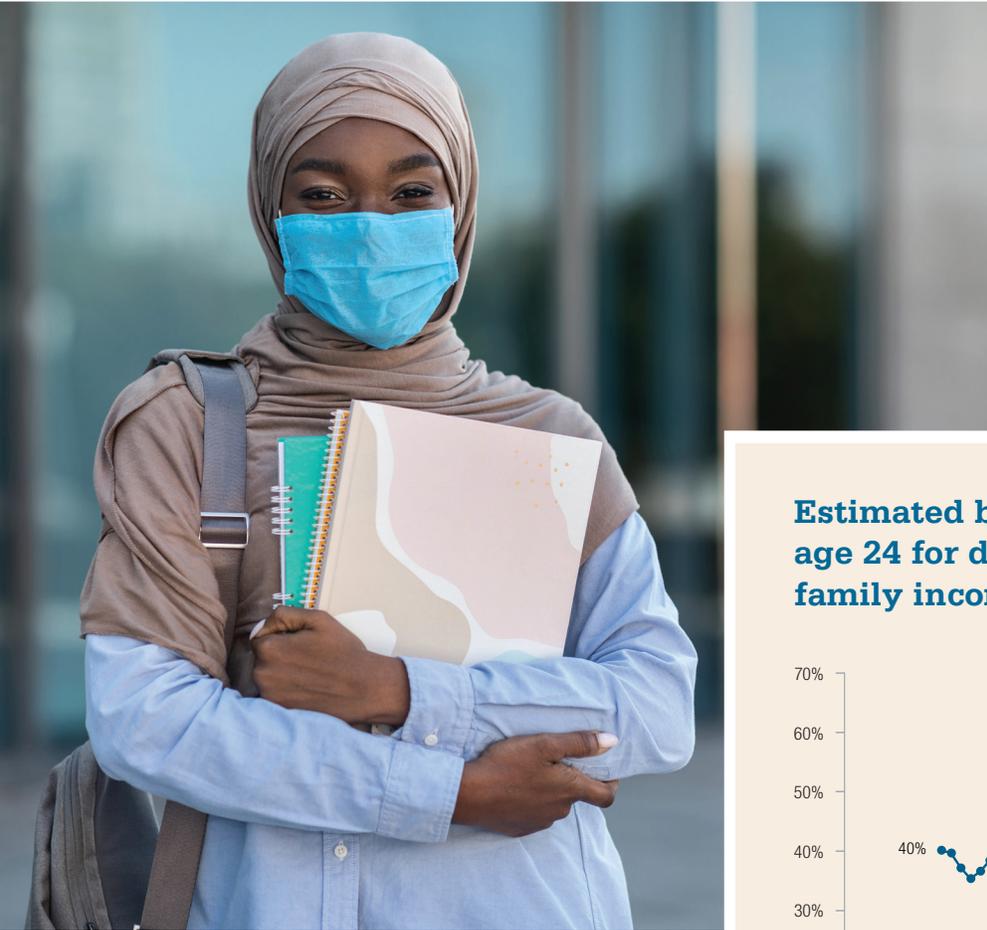


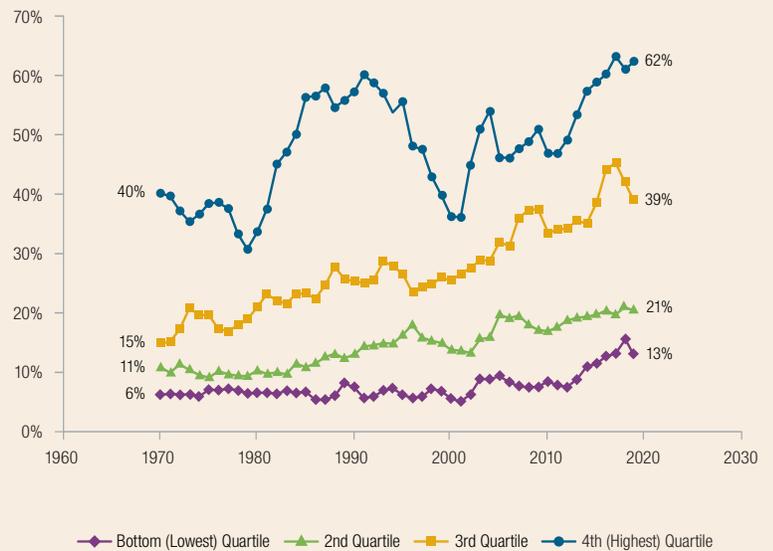
INDICATORS

OF HIGHER EDUCATION EQUITY IN THE UNITED STATES



2021 HISTORICAL TREND REPORT

Estimated bachelor's degree attainment by age 24 for dependent family members by family income quartile: 1970 to 2019



**When will the U.S.
close the gap in higher
education attainment by
family income?**

The Pell Institute for the Study of Opportunity in Higher Education of the Council for Opportunity in Education (COE)

conducts and disseminates research and policy analysis to encourage policymakers, educators, and the public to improve educational opportunities and outcomes of low-income, first-generation students, and students with disabilities. The Pell Institute is sponsored by the Council for Opportunity in Education (COE). The Pell Institute shares the mission of the Council to advance and defend the ideal of equal opportunity in postsecondary education. As such, the focus of the Council is to ensure that the least advantaged segments of the American population have a realistic chance to enter and graduate from a postsecondary institution.

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Alliance for Higher Education and Democracy, University of Pennsylvania (PennAHEAD)

is dedicated to advancing higher education policy and practices that foster open, equitable, and democratic societies. Drawing on the intellectual resources of the University of Pennsylvania and a global alliance of higher education and academic leaders, Penn AHEAD achieves its mission by creating knowledge, improving practice, and building capacity. Through engagement with policymakers, institutional leaders, scholars, and practitioners, AHEAD produces research and applies research-based knowledge to address the most pressing issues pertaining to the public purposes of higher education in the U.S. and across the globe.

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DEDICATION & SPONSORS

SPECIAL DEDICATION ARNOLD MITCHEM & TOM MORTENSON

The *2021 Indicators of Higher Education Equity in the United States* report is once again dedicated to Arnold Mitchem and Tom Mortenson. Without the work of these two individuals, the report would not have been possible. Both have dedicated their careers to creating greater equity in educational opportunity. By producing this 2021 volume and continuing the Search for Solutions Shared Dialogues, we honor the legacy of their work and the seeds they have sown for increasing equity in higher education opportunity and outcomes in the United States.

SPECIAL THANKS FOR SUPPORT FROM:



BILL & MELINDA
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FOREWORD

In 2004 and 2005, the Pell Institute for the Study of Opportunity in Higher Education (Pell Institute), sponsored by the Council for Opportunity in Education (COE), published two editions of *Indicators of Opportunity in Higher Education*. In 2015, we renewed the commitment to documenting trends in higher education equity by publishing an expanded annual trend report and initiating the Search for Solutions Shared Dialogues. The *Indicators of Higher Education Equity in the United States: 2021 Historical Trend Report*, directly follows on these earlier efforts. This publication brings together again in partnership the Pell Institute with the Alliance for Higher Education and Democracy of the University of Pennsylvania (PennAHEAD). Both organizations have a core mission to promote a more open, equitable, and democratic system of higher education. The Pell Institute, with its historical and ongoing ties to the federal TRIO programs, has a special mission to promote more equitable opportunity for low-income and first-generation students, and students with disabilities. These reports draw from multiple sources of existing data to provide, in one place, indicators that describe trends in equity in postsecondary enrollment, choice, and degree attainment, as well as indicators of college affordability.

Purposes of the Indicators Project. The purposes of this equity indicators project are to:

- Report the status of higher education equity in the United States and identify changes over time in measures of equity;
- Identify policies and practices that promote and hinder progress, and
- Illustrate the need for increased support of policies, programs, and practices that not only improve overall attainment in higher education but also create greater equity in higher education opportunity and outcomes.

Focus on Inequities by Family Income. The first *Indicators* report in 2015 focused on equity in higher education based on measures of family income. Recognizing the need to also address inequity based on other interrelated demographic characteristics, reports since 2016 include selected indicators that highlight differences by race/ethnicity and socioeconomic status (SES). In these reports, SES is primarily measured by an index comprised of family income, parents' education, and parents' occupation developed by the National Center for Education Statistics (NCES).

Inclusion of State Data. The 2018 *Indicators* report added data describing higher education equity by U.S. state. The 2019 to 2021 *Indicators* reports continue the inclusion of state data. Considering indicators of equity by state is essential given the many differences across the 50 states in historical, demographic, economic, and political characteristics, as well as the characteristics of their K-12 and higher education systems.

Inclusion of Dependency Status. *Indicators* reports 2015 to 2019 presented a number of indicators for all students and for dependent students. In the 2020 and 2021 *Indicators* report, we add disaggregation by dependency status (dependent, independent without dependents, and independent with dependents) where data are available.

Inclusion of TRIO Data for the First Time. The 2021 *Indicators* report for the first time includes historical data on the Federal TRIO programs. Data are presented for each of the programs on numbers served, percent of eligible students served, funding levels, and characteristics of students served. Data presented also include the results of the most recent evaluations on college entrance and completion.

Methodological Issues. This *Indicators* report presents data as far back as comparable data warrant, often beginning with 1970. The Methodological Appendix A provides additional notes, tables, and figures that help in understanding the trend data in the body of the report. Throughout the report, we include methodological notes concerning qualifications and limitations of the data over time.

The Search for Solutions Shared Dialogues, Essays and Blog. In addition to providing longitudinal indicators of equity, the *Indicators* project is also intended to advance productive conversation about effective policies and practices for improving equity in higher education opportunity and outcomes. To this end, the *Indicators* reports periodically include essays intended to connect the indicators to current policy debates. In 2018, the *Indicators* project launched the *Improving Equity in Higher Education Search for Solutions* Blog hosted by PennAHEAD (<https://www.ahead-penn.org>) intended to further advance discussion of how to create meaningful improvements in higher education equity.

Online Tools. To download the Excel files used to produce the figures in this report, find links to the 2016 to 2021 reports, and access to the Search for Solutions Shared Dialogues Essays that periodically accompany the *Indicators* reports, please visit the Equity Indicators Website hosted by the Pell Institute: <http://pellinstitute.org/indicators>.

2021 Infographics and Interactive Data Tool. In 2021 we will be adding to the *Indicators* website additional data visualizations and infographic stories for selected Indicators. Please visit the Equity Indicators Website <http://pellinstitute.org/indicators> to access these materials.

Introduction

In this hopeful spring of 2021, as we prepare the *Indicators* report, we look back on what we wrote in the Introduction to the *2020 Indicators* report in April of 2020. In spring 2020, we lamented that the global COVID-19 death toll had reached 400,000 dead and the U.S. had 80,000 deaths. One year later, the U.S. death toll of 570,000 has far exceeded the global death toll of spring 2020 and the global death toll is almost 3 million. We have also come to know, reflective of systemic inequities, that the U.S. is among the nations with the highest rates of pandemic deaths and that this death toll, illness, and economic hardship has fallen disproportionately on peoples of color and those without college-level employment. This disproportionate impact is linked to observed historic inequities in our basic institutions, including our higher education system.

At an Inflection Point or Crossroads for Real Systemic Change in Higher Education. Award-winning author, Arundhati Roy stated in April of 2020:

“Historically, pandemics have forced humans to break with the past and imagine their world anew. This one is no different. It is a portal, a gateway between one world and the next.”¹

Last spring, we could not comprehend the severity or have foreseen the duration of the pandemic. Now, in spring 2021, with vaccines becoming widely available in the U.S. we are hopeful that relief from the immediate impact of the pandemic will finally come. However, the events of the past year have revealed in a manner that statistical reports cannot, the stark inequities that characterize our system. Much was written at the start of the pandemic that perhaps the unmasking of these inequities would foster real change in our society and within our higher education system. None of us can predict what the long-term outcomes of the pandemic will be. But we are now at a crossroads. For the *Indicators 2021* we again ask the question:

*Will we seek to return as quickly as possible to a highly unequal but familiar higher education system that seems in many ways designed to bolster and legitimize the very inequities that we look to higher education to overcome, or will we see real systemic change that address the statistics in this *Indicators* report?*

Renewed Commitment in the Light of Dual Emergencies of COVID-19 and Climate Change. As we introduce the seventh report in this series in the light of the new reality of a global pandemic, as well as the related increasingly apparent emergency of human induced environmental destruction and climate change, we renew our original purpose in starting the equity *Indicators* series of historical reports. Our hope remains that, by pulling together available historical statistics, we can understand how to foster the evolution of a more sustainable and resilient higher educational system that provides equity of opportunity, while respecting the diversity of talents and gifts among us. This 2021 report and the associated shared solutions dialogues are dedicated to the hope that COVID-19 will indeed be a portal that will lead us together to “recover, reimagine and reconstruct” a more equitable, resilient, and ecologically sustainable higher education system.

¹ Roy, A. (2020) Video excerpt link retrieved April 2020 <https://youtu.be/7hgQFaeeo0>. Azadi introducing book *Freedom. Fascism. Fiction. Haymarket*.

Commitment to a Non-Zero-Sum Game Higher Education System in Which Each Person Develops Talents and Contributes to Unique Time in History. The youth in our society and the non-traditional older learners (who currently make up 50 percent of the students in higher education) are faced with very heavy challenges in 2021. We renew our firm belief that each person should have the opportunity to learn about, thrive in, and contribute to their unique time in history. In these times, we are committed to fostering a higher education system that does not function as a zero-sum-game in which the provision of opportunity for one individual or group means that another individual or group has less opportunity. The historical statistical trends and recent data suggest that creating a more equitable higher education system has long been and is a major challenge, even without the pandemic and climate change. However, taking what we are calling an “empathetic inquiry systems perspective,” in facing new challenges, we keep our hope that we can evolve toward a stronger place by thinking, learning, and communicating together about our education system.² We hope that an “empathetic inquiry” will lead to an awareness that everyone benefits from the development of a more egalitarian, ecologically sustainable, inclusive, and diverse higher education system.

Return to A Civil Rights Perspective. As adopted under President Jimmy Carter in the late 1970s, the original stated mission of the U.S. Department of Education reflected a clear civil right focus to “ensure equal access to education.”³ This historical trend report series and the associated dialogue pieces on our website continue to draw inspiration from this original mission statement and from other historical statements concerning equal access to education. In this introduction, we briefly review again some of these articulations to highlight the current challenges and opportunities pertaining to equity in higher education in the United States.

The Dangers of a Higher Educational System that Functions to Sort Students and Legitimizes Intergenerational Wage and Wealth Inequality. In the first Equity *Indicators* report, we included a quote from the foreword to President Truman’s 1947 Commission on Higher Education that called attention to the dangers of a higher education system that functioned not to provide opportunity but to sort students:

*If the ladder of educational opportunity rises high at the doors of some youth and scarcely rises at the doors of others, while at the same time formal education is made a prerequisite to occupational and social advance, then education may become the means, not of eliminating race and class distinctions, but of deepening and solidifying them.*⁴

As in previous *Indicators* reports, the data in the 2021 *Indicators* show persisting inequality in higher education opportunity based on family income, race/ethnicity, parent education, location of residence, and dependency status. While there has been an increase in postsecondary attainment since these words were articulated in the late 1940s, new forms of inequity and stratification have evolved, as education becomes one of the chief ways of differentiating wages and salaries and quality of life indicators.⁵

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- 2 Richmond, B. *Introduction to Systems Thinking, STELLA 1992-1997, 2000, 2001, 2004, 2005* isee systems, Inc. “Being able to empathize is a skill that can be developed—and is in some ways, the ultimate Systems Thinking skill because it leads to extending the boundary of true caring beyond self (a skill almost everyone could use more of).” (p.30). “The key to evolving our education system lies in tapping the potential synergies that exist in the mutually reinforcing processes of thinking, communicating and learning.” (p.33) Retrieved from: <https://www.fi.muni.cz/~xpelane/IV109/jaro07/IST.pdf>.
 - 3 The U.S. Department of Education’s mission statement was revised in 2005 under President George W. Bush to “promote student achievement and preparation for global competitiveness by fostering educational excellence and ensuring equal access.” It can be found at <https://www2.ed.gov/about/overview/mission/mission.html>.
 - 4 Truman, H.S. “Statement by the President making public a report of the Commission on Higher Education,” December 15, 1947. Retrieved from <https://www.presidency.ucsb.edu/documents/statement-the-president-making-public-report-the-commission-higher-education>.
 - 5 Data from BLS document this trend and the increase in the gap in earnings by education level. <https://www.bls.gov/cps/earnings.htm#demographics>.

Higher Education as an International Human Right. Article 13 of the International Covenant on Economic, Social, and Cultural Rights of the United Nations declares:

*Higher education shall be made equally accessible to all, on the basis of capacity, by every appropriate means, and in particular by the progressive introduction of free education.*⁶

The Truman Commission report foreshadows more recent arguments that question the validity, justice, and utility for a democracy of our education system's focus on measuring merit, ranking, and competition in almost every aspect of the system. In the wake of increasingly apparent difficulties in fairly implementing the so called "merit" system of admissions, these policies are receiving more critical interest. Issues are also being raised as to the negative impact of the competitive paradigm on educational excellence and learning. Lani Guinier (2016) argues in the *Tyranny of the Meritocracy, Democratizing Higher Education in America*, that:

*"The merit systems that dictate and justify the college admissions are functioning to select and privilege elite individuals" and exclude others rather than "creating learning communities geared to advance democratic societies."*⁷

After years of increasingly operating under a paradigm that viewed higher education in terms of human capital development and as an "investment" commodity, scholars and politicians alike have begun again to speak of high-quality higher education as a basic human right.⁸ The U.S. has a core constitutional and founding commitment to equality of opportunity for all citizens. The U.S. Supreme Court has issued rulings barring discrimination based on race/ethnicity within the United States and has ruled in favor of increasing diversity for the good of the institution in college admissions decisions in *Fisher v. Texas*.

Thus far, the courts have not ruled on inequities in access to higher education based on family income, parents' education, or socioeconomic status, and the courts have not yet addressed the stark differences in higher education spending per student between students attending *Highly Selective* institutions who currently have an average Education and Related (E&R) spending per full-time-equivalent (FTE) enrolled student of \$52,129, while the *Broad Access* institutions who serve the majority of Pell Grant students have average E&R spending of \$14,945 per FTE enrolled student.⁹ It is difficult to justify this difference as representing anything close to equal educational opportunity for postsecondary education in the United States. If postsecondary education is necessary to obtain work that pays a living wage, then all individuals, regardless of family income, parents' education, socioeconomic status, or other demographic characteristics, should have equal opportunity to participate, complete, and benefit. The United States has higher levels of income and wealth inequality and lower levels of measured intergenerational mobility than many other developed nations.¹⁰ Inequality is negatively related to various health and well-being indicators – indicators that are also falling in the U.S. relative to many

6 Tomaševski, K. (2001). *Special Rapporteur Report on the Right to Education Mission to the United States of America*, United Nations Commission on Human Rights, Economic, Social, and Cultural Rights. Retrieved from <https://www.ohchr.org/en/professionalinterest/pages/cescr.aspx>. President Carter signed the U.N. Covenant in 1977, but thus far no President, Democrat or Republican, has presented the Covenant for ratification by the U.S. Senate. The U.N. Covenant has been ratified by 166 countries worldwide but the United States is one of a handful of countries worldwide that has not become a binding party to the Covenant.

7 Lani Guinier (2016), *Tyranny of the Meritocracy, Democratizing Higher Education in America*, Harcourt.

8 Beiter, K.D. (2005). *The Protection of the Right to Education by International Law*. Martinus Nijhoff Publishers. ISBN 9789004147041. Cahalan, M, Franklin K, Yamashita M, (2016) Is Higher Education a Human Right or a Competitive Investment Commodity?, Pell Institute for the Study of Opportunity in Higher Education. http://pellinstitute.org/indicators/downloads/dialogues-2016_essays_Cahalan_Franklin_Yamashita.pdf.

9 Hillman, N. "Why Rich Colleges Get Richer & Poor Colleges Get Poorer: The Case for Equity-Based Funding in Higher Education – Third Way." – Third Way, 20 Nov. 2020, <https://www.thirdway.org/report/why-rich-colleges-get-richer-poor-colleges-get-poorer-the-case-for-equity-based-funding-in-higher-education>.

10 Major, L.E., & Manchin, S. (2018). *Social Mobility: And Its Enemies*. Pelican Books. With a focus on England, Lee Elliot Major and Stephan Manchin advocate a lottery system for students meeting transparent entrance requirements.

other developed countries.¹¹

The Proposed Second Bill of Rights of Franklin Roosevelt. In the 1940s, at a time when according to the U.S. decennial Census, only about 26 percent of Whites and 8 percent of Blacks over the age of 25 had attained a high school diploma and about 5 percent of Whites and 1 percent of Blacks had attained a bachelor's degree,¹² President Franklin Delano Roosevelt put forth his proposal for a "Second Bill of Rights" that included the right to "Education." This proposal grew out of the experience of the Great Depression and World War II; and was articulated in President Roosevelt's State of the Union Address on January 11, 1944.¹³ The President argued that the "political rights" guaranteed by the U.S. Constitution and the Bill of Rights had "proved inadequate to assure us "equality" in the "pursuit of happiness." Roosevelt's remedy was to declare an "economic bill of rights" which would guarantee eight specific rights. Among these rights was the right to "a Good Education." While these rights were not taken up by the U.S. Congress at the time, and President Roosevelt died in early 1945, they did form the basis for Eleanor Roosevelt's subsequent work in helping to draft the Declaration of Human Rights in the United Nations.¹⁴ The eight interrelated rights were:

1. Employment (right to work)
2. Food, clothing and leisure, via enough time to support them
3. Farmers' rights to a fair income
4. Freedom from unfair competition and monopolies
5. Housing
6. Medical care
7. Social security
8. Education.

Although the COVID-19 pandemic has further unmasked the lack of these rights, and intergenerational inequalities in the United States, the recent conversations about the need to address college cost and discussions of higher education as a human right pre-date the pandemic.¹⁵ A pre-pandemic example is the *Debt Free College Act of 2019*, which was introduced in the U.S. Senate by Senator Brian Schatz of Hawaii. The bill proposes to establish a federal-state grant program that would require state public institutions to provide students with the full estimated "cost of attendance," including books, transportation, room and board and living expenses; extends Pell Grant eligibility to DREAMer students; repeals suspension of federal aid eligibility for drug related offenses; requires state public institutions to tie cost increases to the consumer price index, and provides additional support for minority-serving institutions. Since the pandemic, growing numbers of specific proposals have been introduced in Congress that have some chance of passing and being implemented. Since the 117th

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- 11 Pickett, K.E. & Wilkinson, R. (2009) *The Spirit Level: Why More Equal Societies Almost Always Do Better*. As the book points out, among developed nations the U.S. has one of the highest levels of inequality. It is not only the absolute level of income that reduces well-being, but also the degree of income inequity that is manifest in the state or nation. The book highlights the "pernicious effects that inequality has on societies: eroding trust, increasing anxiety and illness, (and) encouraging excessive consumption". It shows that for each of eleven different health and social problems: physical health, mental health, drug abuse, education, imprisonment, obesity, social mobility, trust and community life, violence, teenage pregnancies, and child well-being, outcomes are significantly worse in more unequal rich countries. See also, Kerry, B., Pickett, K.E. & Wilkinson, R. (2010). *Why Greater Equality Makes Societies Stronger*. Child Poverty Insights, Social and Economic Policy, UNICEF Policy and Practice; [https://www.unicef.org/socialpolicy/files/Insights_August2010_ENG\(1\).pdf](https://www.unicef.org/socialpolicy/files/Insights_August2010_ENG(1).pdf).
 - 12 Separate data by race is available in 1940 only for the categories of Whites and Blacks. U.S. Census Population Division Census 2000 PHC-T-41. A Half-Century of Learning: Historical Statistics on Educational Attainment in the United States, 1940 to 2000.
 - 13 This Second Bill of Rights speech of FDR is available at: <https://www.youtube.com/watch?v=3EZ5bx9Ayl4>.
 - 14 See <http://www.un.org/en/universal-declaration-human-rights>.
 - 15 The Debt Free College Act of 2019, introduced in the U.S. Senate by Senator Brian Schatz of Hawaii can be accessed at <https://www.congress.gov/bill/116th-congress/senate-bill/672/text>. Several states, with a stated goal of improving college affordability, (including Tennessee, Oregon, and New York) have already adopted some type of "free tuition" programs. "Free community college" programs are also being created in local communities across the U.S. For a database of current programs see: <http://www.ahead-penn.org/creating-knowledge/college-promise>.

Congress convened on January 3 2021, more than 18 bills addressing college costs and student debt have already been introduced in Congress. Bills in the form of resolutions calling on the President to use his authority to cancel up to \$50,000 of debt have recently been introduced in both the House and the Senate. In addition, Sen. Bernie Sanders, I-Vt., and Rep. Pramila Jayapal, D-Wash., on April 21, 2021 introduced the College for All Act. This legislation would increase Pell Grants and TRIO funding substantially, as well as provide support for federal-state partnerships for free college.¹⁶

A Question of Will Not Resources. In 1967, in *Where Do We Go from Here?* Reverend Martin Luther King, Jr. argued that: “*There is no deficit in human resources, the deficit is in human will.*”¹⁷ Over 50 years later, and in this pandemic recovery period, these words could be applied to many problems we face, including persisting inequality in higher education opportunity and outcomes. This 2021 report and the dialogue questions we pose seek to place the *Indicators* in the wider discussion of equity and in the context of the role that higher education is playing in a society under conflict and stress. Whether or not we believe that higher education is a civil right, an essential element of a full democratic society, or a fundamental requirement for achieving the American dream, the 2021 *Indicators* report continues to show that higher education opportunity and outcomes remain highly inequitable across family income, socioeconomic status (SES), and race/ethnicity groupings. On many indicators, gaps are larger now than in the past. The disinvestment of state funds for public colleges and universities since the 1980s and the declining value of federal student grant aid have aided in the creation of a higher education system that is stained with inequality. Once known for wide accessibility to and excellence within its higher education system, the U.S. now has an educational system that sorts students in ways that have profound implications for later life chances. More serious fundamental reconstruction level work is required to ensure that all youth have opportunity to use their creative potential to realize the many benefits of higher education and advance the well-being and progress of the nation.¹⁸

The equity indicators tracked in this report address the following fundamental questions:

1. **Equity Indicator 1: Who enrolls in postsecondary education?**

- How do college participation rates of high school leavers vary by family income?
- How do college participation rates of high school graduates vary by family income?
- How do rates of postsecondary enrollment differ by race/ethnicity?
- How do rates of postsecondary enrollment differ by race/ethnicity and family income?
- How do the percentages of young adults that have not enrolled in postsecondary education within 8 to 10 years of expected high school graduation vary by parents’ socioeconomic status (SES)?
- How do the rates of enrollment vary by parent education or first-generation status?
- What are the differences by state in estimated participation of low-income students in college?
- How do rates of postsecondary enrollment differ by state?

16 Both the House <https://www.congress.gov/bill/117th-congress/house-resolution/100> and Senate <https://www.congress.gov/bill/117th-congress/senate-resolution/46/text> have bills in the 117 congress that are now in committees concerning student debt. The Senate resolution calls on the President to take executive action to cancel up to \$50,000 in federal student loan debt for borrowers. Further, it encourages the President to (1) ensure that borrowers have no tax liability from the debt cancellation, (2) ensure that the debt cancellation helps close racial wealth gaps, and (3) pause student loan payments and interest accumulation on federal student loans for the duration of the COVID-19 (i.e., coronavirus disease 2019). The College for All Act, introduced by Senator Sanders and Representative Jayapal has wide-spread support in the higher education community. <https://www.sanders.senate.gov/wp-content/uploads/Final-College-for-All-Act-Supporting-Organizations.pdf>.

17 Especially in the final years of his life Dr. King increasingly spoke of the interrelationships between civil rights and education, the economic system, poverty, militarism, and racism. <https://kairoscenter.org/wp-content/uploads/2014/11/King-quotes-2-page.pdf>.

18 Jeanna Smialek (2019) examines the business arguments for a more equitable system in “Inequality is Holding Economies Back. Education Could be One Solution in Countries Where Lack of Opportunity Mixed with High Inequality See Slower Growth.” *Inequality Is Holding Economies Back. Education Could Be One Solution* - Bloomberg.

- What is the dependency status of those enrolled in postsecondary education and how do dependent and independent students differ in demographic characteristics and completion risk factors?
- What have been short term impacts of the COVID pandemic on enrollment?

2. Equity Indicator 2: What types of postsecondary educational institutions do students attend?

- How does the level of institution attended vary by Pell Grant receipt?
- How does the control of institution attended vary by Pell Federal Grant Receipt?
- How does Pell or other Federal Grant receipt and dependency status vary by institutional level and control?
- How does the selectivity of institution attended vary by family income?
- How does the representation of low-income students vary by institutional selectivity?
- How does selectivity of institution attended vary by dependency status?
- How has the COVID-19 pandemic impacted the types of institutions students attend?

3. Equity Indicator 3: Does Financial Aid and Differences in College Cost Eliminate the Barriers to College Equity?

- What are the trends in cost of attendance nationally and by state?
- What is the maximum Pell Grant relative to average college costs?
- What level of Pell Grant would be necessary to meet college costs?
- How much would this cost each year?
- What is the total number of dependent and independent Pell Grant Recipients?
- What is the unmet need by family income for dependent and independent students?
- What is the extent of differences between Education and Related (E&R) spending per FTE Enrollment by institutional selectivity and for Pell Grant recipients?

4. Equity Indicator 4: How do students in the United States pay for college?

- What share of higher education costs is paid by students and their families?
- What is the net price of attendance by family income?
- What is the percentage of family income needed to pay for college for dependent, and independent students?
- What percent of students borrow and how much do they borrow nationally and by state?
- What is the level of state need-based aid?

5. Equity Indicator 5: How do educational attainment rates and early outcomes vary by student characteristics?

- How does dependent individuals' bachelor's degree attainment by age 24 vary by family income?
- What percentages of high school graduating cohorts and entering postsecondary cohorts complete a degrees?
- How does students' degree completion rates vary by characteristics such as family income, dependency status, and Pell Grant Receipt status?
- How does the distribution of associate's, bachelor's, master's and doctoral degrees relative to the population differ by race/ethnicity?
- Are there differences in post-baccalaureate enrollment and average income for recent graduates by family income and dependency status?

- What are the longer term 10-year outcomes for bachelor's degree completers?
- How do degree attainment rates vary by state?

6. Equity Indicator 6: How does educational attainment in the U.S. compare with other countries?

- What percentage of 25- to 34-year-olds has completed a type A (bachelor's or above) tertiary degree?
- What percentage of 25- to 34-year-olds has completed a type A (bachelor's or above) or a type B (short cycle or associate's) tertiary degree?

7. Equity Indicator 7: The Federal TRIO Programs: Who, What, Why, Where, When, and How Does TRIO work?

- What is the overall mission and context for TRIO?
- When was each program initiated and what is the special focus of each of the TRIO programs?
- What are the trends in number of participants and projects for each of the TRIO programs?
- What have been and are the current funding levels by program?
- What are the eligibility requirements and who are the TRIO Participants?
- What proportion of eligible students are covered by TRIO programs?
- What are the educational outcomes of Federal TRIO programs?

Setting the Stage

Before presenting the equity indicators, we first present data on the structure and context of postsecondary education in the United States.¹⁹ We review the number and percentage distribution of institutions and enrollment by institution level (2-year and 4-year), control (public, private non-profit, and private for-profit), and selectivity. We also report the percentage of youth that were eligible for the Federal Free or Reduced-Price Lunch program and the receipt of Pell or other Federal Grants. We also observe changes in the percent of students that are potentially first-generation to attend college. In this 2021 edition, as in 2020, we also describe trends in the distribution of income and wealth within the United States, as these trends are critical to understanding educational equity issues. Throughout, we include attention to differences by state.

Institutional Type and Control. In 2018-19, there were 4,042 2-year and 4-year undergraduate degree-granting institutions in the United States; 33 percent were 2-year institutions and 67 percent were 4-year institutions. There were also about 2,100 non-degree granting institutions not represented in STS Figure 1, of which about 79 percent (n = about 1,700) were private for-profit.²⁰

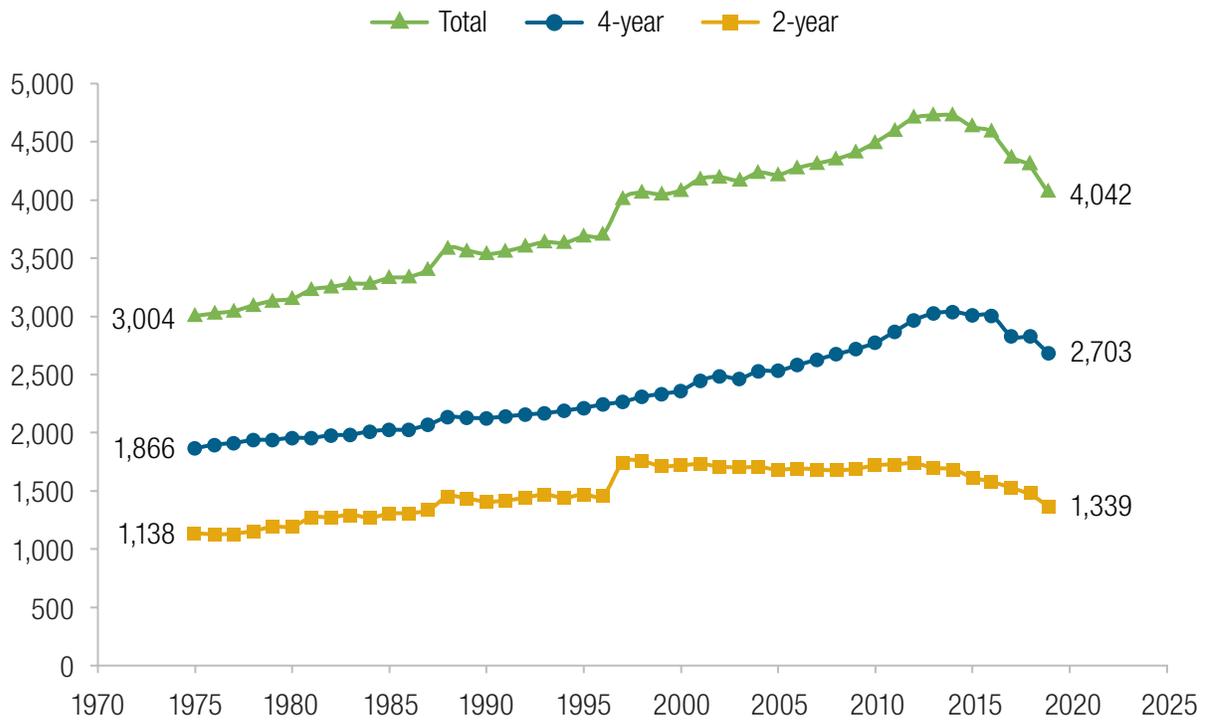
STS Figure 1 illustrates trends in the numbers of 2- and 4-year degree-granting institutions in the United States from 1974-75 to 2018-19. Although the total number of 2- and 4-year degree-granting institutions declined from a peak of 4,726 in 2012-13 to 4,042 in 2018-19, between 1974-75 and 2018-19, the total number of degree-granting institutions (including branch campuses) increased from 3,004 to 4,042, an increase of 35 percent. The increases from 1974-75 to 2018-19 were 45 percent for 2-year institutions and 18 percent for 4-year institutions.

The increase from 3,706 in 1995-96 to 4,009 in 1996-97 occurred following a change in reporting from “Institutions of Higher Education” (1995-96) to “Degree-Granting Institutions” (1996-97). Following this change, more 2-year colleges were included in the newer classification (an increase from 1,462 to 1,742).

19 To distinguish the Setting the Stage (STS) figures from those of the Equity Indicators Figures, we use STS in front of each of the figures in this section.

20 These totals also exclude about 530 institutions that are not undergraduate degree-granting institutions but are specialized and graduate schools. U.S. Department of Education, National Center for Education Statistics, *Education Directory, Colleges and Universities, 1949-50 through 1965-66*; Higher Education General Information Survey (HEGIS), “Institutional Characteristics of Colleges and Universities” surveys, 1966-67 through 1985-86; Integrated Postsecondary Education Data System (IPEDS), “Institutional Characteristics Survey” (IPEDS-IC:86-99); and IPEDS Fall 2000 through Fall 2018, “Institutional Characteristics” component. *Digest of Education Statistics 2019*.

STS Figure 1: Number of degree-granting Title IV institutions in the United States by level: 1974-75 to 2018-19



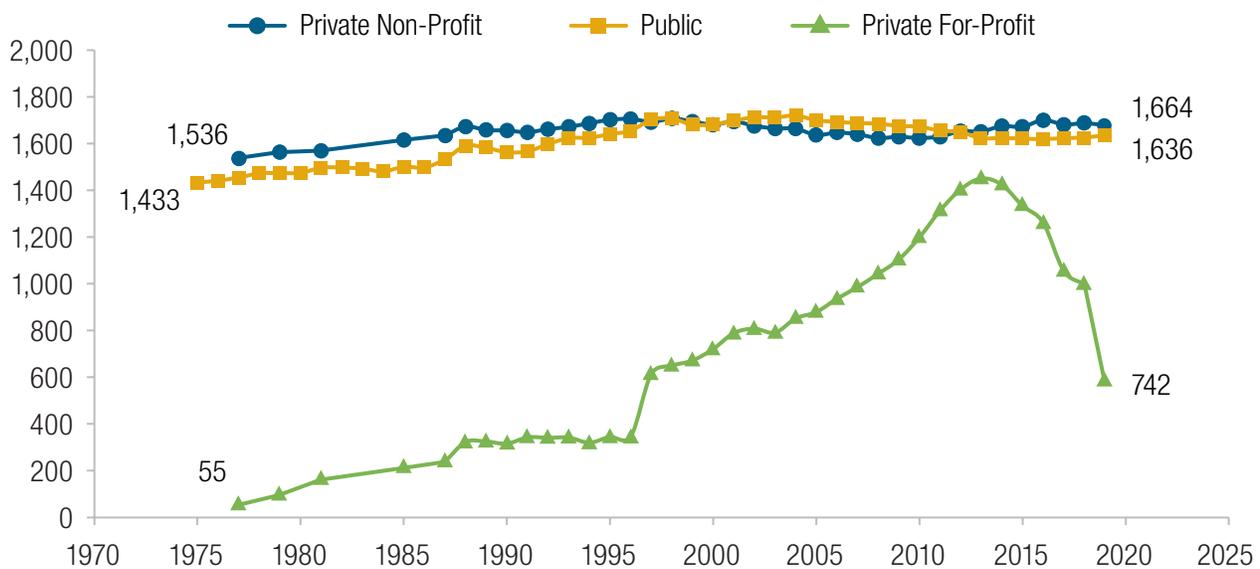
NOTE: Data represent 1974-75 to 2018-19 academic years. Data begin with 1975 due to lack of reporting coverage prior to 1975. Data through 1995-96 are for institutions of higher education, while later data are for degree-granting institutions. Degree-granting institutions grant associate's or higher degrees and participate in Title IV federal financial aid programs. Changes in counts of institutions over time are partly affected by changes in the numbers of institutions submitting separate data for branch campuses.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Education Directory, Colleges and Universities, 1949-50 through 1965-66*; Higher Education General Information Survey (HEGIS), "Institutional Characteristics of Colleges and Universities" surveys, 1966-67 through 1985-86; Integrated Postsecondary Education Data System (IPEDS), "Institutional Characteristics Survey" (IPEDS-IC:86-99); and IPEDS Fall 2000 through Fall 2018, Institutional Characteristics component as included in *Digest of Education Statistics 2019*, [Table 317.10]. Retrieved from https://nces.ed.gov/programs/digest/d19/tables/dt19_317.10.asp?current=yes.

STS Figure 2 shows trends in the number of institutions by control. Data in the Integrated Postsecondary Education Data System (IPEDS) prior to 1984-85 are not comprehensive, particularly for private for-profit institutions. For this reason, in this discussion, we take 1985 as a starting point.

Between 1984-85 and 2018-19, the number of public institutions increased by 9 percent and the number of private non-profit institutions increased by 3 percent. Starting from a much lower reported base, the number of private for-profit institutions increased by 247 percent, rising from 214 in 1984-85 to 742 by 2018-19.²¹ The number of private for-profit institutions reached a peak of 1,451 in 2013 and then declined by almost 50 percent to 742 institutions by 2018-19. This level is roughly that of the early 2000s before the period of large increase before and during the Great Recession. The recent decline is attributable to the closing or consolidation of for-profit institutions, as well as the conversion of some for-profit institutions to non-profit status.

STS Figure 2: Number of degree-granting Title IV institutions in the United States by control: 1974-75 to 2018-19



NOTE: Data begin with 1975 due to reporting consistency issues prior to 1975. Data for private for-profit institutions are subject to coverage issues, especially prior to 1985. Data through 1995-96 are for institutions of higher education, while later data are for degree-granting institutions. This change accounts for the increase in private for-profit institutions between 1995 and 1996. Changes in counts of institutions over time are also affected by changes in the numbers of institutions submitting separate data for branch campuses.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Education Directory, Colleges and Universities, 1949-50 through 1965-66*; Higher Education General Information Survey (HEGIS), "Institutional Characteristics of Colleges and Universities" surveys, 1966-67 through 1985-86; Integrated Postsecondary Education Data System (IPEDS), "Institutional Characteristics Survey" (IPEDS-IC:86-99); and IPEDS Fall 2000 through Fall 2018, Institutional Characteristics component as included in *Digest of Education Statistics 2019*. Retrieved from https://nces.ed.gov/programs/digest/d18/tables/dt18_317.10.asp.

²¹ It is unknown how much of the early increase is related to more coverage in reporting and participation in Title IV aid programs on the part of private for-profit institutions and how much reflects actual growth. Title IV institutions are eligible to participate in Title IV federal student financial assistance programs. Before 1995-96, NCES counted "institutions of higher education." Beginning in 1995-96, the numbers reflect "degree-granting institutions," defined by NCES as "institutions that grant associate's or higher degrees and participate in Title IV federal financial aid programs." *Digest of Education Statistics 2019*.

Enrollment Trends. In fall 2021, the National Center for Education Statistics (NCES) estimates that approximately 16.7 million undergraduates will be enrolled in U.S. degree-granting higher education institutions (STS Figure 3). Enrollment since the 1970s shows an overall upward trend over time, with some periods of declines or no growth.²² Trends in enrollment are linked, at least in part, to trends in employment opportunities (e.g., the Great Recession between 2008 and 2010). Pre-COVID, in periods of fewer job opportunities and higher unemployment, college enrollment generally increases. It remains to be seen whether the enrollment declines seen in 2020-21 will continue after the COVID-19 related disruption. Undergraduate enrollment increased sharply during the Great Recession, rising from 15.6 million in fall 2007 to a peak of 18.1 million in fall 2010, and then declined by 2 percent between fall 2011 and fall 2012 and by 3 percent between fall 2012 and fall 2014. Enrollment declined again between 2014 and 2018, reaching 16.9 million in 2016 and 16.6 million in 2018. NCES projections made prior to COVID-19 were slightly higher at 16.7 million for 2021.

Enrollment by Institutional Control and Level. In fall 2018, public institutions accounted for 79 percent of undergraduate enrollment, private non-profit institutions accounted for 17 percent, and private for-profit institutions accounted for 4 percent (STS Figures 3 and 4).²³ Because public institutions, on average, enroll larger numbers of students than private non-profit and private for-profit institutions, the distribution of enrollment by control is substantially different than the distribution of institutions. As tabulated by the numbers in Figure 2, in 2018-19, 41 percent of institutions were public, 41 percent were private non-profit, and 18 percent were private for-profit.

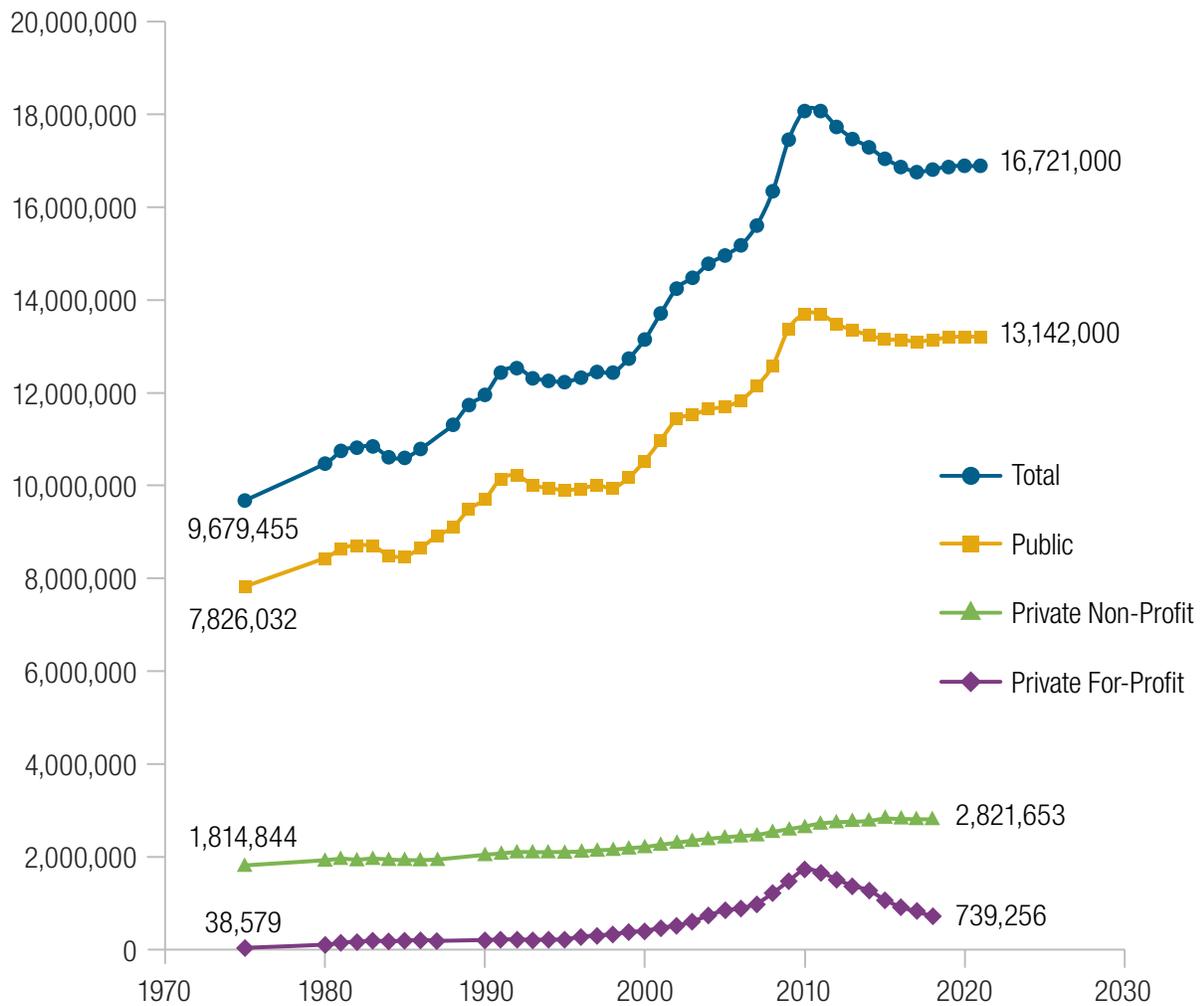
While there have been some fluctuations in the share of enrollments in public institutions since 1975, public institutions have consistently enrolled well over 70 percent of undergraduates. In 1975, 81 percent of undergraduates were enrolled in public institutions. The public share declined to 76 percent by fall 2010 and was 77 percent in 2014 and 2015. In 2016, the public share rose again to 78 percent, and by 2018 the share was at 79 percent. The share of undergraduates enrolled in private non-profit institutions fluctuated between 19 percent in 1975 and 15 percent in 2009.

In 2018, about 17 percent of undergraduates were enrolled in private non-profit institutions (16.7 percent in 4-year and 0.3 percent in 2-year private non-profits). During the 1990s, approximately 2 percent of undergraduates were enrolled in private for-profit 2-year and 4-year institutions. The private for-profit share of 2-year and 4-year undergraduate enrollment increased during the 2000s, reaching a high of 10 percent in 2010 and then declining to 4 percent in fall 2018.

²² In most recently published estimates, NCES does not project undergraduate enrollment to reach the level of 2010 (18,082,427) by 2029. The projection now is 17,003,000 for 2029—the last year for which projections were made. NCES (2019). *Digest of Education Statistics 2019* [Table 303.70]. Retrieved from https://nces.ed.gov/programs/digest/d19/tables/dt19_307.10.asp.

²³ Total and public enrollment data for 2019 to 2021 are estimates from NCES. Estimates for 2019 to 2021 are not available for private non-profit or private for-profit institutions. For these groups, the last years displayed in STS Figure 3 are 2018.

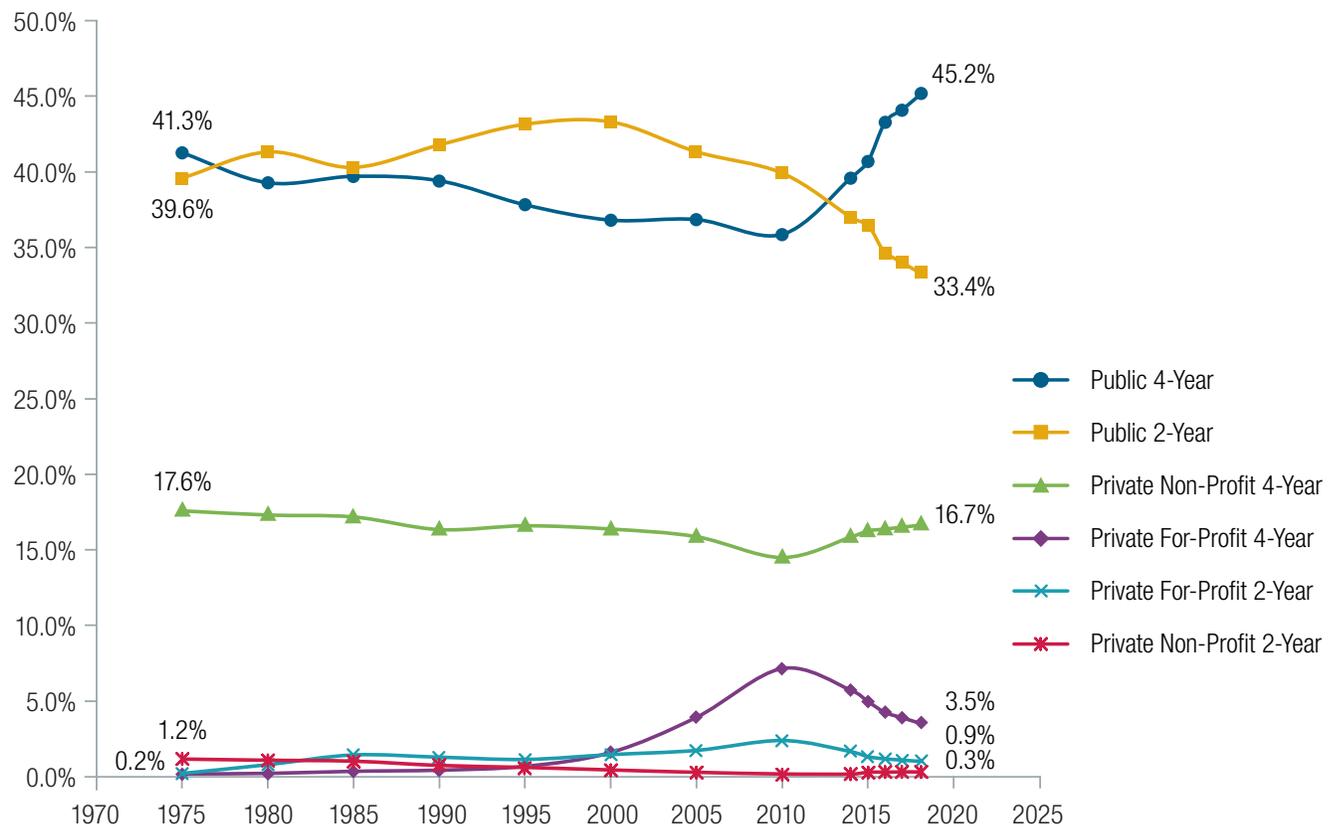
STS Figure 3: Undergraduate fall enrollment in degree-granting institutions by institutional control: Fall 1975 to projected 2021



NOTE: Total and public enrollment data for 2019 to 2021 are projected estimates. Estimates for 2019 to 2021 are not available for private non-profit or private for-profit institutions. For these groups, the last years displayed are 2018. Data include unclassified undergraduate students. Data through 1995 are for institutions of higher education, while later data are for degree-granting institutions. Degree-granting institutions grant associate's or higher degrees and participate in Title IV federal financial aid programs. The degree-granting classification is very similar to the earlier higher education classification, but it includes more 2-year colleges and excludes a few higher education institutions that did not grant degrees. Some data have been revised from previously published figures.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Higher Education General Information Survey (HEGIS), "Fall Enrollment in Colleges and Universities" surveys, 1970 through 1985; Integrated Postsecondary Education Data System (IPEDS), "Fall Enrollment Survey" (IPEDS-EF:86-99); IPEDS Spring 2001 through Spring 2018, Fall Enrollment component; and Enrollment in Degree-Granting Institutions Projection Model, 2000 through 2029, as included in *Digest of Education Statistics 2019*, [Table 303.70]. Retrieved from https://nces.ed.gov/programs/digest/d19/tables/dt19_303.70.asp.

STS Figure 4: Percentage distribution of undergraduate fall enrollment in degree-granting institutions by institution control and level: 1975 to 2018

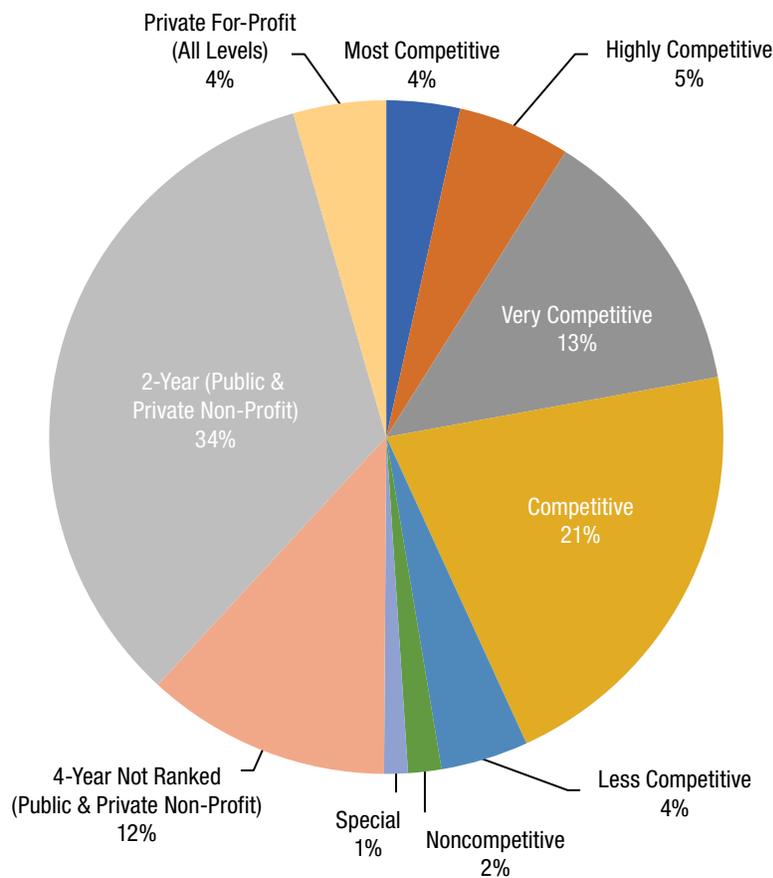


NOTE: See notes for STS Figure 3.

SOURCE: U.S. Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Data System (IPEDS), *Digest of Education Statistics 2019*, [Table 303.70]. Retrieved from https://nces.ed.gov/programs/digest/d19/tables/dt19_303.70.asp.

Enrollment by Institutional Competitiveness Index. STS Figure 5a presents the distribution of undergraduates enrolled (both full-time and part-time) at degree-granting institutions by institutional competitiveness, and STS Figure 5b presents the distribution of degree-granting institutions by institutional competitiveness. Selectivity is defined using Barron’s Admissions Competitiveness Index for 2016. In fall 2018, a majority (57 percent) of undergraduate students were enrolled at 2-year or 4-year institutions that were not classified as competitive and conversely 43 percent of undergraduate students were enrolled in 4-year institutions classified as “Competitive” or higher. Only 4 percent of students were enrolled in the nation’s “Most Competitive” institutions. More than a third of students (34 percent) were attending 2-year institutions. The remaining students attended for-profit institutions (4 percent) or non-ranked 4-year public and non-profits (12 percent), or institutions designated by Barron’s as “Special” (1 percent), “Noncompetitive” (2 percent), or “Less Competitive” (4 percent) 4-year institutions.

STS Figure 5a: Percentage distribution of total undergraduate enrollment by institutional competitiveness index: 2018

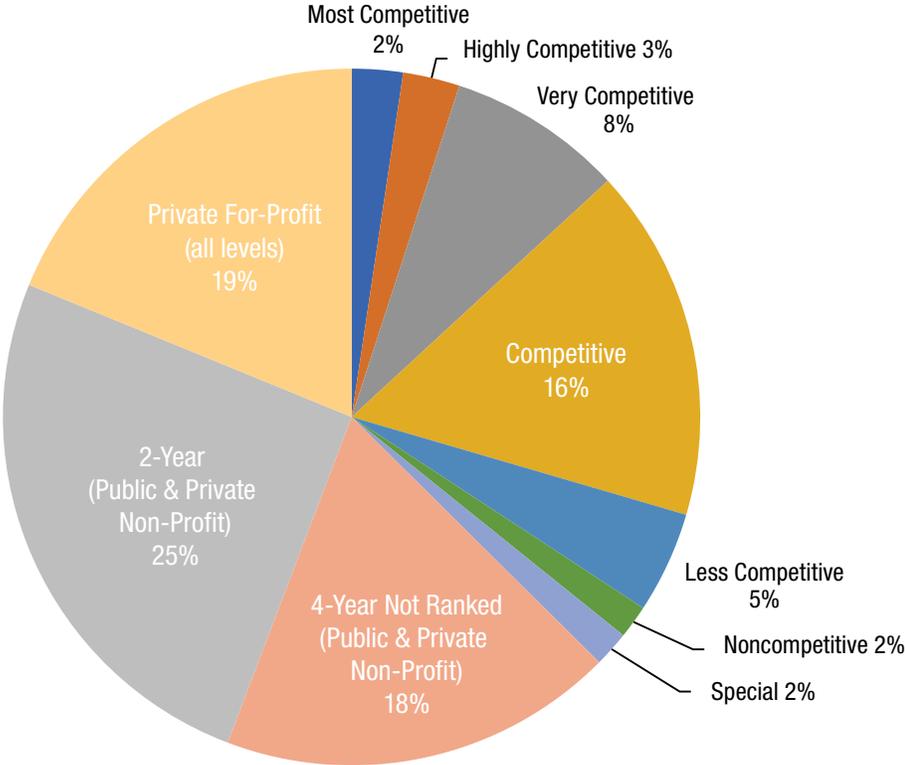


NOTE: This figure uses Barron’s Admissions Competitiveness Index for 2016 and IPEDS fall 2018 enrollment data (full-and part-time enrollment captured by the “EFTOTLT” variable). Students attending institutions not ranked by Barron’s are classified by institutional level and control. We include only public and private not-for-profit institutions in the categories of Barron’s rankings. A small number of for-profit institutions are ranked by Barron’s, but we include these institutions in the for-profit sector.

SOURCE: U.S. Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Data System (IPEDS) (2018), and *Barron’s Profiles of American Colleges* 32nd Edition (2016).

Number of Institutions by Competitiveness Index. STS Figure 5b, also using Barron’s 2016 competitiveness index, shows the percentage distribution of degree-granting institutions in each category. The differences in the distributions in STS Figures 5a and 5b reflect differences in average enrollment among institutions of different competitiveness. For example, 2-year public and private non-profit institutions enroll 34 percent of undergraduate students (see STS Figure 5a) but comprise only 25 percent of all degree-granting institutions (STS Figure 5b). Non-ranked 4-year institutions enroll 12 percent of students but comprise 18 percent of institutions.

STS Figure 5b: Distribution of institutions by institutional competitiveness index: 2018



NOTE: This figure uses Barron’s Competitiveness index for 2016 and IPEDS. We include only public and private not-for-profit institutions in the categories of Barron’s rankings. A small number of for-profit institutions are ranked by Barron’s, but we include these institutions in the for-profit sector.

SOURCE: U.S. Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Data System (IPEDS) (2018) and *Barron’s Profiles of American Colleges*, 32nd Edition (2016).

Growth of Students Classified as Eligible for Free or Reduced-Price Lunch and Growth of Federal Grants (Pell and Other Grants). STS Figure 6a shows trends in the percentages of youth that are approved as eligible for Free or Reduced-Price Lunches from 1989 to 2020 and the percent of full-time, first-time degree/certificate seeking undergraduate students enrolled in degree-granting postsecondary institutions who have Federal Grants from 2000-01 to 2018-19.

Both measures show an increase in the share of students enrolled in our nation’s educational systems who are from low-income families. The percent of K-12 students eligible for Free or Reduced-Price Lunches has almost doubled, increasing from 31 percent in 1989 to 53 percent in 2012 and to 57 percent in 2020. Increases over time

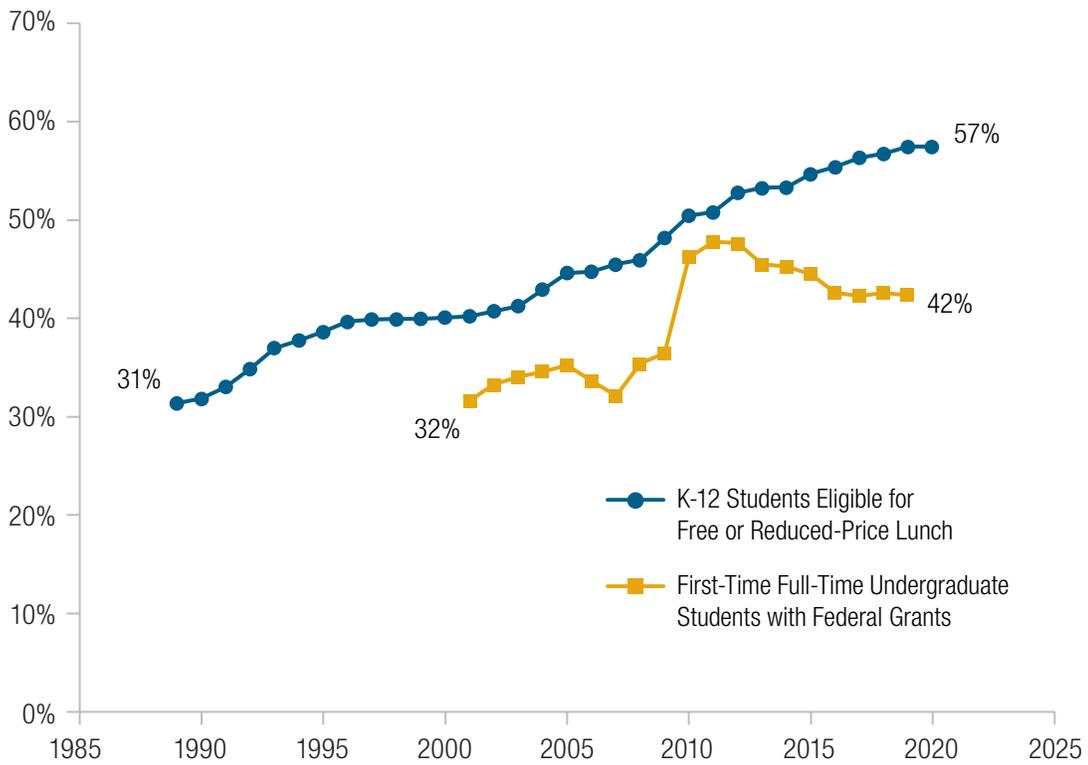
may reflect changes in policy across school districts (e.g., schools with more than a certain percentage of low-income students enroll the entire school), as well as the lingering impact of the Great Recession.

In 2001, the percentage of first-time, full-time undergraduates enrolled at public and private non-profit institutions who received Pell or other Federal Grants was roughly one third (32 percent). This percentage fluctuated between 32 percent in 2001 and 35 percent in 2008.²⁴ After 2007 (with the Great Recession), the share of first-time, full-time undergraduates receiving Federal Grants increased to a peak of 48 percent in 2011. This percentage declined to 45 percent in 2012-13 and further declined to 42 percent in 2019. Changes over time in participation in Federal Grants (most of which are awarded based on financial need) reflect changes in the economic cycle, income eligibility levels, and the stagnation of family incomes in the United States.

Growth of Students Classified as Eligible for Free or Reduced-Price Lunch by State. STS Figure 6b compares the percent of students approved as eligible for the Federal Free or Reduced-Price Lunch program by state. The figure shows the increase in the percent of students approved as eligible since 1990 as well as the wide variation by state.

24 The Federal Pell Grant Annual Report data <https://www2.ed.gov/finaid/prof/resources/data/pell-data.html> shows that the percentage of undergraduates with Pell Grants rose from 13 percent in 1975 at the start of the Pell Grant program to 32 percent by 1992. The rates shown in STS Figure 6(a) for 2000 to 2019 are for full-time, first-time undergraduates. Estimates for all undergraduates are generally higher, at around 50 percent.

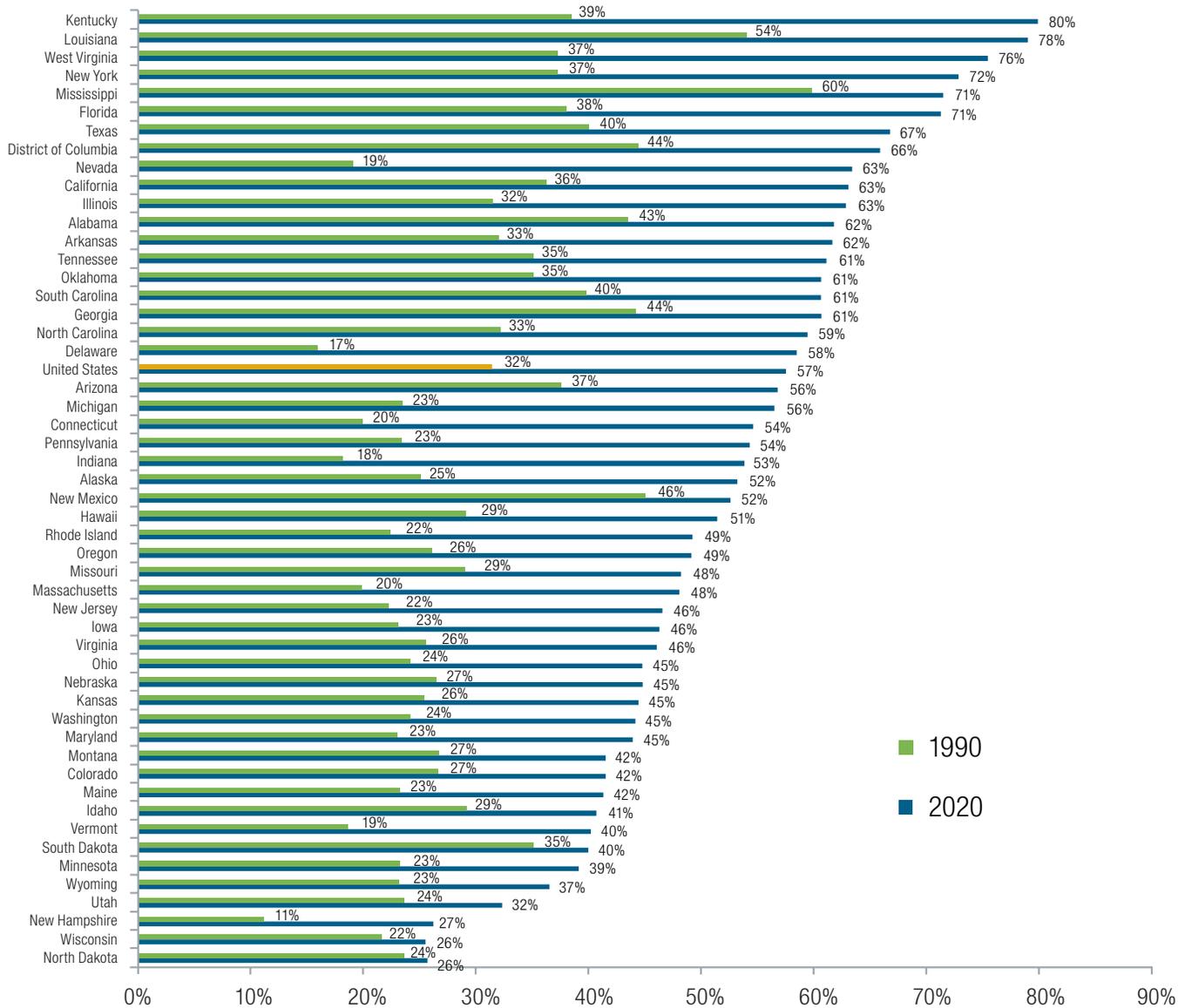
STS Figure 6a: Percentage of K-12 students approved for Free or Reduced-Price Lunch (1989 to 2020) and percentage of first-time full-time degree-seeking undergraduates with Pell or other Federal Grants (2001 to 2019)



NOTE: Federal Grants include Pell Grants and other aid that does not have to be repaid. Totals for approved Free or Reduced-Price Lunch include the 50 states, District of Columbia, Guam, Virgin Islands, Puerto Rico, and Department of Defense schools.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), Student Financial Aid component final data (2001-02 to 2017-18) and provisional data (2018-19) Retrieved from <https://nces.ed.gov/ipeds/TrendGenerator/app/trend-table/8/34?trending=column&f=2%3D1&rid=51>. U.S. Department of Agriculture, Food and Nutrition Services, Free and Reduced-Price Lunch data various years 1989 to 2020.

STS Figure 6b: Percentage of K-12 students approved for Free or Reduced-Price Lunch by state: 1990 and 2020



NOTE: The total row for the United States includes the 50 states, District of Columbia, Guam, Virgin Islands, Puerto Rico, and Department of Defense schools.

SOURCE: U.S. Department of Agriculture, Food and Nutrition Services, Free and Reduced-Price Lunch data various years 1989 to 2020, as compiled by Tom Mortenson and Nicole Brunt.

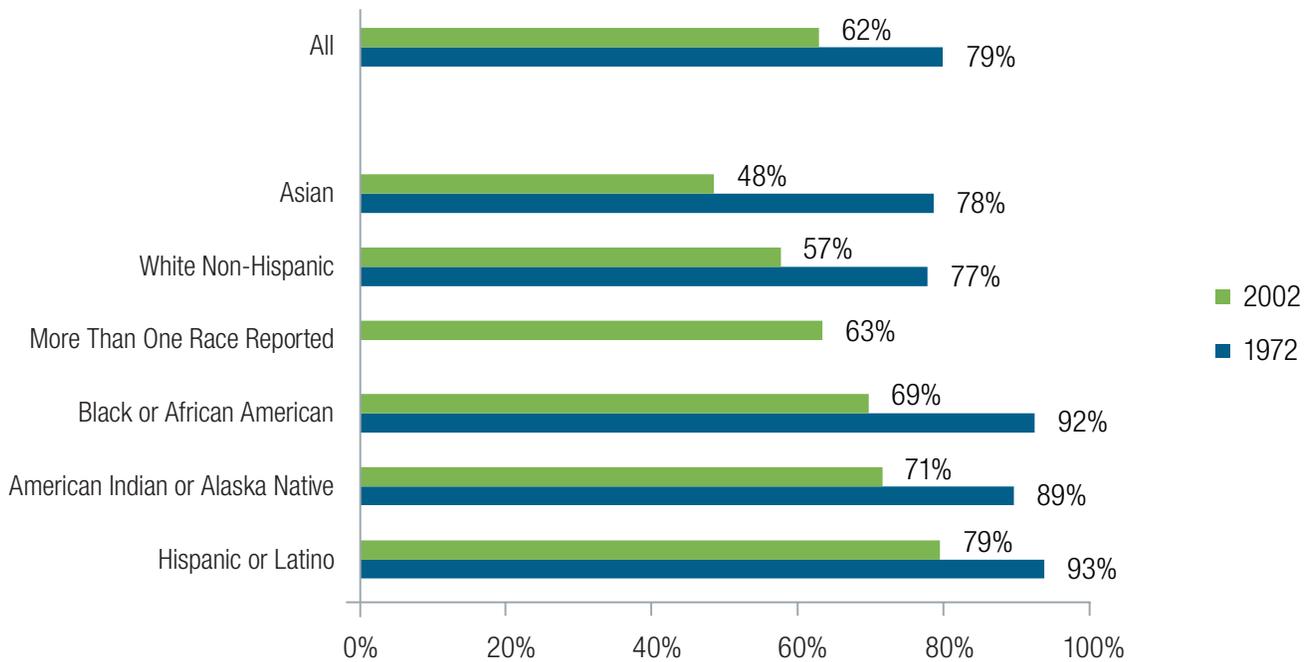
Percentage of Youth Who Are the First-Generation in their Family to Go to College. Measures of educational achievement (e.g., test scores, college entrance rates, and college degree attainments) are highly correlated with parental education. STS Figure 7a uses data from the National Longitudinal Study of the High School Class of 1972 (NLS-72) and the Educational Longitudinal Study (ELS) of students who were 10th graders in 2002 and were scheduled to graduate in 2004.

Comparing the classes of 1972 and 2004 shows large declines in the percentages of high school students who would be first-generation to college (defined as no parent has a bachelor's degree). But, for both classes, higher shares of Hispanics, Blacks, and American Indians are potential first-generation to college compared to Whites and Asians. In 1972, 93 percent of Hispanic or Latino students, 92 percent of Black students, 89 percent of American Indian or Alaska Native students, 78 percent of Asian students, and 77 percent of White students had the potential to be first-generation to college. About 30 years later, by the high school class of 2004 (as measured by ELS), the percentages of high school students who had the potential to be first-generation to college had declined to 79 percent for Hispanics or Latinos, 71 percent for American Indian and Alaska Native, 69 percent for Blacks, 57 percent for Whites, and 48 percent for Asian students.

Data from the American Community Survey (ACS), as displayed in STS Figure 7b, give estimates for the percentages of parents of children under 18 who had not completed a bachelor's degree in 2010 and 2018 by race/ethnicity. While also showing declines in the share of students who had the potential to be first-generation to college, the estimates are not directly comparable to those in Figure 7a (which use data from the NCES high school longitudinal studies). The ACS is a household survey, and the estimates are for percentage of all children under 18 years old living in the household sampled. In addition, the ACS classifications reflect newer, more complex race/ethnicity categories.

While the percentages of children who would be the first in their families to obtain a bachelor's degree continue to decline, the ACS data show that by 2018, rates of being first-generation remain high, especially among traditionally underrepresented minorities. In 2018, 81 percent of American Indian/Alaska Native children, 79 percent of Hispanic children, 77 percent of Pacific Islander children, 73 percent of Black children, 59 percent of children of "Some Other Race," and 52 percent of children of "Two or More Races" had the potential to be first-generation to college. About half of Whites (47 percent) and a third of Asians (31 percent) are potentially first-generation college students. These data may overestimate potential first-generation status, as some of the parents may complete a bachelor's degree or higher by the time their children reach college age.

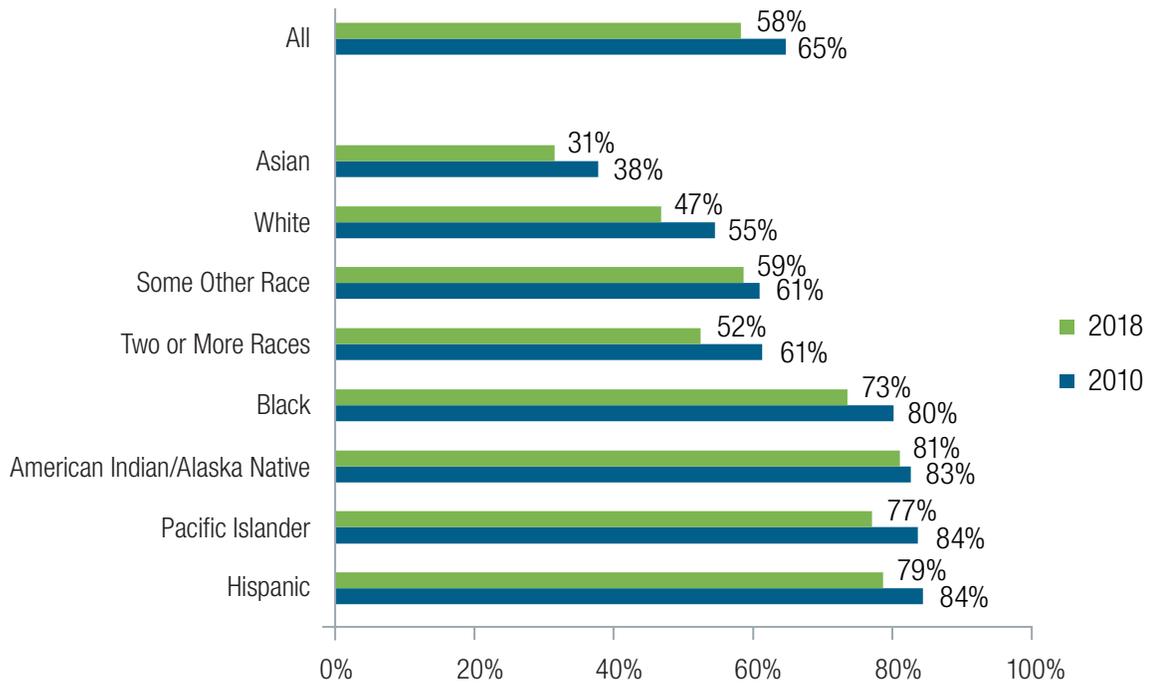
STS Figure 7a: Percentage of high school students who had the potential to be first-generation college by race/ethnicity: 1972 (National Longitudinal Study of High School Class of 1972) and 2004 (Educational Longitudinal Study: ELS:2002/2004)



NOTE: First-generation is defined as no parent or guardian has a bachelor's degree. The National Longitudinal Study (NLS) of High School Class of 1972 sampled high school seniors and the Educational Longitudinal Study (ELS:2002) sampled high school sophomores. This difference may impact the comparison between the two estimates as the NLS is limited to individuals who persisted to the senior year of high school while the ELS includes students who may leave high school between the sophomore and senior years.

SOURCE: Cahalan, M. & Curtin, T. (2004). *A Profile of the Upward Bound Program 2000-2001*. U.S. Department of Education, Office of Federal TRIO Programs. Retrieved from <https://www2.ed.gov/programs/trioupbound/ubprofile-00-01.pdf>. Tabulated from the National Longitudinal Study of 1972 (NLS-72) and Educational Longitudinal Study of Youth (ELS:2002/2004).

STS Figure 7b: Percentage of children under 18 with the potential to be first-generation college by race/ethnicity: 2010 and 2018



NOTE: First-generation is defined as no parent or guardian has a bachelor's degree. These estimates are not directly comparable to estimates in STS Figure 7a as they reflect multiple children per household and are estimates based on parents of children under age 18 from the Census household survey.

SOURCE: U.S. Department of Commerce, Census Bureau, American Community Survey (ACS), 2010 and 2018 as included in U.S. Department of Education, National Center for Education Statistics (2019). *Digest of Education Statistics 2019*, [Table 104.70]. Retrieved from https://nces.ed.gov/programs/digest/d19/tables/dt19_104.70.asp?current=yes.

Educational Attainment of the Population Age 25 and Older by Race/Ethnicity. Setting the Stage Figures 7c and 7d use data sources from the Decennial Census and the American Community Survey (ACS) to present data by race/ethnicity on high school and bachelor's degree attainment from 1940 to 2020. Educational attainment of the adult population is a strong positive predictor of educational achievement of youth, as measured by such indicators as scores on the National Assessment of Educational Progress (NAEP), high school completion, and college entrance and completion.²⁵

High School Diploma Attainment. All groups depicted in STS 7c experienced growth in attainment of a high school diploma or equivalent since 1940. Blacks experienced the greatest percent change, rising from 8 percent in 1940 to 89 percent in 2020. This represents a substantial lowering of the gap between the Black and the White population for high school completion rate, which rose from 26 percent in 1940 to 91 percent in 2020 (95 percent for White non-Hispanic). Hispanic high school completion for the population 25 and older increased from 44 percent in 1980 (the first year for which data is available) to 74 percent in 2020.

Bachelor's Degree Attainment. Although STS Figure 7c displays a closing of the gap in the differences in the percentage of the population 25 and older who attained a high school diploma or equivalent, STS Figure 7d shows a growing divergence in bachelor's degree attainment among the groups represented. In the 1940 Census, 5 percent of the White population and 1 percent of the Black population over 25 held a bachelor's degree. Eighty years later, in 2020, 61 percent of Asians, 41 percent of White Non-Hispanics²⁶ age 25 and over had attained a bachelor's degree or higher, compared to 28 percent of Blacks and 21 percent of Hispanics. Please remember, caution is needed when interpreting figures 7c and 7d over the period since 1940, as classifications used for race/ethnicity have changed over the 80-year period.

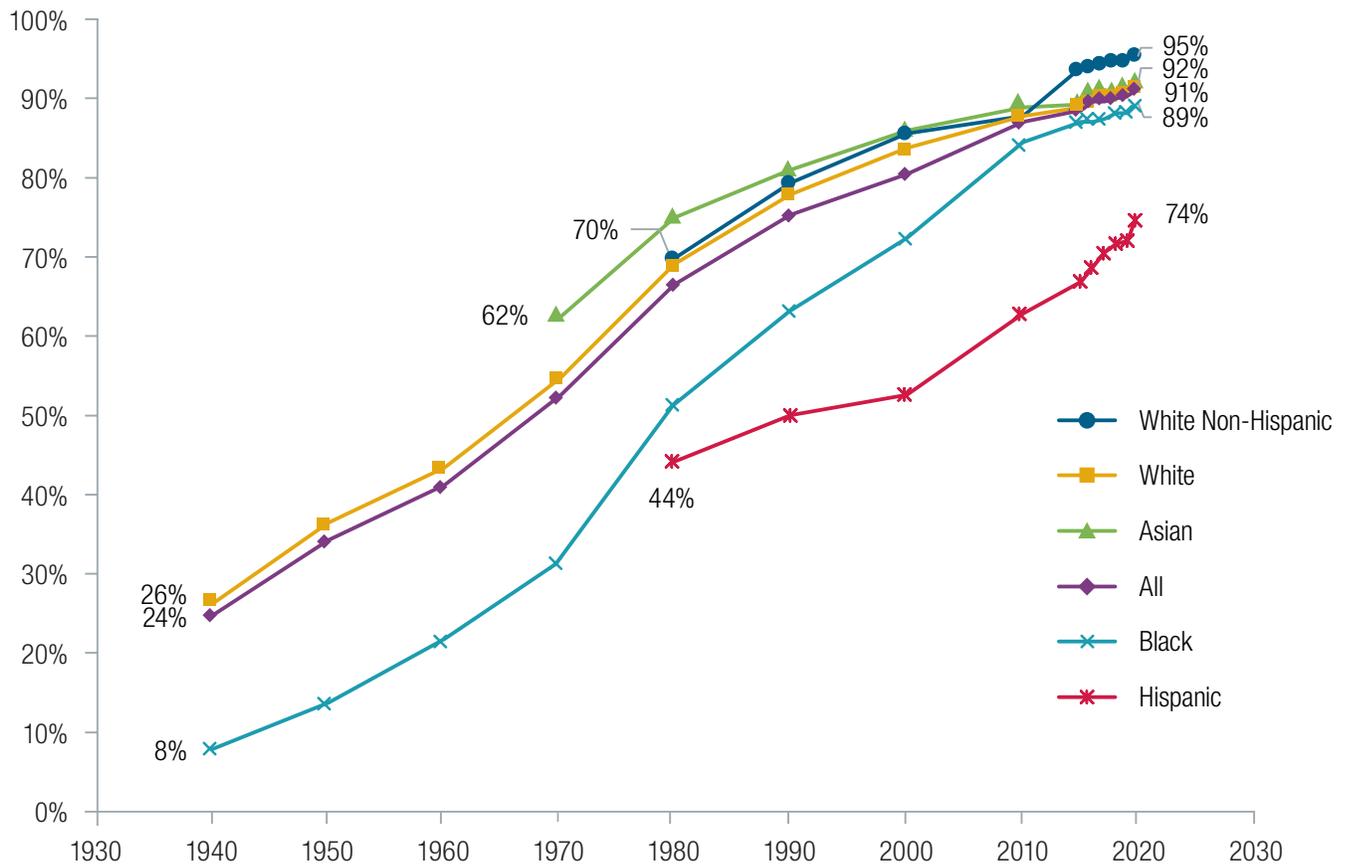
Differences in Educational Attainment by States. STS Figure 7e uses data from the Census Bureau ACS to show the percent of the population age 25 and over with a bachelor's degree or higher by state in 2005 and 2019. These data show large differences by state, with rates in the highest attainment states being twice the rates in the lowest attainment states. In 2019, the percentage of adults 25 and older with at least a bachelor's degree ranged from 21 percent in West Virginia, 22 percent in Mississippi, and 23 percent in Arkansas, to 41 percent in Maryland and New Jersey, 43 percent in Colorado, and 45 percent in Massachusetts.

Overall, between 2005 and 2019, the United States had a 23 percent increase in the percentage of adults with at least a bachelor's degree, increasing from 27 percent to 33 percent. The states with the largest percentage increase during this period were Tennessee (32 percent), Kentucky (30 percent), and North Carolina, South Carolina, and Maine (29 percent).

25 Cahalan, M., & Maxwell, J. (2007). *Exploring Demographic and Selected State Policy Correlates of State Level Educational Attainment and Achievement Indicators*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL. Retrieved from <https://www.slideshare.net/cheardsotorg/exploring-demographic-and-selected-state-policy-correlates-of-state-level-educational-attainment-and-achievement-indicators-aera2007-cahalan>.

26 The "White" race category is defined by Census as: "A person having origins in any of the original peoples of Europe, the Middle East, or North Africa. It includes people who indicate their race as "White" or report entries such as Irish, German, Italian, Lebanese, Arab, Moroccan, or Caucasian." The "White non-Hispanic" category began to be reported in 1980. This category "Includes people who reported White and no other race group and did not report Hispanic origin." White non-Hispanic excludes those persons who indicated they were of Hispanic origin. Persons of Hispanic origin may be of any race. Data classifications have changed over time, providing for separate Hispanic ethnicity identification in 1980 and choice of more than one race after 2003.

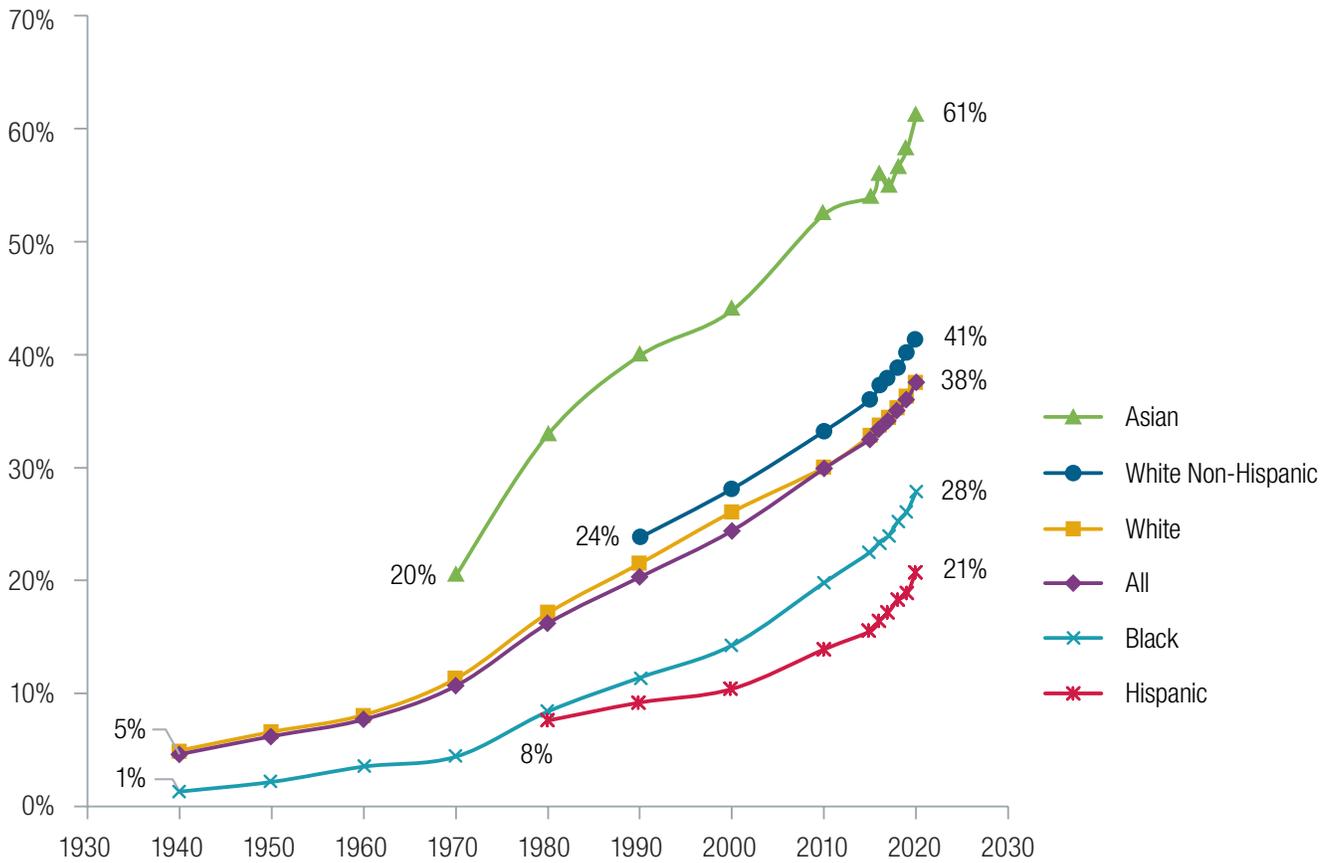
STS Figure 7c: Percentage of the population 25 years of age and older who attained a high school diploma or equivalent by race/ethnicity: selected years 1940-2020



NOTE: The “White” race category is defined as “A person having origins in any of the original peoples of Europe, the Middle East, or North Africa. It includes people who indicate their race as “White” or report entries such as Irish, German, Italian, Lebanese, Arab, Moroccan, or Caucasian.” The “White non-Hispanic” category began to be reported in 1980. This category “Includes people who reported White and no other race group and did not report Hispanic origin.” White non-Hispanic excludes those persons who indicated they were of Hispanic origin. Persons of Hispanic origin may be of any race. Data classifications have changed over time, providing for separate Hispanic ethnicity identification in 1980 and choice of more than one race after 2003. Data from 1940 to 2010 are from the Decennial Census. Data from 2010 to 2020 are from the Current Population Survey and American Community Survey.

SOURCE: U.S. Census Population Division Census 2000 PHC-T-41. (2015). *A Half-Century of Learning: Historical Statistics on Educational Attainment in the United States, 1940 to 2000*. Census data after 2000 retrieved from: <https://www.census.gov/data/tables/time-series/demo/educational-attainment/cps-historical-time-series.html>.

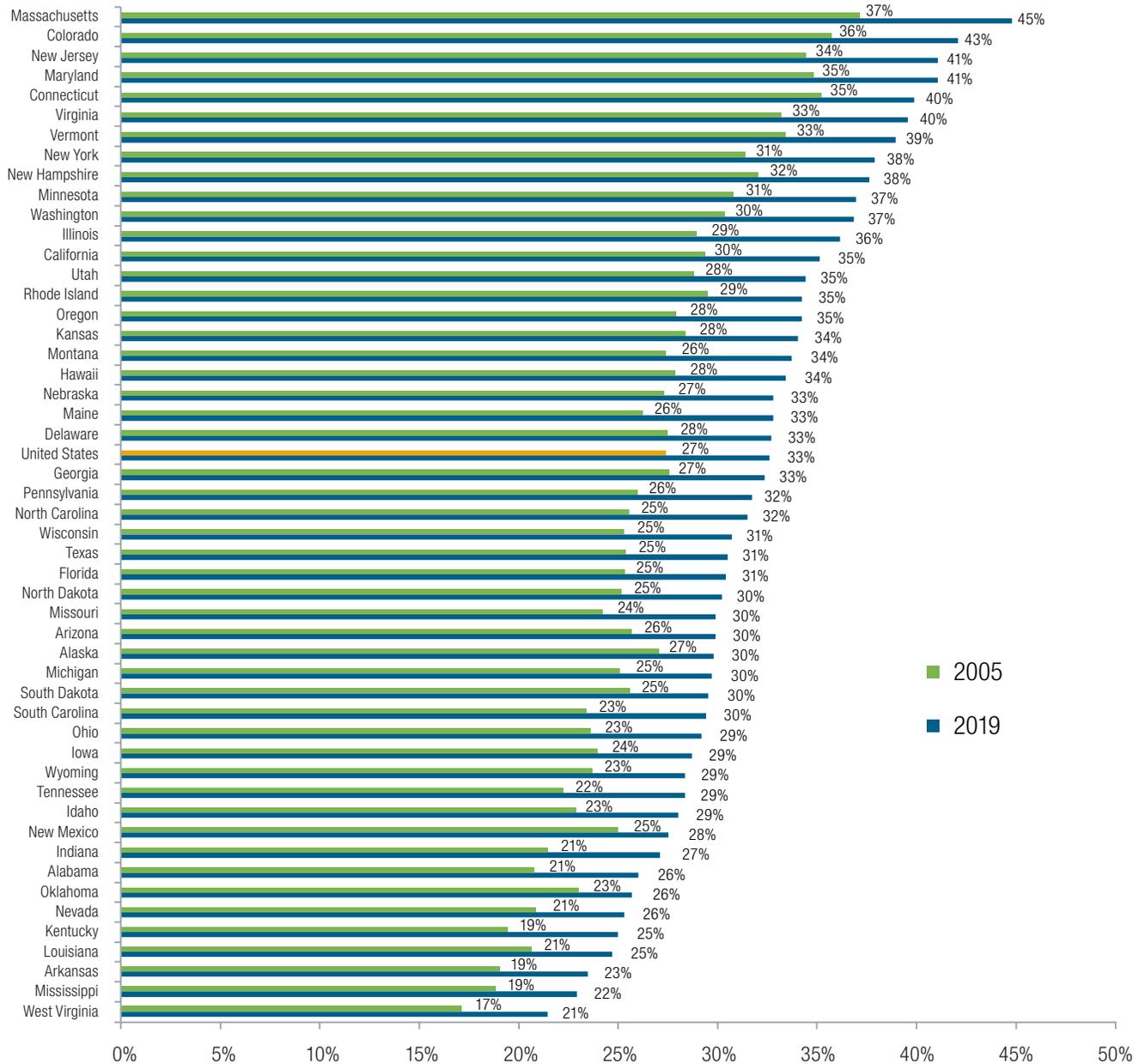
STS Figure 7d: Percentage of the population 25 years of age and older who attained a bachelor's degree or higher by race/ethnicity: selected years 1940-2020



NOTE: The “White” race category is defined as “A person having origins in any of the original peoples of Europe, the Middle East, or North Africa. It includes people who indicate their race as “White” or report entries such as Irish, German, Italian, Lebanese, Arab, Moroccan, or Caucasian.” The “White non-Hispanic” category began to be reported in 1980. This category “Includes people who reported White and no other race group and did not report Hispanic origin.” White non-Hispanic excludes those persons who indicated they were of Hispanic origin. Persons of Hispanic origin may be of any race. Data classifications have changed over time, providing for separate Hispanic ethnicity identification in 1980 and choice of more than one race after 2003. Data from 1940 to 2010 are from the decennial census. Data from 2010 to 2020 are from the Current Population Survey and American Community Survey.

SOURCE: U.S. Census Population Division Census 2000 PHC-T-41. (2015). *A Half-Century of Learning: Historical Statistics on Educational Attainment in the United States, 1940 to 2000*. Census data after 2000 retrieved from: <https://www.census.gov/data/tables/time-series/demo/educational-attainment/cps-historical-time-series.html>.

STS Figure 7e: Percentage of adults age 25 and over with a bachelor's degree or higher: 2005 and 2019



NOTE: Data are based on sample surveys of the entire population in the given age range residing within the United States, including both noninstitutionalized persons (e.g., those living in households, college housing, or military housing located within the United States) and institutionalized persons (e.g., those living in prisons, nursing facilities, or other healthcare facilities). Detail may not sum to totals because of rounding.

SOURCE: U.S. Census Bureau, 2005 & 2019 American Community Survey (ACS) 1-Year Estimates. Retrieved from <https://data.census.gov/cedsci/table?q=S1501&g=0100000US.04000.001&tid=ACSST1Y2019.S1501&hidePreview=true>.

Income and Wealth Inequality in the United States. Past editions of the *Indicators* report document differences in college enrollment, completion, and attainment rate by income levels and other demographic characteristics. Beginning with the 2018 edition, we begin to look more closely at income and wealth equity distribution levels and educational attainment. STS Figures 8a to 8f present information on the distribution of income and wealth in the United States.²⁷ The data come from the Census Bureau's household Current Population Survey (CPS),²⁸ the Internal Revenue Services' (IRS) Statistics of Income (SOI) data compiled from a large sample of individual income tax returns,²⁹ and the Federal Reserve's triennial Survey of Consumer Finance.³⁰ The Congressional Budget Office (CBO) has developed a model that combines CPS and SOI data to estimate household income both before and after taxes, as well as average taxes paid by income group back to 1979.³¹

The Rise in the Gini Index. STS Figure 8a displays trends in the Gini index from 1979 to 2017 as published by the Congressional Budget Office. The Gini index is a measure of income inequality that ranges from zero (the most equal distribution) to 1.0 (the least equal distribution). Gini indexes are calculated using income measures adjusted for household size. The larger the Gini index, the higher the inequality. Market income consists of labor income, business income, capital gains (profits realized from the sale of assets), capital income excluding capital gains, income received in retirement for past services, and other sources of income. Before-tax income is market income plus government transfers. Government transfers are cash payments and in-kind benefits from social insurance and other government assistance programs, such as Social Security benefits. Transfers include payments and benefits from federal, state, and local governments. After-tax income is before-tax income minus federal taxes. Federal taxes include individual income taxes, payroll taxes, corporate income taxes, and excise taxes.

STS Figure 8a shows that, for all three measures of income, the Gini coefficient was substantially higher in 2017 than in 1979. The Market Income Gini Index was 0.60 in 2017, up from 0.47 in 1979. The After Transfers and Tax Income Gini Index increased from 0.35 in 1979 to 0.43 in 2017.

27 An excellent guide to data on income inequality is provided in *A Guide to Statistics on Historical Trends in Income Inequality* by Chad Stone, Danilo Trisi, Arlo Sherman and Emily Horton (2017) published by the Center on Budget and Policy Priorities <https://www.cbpp.org/research/poverty-and-inequality/a-guide-to-statistics-on-historical-trends-in-income-inequality>.

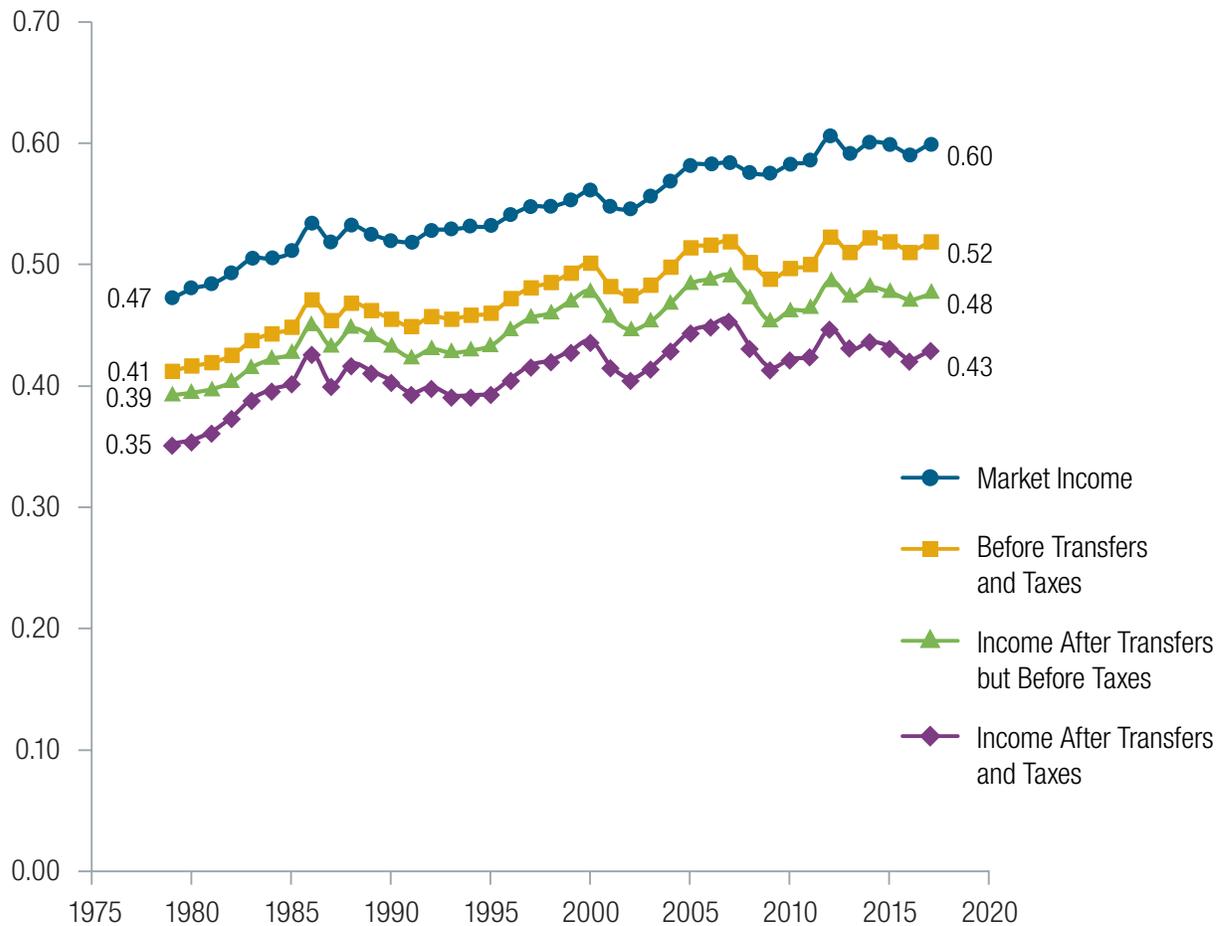
28 The Census Bureau publishes annual reports on income, poverty, and health insurance coverage in the U.S. based on the CPS data <http://www.census.gov/topics/income-poverty/income.html>.

29 IRS publishes an annual report on individual income tax returns based on the SOI Internal Revenue Service, "SOI Tax Stats—Individual Income Tax Returns Publication 1304," multiple years available.

30 The Federal Reserve collects income and wealth data in its triennial sample Survey of Consumer Finances (SCF). The last SCF was conducted in 2017 and covered information for 2016. Jesse Bricker et al. (2017, September). "Changes in U.S. Family Finances from 2013 to 2016: Evidence from the Survey of Consumer Finances," Federal Reserve Bulletin, 103(3). Retrieved from <https://www.federalreserve.gov/publications/files/scf17.pdf>.

31 Congressional Budget Office (July 9, 2019). *Distribution of Household Income*, 2016. Retrieved from <https://www.cbo.gov/publication/55413>.

STS Figure 8a: Gini index based on market, before-tax, and after-tax income: 1979 to 2017



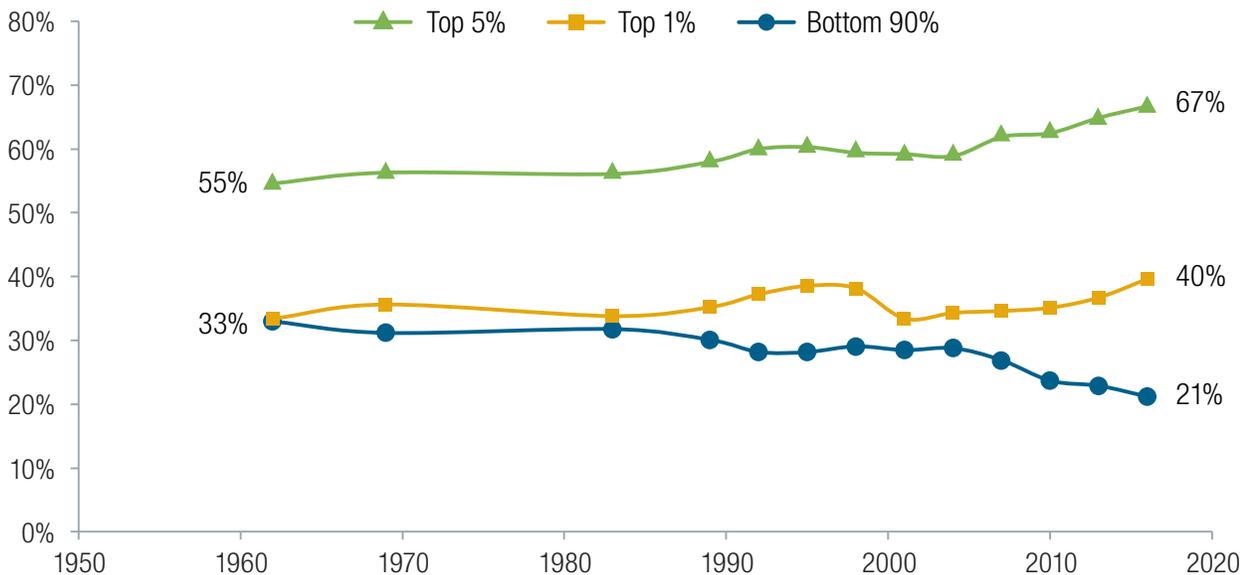
NOTE: The Gini index is a measure of income inequality that ranges from zero (the most equal distribution) to 1.0 (the least equal distribution). Gini indexes are calculated using income measures adjusted for household size. The larger the Gini index, the higher the inequality level. Market income consists of labor income, business income, capital gains (profits realized from the sale of assets), capital income excluding capital gains, income received in retirement for past services, and other sources of income. Before-tax income is market income plus government transfers. Government transfers are cash payments and in-kind benefits from social insurance and other government assistance programs. Transfers include payments and benefits from federal, state, and local governments. After-tax income is before-tax income minus federal taxes. Federal taxes include individual income taxes, payroll taxes, corporate income taxes, and excise taxes.

SOURCE: Congressional Budget Office (October 2020). *Distribution of Household Income, 2017*. Retrieved from <http://www.cbo.gov/publication/56575>.

Rise in Share of Wealth Held by Top 1 Percent. STS Figure 8b(i), using data from the National Bureau of Economic Research, presents data on the percent of wealth held by the top 1 percent, the top 5 percent, and the bottom 90 percent from 1962 to 2016. These data show the rise in wealth inequality. In 2016, the top 5 percent had over two-thirds of the nation's wealth, the top 1 percent held 40 percent, and the bottom 90 percent had just 21 percent.

Emmanuel Saez and Gabriel Zucman (2016),³² analysis of the share of wealth held by the top 1 percent and the top 0.5 percent of families in the U.S. from 1913 to 2012 shows that the current concentration of wealth is now approaching the high rates observed during the Great Depression in the late 1920s. After World War II until the late 1970s, the concentration of wealth declined. During the 1980s, this trend reversed and has accelerated in the last two decades. The top 1 percent and top 5 percent now hold the same share of the nation's wealth as they did in the 1920s (40 percent and 67 percent, respectively).³³

STS Figure 8b(i): Share of wealth held by top 5 percent, top 1 percent, and bottom 90 percent in the United States: Selected Years: 1962 to 2016



NOTE: Over the past century, the share of America's wealth held by the nation's wealthiest has changed markedly. The share peaked in the late 1920s, right before the Great Depression, then fell by more than half over the next three decades. The equalizing trends of the mid-20th century have now been almost completely undone. The wealthiest in the nation now hold as large a wealth share as they did in the 1920s.

SOURCE: National Bureau of Economic Research, as cited on the Inequality.org website. Retrieved from <https://inequality.org/facts/wealth-inequality/#household-wealth>.

- 32** Saez, E., & Zucman, G. (2016). Wealth Inequality in the United States since 1913: Evidence from Capitalized Income Tax Data. *Quarterly Journal of Economics*, 131(2), 519-578. Retrieved from <http://eml.berkeley.edu/~saez/SaezZucman2016QJE.pdf>.
- 33** National Bureau of Economic Research, as cited in Institute for Policy Studies, Inequality.org website. Retrieved from <https://inequality.org/facts/wealth-inequality/#household-wealth>.

Wealth and Race/Ethnicity. STS Figure 8b(ii) shows median family wealth and the percent of families with negative wealth by race/ethnicity in 1983 and 2016 in constant 2019 dollars. These are among the most unequal data reported in this *Indicators* report and have profound implications for issues of higher educational equity and justice in the United States.

Overall median family wealth declined by 2 percent in constant 2019 dollars between 1983 and 2016, falling from \$89,578 to \$87,015. But the overall medians mask the stark contrast between the high median family wealth of Whites and the low median family wealth of Blacks and Latinos. Moreover, differences in median family wealth increased between 1983 and 2016.

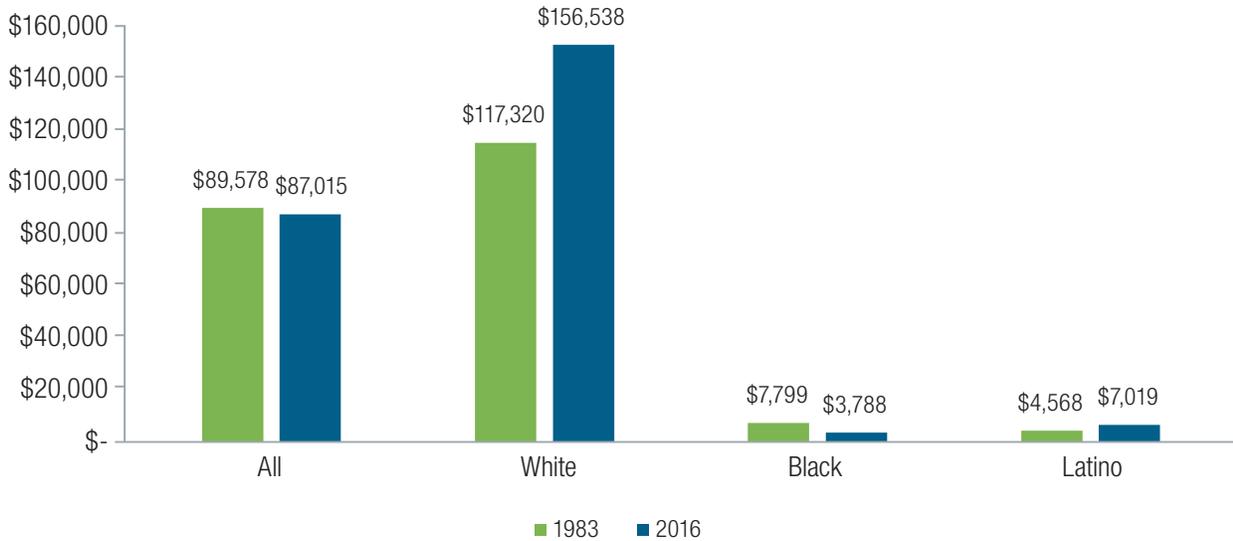
Between 1983 and 2016, White median family wealth increased by 33 percent in constant 2019 dollars, rising from \$117,320 to \$156,538. At the same time, Black median family wealth fell by 51 percent, declining from \$7,799 to \$3,788. In 1983, White median family wealth was 15 times higher than Black median family wealth; in 2016, it was 41 times higher. Latino median family wealth increased by 53 percent in constant 2019 dollars, increasing from \$4,568 in 1983 to \$7,019 in 2016. But White median family wealth was 26 times higher than Latino family wealth in 1983 and 22 times higher in 2016.

Negative Family Wealth. Among the most disturbing of the wealth data by race/ethnicity is the percent of families with negative wealth, meaning that they owe more than they have in assets. The percent of all families with negative wealth was 21 percent in 2016, up from 16 percent in 1983. More than one-third (37 percent) of Black families and 33 percent of Latino families had negative wealth in 2016. The proportion of Black families with negative wealth increased from 34 percent in 1983 to 37 percent in 2016, while the percent of Latino families with negative family wealth declined from 40 percent in 1983 to 33 percent in 2016.

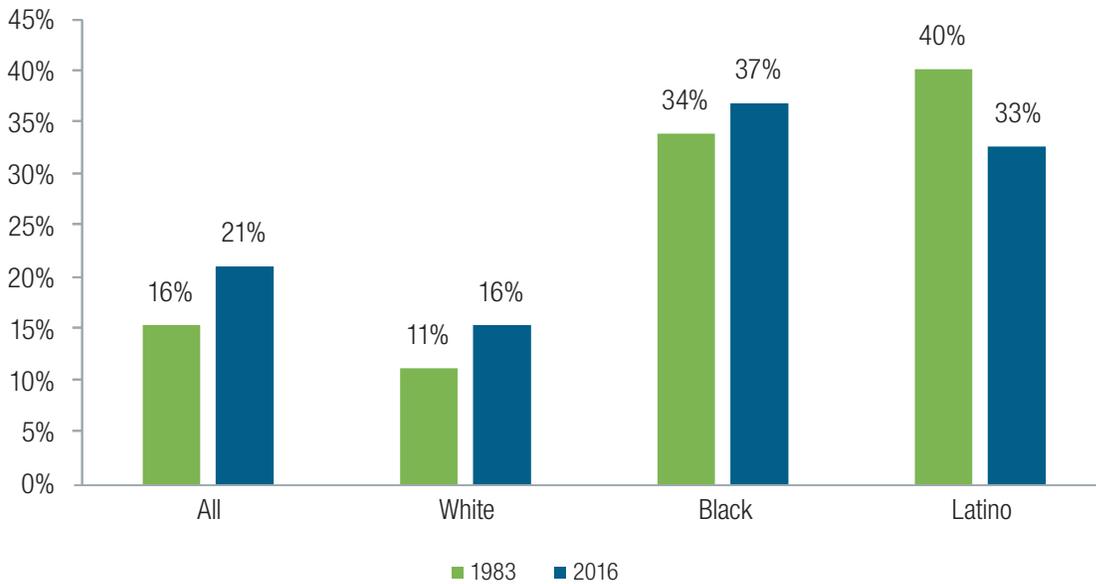
Household Income Disaggregated by Race and Ethnicity for Dependent 18- to 24-year-olds. Using data from the Current Population Survey (CPS) data on household income STS Figure 8b(iii) displays the percentage distribution of the family income quartiles of the traditional college age population of 18- to 24-year-olds by race/ethnicity in 2019. These data further reveal the stark differences in the family income by race/ethnicity in the United States. In 2019, only 12 percent of Hispanics dependent youth and 11 percent of Black dependent youth were in the highest family household income quartile, in comparison with 31 percent of Whites and 32 percent of Asian dependent youth.

STS Figure 8b(ii): Median family wealth and percent of families with negative wealth by race/ethnicity: 1983 and 2016 (in 2019 Constant Dollars)

Median Wealth in 2019 Constant Dollars



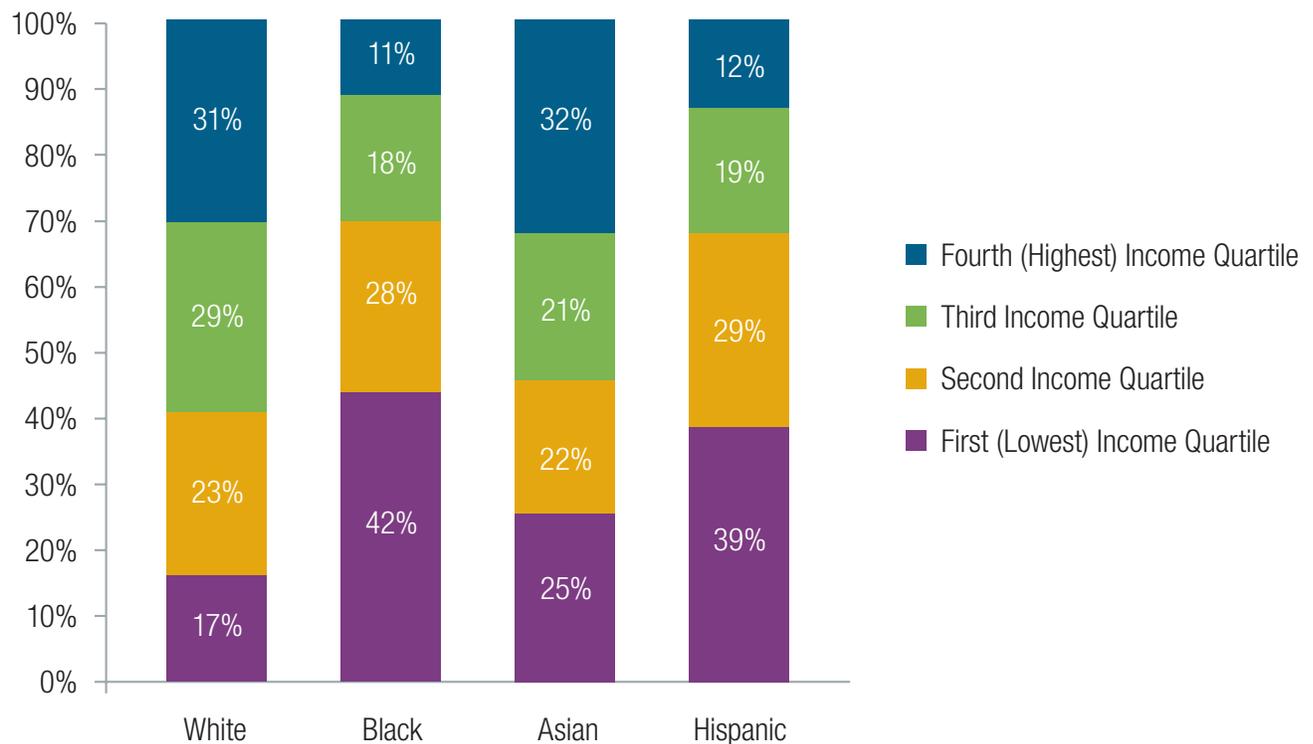
Percent with Negative Wealth



NOTE: This figure presents data on the median wealth of families by race/ethnicity in 2019 constant dollars. Also given is the percent of families that have zero or “negative” wealth (meaning the value of their debts exceeds the value of their assets).

SOURCE: Institute for Policy Studies, as cited on the Inequality.org website. Retrieved from <https://inequality.org/facts/wealth-inequality/#household-wealth>.

STS Figure 8b(iii): Percentage distribution of the family income quartiles of dependent 18- to 24-year-olds by race/ethnicity: 2019



NOTE: Caution is needed in interpreting these data, as CPS sample survey data disaggregated by income quartile and race/ethnicity are subject to large sampling errors. Race categories exclude persons of Hispanic ethnicity. Annual data collected by Census and reported by BLS yearly are from the October supplement to the Current Population Survey (CPS), a national sample of about 60,000 households. Each October, a supplement to the CPS gathers information about school enrollment.

SOURCE: U.S. Census Bureau, 1976-2019, as adapted by Tom Mortenson, *Postsecondary Education Opportunity (PEO) Newsletters* and database, Washington, DC: The Pell Institute for the Study of Opportunity in Higher Education. Retrieved from <http://www.pellinstitute.org/peo.shtml>. Calculated from October Current Population Survey File (formerly Table 14 in Census Bureau's School Enrollment Report), tabulated using the U.S. Census Bureau online data retrieval tool, Dataferrett; School Enrollment Data, 1970-2018, and the U.S. Census Bureau, online extraction tool, MDAT, <https://data.census.gov/mdat/#/>; which replaces Datafarrett, using CPS School Enrollment Supplement dataset, 2019, compiled by Nicole Brunt and Tom Mortenson.

Household Income Distribution by Quintile. The CPS data on household income by income quintiles from 1967 to 2019 also show growing inequality (STS Figure 8c). The highest 20 percent of the nation's households had 52 percent of the income in 2019, up from 44 percent in 1967. The bottom 20 percent of households had 3 percent of the nation's household income in 2019, down from 4 percent in 1967.

Range of Income. STS Figure 8d displays the average household income, government transfers, and taxes paid by income quintile. Quintile groupings are based on before-tax household income, adjusted for household size. In 2017, the highest 20 percent of households had a market income that was 14 times higher than the lowest quintile (\$309,000 versus \$21,000). After transfers and taxes, the highest quintile had an income that was, on average, 6 times higher

than the household income of the lowest 20 percent (\$230,000 versus \$36,000). The disparity in household income between the top and bottom quintiles in the U.S. is among the largest level of inequality in the world.³⁴

Median Household Income by State. STS Figure 8e displays median household income by state in 1990 and 2019. The data on median income by state are from the Census and include all households. As indicated in the *Postsecondary Education Opportunity* Newsletter, the correlation between average per capita income and education was 0.79 in 2016, up from 0.41 in 1989.³⁵

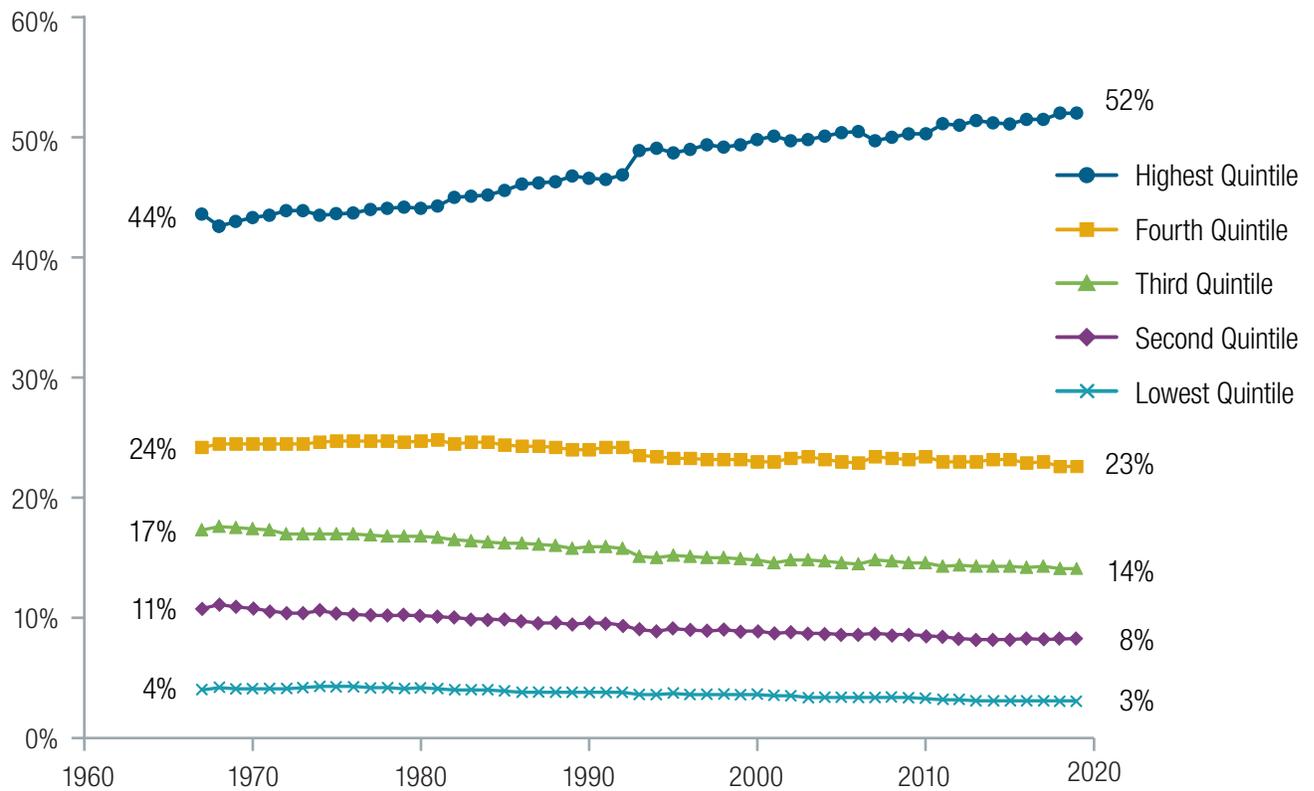
Median household income varies widely across states, and in 2019 ranged from less than \$45,000 in Mississippi (\$44,787), to more than \$88,000 in Hawaii (\$88,006), the District of Columbia (\$93,111), and Maryland (\$95,572).

Poverty and Gini Index by State. STS Figure 8f displays the percent in poverty and the Gini index by state. In 2019, average poverty rates ranged from 6 percent in New Hampshire and 7 percent in Minnesota to 19 percent in Louisiana and Mississippi. Gini index rates ranged from .43 in Utah, Idaho, and Wyoming to .50 in Connecticut and Louisiana, and .51 in the District of Columbia and New York.

34 Pickett, K.E. & Wilkinson, R.G. (2015). Income Inequality and Health: A Causal Review. *Social Science & Medicine*, 128, 316-326; Wilkinson, R.G. & Pickett, K.E. (2006). Income Inequality and Population Health: A Review and Explanation of the Evidence. *Social Science & Medicine*, 62 (7), 1768-1784; Dorling, D. (2014). *Inequality and the 1%*. London: Verso.

35 Mortenson, T. (2017). State Correlates of Educational Attainment. *Postsecondary Education Opportunity*, 293. Washington, DC: Pell Institute for the Study of Opportunity in Higher Education. Retrieved from <http://www.pellinstitute.org/peo.shtml>.

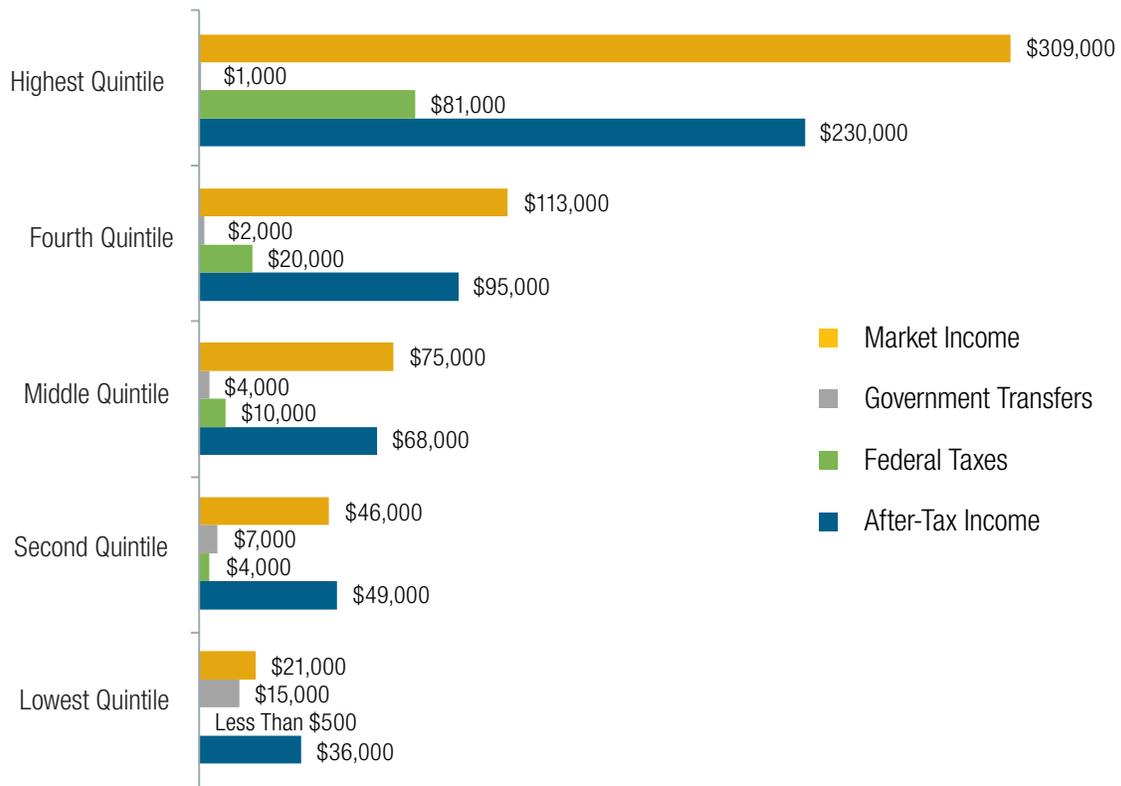
STS Figure 8c: Shares of United States household income by quintiles: 1967-2019



NOTE: Income in 2019 CPI-U-RS adjusted dollars. Beginning with 2010, standard errors calculated using replicate weights. For further explanation of income inequality measures, see “The Changing Shape of the Nation’s Income Distribution: 1947-1998,” Current Population Reports, Series P60-204.

SOURCE: Current Population Survey (CPS) Table A-4 Selected Measures of Household Income Dispersion: 1967-2019. Retrieved from <https://www.census.gov/data/tables/time-series/demo/income-poverty/historical-income-inequality.html>.

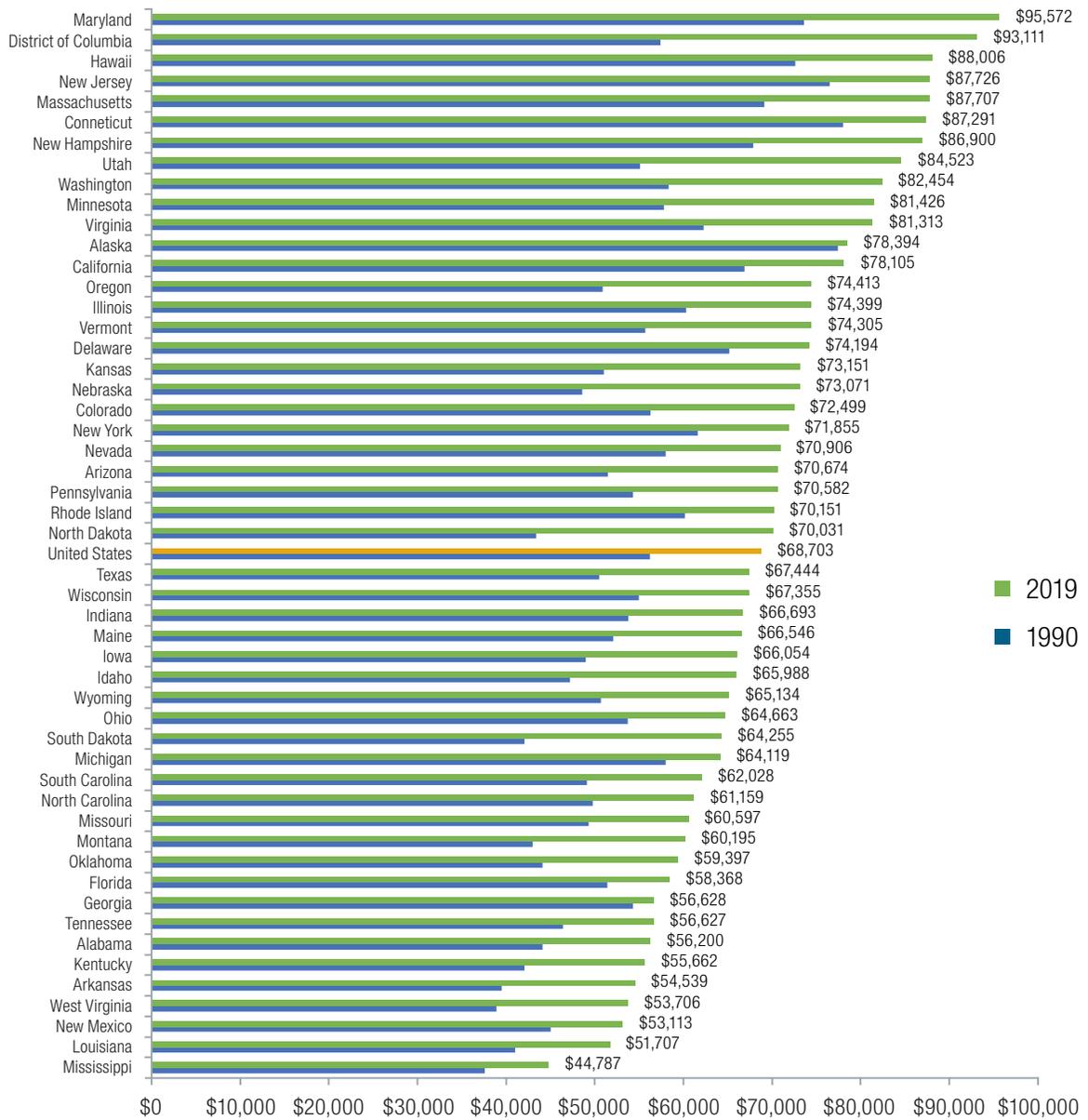
STS Figure 8d: Average household market income and after-tax-income by before-tax income quintiles: 2017



NOTE: Market income consists of labor income, business income, capital gains (profits realized from the sale of assets), capital income excluding capital gains, income received in retirement for past services, and other sources of income. Government transfers are cash payments and in-kind benefits from social insurance and other government assistance programs. Those transfers include payments and benefits from federal, state, and local governments. Federal taxes include individual income taxes, payroll taxes, corporate income taxes, and excise taxes. After-tax income is before-tax income minus federal taxes. Income groups are created by ranking households by before-tax income, adjusted for household size. Quintiles (fifths) contain equal numbers of people.

SOURCE: Congressional Budget Office (2020). *The Distribution of Household Income, 2017*. Retrieved from <https://www.cbo.gov/publication/56575>.

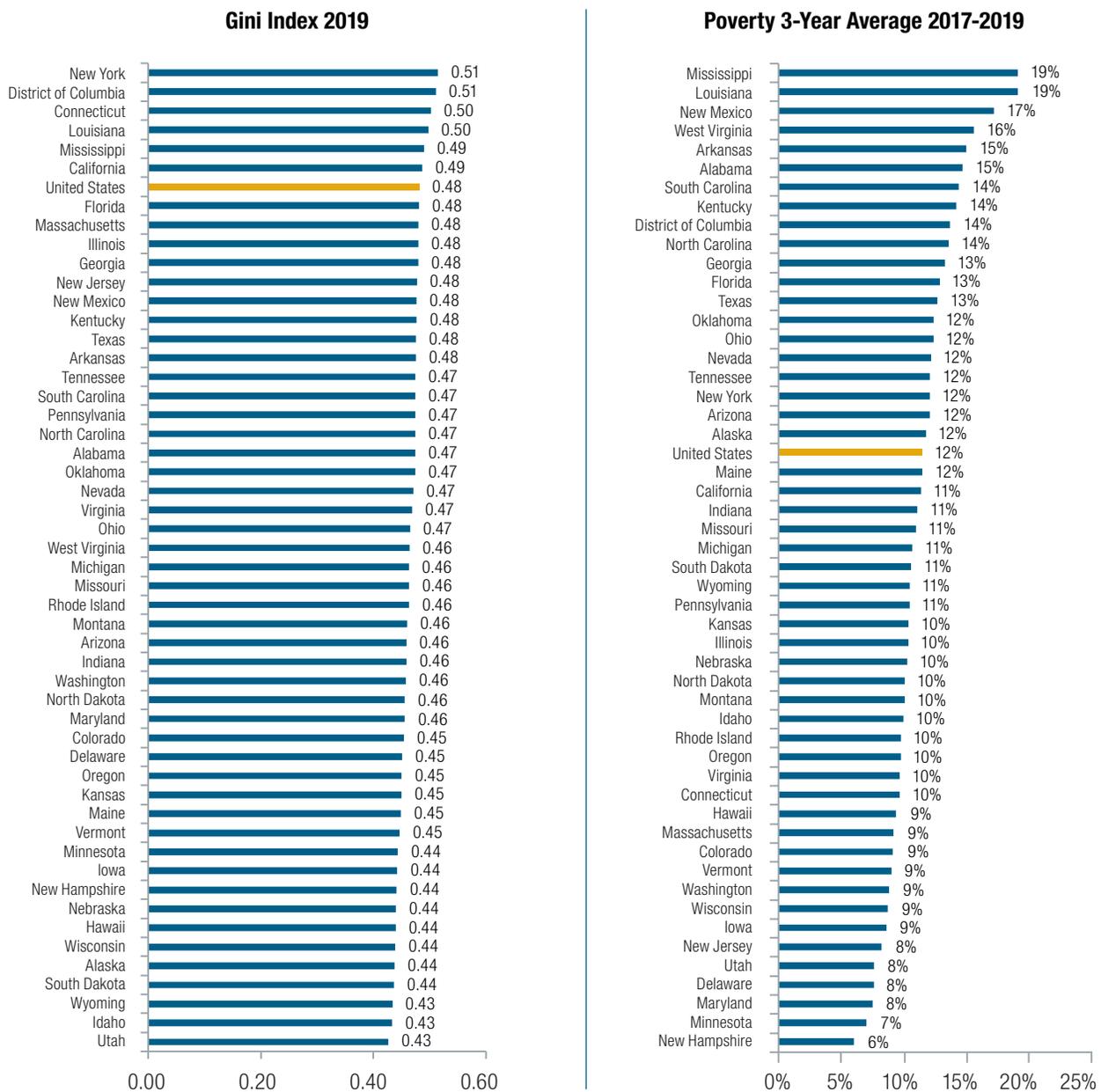
STS Figure 8e: Median household income by state: 1990 and 2019



NOTE: Constant dollars adjusted by the Consumer Price Index research series using 2019 CPI-U-RS adjusted dollars.

SOURCE: U.S. Department of Commerce, Census Bureau, 1990 Summary Tape File 3 (STF 3), "Median Household Income in 1989," retrieved May 12, 2005; Current Population Survey (CPS) Table H-8 Median Household Income by State (2019). Retrieved from <https://www.census.gov/data/tables/time-series/demo/income-poverty/historical-income-households.html>.

STS Figure 8f: Average poverty rate and Gini Inequality Index by state: 2017-2019



NOTE: Poverty rates represent 3-year averages for 2017-2019. The Gini index is a measure of income inequality that ranges from zero (the most equal distribution) to 1.0 (the least equal distribution). Gini indexes are calculated using income measures adjusted for household size. The larger the Gini index, the higher the inequality level. Gini indexes are tabulated based upon different inclusions and exclusions (see STS Figure 8a). In STS 8f, the Gini index used is “Income after Government Transfers but before Taxes.” Before-tax income is market income plus government transfers. Government transfers are cash payments and in-kind benefits from social insurance and other government assistance programs. Transfers include payments and benefits from federal, state, and local governments. The 2019 Gini index for the U.S. after transfers but before taxes was 0.48.

SOURCE: U.S. Census Bureau, Current Population Survey, 2016 to 2019 Annual Social and Economic Supplements (Poverty rates). Retrieved from <https://www.census.gov/content/dam/Census/library/publications/2019/acs/acsbr18-01.pdf>; American Community Survey, Retrieved from: <https://data.census.gov/cedsci/table?q=b19083&g=0100000US.04000.001&tid=ACSDT1Y2019.B19083&moe=false&tp=false&hidePreview=true>.

Inequality and Intergenerational Mobility. In a recent review of research,³⁶ Elisabeth Jacobs and Liz Hipple concluded that relative to many other developed countries, the United States has both higher levels of inequality and lower levels of intergenerational mobility.³⁷

The relationship between a parent and child's economic outcomes is strongest in countries with high inequality (such as the United States) and lower in countries with less inequality (such as Finland, Norway, and Denmark).³⁸ Economist Raj Chetty identified dramatic geographic variation in mobility across the United States and by race/ethnicity. In the United States, there has been an inflation-adjusted decline in mobility for each successive birth cohort since 1940.³⁹

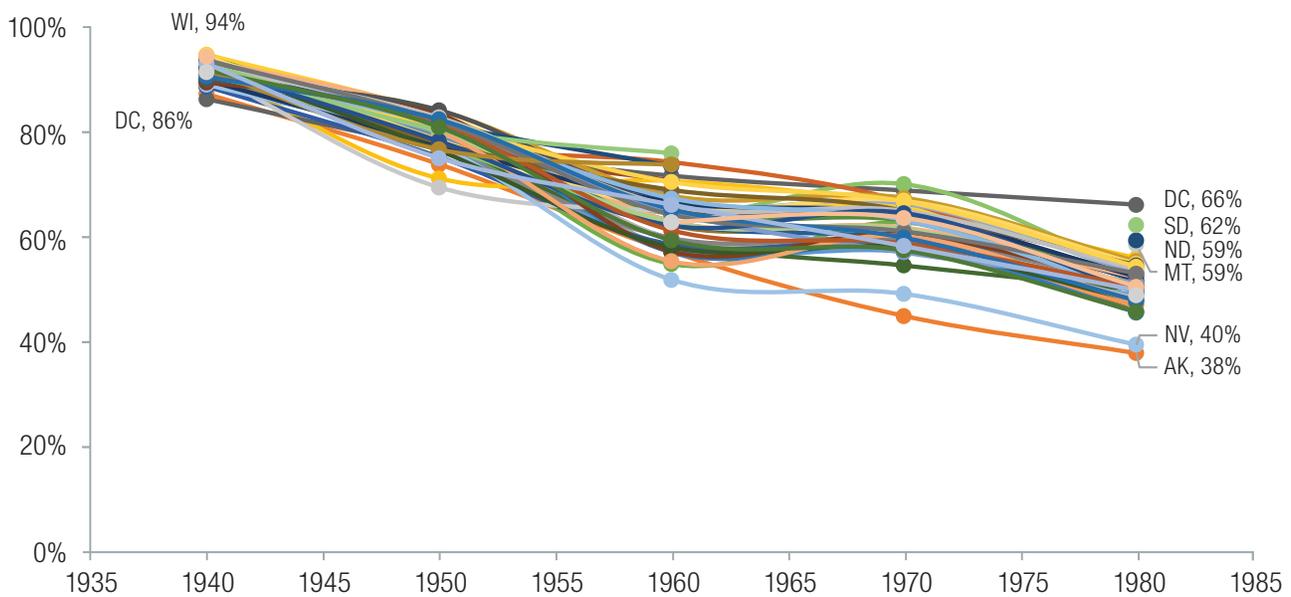
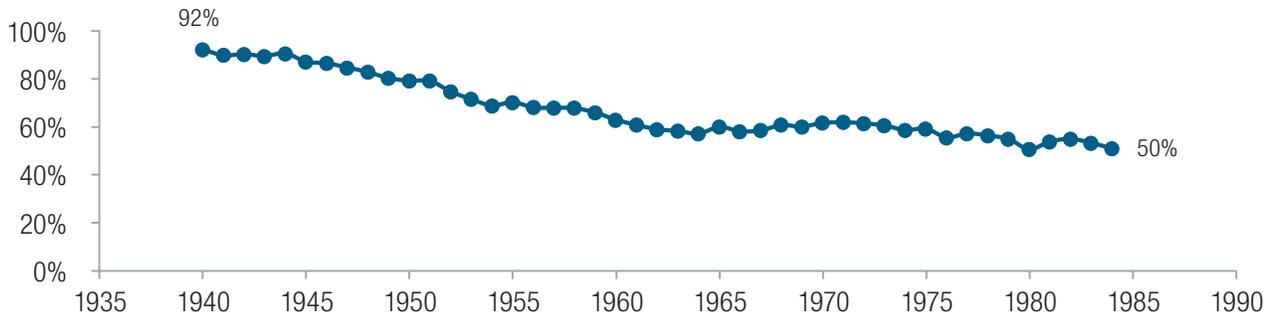
STS Figure 9 uses national and state data provided on the *Opportunity Insights* website to document the decline in the percent of children who at age 30 earn more than their parents as also measured at that age, for cohorts born from 1940 to 1984.⁴⁰ As Chetty and colleagues conclude:

*The rates of absolute mobility have fallen from approximately 90% for children born in 1940 to 50% for children born in the 1980s. Absolute income mobility has fallen across the entire income distribution, with the largest declines for families in the middle class.*⁴¹

STS Figure 9 also shows an increase in the variation in this measure of mobility across states.

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- 36** Jacobs, E. & Hipple, L. (2018). *Are Today's Inequalities Limiting Tomorrow's Opportunities? A Review of the Social Sciences Literature on Economic Inequality and Intergenerational Mobility*. Washington, DC: Washington Center for Equitable Growth. Retrieved from: <https://equitablegrowth.org/research-paper/are-todays-inequalities-limiting-tomorrows-opportunities>.
- 37** Jantti, M., Bratsberg, B., Røed, K., Raaum, O., Naylor, R., Österbacka, E., Björklund, A., & Eriksson, T. (2006). *American Exceptionalism in a New Light: A Comparison of Intergenerational Earnings Mobility in the Nordic Countries, the United Kingdom, and the United States*. Bonn: Institute for the Study of Labor. Retrieved from <http://ftp.iza.org/dp1938.pdf>.
- 38** Corak, M. (2013). Income Inequality, Equality of Opportunity and Intergenerational Mobility. *Journal of Economic Perspectives*, 27(3), 79–102.
- 39** Chetty, R., Grusky, D., Hell, M., Hendren, N., Manduca, R., & Nrang, J. (2017). The Fading American Dream: Trends in Absolute Income Mobility since 1940. *Science*, 356 (6336), 398–406. Retrieved from <http://science.sciencemag.org/content/356/6336/398/tab-pdf>; Chetty, R., Friedman, J. N., Saez, E., Turner, N., & Yagan, D. (2017). *Mobility Report Cards: The Role of Colleges in Intergenerational Mobility*. Cambridge, MA: National Bureau of Economic Research. NBER Working Paper No.23618. Retrieved from <https://www.nber.org/papers/w23618.pdf>; Chetty, R., Hendren, N., Jones, M.R., Porter, S.R. (2018). Race and Economic Opportunity in the United States: An Intergenerational Perspective. Cambridge, MA: National Bureau of Economic Research. NBER Working Paper No. 24441.
- 40** *Opportunity Insights* (<https://opportunityinsights.org>) is a non-partisan, not-for-profit organization based at Harvard University and directed by Raj Chetty, John Friedman, and Nathaniel Hendren. The website gives its mission as follows: “We conduct scientific research using ‘big data’ on how to improve upward mobility and work collaboratively with local stakeholders to translate these research findings into policy change. We also train the next generation of social scientists and practitioners to improve opportunity for all.”
- 41** Chetty, R., et al. (2019). Retrieved from <https://opportunityinsights.org/data>.

STS Figure 9: Percent of cohorts of children who at age 30 have a higher inflation-adjusted income than their parents at age 30, for the U.S. and states: 1940-1984 birth cohorts



NOTE: Absolute mobility is measured by comparing children's household incomes at age 30 (CPI adjusted) with their parents' household incomes at age 30. Rates of absolute mobility declined from about 90 percent for children born in the 1940s to 50 percent to those born in the 1980s. Absolute mobility declined across the entire distribution, with the largest declines in the middle-income groups.

SOURCE: Chetty, R., Grusky, D., Hell, M., Hendren, N., Manduca, R., & Nrang, J. (2017). The Fading American Dream: Trends in Absolute Income Mobility since 1940. *Science*, 356 (6336), 398–406. Retrieved from <http://science.sciencemag.org/content/356/6336/398/tab-pdf>; Opportunity Insights website, The Fading American Dream: Trends in Absolute Income Mobility since 1940 [Data file]. Retrieved from https://opportunityinsights.org/data/?geographic_level=0&topic=0&paper_id=546#resource-listing.

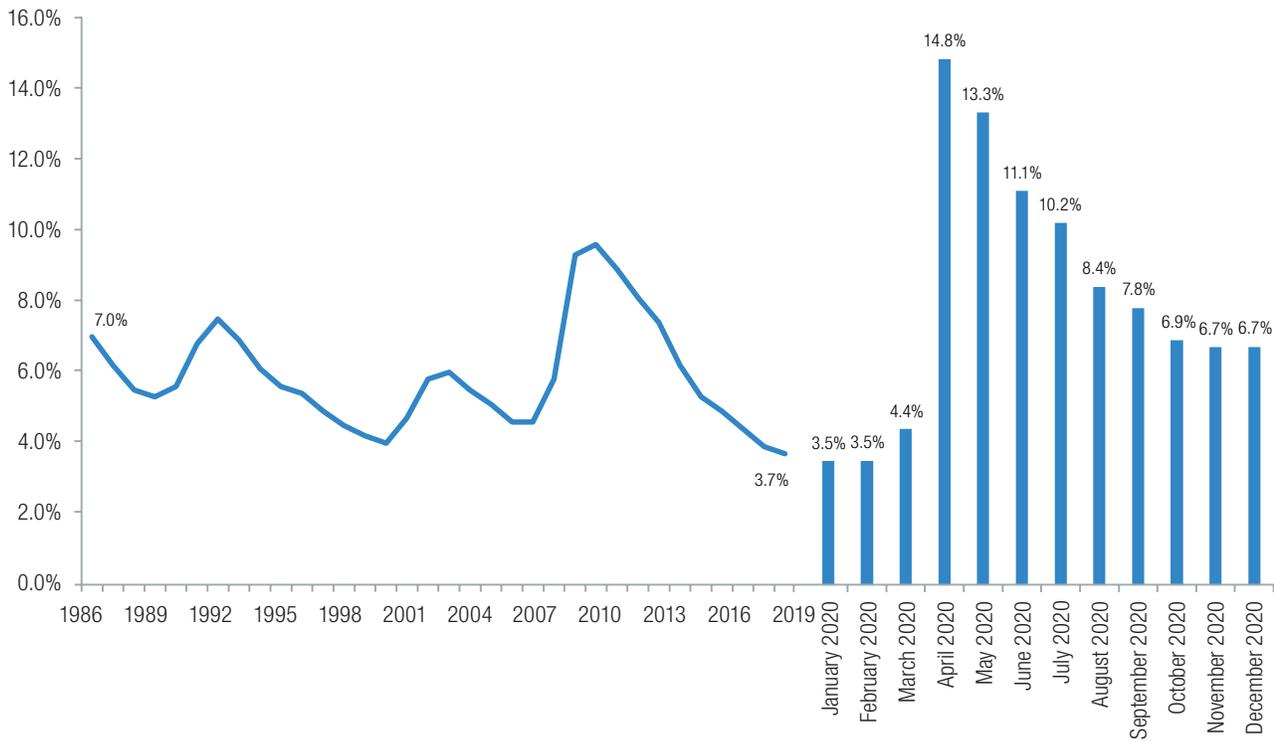
COVID-19: A Special Data Section

The COVID-19 pandemic has unmasked the vulnerabilities and inequities across the globe in our interrelated economic, health care and educational systems. These inequities have co-existed with interrelated challenges in the United States over many generations, but they cannot be ignored anymore. The pandemic has forced them to the center of discussions in the rebuilding of a more equitable education system for all students, including low-income, first-generation students, and students with disabilities. The COVID-19 statistics reported below reveal the stark differences in unemployment rates, and in computer access and internet connectivity, especially between communities of color and other ethnic minorities.

Unemployment Rates. Figure 10a shows the unemployment rates for the United States since 1986 through 2020, with a breakdown of monthly data during the 2020 year, in which COVID-19 had a major impact. Unemployment rates have fluctuated over the past decades but were noticeably higher during the recession in the early 1990s and during the Great Recession of 2008. During the coronavirus crisis, unemployment rates soared, reaching a peak of 14.8 percent in April 2020.

As the data for Figure 10b illustrate, employment rates for working college students have changed dramatically in the last year. From September 2019 to September 2020, the rate of change for 16- to 24-year-old employed college students, has gone down an average of 19 percent. Looking at it the other way, unemployment rates for 16- to 24-year-old college students have increased by 102 percent from September 2019 to September 2020. Hispanics had the largest increase of unemployed enrolled college students (195 percent), while Whites had the lowest increase (84 percent).

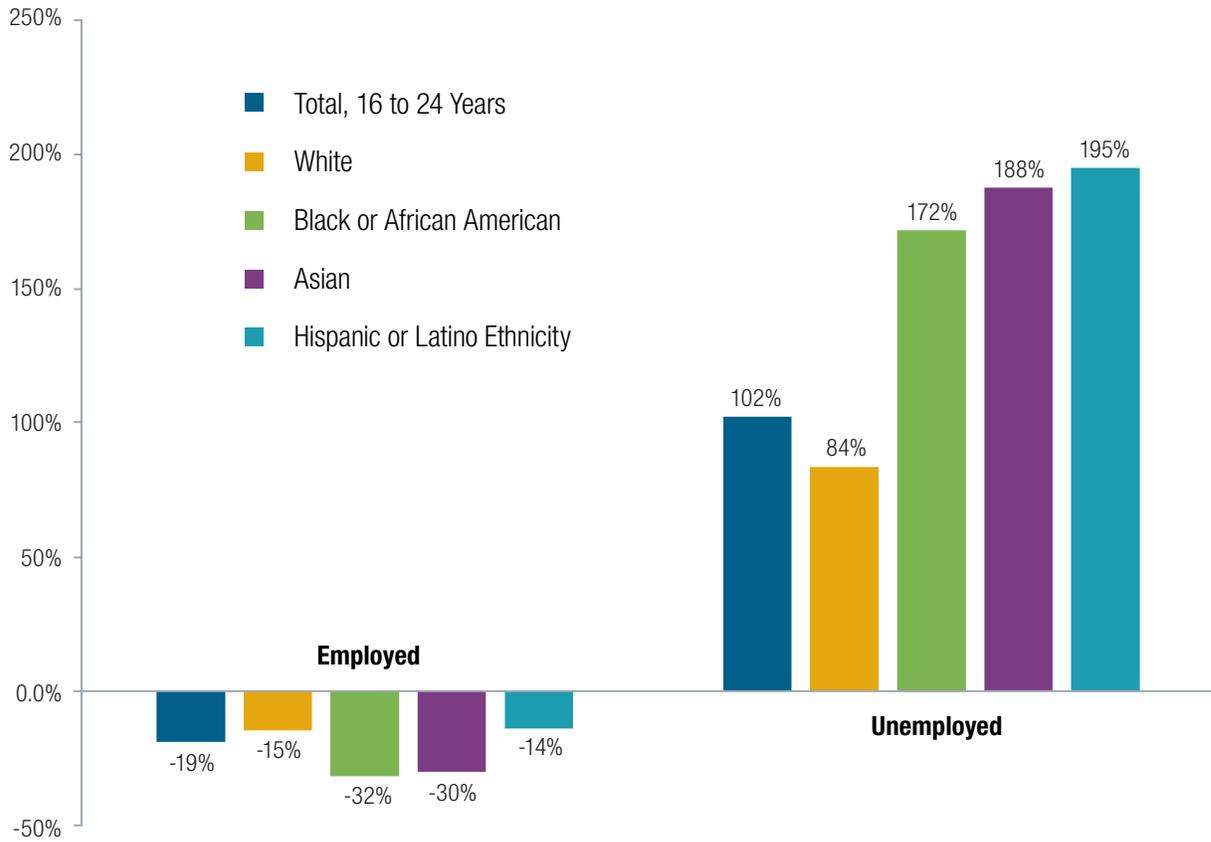
STS Figure 10a: Percentage of the civilian labor force, age 16 years and over, that is unemployed: 1986 to 2019 and by month for 2020



NOTE: Revisions to population controls and other changes can affect the comparability of labor force levels over time. In recent years, updated population controls have been introduced annually with the release of January data.

SOURCE: United States Bureau of Labor Statistics, Current Population Survey, 1986 to 2020. Retrieved from <https://www.bls.gov/web/empsit/cpseea01.pdf>.

STS Figure 10b: Percentage change of enrolled 16-to-24-year-olds in college by employment status and by race/ethnicity between September 2019 and September 2020



NOTE: The coronavirus hit college students hard in the job market. In the course of one year, between September 2019 and September 2020, employment for enrolled 16-to-24-year-old college students decreased by 19 percent while unemployment increased by 102 percent. Blacks had the largest percentage decline (-32 percent) among employed college students and Hispanics had the largest growth in unemployment among enrolled college students.

SOURCE: United State Bureau of Labor Statistics, Current Population Survey, 2019 and 2020.

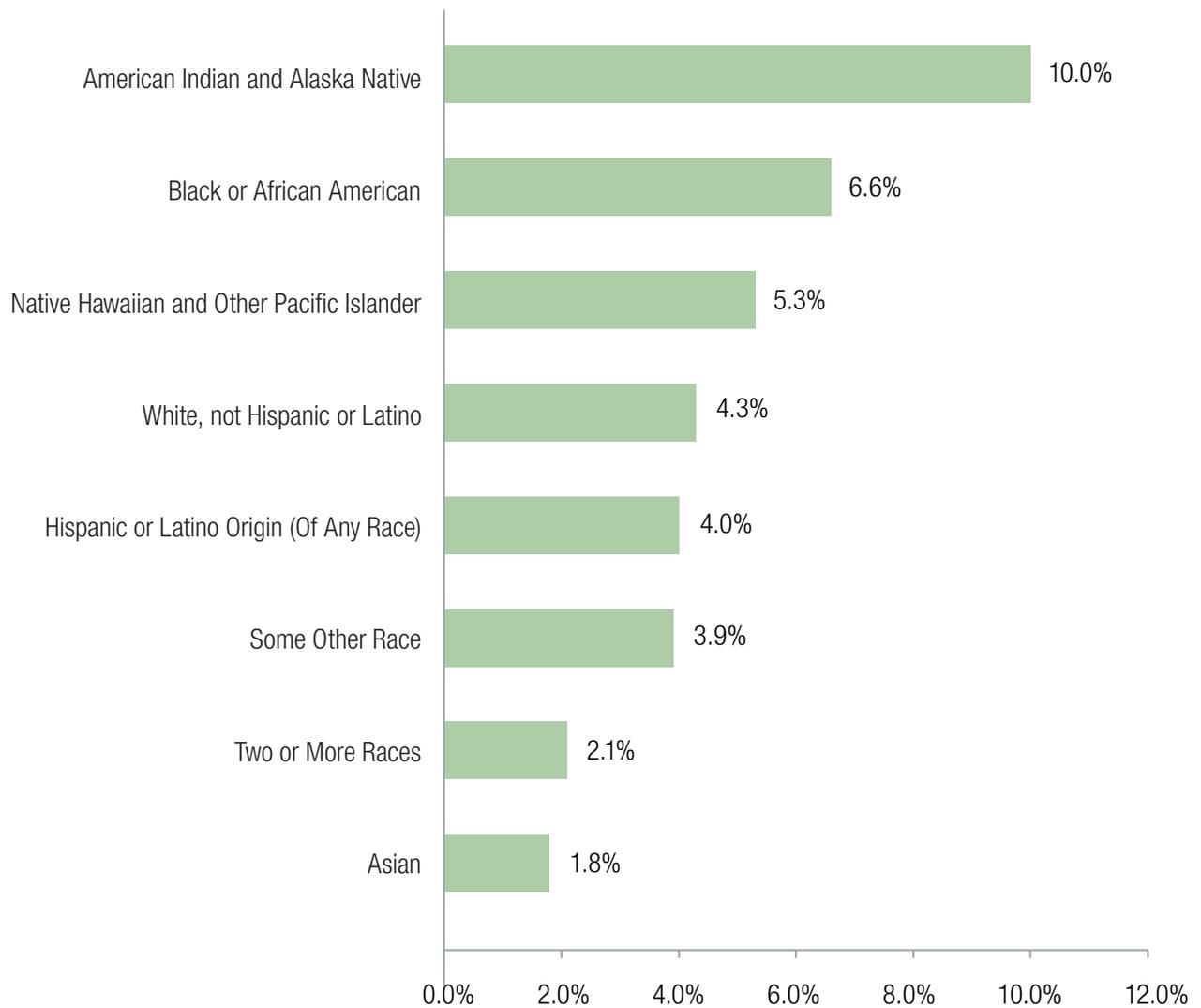
Computer Access and Internet Connectivity. Starting in spring 2020, computers and internet access became a necessity for almost everyone, but especially for those enrolled in school. Remote learning requires the use of computers and/or smart devices with access to the internet, but the digital divide reveals sizable differences across race/ethnicity and incomes.

Access to Computers by Race/ethnicity. STS Figure 11a highlights the differences by race and ethnicity that existed as of 2019 in the percentage of households with no computer access. The percentage of households with no computer ranged from 1.8 percent for Asian households to 10 percent for American Indian and Alaska Natives and 6.6 percent for Black or African Americans.

Internet Connectivity by Race/Ethnicity. As STS Figure 11b displays, internet connectivity also varied across race/ethnicity. Asians were most likely to have a broadband internet subscription (95 percent) and American Indian and Alaska Natives were least likely (78 percent).

Household Income. In 2019, 87 percent of United States households had an internet subscription; however, as STS Figure 11c conveys, the differences in type of connectivity varied by household income. Households with incomes below \$20,000 were more likely to have no internet subscription (36 percent) and households with incomes above \$75,000 were more likely to have a broadband internet subscription (96 percent).

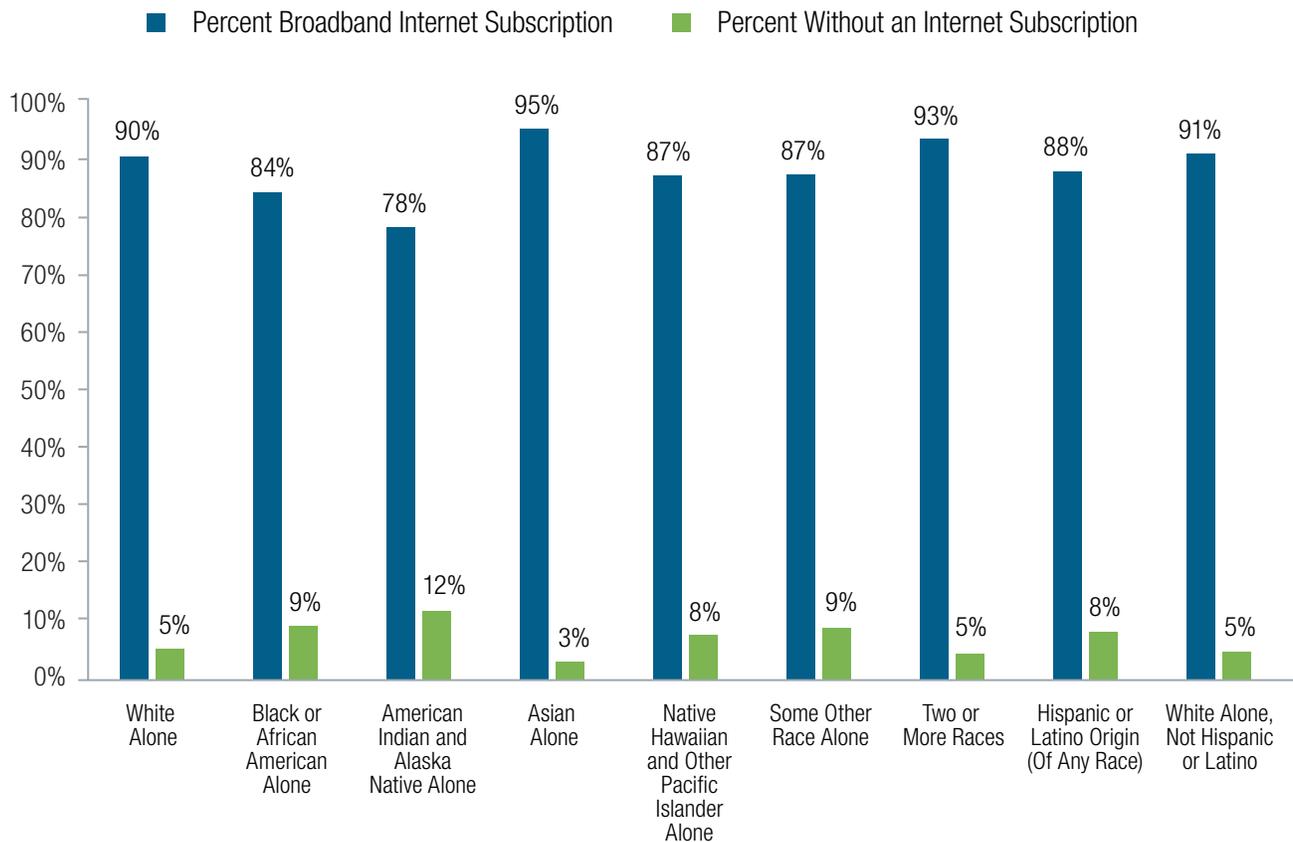
STS Figure 11a: Percentage of the United States population with no computer in household by race/ethnicity in 2019



NOTE: Having “No computer in household” consists of those who said “No” to all of the following types of computers: Desktop or laptop; smartphone; tablet or other portable wireless computer; and some other type of computer.

SOURCE: United States Census Bureau, American Community Survey, 2019. Retrieved from <https://data.census.gov/cedsci/table?q=S28&d=ACS%201-Year%20Estimates%20Subject%20Tables&tid=ACSST1Y2019.S2802&hidePreview=true>.

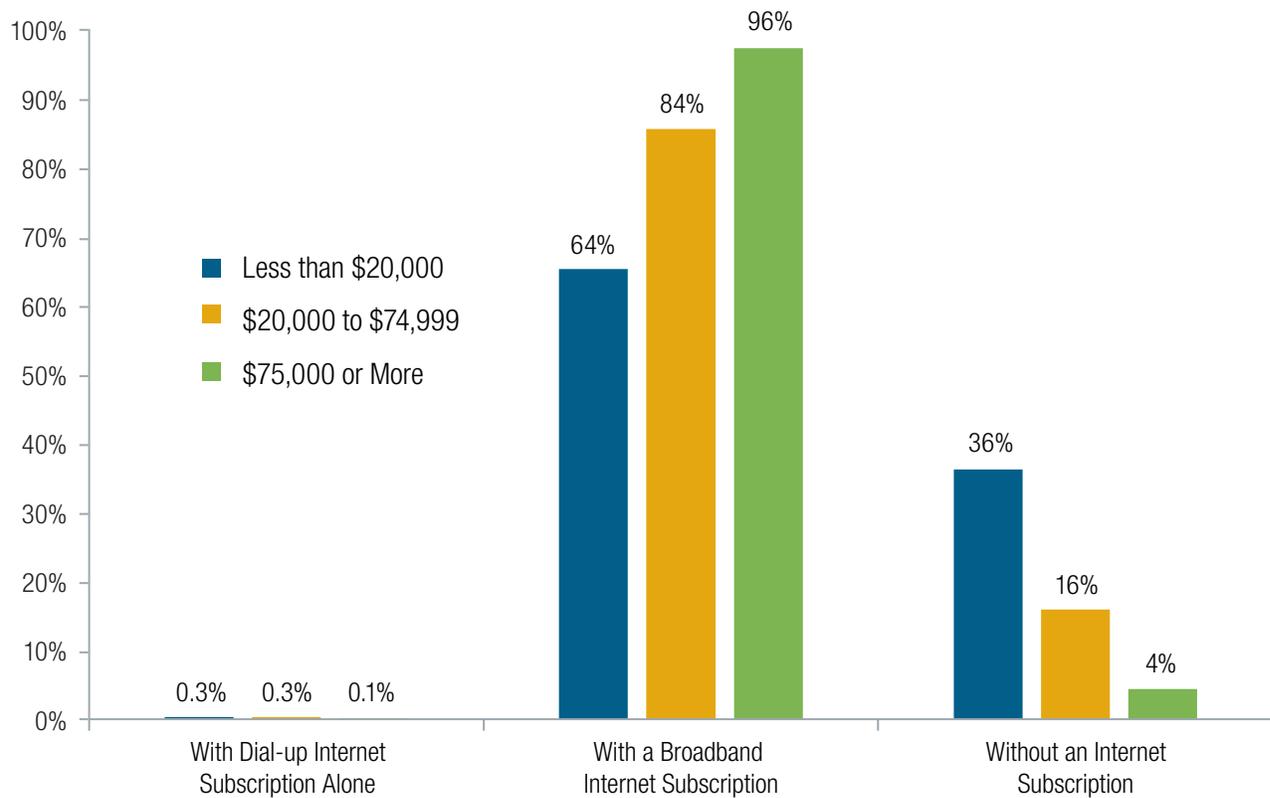
STS Figure 11b: Percentage of the United States population with either a broadband internet subscription or without an internet subscription by race/ethnicity: 2019



NOTE: The category “With a broadband Internet subscription” refers to those who said “Yes” to at least one of the following types of Internet subscriptions: Broadband such as cable, fiber optic, or DSL; a cellular data plan; satellite; a fixed wireless subscription; or other non-dial up subscription types. The category “Without an Internet subscription” includes those who accessed the Internet without a subscription and also those with no Internet access at all.

SOURCE: United States Census Bureau, American Community Survey, 2019. Retrieved from <https://data.census.gov/cedsci/table?q=S28&d=ACS%201-Year%20Estimates%20Subject%20Tables&tid=ACSST1Y2019.S2802&hidePreview=true>.

STS Figure 11c: Percentage of the United States population by type of internet subscription by household income in the past 12 months (inflation-adjusted dollars): 2019



NOTE: An Internet “subscription” refers to a type of service that someone pays for to access the Internet such as a cellular data plan, broadband such as cable, fiber optic or DSL, or other type of service. This will normally refer to a service that someone is billed for directly for Internet alone or sometimes as part of a bundle.

SOURCE: United States Census Bureau, American Community Survey, 2019. Retrieved from <https://data.census.gov/cedsci/table?q=S28&d=ACS%201-Year%20Estimates%20Subject%20Tables&tid=ACSST1Y2019.S2801&moe=false&hidePreview=true>.

EQUITY INDICATOR 1:

WHO ENROLLS IN POSTSECONDARY EDUCATION?

In 2019, an estimated 78 percent of 18- to 24-year-olds from the highest family income quartile enrolled in postsecondary education, compared with 48 percent of those in the lowest quartile. Among those who graduated from high school, college enrollment rates were 84 percent for those in the highest family income quartile and 66 percent for those in the lowest quartile.

Equity Indicators 1 (a-k): Definitions

Indicator 1 examines participation in postsecondary education by family income, race/ethnicity, parents' socioeconomic status, state, and student dependency status. The data are from four sets of sources. The first is the cross-sectional annual data from the U.S. Census Bureau's Current Population Survey (CPS) and the American Community Survey (ACS), which provides household-based national estimates and includes data on enrollment in any type of postsecondary institution. The second is a series of national high school longitudinal studies that have been conducted by the National Center for Education Statistics (NCES) at approximately 10-year intervals over the last 40 years. These studies are: the High School Longitudinal Study (HLS) of 9th graders in 2009; the Education Longitudinal Study of 10th graders in 2002 (ELS: 2002); the National Education Longitudinal Study of 8th graders in 1988 (NELS:88); and the High School and Beyond Study of 1980 10th graders (HS&B:1980). For those studies for which sufficient time has elapsed, we report data from the follow-ups 8 or 10 years after expected high school graduation (2012, 2000, and 1992, respectively).⁴² The more recent NCES High School Longitudinal Study began in 2009 with 9th graders and had an 11th grade survey in 2012. An update in 2013 collected information on high school completion and college enrollment in the fall after the expected on-time high school graduation. A second follow-up in 2016 provides data on students approximately 3 years after expected high school graduation. The third data source is the National Postsecondary Student Aid Study (NPSAS) conducted by NCES at approximately 4-year intervals since 1990. We use NPSAS throughout the 2021 *Indicators* report as a major source of information on dependency status and the characteristics of independent and dependent enrolled students. A fourth set of sources draws on federal administrative data from the Free and Reduced-Price Lunch program of the U.S. Department of Agriculture, and the Pell award data from the U.S. Department of Education to estimate enrollment of low-income students by state.⁴³

⁴² NCES also sponsored a study of the High School Class of 1972. Because this study started with the senior class and had follow-up limitations, we do not include data from this study for college continuation rates. We use information from this study to observe trends in parents' education in the Setting the Stage section and Indicator 2d describing selectivity of intended institutions among high school seniors.

⁴³ Mortenson, T. (2019). *College Participation Rates for Students from Low-income Families by State and Sector: 1993 to 2018*, Washington, DC: The Pell Institute for the Study of Opportunity in Higher Education. Retrieved from <http://www.pellinstitute.org/peo.shtml>.

Definitions of the indicators and information about classifications are noted below.

- **Cohort College Participation Rate**⁴⁴ is defined as the percent of dependent 18- to 24- year-olds who are not enrolled in high school but are enrolled in any type of postsecondary education, as measured by the Current Population Survey (CPS) and published by the Bureau of Labor Statistics (BLS).
- **High School Graduates College Continuation Rate** is defined as the percent of dependent 18- to 24- year-old high school graduates who are enrolled in college, as measured by the CPS, and published by the BLS. The High School Graduates College Continuation Rate is higher than the Cohort College Participation Rate because it is contingent upon high school completion.
- **Enrolled in Postsecondary Education Within 8 or 10 Years of Expected High School Graduation** is defined as the percent of students who, in nationally representative school-based longitudinal studies, self-reported having ever enrolled in any type of postsecondary educational institution, regardless of degree-granting status of the institution or the student's degree or certificate attainment status.
- **Income** is most frequently reported in this report in quartiles (4 equal-sized groups). Reflecting the different approaches of a given data source, we also report divisions of family income in 3 categories (high, medium, or low) and 5 groups (quintiles). Using income quartiles or quintiles facilitates comparisons of changes over time, as they reflect the distribution in the year of the study. In 2019, family income quartiles for dependent 18- to 24-year-olds identified by the distribution of family income data in the CPS were:
 - *Lowest quartile:* Less than \$45,360
 - *Second quartile:* \$45,361 to \$81,851
 - *Third quartile:* \$81,852 to \$138,747
 - *Highest quartile:* \$138,748 and above

In 2019, the maximum income for the lowest quartile (\$45,360) was less than one-third (32 percent) of the minimum income level of the highest quartile (\$138,748). Reflecting growing income inequality in the United States, the difference between the highest and lowest family income quartiles has increased since 1987.⁴⁵

- **Race/Ethnicity.** We use the race and ethnicity categories and titles (for example, “Black,” “Black or African American”) in the charts and text as reported by each data source. As race/ethnicity categories have changed over time and vary by study, race/ethnicity categories and titles used in this report also vary based on the original data sources. The more recent studies use race and ethnicity variables that reflect federal requirements for collecting race separately from ethnicity and allow respondents to mark more than one choice for race. In instances in which the labeling for race/ethnicity has changed over time for the same data source, we report the current labels. See notes below figures for more detail.
- **Socioeconomic Status (SES)** is measured using the socioeconomic status (SES) composite included in the NCES longitudinal studies. NCES created the SES composite based on data from the parent questionnaires or data imputed from the student questionnaires. For the NCES high school longitudinal studies, SES was derived using 5 equal-weighted components: father's/guardian's

⁴⁴ In the 2015 to 2017 editions of the *Indicators* report, we used the term Cohort College Continuation Rate. In the 2018 to 2021 editions, we use Cohort College Participation Rate to avoid confusion with the High School Graduates College Continuation Rate. The former includes all members of a given age cohort whereas the latter includes only high school graduates.

⁴⁵ See Appendix A for data on the upper limits of the lowest, second, and third quartiles based on the CPS data from 1987 to present.

education, mother's/guardian's education, family income, father's/guardian's occupational prestige score, and mother's/guardian's occupational prestige score.⁴⁶

- **Dependency Status.** All applicants for federal student aid are considered either “independent” or “dependent.” To determine dependency status, applicants for federal aid answer a series of questions. Depending on the answers to the questions, a student is classified as either dependent or independent. Dependent students must submit their parents’ financial information as reported to the IRS and this information is used to calculate the dependent students’ Expected Family Contribution (EFC).⁴⁷ Independent students submit their own financial records in completing the FAFSA forms.
 - **FAFSA Independent Student.** According to the Department of Education, an independent student must answer “yes” to at least one of the following questions. Students who answer “yes” to one of the following questions are further classified into “independent students with dependents” and “independent students without dependents.” Depending on the responses to items in this series, students may be also entitled to other federal aid benefits.
 1. Will you be 24 or older by January 1st of the school year for which you are applying for financial aid? For example, if you plan to start school in August 2021 for the 2021–22 school year, will you be 24 by January 1st, 2021 (i.e., were you born before Jan. 1, 1998)?
 2. Are you married or separated but not divorced?
 3. Will you be working toward a master’s or doctorate degree (such as M.A., MBA, M.D., J.D., Ph.D., Ed.D., etc.)?
 4. Do you have children who receive more than half of their support from you?
 5. Do you have dependents (other than children or a spouse) who live with you and receive more than half of their support from you?
 6. Are you currently serving on active duty in the U.S. armed forces for purposes other than training?
 7. Are you a veteran of the U.S. armed forces?
 8. At any time since you turned age 13, were both of your parents deceased, were you in foster care, or were you a ward or dependent of the court?
 9. Are you an emancipated minor or are you in a legal guardianship as determined by a court?
 10. Are you an unaccompanied youth who is homeless or self-supporting and at risk of being homeless?⁴⁸
 - **FAFSA Dependent Student.** All students who do not answer “yes” to one of the above questions are considered dependent students for the purposes of federal financial aid. The directions state: “If you don’t answer “yes” to any of the questions above, you’re still considered a dependent student for purposes of applying for federal student aid even if you don’t live with your parents, are not claimed by your parents on their tax forms, or you are paying for your own bills and educational expenses.”

⁴⁶ Cahalan, M., Ingles, S., Burns, L., & Planty, M. (2006). *United States High School Sophomores: A Twenty-Two Year Comparison, 1980-2002*, Statistical Analysis Report (NCES 2006-327). Washington, DC: U.S. Department of Education.

⁴⁷ See Indicator 3 for definition of Expected Family Contribution (EFC).

⁴⁸ Office of Federal Student Aid, US Department of Education, <https://studentaid.gov/resources/dependency-status-text>.

Cautions and Limitations. This report relies on data compiled over long periods of time to observe trends. As noted throughout, data from sample surveys such as the CPS and NCES longitudinal studies are subject to sampling error and changes in definitions and study designs. For example, the income and race/ethnicity data in the CPS suffer from small sample sizes and larger sampling errors than the estimates for the whole population. To address these limitations, in some cases we use 3-year moving averages. As noted above, definitions of race/ethnicity have also changed over time. The NCES high school longitudinal studies have complex multi-level school and student sample designs and have cohorts starting in different grade levels, ranging from 8th to 12th grade. Caution is needed in drawing conclusions about the trend data, especially when changes are small.

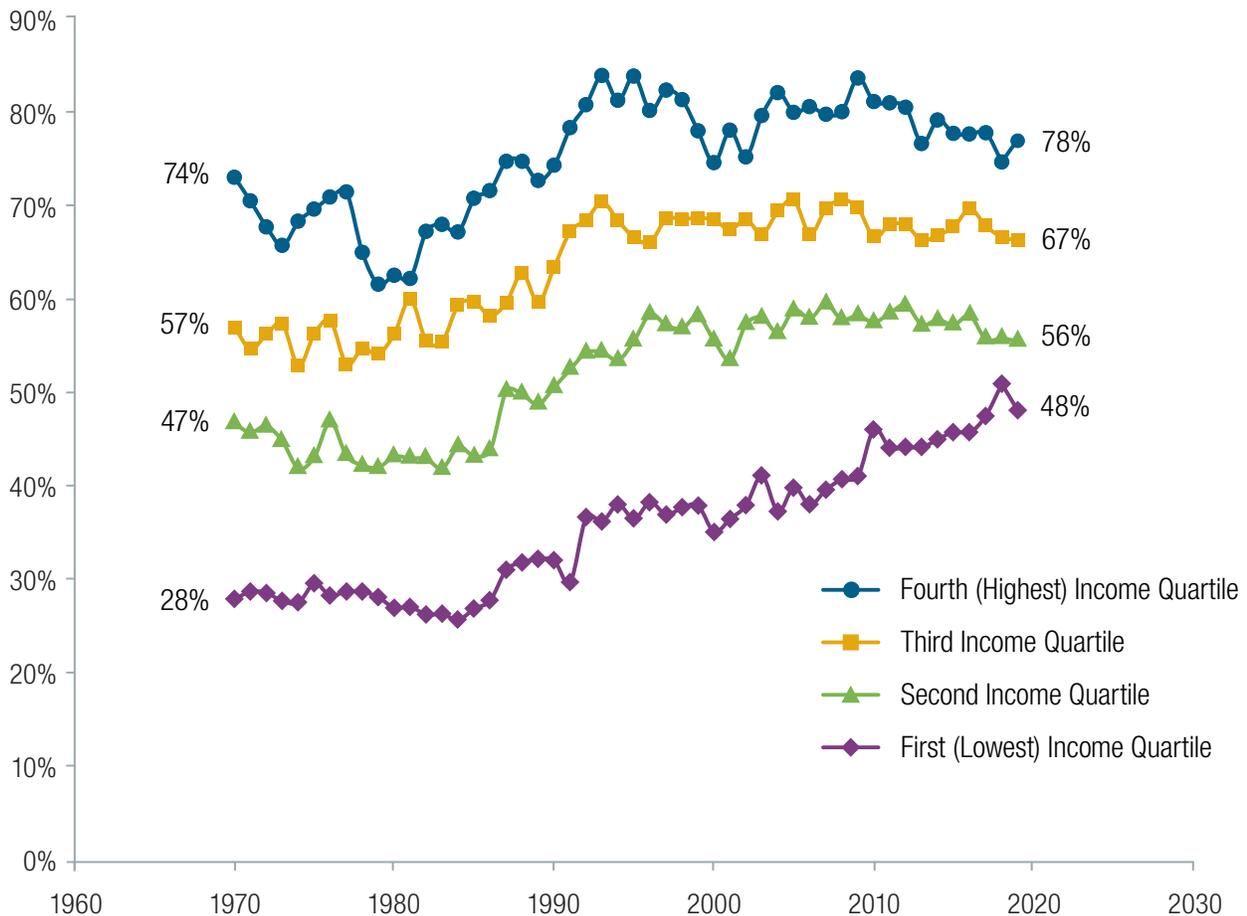
Equity Indicator 1a: How Do Cohort College Participation Rates for High School Leavers Vary by Family Income?

Equity Indicator 1a shows the cohort college participation rate for recent school leavers (including individuals who did and did not complete high school) by family income quartile from 1970 to 2019.⁴⁹ For all income groups, the cohort college participation rate was higher in 2019 than in 1980; however, the highest rates of increase have occurred among the lowest income quartile and the lowest rates of increase have occurred among the highest income quartiles. Nonetheless, in 2019, college participation rates were 30 percentage points lower for students in the lowest income quartile than for those in the highest quartile.

The college participation rate for the lowest income quartile was relatively stable from 1970 to 1990 but has generally increased since 1990. In 2019, 78 percent of high school leavers between the ages of 18 and 24 from the highest family income quartile had enrolled in college, compared with 48 percent of those in the lowest quartile. College participation rates for high school leavers from the lowest quartile increased by 50 percent over the period of 1990 to 2019, (from 32 percent in 1990 to 48 percent in 2019). Over the same period, the share of high school leavers from the highest income quartile who were enrolled in college increased by less than 1 percent, by only 3 percentage points (75 percent in 1990 and 78 percent in 2019). Because of differential rates of increase over this period, the gap in postsecondary education enrollment between those in the lowest and highest family income quartiles is smaller in 2019 (30 percentage points) than in 1990 (42 percentage points) and 1970 (45 percentage points).

⁴⁹ In the 2015 to 2017 editions of the *Indicators* report, we used the term Cohort College Continuation Rate. In the 2018 - 2021 editions we use Cohort College Participation Rate to avoid confusion with the High School Graduates College Continuation Rate. The former includes all members of a given age cohort, whereas the latter includes only high school graduates.

Equity Indicator 1a: Cohort College Participation Rates by family income quartile for dependent 18- to 24-year-olds: 1970 to 2019



Indicator Status: High Inequality but Narrowing Gap

There was a 30 percentage-point gap in college enrollment between dependent 18- to 24-year-olds in the highest and lowest income quartiles in 2019, compared with a 42 percentage-point gap in 1990 and a 46 percentage-point gap in 1970.

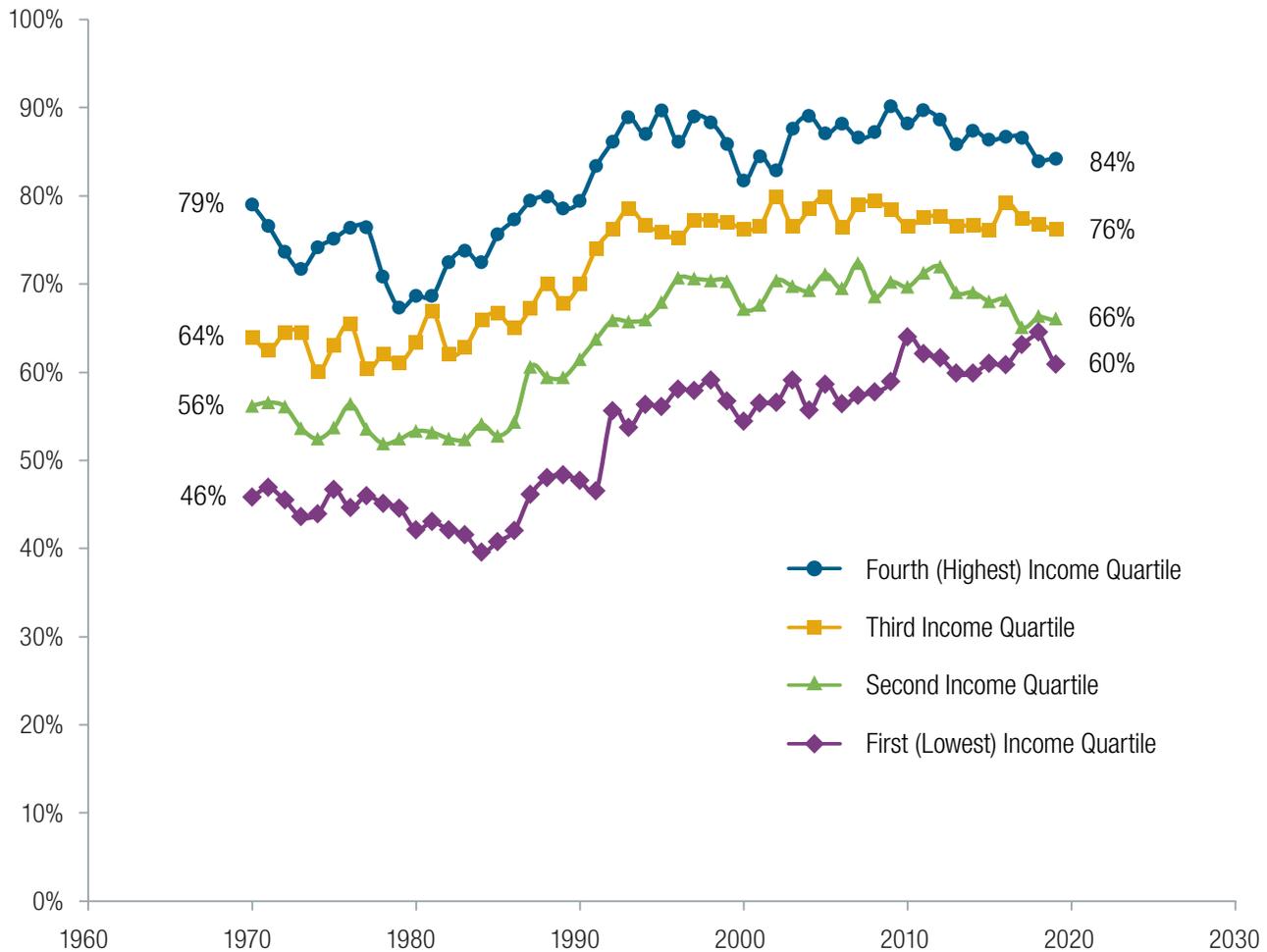
NOTE: The Cohort College Participation Rate is tabulated based on the total number in the cohort year and includes those who have not completed high school. Information on school enrollment and work activity is collected monthly in the Current Population Survey (CPS), a national survey of about 60,000 households, which provides information on employment and unemployment. Each October, a supplement to the CPS gathers information about school enrollment.

SOURCE: U.S. Census Bureau, 1974-2019, as adapted by Tom Mortenson, *Postsecondary Education Opportunity (PEO) Newsletters* and database, Washington, DC: The Pell Institute for the Study of Opportunity in Higher Education. Retrieved from <http://www.pellinstitute.org/peo.shtml>. Calculated from October Current Population Survey File (formerly Table 14 in Census Bureau's School Enrollment Report), tabulated using the U.S. Census Bureau online data retrieval tool, Dataferrett; School Enrollment Data, 1970-2018, and the U.S. Census Bureau, online extraction tool, MDAT, <https://data.census.gov/mdat/#/>; which replaces Dataferrett, using CPS School Enrollment Supplement dataset, 2019, compiled by Nicole Brunt and Tom Mortenson.

Equity Indicator 1b: How Do High School Graduates College Continuation Rates Vary by Family Income?

Equity Indicator 1b shows trends in High School Graduates College Continuation Rates by family income quartile. The college continuation rates for those who have graduated high school have increased with some fluctuations and some narrowing of the gaps between the quartiles over the entire period since 1970, but since the mid-1990s they have remained relatively stable among the upper three-quartiles and have increased only slightly for the lowest quartile. There was a 24 percentage-point gap in college continuation rates between high school graduates in the highest and lowest income quartiles in 2019, compared with a 32 percentage-point gap in 1990 and a 33 percentage-point gap in 1970. For high school graduates in the highest family income quartile, the college continuation rate was 84 percent in 2019, up from 79 percent in both 1990 and 1970. For high school graduates in the lowest quartile, the college continuation rate was 60 percent in 2019, up from 48 percent in 1990 (and 46 percent in 1970).

Equity Indicator 1b: High School Graduates College Continuation Rates by family income quartile: 1970 to 2019



Indicator Status: High Inequality but Narrowing Gap

College continuation rates have fluctuated with an increase and some narrowing of the gaps between the quartiles since 1970, but since the mid-1990s have remained relatively stable among the upper-three quartiles and have increased only slightly for the lowest quartile. There was a 24 percentage-point gap in college continuation rates between high school graduates in the highest and lowest income quartiles in 2019, compared with a 32 percentage-point gap in 1990 and a 33 percentage-point gap in 1970.

NOTE: The High School Graduates College Continuation Rate is the percent of 18- to 24-year-old high school graduates who were enrolled in a postsecondary education institution of any type.

SOURCE: U.S. Census Bureau, 1974-2019, as adapted by Tom Mortenson, *Postsecondary Education Opportunity (PEO) Newsletters* and database, Washington, DC: The Pell Institute for the Study of Opportunity in Higher Education. Retrieved from <http://www.pellinstitute.org/peo.shtml>. Calculated from October Current Population Survey File (formerly Table 14 in Census Bureau's School Enrollment Report), tabulated using the U.S. Census Bureau online data retrieval tool, Dataferrett; School Enrollment Data, 1970-2018, and the U.S. Census Bureau, online extraction tool, MDAT, <https://data.census.gov/mdat/#/>; which replaces Dataferrett, using CPS School Enrollment Supplement dataset, 2019, compiled by Nicole Brunt and Tom Mortenson.

Equity Indicator 1c(i): How Do Cohort College Participation Rates of High School Leavers Vary by Race/Ethnicity?

Equity Indicator 1c(i) uses Current Population Survey (CPS) data to examine Cohort College Participation Rates for dependent 18- to 24-year-olds who are not enrolled in high school (high school graduates and non-graduates) by race/ethnicity from 1974 to 2019. Categories used for race/ethnicity in government statistics have changed over time. Data for Asians are not available until 1998. For Indicator 1c(i), the race categories (White, Black, and Asian) exclude those of Hispanic ethnic origin. Estimates by race/ethnicity have larger sampling errors than estimates for the total population due to smaller population and sample sizes. Estimates are also impacted by changes in the age composition of the group and income distribution by race/ethnicity.⁵⁰ Year-to-year fluctuations may be related to sampling error or differences in how respondents chose to classify themselves. Readers are cautioned about drawing conclusions about small changes in point estimates.

Indicator 1c(i) shows that, in 2019, 84 percent of Asian, and 62 percent of White recent high school leavers enrolled in college, compared with 57 percent of Hispanics and Blacks. In 1974, about 49 percent of White high school leavers enrolled in college, compared with 30 percent of Blacks and 33 percent of Hispanics. Between 1974 and 2019, college participation rates were consistently higher for Asian and White high school leavers than for Black and Hispanic high school leavers.

Equity Indicator 1c(ii): How Do Cohort College Participation Rates of High School Leavers by Race/Ethnicity Vary by Family Income Quartiles?

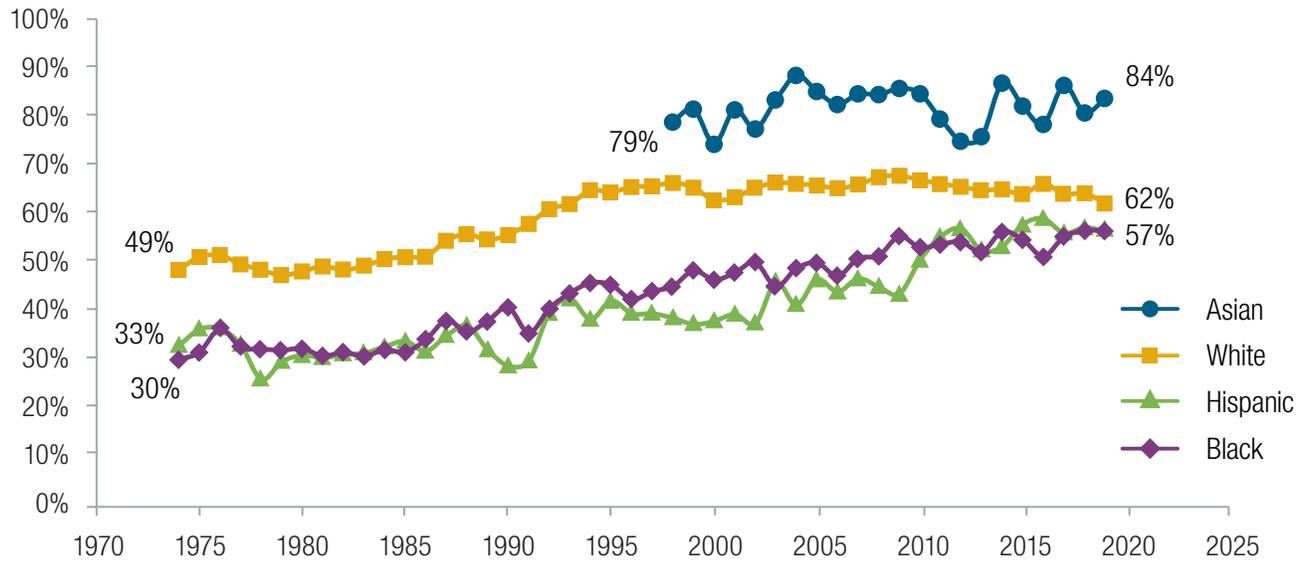
Equity Indicator 1c(ii) displays Cohort College Participation Rates for 2019 by race/ethnicity, disaggregated by family income quartile. Because the data are disaggregated by both income quartile and race/ethnicity, the cautions about interpreting differences across groups, that are articulated above, are even more important. Income quartiles reflect the distribution of income for the entire total population of households, not the income quartiles of the race/ethnicity group. As seen in STS Figure 8b(iii), there are large differences in this distribution by race/ethnicity. For example, only 12 percent of Hispanics and 11 percent of Blacks aged 18 to 24 were in the highest income quartile households, in comparison with 31 percent of Whites and 32 percent of Asians.

Indicator 1c(ii) shows that disaggregating by family income quartile reduces the differences by race/ethnicity observed in Indicator 1c(i).⁵¹ Blacks, Hispanics, and Whites' cohort participation rates are similar for those in the same quartile groupings. For example, for those in the first (lowest) income quartile, Cohort College Participation Rates were 44 percent for Blacks, 47 percent for Hispanics, and 49 percent for Whites. For those in the highest income quartile, the 2019 Cohort College Participation Rate was 80 percent for Blacks, 77 percent for Hispanics, and 76 percent for Whites. Cohort participation rates for Asians (as a group, ignoring differences within this aggregated category) show a less clear pattern by family income quartile.

50 Pfeffer, F. T., Danziger, S., & Schoeni, R. (2013). Wealth Disparities before and after the Great Recession. *Annals of the American Academy of Political and Social Science*, 650 (1), 98–123. This paper reports that between 2007 and 2011, one-fourth of American families lost at least 75 percent of their wealth and more than half of all families lost at least 25 percent of their wealth. The analysis also shows that the large relative losses were disproportionately concentrated among lower income, less educated, and minority households.

51 Given sampling error due to smaller sample sizes, caution is needed in interpreting these results, especially for small groups such as Asians.

Equity Indicator 1c(i): Cohort College Participation Rates of recent high school leavers by race/ethnicity: 1974 to 2019



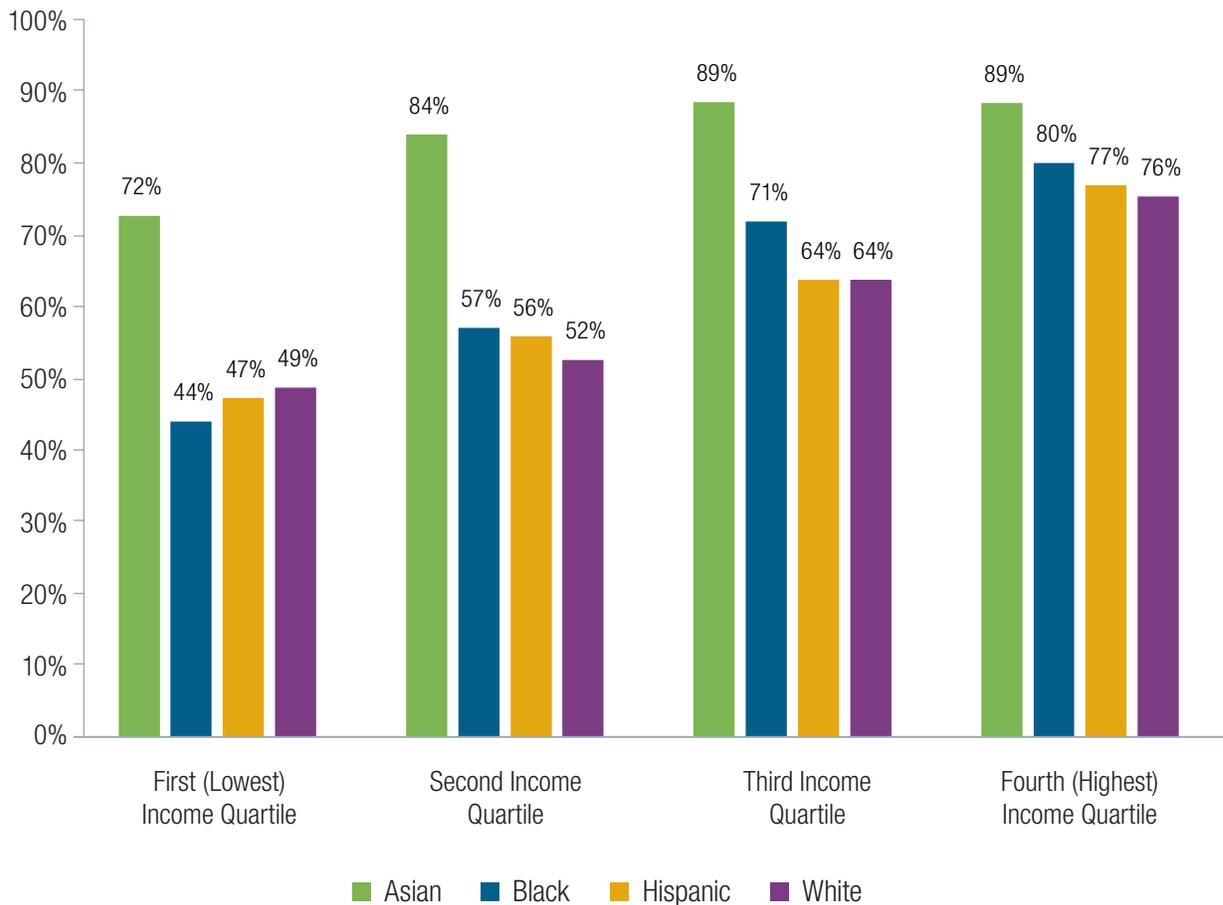
Indicator Status: Narrowing but Gaps Persist by Race/Ethnicity

Among dependent 18- to 24-year-olds who are not enrolled in high school, Cohort College Participation Rates in 2019 were 6 percentage points higher for Whites than for Blacks and Hispanics. In 1974, college participation rates were 18 percentage points higher for White high school leavers than for Blacks and 16 percentage points higher than for Hispanics.

NOTE: Caution is needed in interpreting these data due to small sample sizes for different racial/ethnic groups and changing categorization and self-reporting patterns over time. Race categories exclude persons of Hispanic ethnicity except where otherwise noted. The Cohort College Participation Rate is tabulated based on the total number in the cohort year and includes those who have not completed high school. Data for Asian students were reported beginning in 1998. Annual data collected by Census and reported by BLS are from the October supplement to the Current Population Survey (CPS), a nationwide survey of about 60,000 households. Numbers are revised slightly from those reported previously.

SOURCE: U.S. Census Bureau, 1974-2019, as adapted by Tom Mortenson, *Postsecondary Education Opportunity (PEO) Newsletters* and database, Retrieved from <http://www.pellinstitute.org/peo.shtml>. Calculated from October Current Population Survey File (formerly Table 14 in Census Bureau's School Enrollment Report), tabulated using the U.S. Census Bureau online data retrieval tool, Dataferrett; School Enrollment Data, 1970-2018, and the U.S. Census Bureau, online extraction tool, MDAT, <https://data.census.gov/mdat/#/>; which replaces Dataferrett, using CPS School Enrollment Supplement dataset, 2019, compiled by Nicole Brunt and Tom Mortenson.

Equity Indicator 1c(ii): Cohort College Participation Rates of dependent 18- to 24-year-olds who are not enrolled in high school by race/ethnicity and family income quartile: 2019



Indicator Status:

Estimated differences in college participation rates by race/ethnicity are reduced when race/ethnicity is disaggregated by family income quartiles.

NOTE: Race categories exclude persons of Hispanic ethnicity. The Cohort College Participation Rate is tabulated based on the total number of dependent individuals age 18 to 24 and includes those who have not completed high school and are not enrolled in high school. Annual data collected by Census and reported by BLS are from the October supplement to the Current Population Survey (CPS), a nationwide survey of about 60,000 households. Caution is needed in using these data and comparing small differences in estimates across race/ethnicity categories. Due to small sample sizes, estimates for disaggregated data have larger sampling errors than estimates for the total. Income quartiles are based on the distribution of the total number of households. Reflecting the unequal household income distribution by race/ethnicity in the United States, for example, 42 percent of Black, 39 percent of Hispanic, 25 percent of Asian, and 17 percent of White 18- to 24-year-olds were in households in the lowest quartile of the household income distribution. See STS Figure 8b(iii).

SOURCE: U.S. Census Bureau, 1974-2019, as adapted by Tom Mortenson, *Postsecondary Education Opportunity (PEO) Newsletters* and database, Washington, DC: The Pell Institute for the Study of Opportunity in Higher Education. Retrieved from <http://www.pellinstitute.org/peo.shtml>. Calculated from October Current Population Survey File (formerly Table 14 in Census Bureau's School Enrollment Report), tabulated using the U.S. Census Bureau online data retrieval tool, Dataferrett; School Enrollment Data, 1970-2018, and the U.S. Census Bureau, online extraction tool, MDAT, <https://data.census.gov/mdat/#/>; which replaces Dataferrett, using CPS School Enrollment Supplement dataset, 2019, compiled by Nicole Brunt and Tom Mortenson.

Equity Indicator 1d(i): How Do High School Graduates College Continuation Rates Vary by Race/Ethnicity?

Indicator 1d(i) uses CPS data to show variations by race/ethnicity in college continuation rates for recent high school graduates. This Indicator differs from Indicator 1c(i) in that high school completers with a regular diploma or a GED are the denominator rather than the entire age cohort of students. Therefore, High School Graduates College Continuation Rates are higher than the Cohort College Participation Rates displayed in Indicators 1c(i) and 1c(ii).⁵² As with Indicators 1c(i) and 1c(ii), caution is needed in interpreting Indicator 1d(i) and 1d(ii) due to larger sampling errors with disaggregated data, and changes over time in the race/ethnicity definitions and inclusions. Race categories exclude persons of Hispanic ethnicity. Prior to 2003, the Asian category included Pacific Islanders, and after 2002, White, Black, and Asian data exclude persons of “Two or More Races.” These rates, as with the rates reported for Indicator 1c(i), are also likely influenced by economic and political events and immigration patterns and policies.

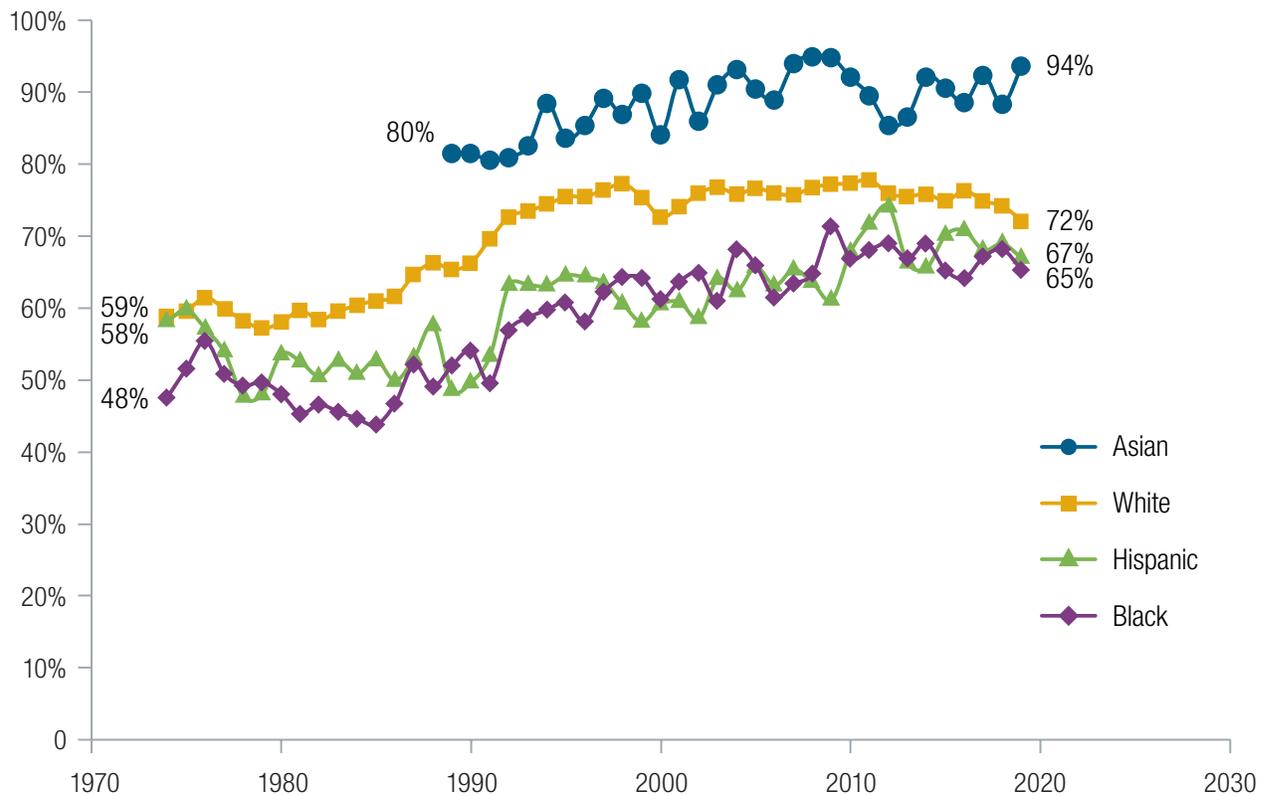
For all groups, college continuation rates for high school graduates were substantially higher in 2019 than in 1974. Although there are some fluctuations in rates over this period, college continuation rates increased by 23 percent between 1974 and 2019 for Whites (rising from 59 percent to 72 percent), 15 percent higher for Hispanics (rising from 58 percent to 67 percent), 37 percent higher for Blacks (rising from 48 percent to 65 percent), and 15 percent higher for Asians (rising from 81 percent in 1989 to 94 percent) in 2019.

While caution is needed in interpreting these data, Indicator 1d(i) especially illustrates the gains that Hispanic recent high school graduates have made in college enrollment, especially since 2006.⁵³ College enrollment rates for Black high school graduates have also generally increased substantially over time.

52 Increases in the percent of high school completers may in the short run depress the percentages of high school graduates who enter college by race/ethnicity.

53 Musu-Gillette, L., Robinson, J., McFarland, J., KewalRamani, A., Zhang, A., & Wilkinson-Flicker, S. (2016). *Status and Trends in the Education of Racial and Ethnic Groups 2016* (NCES 2016-007). U.S. Department of Education, National Center for Education Statistics. Retrieved from <https://nces.ed.gov/pubs2016/2016007.pdf>; Ramos, D., & Taylor, M. (2017). *Aligning Demographic Shifts and College Participation: Increasing Latino Degree Attainment*. Retrieved from <https://www.higheredtoday.org/2017/01/25/aligning-demographic-shifts-college-participation-increasing-latino-degree-attainment>.

Equity Indicator 1d(i): High School Graduates College Continuation Rates by race/ethnicity: 1974 to 2019



Indicator Status: Some Closing and Some Widening of the Gaps by Race/Ethnicity

Asians have the highest rates of college entrance among dependent 18- to 24- year-olds who have completed high school. Attention to the overall average for Asians masks variations among Asian ethnic groups. Rates among the other race/ethnicity categories show a fluctuating trend toward convergence. Caution is needed in interpreting these data due to sampling error and changes over time in race/ethnicity definitions and inclusions.

NOTE: Prior to 2003, Asian data include Pacific Islanders. After 2002, White, Black, and Asian data exclude persons of “Two or More Races.” Race categories exclude persons of Hispanic ethnicity. The High School Graduates College Continuation Rate is the percent of dependent 18- to 24-year-old high school graduates who entered a postsecondary educational institution of any type. Annual data are from the October supplement to the Current Population Survey (CPS), a nationwide survey of about 60,000 households. Each October, a supplement to the CPS gathers information about school enrollment.

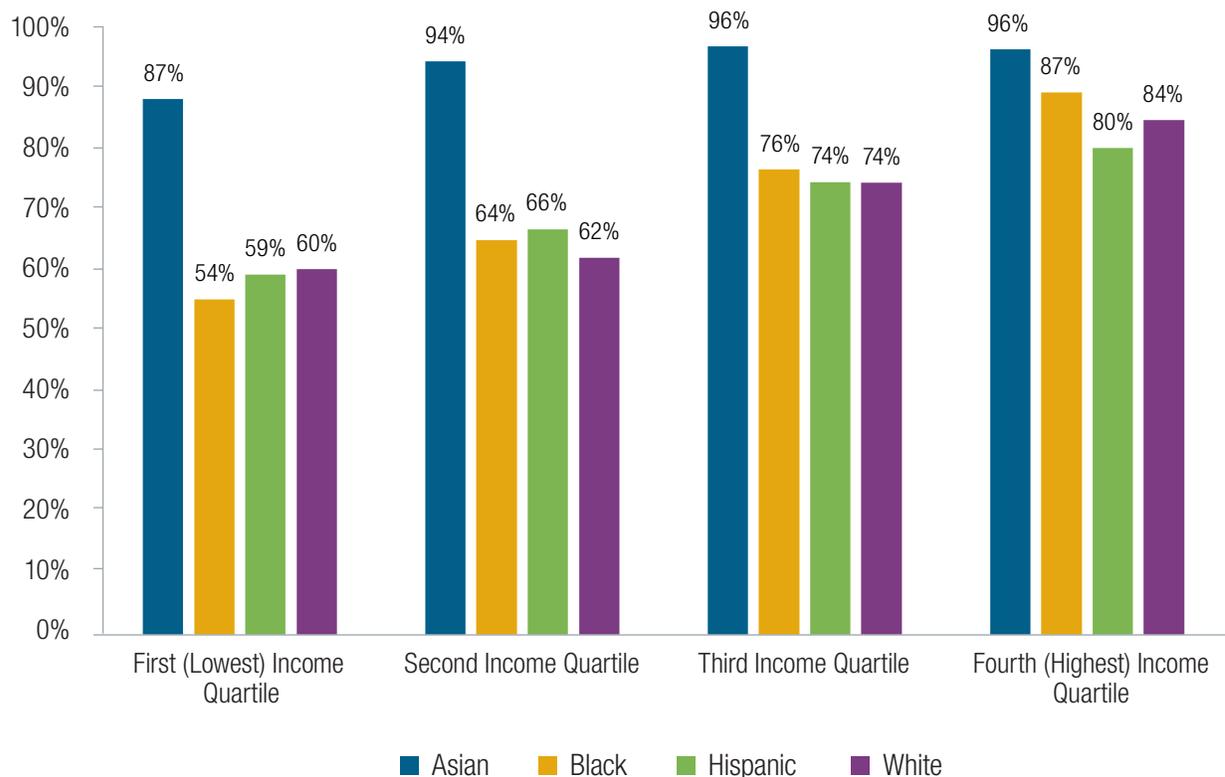
SOURCE: U.S. Census Bureau, 1974-2019, as adapted by Tom Mortenson, *Postsecondary Education Opportunity (PEO) Newsletters* and database, Washington, DC: The Pell Institute for the Study of Opportunity in Higher Education. Retrieved from <http://www.pellinstitute.org/peo.shtml>. Calculated from October Current Population Survey File (formerly Table 14 in Census Bureau’s School Enrollment Report), tabulated using the U.S. Census Bureau online data retrieval tool, Dataferrett; School Enrollment Data, 1970-2018, and the U.S. Census Bureau, online extraction tool, MDAT, <https://data.census.gov/mdat/#/>; which replaces Datafarrett, using CPS School Enrollment Supplement dataset, 2019, compiled by Nicole Brunt and Tom Mortenson.

Equity Indicator 1d(ii): How Do the High School Graduates College Continuation Rates Vary by Race/Ethnicity and Family Income Quartile?

Equity Indicator 1d(ii) displays the High School Graduates College Continuation Rate in 2019 by race/ethnicity disaggregated by family income quartile. Differences across groups should be interpreted with caution, due to small sample sizes and the increase in standard errors for data disaggregated by both race/ethnicity and family income quartiles. As with Indicator 1c(ii), in interpreting this data we need to keep in mind that the income quartiles are based on the distribution of the total number of households and reflect the unequal household income distribution by race/ethnicity in the United States. For example, 42 percent of Black, 39 percent of Hispanic, 25 percent of Asian, and 17 percent of White 18- to 24-year-olds were in households in the lowest quartile of the household income distribution. Conversely, 11 percent of Blacks, 12 percent of Hispanics, 32 percent of Asians and 31 percent of Whites were in the highest quartile. See STS Figure 8b(iii).

As with Indicator 1c(ii), Indicator 1d(ii) shows that observed differences by race/ethnicity in college continuation rates of high school graduates are reduced when disaggregated by family income quartiles. Among Black high school graduates, college enrollment rates ranged from 54 percent for those in the lowest family income quartile to 87 percent for those in the highest income quartile. Among White high school graduates, college entrance rates ranged from 60 percent for those in the lowest quartile to 84 percent in the highest quartile. Among Hispanic high school graduates, college enrollment rates ranged from 59 percent in the lowest income quartile to 80 percent in the highest quartile.

Equity Indicator 1d(ii): High School Graduates College Continuation Rates by race/ethnicity and family income quartiles: 2019



Indicator Status:

Observed differences in college enrollment by race/ethnicity are reduced when the data are disaggregated by family income quartile.

NOTE: Caution is needed in interpreting these data, as CPS sample survey data disaggregated by income quartile and race/ethnicity are subject to large sampling errors. Race categories exclude persons of Hispanic ethnicity. High School Graduates College Continuation Rate is the percent of 18- to 24-year-old high school graduates who enrolled in a postsecondary educational institution of any type. Annual data collected by Census and reported by BLS yearly are from the October supplement to the Current Population Survey (CPS), a national sample of about 60,000 households. Each October, a supplement to the CPS gathers information about school enrollment. Due to small sample sizes, estimates for disaggregated data have larger sampling errors than estimates for the total.

SOURCE: U.S. Census Bureau, 1974-2019, as adapted by Tom Mortenson, *Postsecondary Education Opportunity (PEO) Newsletters* and database, Retrieved from <http://www.pellinstitute.org/peo.shtml>. Calculated from October Current Population Survey File (formerly Table 14 in Census Bureau's School Enrollment Report), tabulated using the U.S. Census Bureau online data retrieval tool, Dataferrett; School Enrollment Data, 1970-2018, and the U.S. Census Bureau, online extraction tool, MDAT, <https://data.census.gov/mdat/#/>; which replaces Dataferrett, using CPS School Enrollment Supplement dataset, 2019, compiled by Nicole Brunt and Tom Mortenson.

Equity Indicator 1e: How Do Rates of Enrolling in College Within 8 or 10 Years of Scheduled High School Graduation Vary by Race/Ethnicity?

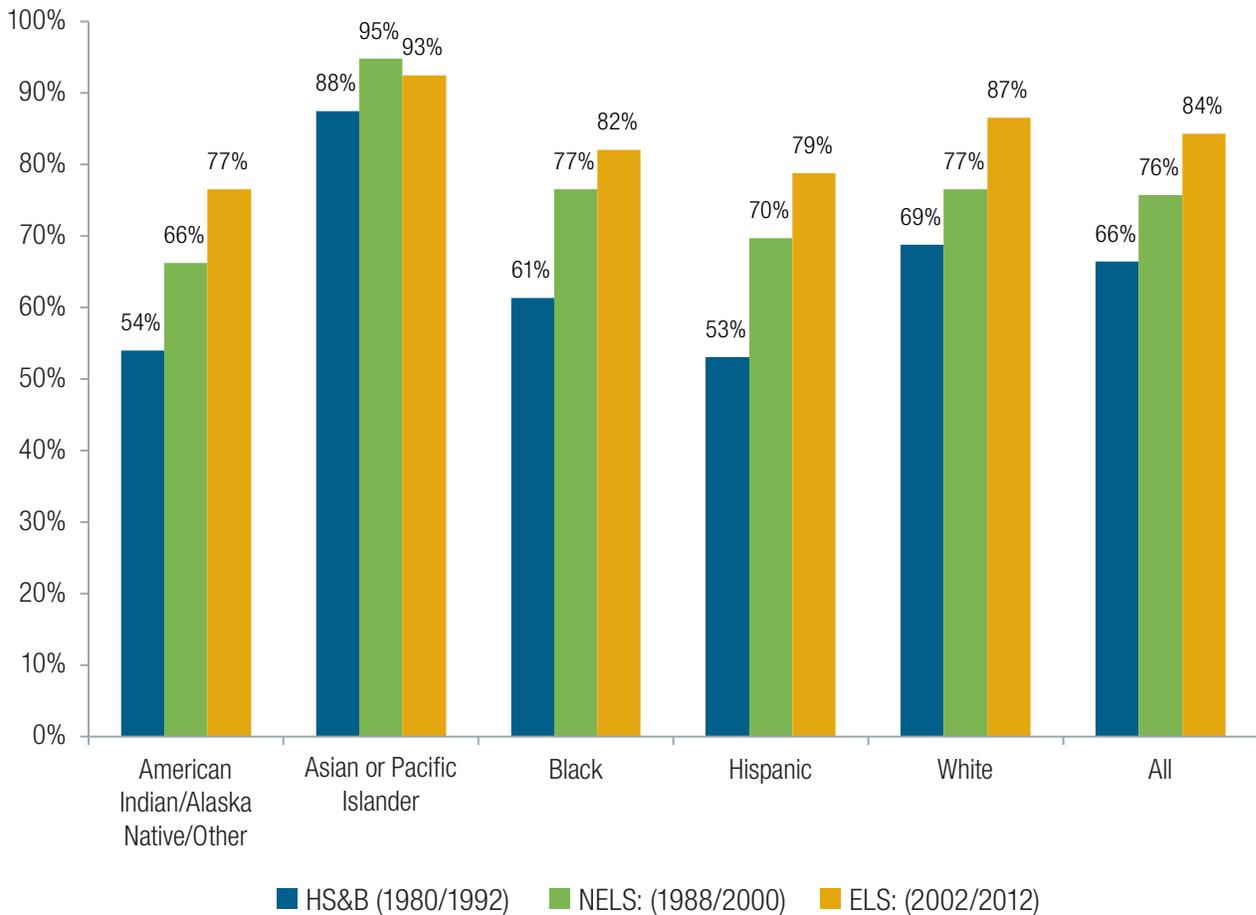
The high school longitudinal studies conducted by the National Center for Education Statistics (NCES) approximately every 10 years shed light on longitudinal trends in college enrollment within 8 or 10 years of expected high school graduation. Because college enrollment is measured within 8 or 10 years of expected high school graduation, the high school longitudinal studies report higher rates of college enrollment than the CPS/BLS data for recent school leavers.

Some caution is needed when using these 3 studies to observe trends over time. The High School and Beyond (HS&B:1980) and Educational Longitudinal Study (ELS:2002) sampled high school 10th graders, while the National Educational Longitudinal Study (NELS:1988) sampled 8th graders. Unlike the NELS, the HS&B and ELS do not account for youth who left high school prior to the spring of the sophomore year.⁵⁴

Considering data across the 3 national high school longitudinal studies shows a narrowing of the racial/ethnic gap in college enrollment. Among 1980 high school 10th graders (HS&B:1980/1992), 61 percent of Blacks and 53 percent of Hispanics reported attending a postsecondary educational institution within 10 years of scheduled high school completion, compared with 69 percent of Whites. Twenty-two years later, among 2002 10th graders (ELS:2002/2012), 82 percent of Blacks and 79 percent of Hispanics enrolled in postsecondary education within 8 years of expected high school graduation, compared with 87 percent of Whites.

54 Because the National Longitudinal Study (NLS) of the class of 1972 began with high school seniors, we do not include these data in the trend analyses for Indicator 1.

Equity Indicator 1e: Percentage of young adults who reported enrolling in postsecondary education within 8 or 10 years of expected high school graduation by race/ethnicity: High School Longitudinal Studies (HS&B:1980/1992; NELs:1988/2000; ELS:2002/2012)



Indicator Status: Persisting but Narrowing Gap

The gap in postsecondary enrollment between Black and White youth narrowed from 8 percentage points for 1980 10th graders to 5 percentage points for 2002 10th graders. Over the same period, the gap in postsecondary enrollment between Hispanic and White youth declined from 16 to 8 percentage points.

NOTE: Race categories exclude persons of Hispanic ethnicity. For ELS, the “American Indian/Alaska Native/Other” category includes college enrollment rates for students of “other” racial/ethnic groups, including American Indians/Alaska Natives, as the sample size for American Indian/Alaska Natives alone was too small for reliable estimates. ELS and HS&B began tracking students when they were in the 10th grade in high school. NELS:88 began with 8th grade.

SOURCE: Lauff, E. & Ingels, S. J. (2014). *Education Longitudinal Study of 2002 (ELS:2002): A First Look at 2002 High School Sophomores 10 Years Later* (NCES 2014-363). U.S. Department of Education; Ingels, S. J., Kaufman, P., Curtin, T. R., Alt, M. N. & Chen, X. (2002). *Initial Results from the Fourth Follow-up to the National Education Longitudinal Study of 1988: Coming of Age in the 1990s: The Eighth-grade Class of 1988 12 Years Later* (NCES 2002-321). U.S. Department of Education, Office of Educational Research and Improvement; Tuma, J., Geis, S., & Carroll (1995). *High School and Beyond Educational Attainment of 1980 High School Sophomores by 1992: 1992 Descriptive Summary of 1980 High School Sophomores 12 Years Later* (NCES 95-304). U.S. Department of Education, National Center for Education Statistics.

Equity Indicator 1f: How Do Rates of Not Enrolling in Postsecondary Education within 8 or 10 Years of Expected High School Graduation Vary by Parents' Socioeconomic Status (SES)?

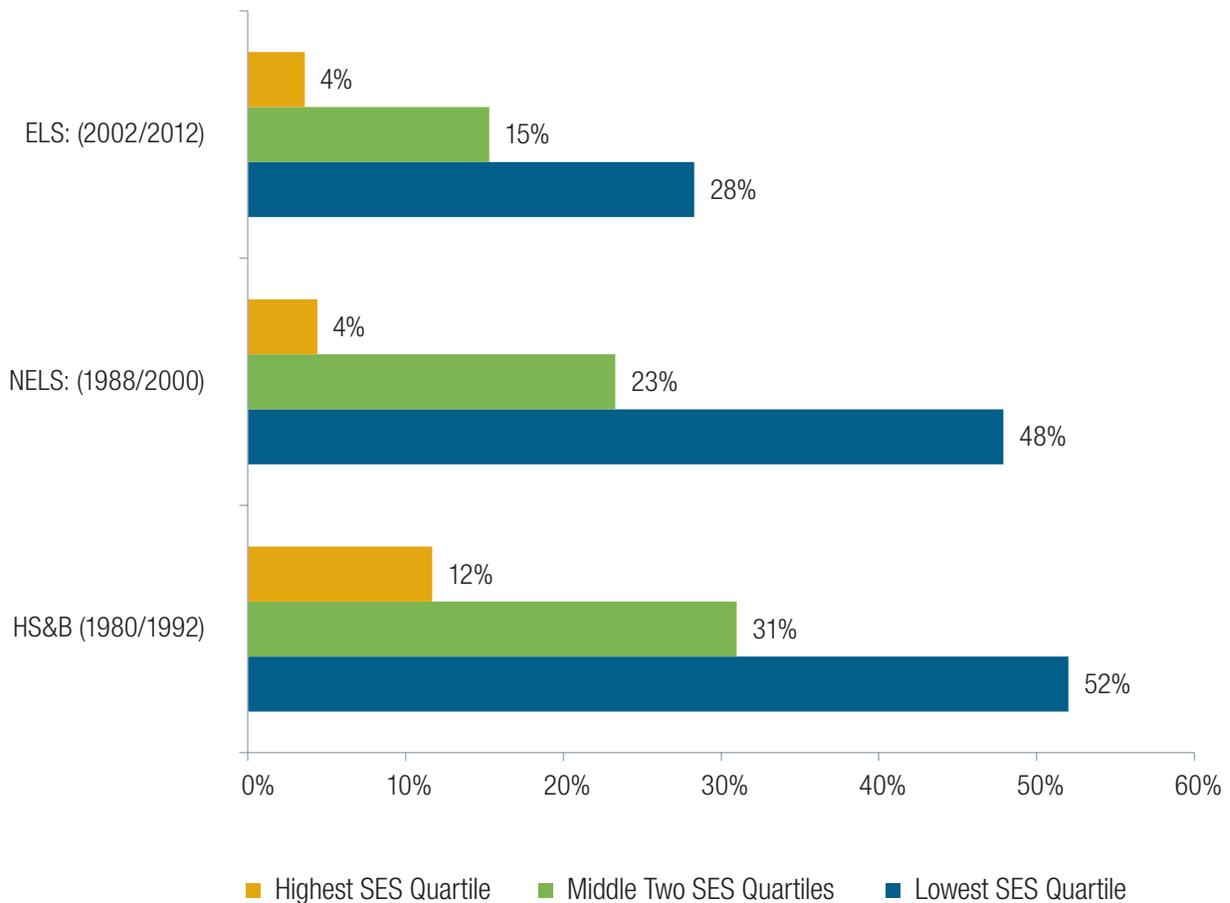
Indicator 1f documents the percent of young adults who reported that they had not enrolled in postsecondary education within 8 or 10 years of their scheduled high school graduation by parents' socioeconomic status (SES), using data from the three NCES-sponsored high school longitudinal studies. SES is a composite that reflects parents' and guardians' highest level of education, occupation, and income. This composite is measured consistently across the three NCES longitudinal studies.⁵⁵

Across these three longitudinal studies, the percent of youth who reported no participation in postsecondary education declined for all levels of SES, including those in the lowest SES quartile. Despite this progress, differences in rates of non-enrollment based on SES persist. The percentage of youth in the lowest SES quartile reporting no postsecondary educational enrollment within 8 or 10 years of scheduled high school graduation declined substantially over the period. In the 1980 10th grade HS&B cohort just over half (52 percent) of students in the lowest family SES quartile reported not enrolling in postsecondary within 8 or 10 years; however, by the time of ELS representing the 2002 10th grade cohort, the percent not enrolling in postsecondary education in the lowest SES quartile had declined to 28 percent.

In all three studies, young adults from the highest SES quartile average lower rates of non-enrollment than those in the lowest SES quartile. Only 4 percent of those in the highest SES quartile in both ELS:2002 (sampled as 10th graders) and NELS:88 (sampled as 8th graders) reported no postsecondary enrollment within 8 or 10 years of high school graduation, down from 12 percent of 1980 10th graders (HS&B).

55 SES is a composite measure that NCES derived in a comparable manner for the three high school longitudinal studies. NCES imputed SES for all sample members, including those with missing data for the parent income variable. We use the SES composite rather than family income, as SES is considered more reliable than a single measure like family income. The latter tends to have a high rate of missing data and is subject to reporting error.

Equity Indicator 1f: Percentage of young adults who reported no postsecondary enrollment within 8 or 10 years of expected high school graduation by parents' socioeconomic status (SES): High School Longitudinal Studies (HS&B:1980/1992; NELS:1988/2000; ELS:2002/2012)



Indicator Status: High Inequality but Narrowing Gap

The gap in the percentage of youth in the highest and lowest SES quartiles who reported no postsecondary enrollment within 8 or 10 years of scheduled high school graduation was 24 percentage points for 10th graders in 2002, down from 44 percentage points for 1988 8th graders and 40 percentage points for 1980 10th graders.

NOTE: ELS and HS&B sampled students when they were in the 10th grade (high school sophomores). NELS:88 sampled 8th graders. Some differences in findings across longitudinal studies are expected due to the longer time period for dropping out of high school for students sampled in 8th grade rather than 10th grade.

SOURCE: Lauff, E. & Ingels, S. J. (2014). *Education Longitudinal Study of 2002 (ELS:2002): A First Look at 2002 High School Sophomores 10 Years Later* (NCES 2014-363). U.S. Department of Education; Ingels, S. J., Kaufman, P., Curtin, T. R., Alt, M. N., & Chen, X. (2002). *Initial Results from the Fourth Follow-up to the National Education Longitudinal Study of 1988: Coming of Age in the 1990s: The Eighth-Grade Class of 1988 12 Years Later* (NCES 2002-321). U.S. Department of Education, Office of Educational Research and Improvement; Tuma, J, Geis, S., & Carroll (1995). *High School and Beyond Educational Attainment of 1980 High School Sophomores by 1992: 1992 Descriptive Summary of 1980 High School Sophomores 12 Years Later* (NCES 95-304). U.S. Department of Education, National Center for Education Statistics.

Equity Indicator 1g(i) and (ii): What Does the More Recent NCES High School Longitudinal Study Tell Us About College Entrance?

Indicators 1g(i) and 1g(ii) examine data from the High School Longitudinal Study (HSL:2009), high school cohort study sponsored by the National Center for Education Statistics. This study began in 2009 with a nationally representative sample of 9th graders and followed up in 2012 (when most were in 11th grade), 2013 (the fall after scheduled high school graduation), and in 2016 (approximately 3 years after scheduled high school graduation).

Enrollment in College in the Fall After Scheduled High School Graduation. Indicator 1g(i) uses parents' socioeconomic status (SES) quintiles (five equal-sized groups) and shows 2-year and 4-year enrollment and non-enrollment in 2013, the fall after scheduled high school graduation. The findings from these data are consistent with the previous NCES high school studies and with Census data reported earlier in this report, despite the methodological differences between the studies.

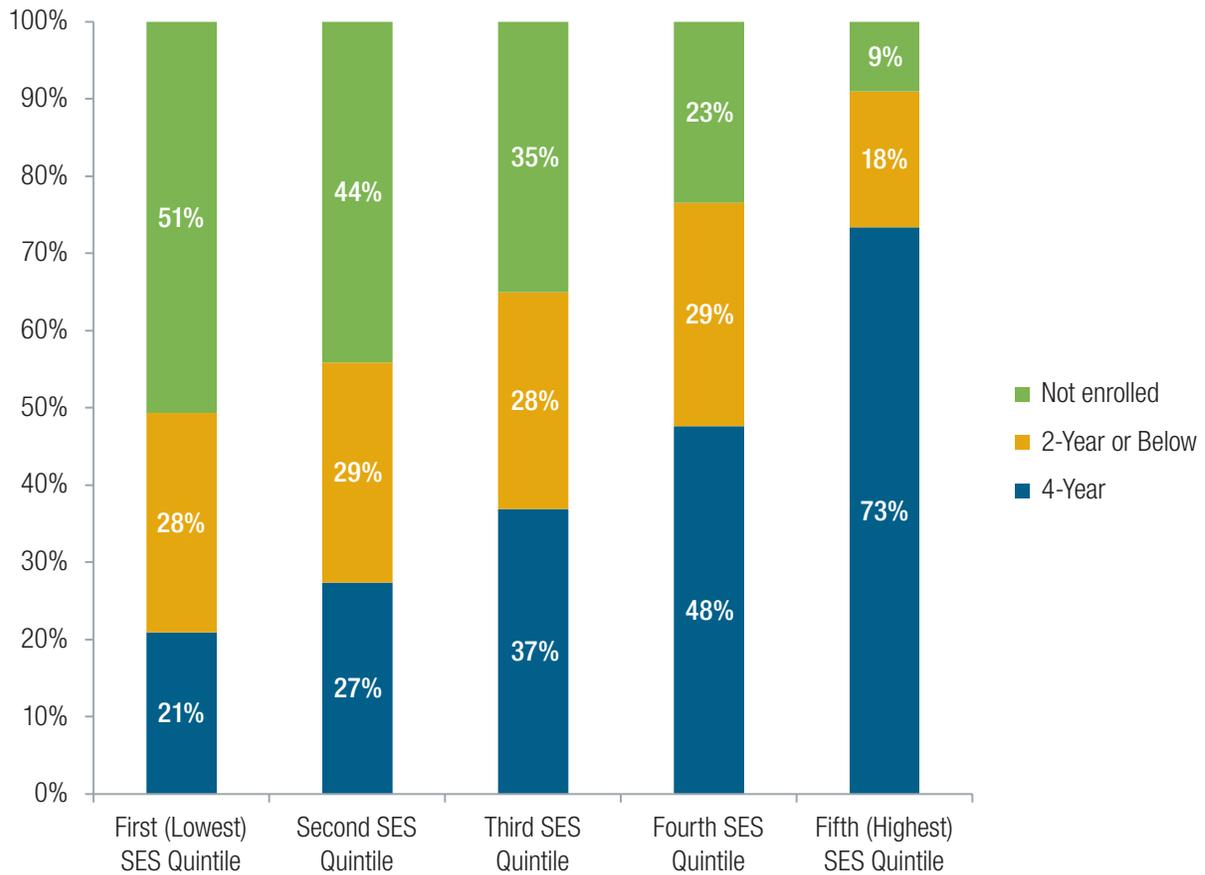
Half (51 percent) of 2009 9th graders from the lowest SES quintile were not enrolled in college the fall after their 2013 scheduled high school graduation, compared with 9 percent of those in the highest SES family quintile. Youth in the highest SES quintile were more than 3 times as likely as those in the lowest quintile to be enrolled in a 4-year institution (73 percent for the highest quintile and 21 percent for the lowest). A higher share of 2009 9th graders in the lowest SES quintile than in the highest SES quintile enrolled in 2-year colleges (28 percent versus 18 percent).

Enrollment in College Within 3 Years of Scheduled High School Graduation. Indicator 1g(ii) presents the percentage of the 2009 9th grade cohort who attended college by February 2016 (approximately 3 years after scheduled high school graduation) by race/ethnicity and SES quintiles.

Among 2009 9th graders, rates of attending college within 3 years of scheduled high school graduation were: 47 percent for American Indian/Alaska Natives, 62 percent for Black/African-Americans, 64 percent for Native Hawaiian/Pacific Islanders, 66 percent for Hispanics, 70 percent for "More than One Race," 73 percent for Whites, and 84 percent for Asians.

Just over half (53 percent) of 2009 9th graders from the lowest SES quintile had attended college within three years of scheduled high school graduation, compared with 92 percent of those in the highest SES quintile.

Equity Indicator 1g(i): Percentage distribution of 2009 9th graders by enrollment status in the fall after scheduled high school graduation by parents' socioeconomic status (SES): High School Longitudinal Study (HSLs:2009/2013)



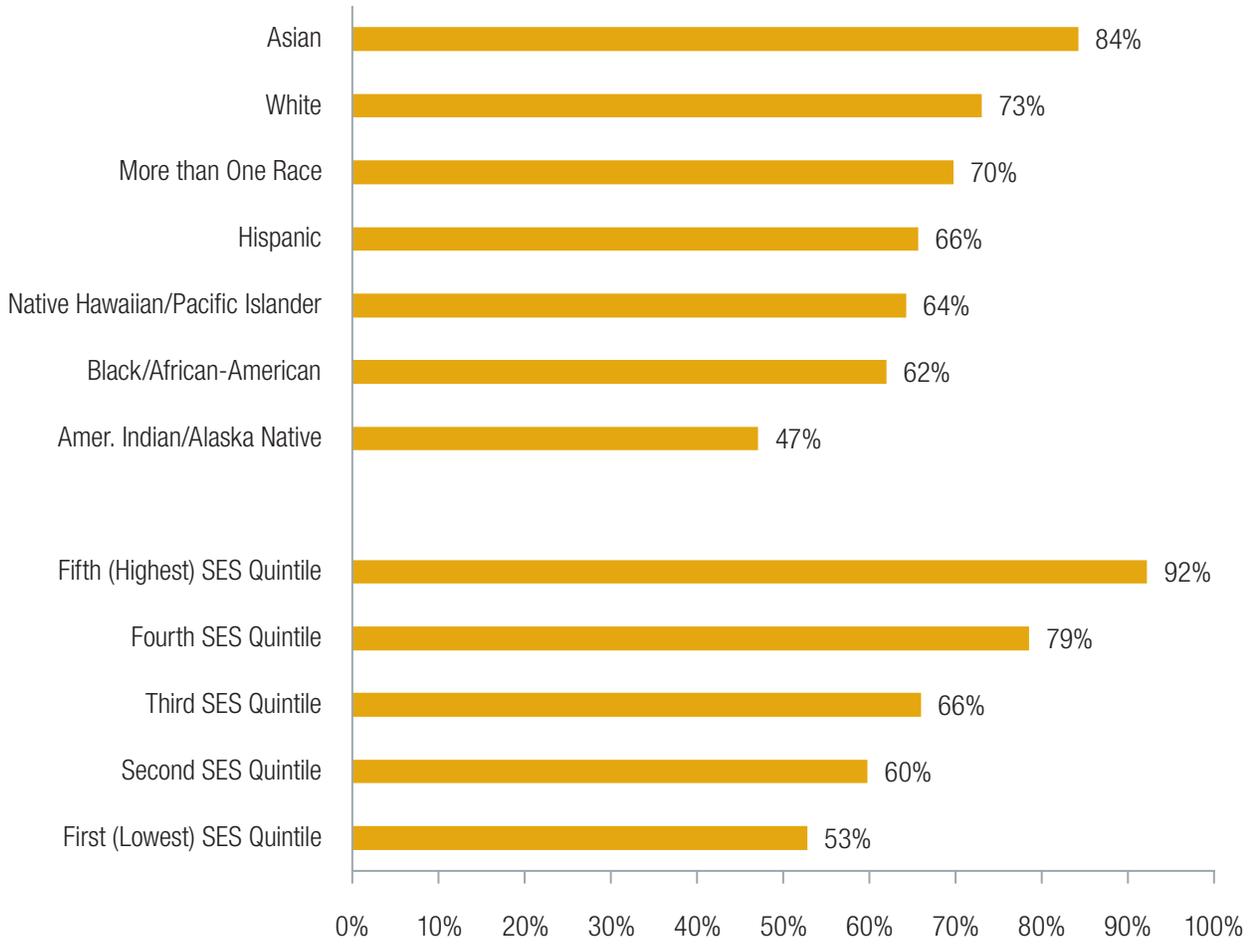
Indicator Status: High Inequality

Half (51 percent) of 2009 9th graders from the lowest SES quintile were not in college in the fall after their scheduled high school graduation, compared with 9 percent of those from the highest SES quintile.

NOTE: The High School Longitudinal Study (HSLs:2009) began with a nationally representative sample of 9th graders in 2009 and included follow-ups in 2012 (typically the 11th grade), 2013 (the fall after scheduled high school graduation), and 2016 (about 3 years after scheduled high school graduation). This indicator uses data from the 2013 follow-up.

SOURCE: U.S. Department of Education, National Center for Education Statistics, High School Longitudinal Study (HSLs:2009/2013). Tabulated using NCES PowerStats.

Equity Indicator 1g(ii): Percent of 2009 9th graders who ever attended college within 3 years after scheduled high school graduation by race/ethnicity and by parents' socioeconomic status (SES): High School Longitudinal Study (HSLs:2009/2016)



Indicator Status: High Inequality

Rates of attending college within three years of high school graduation ranged from 47 percent for American Indian/Alaska Natives to 84 percent for Asians. About half (53 percent) of 2009 9th graders in the lowest SES quintile enrolled in college within 3 years of scheduled high school graduation, compared with 92 percent of those in the highest quintile.

NOTE: The High School Longitudinal Study (HSLs:2009) began with a nationally representative sample of 9th graders in 2009. Data in this chart are from the 2016 follow-up, approximately three years after scheduled high school graduation.

SOURCE: U.S. Department of Education, National Center for Education Statistics, High School Longitudinal Study (HSLs:2009/2016). Tabulated using NCES PowerStats.

Equity Indicator 1h(i): What Are the Differences in High School Completion and College Entrance by Parents' Educational Attainment?

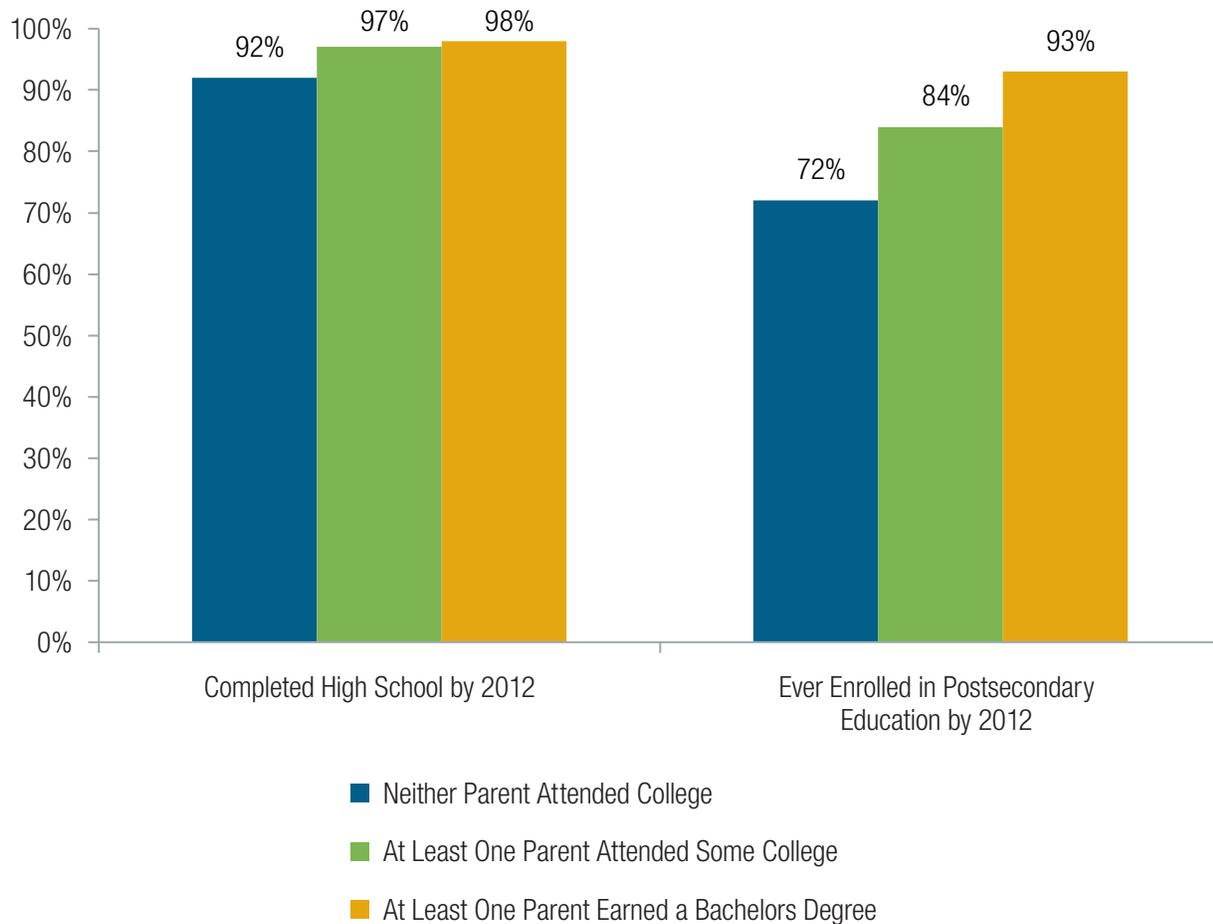
Indicator 1h uses the ELS:2002/2012 data to examine differences in high school completion and college entrance by first-generation college status. First-generation college status can be defined in different ways. The Higher Education Opportunity Act (HEOA), which defines eligibility for many Federal Programs (including the TRIO programs), specifies first-generation as neither parent having a bachelor's degree. Others define first-generation college as neither parent has gone to college. A recently published analysis by NCES in 2018 examines college outcomes for students who meet various definitions.⁵⁶

High School Diploma. Indicator 1h(i) shows that, by 8 years after scheduled high school graduation, virtually all youth whose parents had a bachelor's degree (98 percent) or some college (97 percent) and 92 percent of parents who had not attended college had attained at least a high school diploma.

College Enrollment. Rates of enrolling in college within 8 years after high school graduation increased with parents' education. Indicator 1h(i) also shows that 72 percent of youth with neither parent having attended college had enrolled in college, compared with 84 percent of youth with at least one parent who attended some college, and 93 percent of youth with at least one parent who had attained a bachelor's degree or higher.

⁵⁶ Cataldi, E. F., Bennett, C.T., & Chen X. (2018). *First-Generation Students College Access, Persistence, and Postbachelor's Outcomes* (NCES 2018-421). Washington, DC: U.S. Department of Education.

Equity Indicator 1h(i): Percentages of 10th grade students who completed high school and enrolled in postsecondary education within 8 years of their scheduled high school graduation by highest level of education of either parent (ELS:2002/2012)



Indicator Status: High Inequality

There is a 21 percentage-point gap in the rate of enrolling in college within 8 years of scheduled high school graduation between 2002 10th graders who have at least one parent with a bachelor’s degree and 2002 10th graders for whom neither parent has attended college.

NOTE: The “Completed High School by 2012” group includes students who earned a regular high school diploma, a General Education Development (GED) certificate, or other high school equivalency such as a certificate of attendance.

SOURCE: Table C-2a and C-4a in Chen, X., Lauff, E., Arbeit, C., Henke, R., Skomsvold, P., and Hufford, J. (2017). *Early Millennials: The Sophomore Class of 2002 a Decade Later* (NCES 2017-437), U.S. Department of Education. Washington, DC: National Center for Education Statistics, as included in Cataldi, E. F., Bennett, C.T., & Chen, X. (2018). *First-Generation Students College Access, Persistence, and Postbachelor’s Outcomes* (NCES 2018-421) [Figure 2]. Washington, DC: U.S. Department of Education.

Equity Indicator 1h(ii): What Percentage of College Students are First-generation Students?

Using data from the 2016 NCES National Postsecondary Student Aid Study, Equity Indicator 1h(ii) shows the percentages of undergraduates who were first-generation students. In 2016, 56 percent of undergraduates were first-generation students, defined as neither parent has a bachelor's degree. Of the 56 percent of first-generation undergraduate students, 32 percent had parents who had at some college, while 24 percent of students had parents with no postsecondary education.

Equity Indicator 1h(ii): Percentage distribution of undergraduate students by parents' educational attainment: 2016



Indicator Status: High Inequality

A large portion of undergraduate students are first-generation.

NOTE: First-generation college student is defined as an undergraduate whose parents do not have a bachelor's or higher degree.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Postsecondary Student Aid Study (NPSAS:16) as tabulated from information in the Center for First-Generation Student Success <https://firstgen.naspa.org>.

Equity Indicator 1i(i) and 1i(ii): What Are the Estimated College Participation Rates of Low-Income Students by State?

The Office of Postsecondary Education (OPE) reports the numbers and amount of Pell Grants awarded each year for dependent and independent students by state.⁵⁷ This information does not provide direct estimates of the percent of low-income youth within the state that are enrolled in college.⁵⁸ These participation rates may be estimated using annual data from the U.S. Department of Education on public school enrollment by state and annual data from the U.S. Department of Agriculture on the percent of enrollment approved for Free or Reduced-Price Lunches in the applicable time period by state. Tom Mortenson has used these three sources (Pell Grants awarded, school enrollment, and Free and Reduced-Price Lunch enrollment) to estimate an indicator of college participation rates for low-income students by state for the years 1998 to 2018. These comparisons are limited due to differential use of Free and Reduced-Price Lunch among states and migration of Pell recipients into and out of states. As such, we urge caution in interpreting this Indicator.⁵⁹ Indicator 1i(i) presents the estimates by state for 2018 and Indicator 1i(ii) plots the state data from 1989 to 2018.

Using this method of estimation, Indicator 1i(i) shows that the national estimated college participation rate for low-income students was 33 percent in 2018. This rate ranged from 11 percent in Alaska, 21 percent in New Mexico, 22 percent in Oklahoma, 23 percent in Wyoming, Texas, and Kentucky, and 24 percent in West Virginia; to 45 percent in New Hampshire and Rhode Island, 46 percent in Massachusetts, 47 percent in Connecticut, 48 percent in New York, and 53 percent in New Jersey. States with the highest estimated rates tended to be in the Northeast (NJ, NY, CT, MA, NH, and RI). States with the lowest rates were observed by Mortenson to have strong energy-producing industries (AK, NM, OK, WY, KY, TX and WV), where higher-paying jobs may be available without a college degree.⁶⁰

Indicator 1i(ii) shows variation over time in college participation rates by state. For virtually all states, college participation rates increased during the Great Recession and then declined somewhat in the recovery period. The national average college participation rate for low-income students was 26 percent in 2008, rose to 39 percent in 2011 and 2012, and declined to 33 percent in 2018.

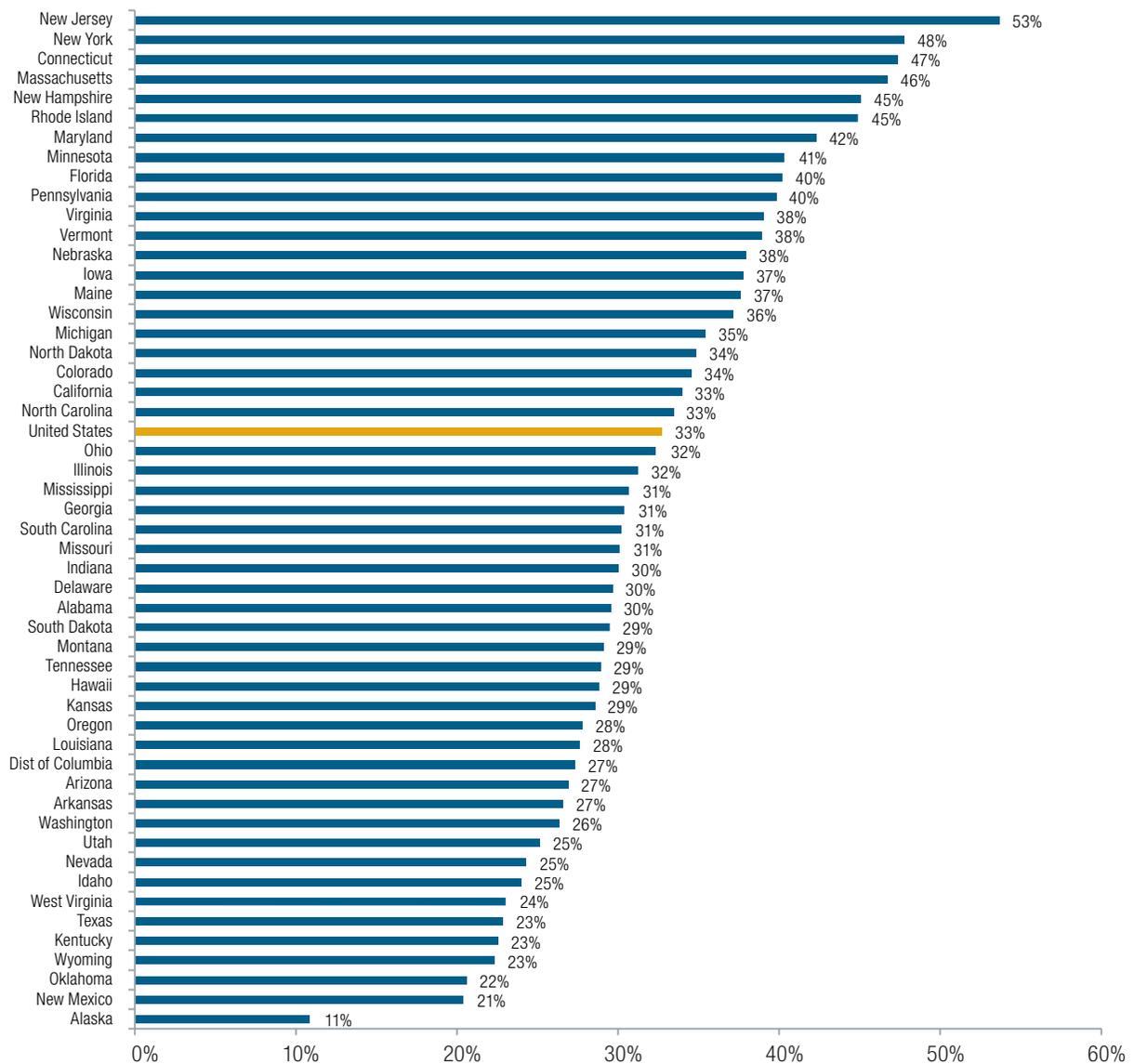
57 U.S. Department of Education, Office of Postsecondary Education, Office of Student Financial Aid, Federal Pell Grant Program Annual Data Reports, <https://www2.ed.gov/finaid/prof/resources/data/pell-data.html>.

58 Mortenson, T. (2019). *College Participation Rates for Students from Low-income Families by State and Sector: 1993 to 2018*, Washington, DC: The Pell Institute for the Study of Opportunity in Higher Education. Retrieved from <http://www.pellinstitute.org/peo.shtml>.

59 While caution is needed due to variation in state use of the federal school lunch program, estimates tabulated in the same manner over time provide a consistent indicator of change and some indication of differences by state.

60 Mortenson, T. (2019). *College Participation Rates for Students from Low-income Families by State and Sector: 1993 to 2018*, Washington, DC: The Pell Institute for the Study of Opportunity in Higher Education. Retrieved from <http://www.pellinstitute.org/peo.shtml>.

Equity Indicator 1i(i): Estimated college participation rates for students from low-income families by state: 2018



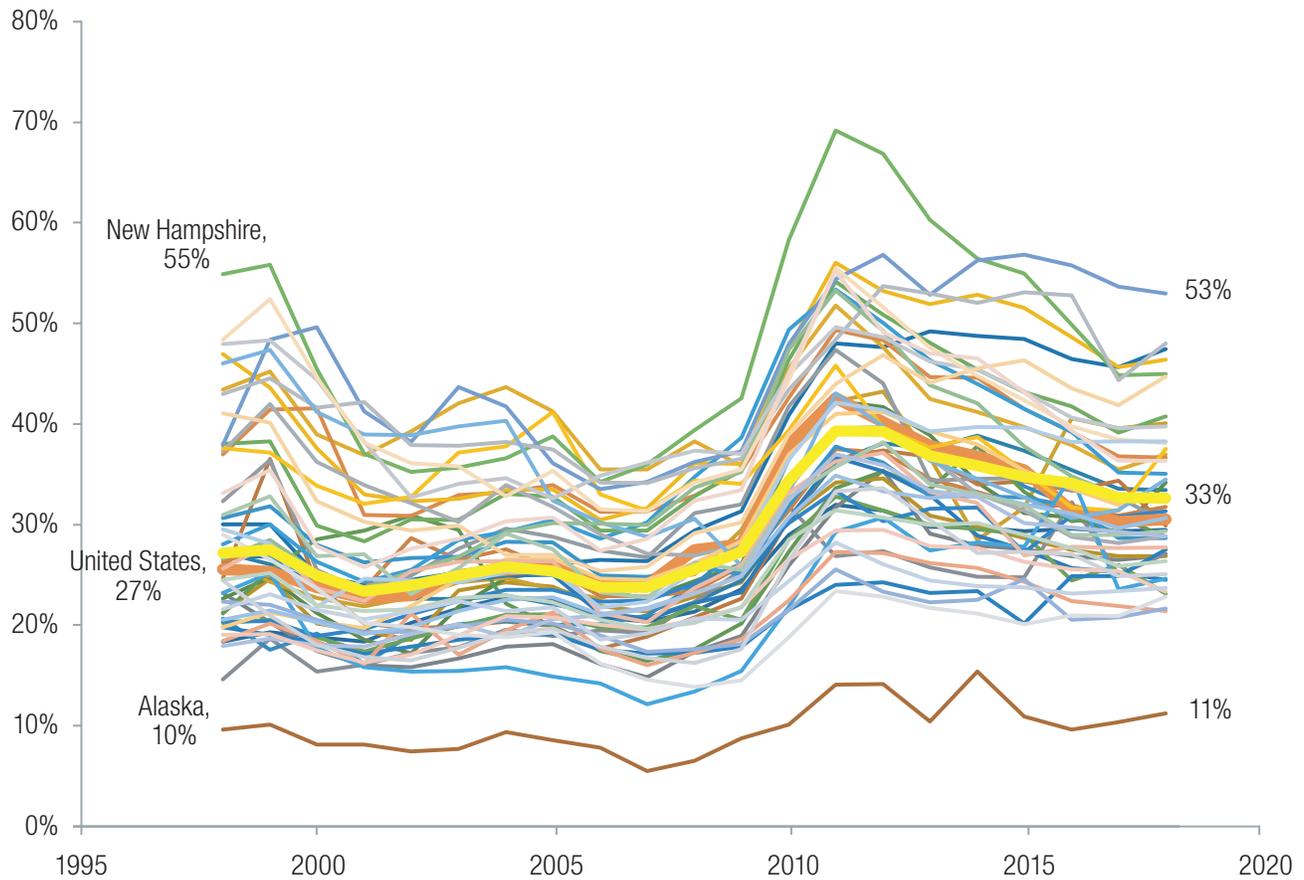
Indicator Status:

College participation rates vary by state and region, with higher rates in the Northeast than in other parts of the U.S.

NOTE: Caution is needed in reviewing these data due to differential use of Free and Reduced-Price Lunch and migrations in and out of states among Pell Grant recipients. Participation rates for low-income students are estimates based on: 1) public school enrollment; 2) number and percent of 4th to 9th graders that were approved for Free or Reduced-Price Lunch 9 years earlier, and 3) number of dependent Pell Grant recipients from each state in a given year.

SOURCE: Mortenson, T. (2019). *College Participation Rates for Students from Low-income Families by State and Sector: 1993 to 2018*, Washington, DC: The Pell Institute for the Study of Opportunity in Higher Education. Retrieved from <http://www.pellinstitute.org/peo.shtml>.

Equity Indicator 1i(ii): Trends in estimated college participation rates for students from low-income families by state: 1998 to 2018



Indicator Status:

While the 50 lines show variation in enrollment rates by state, virtually all states show an increase in enrollment during the Great Recession followed by some decline in the recovery period.

NOTE: Caution is needed in reviewing these data due to differential use of Free and Reduced-Price Lunch and migrations in and out of states among Pell Grant recipients. Participation rates for low-income students are estimated based on: 1) public school enrollment; 2) percent of 4th to 9th graders approved for a Free or Reduced-Price Lunch 9 years earlier, and 3) number of dependent Pell Grant recipients from each state in a given year.

SOURCE: Mortenson, T. (2019). *College Participation Rates for Students from Low-income Families by State and Sector: 1993 to 2018*, Washington, DC: The Pell Institute for the Study of Opportunity in Higher Education. Retrieved from <http://www.pellinstitute.org/peo.shtml>.

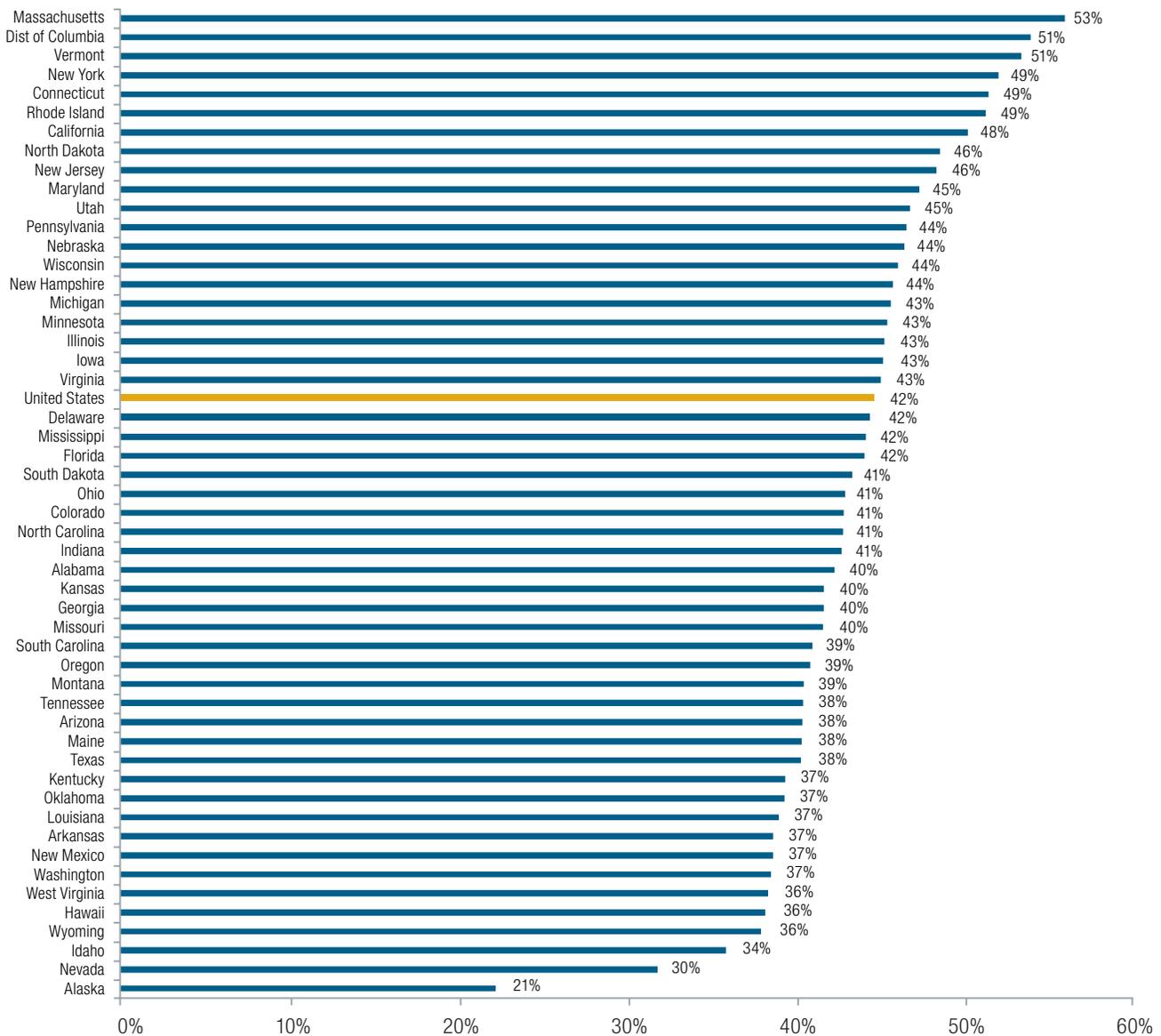
Equity Indicator 1j: What Are the Enrollment Rates of 18- to 24-Year-Olds by Race/Ethnicity and State?

The American Community Survey collects postsecondary enrollment data for 18- to 24-year-olds, with sample sizes that are large enough to estimate data by state and some race/ethnicity categories. Equity Indicator 1j(i) shows enrollment rates for the total state population in 2018 and Equity Indicators 1j(ii) and 1j(iii) show enrollment rates for the two largest racial/ethnic minoritized groups (Hispanics and Blacks, respectively) compared to Whites. Data are based on sample surveys of the population of 18- to 24-year-olds residing in the United States, including noninstitutionalized persons (e.g., those living in households, college housing, or military housing located within the United States) and institutionalized persons (e.g., those living in prisons, nursing facilities, or other healthcare facilities). Race categories exclude persons of Hispanic ethnicity.

In 2018, 42 percent of 18- to 24- year-olds nationwide were enrolled in some type of postsecondary education. Enrollment rates exceeded 50 percent in Massachusetts (53 percent), District of Columbia (51 percent), and Vermont (51 percent). The lowest enrollment rates were in Alaska (21 percent), Nevada (30 percent), and Idaho (34 percent).

Indicators 1j(ii) and 1j(iii) show that, for most states, the percentages of Hispanic and Black 18- to 24-year-olds enrolled in postsecondary education are lower than the percentage of Whites. In 2018, enrollment rates of 18- to 24-year-olds nationwide were 37 percent for Hispanics, 37 percent for Blacks, and 44 percent of Whites.

Equity Indicator 1j(i): Percentage of 18- to 24- year-olds enrolled in degree-granting postsecondary institutions by state: 2018



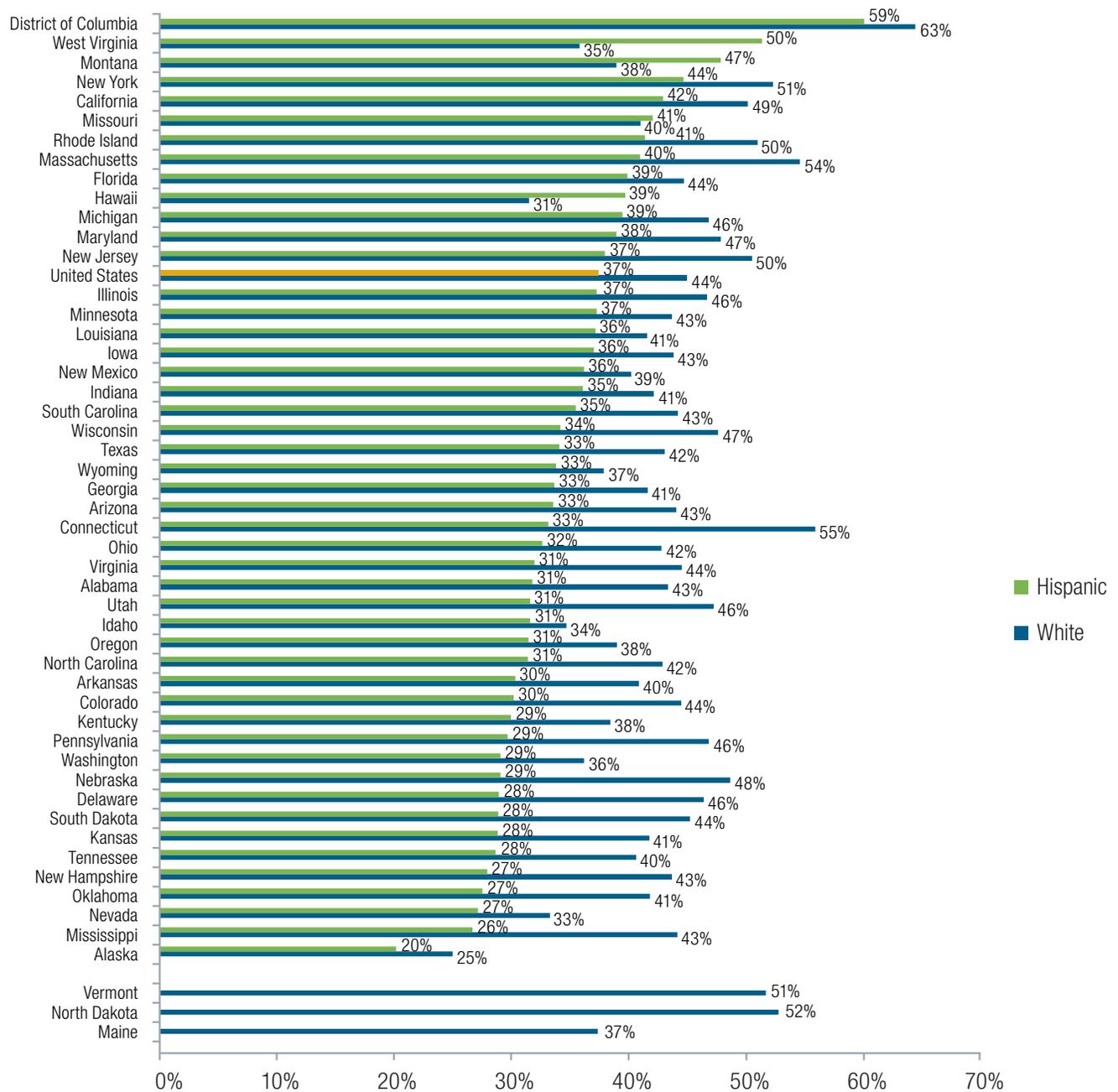
Indicator Status:

College participation rates vary by state, with higher rates in the Northeast than in other parts of the U.S.

NOTE: Data are based on sample surveys of the population 18- to 24-year-olds residing within the United States, including both noninstitutionalized persons (e.g., those living in households, college housing, or military housing located within the United States) and institutionalized persons (e.g., those living in prisons, nursing facilities, or other healthcare facilities).

SOURCE: U.S. Department of Commerce, Census Bureau, American Community Survey (ACS), 2018.

Equity Indicator 1j(ii): Percentages of Hispanic and White 18- to 24- year-olds enrolled in degree-granting postsecondary institutions by state: 2018



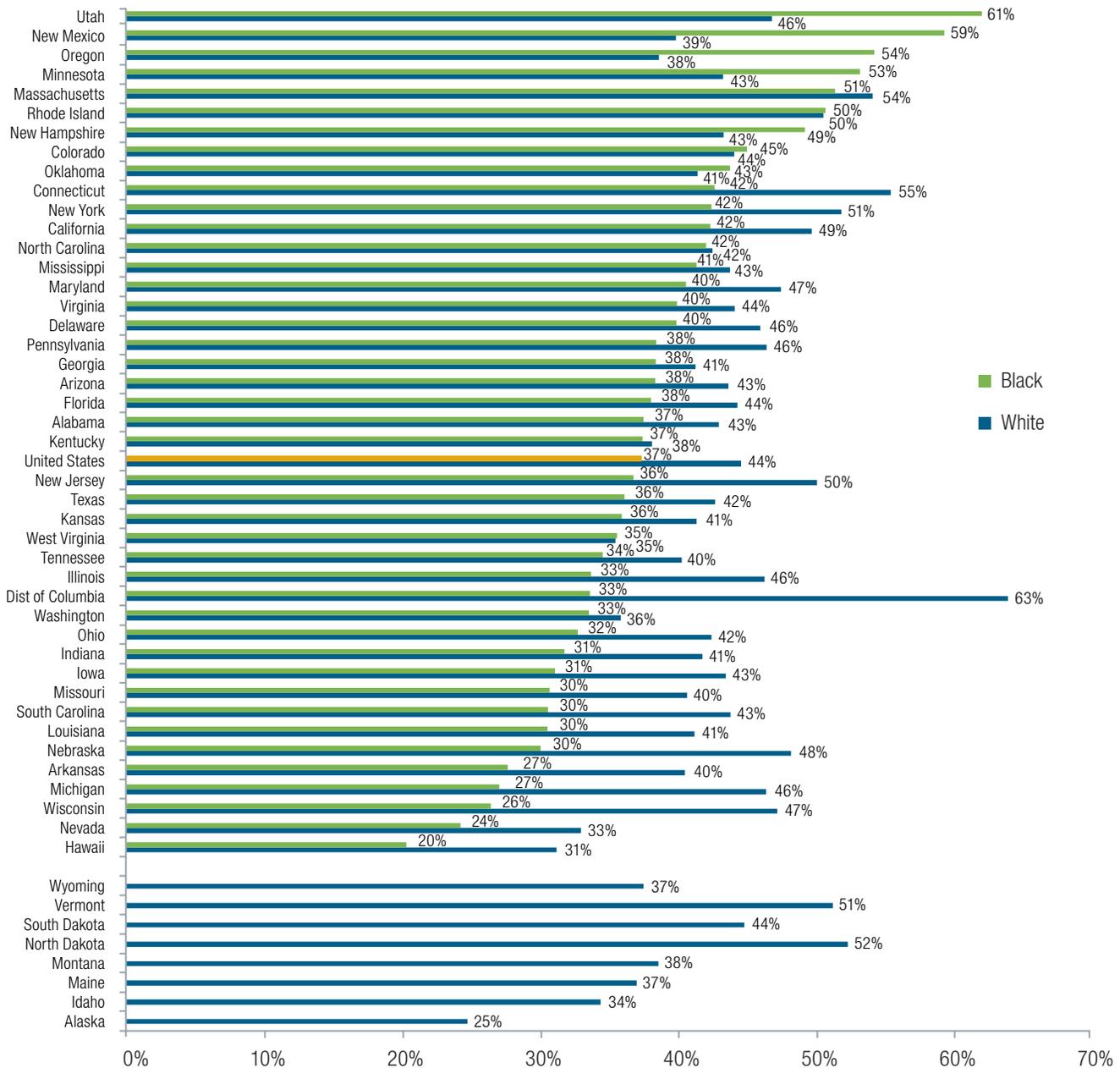
Indicator Status:

In 2018, college participation rates for Hispanics ranged from 20 percent in Alaska to 59 percent in the District of Columbia.

NOTE: States with no entry for Hispanics had too few sample members for estimation. Reporting standards require sufficient number of cases for a reliable estimate and a coefficient of variation (CV) less than 50 percent. The White category excludes persons of Hispanic ethnicity.

SOURCE: U.S. Department of Commerce, Census Bureau, American Community Survey (ACS), 2018.

Equity Indicator 1j(iii): Percentage of Black and White 18- to 24- year-olds enrolled in degree-granting postsecondary institutions by state: 2018



Indicator Status:

In 2018, college participation rates for Blacks ranged from 20 percent in Hawaii to 61 percent in Utah.

NOTE: States with no entry for Blacks had too few sample members for estimation. Reporting standards require sufficient cases for a reliable estimate and a coefficient of variation (CV) less than 50 percent. Race categories exclude persons of Hispanic ethnicity.

SOURCE: U.S. Department of Commerce, Census Bureau, American Community Survey (ACS), 2018.

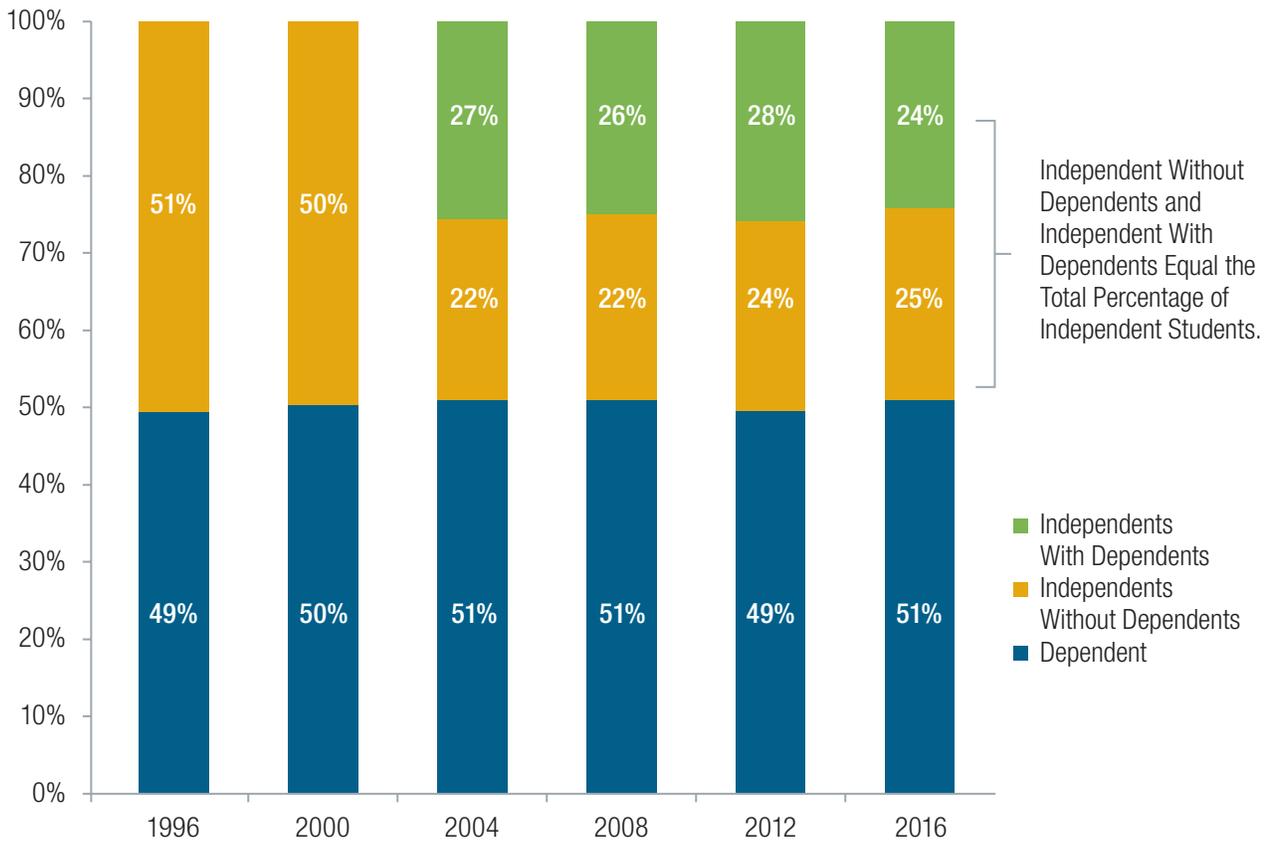
Equity Indicator 1k (i to vi): What is the Dependency Status of Enrolled Students and How Do Dependent and Independent Students Differ From Each Other on Demographic and “Risk” Characteristics?

Indicator 1k(i to vi) uses data from the National Postsecondary Student Aid Study (NPSAS) for the period of 1996 to 2016 to report the characteristics of students by dependency status. We report on enrolled students by dependency status, race/ethnicity, age, Pell Grant receipt, and identified “risk” for completion characteristics.

How Has the Percentage Distribution of Undergraduate Students Between Independent and Dependent Status Changed Since 1996?

Indicator 1k(ii) shows the age distribution of dependent and independent students. Consistent with the federal definition of dependency status, 100 percent of dependent undergraduate students were under age 24 in 2000 and 2016. Among independent students, 16 percent in 2000 and 17 percent in 2016 were under age 24. Per the federal definition, independent students who are under age 24 are married or meet one of the other exceptions (e.g., foster care, active military, emancipated minor, both parents deceased, foster care, homeless, and/or in danger of being homeless). Between 2000 and 2016, the percentage of independent undergraduates age 24 to 29 increased (from 33 percent to 37 percent) while the percentage of those age 40 and older declined (from 24 percent to 19 percent).

Equity Indicator 1k(i): Percentage distribution of undergraduate students by dependency status: 1996 to 2016



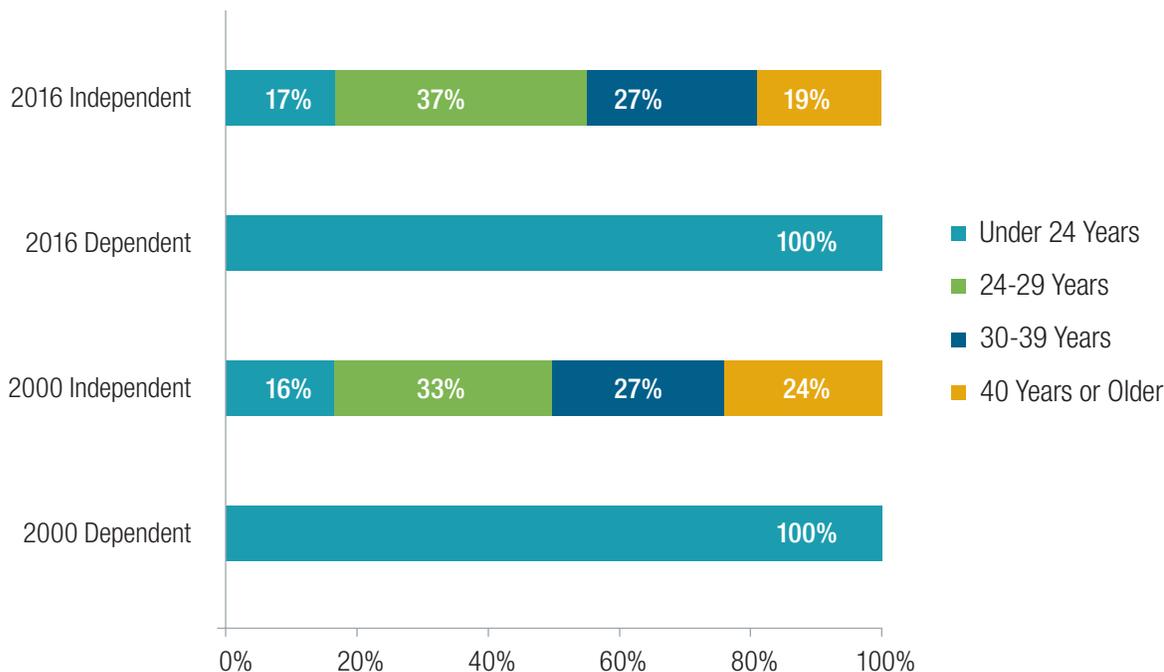
Indicator Status:

Since 1996, about half of all undergraduate students have been classified as financially independent.

NOTE: Dependency status follows the classifications used for federal student financial aid. Students up to age 24 are classified by the federal aid requirements as dependent unless they are married or otherwise have exceptional circumstances, in which case they are classified as independent students. See the introduction to Indicator 1 for detailed definitions of dependent and independent students. Dependency status was disaggregated into 3 categories starting in 2004 (Dependent, Independent Without Dependents, and Independent With Dependents).

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Postsecondary Student Aid Study (NPSAS:1996, 2000, 2004, 2008, 2012, 2016). Tabulated using NCES PowerStats.

Equity Indicator 1k(ii): Percentage distribution of undergraduate students in age brackets by dependency status: 2000 and 2016



Indicator Status:

The percentage of independent students who were 40 and older declined from 24 percent in 2000 to 19 percent in 2016. Over the same period, the percent of independent students who were age 24 to 29 increased from 33 percent in 2000 to 37 percent in 2016.

NOTE: Dependency status follows the classifications used for federal student financial aid. Students up to age 24 are classified by the federal aid requirements as dependent, unless they are married or otherwise have exceptional circumstances, in which case they are classified as independent students. See the introduction to Indicator 1 for detailed definitions of dependent and independent students.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Postsecondary Student Aid Study (NPSAS:2000; 2016). Tabulated using NCES PowerStats.

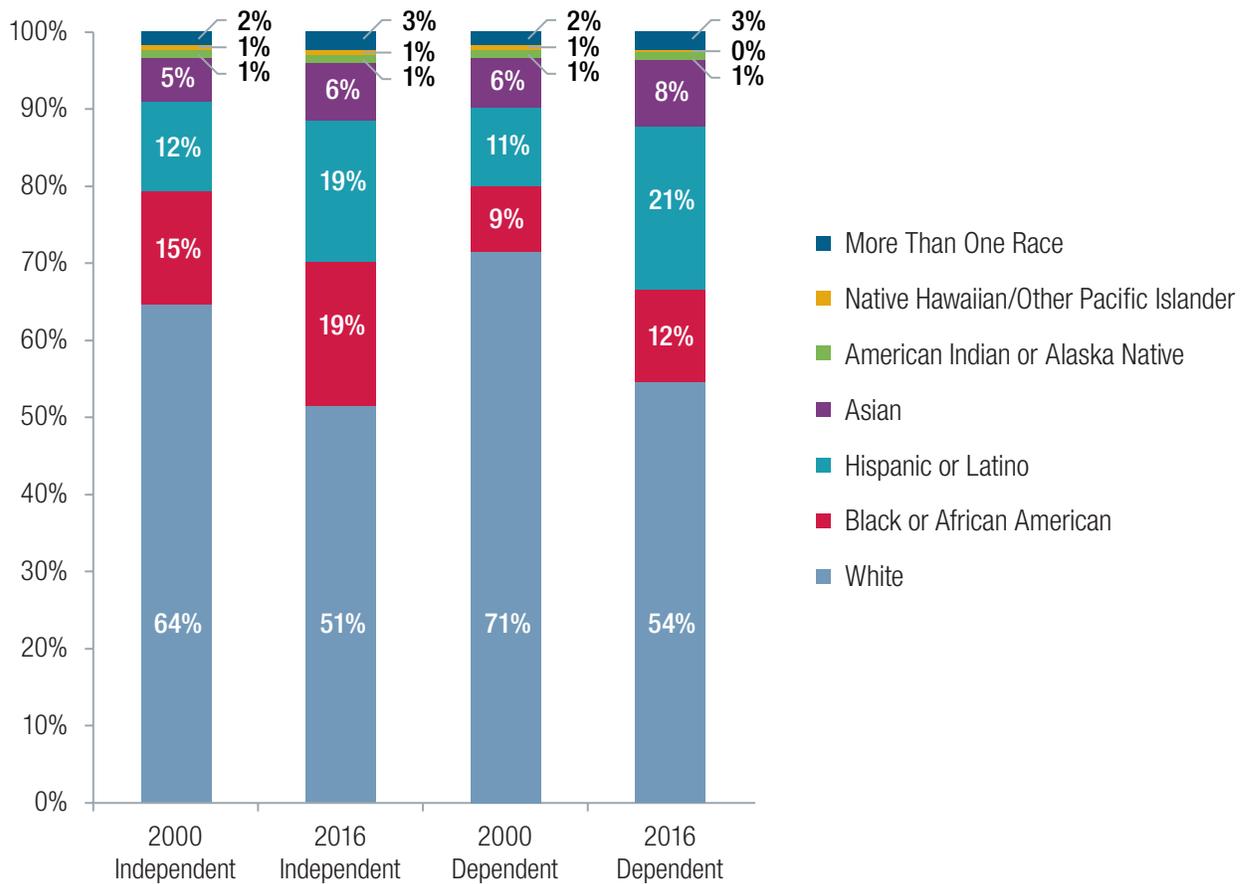
Race/Ethnicity by Dependency Status. Equity Indicator 1k(iii) shows the distributions of independent and dependent students in 2000 and in 2016 by race/ethnicity. Indicator 1k(iv) shows the percentage of each racial/ethnic group that is financially independent. Caution is needed in interpreting these data, especially changes over time. Estimates disaggregated by race/ethnicity, especially for the smaller race/ethnicity groups, typically have larger sampling errors than estimates for the total population or for larger groups. There have also been changes in self-identification options available over time.

Indicator 1k(iii) shows that, between 2000 and 2016, the percentage of independent and dependent students who reported a racial/ethnic group other than White increased. Among independent students, the percent who reported a non-White racial/ethnic group increased from 36 percent in 2000 to 49 percent in 2016 (an increase of 36 percent) and among dependent students, the percentage increased from 29 percent to 46 percent (an increase of 59 percent). Most of this growth has come from the Hispanic population. In 2016, 19 percent of independent students reported being Hispanic, up from 12 percent in 2000, and the percentage of dependent students reporting being Hispanic increased from 11 percent in 2000 to 21 percent in 2016.

Equity Indicator 1k(iv) shows that, among undergraduate students, 60 percent of Blacks, 62 percent of American Indian/Alaska Natives, and 61 percent of Native Hawaiian/other Pacific Islanders were independent in 2016, compared with 48 percent of Whites, 48 percent of those reporting more than one race, 47 percent of Hispanics, and 43 percent of Asians.

Pell Grant Receipt by Dependency Status. Indicator 1k(v) shows the percentage of undergraduate students who received Pell Grants by dependency status. Independent students, especially those with dependents, were more likely to have Pell Grants than dependent students. In 2016, the percentage of students receiving Pell Grants ranged from 39 percent for dependent students to 59 percent for independent students with dependents. Forty-one percent of independent students without dependents had Pell Grants. At the time of data collection for the 2012 NPSAS, during the Great Recession, there were higher percentages of independent students who were Pell Grant recipients (64 percent for independents with dependents and 46 percent for independents without dependents).

Equity Indicator 1k(iii): Percentage distribution of race/ethnicity of undergraduate students by dependency status: 2000 and 2016



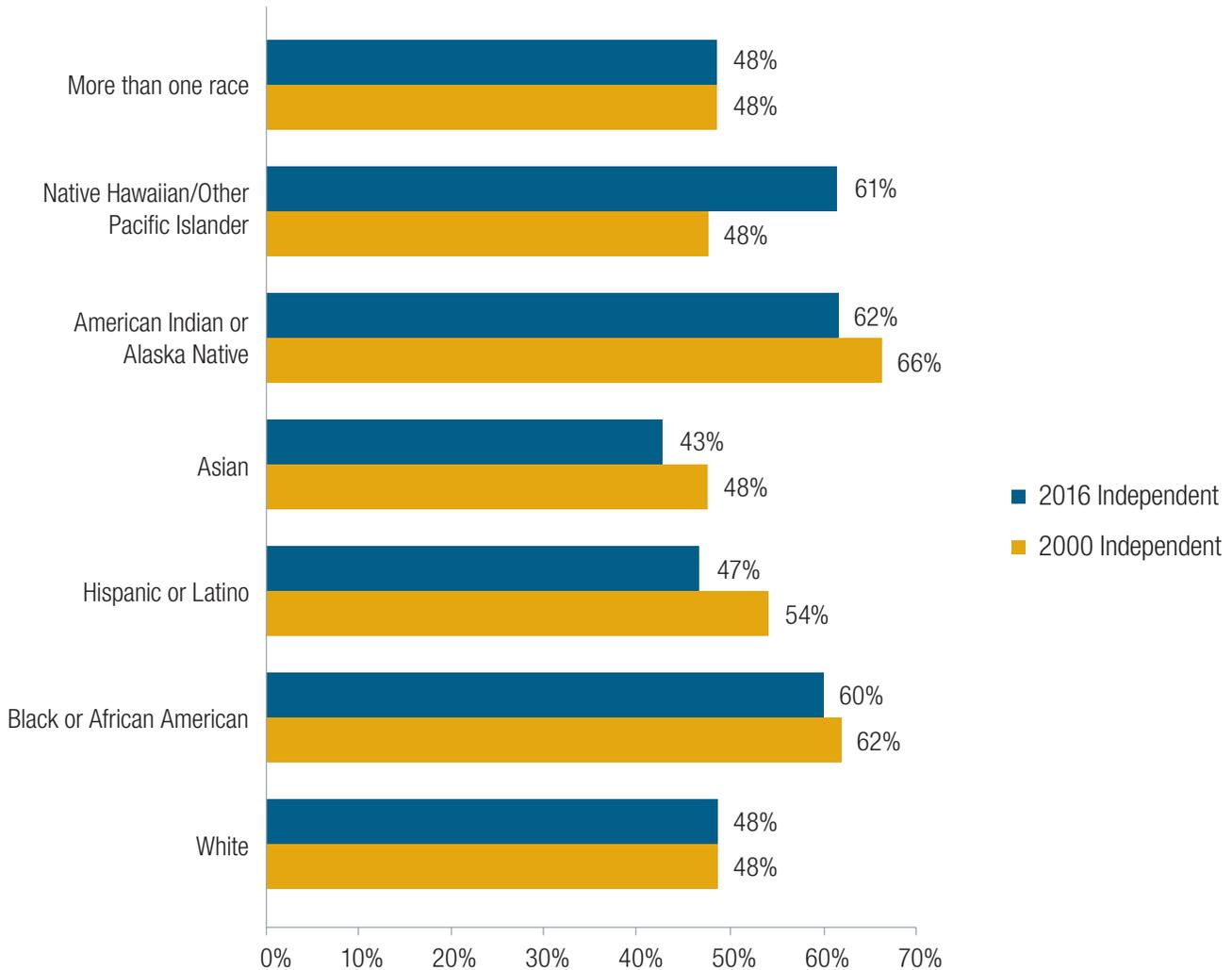
Indicator Status:

Between 2000 and 2016, the percentage of students who report a race/ethnicity other than White increased among independent students (from 36 percent to 49 percent) and dependent students (from 29 percent to 46 percent).

NOTE: Dependency status follows the classifications used for federal student financial aid. Students up to age 24 are classified by the federal aid requirements as dependent, unless they are married or otherwise have exceptional circumstances, in which case they are classified as independent students. See the introduction to Indicator 1 for detailed definitions of dependent and independent students.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *National Postsecondary Student Aid Study* (NPSAS:2000; 2016). Tabulated using NCES PowerStats.

Equity Indicator 1k(iv): Percentage of undergraduate students who were independent by race/ethnicity: 2000 and 2016



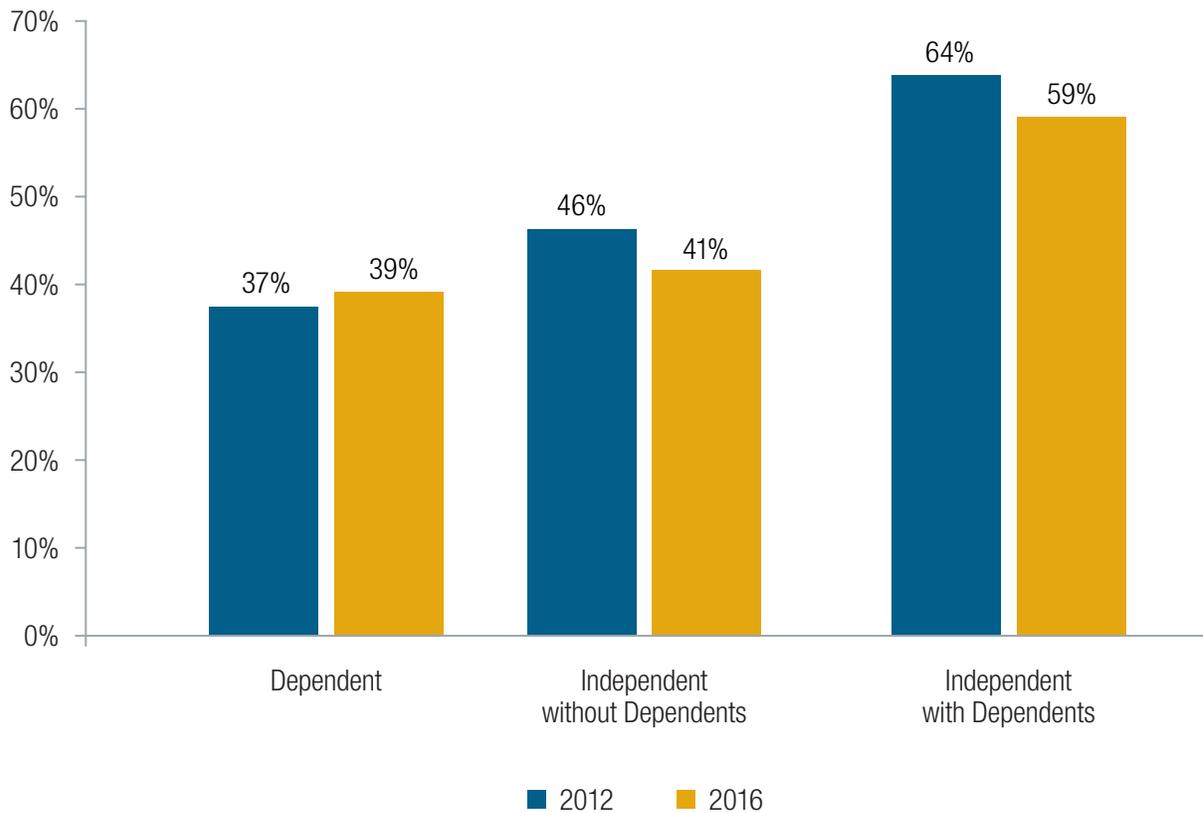
Indicator Status:

In 2016, 60 percent or more of: Native Hawaiian/Other Pacific Islanders (61 percent); American Indian or Alaska Natives (62 percent); and Blacks (60 percent) were independent students compared with less than half of Whites (48 percent), Hispanics (47 percent), and Asians (43 percent).

NOTE: Estimates disaggregated by race/ethnicity, especially for the smaller race/ethnicity groups, typically have larger sampling errors than estimates for the total population or for larger groups. Dependency status follows the classifications used for federal student financial aid. Students up to age 24 are classified by the federal aid requirements as dependent unless they are married or otherwise have exceptional circumstances in which case they are classified as independent students. See the introduction to Indicator 1 for detailed definitions of dependent and independent students.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *National Postsecondary Student Aid Study* (NPSAS:2000; 2016). Tabulated using NCES PowerStats.

Equity Indicator 1k(v): Percentage of undergraduate students who received Pell Grants by dependency status: 2012 and 2016



Indicator Status:

Independent students were more likely to have Pell Grants than dependent students. In 2016, the percentage of students having Pell Grants ranged from 39 percent for dependent students to 59 percent for independent students with dependents and was 41 percent for independent students without dependents. In 2012, at the time of the Great Recession, higher percentages of students were Pell Grant recipients.

NOTE: Dependency status follows the classifications for federal student financial aid. Students up to age 24 are classified by the federal aid requirements as dependent unless they are married or otherwise have exceptional circumstances in which case they are classified as independent students. See the introduction to Indicator 1 for detailed definitions of dependent and independent students.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *National Postsecondary Student Aid Study* (NPSAS:2000; 2016). Tabulated using NCES PowerStats.

College Completion Risk Factors. A 2005 NCES report entitled *Independent Undergraduates: 1999–2000*⁶¹ includes a chart, using NPSAS:2000 data, that compares independent and dependent students on characteristics that had been found to be predictive of the likelihood of completing college. The “risk” factors identified in 2000 were:

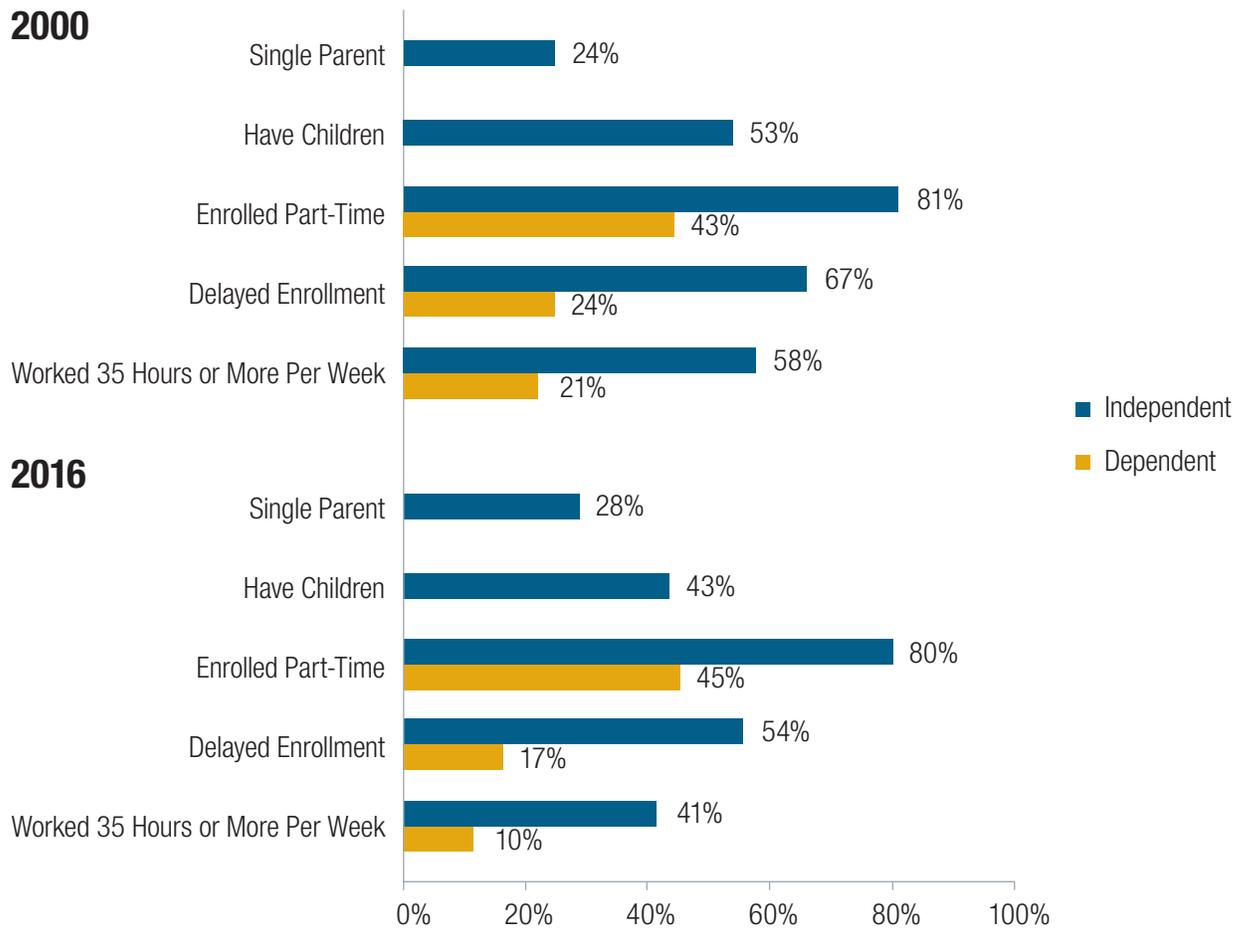
- Worked 35 Hours or More Per Week,
- Delayed Enrollment,
- No Regular High School Diploma,
- Enrolled Part-Time,
- Have Children, and
- Single Parent.

Equity Indicator 1k(vi) replicates the NPSAS: 2000 data for selected risk characteristics and shows the same variables from NPSAS:16.⁶² Indicator 1k(vi) shows that in both 2000 and 2016, higher shares of independent than dependent students have the identified risk characteristics. For example, in 2016, about 80 percent of independent students, compared with 45 percent of dependent students, were enrolled part-time. In 2016, 54 percent of independent students, compared with 17 percent of dependent students, had delayed entry into postsecondary education. Among independent students, about 43 percent had children in 2016 (down from 53 percent in 2000), and 28 percent were single parents (up from 24 percent in 2000). Large differences were also found in the percentages of dependent and independent students working 35 or more hours per week. In 2016, for example, 41 percent of independent students worked 35 or more hours per week, compared with 10 percent of dependent students.

61 Wei, Christina Chang, Nevill Stephanie, Berkner Lutz. (2005). *Independent Undergraduates: 1999–2000*. U.S. Department of Education. NCES, 2005-151. Retrieved from: <https://nces.ed.gov/das/epubs/2005151/index.asp>.

62 Data are not presented in the chart for the risk factor of not having a regular high school diploma, due to large sampling errors.

Equity Indicator 1k(vi): Percentage of undergraduate students with college completion risk characteristics by dependency status: 2000 and 2016



Indicator Status:

Higher percentages of independent than dependent students have “completion risk” characteristics.

NOTE: Dependency status follows the classifications for federal student financial aid. Students up to age 24 are classified by the federal aid requirements as dependent unless they are married or otherwise have exceptional circumstances, in which case they are classified as independent students. See the introduction to Indicator 1 for detailed definitions of dependent and independent students.

SOURCE: Wei, C., Nevill, S., & Berkner, L. (2005). *Independent Undergraduates: 1999–2000*. U.S. Department of Education. NCES, 2005-151. Retrieved from: <https://nces.ed.gov/das/epubs/2005151/index.asp>, U.S. Department of Education, National Center for Education Statistics, National Postsecondary Student Aid Study (NPSAS: 2000; 2016). Data represent the 1999-2000 and 2015-16 academic year. Tabulated using NCES PowerStats.

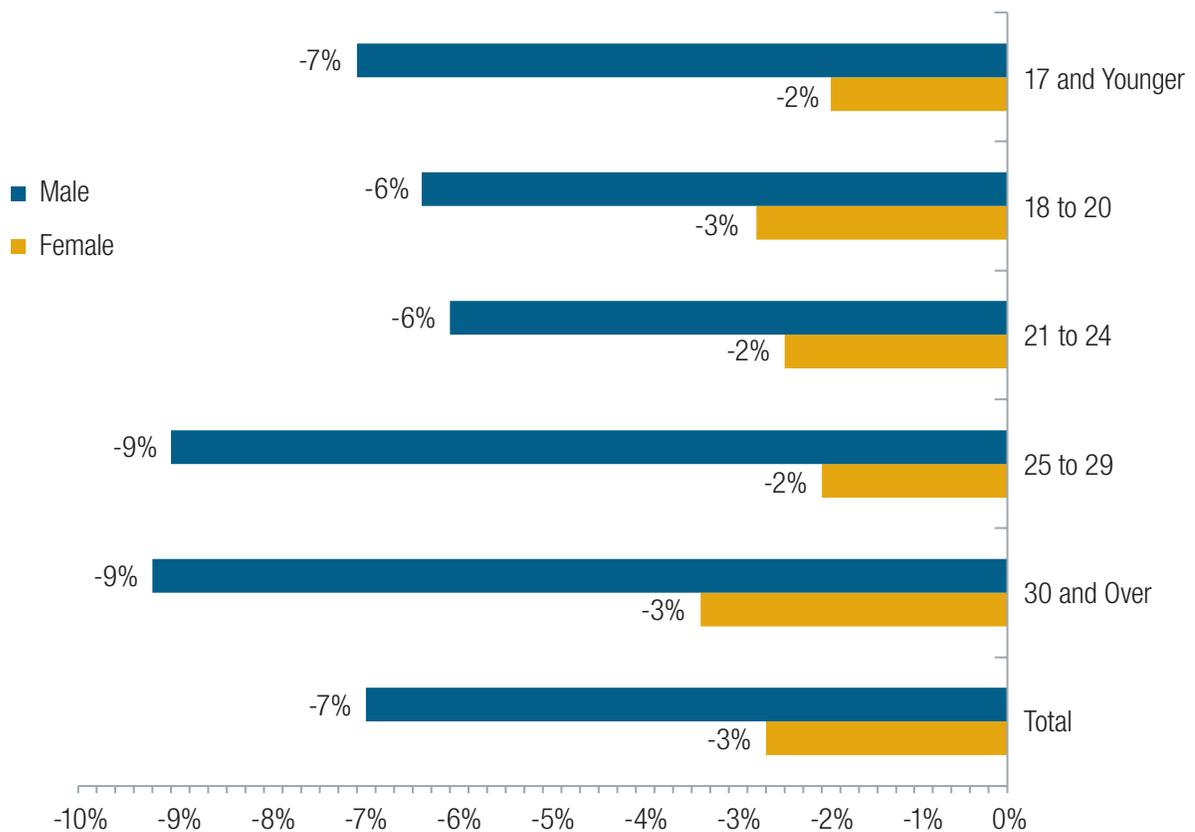
Equity Indicators 1l(i) and 1l(ii): How Has the COVID-19 Virus Affected Short-term Trends in Enrollment in Postsecondary Education?

Indicators 1l(i) and 1l(ii) use data from the National Student Clearinghouse Research Center to compare fall enrollment of 2019 to the fall enrollment of 2020 to study the short-term impact of the COVID-19 pandemic on undergraduate enrollment in postsecondary education institutions. Rather than use data from the *Current Term Enrollment Estimates* report series, this Indicator uses data from the *Stay Informed* series. The *Stay Informed* series studies the effect of COVID-19 on postsecondary enrollment, using 2018 and 2019 as pre-pandemic baselines to compare with the most recent 2020 data. According to the documentation provided by National Student Clearinghouse Research Center, “The Stay Informed series uses unweighted enrollment counts because the goal is to look at year-over-year changes from the same institution’s enrollment patterns rather than total enrollment numbers.” In this 2021 *Indicators* report we include the National Student Clearinghouse Research Center data on enrolled students by gender, age, and race/ethnicity.

Gender and Age. The data in 1l(i) indicate that undergraduate enrollment has declined for both males and females and for all ages. Comparing fall undergraduate enrollment from 2019 to fall 2020, enrollments for males declined by 7 percent and enrollments for females declined by 3 percent. Across all age groups, undergraduate enrollment also declined, most notably for the 25 to 29 age group and the 30 and over age group.

Race/Ethnicity. Undergraduate enrollment has declined across all race/ethnicity groups. Indicator 1l(ii) shows that the largest decrease in undergraduate enrollment came from the non-resident and international students group which declined by 15 percent. Other large decreases in enrollment came from Native Americans (down by 10 percent), Blacks (down by 8 percent), Whites (down by 6.6 percent), and Hispanics (down by 5 percent). The race/ethnicities that saw the least amount of decline were Asians (down by 3 percent) and Other race (down by 2 percent).

Equity Indicator 11(i): Changes in undergraduate enrollment by gender and age from fall 2019 to fall 2020



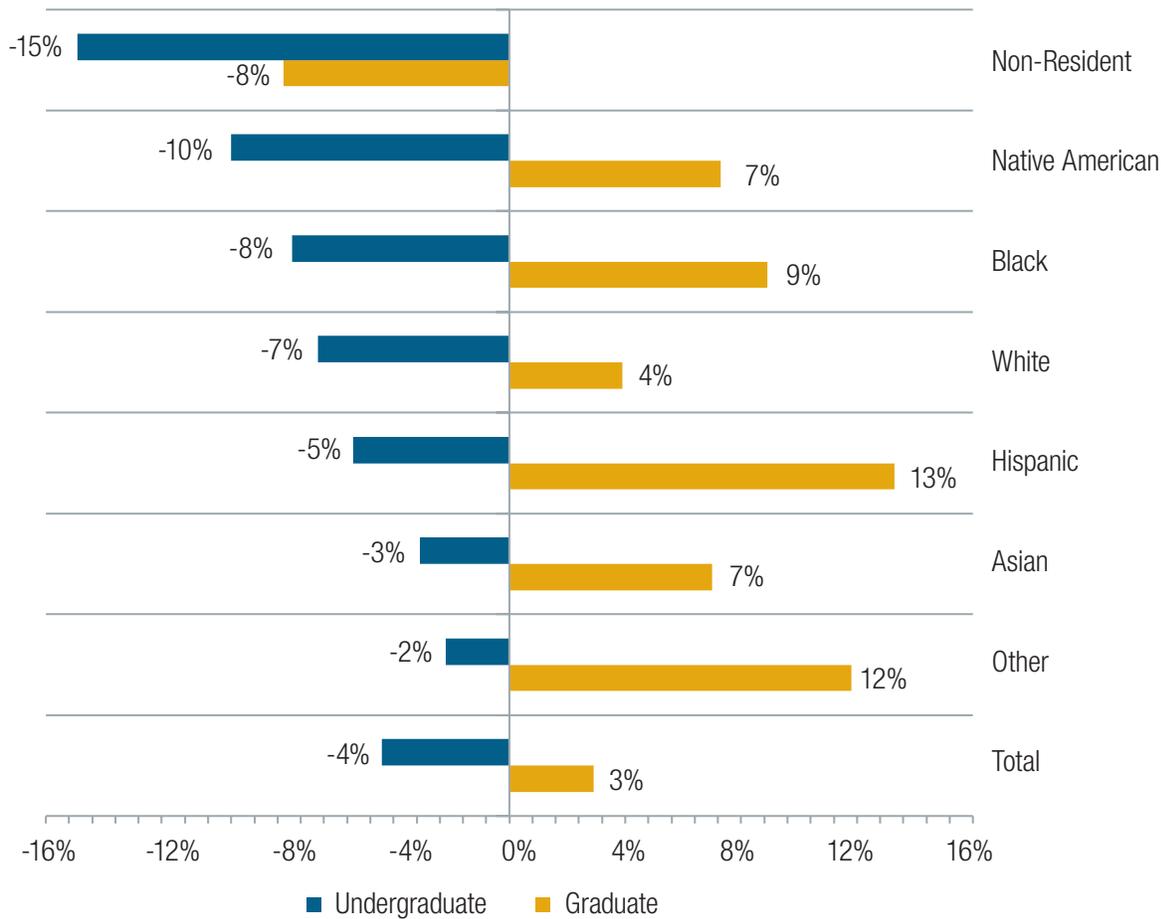
Indicator Status:

Undergraduate enrollment in fall 2020 is down for all ages and genders, but most notably for males and people age 25 and older.

NOTE: This indicator uses data from the *Stay Informed* series from the National Student Clearinghouse Research Center and not the *Current Term Enrollment Estimates* report series. The *Stay Informed* series studies the effect of COVID-19 on postsecondary enrollment, using 2018 and 2019 as pre-pandemic baselines to compare with the most recent 2020 data. The *Stay Informed* series uses unweighted enrollment counts because the goal is to look at year-over-year changes from the same institution's enrollment patterns rather than total enrollment numbers.

SOURCE: National Student Clearinghouse Research Center. (2020). *COVID-19 Stay Informed with the Latest Enrollment Information*. National Student Clearinghouse Research Center's Monthly Update on Higher Education Enrollment. Retrieved from <https://nscresearchcenter.org/stay-informed>.

Equity Indicator 11(ii): Changes in enrollment by award level and race/ethnicity from fall 2019 to fall 2020



Indicator Status:

Undergraduate enrollment in fall 2020 is down for all races and ethnicities, but most notably for non-resident, international, and Native American students. In contrast, graduate enrollment has risen.

NOTE: This Indicator uses data from the *Stay Informed* series from the National Student Clearinghouse Research Center and not the *Current Term Enrollment Estimates* report series. The *Stay Informed* series studies the effect of COVID-19 on postsecondary enrollment, using 2018 and 2019 as pre-pandemic baselines to compare with the most recent 2020 data. The *Stay Informed* series uses unweighted enrollment counts because the goal is to look at year-over-year changes from the same institution's enrollment patterns rather than total enrollment numbers.

SOURCE: National Student Clearinghouse Research Center. (2020). *COVID-19 Stay Informed with the Latest Enrollment Information*. National Student Clearinghouse Research Center's Monthly Update on Higher Education Enrollment. Retrieved from <https://nscresearchcenter.org/stay-informed>.

EQUITY INDICATOR 2:

WHAT TYPE OF POSTSECONDARY EDUCATIONAL INSTITUTION DO STUDENTS ATTEND?

Among 2009 9th graders who graduated from high school in 2013, those from the highest SES quintile were 8 times as likely to attend a “most” or “highly” selective college as students from the lower SES quintile (33 percent versus 4 percent).

In 2018, 62 percent of degree-seeking undergraduates who received Federal Pell or other grants were enrolled at a 4-year institution. By comparison, among undergraduates who did not receive a Federal grant, 78 percent attended a 4-year institution rather than a 2-year institution.

Equity Indicator 2(a-f): Definitions

The sources of data for Equity Indicator 2 are: 1) Integrated Postsecondary Education Data System (IPEDS), which has collected institutional-level data on U.S. postsecondary educational institutions since 1986⁶³; 2) five NCES high school longitudinal studies; 3) the NCES National Postsecondary Student Aid Study (NPSAS:2016); 4) 2016 Barron’s Admissions Competitiveness Index; and 5) the National Student Clearinghouse (NSC) data on enrollment before the COVID-19 pandemic and during the COVID-19 pandemic.

- **IPEDS Federal Grant Aid.** IPEDS does not collect data on students’ family income but does collect aggregate data on institutional characteristics that provide reasonable proxies.⁶⁴ In Indicator 2, we report the percentage of full-time, first-time degree seeking undergraduate students receiving “Federal Grants.” Federal Grant aid is comprised primarily of Pell Grants but also includes Federal Supplemental Educational Opportunity Grants (FSEOG) and grants from federal agencies other than the U.S. Department of Education, such as the Departments of Veterans Affairs and Labor.⁶⁵ We report Federal Grant aid because separate Pell Grant data were not reported in IPEDS before 2009 and because receipt of Federal Grant aid is a reasonable proxy for Pell-specific measures.⁶⁶ In this report, Federal Grant aid is also referred to as “Pell or other Federal Grants.”

⁶³ In 1986 the IPEDS system was initiated. Prior to this date, the U.S. Department of Education collected institutional data through other data collection systems such as the Higher Education General Information Survey (HEGIS) series, the immediate predecessor to IPEDS.

⁶⁴ Current IPEDS measures include the percent of undergraduates receiving Pell Grants, percent of full-time, first-time (FTFT) undergraduates receiving Pell Grants, and percent of full-time, first-time (FTFT) undergraduates receiving Federal Grant aid.

⁶⁵ National Center for Education Statistics, IPEDS Data Center. Retrieved from <https://nces.ed.gov/ipeds/datacenter/selectVariables.aspx>.

⁶⁶ Others also use Federal Grant aid as a proxy for receiving Federal Pell Grants. See Giancola, J. & Kahlenberg, R. (2016). *True merit: Ensuring our brightest students have access to our best colleges and universities*. Lansdowne: Jack Kent Cooke Foundation. Retrieved from http://www.jkcf.org/assets/1/7/JKCF_True_Merit_Report.pdf.

- **Federal Pell Grant Receipt.** Eligibility for Pell Grants for both dependent and independent students is based on family income, family size, number of family members attending college, and other factors. A dependent student’s Pell Grant eligibility is based on parent’s family income, and an independent student’s eligibility is based on the student’s income plus any spousal income. In the 2019–20 award year, 6.7 million students received a Pell Grant at a total cost of \$27.8 billion. This figure was down from a peak of 9.4 million students in 2011–12 during the Great Recession.⁶⁷ In the 2020–21 award year, the maximum Pell Grant award was \$6,345.
- **High School Longitudinal Studies Data by Family Socioeconomic Status and Institutional Selectivity.** The five NCES high school longitudinal studies included in this report are: the National Longitudinal Study, representing the scheduled high school graduating class of 1972 (NLS); High School and Beyond Study, representing the scheduled high school graduating class of 1982 (HS&B); National Education Longitudinal Study, representing the scheduled high school graduating class of 1992 (NELS); Education Longitudinal Study, representing the scheduled high school graduating class of 2004 (ELS); and High School Longitudinal Study (HSLs) representing the scheduled high school graduating class of 2013. As discussed in Indicator 1, a socioeconomic status (SES) composite is included in each of the NCES high school longitudinal studies. The SES composite is based on data from the parent questionnaires or imputed from the student questionnaires. For the five NCES longitudinal studies, SES is based on five equally weighted components. These components are: father’s/guardian’s education, mother’s/guardian’s education, family income, father’s/guardian’s occupational prestige score, and mother’s/guardian’s occupational prestige score. This Indicator uses data from a published study by Michael Bastedo and Ozan Jaquette and an analytic dataset constructed by merging the high school longitudinal data with the Barron’s Admissions Competitiveness Index.⁶⁸ We also use data from the High School Longitudinal Study (HSLs) to examine selectivity of institutions attended by 2009 9th graders who graduated high school by 2013. Due to differences in survey design and study methodology, we present these data in a separate chart rather than with the earlier four NCES studies.⁶⁹
- **National Postsecondary Student Aid Study (NPSAS) Data by Dependency Status.** Using data from the 2016 wave of the NPSAS, we report differences in the characteristics of higher education institutions attended based on three categories of dependency status: dependent, independent without dependents, and independent with dependents.
- **Institutional Selectivity.** Selectivity is measured using Barron’s Admissions Competitiveness Index, which is based on such measures as percent of applicants admitted, students’ high school class rank, and students’ college entrance exam scores.⁷⁰ NCES publishes Barron’s datasets corresponding to years in which students in the longitudinal studies typically first enrolled in a postsecondary institution. The competitiveness indices include “most competitive,” “highly

⁶⁷ College Board, *Trends in College Pricing 2020*, Table SA-1, Figure SA-7, and Figure SA-16A. U.S. Department of Education, Federal Pell Grant Program End-of-Year Report, Federal Student Aid Data Center (n.d.). Retrieved from <https://research.collegeboard.org/pdf/trends-college-pricing-student-aid-2020.pdf> and [Data file]. Retrieved from <https://research.collegeboard.org/xlsx/trends-student-aid-excel-data-2020.xlsx>.

⁶⁸ Figures are adapted from Bastedo, M. & Jaquette, O. (2011). Running in place: Low-income students and the dynamics of higher education stratification. *Educational Evaluation and Policy Analysis*, 33, 318–339, Appendix 6. Retrieved from <http://www-personal.umich.edu/~bastedo/papers/EEPA-Appendix.pdf>.

⁶⁹ The High School Longitudinal Study (HSLs:2009) sampled 9th graders and completed follow-ups in 2012 (11th grade) and 2013 (the fall after expected high school graduation date). For these reasons, HSLs:2009 is not directly comparable to the earlier four studies which started in 10th or 8th grade and had follow-ups in 12th grade. The 12th grade data on anticipated college were used in the Bastedo and Jaquette (2011) analyses on selectivity for the four earlier NCES longitudinal studies. The HSLs used quintiles for the SES classification rather than quartiles.

⁷⁰ For more information on Barron’s Admissions Competitiveness Index as it pertains to Indicators 2d and 2e, see Bastedo and Jaquette (2011), Retrieved from <http://www-personal.umich.edu/~bastedo/papers/EEPA-Appendix.pdf>.

competitive,” “very competitive,” “competitive,” and “less competitive.” We coded institutions not included in Barron’s Admissions Competitiveness Index based on level and control using IPEDS data.⁷¹ We used the 2016 Barron’s index for all years in Indicator 2e. Reflecting high consistency in Barron’s methodology across years, only a small share of institutions change competitiveness classification over time.⁷²

- **National Student Clearinghouse (NSC) Research Center Data** is used to compare fall enrollment of 2019 to the fall enrollment of 2020 to study the effects that COVID-19 has had on undergraduate and graduate enrollment in postsecondary education institutions. The National Student Clearinghouse published this data in a series called *Stay Informed*. NSC reports on enrolled students by gender, age, and race/ethnicity.

Equity Indicator 2a: How Does the Level of Institution Attended Vary by Pell or Other Federal Grant Receipt?

Indicator 2a shows that, among full-time, first-time (FTFT) degree-seeking undergraduates, those who received Pell and other Federal Grants are consistently less likely than those who do not receive Federal Grants to attend 4-year institutions rather than 2-year institutions. In 2017-18, 62 percent of Federal Grant recipients were enrolled at 4-year rather than 2-year institutions, compared with 78 percent of non-recipients. The difference in the percentages of Federal Grant recipients and non-recipients attending 4-year rather than 2-year colleges widened from 13 percentage points in 2000-01 to 16 percentage points in 2017-18.

Equity Indicator 2b: How Does the Control of Institution Attended Vary by Receipt of Pell or Other Federal Grants?

Most students attend public institutions rather than private non-profit or private for-profit institutions. Indicator 2b shows that, in 2017-18, 72 percent of Pell and other Federal Grant recipients and 71 percent of non-recipients were attending public institutions.

The distribution of full-time, first time (FTFT) undergraduates who did not receive Pell or other Federal Grants across public, private non-profit, and private for-profit institutions remained relatively stable over the past decade. In 2018, 71 percent of non-recipients were enrolled at public institutions, 25 percent were enrolled at private non-profit institutions, and 4 percent were enrolled in private for-profit institutions.

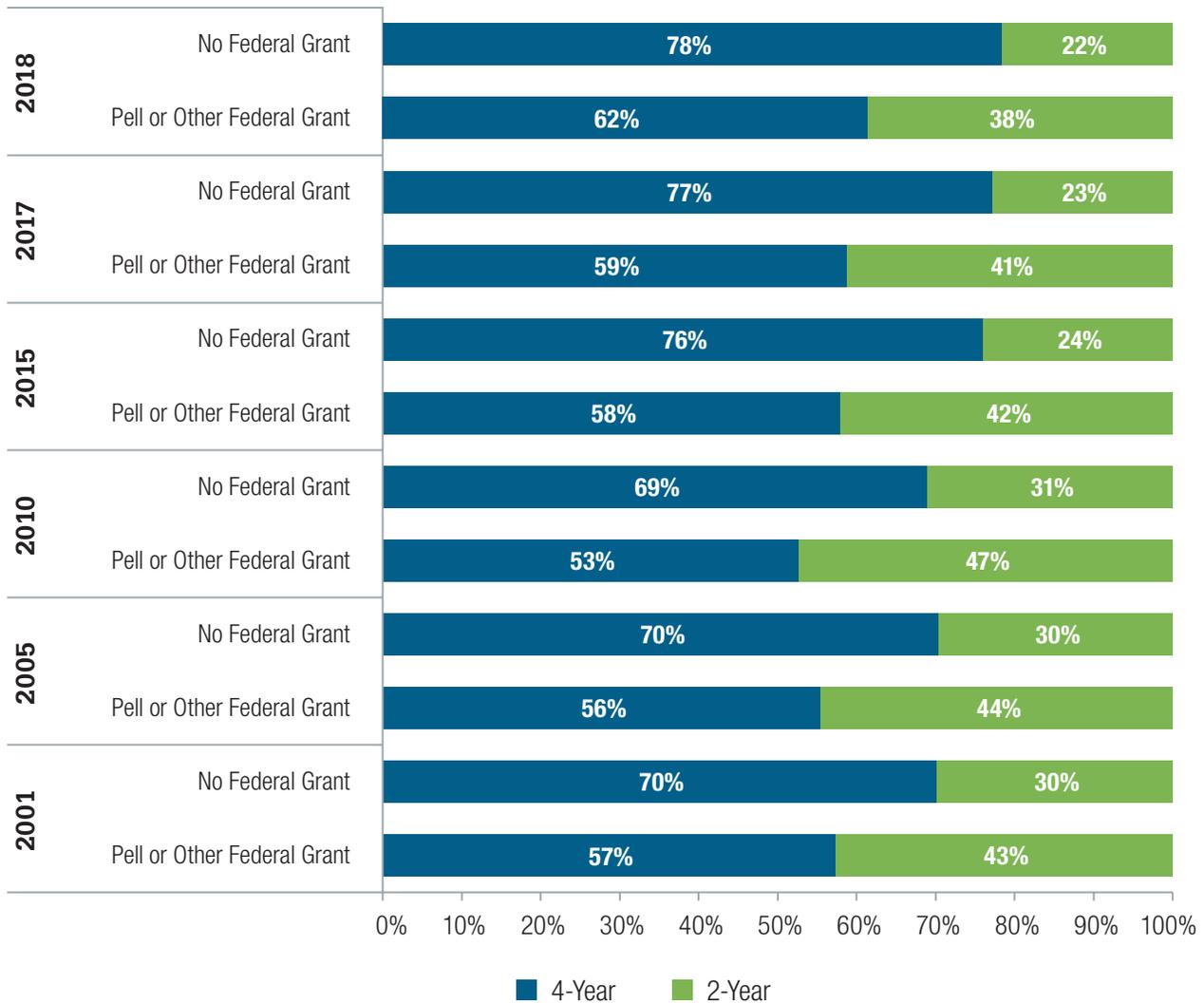
In contrast, the distribution of FTFT undergraduates who received Pell and other Federal Grants shifted across these three sectors over the past decade. The proportion of FTFT undergraduates receiving Pell and other Federal Grants who were enrolled at for-profit institutions increased from 18 percent in 2004 to 23 percent in 2006, reached a high of 31 percent in 2010, and declined to 9 percent in 2017-18.

In 2017-18, as in prior years, Federal Grant recipients were more than twice as likely as those who did not receive Federal Grants to be enrolled at for-profit institutions rather than public or private non-profit institutions (9 percent versus 4 percent).

⁷¹ National Center for Education Statistics.(n.d.). Barron’s Admissions Competitiveness Index Data Files:1972, 1982, 1992, 2008, 2014. [Data file]. Retrieved from <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2016332>.

⁷² Bastedo and Jaquette (2011) also used one year of the Barron’s selectivity index in their study (cited above).

Equity Indicator 2a: Percentage distribution of full-time, first-time degree-seeking undergraduate students who did and did not receive Pell or other Federal Grants by level of institution attended: 2001, 2005, 2010, 2015, 2017 and 2018



Indicator Status: High Inequality and Widening Gap

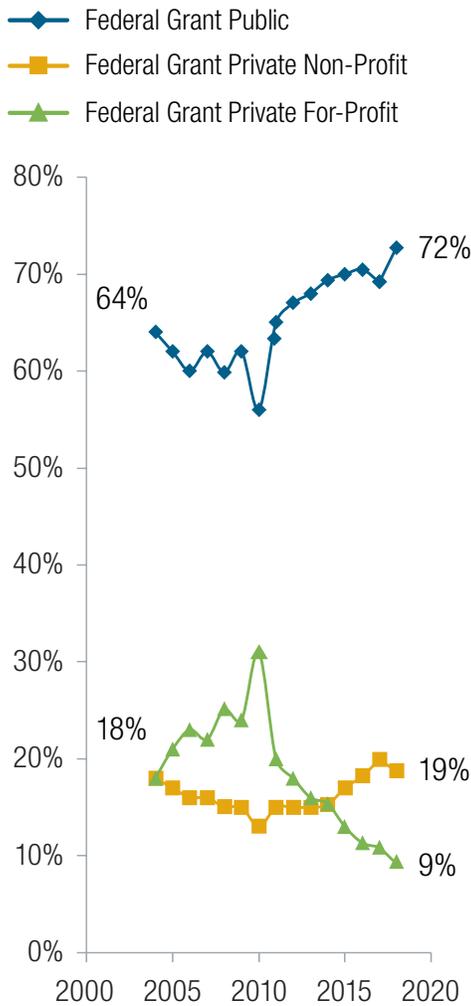
The difference in the percentages of Federal Grant recipients and non-recipients attending 4-year rather than 2-year colleges widened from 13 percentage points in 2000-01 to 16 percentage points in 2017-18.

NOTE: Federal Grant aid is comprised primarily of Pell Grants but also includes Federal Supplemental Educational Opportunity Grants (FSEOG) and grants from federal agencies other than the U.S. Department of Education such as the Department of Veterans Affairs and the Department of Labor.

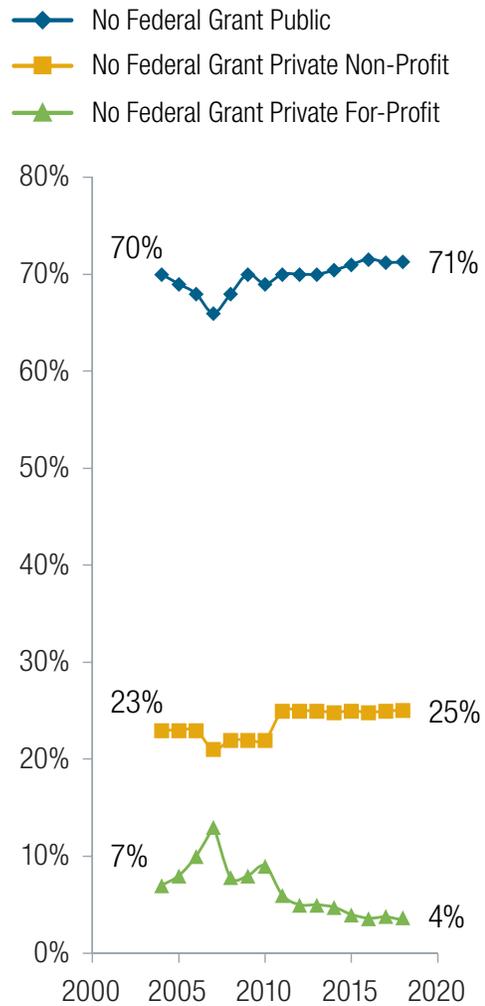
SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), as included in *Digest of Education Statistics 2019*, [Table 331.20]. Retrieved from https://nces.ed.gov/programs/digest/d19/tables/dt19_331.20.asp?current=yes.

Equity Indicator 2b: Percentage distributions of control of institution attended by full-time, first-time degree-seeking undergraduate Pell Recipients and Non-Recipients: 2004 to 2018

Percentage Distribution of Pell and Other Federal Grant Recipients



Percentage Distribution of Non-Recipients



Indicator Status:

Pell and other Federal Grant recipients were more than twice as likely as Federal Grant non-recipients to attend a private for-profit institution in 2018 and 2004.

NOTE: Federal Grant aid is comprised primarily of Pell Grants but also includes Federal Supplemental Educational Opportunity Grants (FSEOG) and grants from federal agencies other than the U.S. Department of Education such as the Departments of Veterans Affairs and Labor.

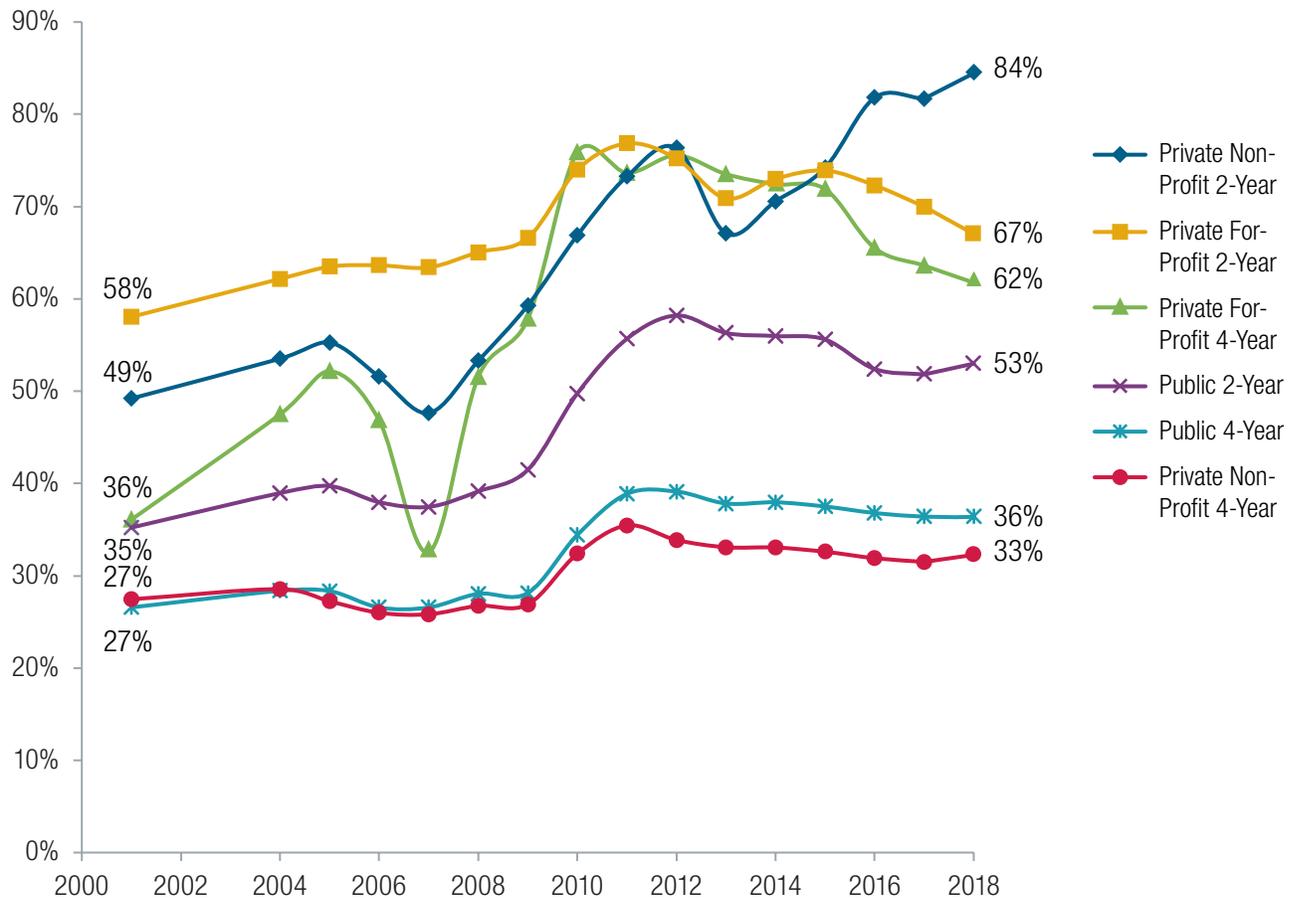
SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS). (2018), as included in *Digest of Education Statistics 2019*, [Table 331.20]. Retrieved from https://nces.ed.gov/programs/digest/d19/tables/dt19_331.20.asp?current=yes.

Equity Indicator 2c: How Does the Percent of Students Receiving Federal Grants Vary by Institutional Level and Control?

The percentage of full-time, first-time (FTFT) undergraduates who receive Pell and other Federal Grants is higher at for-profit institutions than public institutions of the same level (4-year or 2-year). In 2017-18, two-thirds (62 percent) of FTFT undergraduates attending private for-profit 4-year institutions received Pell or other Federal Grants, compared with about a third of FTFT undergraduates attending public 4-year (36 percent) and private non-profit 4-year (33 percent) institutions. About 70 percent of FTFT undergraduates at private for-profit 2-year institutions and 84 percent of those attending private non-profit 2-year institutions received Federal Grants in 2017-18, compared with half (53 percent) of FTFT undergraduates attending public 2-year institutions.

Indicator 2c shows that the share of FTFT undergraduate students receiving Pell or other Federal Grants was lower in all institutional sectors, except the private non-profit 2-year sector, in 2017-18 than in 2014-15. Between 2015 and 2018, the percentage of FTFT undergraduates receiving Pell and other Federal Grants declined by 10 percentage points at private for-profit 4-year institutions (from 72 percent to 62 percent), 7 percentage points at private for-profit 2-year institutions (from 74 percent to 67 percent), 3 percentage points at public 2-year institutions (from 56 percent to 53 percent), 2 percentage points at public 4-year institutions (from 38 percent to 36 percent), and remained the same at private non-profit 4-year institutions (33 percent). At private non-profit 2-year institutions, the percentage of FTFT undergraduates receiving Federal Grants increased from 74 percent in 2015 to 84 percent in 2018.

Equity Indicator 2c: Percentage of full-time, first-time degree/certificate-seeking undergraduate students receiving Pell or other Federal Grants by institutional level and control: 2001 to 2018



Indicator Status: High Inequality

In 2018, 62 percent of FTFT undergraduates attending private for-profit 4-year institutions received Federal Grants, compared with about a third of students attending public 4-year and private non-profit 4-year institutions. The gap in the share of enrolled students at public 4-year institutions and private for-profit 4-year institutions receiving Federal Grants was 9 percentage points in 2001 (27 percent versus 36 percent) and 26 percentage points in 2018 (36 percent versus 62 percent).

NOTE: Federal Grant aid for undergraduates is comprised primarily of Pell Grants but also includes Federal Supplemental Educational Opportunity Grants (FSEOG) and grants from federal agencies other than the U.S. Department of Education such as the Department of Veterans Affairs and Department of Labor.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), as included in *Digest of Education Statistics 2019*, [Table 331.20]. Retrieved from https://nces.ed.gov/programs/digest/d19/tables/dt19_331.20.asp?current=yes.

Equity Indicator 2d: How Does the Percentage Distribution of Students by Socioeconomic Status Vary by the Selectivity of the Institution?

Equity Indicator 2d presents the distribution of students by socioeconomic status (SES) in each selectivity category of the postsecondary institutional destinations of seniors in the high school graduating classes of 1972, 1982, 1992, and 2004.⁷³ As institutional selectivity increases, the share of students who come from the lowest SES quartile declines. This pattern is consistent over time.

Data from the Educational Longitudinal Study (ELS) for the high school class of 2004 show that, of the approximately 2 percent of all students (See Appendix A) who planned to attend the “most competitive” institutions, 69 percent were from the highest SES quartile, 19 percent were from the third SES quartile, 8 percent were from the second SES quartile, and 4 percent were from the lowest SES quartile.⁷⁴ The representation of students in the highest SES quartile who had institutional destinations in “most competitive” institutions decreased from 78 percent in 1972 to 69 percent in 2004. The representation of students from the lowest SES quartile planning to attend the “most competitive” institutions remained virtually unchanged (5 percent in 1972 and 4 percent in 2004).

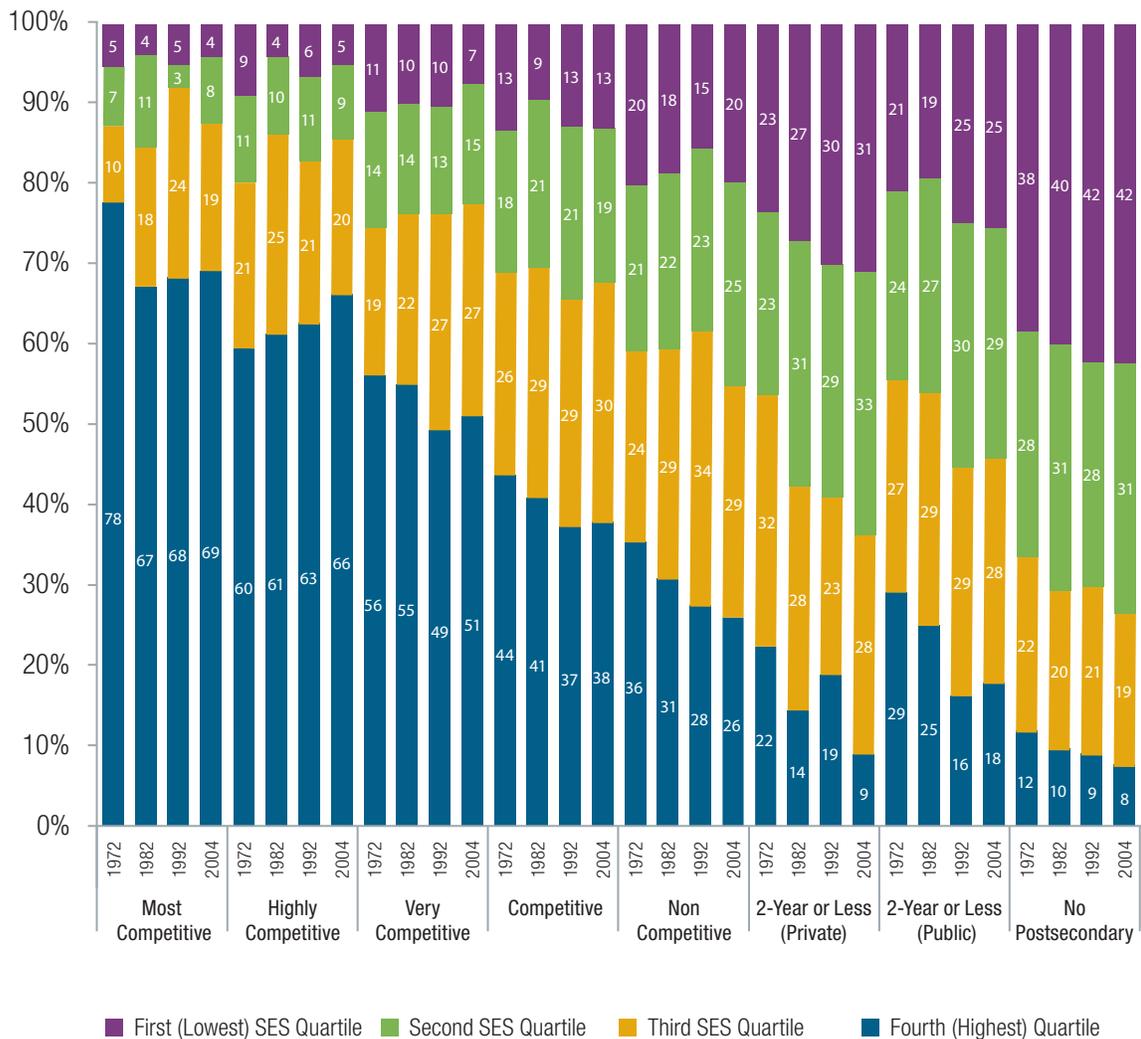
In both 1972 and 2004, among students whose institutional destination was the “most competitive” colleges and universities, 88 percent came from the two highest family income quartiles and 12 percent came from the bottom half of the SES distribution.

At the same time, the representation of youth from the lowest SES quartile increased among those whose institutional destination was a public 2-year or less institution (from 21 percent in 1972 to 25 percent in 2004) or a private 2-year or less institution (from 23 percent in 1972 to 31 percent in 2004) and among those with no postsecondary education plans (from 38 percent in 1972 to 42 percent in 2004).

73 See Appendix A for the data on which Indicator 2d is based. The data are adapted from the analysis of Bastedo and Jaquette (2011). Running in Place: Low-income Students and the Dynamics of Higher Education Stratification, *Educational Evaluation and Policy Analysis*, 33(3), 318-339. Retrieved from <http://www-personal.umich.edu/~bastedo/papers/EEPA-Appendix.pdf>.

74 Across the four studies, the percentages of all graduating high school students who had institutional destinations among the “most competitive” colleges were 1.9 percent in 1972, 2.0 percent in 1982, 3.6 percent in 1992, and 2.4 percent in 2004. See Appendix A for the distribution of institutional destinations by SES quartile as published by Bastedo and Jaquette (2011) as cited above.

Equity Indicator 2d: Percentage distribution of each selectivity category of institutional destinations by parents' socioeconomic status (SES) for high school class cohorts: 1972, 1982, 1992, and 2004



Indicator Status: High Inequality and Persisting Gaps

In the four high school longitudinal studies represented above, among those graduating seniors planning to enroll in the “most competitive” institutions, 4 percent to 5 percent were from the lowest SES quartile and 67 percent to 69 percent were from the highest SES quartile.

NOTE: This Indicator draws from high school longitudinal studies survey data of institutional destination of high school seniors. As the data in Appendix A reveal, in 2004, the percentage of students planning to attend the “Most Competitive” institutions was very low and ranged from 0.5 percent for the first (lowest) SES quartile to 6.2 percent for the fourth (highest) SES quartile. Overall, 2 percent of all students planned to attend a “Most Competitive” institution in 2004.

SOURCE: U.S. Department of Education, NCES, NLS; HS&B, NELS, and ELS; Adapted from Bastedo, M. N., & Jaquette, O. (2011). Running in place: Low-income students and the dynamics of higher education stratification, *Educational Evaluation and Policy Analysis*, 33(3), 318-339. Retrieved from <http://www-personal.umich.edu/~bastedo/papers/EEPA-Appendix.pdf> and used with permission.

Equity Indicator 2e: How Does the Average Percentage of Students Receiving Pell or Other Federal Grants Vary by Institutional Competitiveness?

Using IPEDS data combined with the 2016 Barron's Admissions Competitiveness Index, Indicator 2e shows the average percentage of first-time, full time (FTFT) undergraduates who received Pell or other Federal Grants from academic years 1999-2000 to 2018-2019 by admissions selectivity.

Indicator 2e shows a consistent negative association between the selectivity of the institution and the average percentage of students who receive Pell or other Federal Grants. As institutional competitiveness increases, the institutional average percentage of students receiving Federal Grants decreases. In 2018-19, only 17 percent of students enrolled at the "Most Competitive" institutions received Pell or other Federal Grants, compared with 58 percent of students enrolled at "Noncompetitive" institutions.

Although the representation of students receiving Federal Grants was higher in 2018-19 than in 1999-00 in all institutional selectivity categories, differences in average rates of Federal Grants recipients by institutional selectivity also increased over this period. The average percentage of students receiving Federal Grants at the "Most Competitive" institutions was just two percentage points higher in 2018-19 than in 1999-00 (17 percent versus 15 percent). In contrast, the share of FTFT undergraduates receiving Federal Grants was 18 percentage points higher in 2019 than in 2000 at 2-year public and private non-profit institutions (56 percent versus 38 percent), 8 percentage points higher at "Noncompetitive" institutions (58 percent versus 50 percent), and 15 percentage points higher at for-profit 2-year and 4-year institutions (69 percent versus 54 percent).⁷⁵

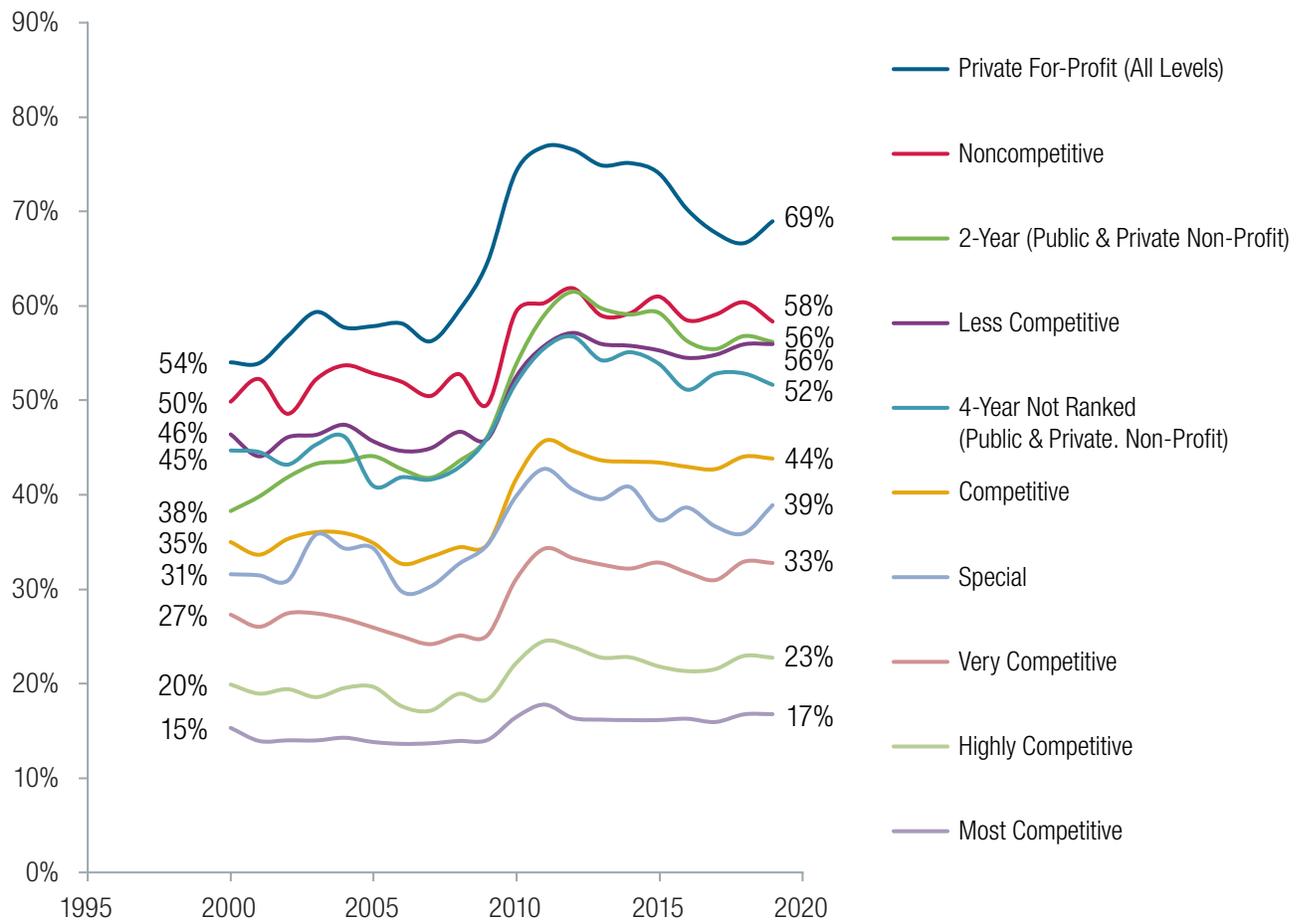
Equity Indicator 2f: How Does Immediate College Enrollment by Competitiveness of the Institution Vary by Socioeconomic Status (SES)?

The NCES High School Longitudinal Study, combined with the Barron's Admissions Competitiveness Index, provides information on the competitiveness of the institutions attended by 2009 9th graders who graduated from high school by 2013. While the classifications of institutional competitiveness are different than those reported in Indicators 2d and 2e, the patterns are similar.

Among 2009 9th graders who graduated from high school by 2013, those from the highest SES quintile were 8 times as likely to be enrolled in a "most" or "highly" competitive institution in the fall following scheduled high school graduation (2013) as students from the lowest SES quintile (33 percent versus 4 percent). Almost two-thirds (63 percent) of students from the highest SES quintile were enrolled in the "most," "highly," or "moderately" competitive institutions, compared with 15 percent of those in the lowest SES quintile. About 7 percent of students from the highest quintile were not enrolled in the fall after the scheduled high school graduation, compared with 40 percent of students in the lowest SES quintile.

⁷⁵ We include only public and private not-for-profit institutions in the categories of Barron's rankings. A small number of for-profit institutions are ranked by Barron's (18 institutions in 2018-2019), but we include these institutions in the for-profit sector.

Equity Indicator 2e: Average percentage of full-time, first-time degree/certificate-seeking undergraduate students who were awarded Pell or other Federal Grants by institutional selectivity: 1999-2000 to 2018-19



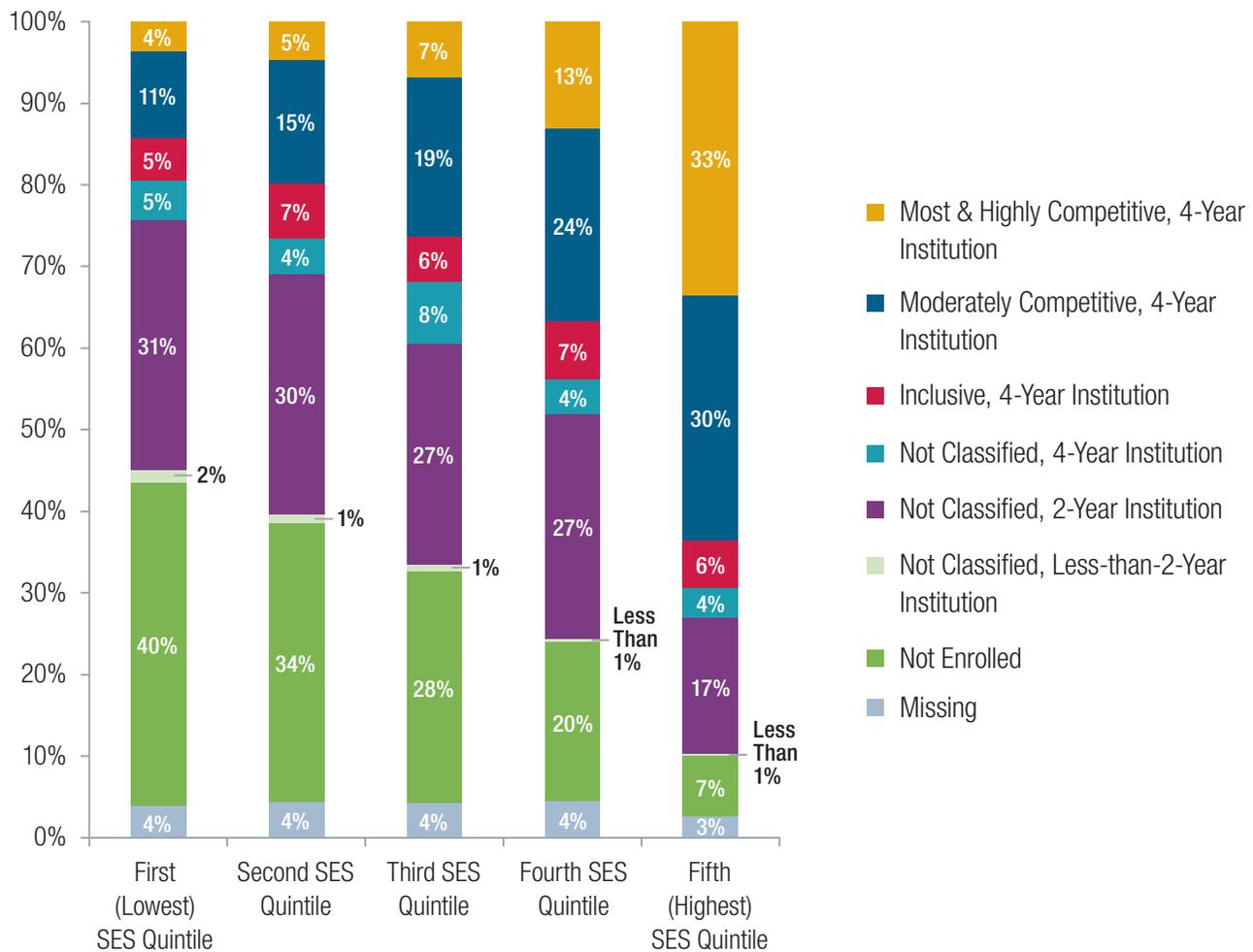
Indicator Status: High Inequality and Widening Gaps

The representation of low-income students declines, on average, as institutional selectivity increases. The gap in the average share of undergraduates receiving Pell or other Federal Grants at the “most competitive” and “less competitive” institutions widened from 31 percentage points (15 percent versus 46 percent) in 2000 to 39 percentage points (17 percent versus 56 percent) in 2019.

NOTE: Federal Grant aid is comprised primarily of Pell Grants, but also includes Federal Supplemental Educational Opportunity Grants (FSEOG) and grants from federal agencies other than the U.S. Department of Education such as the Departments of Veterans Affairs and Labor. Data represent institutional averages in each category.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), 2019, and Barron’s Admissions Competitiveness Index, 2016.

Equity Indicator 2f: Percentage distribution of 2009 9th graders who graduated from high school by institutional selectivity of enrollment in the fall after scheduled high school graduation (in 2013) by SES quintile



Indicator Status: High Inequality

Among 2009 9th graders who graduated from high school by 2013, 4 percent of those from the lowest SES quintile were enrolled in a “most” or “highly” competitive institution in the fall after scheduled high school graduation, compared with 33 percent of students from the highest SES quintile. Forty percent of those from the lowest SES quintile were not enrolled at all.

NOTE: This chart is based on those who graduated from high school in 2013 and excludes 9th graders in 2009 who had not yet completed a regular high school diploma or GED by 2013. Sample members were surveyed in summer or fall of 2013.

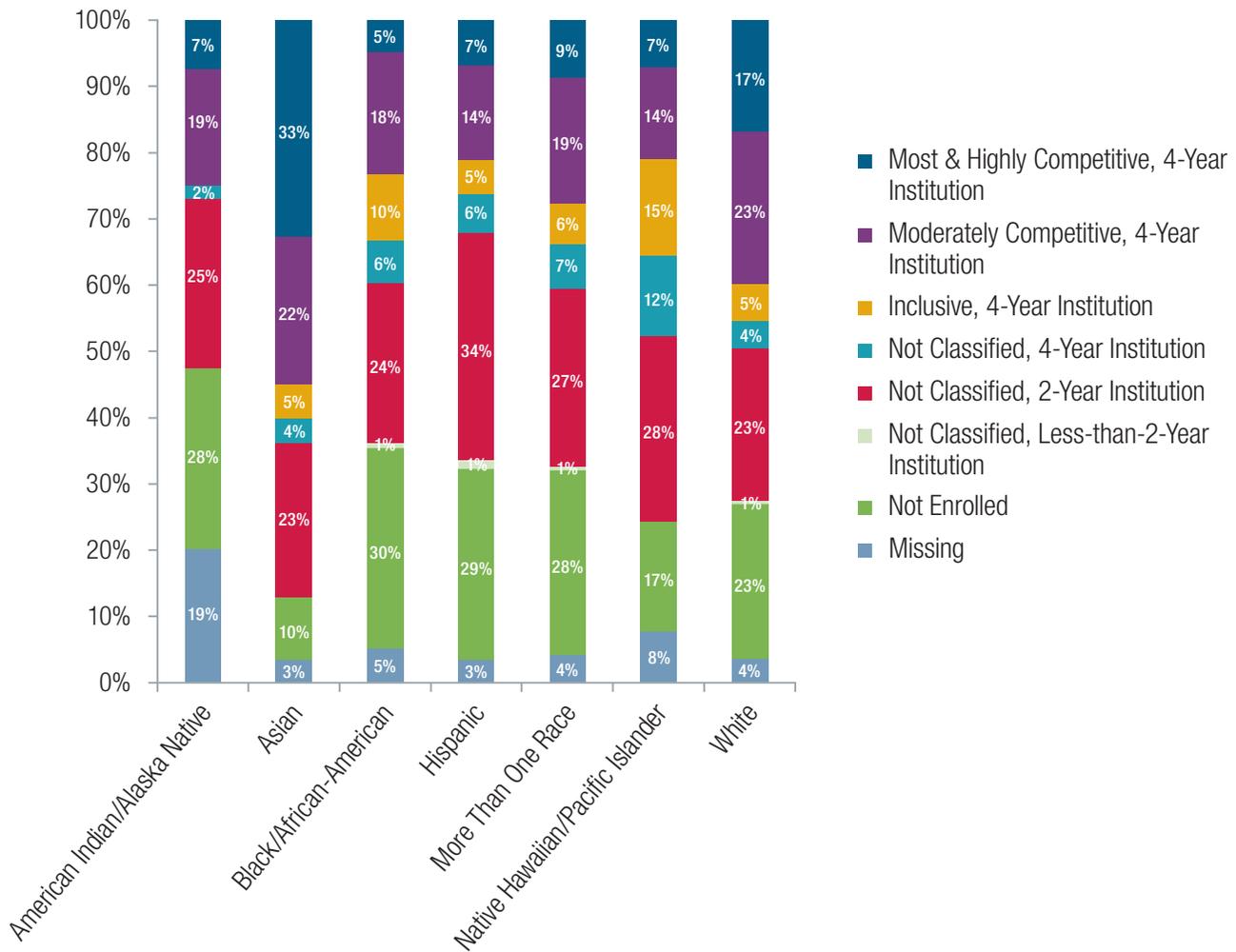
SOURCE: U.S. Department of Education, National Center for Education Statistics, High School Longitudinal Study (HSL:2009). Tabulated using NCES PowerStats for HSL:2009.

Equity Indicator 2g: How Does the Selectivity of Institutions at Which Students Enroll Vary by Race/Ethnicity?

Indicator 2g utilizes information from the High School Longitudinal Study to consider differences in the competitiveness of the higher education institutions attended by 2013 high school graduates who were 9th graders in 2009 by race/ethnicity.

Among 2009 9th graders who graduated from high school by 2013, 30 percent of Blacks and 29 percent of Hispanics were not enrolled in a higher education institution in fall 2013, compared with 23 percent of Whites and 10 percent of Asians. About a third (34 percent) of Hispanics were enrolled at two-year institutions, compared with about a fourth of students from other groups. A third (33 percent) of Asians and 17 percent of Whites were enrolled at “most” or “highly” competitive institutions, compared with 7 percent of Hispanics and 5 percent of Blacks.

Equity Indicator 2g: Percentage distribution of 2009 9th graduates who graduated from high school by 2013 by institutional selectivity of enrollment in the fall after scheduled high school graduation by race/ethnicity



Indicator Status: High Inequality

Among 2009 9th graders who graduated from high school by 2013, 33 percent of Asians and 17 percent of Whites were enrolled at “most” or “highly” competitive institutions, compared with 7 percent of Hispanics and 5 percent of Blacks.

NOTE: This chart is based on those who graduated from high school in 2013 and excludes 9th graders in 2009 who had not yet completed a regular high school diploma or GED by 2013. Sample members were surveyed in summer or fall of 2013. Caution is needed for data on American Indian/Alaska Native, More than One Race, and Native Hawaiian/Pacific Islander as the estimates are not stable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, High School Longitudinal Study (HSLs:2009). Tabulated using NCES PowerStats for HSLs:2009.

Equity Indicator 2h: How Does Pell Receipt and Institutional Level and Control Vary by Dependency Status?

Using data from NPSAS:2016, Indicators 2h(i to iii) show variations in Pell Grant receipt by for various types of institutions by dependency status.

Dependency Status and Pell Grant Receipt. Indicator 2h(i) shows that, among degree-seeking undergraduates, Pell Grant receipt varies by dependency status. In 2016, 59 percent of independent students with dependents received Pell Grants compared with 41 percent of independent students without dependents and 39 percent of dependent students.

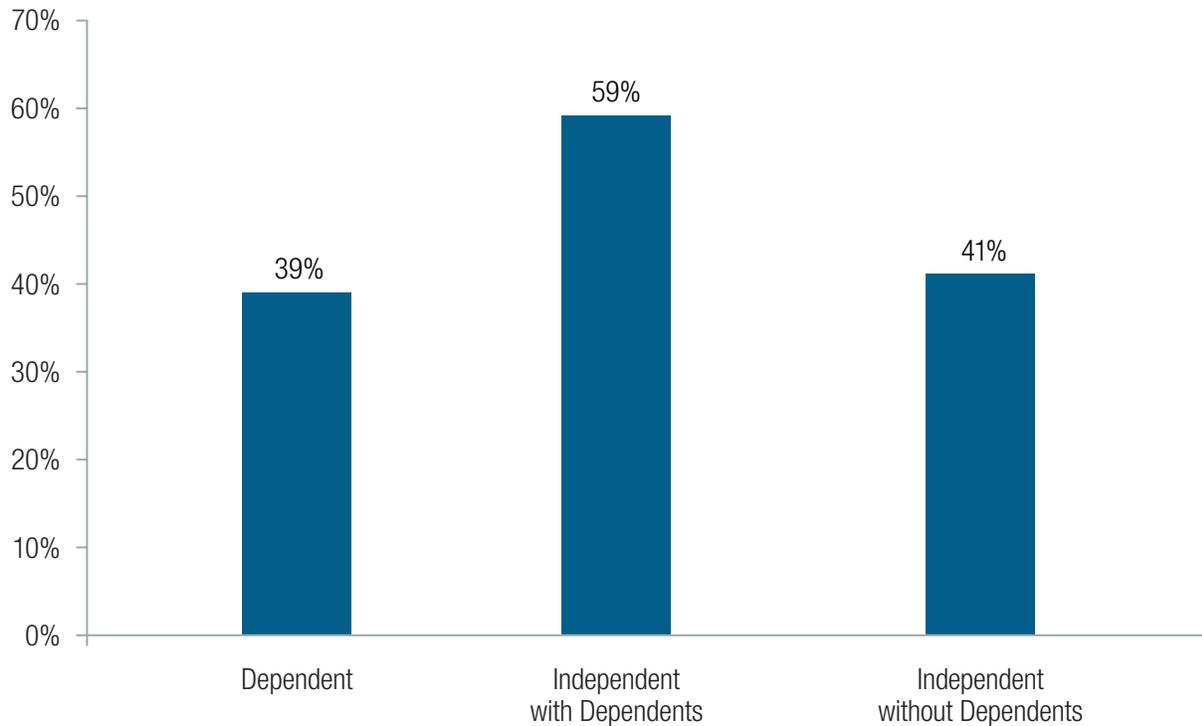
Dependency Status and Attendance at 4-Year Public and 4-Year Non-Profit Institutions. Indicator 2h(ii) shows that almost two-thirds (61 percent) of dependent undergraduate students in 2016 were enrolled in a 4-year public or private non-profit institution. Smaller shares of independent students were enrolled at 4-year institutions. Among independent students, 42 percent of independent students without dependents and 33 percent of independent students with dependents were enrolled at a 4-year institution.

Dependency Status and Attendance at 2-Year Public and For-Profit Institutions. Independent students with and without dependents were more likely to be enrolled at 2-year or for-profit institutions than dependent students. In 2016, 37 percent of independent students without dependents and 40 percent of independent students with dependents attended a public 2-year institution, compared to 25 percent of dependent students. In 2016, 10 percent of independent students without dependents and 16 percent of independent students with dependents attended a private for-profit institution, compared to 3 percent of dependent students.

Level and Control by Dependency Status and Pell Receipt. Indicator 2h(iii) shows variations in the level and control of institution attended by undergraduate students in the same dependency category based on Pell Grant receipt. Among dependent students who did and did not receive Pell Grants, the percentages who attended public-4 year institutions (43 percent for both groups) and public 2-year institutions (24 percent for non-Pell and 26 percent for Pell recipients), were comparable. However, dependent students who received Pell Grants were less likely than students who did not receive Pell Grants to attend private non-profit 4-year institutions (15 percent versus 20 percent) and more likely to attend private for-profit institutions (5 percent versus 2 percent).

Independent students who received Pell Grants were also more likely to attend for-profit institutions than independent students who did not receive Pell Grants (14 percent versus 7 percent for independent students without dependents and 20 percent versus 9 percent for independent students with dependents). Correspondingly, among independent Pell recipients compared to independent non-recipients, the percentage attending 2-year public institutions is reduced.

Equity Indicator 2h(i): Percentage of undergraduate students receiving Pell Grants by dependency status: 2016

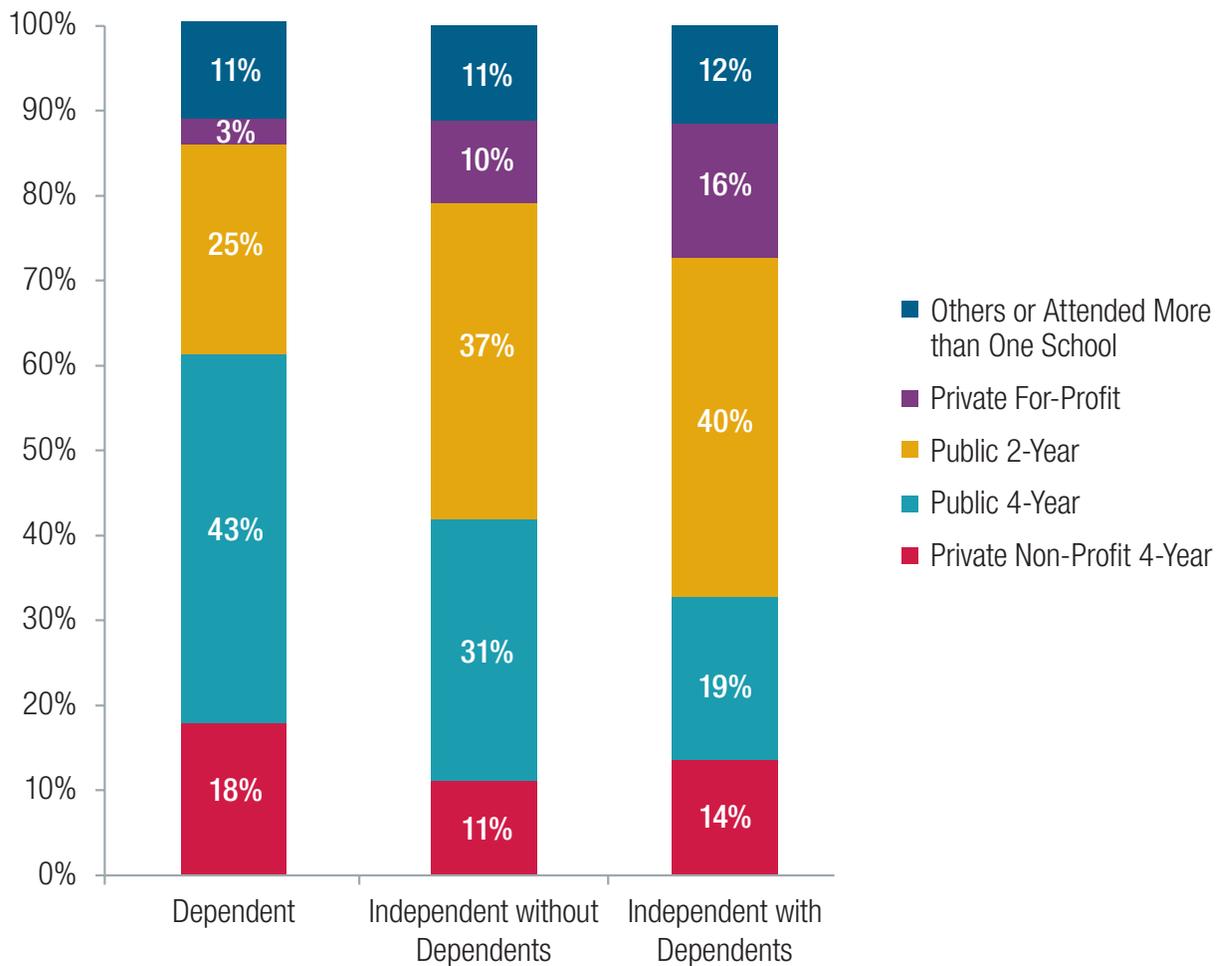


Indicator Status:

Independent students more frequently received Pell Grants than did dependent students. In 2016, 59 percent of independent students with dependents received Pell Grants, compared with 41 percent of independent students without dependents and 39 percent of dependent students.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2015-16 National Postsecondary Student Aid Study (NPSAS:16). Tabulated using NCES PowerStats for NPSAS:16.

Equity Indicator 2h(ii): Percentage distribution of dependent and independent undergraduate students by level and control of institution: 2016

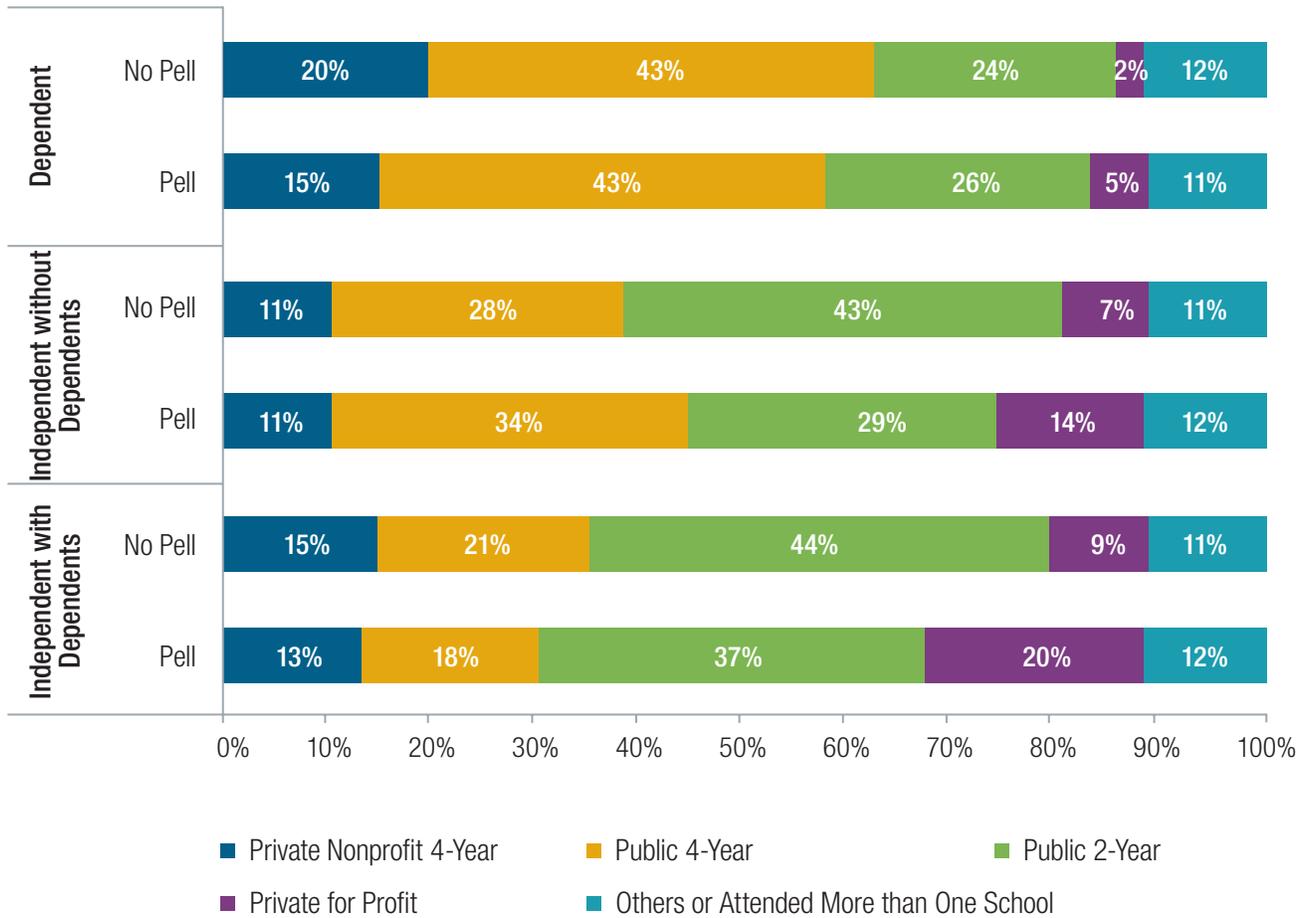


Indicator Status:

Independent students attended public 2-year and private for-profit institutions at higher rates than dependent students. In 2016, 37 percent of independent students without dependents and 40 percent of independent students with dependents attended a public 2-year institution, compared to 25 percent of dependent students.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2015-16 National Postsecondary Student Aid Study (NPSAS:16). Tabulated using NCES PowerStats for NPSAS:16.

Equity Indicator 2h(iii): Percentage distribution of dependent and independent undergraduate students by level and control of institution attended by Pell Grant status: 2016



Indicator Status:

Among students of the same dependency category, those who received Pell Grants were more likely to attend for-profit institutions than those who did not receive Pell Grants. For example, among independent students with dependents, 20 percent of students who received Pell Grants attended a for-profit institution, compared with 9 percent of those who did not receive Pell Grants.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2015-16 National Postsecondary Student Aid Study (NPSAS:16). Tabulated using NCE PowerStats for NPSAS:16.

Equity Indicator 2i: How Does Institutional Selectivity Vary by Dependency and Pell Grant Status?

Indicator 2i(i) shows that dependent students are more likely to attend very selective and moderately selective institutions than independent students. In 2016, 16 percent of dependent students enrolled at colleges and universities nationwide, attended “very selective” institutions and 42 percent attended “moderately selective” institutions. By comparison, 7 percent of independent students without dependents attended “very selective” institutions and 27 percent attended “moderately selective” institutions. Among independent students with dependents, 5 percent attended “very selective” institutions and 17 percent attended “moderately selective” institutions.

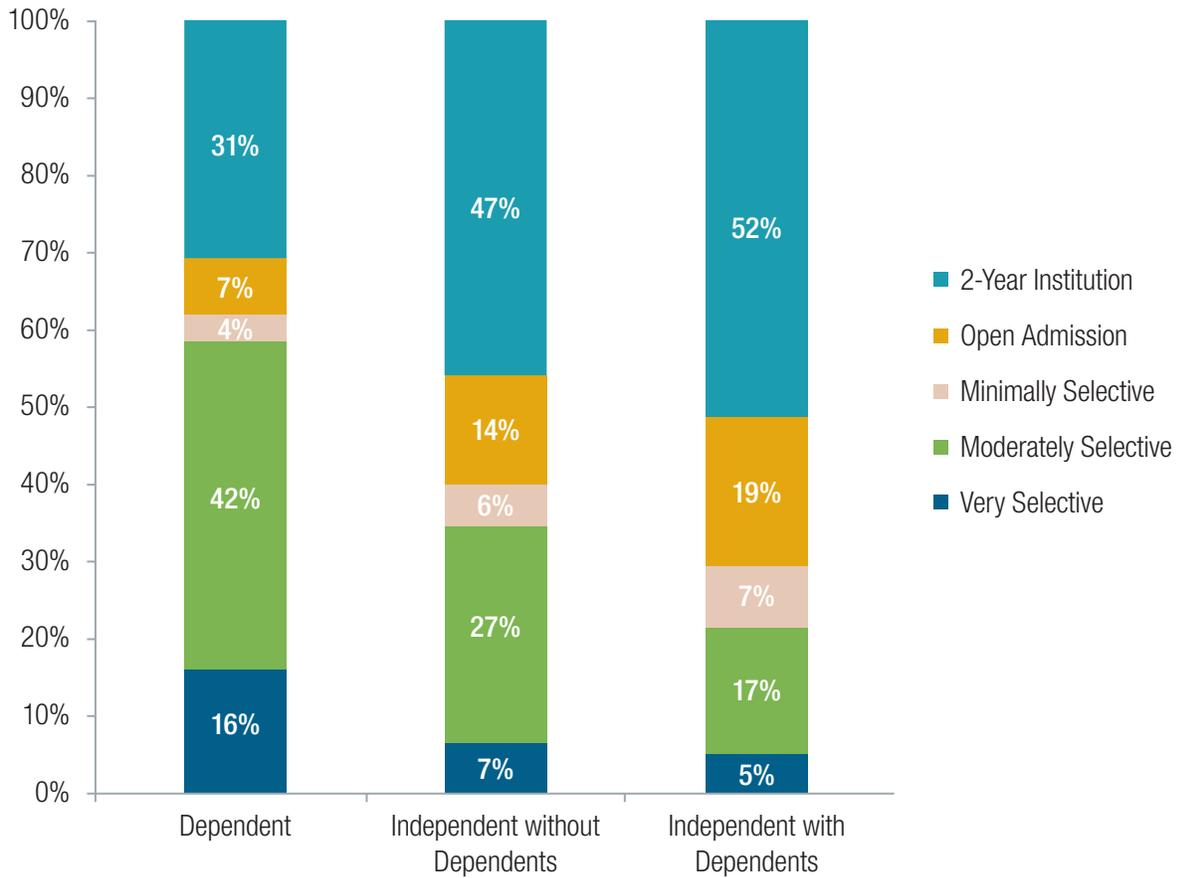
Independent students are more likely than dependent students to attend 2-year⁷⁶ and open admission 4-year institutions. In 2016, 47 percent of independent students without dependents and 52 percent of independent students with dependents attended a 2-year institution, compared with 31 percent of dependent students. In addition, 14 percent of independent students without dependents and 19 percent of independent students with dependents attended an open-admission 4-year institution, compared with 7 percent of dependent students.

Indicator 2i(ii) shows that, for dependent students and independent students without dependents, smaller shares of those who receive Pell Grants than of those who do not receive Pell Grants attend “very selective” institutions. Among dependent students, 12 percent of those who received Pell Grants and 19 percent of those who did not receive Pell Grants attended a “very selective” institution in 2016. Higher shares of dependent students who receive Pell Grants than of those who do not receive Pell Grants attend a 2-year institution. In 2016, 34 percent of dependent Pell Grant recipients, compared with 29 percent of dependent non-Pell recipients, attended 2-year institutions. Among independent students without dependents, 40 percent of Pell Grant recipients and 51 percent of non-Pell recipients attended 2-year institutions.

The distribution of independent students with dependents by institutional selectivity is similar for Pell Grant recipients and non-recipients. For example, 4 percent of those who received Pell Grants and 6 percent of those who did not receive Pell Grants attended “very selective” institutions. About half of independent students with dependents attend 2-year institutions (52 percent of Pell recipients and 54 percent of non-Pell recipients).

⁷⁶ The categories that NCES provides for the selectivity variable [SELECTV3] are very selective, moderately selective, minimally selective, open admission, and non-4-year, which we labeled as 2-year.

Equity Indicator 2i(i): Percentage distribution of dependent and independent undergraduate students by institutional selectivity: 2016

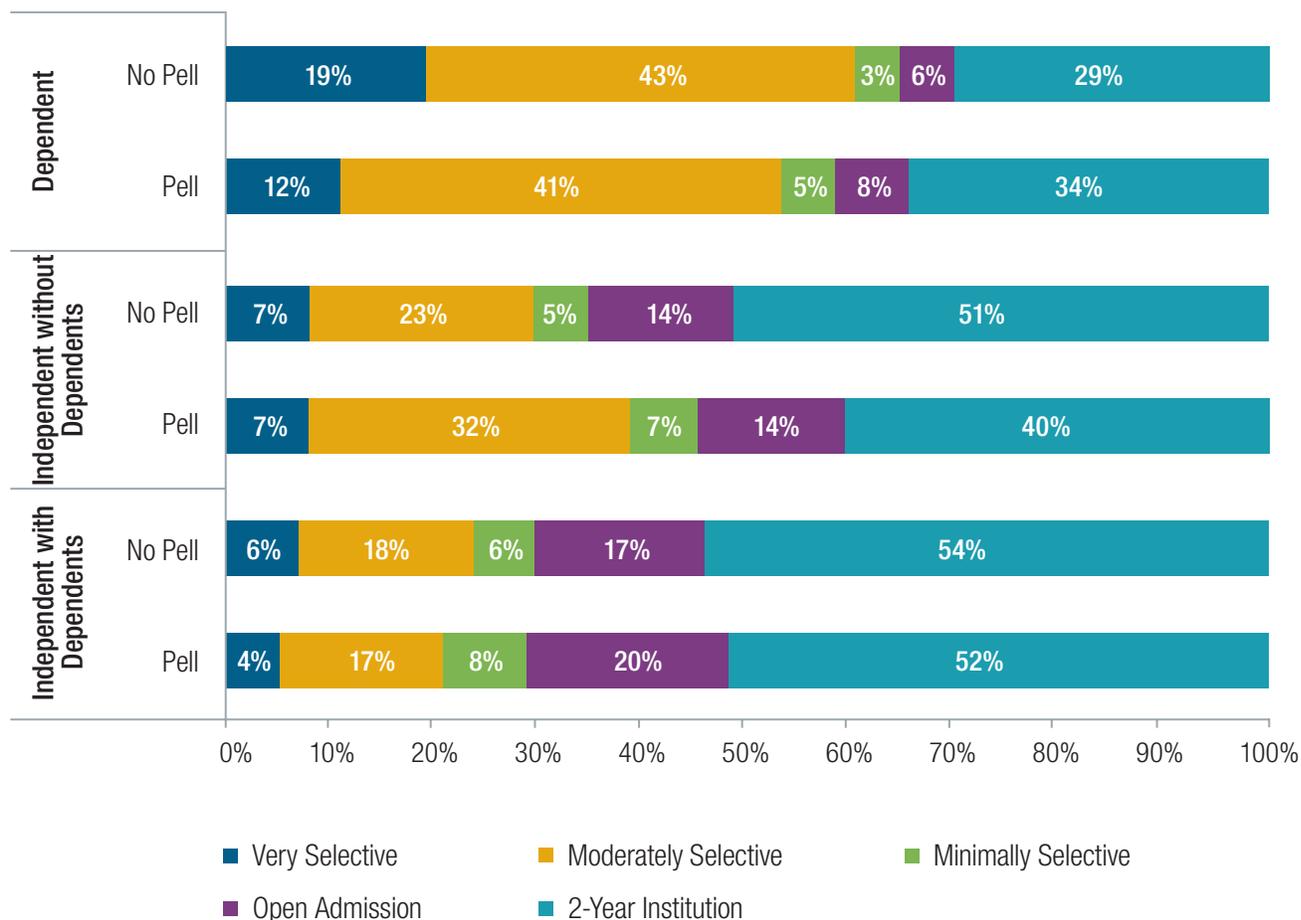


Indicator Status:

Dependent students are more likely than independent students to attend “very selective” and “moderately selective” institutions. By comparison, independent students are more likely to attend open admission 4-year institutions and 2-year institutions.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2015-16 National Postsecondary Student Aid Study (NPSAS:16). Tabulated using NCES PowerStats for NPSAS:16.

Equity Indicator 2i(ii): Percentage distribution of dependent and independent undergraduate students by institutional selectivity and Pell Grant status: 2016



Indicator Status:

Among dependent students, smaller shares of those who receive Pell Grants than of those who do not receive Pell Grants attend “very selective” institutions (12 percent versus 19 percent).

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2015-16 National Postsecondary Student Aid Study (NPSAS:16). Tabulated using NCES PowerStats for NPSAS:16.

Equity Indicator 2j: How has the COVID-19 pandemic affected the sectors of postsecondary institutions in which students enroll?

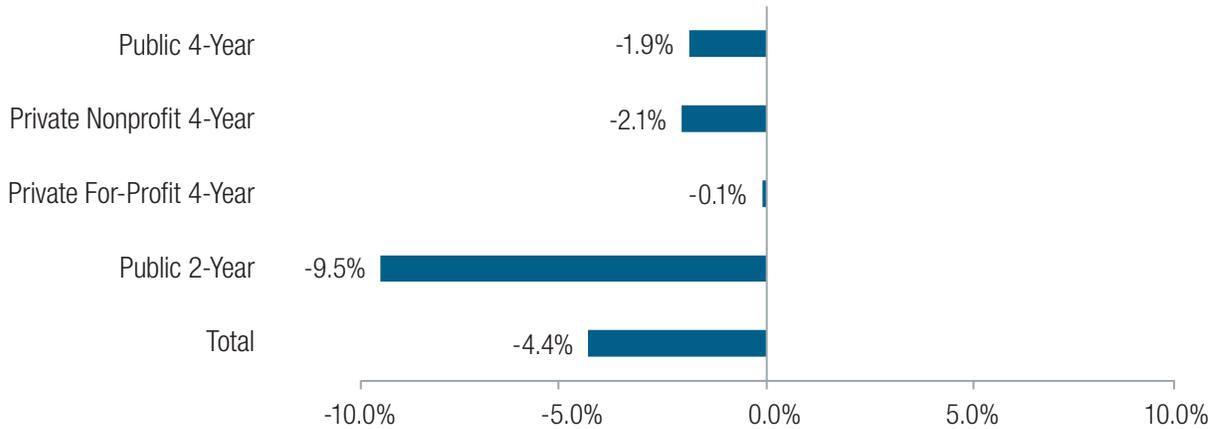
Indicator 2j uses data from the National Student Clearinghouse (NSC) Research Center to compare fall enrollments of 2019 to the fall enrollment of 2020 to study the effects that COVID-19 has had on undergraduate and graduate enrollment in postsecondary education institutions. This indicator uses data from the *Stay Informed* series. The *Stay Informed* series studies the effect of COVID-19 on postsecondary enrollment, using 2018 and 2019 as pre-pandemic baselines to compare with the most recent 2020 data. The *Stay Informed* series uses unweighted enrollment counts because the goal is to look at year-over-year changes from the same institution's enrollment patterns rather than total enrollment numbers.

Undergraduate Enrollment. The data shows that enrollment for undergraduates declined from the fall of 2019 to the fall of 2020 in every postsecondary institutional sector. Enrollment at private for-profit 4-year institutions had the least change at a decline of .1 percent while public 2-year schools had the largest loss in enrollment at 9.5 percent. The overall decline in enrollment from the fall of 2019 to the fall of 2020 for undergraduates was 4.4 percent.

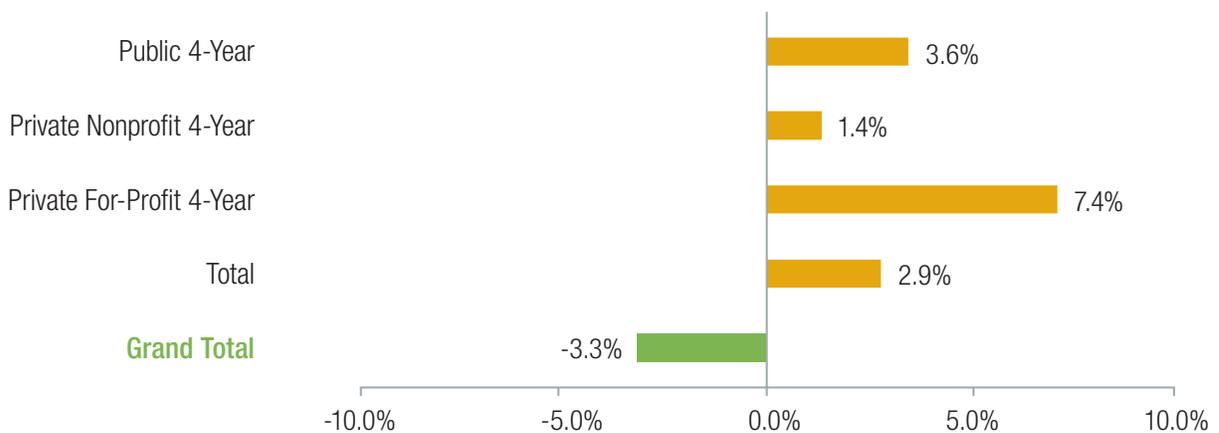
Graduate Enrollment. Graduate enrollment saw the opposite of the declines in enrollment for undergraduates. Private for-profit 4-year institutions saw a 7.4 percent growth in their graduate enrollment, public 4-year enrollment increased by 3.6 percent, and private nonprofit 4-years saw a small increase at 1.4 percent. The total for these sectors was a 2.9 percent graduate enrollment increase from the fall of 2019 to to the fall of 2020.

Equity Indicator 2j: Percent change in enrollment from fall 2019 to fall 2020 for undergraduate and graduate students by institutional sector

Undergraduates



Graduates



Indicator Status:

Overall enrollment has declined by 3.3 percent. Enrollment for undergraduates is down by 4.4 percent, whereas graduate enrollment has increased by 2.9 percent.

NOTE: This indicator uses data from the *Stay Informed* series from the National Student Clearinghouse Research Center and not the *Current Term Enrollment Estimates* report series. The *Stay Informed* series studies the effect of COVID-19 on postsecondary enrollment, using 2018 and 2019 as pre-pandemic baselines to compare with the most recent 2020 data. The *Stay Informed* series uses unweighted enrollment counts because the goal is to look at year-over-year changes from the same institution's enrollment patterns rather than total enrollment numbers.

SOURCE: National Student Clearinghouse Research Center. (2020). *COVID-19 Stay Informed with the Latest Enrollment Information*. National Student Clearinghouse Research Center's Monthly Update on Higher Education Enrollment. Retrieved from <https://nscresearchcenter.org/stay-informed>.

EQUITY INDICATOR 3:

DOES FINANCIAL AID AND DIFFERENCES IN COLLEGE COST ELIMINATE THE BARRIERS TO COLLEGE EQUITY?

The maximum Federal Pell Grant covered 68 percent of average college costs in 1975-76 but only 25 percent of average college costs in 2018-19. If it had covered two-thirds of average college costs, the maximum Federal Pell Grant would have been \$16,497 rather than \$6,205 in 2018-19.

Stark inequity in the U.S. postsecondary education system is manifest in the differences in Educated and Related (E&R) spending per FTE students enrolled. Hillman (2020) found that in 2018, the average amount of E&R spending per FTE students was \$52,129 for Highly Selective colleges and universities, and in contrast was \$14,945 per FTE for Broad Access colleges and universities. Highly Selective institutions serve 11 percent of FTE enrollment compared to Broad Access institutions that serve half (49 percent) of FTE students enrolled.

Equity Indicator 3(a-c): Definitions

Indicator 3 tracks statistics related to college cost, the amount of cost covered by Federal Pell Grants, and educational spending per FTE of students enrolled. Drawing on definitions developed by researchers and the federal government for federal student financial aid programs, we rely on the following measures.

- **College Cost** is reported annually by institutions to the U.S. Department of Education through IPEDS and includes tuition, fees, and room and board. Average costs in this report are weighted by undergraduate full-time enrollment but do not account for residency status. For public institutions, in-state tuition and required fees are used.
- **Cost of Attendance (COA)** is the total cost, on average, to attend college each year. The COA includes tuition and fees; on-campus room and board (or a housing and food allowance for off-campus students), and allowances for books, supplies, transportation, loan fees, and, if applicable, dependent care. It can also include other expenses like an allowance for the rental or purchase of a personal computer, costs related to a disability, and costs for eligible study abroad programs. COA is institutionally derived and used by the federal government in determining a student's financial need.
- **Total Federal Aid vs. Federal Grant Aid.** Total Federal Aid, as defined by the U.S. Department of Education, includes grants, loans, and work-study to help students pay for college. We use the term

Federal Grant Aid to include federal financial assistance for college that does not have to be repaid (e.g., federal loans) and does not have a work requirement (e.g., federal work-study).

- **Maximum Pell Grant** is the largest Pell Grant award allowed by federal law. The average Pell Grant award is lower than the maximum. The maximum Pell award for the AY2020-21 award year (July 1, 2020 to June 30, 2021) is \$6,345.
- **Expected Family Contribution (EFC)** is calculated by the federal government from information submitted on the Free Application for Federal Student Aid (FAFSA) and determines a student's eligibility for federal student aid. The EFC is determined using formulas mandated by Congress in the Higher Education Act of 1965, as amended, and takes account of indicators of financial strength such as income, assets, and family size. The EFC is combined with the cost of attendance (COA) and the student's enrollment intensity (e.g., full-time, part-time) to determine the amount of the Federal Pell Grant award. Tuition may be used to calculate the amount of the Pell Grant award for students enrolled at low-tuition schools (if tuition is less than the current maximum Pell Grant). The lower the EFC, the greater a student's demonstrated financial need. The amount of the Federal Pell Grant award generally increases as the EFC decreases. An applicant with the minimum EFC of zero will generally receive the maximum Pell award up to the applicant's COA for the year. Proportionally smaller awards are made to part-time students.
- **Dependency Status.** For purposes of determining federal financial aid, applicants are classified according to specified criteria as: dependent, independent with dependents or independent without dependents. Generally, persons under 24 are classified as dependent students unless they are married or otherwise meet specified special circumstances. Students under 24 and not meeting the special circumstances are classified as dependents regardless of whether their parents provide them with any financial support. For dependent students, the parents' tax returns are used to estimate EFC. For independent students, the applicants and spouse's income (if applicable) are used to determine the EFC. See Indicator 1 for a detailed description of the special circumstances criteria.
- **Unmet Need** is the financial need remaining after the Expected Family Contribution (EFC) and all grants and other discounts (but not loans) are subtracted from the cost of attendance (COA).
- **Education and Related Spending per FTE Student.** We include charts based on analyses by Nick Hillman, using IPEDS data on Education and Related (E&R) spending, FTE enrollment, and a constructed selectivity measure based on IPEDS data on institutional characteristics including applications accepted.⁷⁷

Equity Indicator 3a(i to iv): What Are the Trends in Average College Costs?

Large Increases in College Costs. Average college costs for all institutions, weighted by full-time undergraduate enrollment, were 2.5 times higher (in constant 2019 dollars) in 2018-19 than in 1974-75. Indicator 3a(i) shows that cost increases have largely occurred since 1980. In 1980, average costs were lower in constant dollars (\$9,164) than in 1974-75 (\$9,698). After 1980, average costs rose steadily to \$24,623 in 2018-19.⁷⁸

⁷⁷ Hillman, N. "Why Rich Colleges Get Richer & Poor Colleges Get Poorer: The Case for Equity-Based Funding in Higher Education – *Third Way*." – Third Way, 20 Nov. 2020, www.thirdway.org/report/why-rich-colleges-get-richer-poor-colleges-get-poorer-the-case-for-equity-based-funding-in-higher-education.

⁷⁸ U.S. Department of Education, National Center for Education Statistics. (2019). *Digest of Education Statistics 2019*, [Table 330 10]. Retrieved from: https://nces.ed.gov/programs/digest/d19/tables/dt19_330.10.asp.

Public vs. Private Costs. Average costs in constant 2019 dollars were about twice as high at 4-year private non-profit and for-profit institutions than at 4-year public institutions in both 1974-75 (\$16,647 vs. \$8,052) and in 2018-19 (\$44,662 vs. \$20,598). Costs were about twice as high at 2-year private institutions than at 2-year public institutions in 1974-75 (\$12,670 vs. \$6,548 in 2019 dollars) and 2.6 times higher in 2018-19 (\$28,627 vs. \$10,950).

Increase in Differences Between 2-Year and 4-Year Public Institutions. The difference in costs between 2-year and 4-year public colleges has increased since 1974-75, with most of the increase occurring after 1980. In constant 2019 dollars, average costs at 4-year public institutions were 23 percent higher than 2-year public costs in 1974-75 (\$8,052 vs. \$6,548). By 2018-19, average costs were 88 percent higher for 4-year public institutions than 2-year public colleges (\$20,598 vs. \$10,950).

Between 1974-75 and 2018-19, average costs for 4-year public postsecondary institutions increased 2.6 times in constant dollars while average costs for 2-year public institutions increased 1.7 times. Over the same period, average costs for 4-year private institutions rose 2.7 times and average private 2-year costs rose 2.3 times. By comparison, median family income of families increased only 1.4 times (45 percent) between 1975 and 2019 (rising from \$59,438 to \$86,011 in constant 2019 dollars), with most of the increase occurring prior to 1999.⁷⁹

Average College Costs Vary Widely by State. States differ in the organization and structure of higher education, particularly in the availability of public and private 2-year and 4-year institutions, degree of state support for higher education, and amount and characteristics of financial aid for students. Indicators 3a(ii) to 3a(iv) show the 2018-19 average college costs for full-time undergraduates, weighted by enrollment, by state as reported by NCES.⁸⁰

Indicator 3a(ii) shows that average in-state tuition and fees and room and board costs for full-time, in-state residents at 4-year public institutions in 2018-19 ranged from less than \$15,000 in Utah and Wyoming to more than \$25,000 in Illinois, Connecticut, Pennsylvania, Massachusetts, New Jersey, New Hampshire, and Vermont.

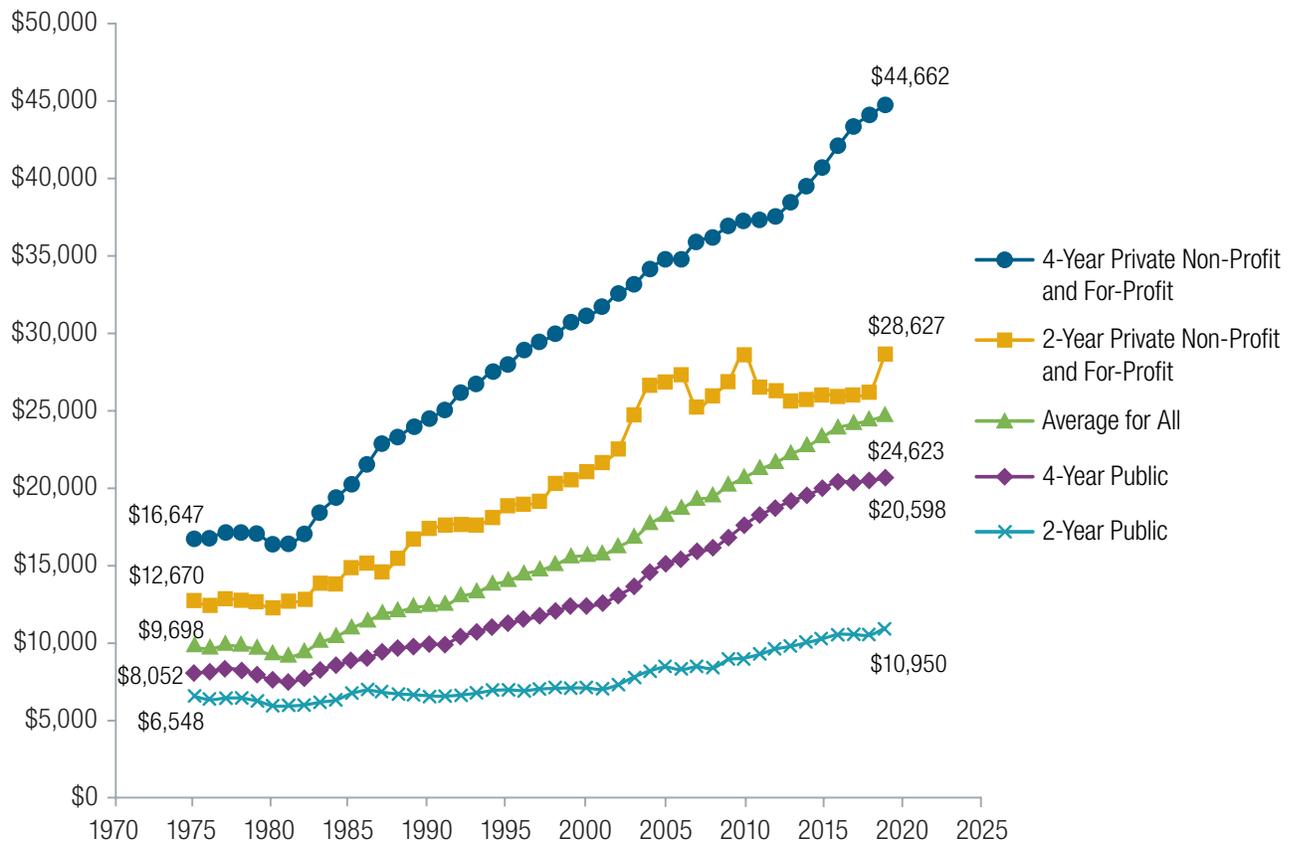
Indicator 3a(iii) shows that at 4-year private (including non-profit and for-profit) institutions, average costs (tuition, fees, and room and board) for full-time students varied from \$13,157 in Idaho and \$15,804 in Utah to more than \$55,000 in Pennsylvania, New York, Connecticut, Rhode Island, Maryland, Vermont, the District of Columbia, and Massachusetts.

For 2-year public institutions, Indicator 3a(iv) shows that average tuition and fees (not including room and board costs) for full-time, in-state residents were \$1,271 in California and \$1,705 in New Mexico, compared with \$7,599 in New Hampshire.

⁷⁹ See Appendix A for median income for all families and for families with children under 18.

⁸⁰ Additional breakouts by in-state and out of state are available at the following NCES website: https://nces.ed.gov/programs/digest/d19/tables/dt19_330.10.asp.

Equity Indicator 3a(i): Average college costs (undergraduate tuition, fees, and room and board) charged for full-time students in degree-granting postsecondary institutions, by institutional level and control: 1974-75 to 2018-19 (in constant 2019 dollars)



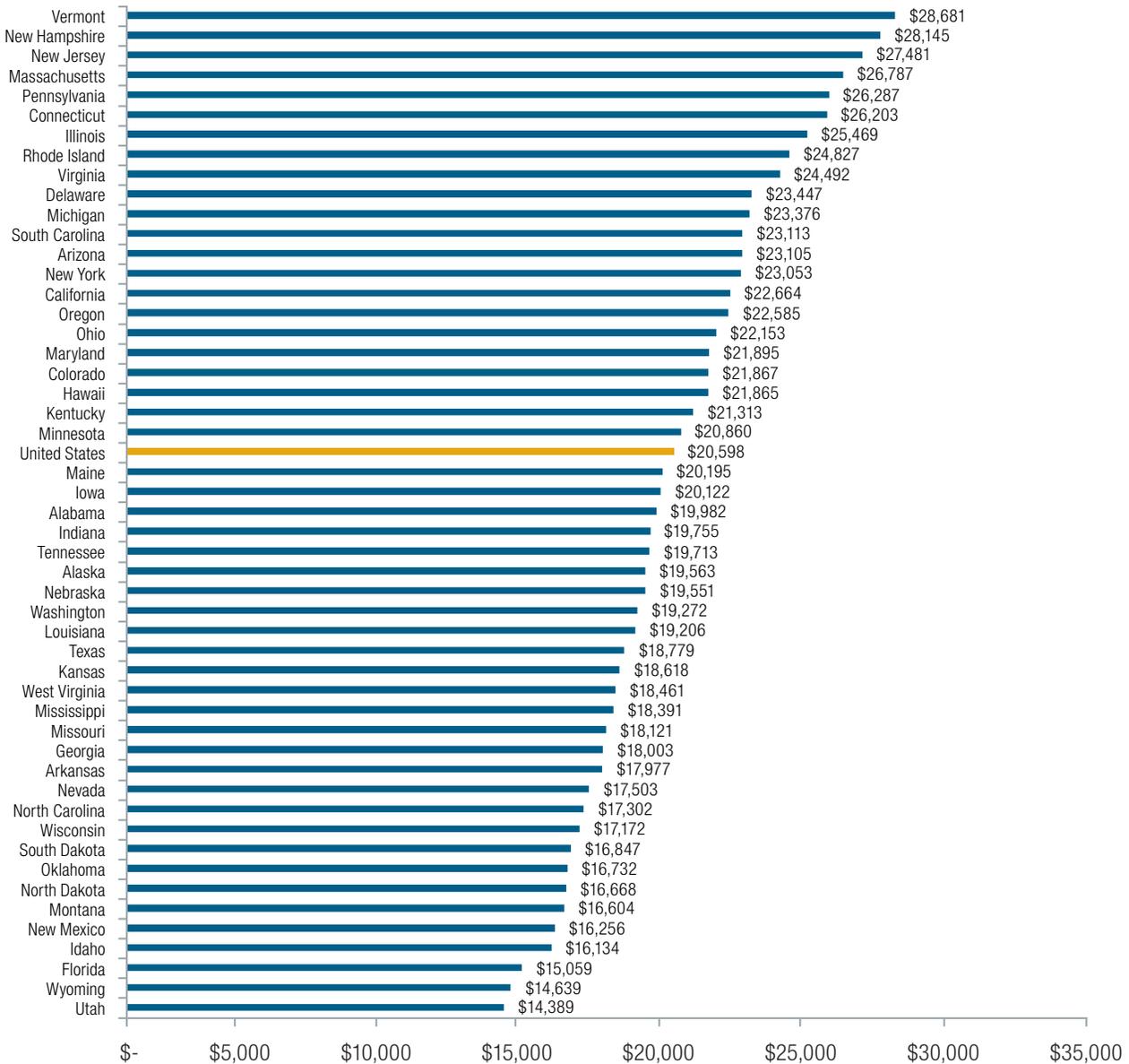
Indicator Status: Large Increases in College Costs and Growing Difference in Costs between Institutional Sectors

In constant dollars, between 1974-75 and 2018-19, average costs increased 2.6 times for 4-year public postsecondary institutions and 1.7 times for 2-year public institutions.

NOTE: College Cost is reported annually by institutions to the U.S. Department of Education through IPEDS and includes tuition, fees, and room and board. Data are for the entire academic year and are average charges for full-time students. Tuition and fees are weighted by the number of full-time-equivalent undergraduates, but not adjusted to reflect student residency. Room and board are based on full-time students.

SOURCE: U.S. Department of Education, National Center for Education Statistics (2019). *Digest of Education Statistics 2019*, [Table 330.10]. Retrieved from https://nces.ed.gov/programs/digest/d19/tables/dt19_330.10.asp.

Equity Indicator 3a(ii): Average costs (undergraduate tuition, fees, and room and board) charged by 4-year public colleges and universities for full-time in-state students by state: 2018-19



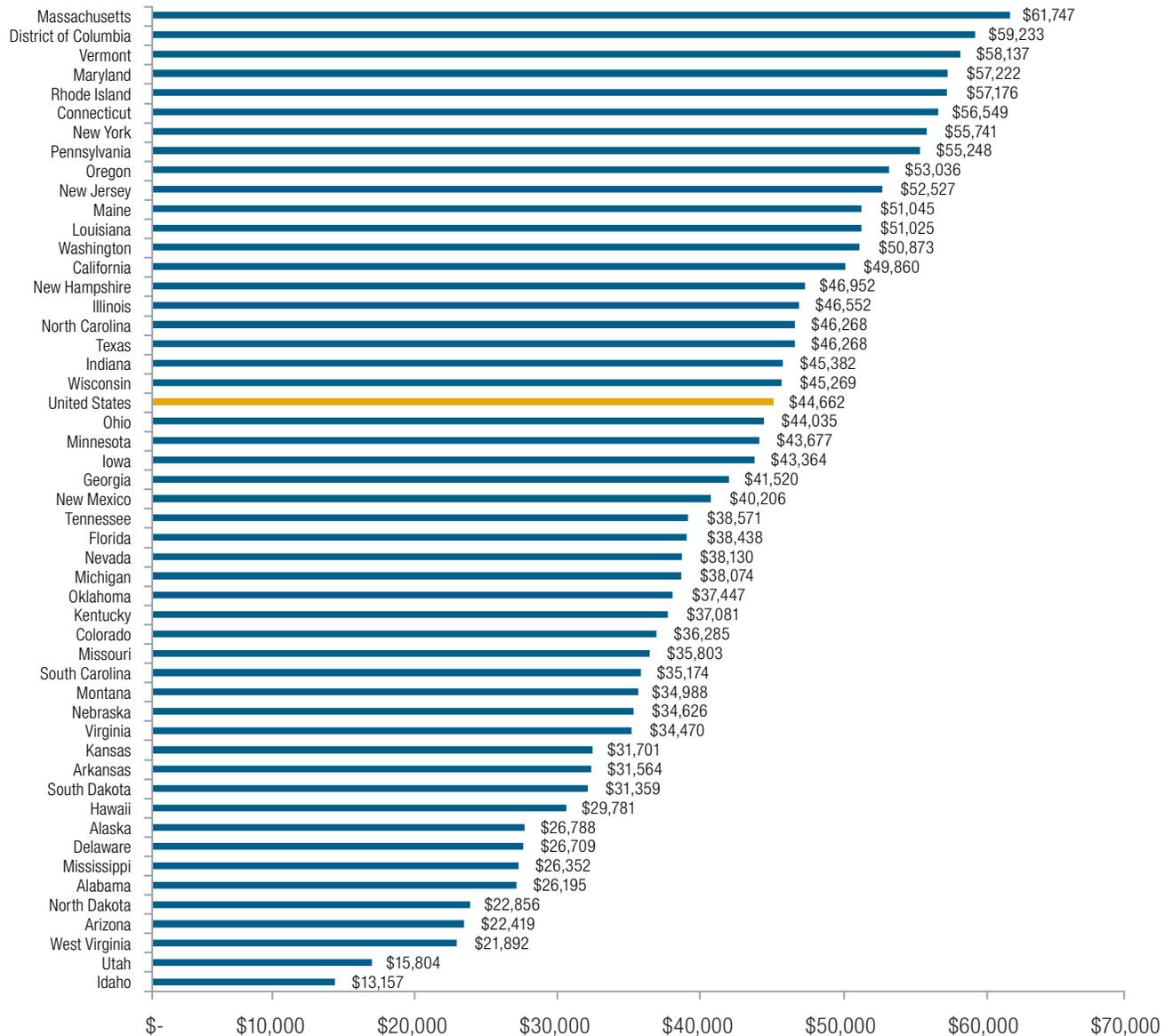
Indicator Status:

Wide variation in average college costs across states, ranging from \$14,389 in Utah to \$28,681 in Vermont.

NOTE: College Cost is reported annually by institutions to the U.S. Department of Education through IPEDS and includes tuition, fees, and room and board. Data are for the entire academic year and are average charges for full-time students. Tuition and fees are weighted by the number of full-time-equivalent undergraduates, but not adjusted to reflect student residency.

SOURCE: U.S. Department of Education, National Center for Education Statistics (2019). *Digest of Education Statistics 2019*, [Table 330.20]. Retrieved from https://nces.ed.gov/programs/digest/d19/tables/dt19_330.20.asp.

Equity Indicator 3a(iii): Average costs (undergraduate tuition, fees, and room and board) charged by 4-year private (non-profit and for-profit) colleges and universities for full-time students by state: 2018-19



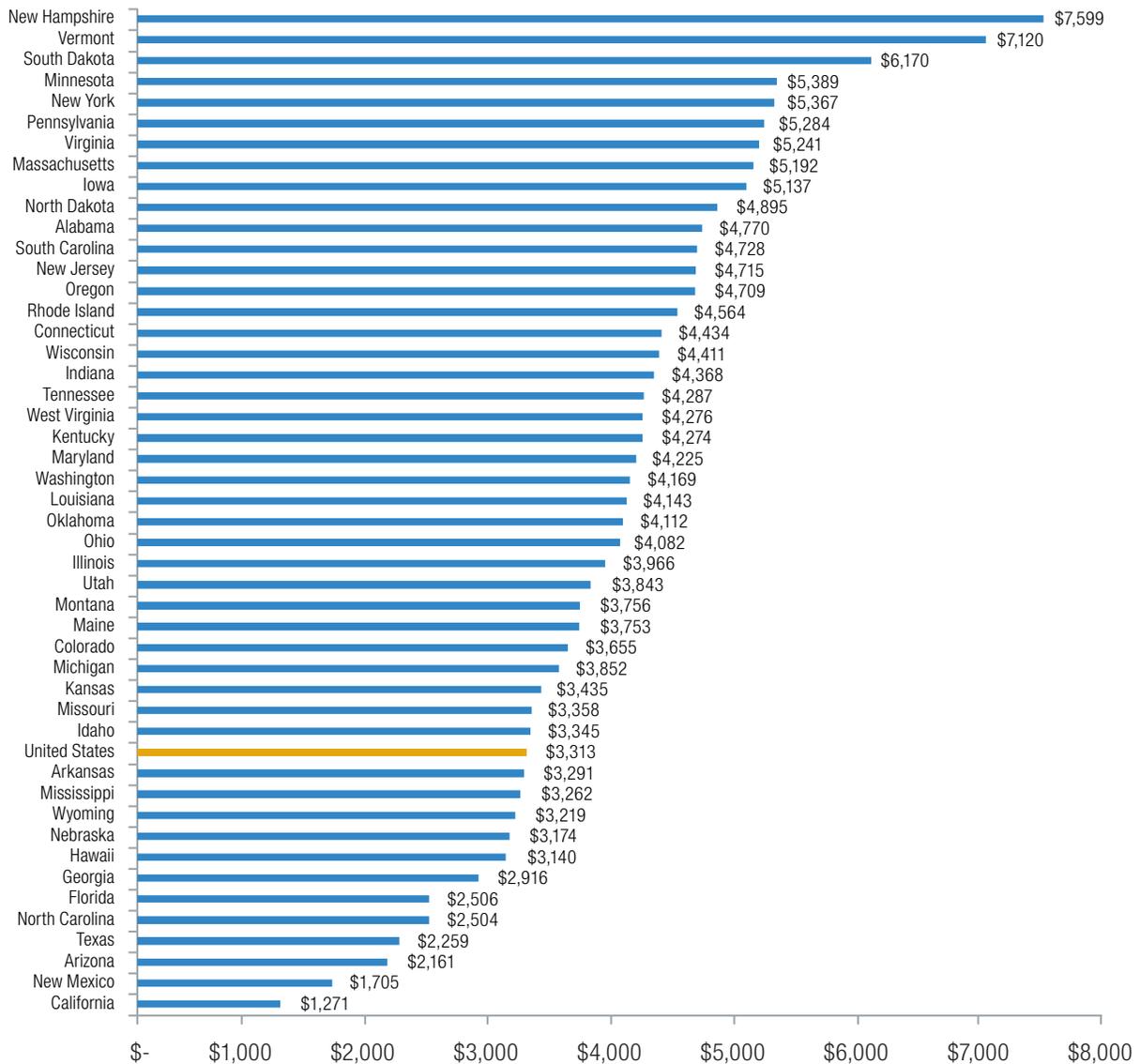
Indicator Status:

Wide variation in average costs across states, ranging from \$13,157 in Idaho to \$61,747 in Massachusetts.

NOTE: College Cost is reported annually by institutions to the U.S. Department of Education through IPEDS and includes tuition, fees, and room and board. Data are for the entire academic year and are average charges for full-time students. Tuition and fees are weighted by the number of full-time-equivalent undergraduates, but not adjusted to reflect student residency. Room and board are based on full-time students. Figure excludes Wyoming as 4-year private costs are not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics (2019). *Digest of Education Statistics 2019* [Table 330.20]. Retrieved from https://nces.ed.gov/programs/digest/d19/tables/dt19_330.20.asp.

Equity Indicator 3a(iv): Average costs (undergraduate tuition, fees, and room and board) charged by 2-year institutions for full-time in-state students by state: 2018-19



Indicator Status:

Wide variation in average costs across states. In 2018-19, average costs (undergraduate tuition and fees) of attending a public 2-year institution ranged from \$1,271 in California to \$7,599 in New Hampshire.

NOTE: College Cost is reported annually by institutions to the U.S. Department of Education through IPEDS and includes tuition, fees, and room and board. Data are for the entire academic year and are average charges for full-time students. Tuition and fees are weighted by the number of full-time-equivalent undergraduates, but not adjusted to reflect student residency. Figure excludes Alaska, Delaware, the District of Columbia, and Nevada as these costs are not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics (2019). *Digest of Education Statistics 2019* [Table 330.20]. Retrieved from https://nces.ed.gov/programs/digest/d19/tables/dt19_330.20.asp.

Equity Indicator 3b(i to vi): What are the Trends in the Pell Grant Program?

The maximum Pell Grant is set by Congress.⁸¹ The average Pell Grant award is lower than the maximum Pell Grant. The actual Pell award is based on tuition and fees and intensity of enrollment, as well as a student's Expected Family Contribution (EFC). In the recent period, just over one-quarter of recipients typically receive the maximum award.⁸²

Trends in College Costs, Pell Maximum, and Average Award. Indicator 3b(i) shows trends in average college costs (tuition and required fees plus room and board), maximum Pell Grant award, and average Pell Grant award, in constant 2019 dollars from 1974-75 to 2018-19. Average college costs increased from \$9,698 in 1974-75 to an estimated \$24,623 in 2018-19.⁸³ This is an increase of 154 percent in constant dollars. In contrast, the Pell maximum shows fluctuations but much less change over the same period. In constant 2019 dollars, the maximum Pell award was \$5,445 in 1974-75 and \$6,195 in 2019-20. The average Pell award increased from \$3,277 to \$4,170 in the same period (all in constant dollars).

Decrease in Percent of College Costs Covered by Pell Grants. Considering these amounts relative to the increases in college costs over the same period, Indicator 3b(ii) shows the large decrease in the percentage of average costs covered by the maximum Pell Grant. In constant 2019 dollars, the percent of average college costs covered by the maximum Pell Grant peaked in 1975-76 and has generally declined over the period. The Pell Grant maximum fell from a high of 69 percent in 1975-76 and 1979-80 to 41 percent by 1986-87. In the recent period, the Pell maximum has fallen further and now covers about 25 percent of average college costs.

Amount of Maximum Pell Needed to Cover Two-Thirds of Cost. Early Congressional committee supporters expressed hope that the Pell Grant would be funded at a level to cover close to three-fourths of the average yearly costs at public colleges.⁸⁴ This goal was never reached, but maximum Pell awards came closer to this goal in the early years of the program than in recent years. Indicator 3b(iii) shows the actual maximum Pell Grant award compared with what the maximum would be if it were to cover two-thirds of average costs each year. If it had covered two-thirds of average college costs in 2018-19, the maximum Pell would have been \$16,497 rather than \$6,205.

Appendix A (Figure 5) summarizes the Pell Grant spending from 1974 to 2019. The increase in Pell maximum necessary to restore funding to the 1976 levels of covering about two-thirds of average college (from \$6,205 to \$16,497) would require an estimated increase of about \$48 billion per year over the \$28 billion spent in 2018-2019. This amount would raise Pell Grant spending to about \$76.4 billion per year. To put this amount in perspective, the annual defense budget for 2019 was \$732 billion.⁸⁵

81 The Higher Education Act of 1965, as amended (HEA), provides for an automatic annual increase of the maximum Pell Grant award based on estimated changes in the Consumer Price Index (CPI). The Federal Pell Grant award is \$6,195 for the 2019–20 award year (July 1, 2019 to June 30, 2020). This is an increase of \$100 over 2018-2019.

82 College Board (2019). *Trends in Student Aid*. Retrieved from <https://research.collegeboard.org/trends/student-aid>.

83 Average college costs reported in Indicator 3b(i) are estimated for 2018-19 based data reported in Indicator 3a(i) for 2017-18 data and rates of observed increase.

84 Mensel, F. (2013). Birth of the Pell Grant: The Community College Role, *Reflections on Pell*, 5-55, Washington, DC: Council for Opportunity in Education, Pell Institute for the Study of Opportunity in Higher Education. Retrieved from http://www.pellinstitute.org/downloads/publications-Reflections_on_Pell_June_2013.pdf.

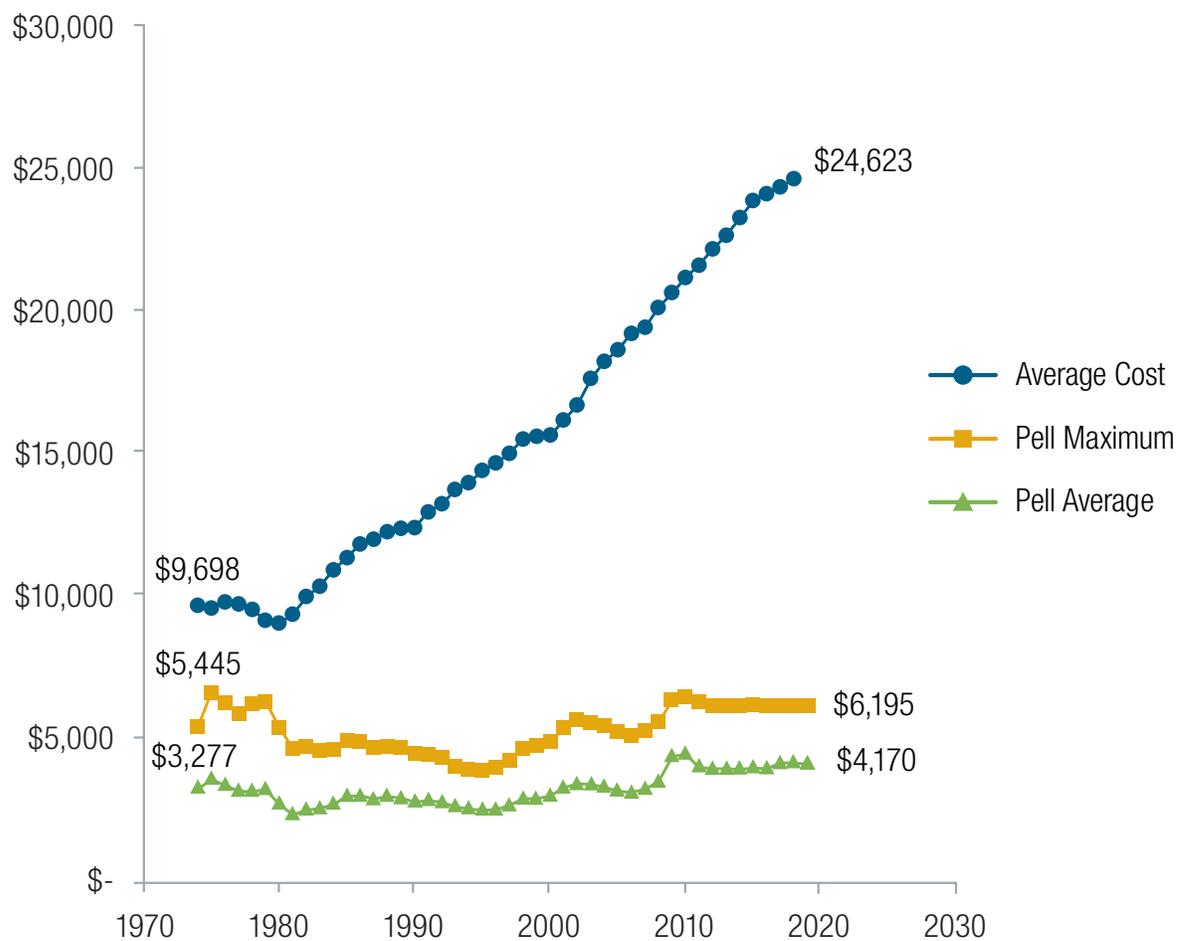
85 Stockholm International Peace Research Institute (SIPRI). Military Expenditures/Defense Budget 1960-2019. Retrieved from <https://www.sipri.org/databases/milex>.

College Board Full Student Budgets. The average costs considered in Indicator 3a and 3b include tuition and required fees, and room and board charges, but not transportation or other costs. The College Board reports student budgets for full-time students based on their Annual Survey of College Costs.⁸⁶ The student budgets for 2020-21 including tuition and fees, room and board, books and supplies, transportation, and other expenses, as published by the College Board, were:

- \$18,550 at 2-year public institutions for commuter students within district;
- \$26,820 at 4-year public institutions for in-state students living on campus;
- \$43,280 at 4-year public institutions for out-of-state students living on campus, and
- \$54,880 at 4-year private non-profit institutions for students living on campus.

86 College Board, <https://research.collegeboard.org/pdf/trends-college-pricing-student-aid-2020.pdf>.

Equity Indicator 3b(i): Average costs (tuition and required fees plus room and board) for full-time undergraduate enrollment (1974-75 to 2018-19) and maximum and average Pell Grant awards (1974-75 to 2019-20) (in constant 2019 dollars)



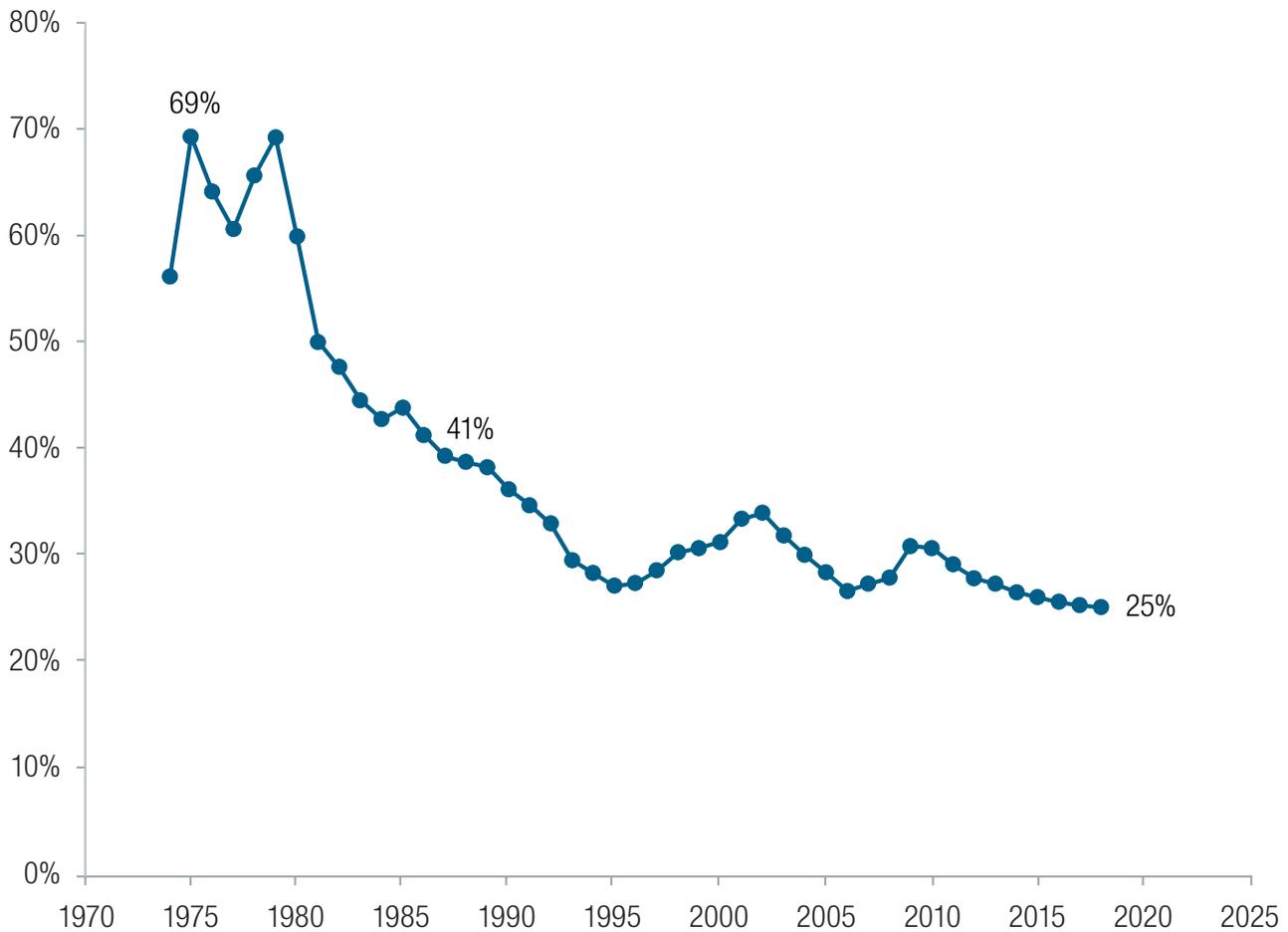
Indicator Status: Widening Gap between Average College Costs and Pell Awards

Between 1974-75 and 2018-2019, average college costs in constant dollars increased by 154 percent, while the maximum Pell Grant remains virtually unchanged. The average Pell Grant increased by 18 percent over the period (in constant dollars).

NOTE: College costs are weighted by undergraduate total full-time enrollment at all types of institutions, as reported by NCES. https://nces.ed.gov/programs/digest/d18/tables/dt18_330.10.asp. College costs include tuition, fees, and room and board. The maximum Pell Grant is the highest amount allowed by law. The average Pell Grant awarded each year is lower than the maximum, as most students do not receive the maximum.

SOURCE: College Board, *Trends in Student Aid 2019*, Table 8. <https://research.collegeboard.org/trends/student-aid>; National Center for Education Statistics (2019). *Digest of Education Statistics 2019*, [Table 330.10]. Retrieved from https://nces.ed.gov/programs/digest/d19/tables/dt19_330.10.asp.

Equity Indicator 3b(ii): Percentage of average costs (tuition and required fees plus room and board) covered by the maximum Pell Grant: 1974-75 to 2018-19 (in constant 2019 dollars)



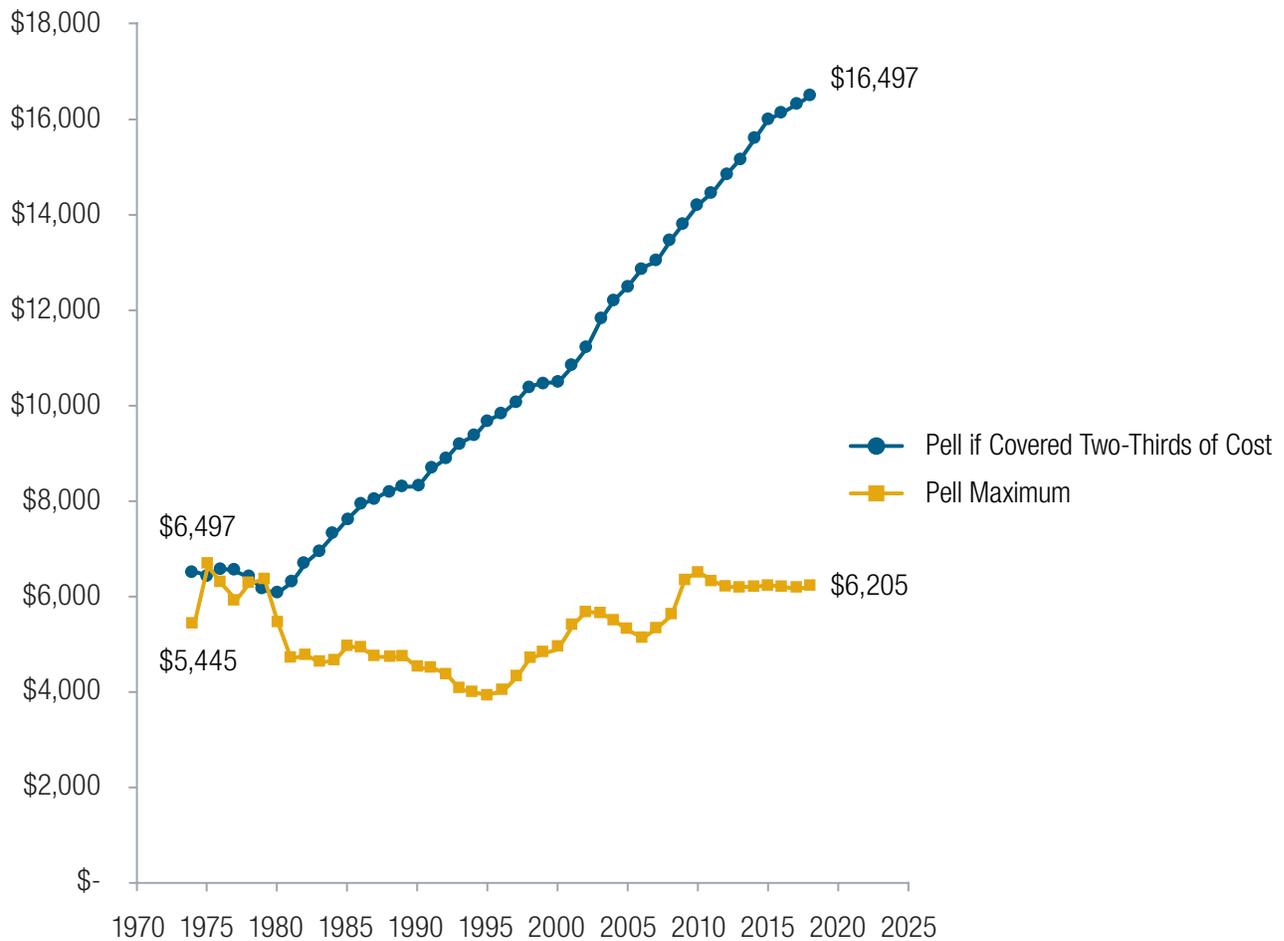
Indicator Status: Large Declining Opportunity

The percentage of average college costs covered by the maximum Pell Grant peaked in 1975-76, when the grant covered about 69 percent of costs, and declined to 25 percent in 2018-19.

NOTE: Figure 3b(ii) shows the maximum Pell Grant as a percent of average college cost weighted by full-time undergraduate enrollment, among all types of institutions.

SOURCE: College Board, *Trends in Student Aid 2019*, Table 8. <https://research.collegeboard.org/trends/student-aid>; National Center for Education Statistics (2019). *Digest of Education Statistics 2019*, [Table 330.10]. Retrieved from https://nces.ed.gov/programs/digest/d19/tables/dt19_330.10.asp.

Equity Indicator 3b(iii): Maximum Pell Grant if the Pell Grant maximum covered two-thirds of average college costs (tuition and fees; room and board): 1974-75 to 2018-19 (in constant 2019 dollars)



Indicator Status: Reduced Opportunity

The maximum Pell Grant in 2018-19 would be \$16,497 rather than \$6,205 if it covered about two-thirds of college costs as in 1974-75.

NOTE: Figure 3b(iii) shows what the maximum Pell Grant would need to be to cover two-thirds of the average college costs for a given year. College Cost is reported annually by institutions to the U.S. Department of Education through IPEDS and includes tuition, fees, and room and board. Average costs are weighted by undergraduate full-time enrollment. For public institutions, in-state tuition and required fees are used.

SOURCE: College Board, *Trends in Student Aid 2019*, Table 8. <https://research.collegeboard.org/trends/student-aid>; National Center for Education Statistics (2019). *Digest of Education Statistics 2019*, [Table 330.10]. Retrieved from https://nces.ed.gov/programs/digest/d19/tables/dt19_330.10.asp.

Growth in Pell Grant Recipients. Between 1975-76 and 2018-19, the number of Pell recipients per year has generally increased. There were 1.2 million Pell recipients in 1975-76 and 6.8 million in 2018-19 (see Equity Indicator 3b(iv)). The increase is attributable to increases in total postsecondary enrollment (from 9.6 million in 1975 to about 17 million in 2020) as well as increases in the percentages of students who receive Pell Grants. The share of first-time full-time undergraduates receiving Pell Grants increased from about 8 to 10 percent at the start of the program to about one-third by 2000 and was 42 percent in 2019 (See STS Figures 3 and 6a).

The number of students who qualify for Pell Grants is sensitive to economic conditions. The number of Pell Grant recipients peaked during the Great Recession. In 2011, there were 9.4 million recipients. By 2018-19, a period of economic recovery, the number of Pell recipients had declined to 6.8 million.

Growth in Independent Students in Periods of Recession. Although recent trends in the numbers of both dependent and independent students receiving Pell Grants have generally followed a similar pattern, peaking during the Great Recession and declining during a period of economic recovery, independent students have greater rates of increase in economic downturns. Between 2006 and 2011, the number of independent Pell recipients increased from 3,011 to 5,716 (an increase of about 90 percent) while the number of dependent Pell recipients increased from 2,154 to 3,728, an increase of 73 percent (see Equity Indicator 3b(v)).

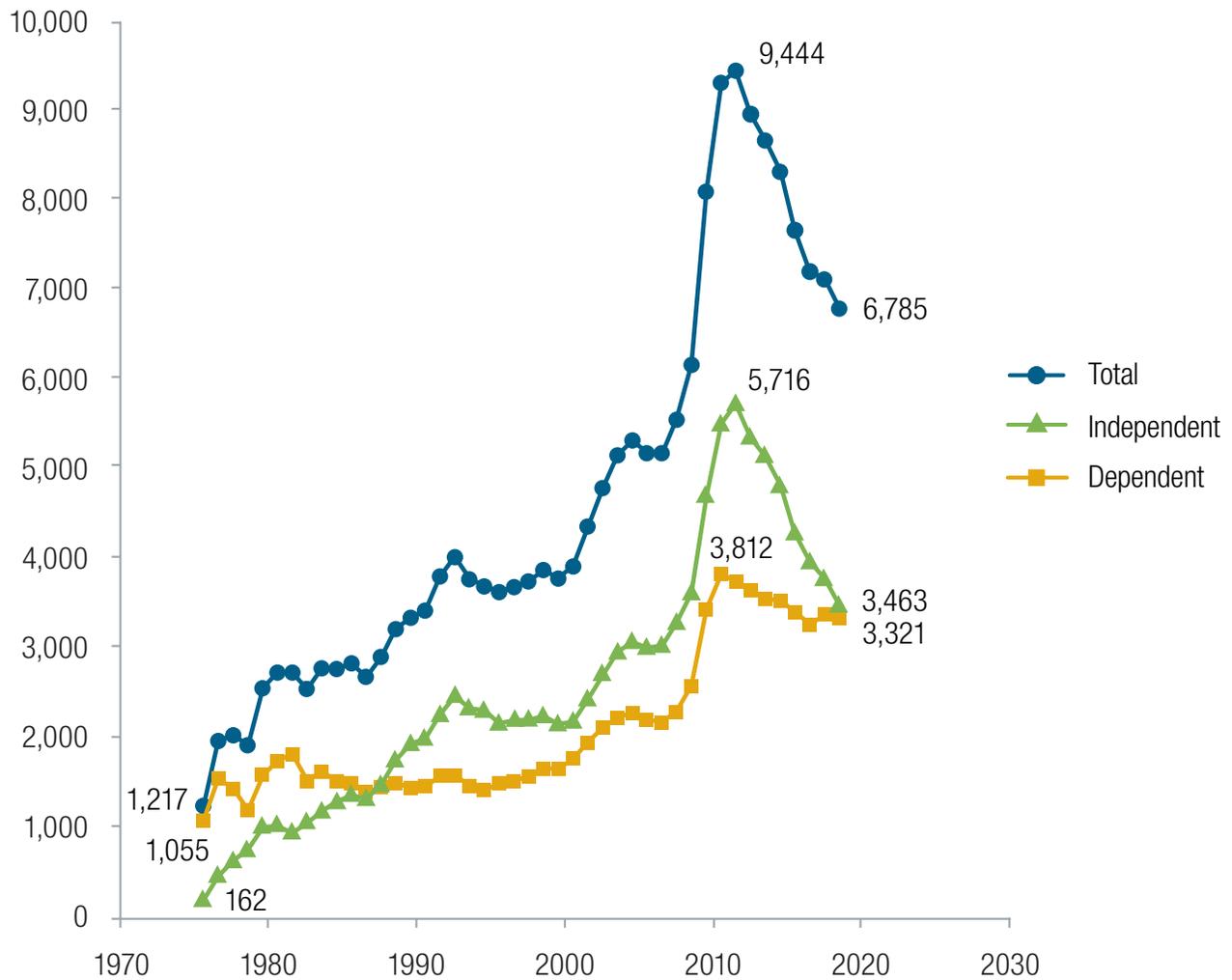
About half (51 percent) of all Pell recipients were classified as independent students in 2018-19 (Equity Indicator 3b(v)). The percentage of Pell recipients who were independent peaked at 62 percent in 1993 and 1994 and 61 percent in 2011-2012, both periods of economic recession (see Equity Indicator 3b(v)).

Selectivity of Institutions Attended by Pell Recipients and Impact of Economic Downturns and Recovery.

As seen in Equity Indicator 2, Pell Grant recipients are not distributed equally across different types of institutions; they tend to enroll more frequently in 2-year rather than 4-year and in open access colleges rather than more selective institutions (Equity Indicator 2). Using IPEDS data on Institutional Characteristics, Hillman (2020) has categorized institutions into four categories: *Broad Access*, *Moderately Selective*, *Selective* and *Highly Selective*.⁸⁷ Although the categorization is different than the Barron's categorizations used in Indicator 2, the results are similar. Equity Indicator 3b(vi) plots the head count number (undergraduate and graduate) of Pell recipients by the four selectivity classifications between 1999 and 2018. During the entire period, there was a 98 percent increase in the numbers of Pell Grant recipients enrolled in postsecondary institutions, with most of the increase due to Pell Grant recipients enrolling at *Broad Access* colleges. The impact of the Great Recession and subsequent economic recovery on Pell enrollment is starkly clear for *Broad Access* postsecondary institutions, with a sharp increase and then a decline of 30 percent between the peak of 2011 and 2018 among *Broad Access* colleges and universities. *Moderately Selective* colleges and universities had a 5 percent decline in Pell recipients, and *Selective* institutions had a .3 percent decline. In the same period, *Highly Selective* institutions had an increase of 2 percent in enrollment of Pell recipients. In 2018, 63 percent of Pell Grant recipients were enrolled at *Broad Access* colleges and universities, while 5 percent were enrolled at *Highly Selective* institutions (calculated from numbers in Equity Indicator 3b(vi)).

⁸⁷ Hillman, N. "Why Rich Colleges Get Richer & Poor Colleges Get Poorer: The Case for Equity-Based Funding in Higher Education – *Third Way*." – *Third Way*, 20 Nov. 2020, Retrieved from <https://www.thirdway.org/report/why-rich-colleges-get-richer-poor-colleges-get-poorer-the-case-for-equity-based-funding-in-higher-education>.

Equity Indicator 3b(iv): Number of Pell Grant recipients (in thousands) by dependency status: 1975-76 to 2018-19



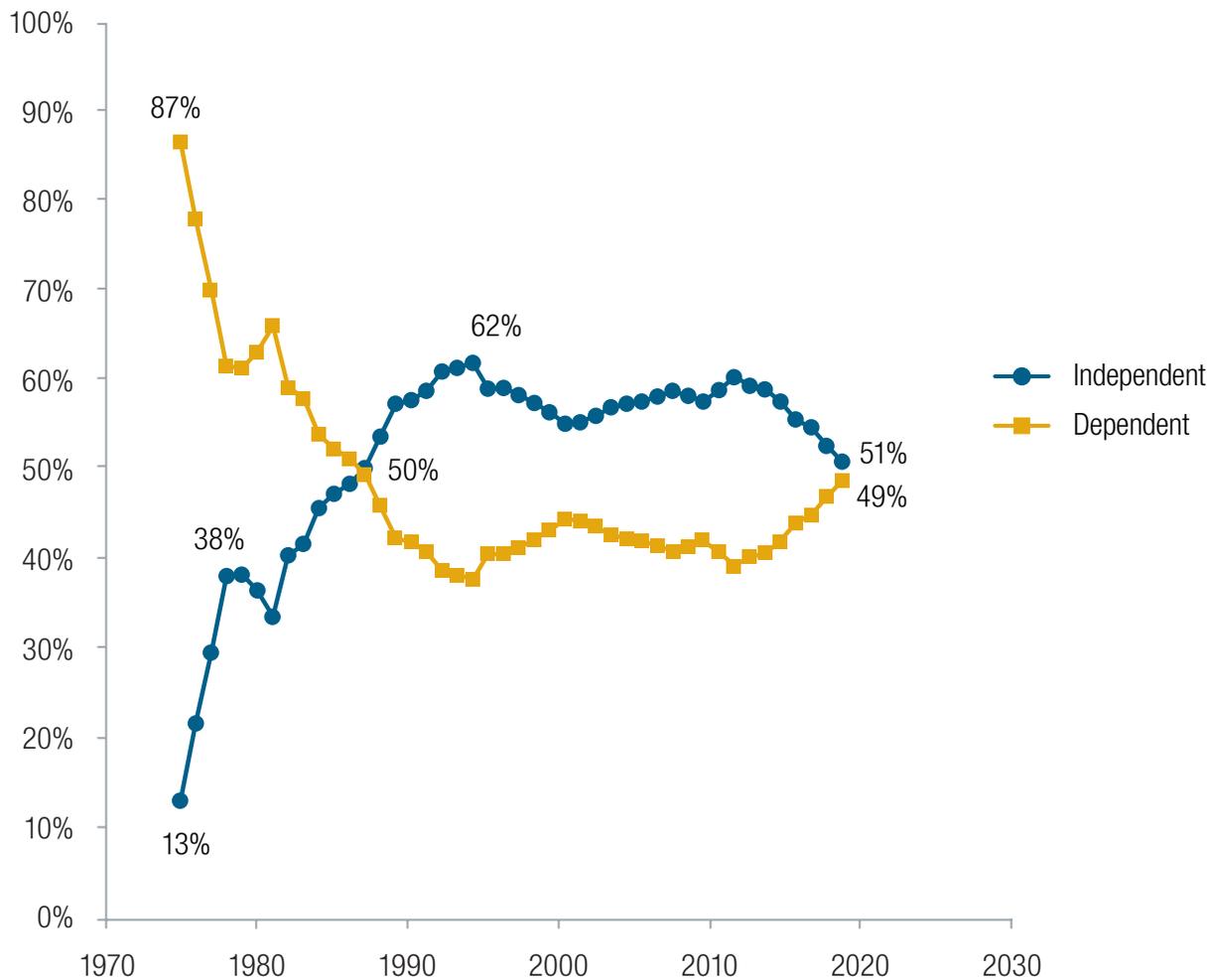
Indicator Status:

The number of students who qualify for Pell Grants is sensitive to economic conditions. The number of Pell Grant recipients peaked during the Great Recession and declined during a period of economic recovery. The number of independent Pell recipients is especially sensitive to economic conditions.

NOTE: See Indicator 1 for the Dependency Status definitions used for federal financial aid award application purposes.

SOURCE: U.S. Department of Education (2018). *Summary Pell Grant Statistics for Cross-Year Comparison, Pell End of Year Report*, various years. Retrieved from <https://www2.ed.gov/finaid/prof/resources/data/pell-data.html>; College Board, *Trends in Student Aid* Retrieved from <https://trends.collegeboard.org/student-aid>.

Equity Indicator 3b(v): Percentage distribution of Pell Grant recipients by dependency status: 1975-76 to 2018-19



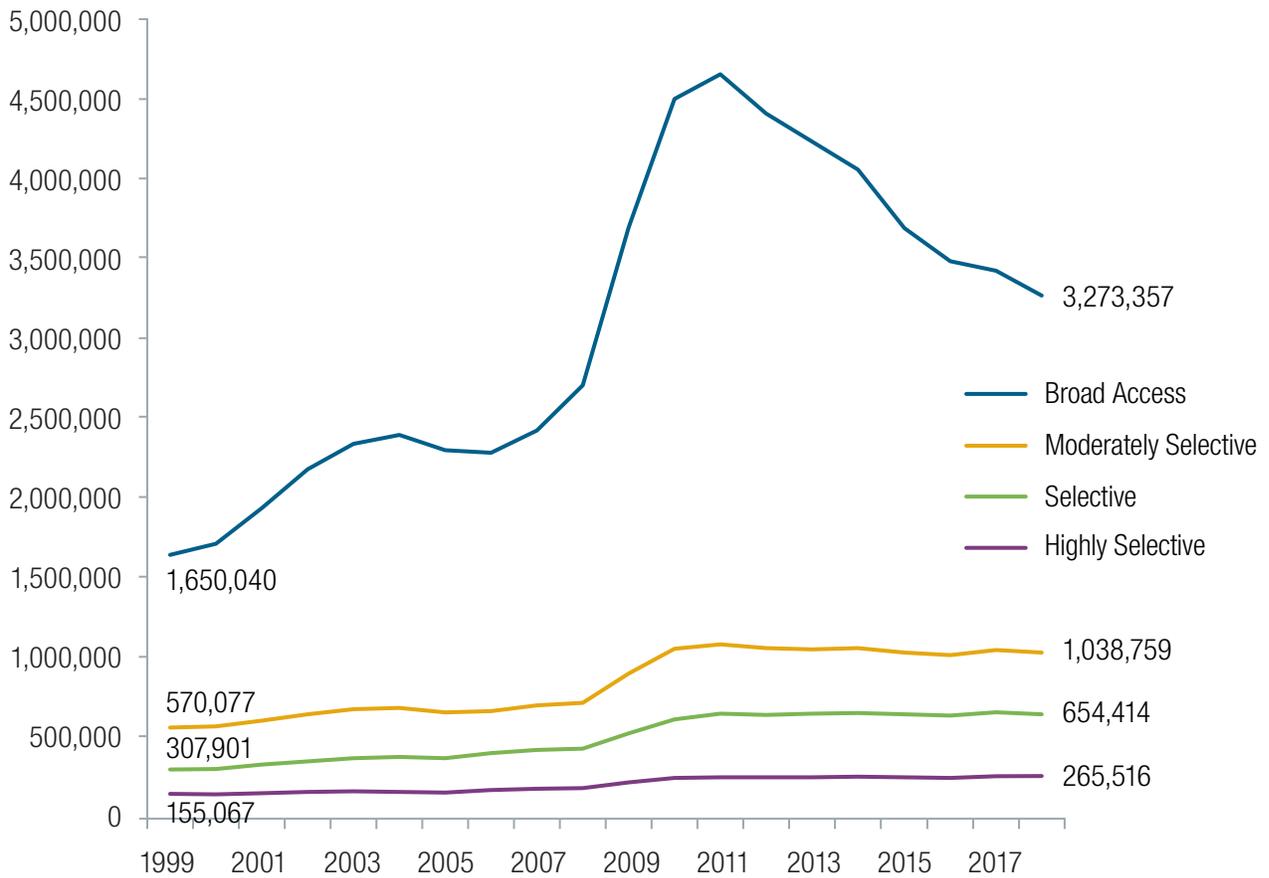
Indicator Status: Reduced Opportunity

The percentage of Pell Grant recipients who were independent peaked at about 62 percent in 1993 and again in 2011 and 2012—periods of economic recession. In 2018-19, independent students received 51 percent of all Pell Grants.

NOTE: See Indicator 1 for the Dependency Status definitions used for federal financial aid award application purposes.

SOURCE: U.S. Department of Education (2018). *Summary Pell Grant Statistics for Cross-Year Comparison, Pell End of Year Report*, various years. Retrieved from <https://www2.ed.gov/finaid/prof/resources/data/pell-data.html>; College Board, *Trends in Student Aid*. Retrieved from <https://trends.collegeboard.org/student-aid>.

Equity Indicator 3b(vi): Number of Pell Grant recipients (undergraduate and graduate) by institutional selectivity: 1999-2018



Indicator Status: Reduced Opportunity

The distribution of Pell Grant recipient enrollment is highly inequal across selectivity categories. In 2018, 63 percent of Pell Grant recipients were in *Broad Access* colleges and universities and 5 percent were in *Highly Selective* institutions. The number of Pell Grant recipients has increased overall by 98 percent since 1999, with most of the growth occurring in *Broad Access* institutions. The impact of the Great Recession and subsequent recovery is apparent in a decline of 30 percent in *Broad Access* enrollment between 2011 and 2018.

NOTE: Selectivity categorizations, and tabulations based on IPEDS Enrollment, Finance, and Institutional Characteristics surveys as analyzed and reported in Hillman (2020) at the source noted below.

SOURCE: Hillman, N. "Why Rich Colleges Get Richer & Poor Colleges Get Poorer: The Case for Equity-Based Funding in Higher Education – *Third Way*." – Third Way, 20 Nov. 2020, Retrieved from <https://www.thirdway.org/report/why-rich-colleges-get-richer-poor-colleges-get-poorer-the-case-for-equity-based-funding-in-higher-education>.

Indicator 3c: What is the Unmet Financial Need for Dependent and Independent Full-time Undergraduates?

Indicators 3c(i) and 3c(ii) display trends in unmet need using data from the National Postsecondary Student Aid Study (NPSAS). Indicator 3c(i) uses NPSAS data from 1990 to 2016 to show average unmet need for dependent undergraduate students by family income quartile. Indicator 3c(ii) uses NPSAS data from 2000 to 2016 and displays average unmet need by dependency status (dependent, independent without dependents, and independent with dependents). We define unmet need as the Cost of Attendance (COA) remaining after subtracting Expected Family Contribution (EFC) and all grants and other discounts that do not have to be repaid. Discounts, as measured here, do not include loans.

Unmet Financial Need for Dependent Students by Family Income Quartile: 1990-2016. The data in Indicator 3c(i) are from the eight NPSAS studies conducted between 1990 and 2016. Family income quartiles are tabulated based on the income distribution of parents of the nationally representative samples of students in each of the data collection years.⁸⁸ For ease of comparison, all NPSAS data have been re-tabulated to reflect 2019 constant dollars.

Growth in Unmet Financial Need Among Lower Quartiles and Increase in Surplus in Highest Quartile.

Equity Indicator 3c(i) shows that unmet need has increased substantially since 1990 for dependent full-time undergraduates in the first and second family income quartiles. It also shows extreme differences in unmet need between dependent full-time undergraduates in the lowest and highest income quartiles, even though students in the lower family income quartiles are more likely to attend community colleges and other institutions with lower average COA and are more likely to qualify for Pell Grant aid. Differences in average unmet need between the lowest and highest family income quartiles reflect the growing inequality in the income distribution of the United States.

In 2016, dependent full-time students in the lowest family income quartile averaged \$9,739 in unmet need while dependent full-time students in the highest family income quartile had, on average, a surplus of \$28,755. Average unmet financial need for dependent full-time undergraduates in the lowest family income quartile was 2.4 times higher in 2016 than in 1990 in constant 2019 dollars (\$9,739 vs. \$4,014).

Dependent full-time students in the second-lowest family income quartile also averaged high levels of unmet need. In 2016, their unmet need averaged \$8,165 (up from \$3,389 in constant dollars in 2008). In 2016, (in constant 2019 dollars), dependent full-time students in the third highest quartile averaged a small surplus or negative unmet need (-\$640), and students in the fourth/highest quartile averaged a large surplus or negative unmet need (-\$28,755).⁸⁹

Unmet Financial Need by Dependency Status: 2000-2016. Indicator 3c(ii) shows that average unmet need was substantially higher for full-time independent undergraduates in 2016 than for full-time dependent students. Average unmet need was \$17,112 for independent students with dependents and \$16,648 for independent students without dependents, compared with \$10,918 for dependent students.

⁸⁸ Indicator 3a on “unmet need” in the 2019 *Indicators* report presented NPSAS data in 2016 constant dollars and the 2020 *Indicators* report used 2018 constant dollars and hence differs slightly from the amounts in 2019 *Indicators* report for Indicator 3c(i) which are in 2019 constant dollars.

⁸⁹ The percent of students with an Expected Family Contribution (EFC) of zero has also increased between 2000 and 2012. About 23 percent of dependent students had an EFC of zero in 2012 (NPSAS:2012), up from 10 percent in 2000 (NPSAS:2000). The percent of families with an EFC greater than the cost of attendance decreased from 28 percent in 2000 to 17 percent in 2012 (NPSAS:2000 and NPSAS:2012).

Equity Indicator 3c(ii) shows that average unmet need was 56 percent higher in 2016 than 2000 for full-time independent students with dependents (\$10,979 versus \$17,112 in constant 2019 dollars), 84 percent higher for full-time independent students without dependents (\$9,052 versus \$16,648), and 72 percent higher for full-time dependent students (\$6,337 versus \$10,918).

Equity Indicator 3c(i): Unmet financial need of dependent full-time undergraduates by family income quartile: 1990 to 2016 (in constant 2019 dollars)



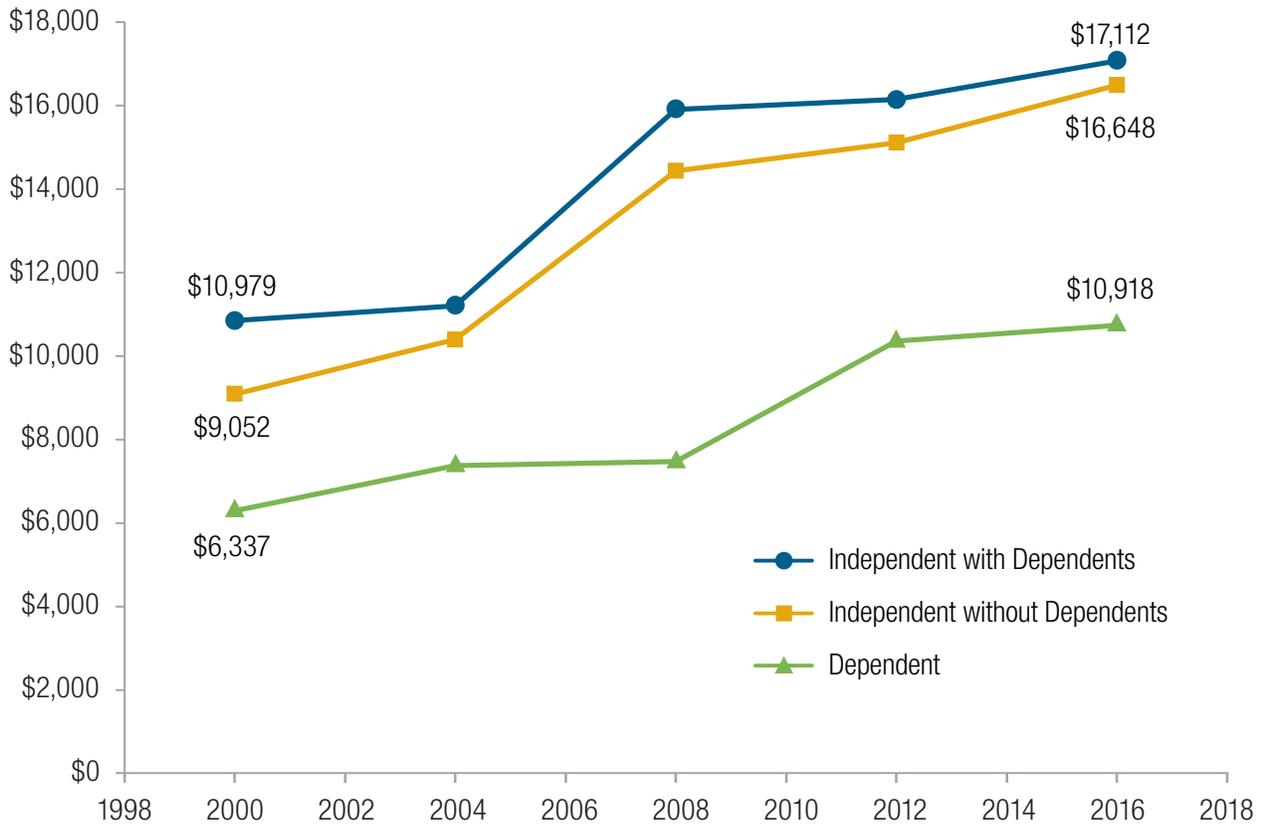
Indicator Status: High Inequality

There are large and growing differences in the unmet need of dependent students from the lowest and highest family-income quartiles. Dependent students from the lowest family income quartile averaged \$9,739 in unmet need in 2016, while dependent students from the highest income quartile had a surplus of \$28,755. Unmet financial need for students in the lowest family-income quartile more than doubled between 1990 and 2016.

NOTE: Unmet need is defined as what remains after Expected Family Contribution (EFC) and all grants and discounts that do not have to be repaid are subtracted from average COA. Loans are not considered a discount.

SOURCE: U.S. Department of Education, National Postsecondary Student Aid Study (NPSAS), 1990, 1993, 1996, 2000, 2004, 2008, 2012 and 2016, as analyzed by Tom Mortenson and published in "Trends in Financial Barriers to Higher Education for Dependent Undergraduate Students 1990 to 2016," *Postsecondary Education Opportunity*, 300. Retrieved from <http://www.pellinstitute.org/peo.shtml>.

Equity Indicator 3c(ii): Unmet financial need among full-time undergraduates by dependency status: 2000 to 2016 (in constant 2019 dollars)



Indicator Status: Growing Unmet Need

Average unmet need was 56 percent higher in 2016 than 2000 for full-time undergraduate independent students with dependents (\$17,112 versus \$10,979 in constant 2019 dollars), 84 percent higher for full-time independent students without dependents (\$16,648 versus \$9,052), and 72 percent higher for full-time dependent students (\$10,918 versus \$6,337).

NOTE: Unmet need is defined as what remains after Expected Family Contribution (EFC) and all grants and discounts that do not have to be repaid are subtracted from average COA. Loans are not considered a discount.

SOURCE: U.S. Department of Education, National Postsecondary Student Aid Study (NPSAS), 2000, 2004, 2008, 2012 and 2016. Data tabulated using NCES PowerStats. The variables used were: ATTEND, DEPEND2, and SNEED5.

Indicator 3d: What is the Extent of Differences Between Education and Related (E&R) Spending per FTE Enrollment by Institutional Selectivity and for Pell Recipients?

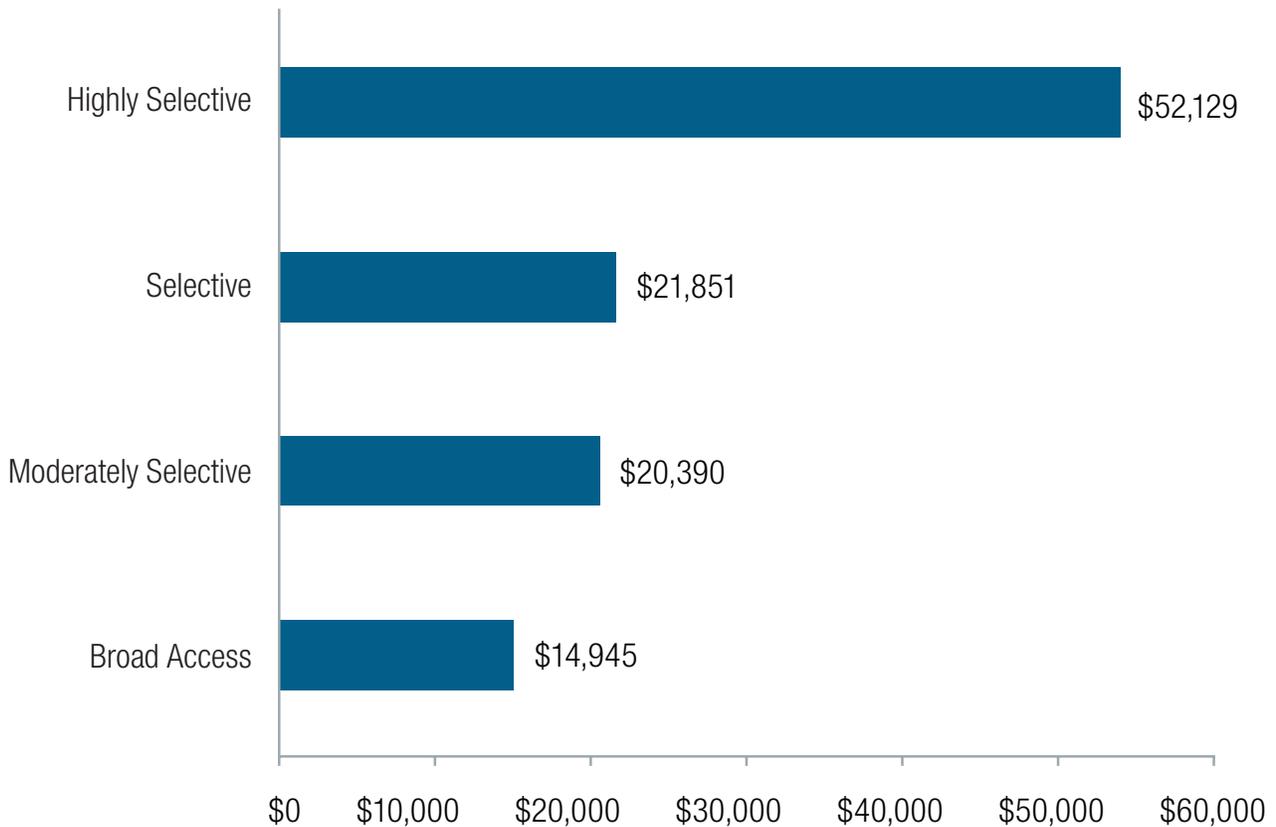
Education and Related (E&R) Spending per FTE Enrollment by Institution Selectivity. In 2018-2019, postsecondary institutions spent an average of \$20,804 per full-time equivalent (FTE) student on Education and Related (E&R) expenditures.⁹⁰ This amount includes cost for instruction, student services, and a portion of academic and institutional support services expenditures. When disaggregated by institutional selectivity the numbers present a story of inequality (Equity Indicator 3d(i)). Students attending *Highly Selective* institutions had E&R spending of \$52,129 per FTE enrolled student and *Broad Access* institutions had E&R spending of \$14,945 per FTE enrolled student. It is difficult to justify this difference as representing anything close to equal educational opportunity for postsecondary education in the United States.

Distribution of FTE Enrollment, and Education and Related (E&R) Spending by Selectivity. Equity Indicator 3d(ii) displays percentage distributions for FTE enrollment, Education and Related Spending (E&R) and number of institutions by selectivity of the college or university. Although *Broad Access* institutions enroll almost 50 percent (49 percent) of the FTE students, they do so with only about one-third (34 percent) of the total Education and Related Spending (E&R). In contrast, *Highly Selective* institutions enroll about 11 percent of the total FTE enrollment, yet they spend more than a fourth (27 percent) of the total Education and Related expenditures.

Pell Grant Recipients and Education and Related (E&R) Spending Quintiles. Using the analyses by Hillman (2020), Equity Indicator 3d(iii) shows the distribution of Pell Grant recipients by Education and Related (E&R) spending per FTE institutional quintiles from 1999 to 2019. These distributions show a trend toward greater inequity of expenditures, with a higher percentage of Pell recipients in quintiles with lower education spending per FTE since 1999. In 2018, 29 percent of Pell Grant recipients were enrolled in the lowest quintile of E&R institutional spending, and 9 percent were enrolled in the highest quintile. In 1999, about 22-23 percent of Pell recipients were in each of the three E&R lower quintiles, and 12 percent were in the highest funding quintile.

⁹⁰ Hillman, N. "Why Rich Colleges Get Richer & Poor Colleges Get Poorer: The Case for Equity-Based Funding in Higher Education – *Third Way*." – *Third Way*, 20 Nov. 2020, Retrieved from <https://www.thirdway.org/report/why-rich-colleges-get-richer-poor-colleges-get-poorer-the-case-for-equity-based-funding-in-higher-education>.

Equity Indicator 3d(i): Education and Related (E&R) spending per FTE enrollment by institution selectivity: IPEDS data 2018-2019



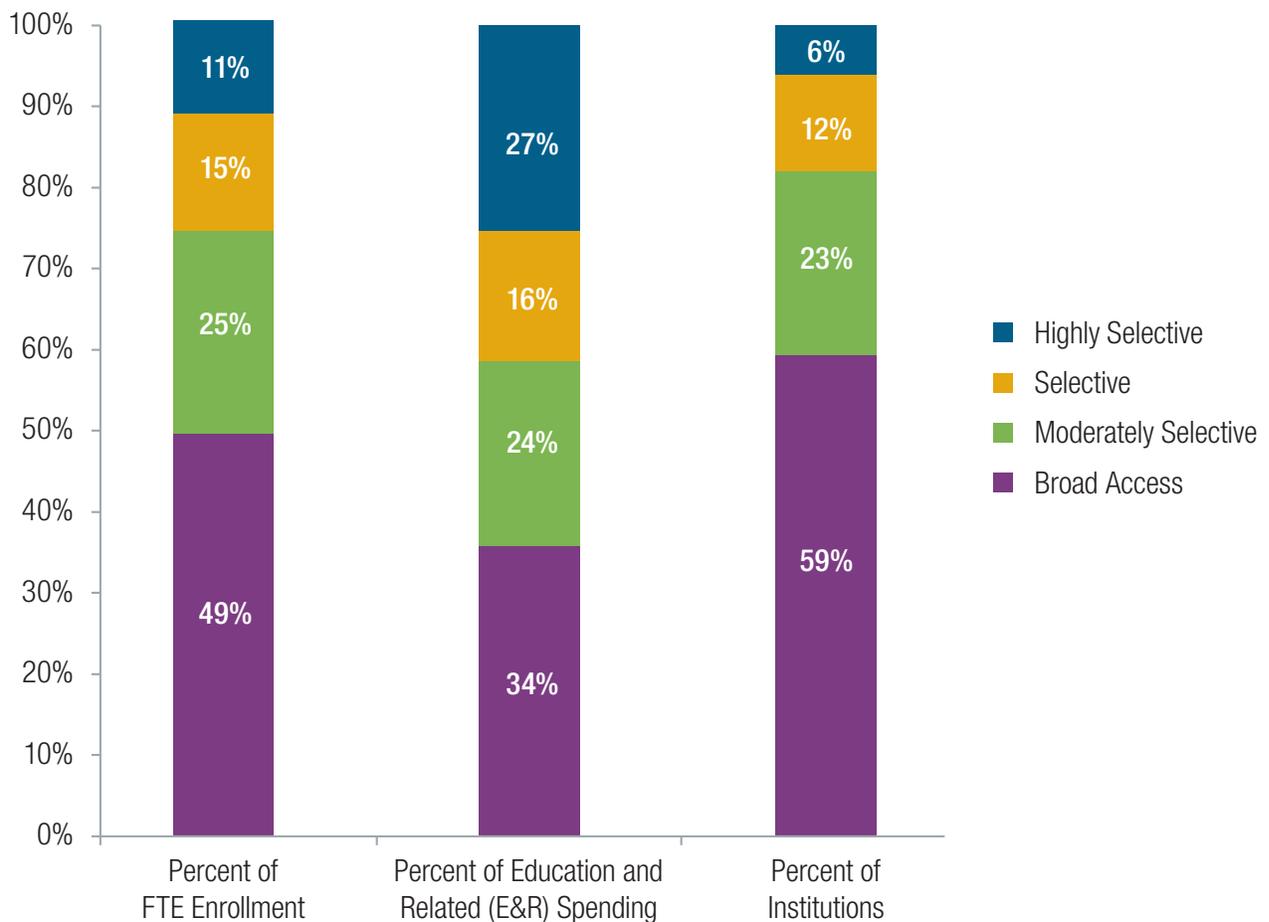
Indicator Status: High Level of Inequality

Spending per FTE student was 3.5 times higher at *Highly Selective* institutions as at *Broad Access* institutions (\$52,129 vs, \$14,945).

NOTE: Selectivity categorizations, and tabulations based on IPEDS Enrollment, Finance, and Institutional Characteristics surveys as analyzed and reported in Hillman (2020) at the source noted below.

SOURCE: Hillman, N. "Why Rich Colleges Get Richer & Poor Colleges Get Poorer: The Case for Equity-Based Funding in Higher Education – *Third Way*." – Third Way, 20 Nov. 2020, Retrieved from <https://www.thirdway.org/report/why-rich-colleges-get-richer-poor-colleges-get-poorer-the-case-for-equity-based-funding-in-higher-education>.

Equity Indicator 3d(ii): Percentage distributions of FTE student enrollment, educational and related (E&R) spending, and number of institutions by institution selectivity: IPEDS data 2018-2019



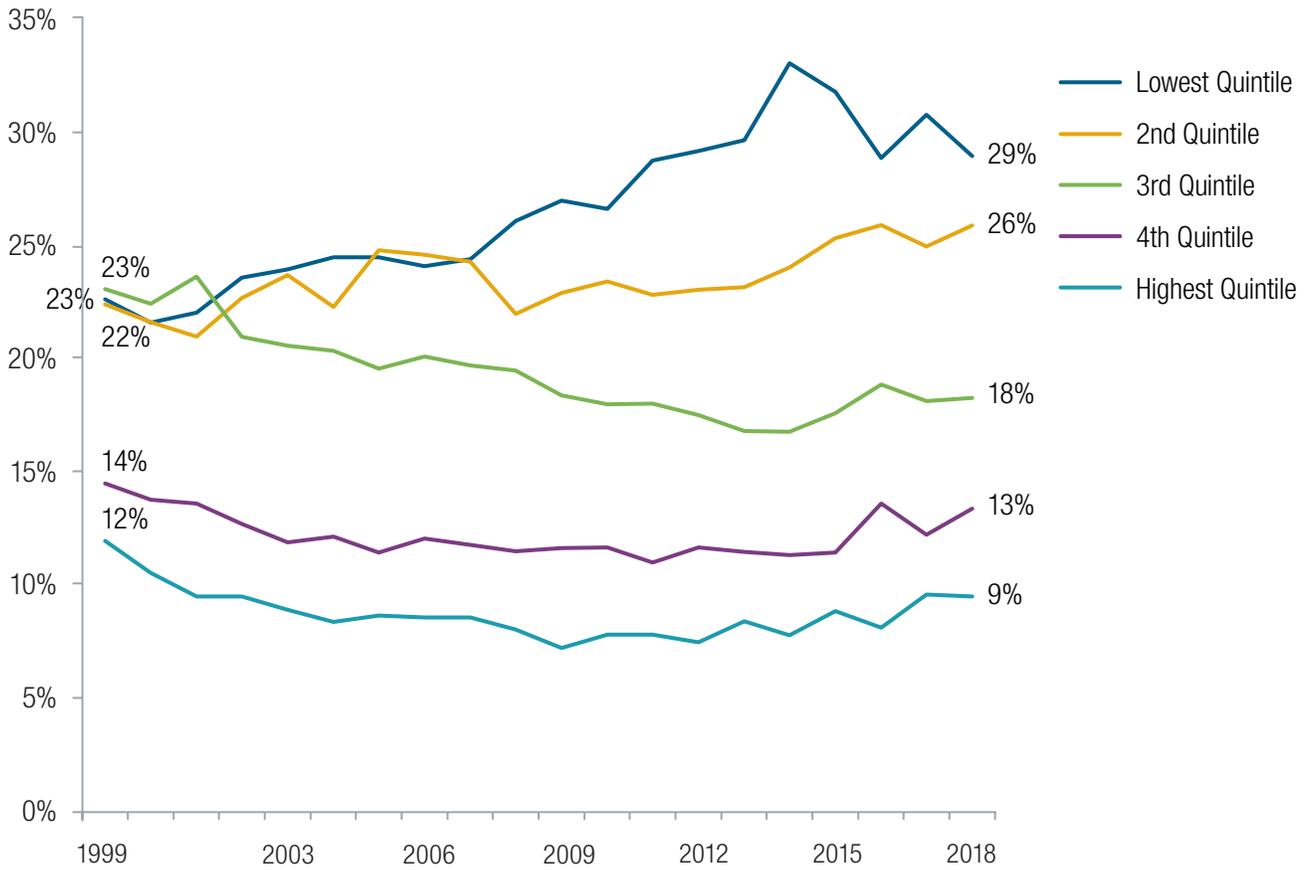
Indicator Status: High Inequality

Broad Access institutions serve almost 50 percent of the FTE students enrolled, yet they do so with about one-third (34 percent) of the total Education and Related Expenditures (E&R). *Highly Selective* institutions serve about 11 percent of the total FTE students, yet they do so with 27 percent of the total Education and Related expenditures.

NOTE: Selectivity categorizations, and tabulations based on IPEDS Enrollment, Finance, and Institutional Characteristics surveys as analyzed and reported in Hillman (2020) at the source noted below.

SOURCE: Hillman, N. "Why Rich Colleges Get Richer & Poor Colleges Get Poorer: The Case for Equity-Based Funding in Higher Education – *Third Way*." – *Third Way*, 20 Nov. 2020, Retrieved from <https://www.thirdway.org/report/why-rich-colleges-get-richer-poor-colleges-get-poorer-the-case-for-equity-based-funding-in-higher-education>.

Equity Indicator 3d(iii): Distribution of Pell Grant recipients by Education and Related Spending (E&R) per FTE quintiles: 1999-2018



Indicator Status: High and Growing Inequity

Among the total Pell Grant recipients, 29 percent of Pell Grant recipients were in the lowest Education and Related (E&R) spending quintile, and 9 percent were in the highest funding quintile in 2018-19. Two decades earlier, in 1999, 23 percent of Pell recipients were in the lowest E&R quintile and 12 percent were in the highest E&R quintile.

NOTE: Selectivity categorizations, and tabulations based on IPEDS Enrollment, Finance, and Institutional Characteristics surveys as analyzed and reported in Hillman (2020) at the source noted below.

SOURCE: Hillman, N. "Why Rich Colleges Get Richer & Poor Colleges Get Poorer: The Case for Equity-Based Funding in Higher Education – *Third Way*." – Third Way, 20 Nov. 2020, Retrieved from <https://www.thirdway.org/report/why-rich-colleges-get-richer-poor-colleges-get-poorer-the-case-for-equity-based-funding-in-higher-education>.

EQUITY INDICATOR 4:

HOW DO STUDENTS IN THE UNITED STATES PAY FOR COLLEGE?

The period since 1980 shows an increasing shift in financing for postsecondary education from public funding to students and their families. Despite the fact that low-income students on average attend lower-priced colleges, by 2016, the net price of college attendance after all grants and discounts were taken into account represented a stark 94 percent of average family income in the lowest family income quartile.

The long-lasting student debt burden falls most heavily on Pell Grant recipients and students of color. For example, in 2019 dollars, 10 years after being awarded a bachelor's degree, Black students had borrowed an average of \$62,842 and White graduates \$34,717 to finance their undergraduate and graduate education. This represents a Black-White gap of \$28,107.

Equity Indicator 4(a-f): Sources and Definitions

Indicator 4 reports how students and families pay college costs. We include data from the following sources.

- **National Income and Product Accounts (NIPA).** Available since 1952, these data identify the percent of total higher education funding from State and Local Government, Federal Government, and Personal Consumption Expenditures. Personal Consumption Expenditures represent costs that are borne by students and their families.
- **The Grapevine Project of the Center for the Study of Education Policy at Illinois State University and the State Higher Education Executive Officers (SHEEO).** The Grapevine project compiles data on state appropriations and need-based funding.⁹¹
- **The National Association of State Student Grant & Aid Programs (NASSGAP)** information on state grant programs.
- **U.S. Department of Education, Office of Postsecondary Education (OPE), The Office of Federal Student Aid** publishes Annual Pell Grant Award End of Year Reports⁹² and reports on the Federal student loan portfolio which provides data on student loans and default rates. These reports are published yearly since the mid-1970s.

⁹¹ Palmer, J. (2019). *About the Grapevine Data*. Retrieved from <https://education.illinoisstate.edu/grapevine/about>.

⁹² U.S. Department of Education (n.d.) Federal Pell Grant Program Annual Data Reports. Retrieved from <https://www2.ed.gov/finaid/prof/resources/data/pell-data.html>.

- **National Postsecondary Student Aid Study (NPSAS)** is a congressionally-mandated study conducted by NCES that provides detailed cross-sectional data on student financial aid every 4 years. Indicator 4 includes data from the 1990-2016 NPSAS studies. NPSAS:20 was completed last year, but the data have not yet been released. To adjust for inflation, we present most dollar amounts in constant 2019 dollars.
- **Baccalaureate and Beyond Study (B&B)** is a longitudinal study that follows a cohort of graduating bachelor's degree recipients drawn from the NPSAS sample. A new B&B cohort is started only every 7 years. Indicator 4 includes estimates generated from the 4-year and 10-year follow-ups of the 2008 bachelor's degree recipients surveyed in 2012 and 2018 (B&B:08/12/18). Data are also included from the 1-year follow-up of the 2016 bachelor's graduates conducted in 2017. As with NPSAS data, to adjust for inflation, we present all dollar amounts in 2019 dollars.
- **The Institute for College Access and Success (TICAS) /Project on Student Debt.** The TICAS Project on Student Debt collects voluntary information from institutions and presents state by state estimates in its yearly report, *Student Debt and the Class of 2019, 15th Annual Report*: Oakland: Retrieved from <https://ticas.org/wp-content/uploads/2020/10/classof2019.pdf>.
- **Federal Reserve System Report on the Economic Well-Being of U.S. Households in 2019-May 2020.** Retrieved from: <https://www.federalreserve.gov/publications/2020-economic-well-being-of-us-households-in-2019-student-loans-other-education-debt.htm>.

Key terms used in this chapter are defined as follows:

- **Net Price is Cost of Attendance (COA) Minus All Grant Aid.** The Higher Education Act of 1965 (HEA), as amended, requires the U.S. Department of Education to make publicly available information about the average net price of each postsecondary institution that participates in Title IV federal student aid programs. The HEA defines institutional net price as “the average yearly price actually charged to first-time, full-time undergraduate students receiving student aid at an institution of higher education after deducting aid.” Essentially, net price moves beyond an institution’s “sticker price” and provides students and families with an idea of how much a first-time, full-time undergraduate student who was awarded aid pays to attend a particular institution after grant and scholarship aid, but not loan aid, is subtracted from the published cost of attendance (COA).
- **Net Price of Attendance as a Percent of Average Family Income** uses data from the various NPSAS 1990-2016 surveys. Average family income for a quartile reflects the distribution of the NPSAS sample in the study year for dependent undergraduate students. For the 2016 NPSAS, average family incomes for each quartile in 2019 dollars were as follows: First (lowest), \$17,155; Second, \$54,045, Third, \$102,994, and Fourth (highest), \$228,368.⁹³
- **Dependent Student** status has a particular definition for financial aid eligibility and is defined as a student who is an undergraduate, unmarried, not a veteran, and younger than 24 years of age. For dependent students, parents’ income and assets are used to determine the Expected Family Contribution (EFC) even if the parents have no intention of helping to pay students’ college expenses. In exceptional cases (e.g., parental child abuse, parental communication with the child prohibited by a court), the institution’s financial aid office may change a student’s status from dependent to independent.
- **Student Borrowing** In this report we include the percent borrowing and the average cumulative

93 Mortenson, T. (2018). Trends in Financial Barriers to Higher Education for Dependent Undergraduate Students: 1990 to 2016, *Postsecondary Education Opportunity Newsletter*, 300. Washington, DC: The Pell Institute for the Study of Opportunity in Higher Education. Retrieved from <http://www.pellinstitute.org/peo.shtml>.

amounts borrowed at the time of bachelor's, associate's and certificate completion from NPSAS. Using B&B data from a 4-year and 10-year follow up of bachelor's degree recipients for the 2008 cohort surveyed in 2012 and 2018, we include both undergraduate and graduate borrowing. For the 2016 graduating cohort we include data from the 1-year follow-up conducted in 2017. State averages are from the TICAS Project on Student Debt annual survey.

Equity Indicator 4a(i to v): What are the Trends in Financing of Higher Education in the United States?

Equity Indicators 4a(i to v) present data on funding for higher education. We first give a national overview of the distribution of funding responsibilities for higher education and then look at trend data on state appropriations and need-based aid.

Trend in the Percentage of Higher Education Costs Paid by Students and their Families. Equity Indicator 4a(i) describes trends in the sources of funding for public and private higher education institutions, as reported in the National Income and Product Accounts (NIPA) from 1952 to 2019. The indicator considers changes in the relative contributions of state and local public expenditures, federal expenditures, and personal consumption expenses (students and parents). Since 1975, the percentage of higher education costs covered by state and local governments has declined, while the share covered by students and parents has increased. Students and families now pay the largest portion of college costs (48 percent in 2019). The percent of total costs borne by parents and students has fluctuated, declining from 50 percent in 1952 to 33 percent between 1977 and 1981. After 1981, the percent paid by families rose, and was 48 percent in 2019. State and local sources accounted for 58 percent of higher education expenditures in 1975 but just 42 percent in 2019.

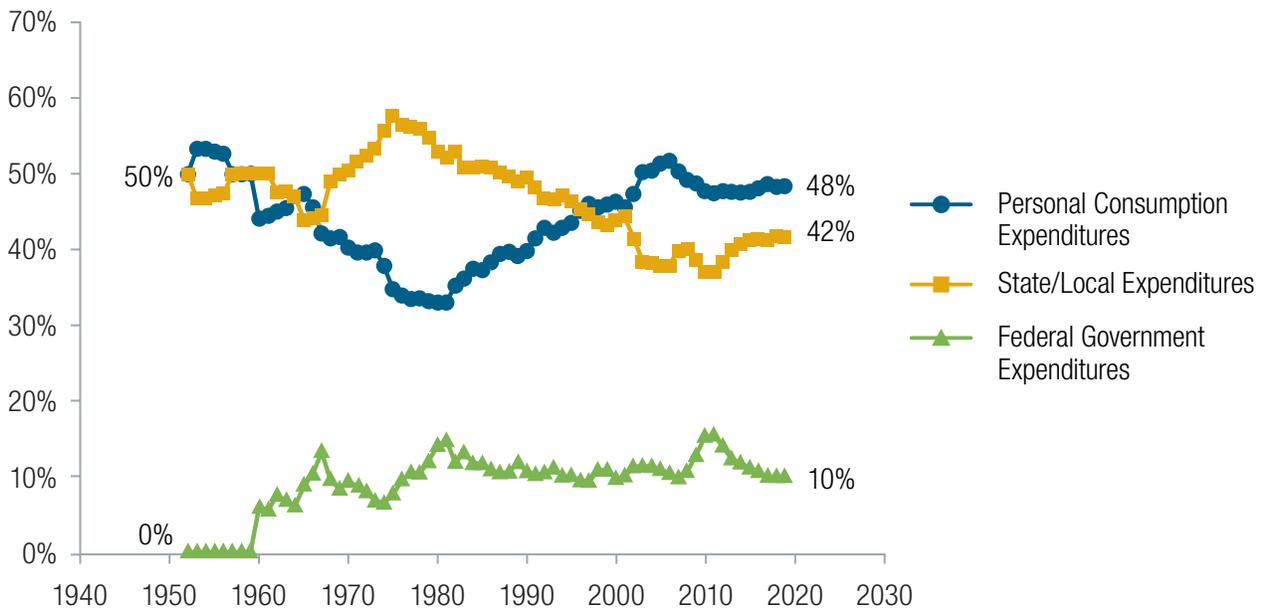
The share of higher education costs provided by the federal government was about the same in 2019 as in 1976 (10 percent). During the Great Recession, the federal government provided additional funding through the American Recovery and Reinvestment Act of 2009. This funding temporarily raised the share of costs covered by the federal government to 15 percent in 2010 and 2011.

Equity Indicator 4a(ii) uses data on state appropriations compiled by the Grapevine Project for FY1961 to FY2020 combined with data on personal income as reported by the Bureau of Economic Analysis.⁹⁴ State appropriations are considered per \$1,000 of personal income and reported in constant dollars. These data document the increase in state support in the 1960s to the late 1970s with a peak of \$10.39 in 1979, and then the subsequent general decline after 1980.⁹⁵ Using this measure of state appropriations per \$1,000 of personal income, FY2020 state funding for higher education was 72 percent of the FY2000 state effort and 52 percent of the FY1980 effort. State appropriations per \$1,000 of personal income fell from \$10.34 in 1980 to \$5.43 in 2020.

⁹⁴ The Grapevine Project at Illinois State University has collected data on state appropriations since 1961. Since 2010, these data have been jointly collected and reported with the State Higher Education Executive Officers (SHEEO). Grapevine (n.d.) About the Grapevine Data. Retrieved from <https://education.illinoisstate.edu/grapevine/about>, Washington, DC: The Pell Institute for the Study of Opportunity in Higher Education. Retrieved from <http://www.pellinstitute.org/peo.shtml>.

⁹⁵ Mortenson, T. (2017). State Fiscal Investment Effort in Higher Education: FY1961 to FY2017, *Postsecondary Education Opportunity*, 292.

Equity Indicator 4a(i): Percentage distribution of higher education funding responsibilities: 1952 to 2019



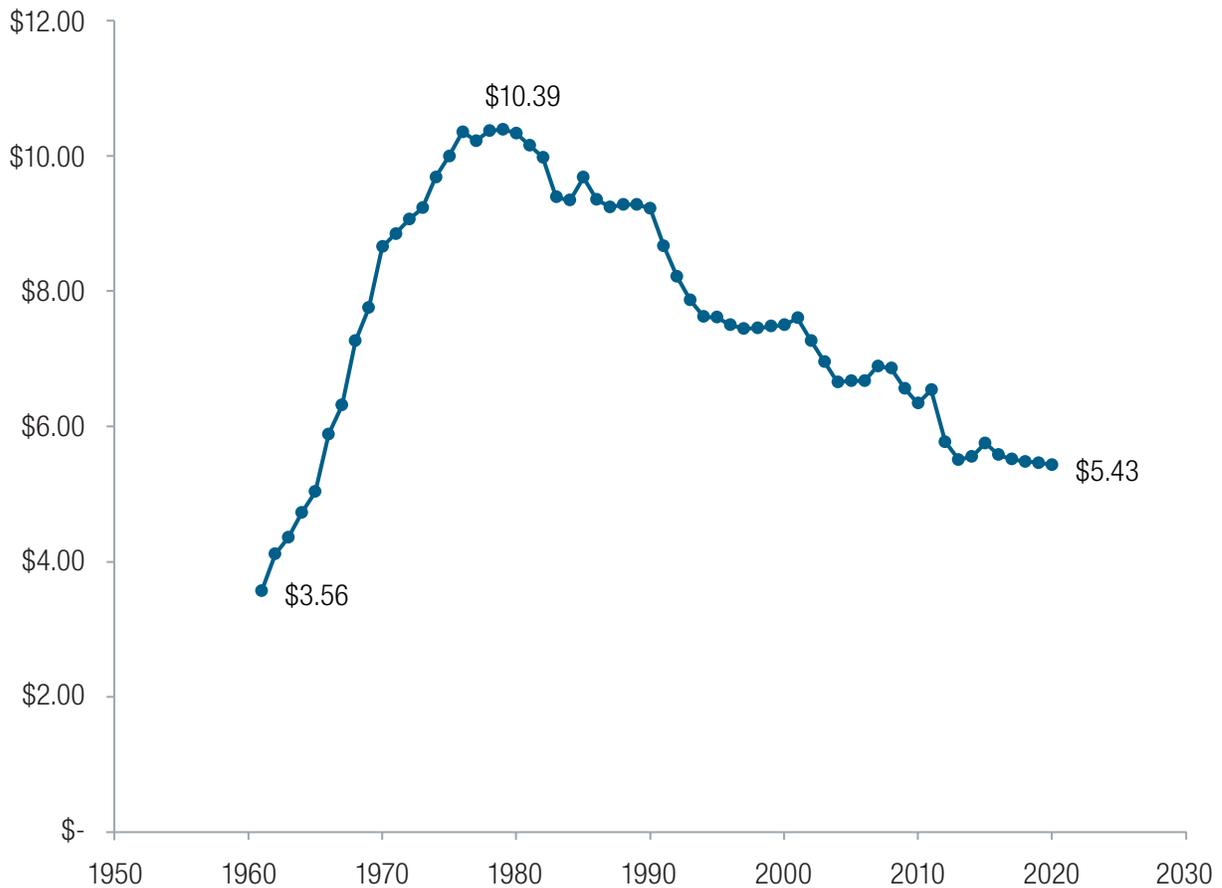
Indicator Status: Decline in Share Paid by State and Local Governments and Increase in Personal Expenditures

The share of higher education expenditures paid by students and families increased from one-third (33 percent) in the late 1970s to almost one-half (48 percent) in 2019.

NOTE: National Income and Product Accounts (NIPA) data are periodically updated.

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis (2020). National Income and Product Accounts (NIPA). Retrieved from <http://www.bea.gov> and tabulated by Nicole Brunt and Tom Mortenson. *Higher Education's Share of Gross Domestic Product and Distribution of Higher Education Funding Responsibilities: 1952 to 2019*.

Equity Indicator 4a(ii): State fiscal support for higher education per \$1,000 of personal income: FY1961 to FY2020



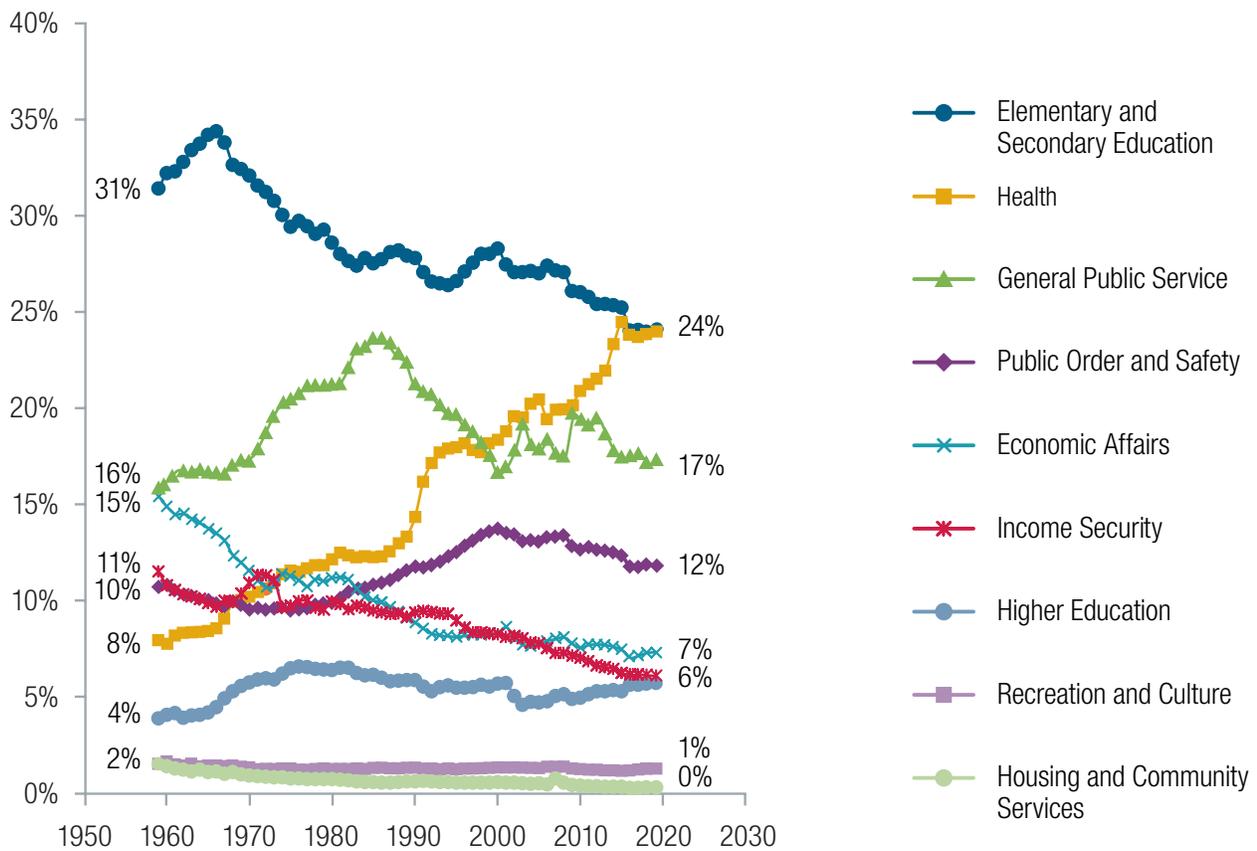
Indicator Status: Decline in State Support

Considered relative to per capita income, state appropriations for higher education have declined since 1980. FY2020 state funding for higher education represented 72 percent of the FY2000 effort and 52 percent of the FY1980 effort.

SOURCE: Mortenson, T. (2017). State Fiscal Investment Effort in Higher Education: FY1961 to FY2016, *Postsecondary Education Opportunity*, 292 (data updated to 2020). Washington, DC: The Pell Institute for Study of Opportunity in Higher Education. Retrieved from <http://www.pellinstitute.org/peo.shtml>; Per capita income data from Bureau of Economic Analysis, <https://bea.gov/regional/index.htm>; State appropriation data compiled by the Grapevine Project, <https://education.illinoisstate.edu/grapevine>. Grapevine is an annual compilation of data on state fiscal support for higher education. This is a joint project of the Center for the Study of Education Policy at Illinois State University and the State Higher Education Executive Officers (SHEEO).

Equity Indicator 4a(iii) shows changes in the relative distribution of state appropriations by function between 1959 and 2019. The share of state appropriations allocated to higher education increased from 4 percent in 1959 to 6 percent in the late 1970s and early 1980s. In 2019, 6 percent of state appropriations were allocated to higher education. Over the same period, the proportion of state appropriations allocated to elementary and secondary education declined, from a peak of 34 percent in 1966 to 24 percent in 2019. In contrast, since 1959, the proportion of state appropriations allocated to health increased from 8 percent in 1959 to 24 percent in 2019.

Equity Indicator 4a(iii): Distribution of state appropriations by function: 1959-2019



Indicator Status: Growth in Health Care's Share of State Appropriations

The share of state appropriations allocated to higher education increased from 4 percent in 1959 to 6 percent in the late 1970s and early 1980s. In 2019, 6 percent of state appropriations were allocated to higher education, while health care expenditures accounted for nearly one-quarter (24 percent).

NOTE: 0% indicates less than 1 percent. BEA has revised estimates from previously reported distributions.

SOURCE: Mortenson, T. (2017). State Fiscal Investment Effort in Higher Education: FY1961 to FY2017, *Postsecondary Education Opportunity*, 292 (data updated to 2019). Washington, DC: The Pell Institute for the Study of Opportunity in Higher Education. Retrieved from <http://www.pellinstitute.org/peo.shtml>; Per capita income data from Bureau of Economic Analysis. Retrieved from <https://bea.gov/regional/index.htm>; Personal Consumption Expenditures: NIPA Table 3.16.

Equity Indicator 4a(iv) and 4a(v): How Much is State Need-Based Aid Relative to Pell Grant Aid?

Award Numbers. In FY2018, 7 million undergraduate students received Federal Pell Grants and 2.3 million undergraduates received state need-based grants (Equity Indicator 4a(iv)).⁹⁶ The number of Federal Pell Grant recipients was 322 percent higher in 2018 than in 1979, while the number of state need-based aid recipients was 93 percent higher.

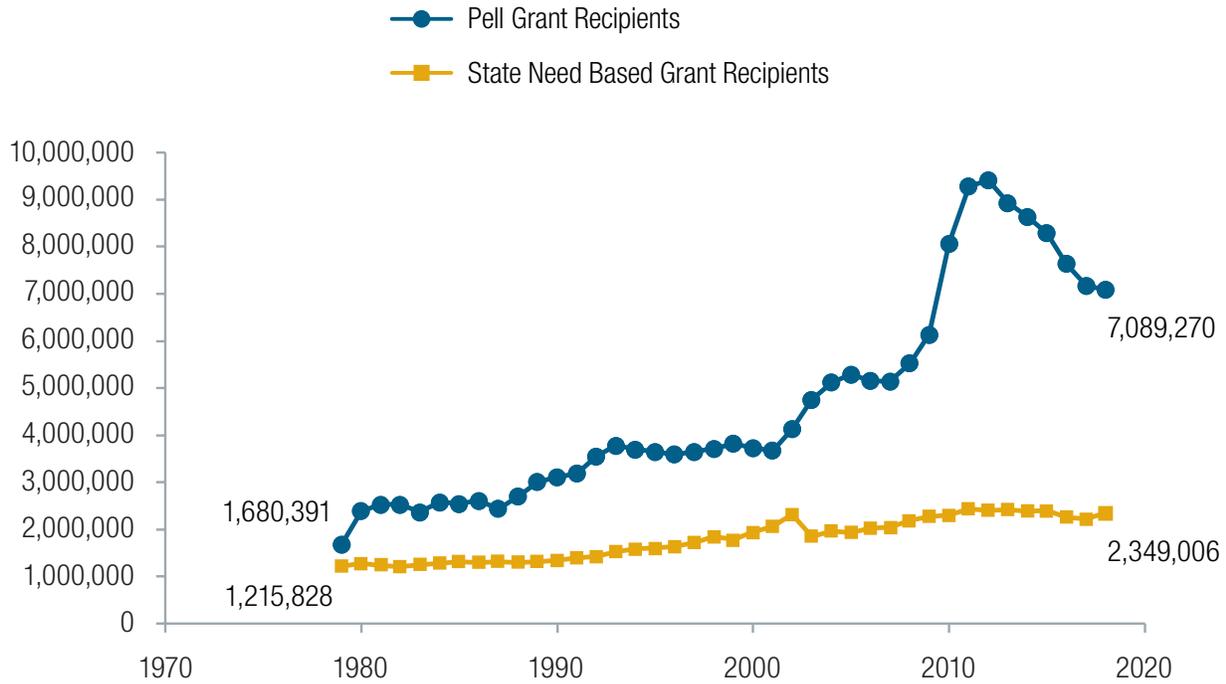
Federal and State Need-Based Aid. In FY2018, \$28.5 billion was awarded in Federal Pell Grants and about \$9 billion was awarded across the nation in state-sponsored need-based grants. Combining federal and state need-based aid, in FY2018 need-based aid totaled \$37.5 billion. To put this amount in perspective, in FY2018 the federal military spending budget was \$731.8 billion and by FY2020 this had increased to \$778.2 in 2020 dollars.⁹⁷

State Differences. Equity Indicator 4a(v) shows the number of state need-based grant recipients per state as a percentage of the number of Pell Grant recipients in the state in the same year. As we do not have student level data, we do not know the extent to which these figures represent the same individuals. In 2018, the number of state need-based grant aid recipients relative to the number of Pell Grant recipients ranged from 0 percent in Georgia, Montana, New Hampshire, and Wyoming to 67 percent in Pennsylvania, 80 percent in Minnesota, and to 90 percent in Vermont.

⁹⁶ As of the time of preparation of this document the Pell End of Year Report for 2019 had not yet been released, so these figures could not be updated.

⁹⁷ Stockholm International Peace Research Institute (SIPRI). Military Expenditures/Defense Budget 1960-2020. Retrieved from <https://www.sipri.org/databases/milex>.

Equity Indicator 4a(iv): Numbers of Pell and state need-based grant aid recipients: 1979-2018



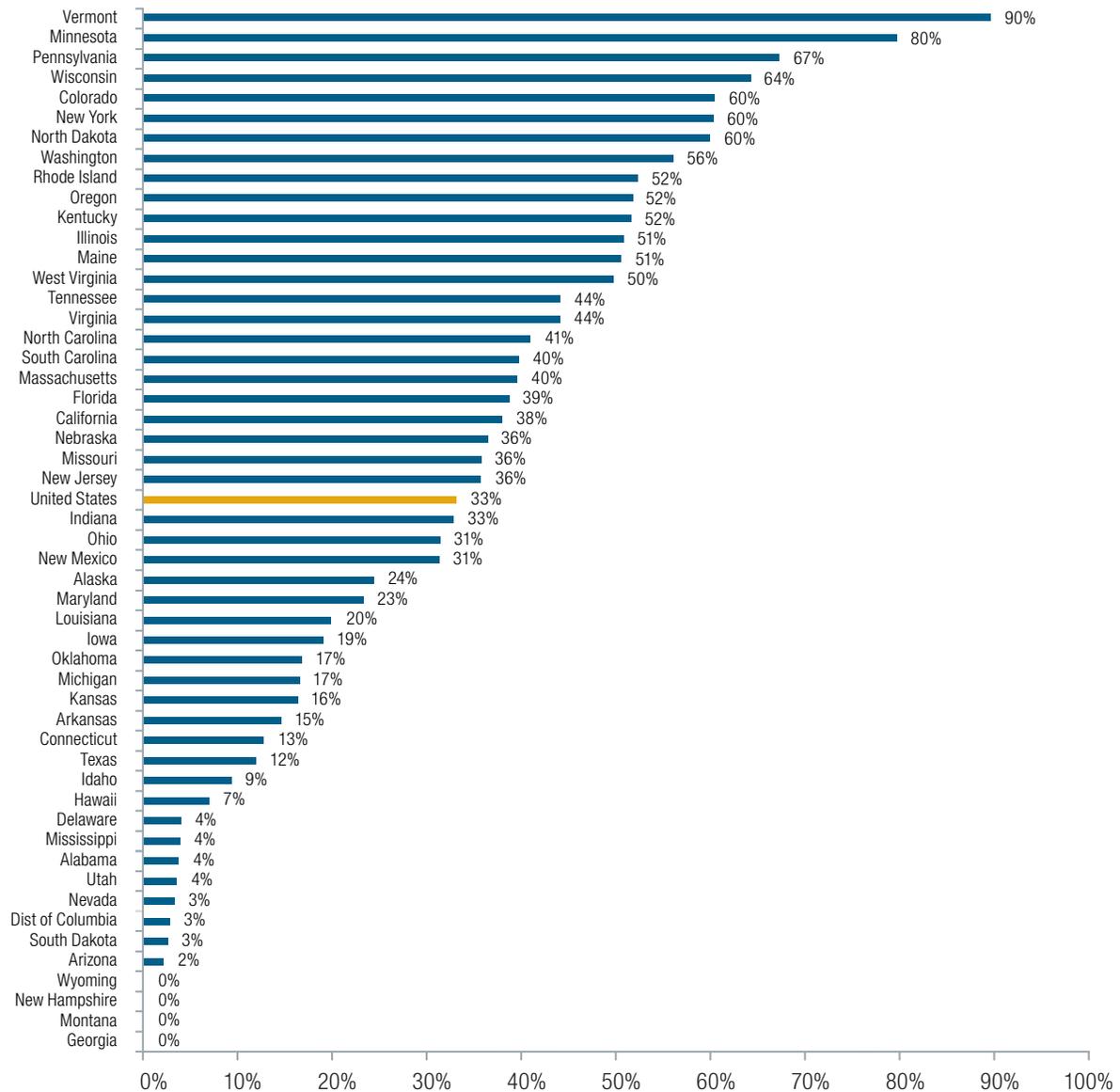
Indicator Status:

In FY2018, 7 million undergraduate students received Federal Pell Grants and 2.3 million undergraduates received state need-based grants. The number of Pell Grant recipients was 322 percent higher in 2018 than in 1979, while the number of state need-based grant aid recipients was 93 percent higher.

NOTE: Annual state student financial aid program data are collected through the National Association of State Student Grant & Aid Programs (NASSGAP), <https://www.nassgapsurvey.com>. Annual data on Federal Pell Grants are compiled and reported by the U.S. Department of Education and are available at <https://www2.ed.gov/finaid/prof/resources/data/pell-data.html>.

SOURCE: Mortenson, T. (2018). State Need-based Grants for Financially Needy Undergraduates: 1979 to 2016, *Postsecondary Education Opportunity*, 296 (Updated to 2018). Washington, DC: The Pell Institute for the Study of Opportunity in Higher Education. Retrieved from <http://www.pellinstitute.org/peo.shtml>.

Equity Indicator 4a(v): State need-based grant recipients as a percentage of Pell Grant recipients by state: 2018



Indicator Status: Large Variation by State

In 2018, the number of state need-based grant aid recipients relative to the number of Pell Grant recipients ranged from 0 percent in Georgia, Montana, New Hampshire, and Wyoming to 67 percent in Pennsylvania, 80 percent in Minnesota, and 90 percent in Vermont.

NOTE: Annual state student financial aid program data is collected through the National Association of State Student Grant & Aid Programs (NASSGAP) <https://www.nassgapsurvey.com>. Annual data on Federal Pell Grants is compiled and reported by the U.S. Department of Education and is available at <https://www2.ed.gov/finaid/prof/resources/data/pell-data.html>.

SOURCE: Mortenson, T. (2020). State Need-based Grants for Financially Needy Undergraduates: 1979 to 2018, *Postsecondary Education Opportunity*, 296. Washington, DC: The Pell Institute for the Study of Opportunity in Higher Education. Retrieved from <http://www.pellinstitute.org/peo.shtml>.

Equity Indicator 4b(i): What Is the Net Price of Attendance by Family Income?

Using NPSAS data from 1990 to 2016,⁹⁸ Indicator 4b(i) tracks the net price of attendance for dependent, full-time undergraduate students by family income quartile. The net price of attendance is the cost of attendance (COA) minus all grant aid.⁹⁹ Net price does not include loans. For ease of comparison, all amounts are in constant 2019 dollars. Indicator 4b(i) shows that, when grant aid and discounts are taken into account, average net price increased for dependent full-time undergraduate students in constant dollars for all family income quartiles.

The rate of increase was greater for dependent full-time undergraduates in the top two income quartiles than the bottom two quartiles. Equity Indicator 4b(i) also shows that the difference in average net price of attendance between dependent full-time students in the highest and lowest family income quartiles increased between 1990 and 2016. In 1990, average net price (in 2019 dollars) ranged from \$12,570 for those in the lowest income quartile to \$20,936 for those in the highest income quartile. In 2016, average net price ranged from \$16,200 for those in the lowest income quartile to \$32,173 for those in the highest income quartile.

The implication of the widening gap in average net price by family income is ambiguous. On the one hand, a widening gap may signify that institutions have allocated available financial aid to students with the greatest financial need. On the other hand, the widening gap may indicate that net price has not risen as rapidly at the colleges most frequently attended by low-income students as the colleges attended by more affluent students. The latter explanation may also suggest that over time, colleges in the United States have become more segregated by family income and that students are increasingly sorted by family income into very different types of colleges.

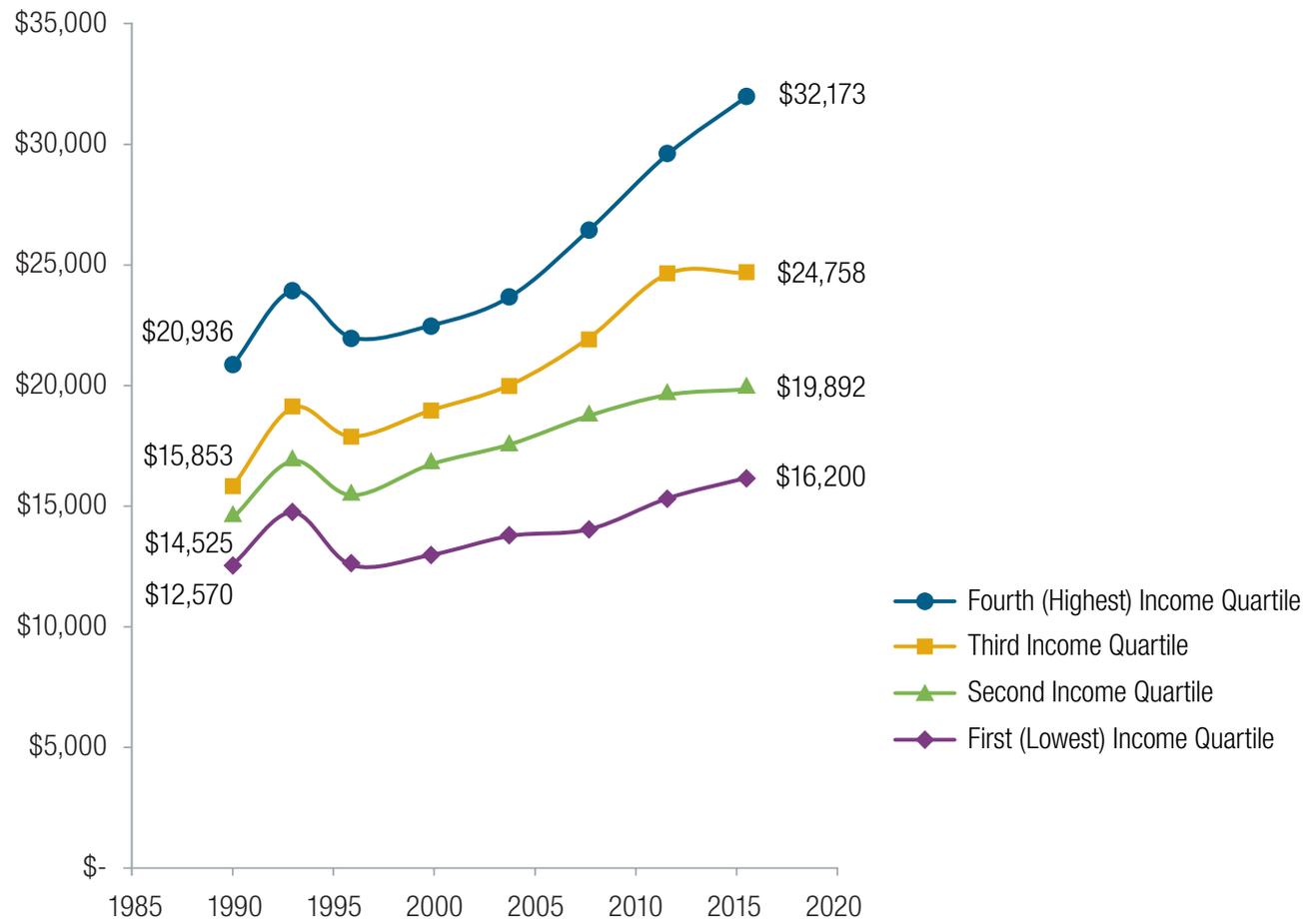
If low-income students are receiving a higher education of equivalent quality as other students in terms of the learning experience and market value upon completion, then this net price differential would signal an increase in equity. Insofar as differences in net price reflect differences in educational quality and market rewards, then the increasing difference in average net price between students in the upper- and lower-family income quartiles reflects the growing inequity and increased stratification of the nation's higher education system.¹⁰⁰

98 NPSAS data are collected approximately every 4 years. Indicator 4b(i) used 1990, 1993, 1996, 2000, 2004, 2008, 2012, and 2016 waves of this cross-sectional survey.

99 The Higher Education Act of 1965 (HEA), as amended, requires the U.S. Department of Education to make publicly available information about the average net price of each postsecondary institution that participates in Title IV federal student aid programs.

100 This latter interpretation is borne out by examination of IPEDS data on enrollment patterns and average instructional spending differences by Pell receipt and by race/ethnicity discussed in Equity Indicators 3d(i to iii)). Using IPEDS data, Hillman (2020) demonstrates that there are substantial differences in educational and related (E&R) spending per FTE enrollment. Disproportionate proportions of wealth and instructional spending per FTE enrollment are in *Highly Selective* institutions that enroll relatively small percentages of total enrollment and low percentages of Pell Grant recipients and students of color. The question is raised as to what would happen if the tables were turned: what if colleges serving the nation's lowest-income students and students of color had the most (or at least equal) resources?

Equity Indicator 4b(i): Average net price for dependent full-time undergraduate students by family income quartile: 1990 to 2016 (in constant 2019 dollars)



Indicator Status: Increased Differentiation in Net Price by Family Income Quartile

Average net price was 99 percent lower for students in the lowest family income quartile than for students in the highest family income quartile in 2016. In 1990, average net price of attendance was 67 percent lower for those in the lowest than for those in the highest family income quartile.

NOTE: Net price of attendance is defined as cost of attendance (COA) minus all grant aid and discounts but not loans.

SOURCE: U.S. Department of Education, National Postsecondary Student Aid Study (NPSAS), 1990, 1993, 1996, 2000, 2004, 2008, 2012 and 2016; Mortenson, T. (2018). Trends in Financial Barriers to Higher Education for Dependent Undergraduate Students 1990 to 2016, *Postsecondary Education Opportunity*, 300, and Mortenson, T. (2018). Financial Barriers to Higher Education for Dependent Undergraduate Students: 2015-16, *Postsecondary Education Opportunity*, 299. Washington, DC: The Pell Institute for the Study of Opportunity in Higher Education. Retrieved from <http://www.pellinstitute.org/peo.shtml>.

Equity Indicator 4b(ii): What Percentage of Family Income Is Needed to Pay the Average Net Price of Attendance?

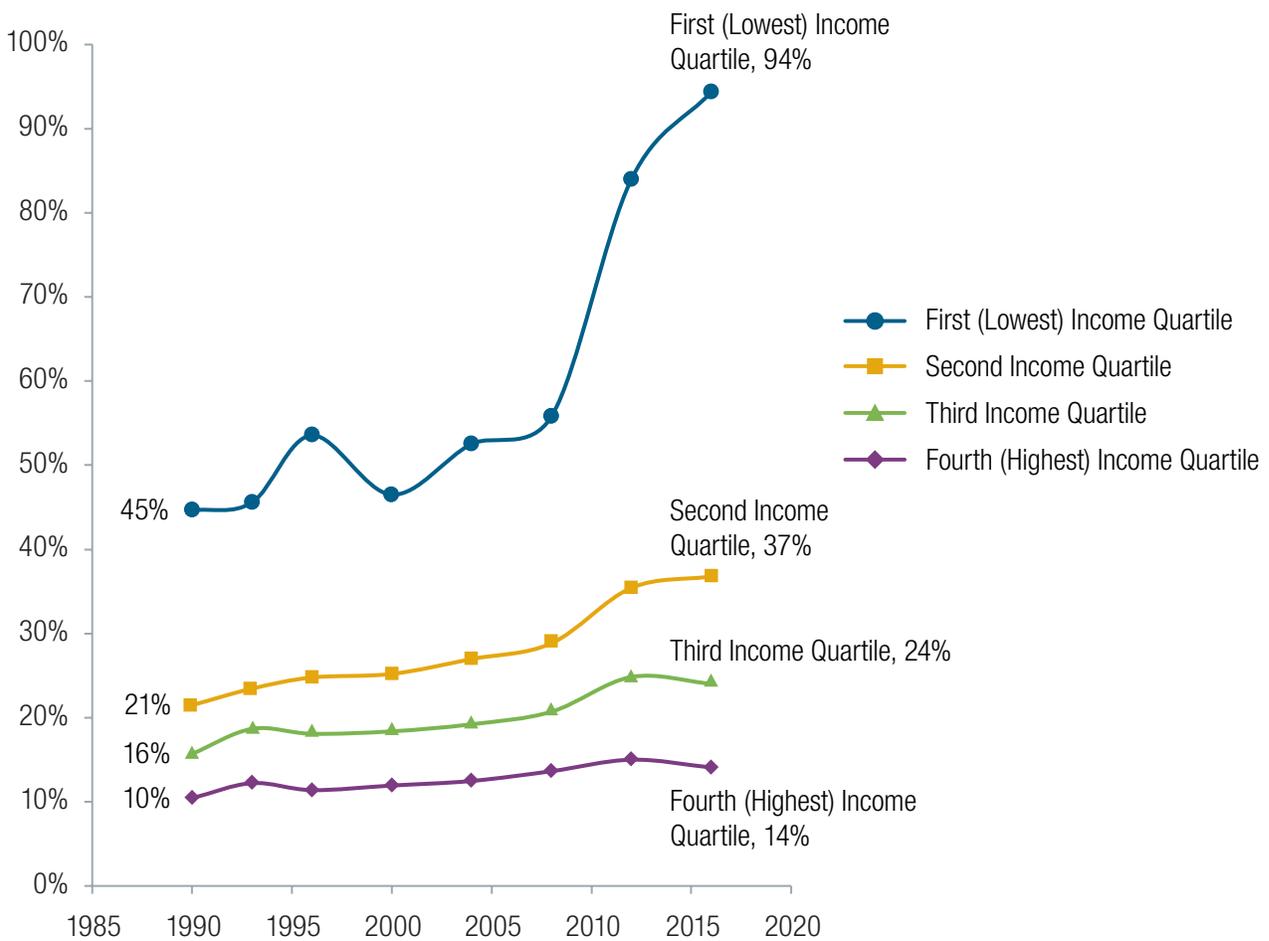
Indicator 4b(ii) tracks average net price of attendance as a percentage of average family income by NPSAS family income quartile for dependent full-time undergraduate students.¹⁰¹ The net price is the price that the student paid to attend their individual institution.

Indicator 4b(ii) shows that net price for dependent full-time undergraduates as a percentage of parents' family income has increased substantially, especially for dependent full-time undergraduate students in the lowest income quartile. In 2016, average net price as a percentage of average family income was 94 percent for students in the lowest family income quartile, compared with 37 percent for students in the second lowest family income quartile, 24 percent for students in the third highest income quartile, and 14 percent for students in the highest income quartile.

Between 1990 and 2008, average net price as a percentage of family income increased for dependent full-time undergraduate students in all four family income quartiles. For students in the lowest family income quartile, the percentage increased from 45 percent in 1990, to 56 percent in 2008. Between 2008 and 2012, in the wake of the Great Recession, the increase in average net price as a percentage of family income was especially high for students in the lowest income quartile. In addition, between 2012 and 2016 (the so-called end of the Great Recession), net price relative to family income stayed virtually unchanged for dependent full-time undergraduates in the highest income quartile, from 15 percent to 14 percent, and declined from 25 percent to 24 percent for those in the third income quartile. For those in the second lowest income quartile, net price as a percent of family income increased from 35 percent in 2012 to 37 percent in 2016. For those in the lowest income quartile, net price as a percent of family income increased from 84 percent in 2012 to 94 percent of average family income in 2016.

¹⁰¹ Net price is different from “out-of-pocket price,” as the latter accounts for both grants and loans. See Horn, L. & Paslov, J. (2014). *Out-of-pocket Net Price for College*. Washington, DC: U.S. Department of Education, National Center for Education Statistics, NCES 2014-9 02.

Equity Indicator 4b(ii): Average net price as a percentage of average family income by income quartile for dependent full-time undergraduate students: 1990 to 2016



Indicator Status: High Inequality: Widening Differences in College Cost Burden Relative to Family Income

In 2016, average net price represented 94 percent of average family income for dependent students in the lowest income quartile, compared with 14 percent of average family income for students in the highest income quartile. In 1990, average net price was 45 percent of family income for dependent students in the lowest quartile and 10 percent for the highest quartile.

NOTE: Net price is tabulated after taking into account all grants and scholarships, but does not take into account loans. Family income quartiles are based on the distribution of family income in each NPSAS survey. For the 2016 NPSAS, average family incomes for each quartile in 2019 dollars were as follows: First (lowest), \$17,155; Second, \$54,045, Third, \$102,994, and Fourth (highest), \$228,368.

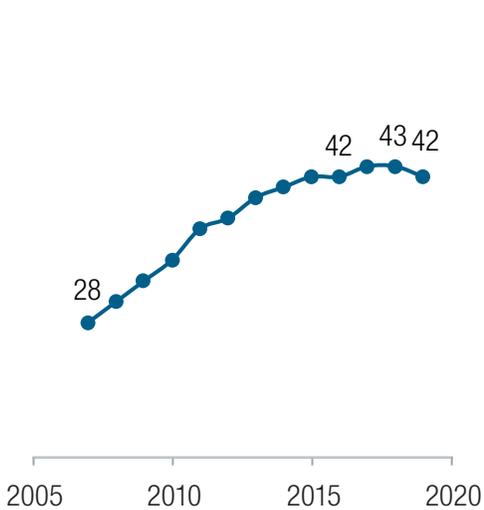
SOURCE: U.S. Department of Education, National Postsecondary Student Aid Study (NPSAS), 1990, 1993, 1996, 2000, 2004, 2008, 2012 and 2016; Mortenson, T. (2018). Trends in Financial Barriers to Higher Education for Dependent Undergraduate Students 1990 to 2016, *Postsecondary Education Opportunity*, 300, and Mortenson, T. (2018). Financial Barriers to Higher Education for Dependent Undergraduate Students 2015-16, *Postsecondary Education Opportunity*, 299. Washington, DC: The Pell Institute for the Study of Opportunity in Higher Education. Retrieved from <http://www.pellinstitute.org/peo.shtml>.

Equity Indicator 4c(i a&b): Student Borrowing and Debt: How Much Is Total Student Debt?

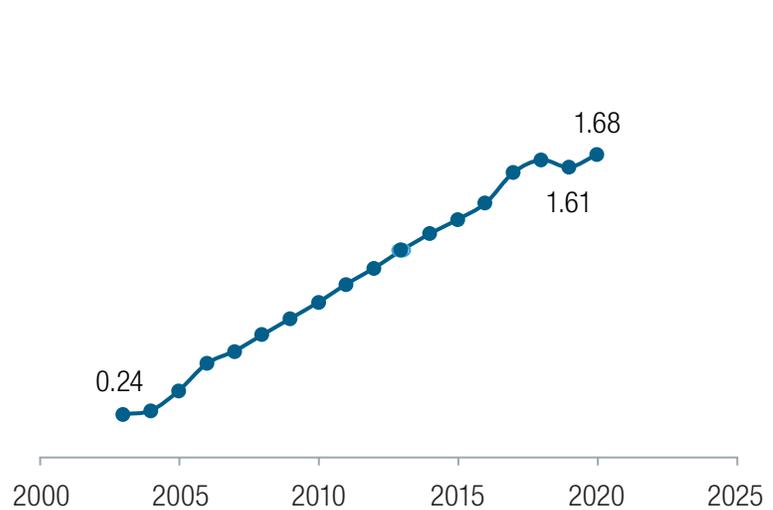
Total Student Debt in the United States. Student debt currently represents the second highest consumer debt category, higher than both auto and credit card debt. Equity Indicator 4c(i a&b) shows the numbers of persons with student debt in millions and the cumulative amount of student loan balances in trillions. In 2020, some 42 million persons had student debt, and the cumulative amount of student debt in the United States was almost 7 times what it was around the start of the 21st century (rising from less than one-quarter, \$0.24, trillion in 2003 to about \$1.7 trillion in 2020). The ripples of this crisis can be devastating, especially for low-income, first-generation students and students of color. Over the last 4 decades, in the face of the rising cost of higher education and a decline in federal, state, and institutional support, less-resourced students and their families have increasingly relied upon student loans as the only means for attaining a college degree. Student debt has had far-reaching consequences that flow throughout student lives, creating an ever-more-stratified road to professional and financial opportunities, even among those who successfully complete their bachelor's degrees.

Equity Indicator 4c(i a&b): Student Borrowing and Debt: How Much Is Total Student Debt?

a. Number with Student Debt in Millions



b. Cumulative Amount of Student Loan Balance in Trillions



Indicator Status: Growing Generational Inequality

Student debt balance in 2020 was 7 times what it was in 2003. With 42 million owing a total of \$1.7 trillion, student debt now represents the second largest category of consumer debt in the United States.

SOURCE: Education Data, as cited on the Education data.org website. Retrieved from <https://educationdata.org/student-loan-debt-statistics>.

Indicators 4c(ii a&b) through 4c(iv a&b): How Frequently and How Much do Students Borrow to Complete Their Undergraduate Degrees and Certificates by Type of Institution?

Using NPSAS data, Indicators 4c(ii a&b) through 4c(iv a&b) show increases in the percentages of bachelor's, associate's, and certificate completers who ever received student loans, and in the cumulative amount borrowed. The charts present data by type of degree or certificate and by institutional control of the graduating institution.¹⁰² The loans include federal and non-federal loans to students for undergraduate education.

Undergraduate Borrowing for Bachelor's Degrees. Indicator 4c(ii a&b) shows that the percentage of bachelor's degree completers who had ever borrowed was 69 percent in 2016, compared with 51 percent in 1990. Borrowing rates were highest among students attending private for-profit institutions (77 percent in 2000 and 87 percent in 2016).¹⁰³ The average cumulative amount borrowed by bachelor's degree completers who borrowed increased by 22 percent between 2000 and 2016 in constant 2019 dollars (from \$26,621 in 2000 to \$32,362 in 2016). In 2019 dollars, the average cumulative amount borrowed by bachelor's degree completers who borrowed ranged from \$29,135 at public institutions, to \$34,510 at private non-profit institutions, to \$44,711 at private for-profit institutions.

Borrowing for Associate's Degrees. Indicator 4c(iii a&b) shows borrowing rates and average amount borrowed among those who borrowed for associate's degree completers from 2000 to 2016. Overall, 48 percent of associate's degree completers borrowed in 2016, compared with 39 percent in 2000. In 2016, borrowing rates among associate's degree completers was about twice as high for those who attended private for-profit (88 percent) and private non-profit (84 percent) institutions than for those who attended public institutions (41 percent). The average amount borrowed among those who borrowed ranged from \$16,919 for those completing associate's degrees at public institutions to \$28,585 for those completing at private for-profit institutions. Few private non-profit institutions award associate's degrees, but among those completing their associate's degrees at private non-profit institutions, there have been notable increases in the percent borrowing (from 46 percent in 2000 to 84 percent in 2016). While private for-profit institutions do not show the large increases observed for private non-profits over the period, borrowing rates and average amount borrowed continued to be highest among private for-profit institutions.

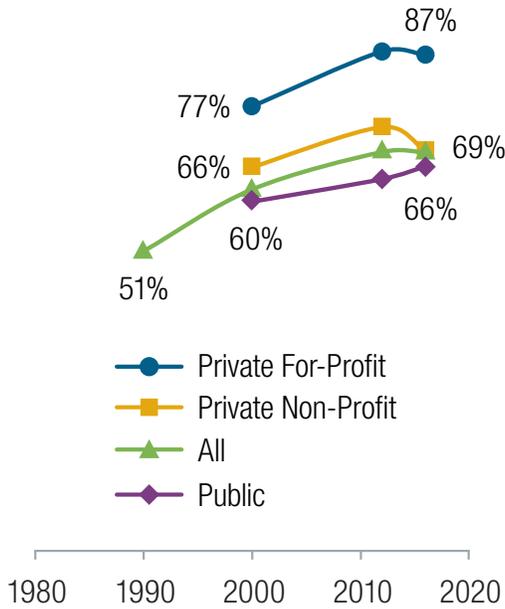
Borrowing Among Certificate Completers. Indicator 4c(iv a&b) shows borrowing rates for certificate completers. Overall borrowing rates for certificate completers increased from 44 percent to 68 percent over the period of 2000 to 2016. Among public institutions the percent borrowing increased from 27 percent to 45 percent, and among the private nonprofit sector, increased from 53 percent to 80 percent. The average amount borrowed by those who borrowed increased by 52 percent among public certificate completers and 42 percent among completers from private for-profits. For example, among those completing at public institutions cumulative loan amounts went from \$11,636 in 2000 to \$17,744 in 2016 using 2019 constant dollars.

102 This statistic represents the cumulative borrowing at any institution for those sampled students who were bachelor's, associate or certificate degree completers in the NPSAS study year. The institution control of reference is the institution from which the degree or certificate was conferred.

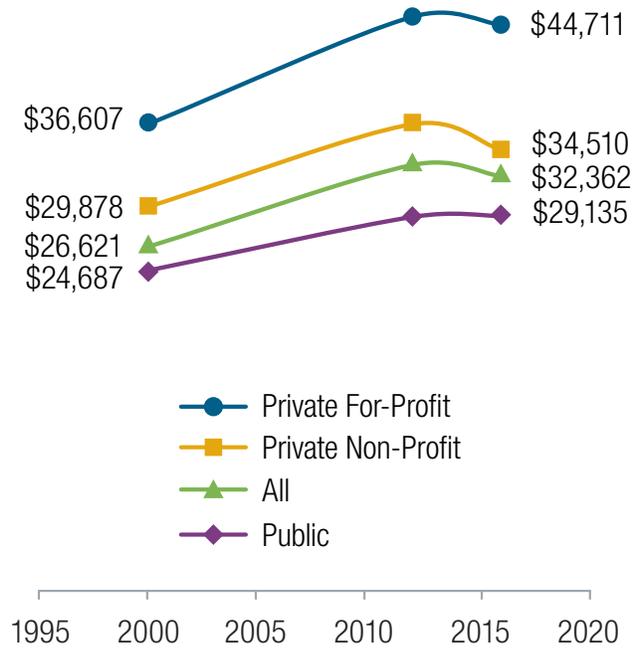
103 Data for 1990 are for the percentage of undergraduate students, age 18 to 24, in their 4th (senior) year or above who ever received loans. Data for 2000, 2012 and 2016 are for bachelor's degree completers in NPSAS year.

Equity Indicator 4c(ii a&b): Percentage of bachelor's degree completers who ever received loans (federal and non-federal loans to students) and amount borrowed among those who borrowed by institutional control: Selected NPSAS years, 1990 to 2016 (in constant 2019 dollars)

a. Percent Borrowing



b. Amount Borrowed Among Those Who Borrowed



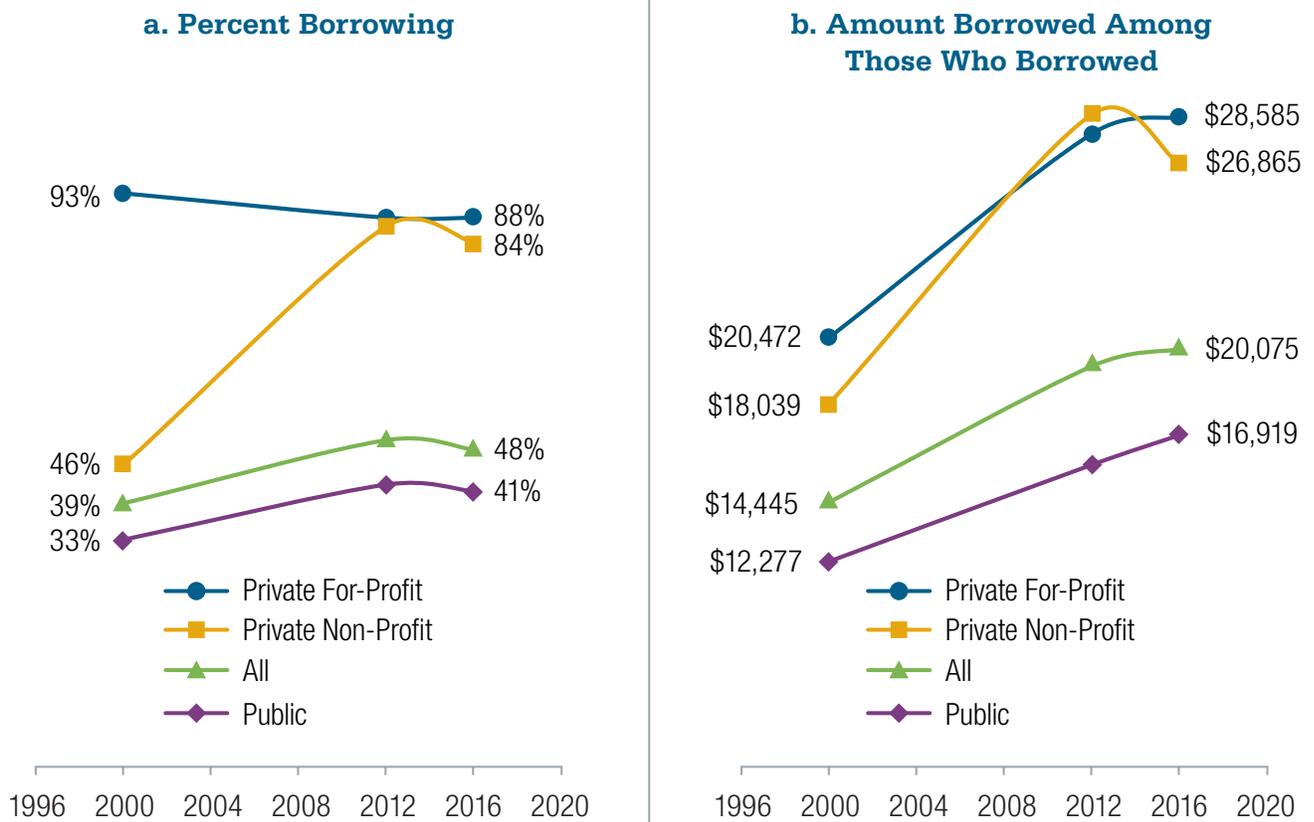
Indicator Status: Substantial Increases in Percentage of Students Who Borrowed and Average Loan Amounts Among Those Who Borrowed

Use of loans among bachelor's degree completers increased from 51 percent in 1990 to 69 percent in 2016. Borrowing rates are highest for bachelor's degree completers at private for-profit institutions (87 percent in 2016). Among those who borrowed, the average amount borrowed by graduation for bachelor's degree completers increased by 22 percent between 2000 and 2016 in constant 2019 dollars.

NOTE: Data are from NPSAS: 1990, 2000, 2012 and 2016.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Postsecondary Student Aid Study (NPSAS:1990, NPSAS:2000, NPSAS:12, and NPSAS:16). *Digest of Education Statistics 2020*, Table [331.95]. Except 1990. Retrieved from https://nces.ed.gov/programs/digest/d20/tables/dt20_331.95.asp?current=yes.

Equity Indicator 4c(iii a&b): Percentage of associate's degree completers who ever received loans (federal and non-federal loans to students) and amount borrowed among those who borrowed by institutional control: Selected NPSAS years: 2000, 2012, 2016 (in constant 2019 dollars)



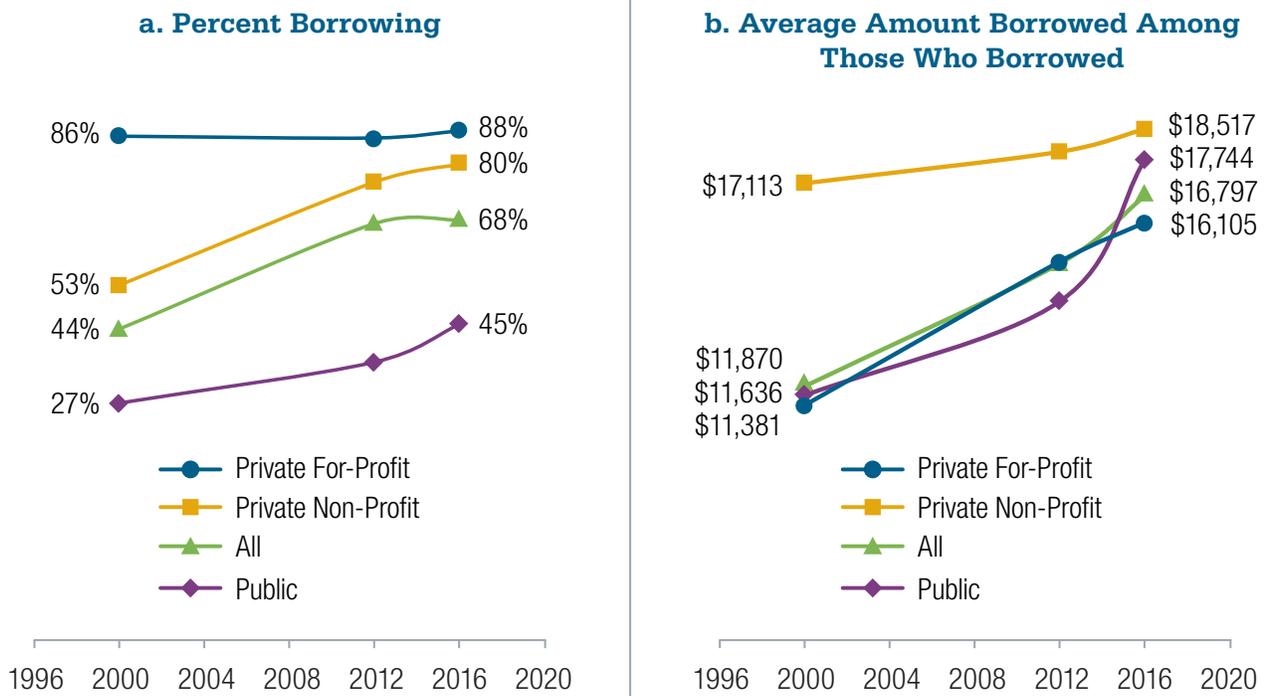
Indicator Status: Large Rates of Borrowing and Increases in Average Amount Borrowed at Private For-profit and Private Nonprofit than at Public Institutions

In 2016, more than 80 percent of associate's degree completers at private nonprofit and private for-profit institutions borrowed, compared with 41 percent of associate's degree completers at public institutions. The average amount borrowed among associate's degree completers who borrowed increased by 39 percent between 2000 and 2016 in constant 2019 dollars, rising from \$14,445 in 2000 to \$20,075 in 2016.

NOTE: Data are from NPSAS: 2000, 2012 and 2016.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Postsecondary Student Aid Study (NPSAS: 2000, NPSAS:12, and NPSAS:16). *Digest of Education Statistics 2020*, Table [331.95]. Retrieved from https://nces.ed.gov/programs/digest/d20/tables/dt20_331.95.asp?current=yes.

Equity Indicator 4c(iv a&b): Percentage of certificate completers who ever received loans (federal and non-federal loans to students) and amount borrowed among those who borrowed by institutional control: Selected NPSAS years: 2000 to 2016 (in constant 2019 dollars)



Indicator Status:

Although borrowing rates remain highest for those completing certificates at private for-profit institutions (88 percent), increases in borrowing rates were greater in the other sectors (public and private nonprofit) between 2000 and 2016.

NOTE: Data are from NPSAS: 2000, 2012 and 2016.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Postsecondary Student Aid Study (NPSAS: 2000, NPSAS:12, and NPSAS:16). *Digest of Education Statistics 2020*, Table [331.95]. Retrieved from https://nces.ed.gov/programs/digest/d20/tables/dt20_331.95.asp?current=yes.

Equity Indicators 4d(i a&b and ii a&b): How Frequently and How Much Do Undergraduate Students Borrow for Bachelor's, or Associate's Degree Attainment by Race/Ethnicity?

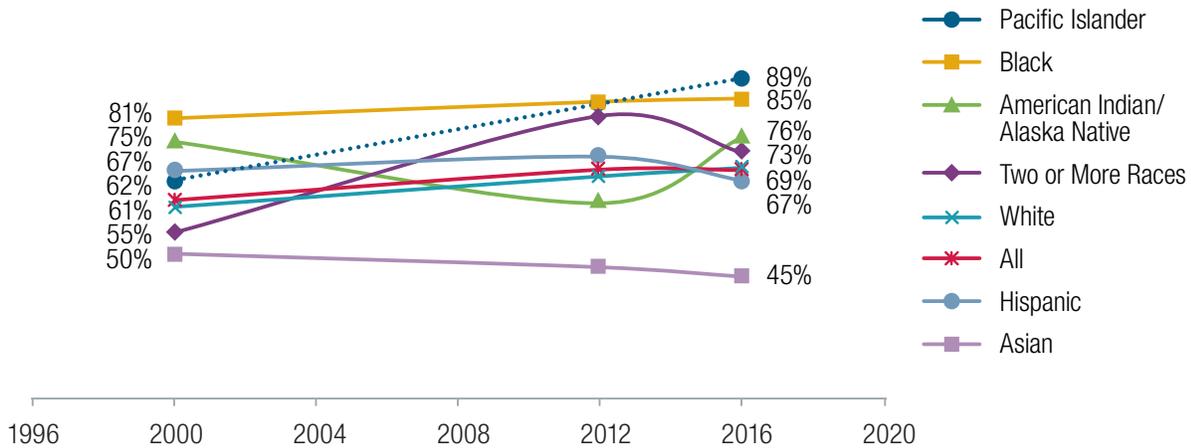
Indicators 4d(i a&b and 4dii a&b) show the percent of undergraduate bachelor's and associate's degree completers who borrowed as well as the average amount borrowed by those who borrowed by race/ethnicity.¹⁰⁴

Undergraduate Borrowing Among Bachelor's Degree Completers by Race/Ethnicity. Borrowing rates increased for Black bachelor's degree completers (from 81 percent in 2000 to 85 percent in 2016) and for Pacific Islander bachelor's degree completers (from 67 percent in 2000 to 89 percent in 2016). In contrast, borrowing rates for Asian bachelor's degree completers decreased from 50 percent in 2000 to 45 percent in 2016. The average amount borrowed for 2016 completers among those who borrowed ranged from \$28,537 for Asian completers to \$38,127 for Black bachelor's completers (in 2019 constant dollars).

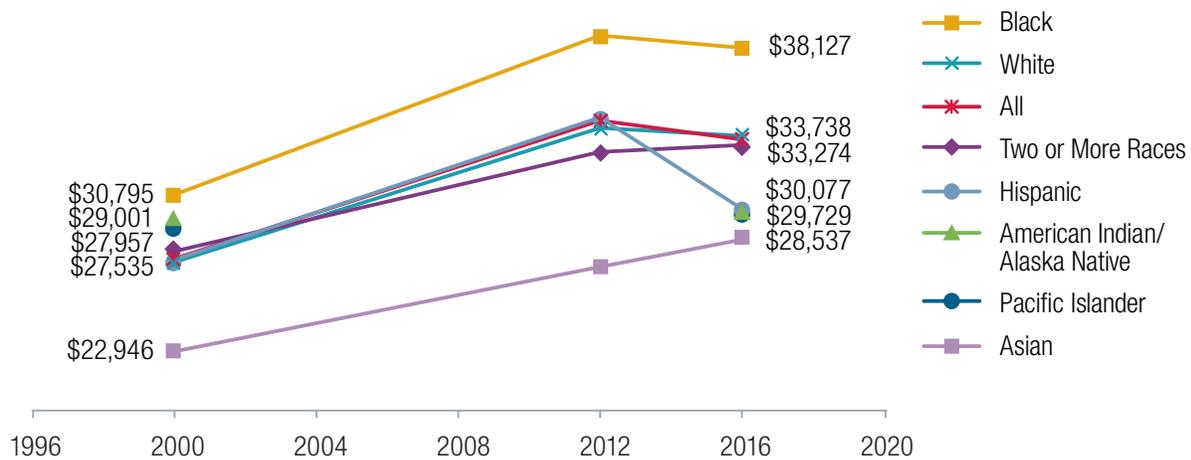
¹⁰⁴ NPSAS sample sizes were too small to disaggregate certificate completion student loan data by race/ethnicity.

Equity Indicator 4d(i a&b): Percentage of bachelor's degree completers who ever received loans (federal and non-federal loans to students) and amount borrowed among those who borrowed by race/ethnicity: NPSAS selected years, 2000 to 2016 (in constant 2019 dollars)

a. Percent Borrowing



b. Average Amount Borrowed Among Those Who Borrowed



Indicator Status: Highest Rates of Borrowing Are Among Pacific Islanders and Blacks

In 2016, 89 percent of Pacific Islander and 85 percent of Black bachelor's degree completers borrowed, compared with 69 percent of White, 67 percent of Hispanic, and 45 percent of Asian bachelor's degree completers.

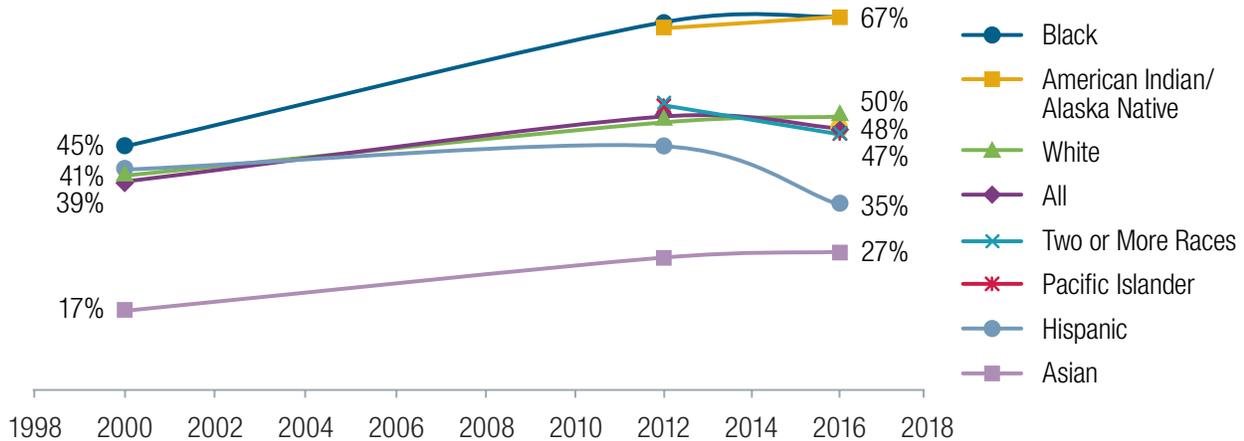
NOTE: Data are from NPSAS: 2000, 2012 and 2016.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Postsecondary Student Aid Study (NPSAS: 2000, NPSAS:12, and NPSAS:16). *Digest of Education Statistics 2020*, Table [331.95]. Retrieved from https://nces.ed.gov/programs/digest/d20/tables/dt20_331.95.asp?current=yes.

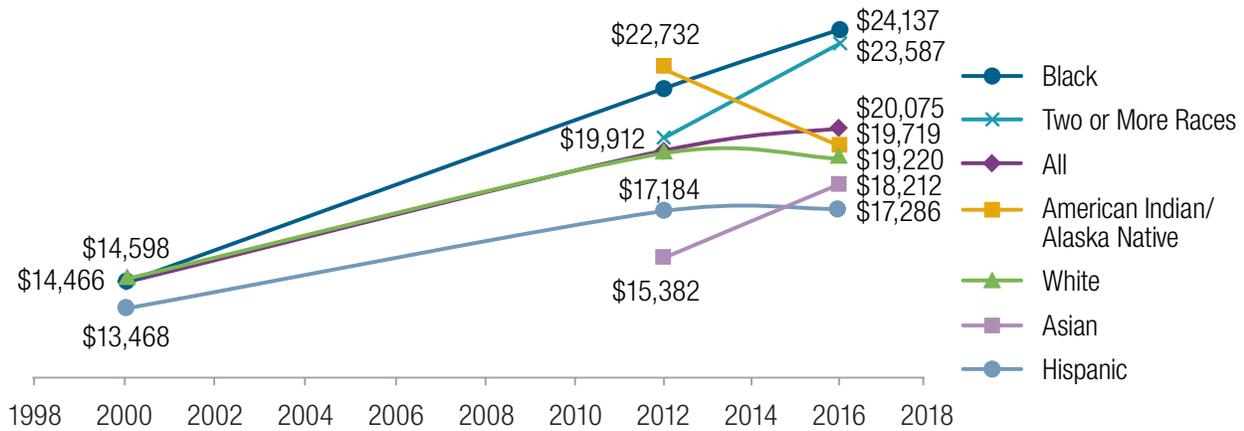
Borrowing Among Associate’s Degree Completers By Race/Ethnicity. As Indicator 4d(ii a&b) shows, in 2016 borrowing rates were higher among Black and American Indian/Alaska Native (67 percent) associate’s degree completers, than among White (50 percent), Hispanic (35 percent), and Asian associate’s degree completers (27 percent). The percentage of Black associate’s degree completers borrowing increased from less than half (45 percent) in 2000 to two-thirds (67 percent) in 2016. The average amount borrowed in 2019 dollars ranged from \$17,286 among Hispanic associate’s degree completers to \$24,137 among Black completers.

Equity Indicator 4d(ii a&b): Percentage of associate's degree completers who ever received loans (federal and non-federal loans to students) and amount borrowed among those who borrowed by race/ethnicity: NPSAS selected years, 2000 to 2016 (in constant 2019 dollars)

a. Percent Who Borrowed



b. Average Amount Borrowed Among Those Who Borrowed



Indicator Status: Blacks and American Indian/Alaska Natives Have the Highest Rates of Borrowing for Associate's Degrees

In 2016, 67 percent of Black and American Indian/Alaska Native associate's degree completers had ever borrowed, compared with 50 percent of White, 47 percent of Pacific Islander, 35 percent of Hispanic, and 27 percent of Asian associate's degree completers.

NOTE: Data are from NPSAS: 2000, 2012 and 2016.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Postsecondary Student Aid Study (NPSAS: 2000, NPSAS:12, and NPSAS:16). *Digest of Education Statistics 2020*, Table [331.95]. Retrieved from https://nces.ed.gov/programs/digest/d20/tables/dt20_331.95.asp?current=yes.

Equity Indicator 4e: What do the Bachelor's Degree Followup Studies Tell Us About Student Debt?

Indicators 4e(i) to 4e(vii) include data from the NCES Baccalaureate and Beyond (B&B) studies. We include data from the 1-year follow-up of the most recent cohort, the 2015-16 bachelor's completers who were surveyed in 2017 in the 1-year follow-up; and data from the 4-year and 10-year follow-ups for the 2008 bachelor's degree completers who were surveyed in 2012 and 2018, respectively.¹⁰⁵

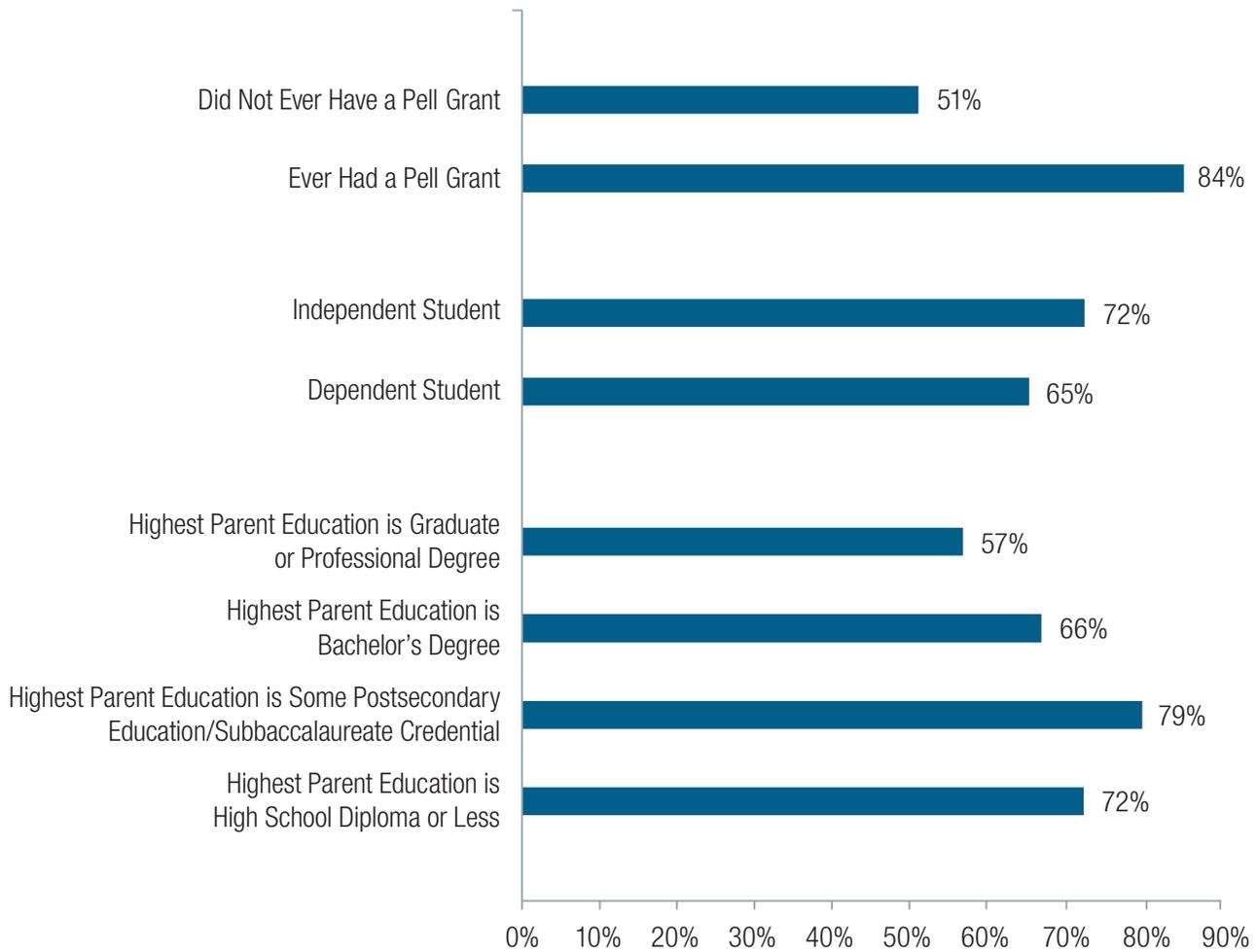
Pell Grant Receipt. It is a myth that those eligible for Pell Grants do not have to borrow or borrow less because they receive grants and discounts, and also attend on average lower cost colleges, than their more income-resourced, non-Pell eligible peers. Both Pell Grant and non-Pell Grant recipients increasingly must borrow to complete degrees; however, Pell Grant recipients are much more likely to borrow and have to borrow more on average. B&B data from the 1-year follow-up of the 2016 graduates in Equity Indicator 4e(i) documents that Pell Grant recipients were more likely to have to borrow to finance their bachelor's degree than non-Pell Grant recipients. Moreover, the average amounts borrowed, among those who borrowed, were also significantly higher. The borrowing rate for those who ever received Pell Grants was 84 percent, compared with 51 percent for non-Pell recipients (Equity Indicator 4e(i)). In short, Pell recipients were 64 percent more likely to have to borrow than non-Pell recipients. In 2019 dollars, the average Pell Grant recipient when surveyed a year after graduation who borrowed had borrowed \$33,688 after bachelor's completion, compared with \$28,786 for non-Pell recipients (Equity Indicator 4e(ii)).

Dependency Status. As indicated in Indicator 4e(i), independent students were more likely to borrow to finance their bachelor's degree than dependent students (72 percent vs. 65 percent). Independent students on average also had to borrow more. Among those who borrowed in 2019 constant dollars, on average independent students borrowed \$35,670, compared with \$28,786 for dependent students (Equity Indicator 4e(ii)).

Parent Education. Students who had at least one parent whose highest degree was a graduate or professional degree were the least likely to have to incur debt to obtain an bachelor's degree, (57 percent), followed by those whose parents had a bachelor's degree as the highest degree (66 percent). First-generation students, those for whom neither parent completed a bachelor's degree, had substantially higher rates of borrowing (79 percent among students whose parents with some college education, and 72 percent for those whose parents had never enrolled in college). Among those who borrowed, the average amount borrowed ranged from \$34,419 among those whose parents had a high school diploma or less as their highest educational attainment to \$33,038 among those who had a parent with a graduate or professional degree.

¹⁰⁵ Velez, E.D., Lew, T., Thomsen, E., Johnson, K., Wine, J. & Cooney, J. (2019). *Baccalaureate and Beyond B&B:16/17: A First Look at the Employment and Educational Experiences of College Graduates, 1 Year Later*, National Center for Education Statistics, NCES 2019-241 <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2019241>.

Equity Indicator 4e(i): Percent of bachelor's degree recipients who borrowed to finance their undergraduate education by Pell Grant receipt status, dependency status, and highest parent education level: 2016 graduation cohort interviewed 1 year after graduation: Baccalaureate and Beyond B&B:16/17



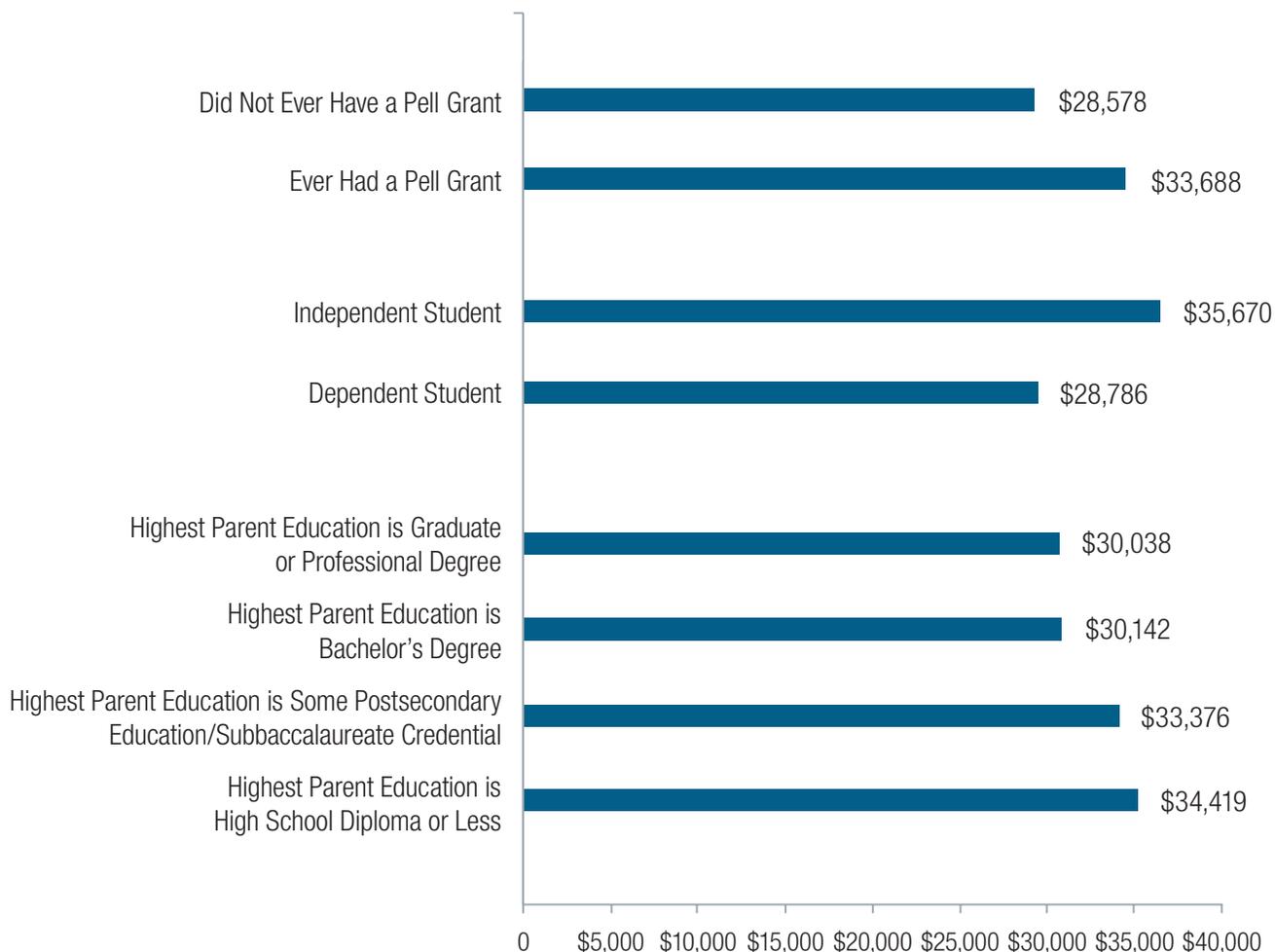
Indicator Status:

Fully 84 percent of Pell Grant Recipients had to borrow to complete a bachelor's degree, compared with 51 percent of students who had not received Pell Grants.

NOTE: Data are from B&B 2016 cohort from the 1-year follow-up.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Baccalaureate and Beyond (B&B) 2016/2017. Velez, E.D., Lew, T., Thomsen, E., Johnson, K., Wine, J. & Cooney, J. (2019). *Baccalaureate and Beyond B&B:16/17: A First Look at the Employment and Educational Experiences of College Graduates, 1 Year Later*, National Center for Education Statistics, NCES 2019-241 <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2019241>.

Equity Indicator 4e(ii): Average amount of undergraduate borrowing, among those who borrowed, by Pell Grant receipt status, dependency status, and highest parent education: 2016 graduation cohort interviewed 1 year after graduation: Baccalaureate and Beyond B&B:16/17 (in 2019 dollars)



Indicator Status:

Pell Grant recipients, independent students, and students whose parents' highest degree is a high school diploma or less have to borrow the most to complete a bachelor's degree.

NOTE: Data are from B&B 2016 cohort from the 1-year follow-up. Averages include only those who borrowed.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Baccalaureate and Beyond (B&B) 2016/2017. Velez, E.D., Lew, T., Thomsen, E., Johnson, K., Wine, J. & Cooney, J. (2019). *Baccalaureate and Beyond B&B:16/17: A First Look at the Employment and Educational Experiences of College Graduates, 1 Year Later*, National Center for Education Statistics, NCES 2019-241 <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2019241>.

Equity Indicators 4e(iii to vii) What Does Bachelor's Degree Recipients Borrowing and Debt look like at 4 and 10 Years After Graduation?

Next we examine the impact of graduate school debt and differences in repayment over time, using data from the 2008 cohort surveyed in 2012 at 4 years after graduation and again in 2018 for the 10-year follow-up. In this section, unlike the sections above, in tabulations of average amount borrowed or owed, we include those who did not borrow and do not have student debt as having zero student debt so that the true magnitude of the differences in debt burden can be noted. As before, the average amount of debt is presented in constant 2019 dollars.

Pell Grant Receipt, First-Generation Status, and Black -White Gaps at 4 Years After Receipt of Bachelor's Degree. Four years after graduation, gaps in amounts borrowed between Pell Grant recipients and non-recipients, and between Blacks and Whites, have grown substantially (Equity Indicator 4e(iii)). For example, including those who did not borrow, the Black-White gap had grown to \$26,736 in 2019 dollars (\$57,928 vs. \$31,192). The average amount owed by Pell Grant recipients had grown to \$43,446, compared to \$25,065 for non-Pell Grant recipients, a gap of \$18,381. Possibly reflecting lower rates of graduate school attendance, first-generation college students had somewhat less average debt than those whose parents had completed a bachelor's degree or higher (\$35,648 vs. \$31,749).

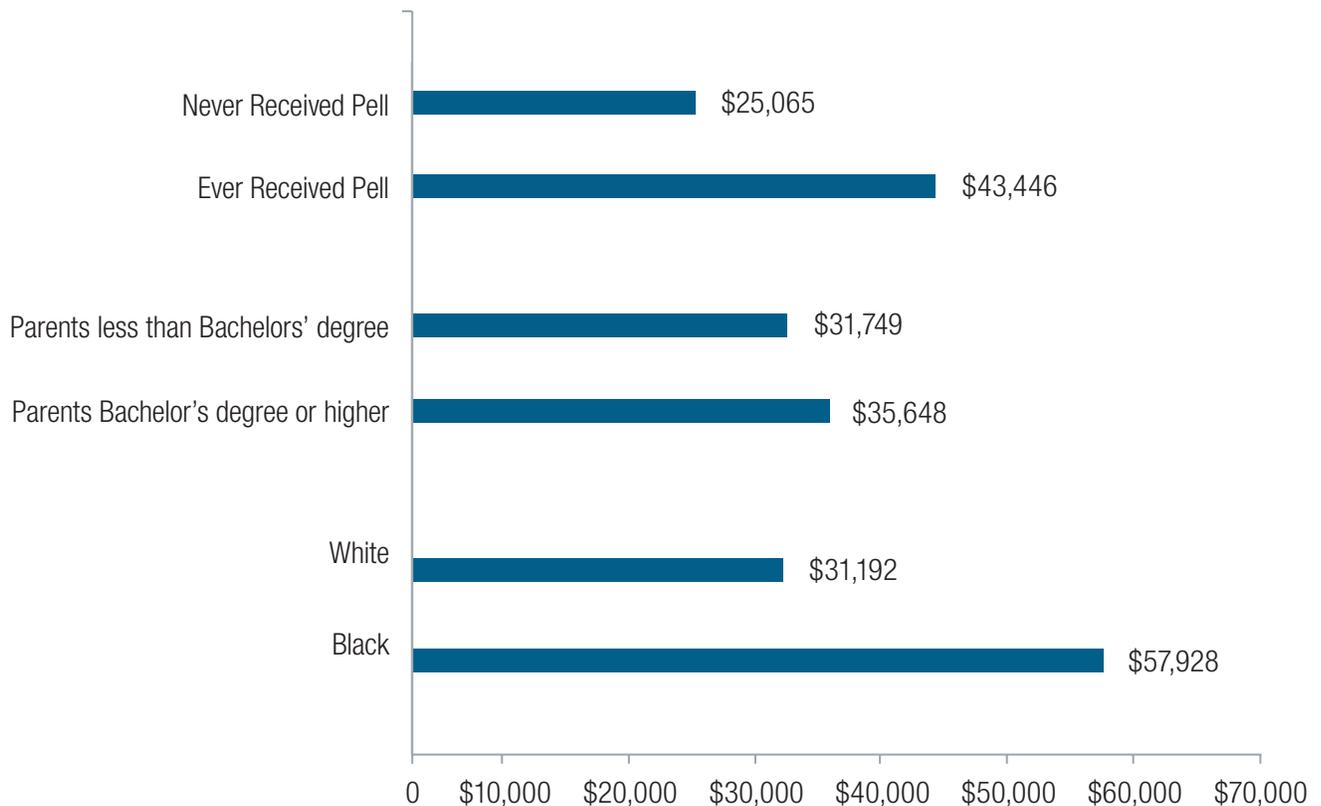
Graduate School Attendance and Debt. As scholars have noted, differences in rates of graduate school attendance have made a substantial impact on the gap in Black-White debt among bachelor's degree completers.¹⁰⁶ Although overall, Blacks continue to have lower graduate degree attainment rates than Whites,¹⁰⁷ among those who complete a bachelor's degree, Blacks are now entering graduate school at higher rates. By 2012, Black graduate school attendance within 4 years of completing a bachelor's degree was 47 percent, compared with 38 percent for Whites (Equity Indicator 4e(iv a&b)).¹⁰⁸ Reflecting systemic inequality, Black graduate students are also more likely to need to use loans to finance their graduate education (Cominole and Bentz, 2018). This means that the gap between Blacks and Whites in federal graduate loans is even greater than for undergraduate loans. Thirty-seven percent of Black bachelor's completers had graduate loans within 4 years of bachelor's completion, compared with 22 percent of White bachelor's completers (Equity Indicator 4e(iv a& b)).

106 Scott-Clayton, J. & Li, J. Black-White disparity in student loan debt more than triples after graduation, Brookings, Evidence Speaks Reports, Vol. 2, #3, October 20, 2016. Brookings Institution <https://www.brookings.edu/research/black-white-disparity-in-student-loan-debt-more-than-triples-after-graduation>.

107 Baum, S. & Steele, P. (2017). *Who Goes to Graduate School and Who Succeeds?* Urban Institute, <https://www.urban.org/research/publication/who-goes-graduate-school-and-who-succeeds>.

108 Cominole, M. & Bentz, A. Web-Tables, *Debt After College: Employment, Enrollment, and Student-Reported Stress and Outcomes*, U.S. Department of Education, National Center for Education Statistics, Baccalaureate and Beyond (B&B) study 2012 follow-up of the 2007-08 graduation cohort, March 2018, NCES 2018-401 <https://nces.ed.gov/pubs2018/2018401.pdf>.

Equity Indicator 4e(iii): Average amount owed (including those with zero debt) by 4 years after graduation by Pell Grant receipt, first-generation college status, and Black-White race/ethnicity: Baccalaureate and Beyond B&B:08/12 (in 2019 dollars)



Indicator Status:

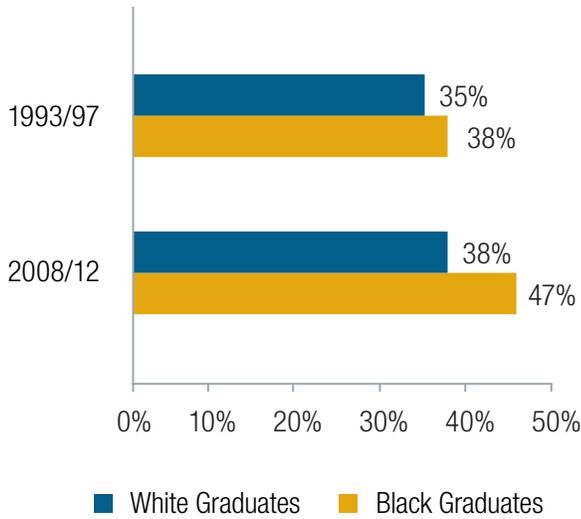
Four years after bachelor's degree completion, the differences in average amount borrowed, especially between Pell Grant recipients and non-recipients and between Blacks and Whites, had grown substantially. For example, in 2019 dollars the Black-White gap had grown to \$26,736 (\$57,928 vs. \$31,192). The average amount owed by Pell Grant recipients had grown to \$43,446, compared to \$25,065 for non-Pell Grant recipients, a gap of \$18,381.

NOTE: Includes those having no debt as zero amount of student debt.

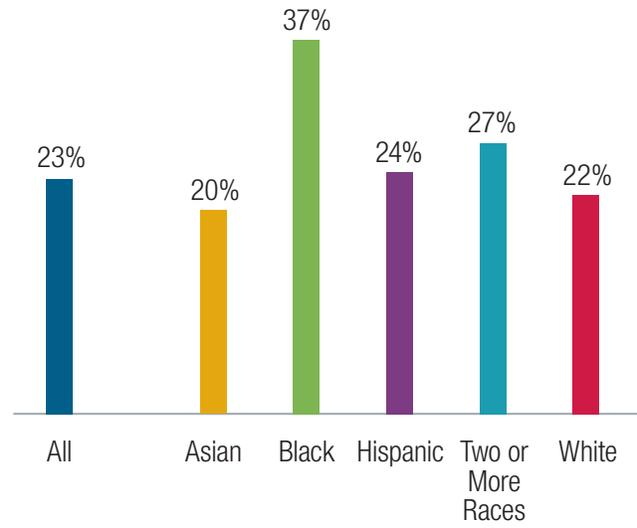
SOURCE: Authors' tabulation using Power Stats, U.S. Department of Education, National Center for Education Statistics, Baccalaureate and Beyond (B&B) study 2012 follow-up of the 2007-08 graduation cohort.

Equity Indicator 4e(iv a&b): Percent of 1993/1997 and 2008/2012 bachelor's degree recipients ever enrolled in graduate school by 4 years after graduation; and percent of 2008/12 cohort with graduate loans, by race/ethnicity: Baccalaureate and Beyond B&B:1993/97 and 2008/12

a. Enrolled in Graduate by 4 Years After Bachelor's Completion



b. Percent of 2008 Cohort With Federal Graduate Loans by 4 years after Bachelor's Completion



Indicator Status:

Differences in graduate enrollment rates between Black and White bachelor's completers are increasing (47 percent vs. 38 percent in 2008/12 cohort, compared to 38 percent vs. 35 percent for the 1993/97 cohort). Four years after graduation, Black bachelor's completers are also more likely to have graduate loans than Whites (37 percent versus 22 percent).

NOTE: Data on graduate school attendance tabulated for U.S. citizens only. The higher rate of graduate school enrollment among black college graduates does not imply a high rate of enrollment among Black young adults relative to other racial and ethnic groups. Black students earning bachelor's degrees are a smaller share of their age group than White and Asian college graduates. See Baum, S. & Steele, P. (2017). *Who Goes to Graduate School and Who Succeeds?* Urban Insitute, <https://www.urban.org/research/publication/who-goes-graduate-school-and-who-succeeds>.

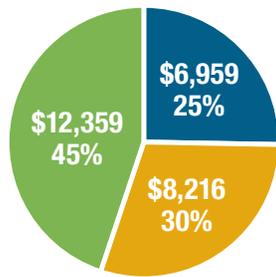
SOURCE: (a) Scott-Clayton, J. & Li, J. Black-white disparity in student loan debt more than triples after graduation, Brookings, Evidence Speaks Reports, Vol 2, #3, October 20, 2016. Brookings Institution <https://www.brookings.edu/research/black-white-disparity-in-student-loan-debt-more-than-triples-after-graduation>; (b) Cominole, M. & Bentz, A. Web-Tables, Debt After College: Employment, Enrollment, and Student-Reported Stress and Outcomes, U.S. Department of Education, National Center for Education Statistics, Baccalaureate and Beyond (B&B) study 2012 follow-up of the 2007-08 graduation cohort, March 2018, NCES 2018-401 <https://nces.ed.gov/pubs2018/2018401.pdf>.

Disaggregating Black-White Debt Gap at 4 Years After Graduation. The analyses completed by Scott-Clayton and Li (2016) for the Brookings Institution using the B&B 4-year follow-up for the 2008 cohort looked not just at the amount borrowed but also at the total amount owed after 4 years for both undergraduate and graduate loans.¹⁰⁹ As Equity Indicator 4e(va) shows, they found that the largest percentage (45 percent) of the gap among Black and White Bachelor's completers was attributable to differences in graduate school borrowing amounts. Thirty percent of the gap was due to differences in undergraduate borrowing and 25 percent from differences in repayment. Black bachelor's recipients were more likely to defer payments and to have more interest accrued. As the Equity Indicator 4e(vb) indicates, 48 percent of Black bachelor's completers owed more than they borrowed for undergraduate and graduate education 4 years later, compared to 17 percent of Whites. Moreover, on average Black bachelor's completers owed 6 percent more than they borrowed, compared with White bachelor's completers who owed 10 percent less than they borrowed 4 years later.

109 Scott-Clayton and Jing Li, op. cit. Cited in White House Initiative on Educational Excellence for African Americans, <https://sites.ed.gov/whieeaa/files/2016/11/Black-College-Graduates-and-the-Student-Debt-Gap.pdf>.

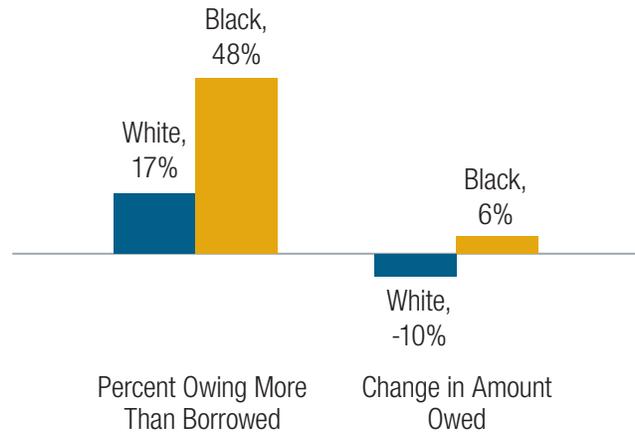
Equity Indicator 4e(v a&b): Source of Black-White differences in amount owed; percent owing more than borrowed, and changes in amount owed 4 years after graduation: Baccalaureate and Beyond (B&B) 2008/12 cohort

a. Percentage Distribution of Source of Black-White Differences in Amount Owed 4 Years After Graduation (in 2019 dollars)



■ Net Repayments ■ Undergraduate Borrowing
■ Graduate Borrowing

b. Black-White Differences in Percent Owning More Than Borrowed, and Change in Amount Owed by 4 Years After Bachelor's Completion



Indicator Status:

Forty-eight percent of Black bachelor's completers owed more than they borrowed 4 years after graduation, compared with 17 percent of White bachelor's completers. Differences in the need to borrow for graduate school accounted for 45 percent of the differences in debt levels between Blacks and Whites.

NOTE: Data on graduate school attendance tabulated for U.S. citizens only. Percent owning more than borrowed includes amounts borrowed for undergraduate and graduate education.

SOURCE: (a&b) Scott-Clayton, J. & Li, J. Black-white disparity in student loan debt more than triples after graduation, Brookings, Evidence Speaks Reports, Vol 2, #3, October 20, 2016. Brookings Institution. Baccalaureate and Beyond (B&B) study 2012 follow-up of the 2007-08 graduation cohort. Retrieved from <https://www.brookings.edu/research/black-white-disparity-in-student-loan-debt-more-than-triples-after-graduation>.

How Do Borrowing and Financial Well-Being of Bachelor's Degree Recipients Vary by Race/Ethnicity 10 Years After Graduation?

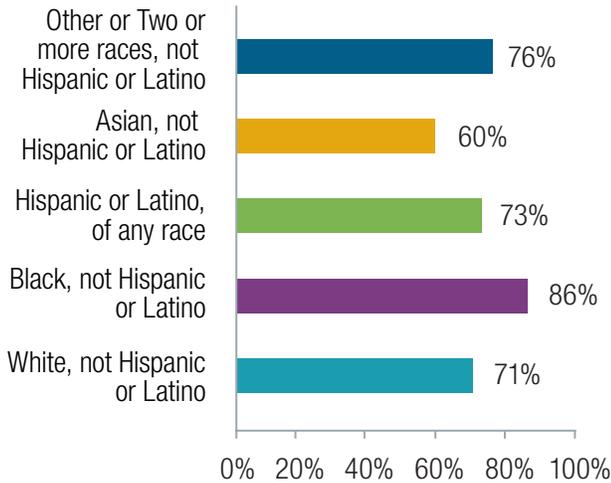
Recently-released (2021) reports¹¹⁰ from the 2018 follow-up of the 2008 cohort show that the gaps observed in earlier follow-ups have far-reaching ripples into the lives of bachelor's completers, as measured by the percentage who have borrowed and amounts borrowed to finance their higher education, as well as in their financial well-being 10 years after graduation.

Percent Borrowing and Average Borrowed by Race/Ethnicity. The 10-year B&B follow-up of the 2008 cohort reveals that 10 years after graduation, 86 percent of Black bachelor's degree recipients had borrowed at either undergraduate or graduate levels, compared with 71 percent of White graduates, 73 percent of Hispanic or Latino, and 60 percent of Asian graduates (Equity Indicator 4e(vi a&b)). Including those who had never borrowed as having zero amount borrowed in the calculations, the average amount borrowed by Black bachelor's degree recipients in the 2008 cohort to finance their education (expressed in 2019 dollars) was \$62,824, and the average amount borrowed by White graduates was \$34,717. This represents a Black-White gap of \$28,107 in 2019 dollars. Black bachelor's graduates had borrowed almost twice (1.8 times) as much as White graduates for their education by 10 years after receiving their bachelor's degree.

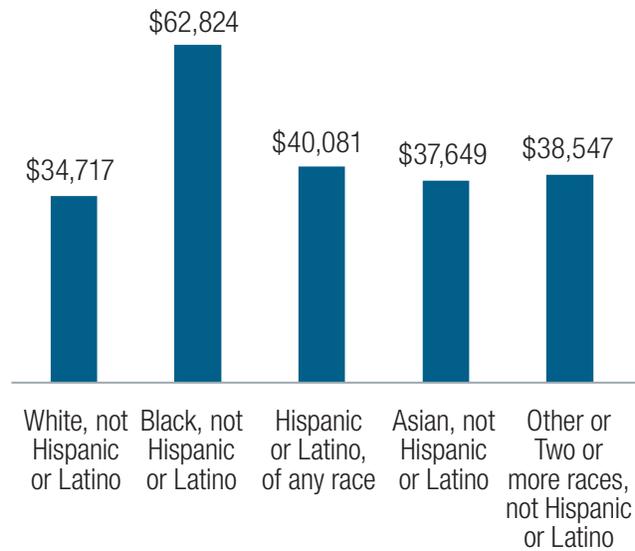
¹¹⁰ Cominole, M., Thomsen, E., Henderson, M., Velez, E.D., & Cooney, J. (2021). *Baccalaureate and Beyond (B&B:08/18): First Look at the 2018 Employment and Educational Experiences of 2007–08 College Graduates (NCES 2021-241)*. U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved [date] from <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2021241>.

Equity Indicator 4e(vi a&b): Percent borrowing and average amount (includes non-borrowers as zero) in 2019 dollars for undergraduate and graduate enrollment by 10 years after bachelor’s completion by race/ethnicity: Baccalaureate and Beyond (B&B:08/18)

a. Percent Borrowing



b. Average Borrowed by 2008 cohort in 2019 dollars (includes Non-Borrowers as Zero)



Indicator Status:

Ten years after completing their bachelor’s degrees, 86 percent of Blacks had borrowed for undergraduate or graduate education, compared with 71 percent of Whites who were not Hispanic or Latino. The debt gap between Blacks and Whites (including those who did not borrow as zero), rose to \$28,107 in 2019 dollars, with Blacks borrowing an average of \$62,824 and Whites borrowing an average of \$34,717.

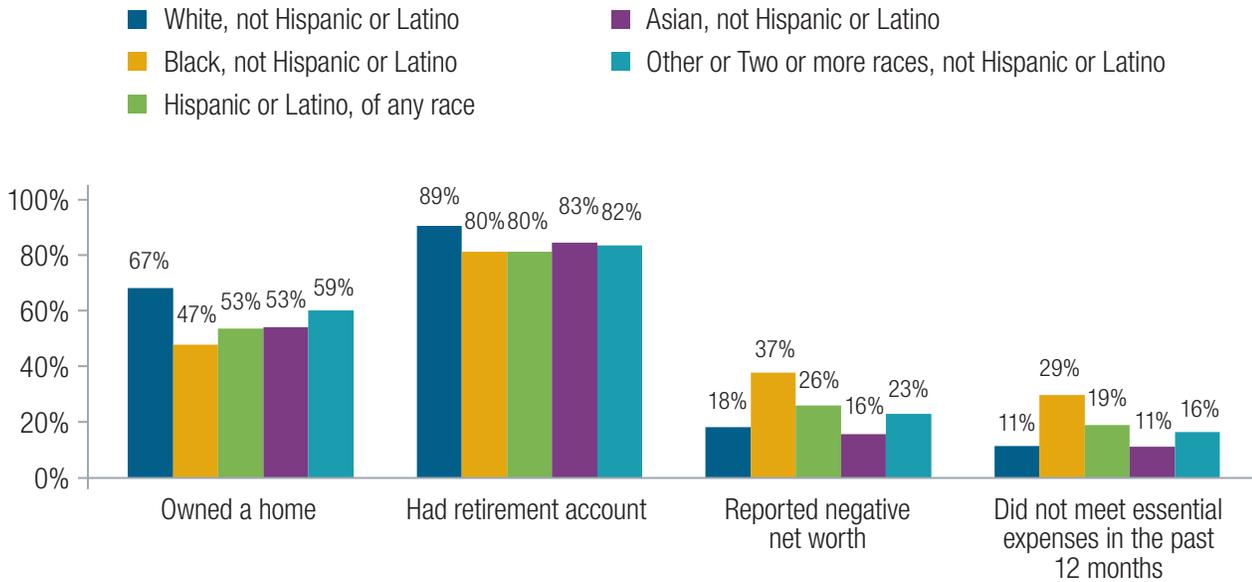
NOTE: Authors’ calculation of amount borrowed including non-borrowers as zero is based on published data on percent who borrowed and average amount among those who borrowed.

SOURCE: Cominole, M., Thomsen, E., Henderson, M., Velez, E.D., & Cooney, J. (2021). *Baccalaureate and Beyond (B&B:08/18): First Look at the 2018 Employment and Educational Experiences of 2007–08 College Graduates (NCES 2021-241)*. U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved [date] from <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2021241>.

Financial Well-being of the 2008 B&B Cohort 10 Years After Graduation by Race/Ethnicity. The 10-year B&B follow-up of the 2008 cohort conducted in 2018 also asked a series of financial well-being questions. These questions included measures of home ownership, having a retirement account, negative net worth, and having months when it was impossible to meet essential expenses. Retirement accounts include both employer-based retirement accounts such as 401(k), 403(b), and pensions, and non-employer-based retirement accounts such as individual retirement accounts. Respondents were considered to have negative net worth if they would still be in debt after selling all their major possessions, turning all their investments and other assets into cash, and paying off as many debts as they could. The item “Did not meet essential expenses” refers to being unable to meet essential living expenses such as mortgage or rent payments, utility bills, or important medical care. The “Past 12 months” refers to any of the 12 months preceding the interview.

As Equity Indicator 4e(vii), shows there were large financial well-being differences among bachelor’s degree recipients by race/ethnicity. Ten years after graduation, home ownership was highest among White bachelor’s degree recipients (67 percent) and least frequent among Black bachelor’s completers (47 percent). The percent having a retirement account ranged from 89 percent for White graduates to 80 percent for Black and Hispanic graduates. Starkly, 10 years after being awarded their bachelor’s degree, over one-third (37 percent) of Black bachelor’s graduates had negative net worth, and 29 percent indicated they had difficulty meeting essential living expenses in the previous 12 months. This compares to 18 percent of White completers with negative net worth and 11 percent who reported being unable to meet essential expenses.

Equity Indicator 4e(vii): Bachelor's degree graduates' financial well-being 10 years after graduation by race/ethnicity: Baccalaureate and Beyond (B&B:08/18)



Indicator Status:

Indicator Status: Starkly, 10 years after being awarded their bachelor's degree, over one third (37 percent) of Black bachelor's graduates had negative net worth, and 29 percent indicated they had difficulty meeting essential living expenses in the previous 12 months. For White bachelor's graduates, the comparable rates were 18 percent with negative net worth and 11 percent who reported having difficulty meeting essential monthly expenses.

NOTE: Retirement accounts include both employer-based retirement accounts such as 401(k), 403(b), and pensions, and non-employer-based retirement accounts such as individual retirement accounts. Respondents were considered to have negative net worth if they would still be in debt after selling all their major possessions, turning all their investments and other assets into cash, and paying off as many debts as they could. The item "Did not meet essential expenses" refers to being unable to meet essential living expenses such as mortgage or rent payments, utility bills, or important medical care. The "Past 12 months" refers to any of the 12 months preceding the interview.

SOURCE: Cominole, M., Thomsen, E., Henderson, M., Velez, E.D., & Cooney, J. (2021). *Baccalaureate and Beyond (B&B:08/18): First Look at the 2018 Employment and Educational Experiences of 2007–08 College Graduates (NCES 2021-241)*. U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved [date] from <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2021241>.

Equity Indicator 4f: What Are Rates of Borrowing and Average Amount Borrowed by State?

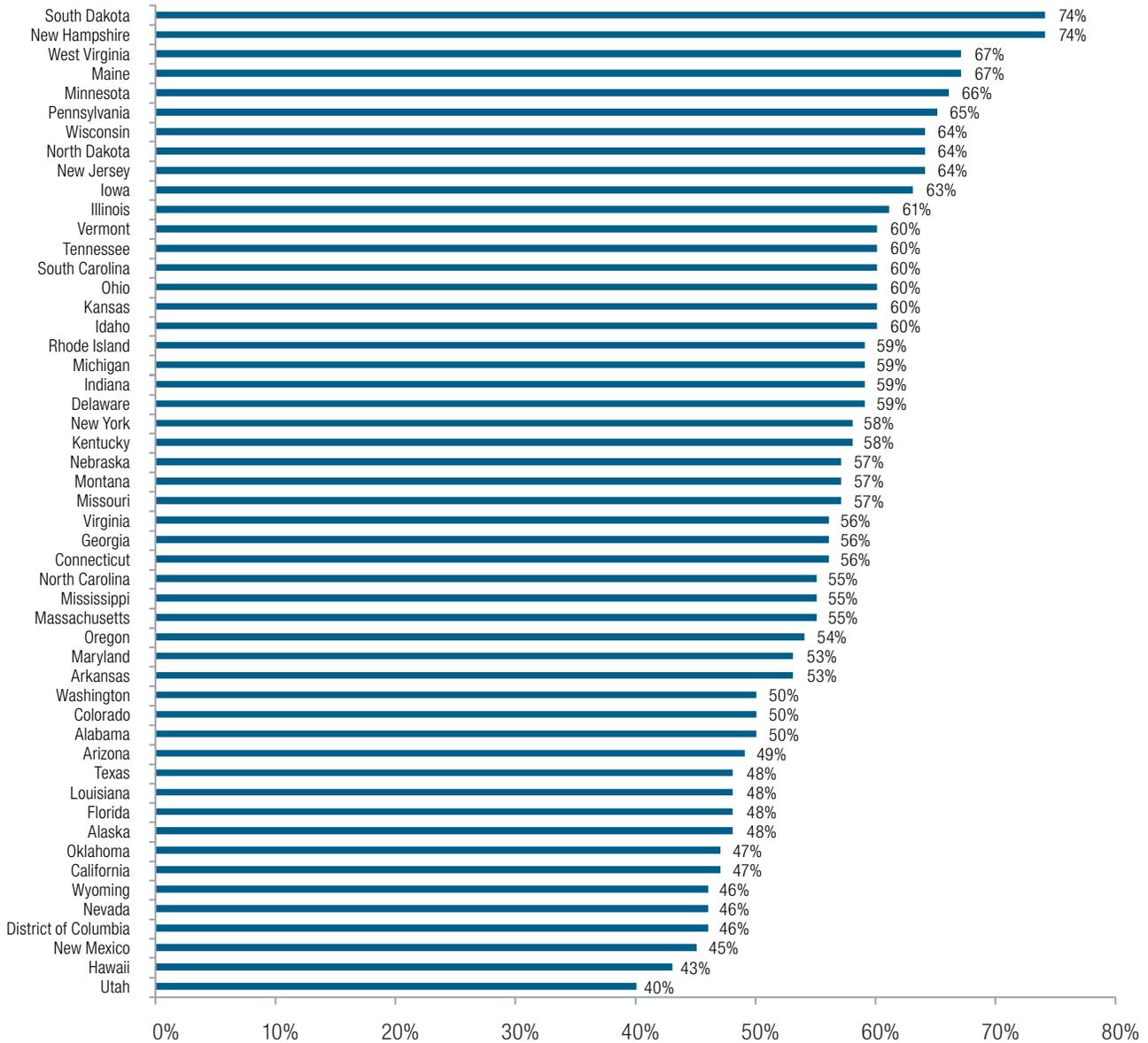
Indicators 4f(i) and 4f(ii) show the estimated percentages of 2019 bachelor's degree recipients who borrowed and, among those who borrowed, the average cumulative amounts borrowed, by state. This indicator relies on data from the 2019 Annual Survey of College Debt by TICAS, a voluntary data collection from over 1,000 4-year institutions. To estimate state-level student loan debt, TICAS uses the most recent available figures, which were provided by more than half of all public and nonprofit bachelor's degree-granting 4-year colleges. TICAS warns that some caution is warranted when using their data. To estimate state averages, TICAS estimates the percent of students borrowing and the average debt amount borrowed for states that have sufficient usable data from which to calculate state estimates.¹¹¹ The limitations of relying on voluntarily-reported data underscore the need for federal collection of cumulative student debt data for all institutions. As with all state comparisons, caution is needed in interpreting differences by state. States may have higher or lower rates of borrowing and amounts borrowed for many reasons, including differences in the rate at which low-income and middle-income students participate in college, availability of need-based grant aid, average college costs, and economic differences among the states.

Indicator 4f(i) shows that, in 2019, fewer than 50 percent of bachelor's degree recipients graduated with debt in Utah (40 percent), Hawaii (43 percent), New Mexico (45 percent), District of Columbia, Nevada, and Wyoming (46 percent), California and Oklahoma (47 percent), Alaska, Florida, Louisiana, and Texas (48 percent), and Arizona (49 percent). The states with the highest percent of students graduating with debt were South Dakota and New Hampshire, where 74 percent of bachelor's degree recipients graduated with debt.

Indicator 4f (ii) shows that the average amount borrowed in 2019 by those who borrowed ranged from less than \$23,000 in Utah (\$17,935), New Mexico (\$20,991), Nevada (\$21,254) and California (\$21,485), to more than \$37,000 in Delaware (\$37,447), Rhode Island (\$37,614), Connecticut (\$38,546), Pennsylvania (\$39,027), and New Hampshire (\$39,410).

111 TICAS does not tabulate average rates of borrowing for states in which less than 30 percent of bachelor's degree recipients are represented in the data submitted by institutions within the state. To estimate state averages, TICAS uses the most recent available figures voluntarily reported by colleges, including 52 percent of all public and nonprofit bachelor's degree-granting four-year colleges and representing 79 percent of graduates. Schak, J.O., Wong, N., Fung, A., & Ahlman, L. (2020). *Student Debt and the Class of 2019, 15th Annual Report*. Oakland: The Institute for College Access & Success (TICAS). Retrieved from <https://ticas.org/our-work/student-debt>.

Equity Indicator 4f(i): Percentage of bachelor's degree recipients with debt by state: 2019



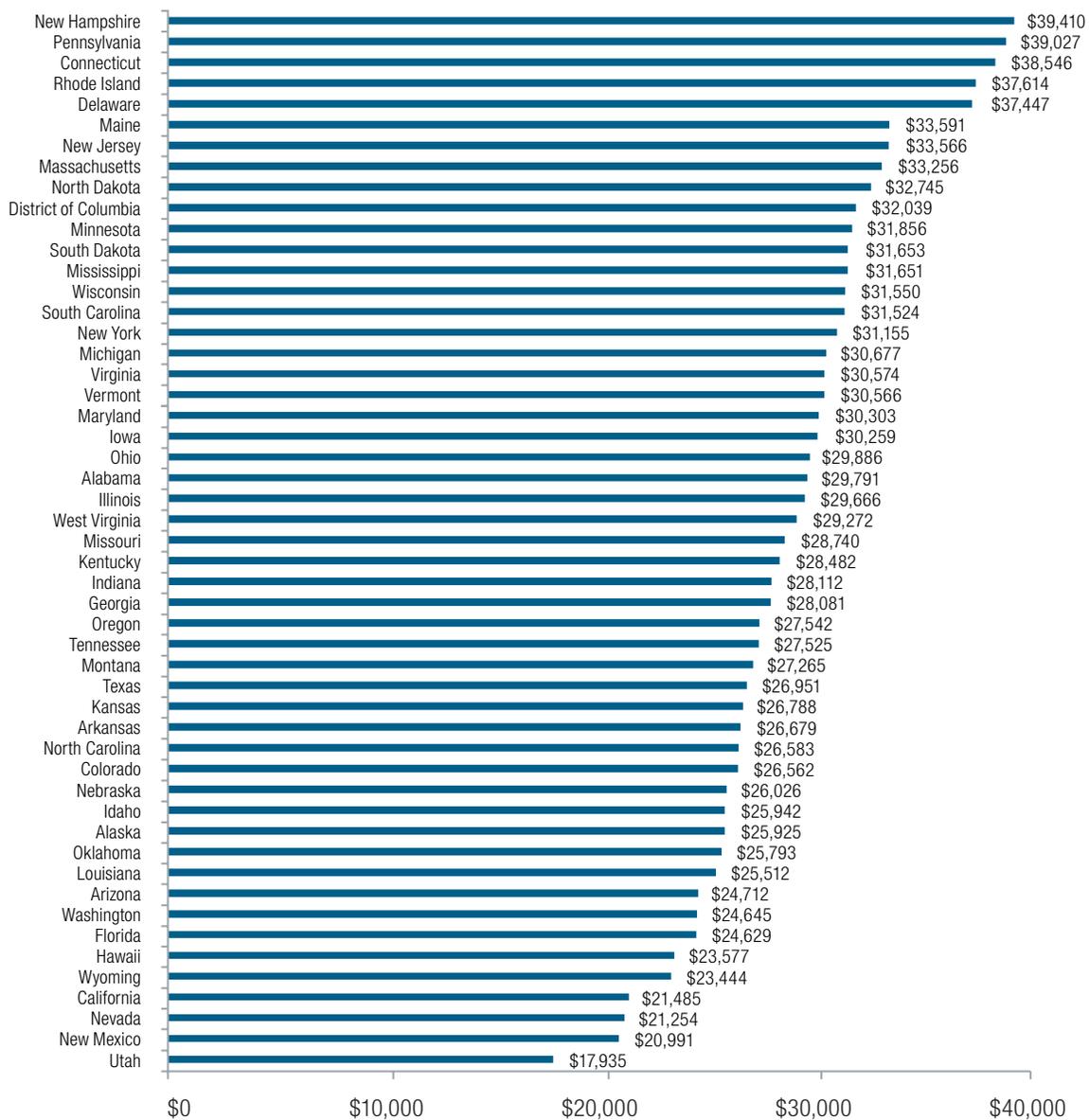
Indicator Status:

The percentage of 2019 bachelor's degree recipients who borrowed ranged from 40 percent in Utah to 74 percent in South Dakota and New Hampshire.

NOTE: To estimate state averages, TICAS used the most recent available figures, which were provided voluntarily by more than half of all public and nonprofit bachelor's degree-granting 4-year colleges. The college- and state-level debt data used for the report are available online at <https://ticas.org>. TICAS does not tabulate average rates of borrowing for states in which "less than 30 percent of bachelor's degree recipients are represented in the data submitted by institutions within the state."

SOURCE: Schak, J.O., Wong, N., Fung, A., & Ahlman, L. (2020). *Student Debt and the Class of 2019, 15th Annual Report*. Oakland: The Institute for College Access & Success (TICAS). Retrieved from <https://ticas.org/our-work/student-debt>.

Equity Indicator 4f(ii): Average amount of debt among bachelor's degree recipients who borrowed by state: 2019



Indicator Status:

The average amount borrowed among 2019 bachelor's degree recipients who borrowed ranged from \$17,935 in Utah to \$39,410 in New Hampshire.

NOTE: To estimate state averages, TICAS used the most recent available figures, which were provided voluntarily by more than half of all public and nonprofit bachelor's degree-granting 4-year colleges. The college- and state-level debt data used for the report are available online at <https://ticas.org>. TICAS does not tabulate average rates of borrowing for states in which "less than 30 percent of bachelor's degree recipients are represented in the data submitted by institutions within the state."

SOURCE: Schak, J.O., Wong, N., Fung, A., & Ahlman, L. (2020). *Student Debt and the Class of 2019, 15th Annual Report*. Oakland: The Institute for College Access & Success (TICAS). Retrieved from <https://ticas.org/our-work/student-debt>.

EQUITY INDICATOR 5:

HOW DO EDUCATIONAL ATTAINMENT RATES AND OUTCOMES VARY BY STUDENT CHARACTERISTICS?

In 2019, estimated bachelor's degree attainment rates by age 24 based on CPS household survey data were almost 5 times greater for dependent family members from the highest family income quartile than for those from the lowest family income quartile (62 percent vs 13 percent). In 1970, those in the highest income quartile were 7 times as likely as those in the lowest quartile to attain a bachelor's degree by age 24 (40 percent vs. 6 percent).

Equity Indicator 5 (a-f): Definitions

Equity Indicator 5 draws on multiple sources of data to describe educational attainment and early graduation outcomes by sociodemographic characteristics. The sources of data are: 1) Census Bureau Current Population Survey (CPS) data on estimated dependent family members' bachelor's degree attainment rates by family income; 2) NCES high school longitudinal studies tracing high school students' bachelor's degree attainment; 3) NCES Beginning Postsecondary Students Longitudinal Studies (BPS) reporting retention and completion rates for cohorts of entering students at various intervals; 4) NCES IPEDS Completions Surveys' data on degrees awarded by race/ethnicity; 5) NCES Baccalaureate and Beyond Longitudinal Study (B&B) follow-up data on outcomes of recent college graduates; 6) Census Bureau data on educational attainment rates by state for various age groupings, and 7) NCES IPEDS Outcomes Component data by State and by Pell Grant Receipt. We utilize multiple data sources for Indicator 5 because of the limitations of each source, as described below. Indicator 5 focuses primarily on bachelor's degree attainment, with some attention to associate's, master's, and doctoral degree attainment by race/ethnicity.

Definitions of terms not already provided in the report are presented below.

- **Estimated Rates of Bachelor's Attainment by Age 24 for Dependent Family Members.** This Indicator reports 3-year moving average estimated rates of bachelor's degree attainment by age 24 by family income quartile for primary dependent family members using data from the October supplement to the Current Population Survey (CPS). CPS is the only available national annual data source that measures attainment, but the data have important limitations and caution is warranted when interpreting the results. The CPS household survey data are reported in aggregate for cross-sectional groupings and include only individuals who were considered "dependent family members" of the household at the time of the CPS survey. Recent years have seen differential changes across

income groupings in dependency patterns and length of time for bachelor's degree completion. We use data from the NCES longitudinal studies to improve the calibration of the CPS estimates.¹¹²

- **Persistence and Completion Data** from the Beginning Postsecondary Students Longitudinal Study (BPS). BPS tracks students first enrolling in a postsecondary educational institution in academic years 1989-90, 1996-97, 2003-04, and 2011-12. NCES began a new BPS cohort in 2019-20; however this data is not yet available. Persistence and completion data are shown by parents' income quartile for dependent students. We also use BPS data to examine differences in attainment by TRIO eligibility criteria (i.e., low-income and first-generation college status) and by dependency status.¹¹³
- **Distributions of Associate's, Bachelor's, Master's, and Doctoral Degrees Conferred by Race/Ethnicity Compared to Population Distributions.** These measures use the annual IPEDS Completion Surveys to report the distributions of degrees conferred. We use Census data for comparisons to the U.S. population distribution by race/ethnicity in 1980 and 2018.
- **Further Education, Early Career Earnings, and Unemployment for Recent Bachelor's Degree Recipients.** These Indicators are drawn from the NCES's Baccalaureate and Beyond Longitudinal study (B&B) series. The 2021 *Equity Indicators* report includes data on post-baccalaureate enrollment, annual income, and unemployment for 2016 bachelor's degree recipients 1 year after graduation in 2017 (B&B 2016/2017). In addition, the 2021 *Equity Indicators* report incorporates the newly released tabulations from the 10-year follow-up from the third cohort of B&B (2008/18) to show students' degree status by race/ethnicity, gender, and parents' highest level of education.¹¹⁴
- **Educational Attainment by State** uses data from the decennial census and the American Community Survey (ACS) from 1940 to 2018 for the total population age 25 and older and for those age 24 to 34 in 2005 and 2018.
- **IPEDS Outcomes Component/Graduation Rates by State and Pell Grant Receipt.** The IPEDS Outcomes Component provides cohort data on degree-seeking undergraduate students earning any formal award (certificate, associate's, or bachelor's degree) at the institution of first enrollment within 4, 6, 8, years. Pell Grant receipt data are shown by institution type and control, and institution acceptance rate.

112 Because of the relationships among family income, dependency status, and degree attainment, CPS data published in the 2015 *Indicators* report overestimated bachelor's degree attainment for the highest income quartile. In 2016, we reported the 100 percent distribution of bachelor's degrees in the text and attainment estimates in the methodological appendix. For the 2017 to 2020 *Indicators* reports, we returned the CPS attainment rate indicator to the main body of the report. The 2016 methodological appendix and 2017 to 2020 Indicator 5a have updated CPS attainment rate estimates with improved calibration from NCES longitudinal survey data from the appropriate time periods. In 2020, we also include the percentage distribution of bachelor's degrees awarded by income quartile in Equity Indicator 5a(ii). Caution is warranted when interpreting CPS estimates given the many underlying assumptions.

113 TRIO is a set of federal competitive grant programs first authorized under the HEA of 1965, as amended most recently in 2008. TRIO programs are designed to increase college access and degree completion for low-income students, first-generation college students, and students with disabilities. The first three TRIO programs began in 1964, 1965, and 1968, respectively. TRIO now consists of eight programs that collectively provide services from middle school through graduate school. The eight TRIO programs are: Upward Bound (UB), Upward Bound Math-Science (UBMS), Veterans Upward Bound (VUB), Talent Search (TS), Student Support Services (SSS), Educational Opportunity Centers (EOC), Ronald E. McNair Postbaccalaureate Achievement Program (McNair), and a training program for TRIO project staff. In 2020, over 3,100 TRIO projects were housed at colleges and universities and community organizations, with projects in all 50 states, Washington, D.C., and U.S. territories. (See Federal TRIO Programs, <https://www2.ed.gov/about/offices/list/ope/trio/index.html>). While federal TRIO program services have been found to increase college entrance, persistence and completion, they are estimated to reach less than 5 percent of the eligible population in any given year. Cahalan, M. (2013). *Widening participation in higher education in the United States of America: Report submitted to HEFCE and OFFA by CFE and Edge Hill University*. Retrieved from: http://www.pellinstitute.org/downloads/publications-Widening_Participation_in_Higher_Education_in_the_USA_October_2013.pdf.

114 The third cohort of B&B was drawn from the 2008 NPSAS sample. Indicators 2020 examines bachelor's degree recipients' labor market experiences and enrollment in additional postsecondary degree programs 4 years after graduation. B&B 2008 was followed up in 2009, 2012, and 2018 with the 10 years follow-up being the last survey for the third cohort.

Equity Indicator 5a(i) and 5a(ii): How Do Estimates of Dependent Family Members' Bachelor's Degree Attainment Rates Vary by Family Income Quartile?

Equity Indicator 5a(i) reports a 3-year moving average of the estimated rates of bachelor's degree attainment by age 24 for dependent family members using data from the annual Current Population Survey (CPS) from 1970 to 2019.¹¹⁵ Estimates are derived using aggregate cross-sectional CPS data with calibration from the NCES longitudinal studies from similar time frames. Equity Indicator 5a(ii), also using CPS data, reports the 100 percent distribution of bachelor's degrees estimated by family income quartiles over the period.

Indicator 5a(i) shows that bachelor's degree attainment rates increased in each family income quartile over the period but remained highly unequal. In 2019, an estimated 13 percent of dependent family members in the lowest family income quartile had attained a bachelor's degree by age 24, compared with 21 percent of those in the second quartile, 39 percent of those in the third quartile, and 62 percent of those in the highest quartile.

The gap in bachelor's degree attainment rates by age 24 between dependent family members in the highest and lowest quartiles was 49 percentage points in 2019. Estimated bachelor's degree attainment rates by age 24 were almost 5 times (4.8 times) higher for dependent family members in the highest income quartile than for the lowest income quartile (62 percent vs. 13 percent) in 2019. In 1970, dependent family members in the highest income quartile were 6.7 times as likely as those in the lowest quartile to attain a bachelor's degree by age 24 (40 percent vs. 6 percent).

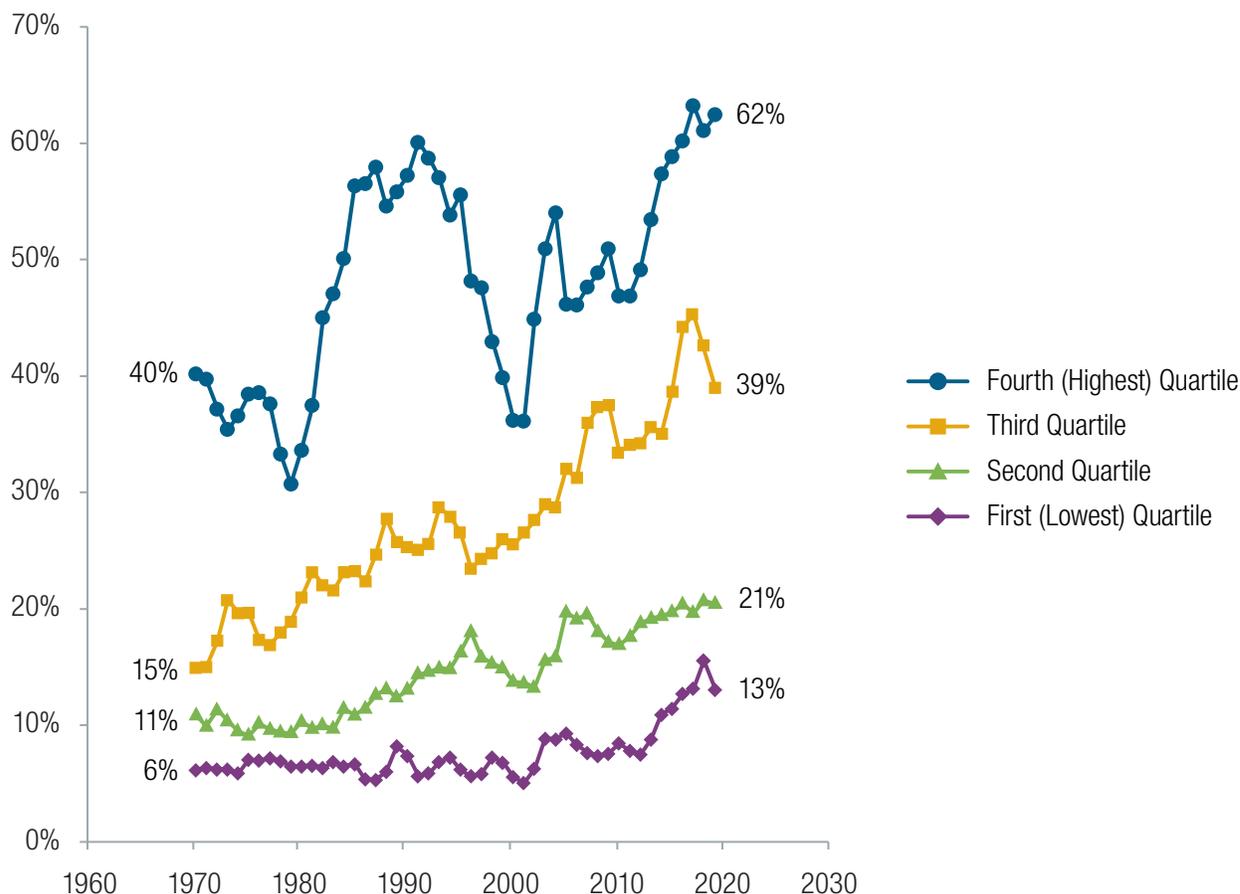
The rate of increase in bachelor's degree attainment for dependent family members by age 24 between 1970 and 2019 was highest for the third quartile, with a 160 percent increase (from 15 percent in 1970 to 39 percent in 2019). The rate of increase in bachelor's degree attainment was lowest for the highest quartile, with attainment rates increasing from 40 percent to 62 percent (54 percent increase). Bachelor's degree attainment rates increased by 108 percent for the lowest quartile, increasing from 6 percent in 1970 to 13 percent in 2019, and by 90 percent for the second lowest quartile, increasing from 11 percent to 21 percent.

Distribution by Family Income Quartile. Equity Indicator 5a(ii) displays the 100 percent distribution of bachelor's degrees completed by dependent family members age 18 to 24 by family income quartile. This chart shows that the upper two quartiles have consistently accounted for over 70 percent of the bachelor's degrees completed by dependent students age 18 to 24. In 2019, dependent family members in the top two income quartiles accounted for 73 percent of the bachelor's degrees awarded, with 44 percent going to the fourth quartile (the top quartile) and 29 percent to the third quartile. Just over one-fourth (27 percent) of bachelor's degrees completed by dependent family members age 18 to 24 were received by individuals in the lowest two income quartiles, 16 percent and 11 percent, respectively.

The largest relative gains were made by individuals in the third quartile (increasing from 20 percent to 29 percent), with a corresponding decline in the percentage going to the top quartile (from 52 percent to 44 percent). The share of bachelor's degrees to dependent family members age 18 to 24 awarded to individuals in the lowest two quartiles remained remarkably stable over the 48 years between 1970 and 2019.

¹¹⁵ Indicator 5a(i) reports a 3-year moving average of the estimated bachelor's degree attainment rate by age 24 for dependent family members. Because we report a moving average, estimates for individual years may be slightly different from year to year.

Equity Indicator 5a(i): Estimated bachelor's degree attainment by age 24 for dependent family members by family income quartile: 1970 to 2019



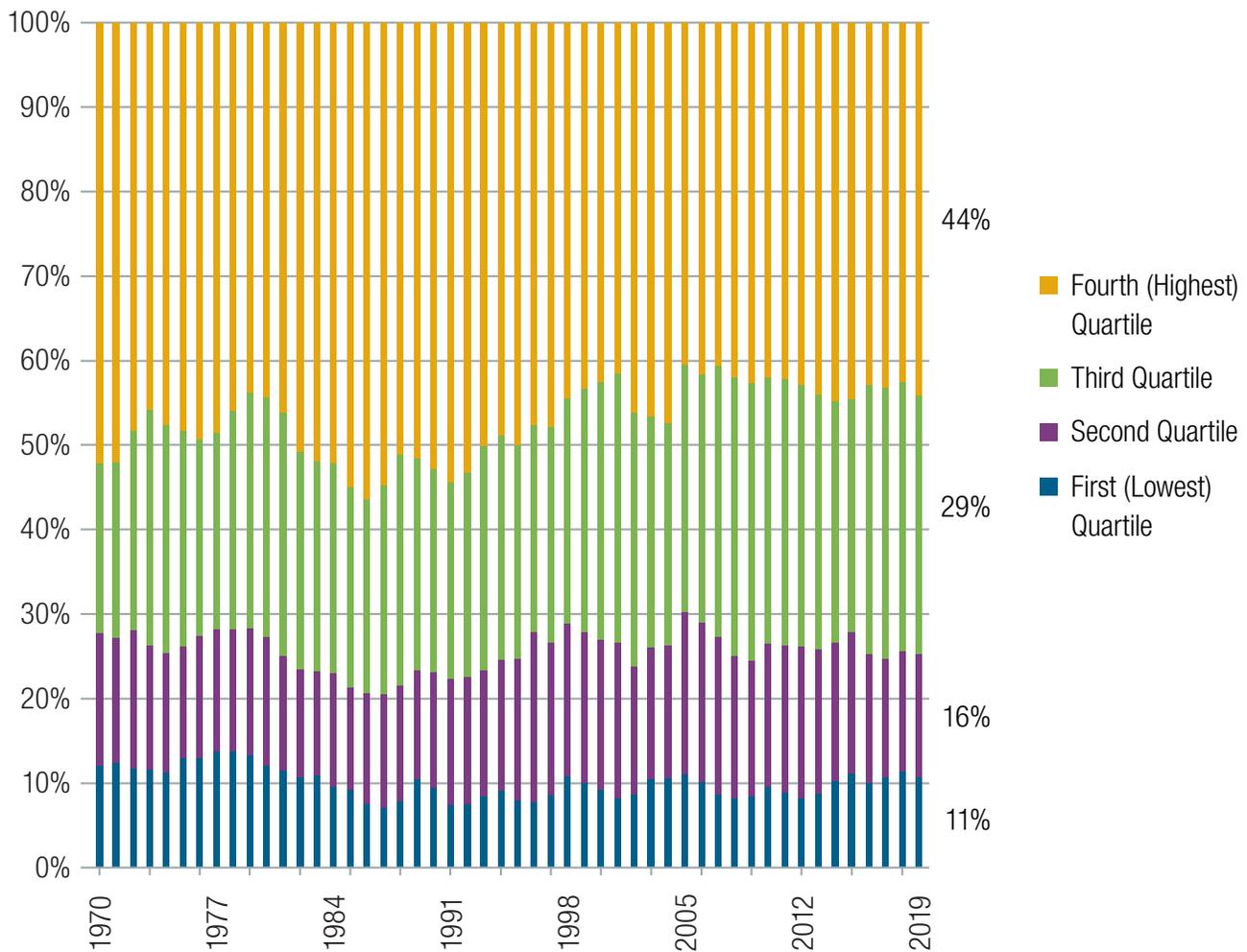
Indicator Status: High Persisting Inequality

Estimated bachelor's degree attainment rates by age 24 were about 5 times (4.8 times) higher for dependent family members in the highest income quartile than for those in the lowest income quartile (62 percent vs. 13 percent). In 1970, dependent family members in the highest income quartile were 6.7 times as likely as those in the lowest quartile to have a bachelor's degree by age 24 (40 percent vs. 6 percent).

NOTE: This figure reports a 3-year moving average of the estimated bachelor's degree attainment rate by age 24 for dependent family members using the CPS data with calibrations from the NCES high school longitudinal studies. Due to estimation assumptions and sampling error, caution is warranted when interpreting changes (especially large single-year fluctuations) over time. See Appendix A for further discussion of the methodology and limitations.

SOURCE: U.S. Census Bureau, Current Population Survey, October Education Supplement, 1970-2019. Data from 1970 to 1986 consider unmarried 18- to 24-year-olds and data from 1987 to 2019 are based on dependent 18- to 24-year-olds. These data were previously published in Table 14 in Census Bureau P20 report on School Enrollment. After 2006, the Census Bureau no longer published Table 14. Data were tabulated using the Census Bureau table production tool (2006-2019). Mortenson, T. (in press). Estimated Baccalaureate Degree Attainment by Age 24 by Family Income Quartiles: 1970 to 2019, *Postsecondary Education Opportunity*. Washington, DC: The Pell Institute for the Study of Opportunity in Higher Education.

Equity Indicator 5a(ii): Distribution of estimated bachelor's degrees attained by dependent family members age 18 to 24 by family income quartile: 1970 to 2019



Indicator Status: High Persisting Inequality

In 2019, the upper two quartiles accounted for 73 percent of the bachelor's degrees awarded to dependent students age 18 to 24 (44 percent for the highest quartile and 29 percent for the third quartile). The bottom two family income quartiles accounted for 27 percent of degrees (16 percent for second quartile and 11 percent for the first, or lowest, quartile).

NOTE: This figure reports a 100 percent distribution of bachelor's degrees reported for dependent 18- to 24-year-olds using the CPS data. Details do not sum to 100 percent due to rounding. Due to estimation assumptions and sampling error, caution is warranted when interpreting changes over time, especially large single-year fluctuations. See Appendix A for further discussion of the methodology and limitations.

SOURCE: U.S. Census Bureau, Current Population Survey, October Education Supplement, 1970-2019. Data from 1970 to 1986 consider unmarried 18- to 24-year-olds and data from 1987 to 2019 are based on dependent 18- to 24-year-olds. These data were previously published in Table 14 in Census Bureau P20 report on School Enrollment. After 2006, the Census Bureau no longer published Table 14. Data were tabulated using the Census Bureau table production tool (2006-2019). Mortenson, T. (in press). Estimated Baccalaureate Degree Attainment by Age 24 by Family Income Quartiles: 1970 to 2019, *Postsecondary Education Opportunity*. Washington, DC: The Pell Institute for the Study of Opportunity in Higher Education.

Equity Indicator 5b: What Percentage of Youth Attain a Bachelor's Degree or Higher in 8 or 10 Years of Expected High School Graduation by Socioeconomic Status (SES)?

Equity Indicator 5b uses data from three NCES high school longitudinal studies that report bachelor's degree attainment rates for students 8 or 10 years after their expected high school graduation.¹¹⁶ For this Indicator we use socioeconomic status (SES), a composite measure based on parental income, education, and occupation, rather than a single measure of self-reported income.¹¹⁷

As noted in the discussions of other indicators in this report, comparisons of bachelor's degree attainment across the three longitudinal studies are limited by differences in the starting year. High School and Beyond (HS&B:1980) sampled 1980 high school 10th graders and followed the cohort until 1992, 10 years after expected high school graduation in 1982. The National Education Longitudinal Study of 1988 (NELS:88) sampled 8th graders in 1988 and followed students until 2000, 8 years after their expected high school graduation in 1992. The Educational Longitudinal Study of 2002 (ELS:2002) sampled 2002 10th graders and followed them until 2012, 8 years after their expected high school graduation in 2004. Because NELS:88 began with 8th graders rather than students in high school, data from NELS:88 might be expected to report a higher percentage of students who did not complete high school than the HS&B and ELS studies that began in 10th grade. Other observed differences in bachelor's degree attainment over time may reflect differences in the willingness of high-poverty schools to participate in the three studies,¹¹⁸ thereby altering the composition of schools and students (despite non-response adjustments by NCES) in the three samples.¹¹⁹

With these cautions in mind, Indicator 5b shows that the share of youth attaining a bachelor's degree within 8 or 10 years of their expected high school graduation varies substantially by parents' socioeconomic status (SES) in all three studies. In the most recent study shown (ELS:2002), 10th graders from the highest SES quartile were 4 times as likely to attain a bachelor's degree in 8 years as 10th graders from the lowest SES quartile. Indicator 5b shows that 60 percent of 2002 10th graders from the highest SES quartile attained a bachelor's degree within 8 years, compared with 15 percent of those from the lowest quartile, 22 percent of those from the second quartile, and 37 percent of those from the third SES quartile.

The percentage of individuals from the lowest SES quartile who attained at least a bachelor's degree within 8 or 10 years of their expected high school graduation was virtually the same for the HS&B:80 cohort (7 percent) as for the NELS:88 cohort (8 percent). But the percentage of individuals from the lowest SES quartile who

116 In 2009, NCES began another nationally representative survey of high school students: the High School Longitudinal Study of 2009 (HSLS). This study began with 9th graders in 2009. Data for bachelor's degree attainment within 8 or 10 years of expected high school graduation are not yet available from this source, as this latest longitudinal study sampled 9th graders who had an expected high school graduation of 2013.

117 SES is a composite measure that NCES derived in a comparable manner for the three studies. We use the SES measure rather than family income as SES is a more robust measure than the single measure of self-reported family income. The latter tends to have a high rate of missing data and is subject to reporting error in the high school studies.

118 While NCES adjusted for non-response and has engaged in increased follow-up efforts, over time there has been growing reluctance of high-poverty schools to participate in the (voluntary) NCES-sponsored sample surveys. This unwillingness to participate was especially pronounced in ELS:2002.

119 See methodological appendices: Lauff, E., & Ingels, S. J. (2014). *A First Look at 2002 High School Sophomores 10 Years Later, Education Longitudinal Study of 2002 (ELS:2002)* (NCES 2014-363). U.S. Department of Education; Ingels, S. J., Kaufman, P., Curtin, T. R., Alt, M. N., & Chen, X. (2002). *Coming of Age in the 1990s: The Eighth Grade Class of 1988 12 Years Later. Initial Results from the Fourth Follow-up to the National Education Longitudinal Study of 1988* (NCES 2002-321). Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement; Tuma, J., Geis, S., & Carroll, C. D. (1995). *High School and Beyond: Educational Attainment of 1980 High School Sophomores by 1992. 1992 Descriptive Summary of 1980 High School Sophomores 12 years later*. Washington, DC: U.S. Department of Education, National Center for Education Statistics.

attained at least a bachelor's degree nearly doubled to 15 percent for the 2002 10th graders in ELS. As noted above, some of the increase in educational attainment between 1988 8th graders and 2002 10th graders may be related to the fact that the NELS:88 sampled cohort was younger than the ELS:2002, and consequently had two additional years to potentially drop out of high school. This difference would downward bias bachelor's degree completion rates compared with a study (like ELS:2002) that had an older entering cohort. Census Bureau data show that high school non-completion rates are higher for those with lower incomes than for those with higher incomes. Thus, this caution may be more applicable for understanding trends over time in completion rates for the lowest quartile than the highest quartile.¹²⁰

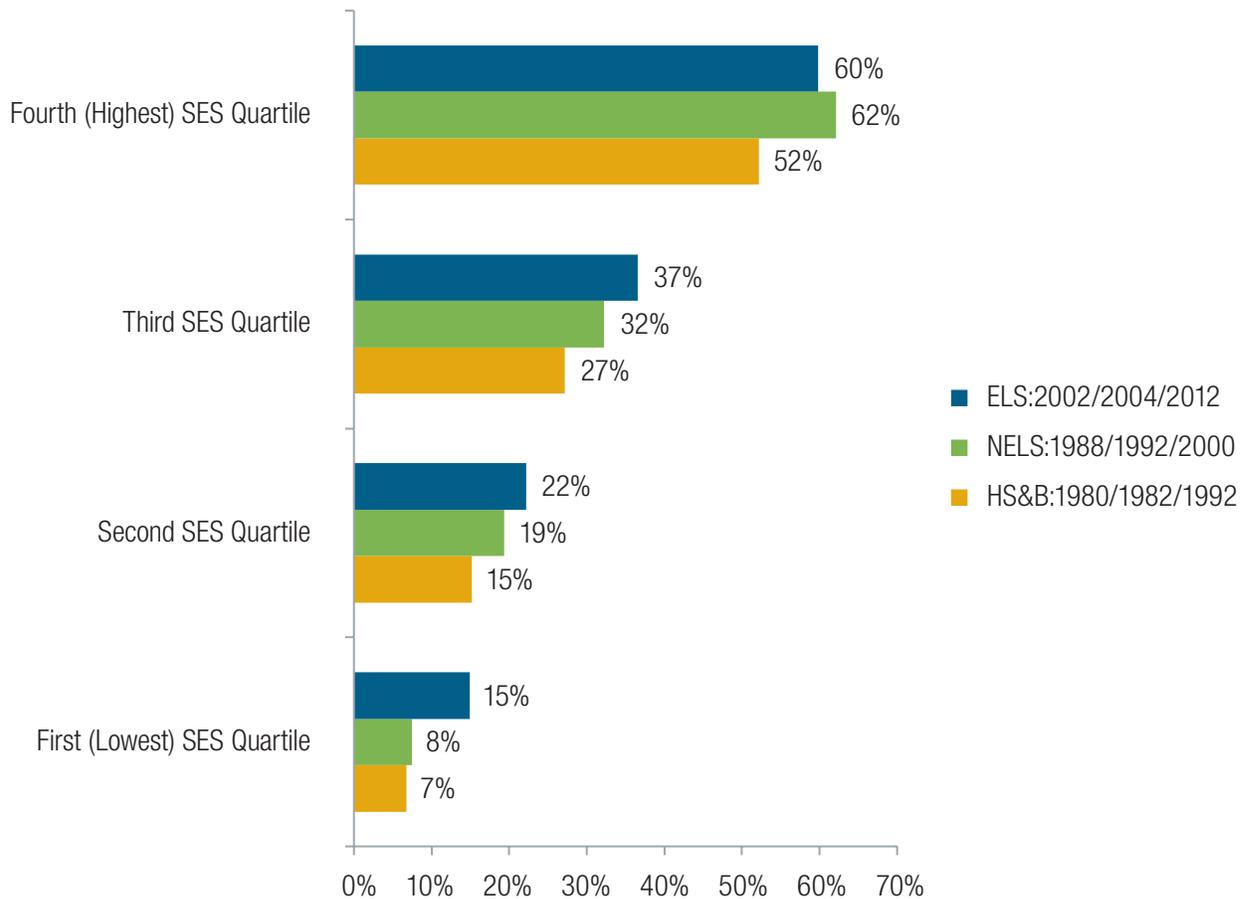
Over the three study periods, the highest SES quartile has shown less variability in high school dropout rates and less gain in both high school and bachelor's degree completion rates than the bottom three SES quartiles. For youth in the highest SES quartile, the percentages attaining at least a bachelor's degree within 8 or 10 years of expected high school graduation were similar in the two most recent studies (62 percent for NELS and 60 percent for ELS), but higher than the earlier study (52 percent for HS&B).

Bachelor's degree attainment rates also increased across the three cohorts for youth in the middle SES quartiles. Attainment rates for youth in the second SES quartile increased from 15 percent in the HS&B:1980 cohort, to 19 percent in the NELS:88 cohort, to 22 percent in the ELS:2002 cohort. For those in the third SES quartile, bachelor's degree attainment rates increased over the three studies (27 percent, to 32 percent, to 37 percent).

Although differing in methods, time periods, and populations measured, estimates of the differences in bachelor's degree attainment of the highest and lowest quartiles in the NCES longitudinal studies show correspondence with the CPS data shown in Indicator 5a(i). Equity Indicator 5b shows that, for the ELS:2002 cohort, 10th graders from the highest SES quartile were about 4 times as likely to attain a bachelor's degree within 8 years of expected high school graduation as 10th graders from the lowest SES quartile (60 percent vs. 15 percent). For the earlier HS&B:80 sophomore cohort, 10th graders in the highest SES quartile were 7.4 times as likely to attain at least a bachelor's degree within 10 years of their scheduled high school graduation as students from the lowest SES quartile (52 percent versus 7 percent).

120 Although SES and income are different measures, family income is one component of the SES-derived variable from the NCES high school longitudinal studies (the other components are parents' education and occupation). In the high school longitudinal studies, there is a high degree of overlap between the distributions for SES and income within the samples. Parental education has generally been found to be more highly associated with educational attainment than parental income. See Cahalan, M., & Maxwell, J. (2007). *Exploring Demographic and Selected State Policy Correlates of State Level Educational Attainment and Achievement Indicators*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL. Retrieved from <https://www.slideshare.net/chearsdotorg/exploring-demographic-and-selected-state-policy-correlates-of-state-level-educational-attainment-and-achievement-indicators-aera2007-cahalan>.

Equity Indicator 5b: Percentage of youth attaining a bachelor's degree or higher within 8 or 10 years of expected high school graduation by parents' socioeconomic status (SES) quartile: 10th grade cohort from HS&B 1980; 8th grade cohort from NELS 1988; 10th grade cohort from ELS 2002



Indicator Status: High Inequality and Persisting Gap

For the ELS:2002 cohort, 10th graders from the highest SES quartile were 4 times as likely to attain a bachelor's degree within 8 years of expected high school graduation as 10th graders from the lowest SES quartile (60 percent vs. 15 percent). The magnitude of the gap in attainment between the highest and lowest SES quartiles for the 2002 10th grade cohort (45 percentage points) was the same as for the HS&B 1980 10th grade cohort (45 percentage points).

NOTE: Comparisons across surveys are limited due to differences in survey methods, as described in the text.

SOURCE: U.S. Department of Education, National Center for Education Statistics, High School and Beyond (HS&B:1980-class of 1982-1992 follow-up), National Education Longitudinal Study (NELS:1988-class of 1992-2000 follow-up), and Educational Longitudinal Study (ELS:2002-class of 2004-2012 follow-up). Data tabulated using NCES Data Analysis System (DAS).

Equity Indicator 5c(i) and 5c(ii): What Percentage of Beginning First-Time Postsecondary Students Complete Bachelor's Degrees?

Whether first enrolling in a 4-year or 2-year postsecondary institution, most students report aspiring to obtain a bachelor's degree.¹²¹ Equity Indicator 5c(i) and 5c(ii) describe the percent of students who first enrolled in a 4-year or 2-year postsecondary institution who earned a bachelor's degree within 5 or 6 years of initial enrollment by dependency status and for dependent students by family income quartile.¹²²

Data for both Indicators are from four waves of NCES's longitudinal Beginning Postsecondary Studies (BPS). These surveys track students who first enrolled in academic years 1989-90, 1995-96, 2003-04, and 2011-12 through the follow-up studies conducted in 1994, 2001, 2009, and 2017 respectively. The 1989-90 cohort follow-up was after 5 years and the other cohorts after 6 years. Hence, we would expect lower rates of completion reported for the 1989-90 BPS cohort than the later cohorts. This is especially the case for independent students who have much higher rates of part-time enrollment (see Equity Indicator 1k(vi)).

Bachelor's Degree Completion of Beginning Postsecondary Students by Dependency Status. As shown in Equity Indicator 5c(i), the bachelor's degree completion rates after 5 or 6 years are higher for dependent students than independent students in each of the BPS cohorts. Excluding the rates from the 5-year follow-up for the 1989-90 cohort, rates for dependent students have ranged from 40 percent in the 1995-96/2001 cohort to 45 percent in the 2011-12/2017 cohort. Over the same period, rates for independent students have ranged from 12 percent for the 1995-96/2001 cohort to 21 percent for the 2011-12/2017 cohort. There is a small amount of increase in independent students' bachelor's completion rates over the three cohorts measured after 6 years (12 percent for students followed in 2001, 15 percent for students followed in 2009, and 21 percent for students followed in 2017).

Bachelor's Degree Completion for Dependent Students by Parent's Family Income. Equity Indicator 5c(ii) shows bachelor's degree completion for dependent students by family income quartiles for the four BPS cohorts. The share of dependent students who completed a bachelor's degree within 5 or 6 years of initial enrollment increases with family income quartile for all cohorts represented. For the cohort of dependent students who first enrolled in 2011, the percentage who completed at least a bachelor's degree within 5 or 6 years of enrolling increased from 26 percent for those in the lowest income quartile, to 36 percent in the second quartile, 49 percent in the third quartile, and 69 percent in the highest quartile. The percentage of dependent students who completed a bachelor's degree or higher from the lowest income quartile remained relatively unchanged over the four years represented, ranging from 26 percent to 28 percent for all four cohorts. Among the second quartile, there was little change (31 percent for those who enrolled in 1989-90; 33 percent for those who enrolled in 1995-96, 37 percent for those who enrolled in 2003-04, and 36 percent for those enrolled in 2011-12).

The third and fourth quartiles showed more substantial change, with the largest increases in the highest quartile of family income. For dependent students in the third family income quartile, the percentages obtaining a bachelor's degree increased from 36 percent for those who entered in 1989-90, 41 percent for those who first

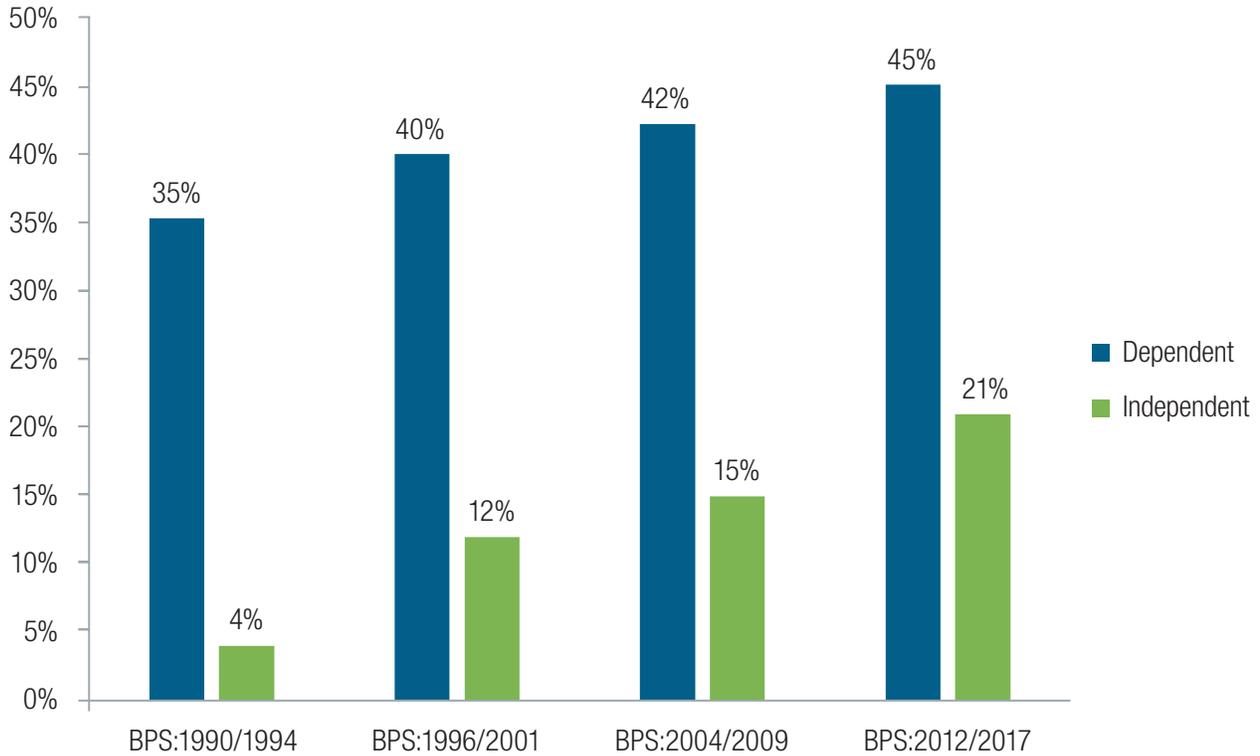
121 For example, data from ELS:2002 show that 80 percent of all high school students, and 60 percent of those in the lowest SES quartile, hoped to obtain a bachelor's degree or higher. See Cahalan, M., Ingels, S., Burns, L., & Planty, M. (2006). *United States High School Sophomores: A Twenty-two Year Comparison, 1980–2002: Statistical Analysis Report* (NCES 2006–327). Washington, DC: U.S. Department of Education. Retrieved from <http://files.eric.ed.gov/fulltext/ED493609.pdf>. Similarly, data from The Condition of College and Career Readiness 2014 by ACT indicate that 80 percent of first-generation college students expect to obtain a bachelor's degree or higher. Retrieved from <https://www.act.org/content/dam/act/unsecured/documents/CCCR14-NationalReadinessRpt.pdf>.

122 BPS data included in these tabulations include full and part-time first-time enrollees in 4-year and 2-year institutions. The BPS series also includes students beginning at less than 2-year institutions. Those enrolling in less than 2-year institutions were not included in these tabulations. Income quartile disaggregation of data by family income quartile is for dependent students only using parents' income. We did tabulations using NCES PowerStats for independent students by student income quartiles including spouse's income but did not include them due to lack of meaningful variation in the income quartiles and cautions on data use.

entered in 1995-96, 44 percent for those who first entered in 2003-04, and was 49 percent for those who entered in 2011-12. Within the highest income quartile, the percentage of dependent students obtaining a bachelor's degree increased substantially, from 49 percent for those who entered in 1989-90, to 57 percent for those who entered in 1995-96, to 58 percent for those who entered in 2003-04, and was 69 percent for the most recent BPS cohort entering in 2011-12.

Indicator 5c(ii) also shows that the difference in 5- or 6-year bachelor's degree completion rates between dependent students in the lowest and highest family income quartiles increased from 29 percentage points for those first enrolling in 1995-96 (28 percent versus 57 percent) to 43 percentage points for those first enrolling in 2011-12 (26 percent vs. 69 percent).

Equity Indicator 5c(i): Percentage of first-time students who obtained a bachelor's degree or higher within 5 or 6 years of first enrolling in a 4-year or 2-year institution by dependency status: BPS:1989-90 (1994 follow-up), BPS:1995-96 (2001 follow-up), BPS:2003-04 (2009 follow-up), and BPS:2011-12 (2017 follow-up)



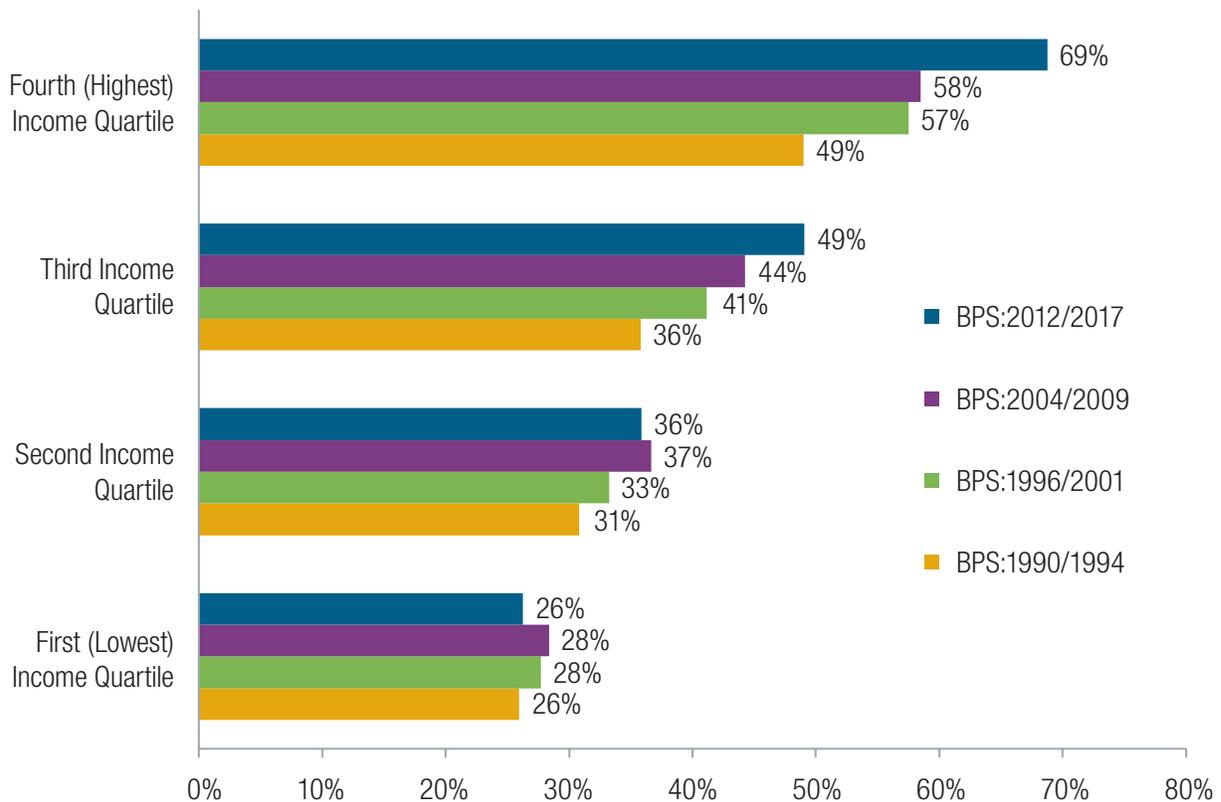
Indicator Status: High Inequality in Completion Rates Between Dependent and Independent Students

Independent students had lower rates of bachelor's degree completion than dependent students in all years represented. Rates of completing at least a bachelor's degree within 5 or 6 years were more than twice as high for dependent students as independent students.

NOTE: BPS: 1989-90/1994 follow-up was conducted after 5 years rather than 6 years after entrance, and some of the differences observed in bachelor's degree attainment rates reflect an earlier follow-up date.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Beginning Postsecondary Students Longitudinal Studies (BPS:1989-90/1994; BPS:1995-96/2001; BPS:2003-04/2009; BPS:2011-12/2017). Tabulated using NCES PowerStats. See also Radford, A., Berkner, L., Wheelless, S., & Shepherd, B. (2010). *Persistence and Attainment of 2003-04 Beginning Postsecondary Students: After 6 Years*. Washington, DC: U.S. Department of Education, National Center for Education Statistics.

Equity Indicator 5c(ii): Percentage of dependent first-time students who obtained a bachelor's degree or higher within 5 or 6 years of first enrolling in a 4-year or 2-year postsecondary institution by parents' family income quartile: BPS:1989-90 (1994 follow-up), BPS:1995-96 (2001 follow-up), BPS:2003-04 (2009 follow-up), and BPS:2011-12 (2017 follow-up)



Indicator Status: High and Increasing Inequality

The family income gap in completion among enrolled dependent students has risen over time. Bachelor's degree completion rates for the 2011-12/2017 cohort were 43 percentage points less in the lowest than the highest family income quartile (26 percent vs. 69 percent). Among the 1989-90/94 cohort, there was a gap of 23 percentage points (26 percent vs. 49 percent).

NOTE: Income quartiles are based on applicable BPS sample parents' income at the start of the NPSAS study. For example, dependent BPS:2012 parent income levels by quartile were as follows: Lowest, less than \$30,000; Second, \$30,000-\$63,499; Third, \$63,500-\$106,999; Highest, \$107,000 or more. The BPS:2012 quartiles reflect 2012 parent family incomes for the first-time, college-going population entering in 2011-12, and thus are not comparable to the CPS income distribution. CPS reflects the income distribution of families of 18- to 24-year-olds for the entire nation for the year specified.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Beginning Postsecondary Students Longitudinal Studies (BPS:1989-90/1994; BPS:1995-96/2001; BPS:2003-04/2009; BPS:2011-12/2017). Tabulated using NCES PowerStats. See also Radford, A., Berkner, L., Wheelless, S., & Shepherd, B. (2010). *Persistence and Attainment of 2003-04 Beginning Postsecondary Students: After 6 Years*. Washington, DC: U.S. Department of Education, National Center for Education Statistics.

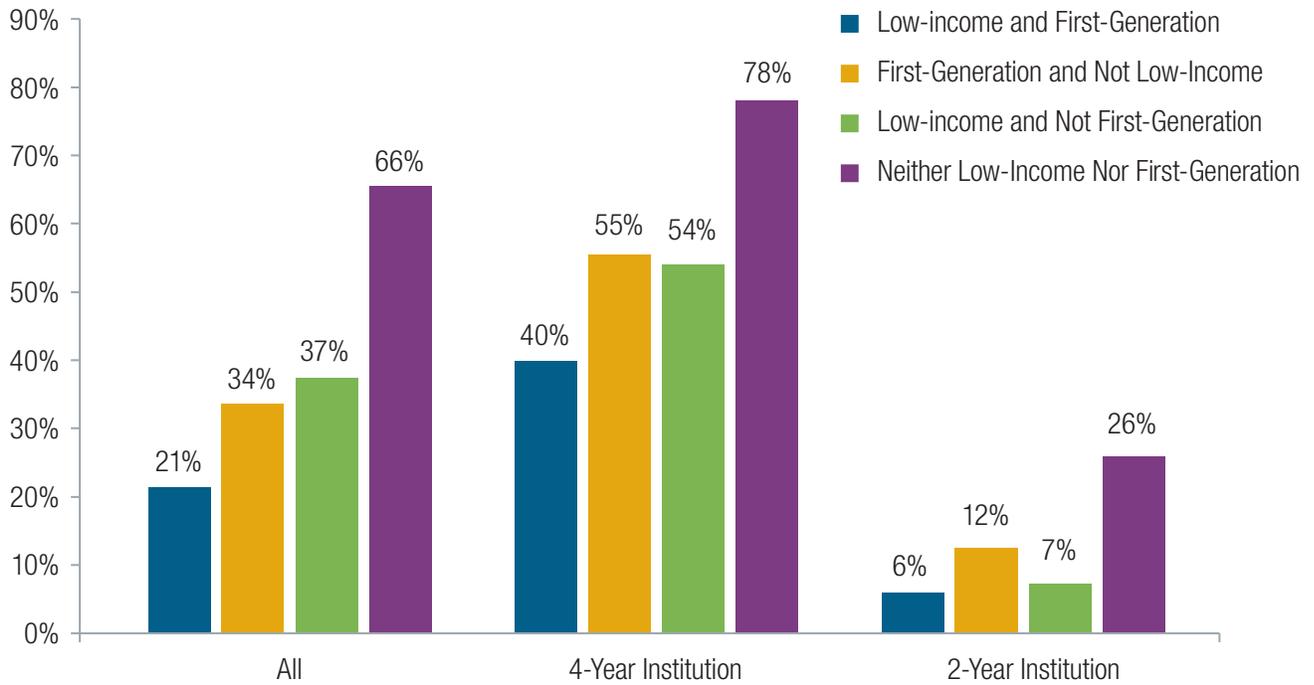
Equity Indicator 5c(iii): What Percentage of Beginning First-Time TRIO Eligible and Non-TRIO-Eligible Students Complete Bachelor's Degrees within 6 Years?

Using data from the 2017 follow-up of the 2011-12 Beginning Postsecondary Students (BPS:2012/2017) study, Indicator 5c(iii) shows rates of completing a bachelor's degree within 6 years of first enrolling in a 2-year or 4-year institution based on eligibility for Federal TRIO programs. Dependent students are classified as to whether they would qualify for the Federal TRIO programs based on their parents' income and first-generation college status. Income thresholds for TRIO eligibility are established by law and reflect an adjusted income that is at or below 150 percent of the federal poverty level. First-generation is defined as neither parent nor guardian having attained a bachelor's degree. Eligibility requirements vary by TRIO program, but for most TRIO programs, two-thirds of participants must be both low-income and first-generation, or students with disabilities. The other one-third must be either low-income or first-generation.

Indicator 5c(iii) shows that 6-year bachelor's degree completion rates for dependent students who first enrolled in a 4-year or 2-year institution in 2011-12 ranged from 21 percent for beginning postsecondary students who were both low-income and first-generation to 66 percent among students who were neither low-income nor first-generation. Dependent students who were first-generation but not low-income had a bachelor's degree completion rate of 34 percent, while students who were low-income and not first-generation had a bachelor's degree completion rate of 37 percent.

Indicator 5c(iii) also shows that dependent students who first enrolled at a 2-year institution were less likely to obtain a bachelor's degree in 6 years than students who first enrolled in a 4-year institution regardless of family income and first-generation status. For both those who first enrolled in a 2-year institution and those who first enrolled in a 4-year institution, dependent students who were neither low-income nor first-generation college had higher rates of obtaining a bachelor's degree in 6 years than students who were both low-income and first-generation (78 percent versus 40 percent for those who first enrolled in a 4-year institution; 26 percent versus 6 percent for those who first enrolled in a 2-year institution).

Equity Indicator 5c(iii): Percentage of dependent students who first enrolled in a postsecondary education institution in academic year 2011-12 who completed a bachelor's degree or higher within 6 years, by low-income and first-generation status and institutional level of initial enrollment: 2012/17



Indicator Status: High Inequality

Among dependent students who first enrolled in 2011-12, 6-year bachelor's degree completion rates were 45 percentage points lower for those who were both low-income and first-generation than for those who were neither low-income nor first-generation (21 percent versus 66 percent). This pattern holds for dependent students regardless of whether they first entered 2-year or 4-year institutions.

NOTE: For this classification, TRIO eligibility criteria were used. TRIO income thresholds are established by law and are set at an adjusted income at or below 150 percent of the federal poverty line. First-generation is defined as neither parent nor guardian having attained a bachelor's degree. In any given year, TRIO programs serve less than 5 percent of eligible low-income and first-generation students. See Equity Indicator 7 for more details on the TRIO programs.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2012/17 Beginning Postsecondary Students Longitudinal Study. Tabulated using NCES PowerStats.

Equity Indicator 5c(iv) and 5c(v): What Was the Enrollment and Completion Status of Students 4 and 6 Years After First Enrolling?

Equity Indicator 5c(iv) reports enrollment and degree completion status for dependent and independent students who first enrolled in a 2- or 4-year institution in 2011-12. This indicator uses data from the 4-year (2015) and 6-year (2017) follow-ups for the BPS:2011-12/17. Indicator 5c(v) disaggregates enrollment and degree completion status by family income for dependent students for the 6-year follow-up in 2017.

Enrollment and Completion by Dependency Status. Indicator 5c(iv) shows that, 4 years after first enrolling, 32 percent of dependent students and 6 percent of independent students had attained a bachelor's degree. Two years later, at the 6-year follow-up, 45 percent of dependent and 9 percent of independent students had completed a bachelor's degree.

Six years after first enrolling, 60 percent of dependent students and 38 percent of independent students had attained some form of a postsecondary credential or degree. An additional 12 percent of dependent students and 13 percent of independent students had not obtained a credential or degree but were still enrolled.

About half (49 percent) of independent students had not completed a degree or certificate and were not enrolled 6 years after first enrolling, compared with 27 percent of dependent students.

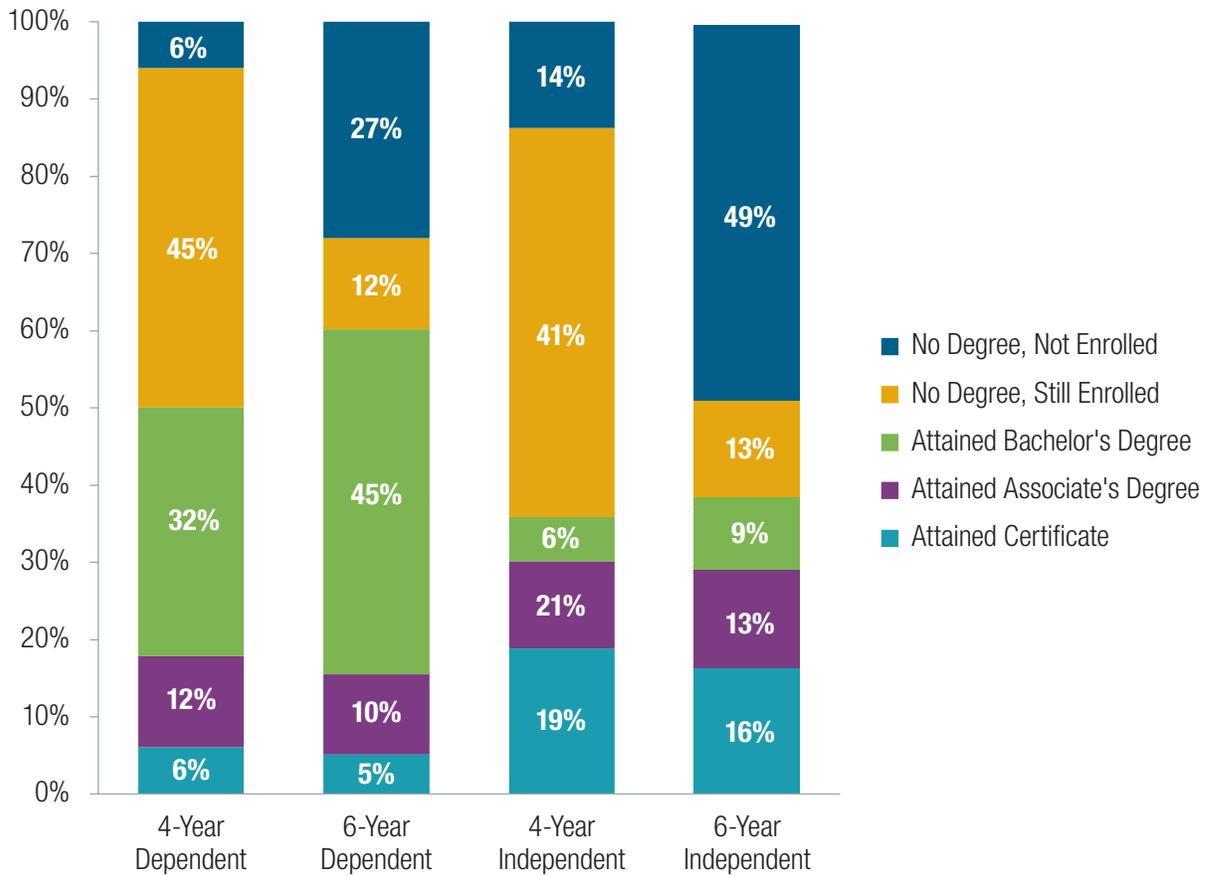
Independent students have higher rates of completing associate's degrees and certificates than dependent students at the 4-year and 6-year follow-ups. Four years after first enrolling, 40 percent of independent students had completed an associate's degree or certificate compared with 18 percent of dependent students. Six years after first enrolling, 15 percent of dependent students and 29 percent of independent students reported an associate's degree or certificate as their highest degree completed.¹²³

Enrollment and Completion for Dependent Students by Parent's Family Income. Indicator 5c(v) shows enrollment and degree completion status 6 years (2017) after dependent students first enrolled in 2011-12 by family income quartile. Completion rates for any credential within 6 years are strongly related to parent family income level, ranging from 46 percent for those in the lowest income quartile, to 77 percent for the highest quartile. Bachelor's degree completion rates ranged from 26 percent for the lowest quartile to 69 percent for the highest quartile.

The percent of dependent students with no degree or credential and not enrolled 6 years after first enrolling was almost 40 percent (39 percent) for those in the lowest income quartile, 30 percent for those in the second income quartile, 24 percent for those in the third highest quartile, and 14 percent for those in the highest quartile.

123 Because a portion of independent and dependent students who reported completion of an associate's degree at the 4-year follow-up were working on a bachelor's degree, the percentage reporting associate or certificate award as their highest degree completed declined between the 4-year and 6-year follow-up.

Equity Indicator 5c(iv): Enrollment and degree status by 2015 (4-year follow-up) and 2017 (6-year follow-up) of students who first enrolled in a 4-year or 2-year institution in 2011-12 by dependency status



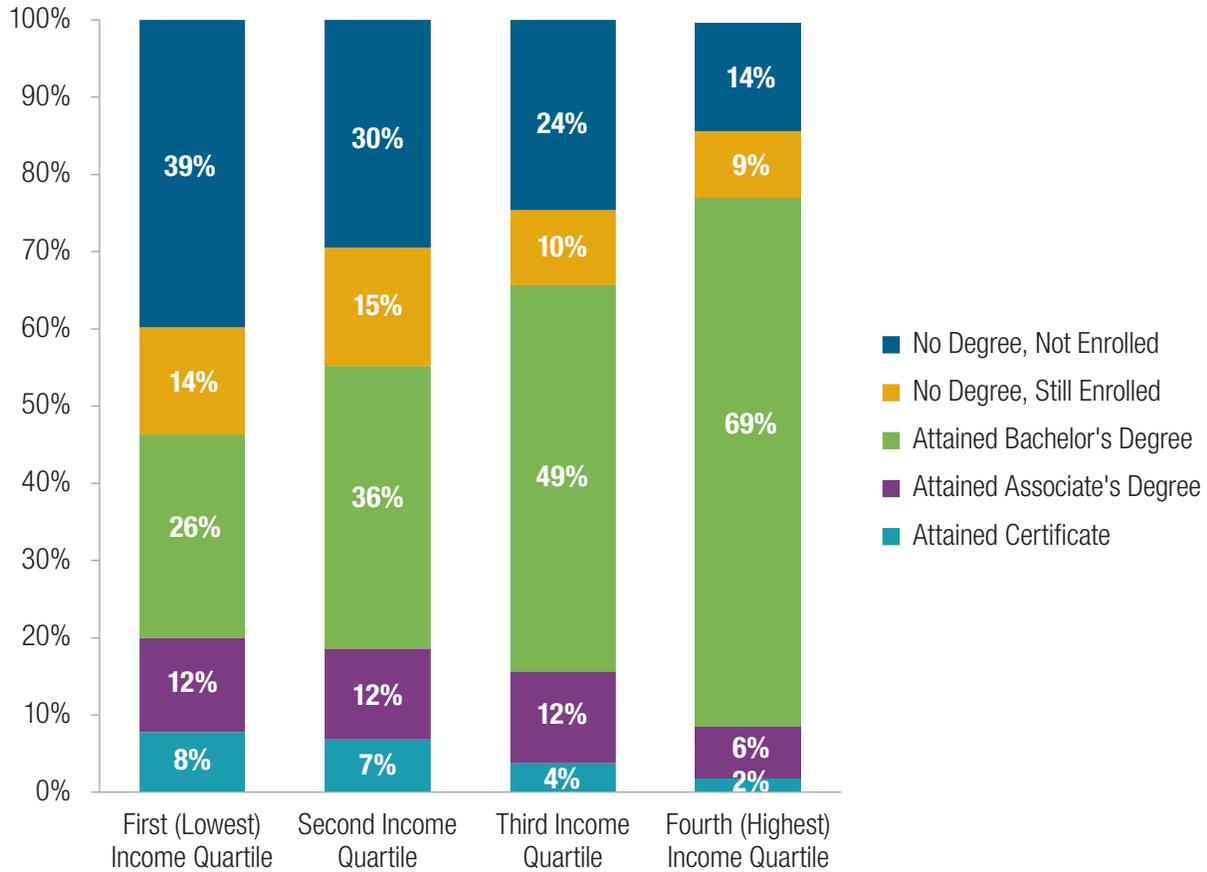
Indicator Status: High Inequality

Four years after first enrolling, 32 percent of dependent students and 6 percent of independent students had attained a bachelor's degree. Six years after first enrolling, 45 percent of dependent and 9 percent of independent students had completed at least a bachelor's degree.

NOTE: Because a portion of both independent and dependent students who reported completion of an associate's degree at the 4-year follow-up were working on a bachelor's degree, the percentage reporting completion of an associate degree or certificate declined between the 4-year and 6-year follow-ups.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2012/17 Beginning Postsecondary Students Longitudinal Study. Tabulated using NCES PowerStats.

Equity Indicator 5c(v): Enrollment and degree status by 2017 (6-year follow-up) of dependent students who first enrolled in a 4-year or 2-year institution in 2011-12 by family income quartile



Indicator Status: High Inequality

The percent of dependent students who completed at least a bachelor's degree within 6 years of first enrolling in 2011-12 was 26 percent for those in the lowest income quartile, compared with 69 percent for those in the highest income quartile.

NOTE: Income quartiles are based on parents' income at the start of the NPSAS study from which the BPS sample is drawn. Dependent BPS:2012 parent income levels by quartile were as follows: Lowest, less than \$30,000; Second, \$30,000-\$63,499; Third, \$63,500-\$106,999; Highest, \$107,000 or more.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2012/17 Beginning Postsecondary Students Longitudinal Study. Tabulated using NCES PowerStats.

Equity Indicator 5d(i) and 5d(ii): What is the Distribution of Degrees Awarded to U.S. Citizens by Race and Ethnicity?

Indicator 5d uses data from the Integrated Postsecondary Education Data System (IPEDS) on degrees conferred to U.S. citizens by race/ethnicity in 1980 and 2019. We compare the distribution of the total civilian population and the 18- to 24-year-old population in the same years. Indicator 5d(i) examines associate's and bachelor's degrees conferred, and Indicator 5d(ii) examines master's and doctoral degrees conferred.

Race and ethnicity are dynamic classifications, and changes in racial/ethnic classification over time should be considered when interpreting these data, especially for relatively small population categories such as American Indian/Alaska Natives and Asian and Pacific Islanders. The statistics are also impacted by the introduction of the "Two or More Races" category, a category that was not present in the 1980 classifications. Race/ethnicity classifications are self-reported using varying categories in the data collection instruments, and some change in distribution of degrees by race/ethnicity over time may be attributable to differences in population self-identifications as well as changes in the categories used in data collection instruments.

As Indicators 5d(i) and 5d(ii) indicate, the U.S. population distribution has undergone considerable demographic change since 1980. Younger individuals represent a higher share of the Black and Hispanic populations than of the White population. In 1980, Whites were 80 percent of the total population (and 77 percent of 18- to 24-year-olds). Blacks were 12 percent of the total (and 13 percent of 18- to 24-year-olds). Hispanics were 7 percent of the total (and 8 percent of 18- to 24-year-olds). Asian/Pacific Islanders were 2 percent of the total (and 2 percent of 18- to 24-year-olds). American Indian/Alaska Natives were about 0.6 percent of the total (and 0.7 percent of 18- to 24-year-olds).

By 2019, Whites were 60 percent of the total population and 53 percent of those age 18 to 24. Blacks were 13 percent of the total population and 14 percent of those age 18 to 24. Hispanics were 19 percent of the total population and 23 percent of those age 18 to 24. The Asian category was 6 percent of both the civilian population and the population age 18 to 24. American Indian/Alaska Natives were 0.7 percent of the total population and 0.8 percent of those age 18 to 24.¹²⁴

Bearing in mind cautions associated with changes in classifications, Indicator 5d suggests some progress as well as the need for more improvement in aligning the racial/ethnic representation of degree recipients with that of the total population and the population age 18 to 24.¹²⁵ In 1980, Blacks were about 12 percent of the total U.S. civilian population and 13 percent of the 18- to 24-year-old population, yet attained 9 percent of associate's degrees, 7 percent of bachelor's degrees, 6 percent of master's degrees, and 4 percent of doctoral degrees. Thus, Blacks were 68 percent as likely to have parity with the population age 18 to 24 among associate's degree recipients, about half (52 percent) as likely to be represented among bachelor's degree recipients, about half (49 percent) as likely to have obtained a master's degree, and about a third (33 percent) as likely to have obtained a doctoral degree relative to their representation in the U.S. population age 18 to 24.

By 2019, Blacks were closer to parity in the percentage of degrees earned but continued to be underrepresented relative to their representation in the population. In 2019, Blacks were 14 percent of the population age 18 to 24 but received 12 percent of associate's degrees (88 percent parity), 10 percent of bachelor's degrees (73 percent of parity), 13 percent of master's degrees (95 percent parity), and 9 percent of doctoral degrees (65 percent of parity).

124 In 2019, but not 1980, Native Hawaiian and Other Pacific Islanders were classified separately from the Asian population by the Census Bureau and were 0.2 percent of the U.S. population.

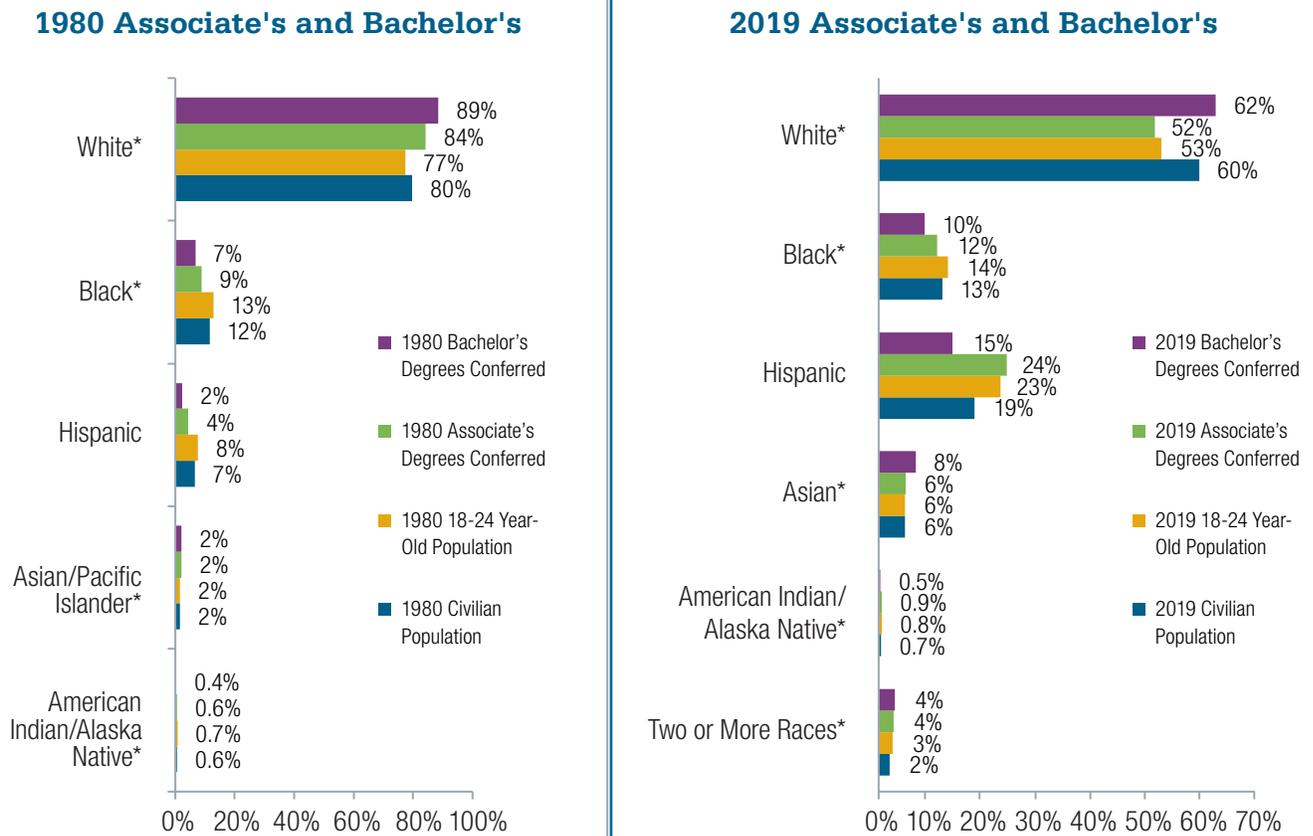
125 Caution is needed in these comparisons, due to changes in the race and ethnicity classifications over time, such as the separation of Hispanics from race/ethnicity classifications and the introduction of the "Two or More Races" category. NCES has data on degrees conferred dating from 1976. Data identifying those of Hispanic origin were not available until 1980. The category "Two or More Races" was not used until 2010 following new OMB regulations.

In 1980, those of Hispanic origin represented 7 percent of the total civilian population and 8 percent of the population age 18 to 24, yet they received 4 percent of associate's degrees and 2 percent of bachelor's, master's and doctoral degrees conferred. By 2019, Hispanics were about 19 percent of the civilian population and 23 percent of those age 18 to 24 and received 24 percent of associate's degrees (107 percent of parity relative to the population age 18 to 24); 15 percent of bachelor's degrees (65 percent of parity), 11 percent of master's degrees (50 percent of parity), and 9 percent of doctoral degrees (38 percent of parity).

In 1980, those of Asian/Pacific Islander origin represented 2 percent of the total civilian population and 2 percent of persons age 18 to 24. In 1980 Asians received 2 percent each of the associate's, bachelor's, master's, and doctoral degrees conferred. By 2019, Asians represented 6 percent of the civilian population and the population age 18 to 24, and received 6 percent of associate's degrees (109 percent of parity), 8 percent of bachelor's degrees (141 percent of parity), 8 percent of master's degrees (129 percent of parity), and 13 percent of doctoral degrees (222 percent of parity).

In 2019, Whites remained overrepresented in degrees conferred relative to their representation in the total population (60 percent) and population age 18 to 24 (53 percent). Whites were awarded 52 percent of associate's degrees (99 percent of parity relative to population age 18 to 24), 62 percent of bachelor's degrees (117 percent of parity), 64 percent of master's degrees (121 percent of parity), and 66 percent of doctoral degrees (124 percent of parity).

Equity Indicator 5d(i): Distributions of associate's and bachelor's degrees conferred to U.S. citizens and distribution of the civilian population by race/ethnicity: 1980 and 2019



Indicator Status: Gains in Equity Since 1980

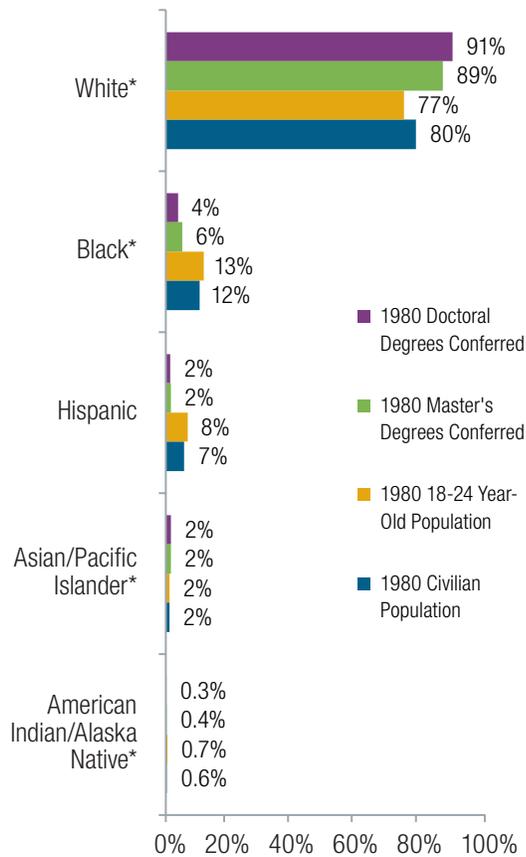
The representation of Blacks and Hispanics among degree recipients has increased since 1980, but Blacks and Hispanics continued to be underrepresented among degree recipients relative to their representation in the population.

NOTE: *The categories (White, Black, Asian/Pacific Islanders, American Indian/Alaska Native and "Two or More Races") exclude Hispanics. Race/ethnicity categories reflect the titles used at the time of reporting. Caution is warranted in interpreting this Indicator as categories for race and ethnicity classifications have changed over time. The category "Two or More Races" was not included in 1980. In 2019, in the population figures by the Census Bureau, Native Hawaiian and Other Pacific Islanders were classified separately from Asians and were 0.2 percent of the U.S. population. The inclusion of the "Two or More Races" category likely reduced the percent of persons who classified themselves as Black, American Indian/Alaska Native or Asian.

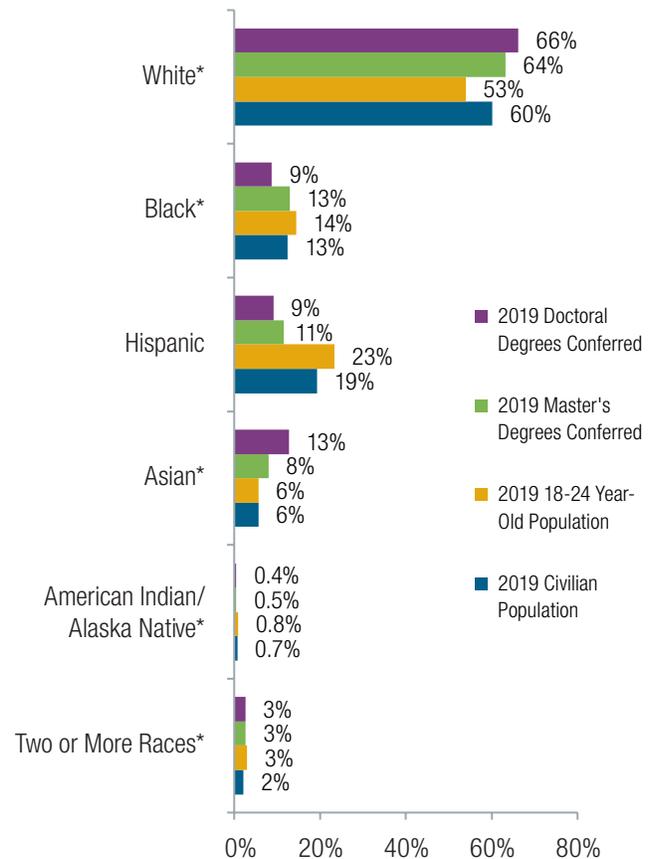
SOURCE: U.S. Department of Education, National Center for Education Statistics (2020). *Digest of Education Statistics 2020* [Table 101.20] [Table 321.20] [Table 322.20]. Retrieved from https://nces.ed.gov/programs/digest/2020menu_tables.asp. Hobbs, F., & Stoops, N. (2002). *Demographic Trends in the 20th Century*. Washington, DC: U.S. Census Bureau. Retrieved from <https://www.census.gov/prod/2002pubs/censr-4.pdf>, U.S. Census Bureau (n.d.). Quick Facts. Retrieved from <https://www.census.gov/quickfacts/fact/table/US/PST045218>.

Equity Indicator 5d(ii): Distributions of master's and doctoral degrees conferred to U.S. citizens and distribution of the civilian population by race/ethnicity: 1980 and 2019

1980 Doctoral and Master's Degrees



2019 Doctoral and Master's Degrees



Indicator Status: Gains in Equity Since 1980

The representation of Blacks and Hispanics among recipients of advanced degrees has increased since 1980, but Blacks and Hispanics continue to be underrepresented among degree recipients relative to their representation in the population.

NOTE: *The categories (White, Black, Asian/Pacific Islanders, American Indian/Alaska Native and Two or More Races) exclude Hispanics. Race/ethnicity categories reflect the titles used at the time of reporting. Caution is warranted in interpreting this Indicator, as categories for race and ethnicity classifications have changed over time. The category “Two or More Races” was not included in 1980. In 2019 Census Bureau data, Native Hawaiian and Other Pacific Islanders were classified separately from Asians and were 0.2 percent of the U.S. population. The inclusion of the “Two or More Races” category likely reduced the percent of persons who classified themselves as Black, American Indian/Alaska Native or Asian.

SOURCE: U.S. Department of Education, National Center for Education Statistics (2020). *Digest of Education Statistics 2020* [Table 101.20] [Table 323.20] [Table 324.20]. Retrieved from https://nces.ed.gov/programs/digest/2020menu_tables.asp. Hobbs, F., & Stoops, N. (2002). *Demographic Trends in the 20th Century*. Washington, DC: U.S. Census Bureau. Retrieved from <https://www.census.gov/prod/2002pubs/censr-4.pdf>, U.S. Census Bureau (n.d.). Quick Facts. Retrieved from <https://www.census.gov/quickfacts/fact/table/US/PST045218>.

Equity Indicator 5e (i-vii): What are the Differences in Post-Baccalaureate Enrollment and Employment Outcomes at 1-year after Degree Completion by Recipients' Characteristics?

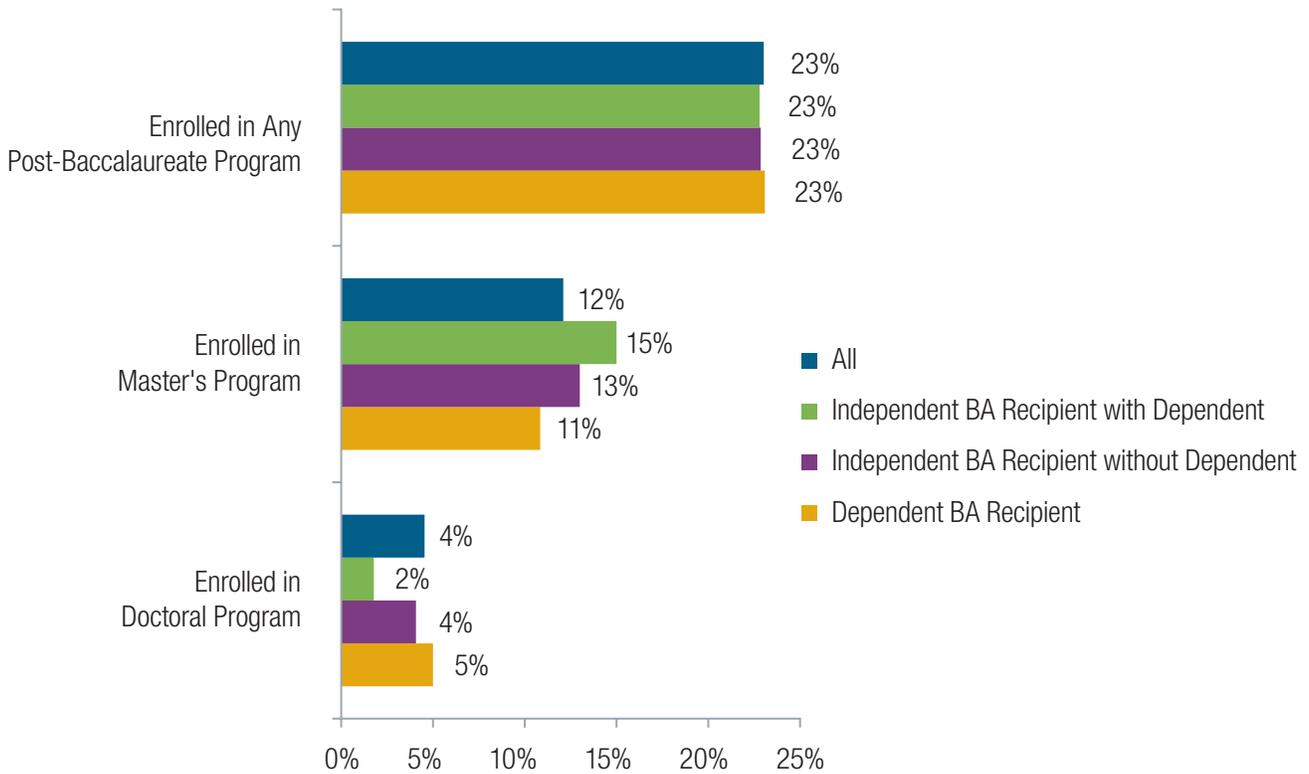
A new Baccalaureate and Beyond (B&B) cohort was drawn from the 2016 NPSAS. This sample was followed at 1-year after graduation in 2017.¹²⁶ Although the B&B is a stratified, nationally representative sample of graduating seniors, some caution is warranted when interpreting the data. Disaggregating the sample by multiple categories such as dependency status and race ethnicity increases sampling errors, especially for categories that have a small number of graduates.

Enrollment of in Post-baccalaureate Programs by Dependency Status. As displayed in Indicator 5e(i) overall, 23 percent of 2016 bachelor's graduates had enrolled in some form of a postbaccalaureate degree program by 1-year after obtaining a bachelor's degree. This includes, doctoral and master's programs, and those enrolled in various certificate and other programs. Overall, there were not significant variations by dependency status. Dependent students were slightly more likely to be enrolled in doctoral programs (5 percent for dependent, 4 percent for independent without dependent, and 2 percent for independent with dependent). Master's program enrollment was 11 percent for dependent graduates, 13 percent for independent without dependent and 15 percent for independents with dependents.

Enrollment in Post-baccalaureate Programs by Race/Ethnicity Status. As displayed in Indicator 5e(ii) Blacks or African American bachelor's degree awardees had the highest enrollment in further education within 12 months of being awarded their bachelor's degree. Over one-fourth (27 percent) of Black graduates had enrolled in some type of further schooling by 1-year after graduation. Asian graduates and graduates of More Than One Race were most likely to have enrolled in a doctoral degree or first professional degree programs by 1-year after bachelor's degree award. Rates of enrolling in doctoral programs within 1-year ranged from 6 percent for Asians and those of More than One Race to less than 1 percent for American Indian or Alaska Native graduates. Enrollment in a Master's program ranged from 17 percent for Blacks and American Indian or Alaska Natives, to 12 percent for Hispanics, and 10 percent for Asians.

¹²⁶ The data was released publicly on NCES PowerStats in December 2019. The 4-Year follow-up is being conducted in 2021.

Equity Indicator 5e(i): Percentage of 2016 bachelor's degrees completers who had enrolled in graduate school or other further schooling programs by 1-year after graduation (2017) by dependency status: Baccalaureate and Beyond Longitudinal Study (B&B 2016/2017).



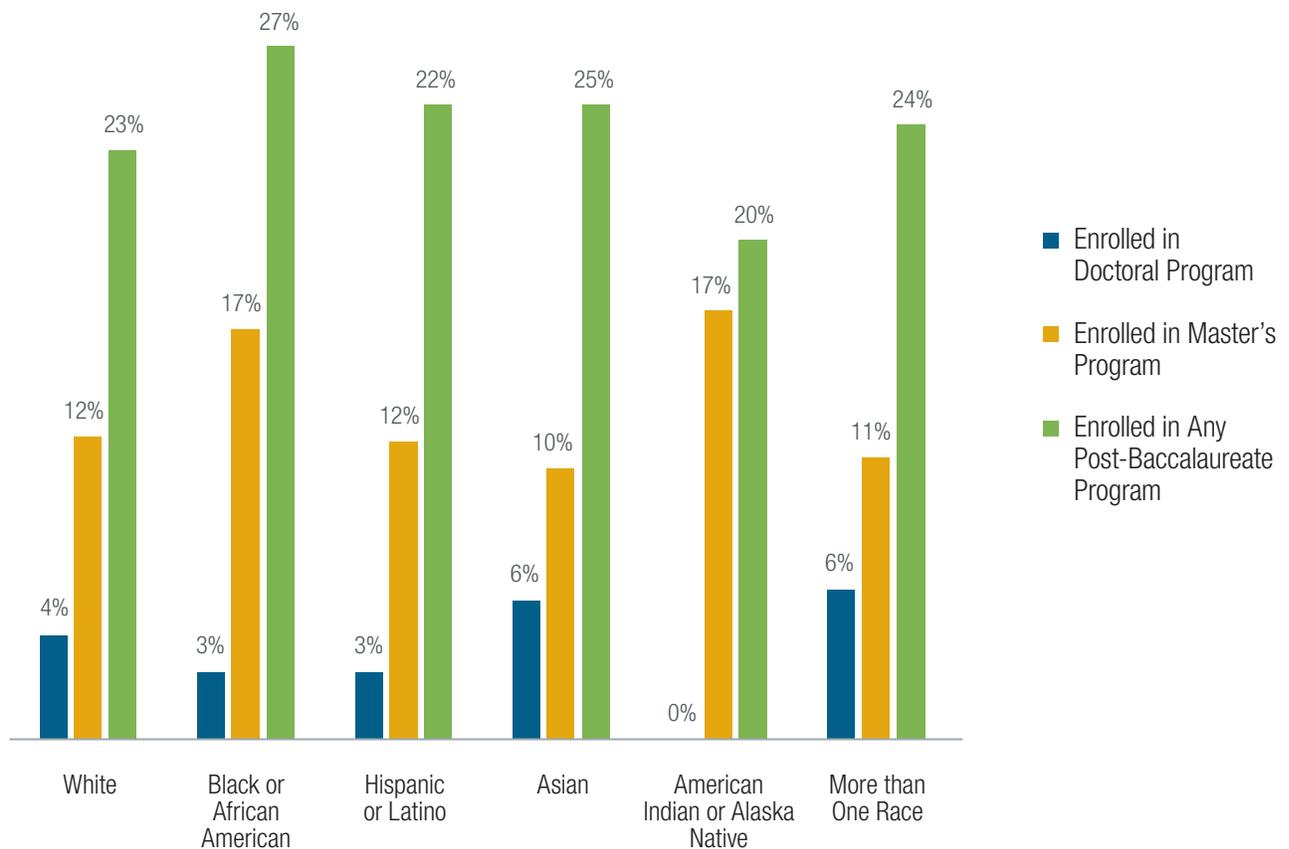
Indicator Status:

Although bachelor's completion rates are much lower for independent students, there is little variation by dependency status in enrolling in graduate or other further schooling after bachelor's degree attainment by 1 year after graduation. Independent bachelor's degree recipients with dependents were more likely to enroll in a master's rather than a doctoral or first professional degree program.

NOTE: In addition to master's and doctoral programs, "Enrolled in Any Program" also includes a small percentage of individuals enrolled in other programs (associate's degree, undergraduate certificate, additional bachelor's degree, and post-bachelor's certificate).

SOURCE: U.S. Department of Education, National Center for Education Statistics, Baccalaureate and Beyond Longitudinal Study (B&B 2016/2017). Tabulated using NCES PowerStats.

Equity Indicator 5e(ii): Percentage of 2016 bachelor's degrees completers who had enrolled in graduate school or other post-baccalaureate programs by 1-year after graduation (2017) by race/ethnicity: Baccalaureate and Beyond Longitudinal Study (B&B 2016/2017)



Indicator Status:

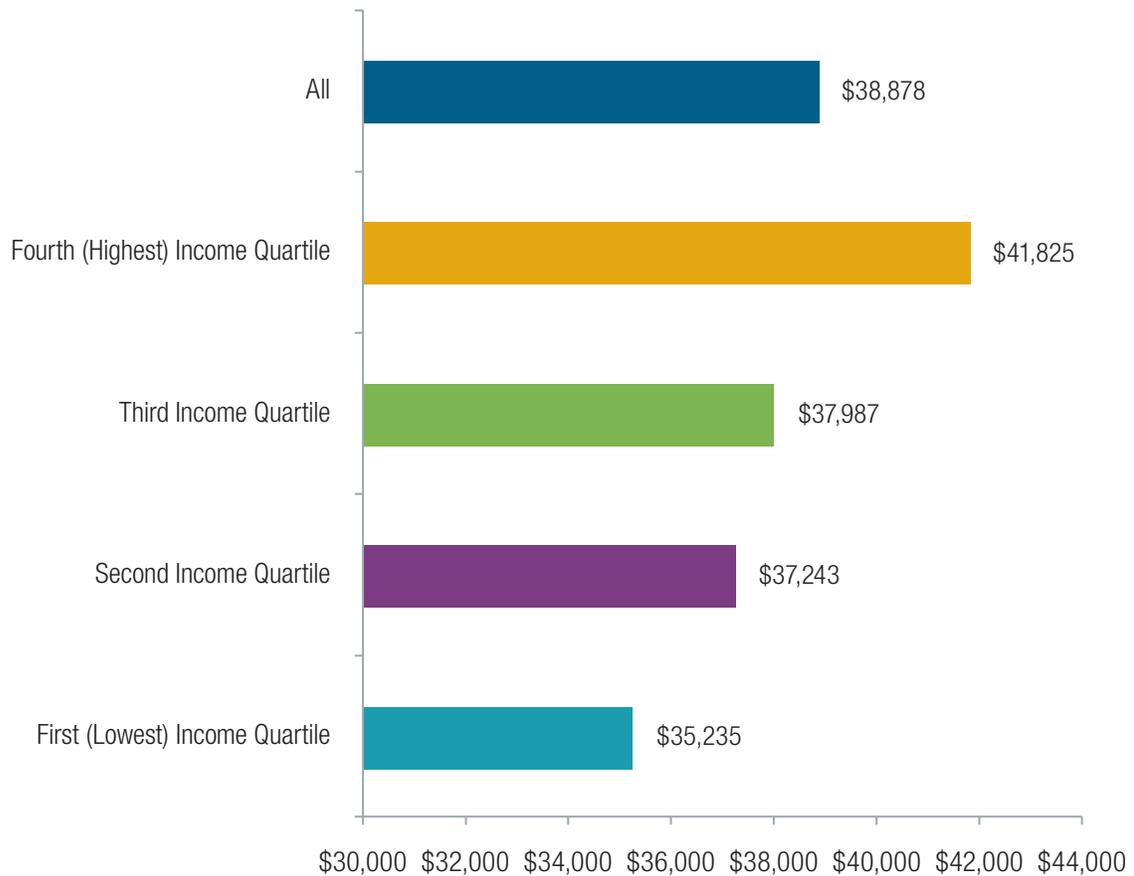
Blacks or African American bachelor's degree awardees had the highest enrollment in advanced education within 12 months of being awarded their bachelor's degree. Over one-fourth (27 percent) of Black graduates had enrolled in some type of postbaccalaureate program by 1 year after graduation.

NOTE: 0% means less than 1 percent. In addition to master's and doctoral programs, "Enrolled in Any Program" also includes individuals enrolled in other programs (associate's degree, undergraduate certificate, additional bachelor's degree, and post-bachelor's certificate).

SOURCE: U.S. Department of Education, National Center for Education Statistics, Baccalaureate and Beyond Longitudinal Study (B&B 2016/2017). Tabulated using NCES PowerStats.

Annualized Income by the 1-Year Follow-Up. Indicator 5e(iii) displays average annualized income in 2017 for 2016 bachelor's degree recipients who were dependent students by parents' income quartile in 2019 constant dollars. The average annualized income reported in Indicator 5e(iii) excludes those who were enrolled in any educational program and includes those who were employed full-time or part-time having one job or more in 2017, 1 year after graduation. The average annualized income in 2019 constant dollars for dependent bachelor's degree recipients from the lowest family income quartile was \$6,500 lower (16 percent) than bachelor's degree recipients from the highest family income quartile (\$35,235 vs. 41,825). There was, however, little difference in average annualized income between bachelor's degree recipients from the third and second family income quartiles (\$37,987 and \$37,243). The mean annualized income for all dependents graduates 1 year after graduation was \$38,878.

Equity Indicator 5e(iii): Average annualized income for dependent students who received bachelor's degrees in 2016 who were not enrolled in education and who were employed at the 1-year follow-up in 2017 by parents' income quartile (in 2019 constant dollars)



Indicator Status:

Average annualized income 1 year after bachelor's degree attainment was about \$6,500 (16 percent) lower for dependent graduates from the lowest family income quartile than the highest quartile (\$35,235 vs. \$41,825). (This comparison includes only individuals who were employed and who were not enrolled in educational programs.)

NOTE: Mean annualized incomes are for dependent 2016 bachelor's degree recipients who were not enrolled in any educational program at the time of the 2017 follow-up and who were employed full-time or part-time with one job or more jobs.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Baccalaureate and Beyond Longitudinal Study (B&B 2016/2017). Tabulated using NCES PowerStats.

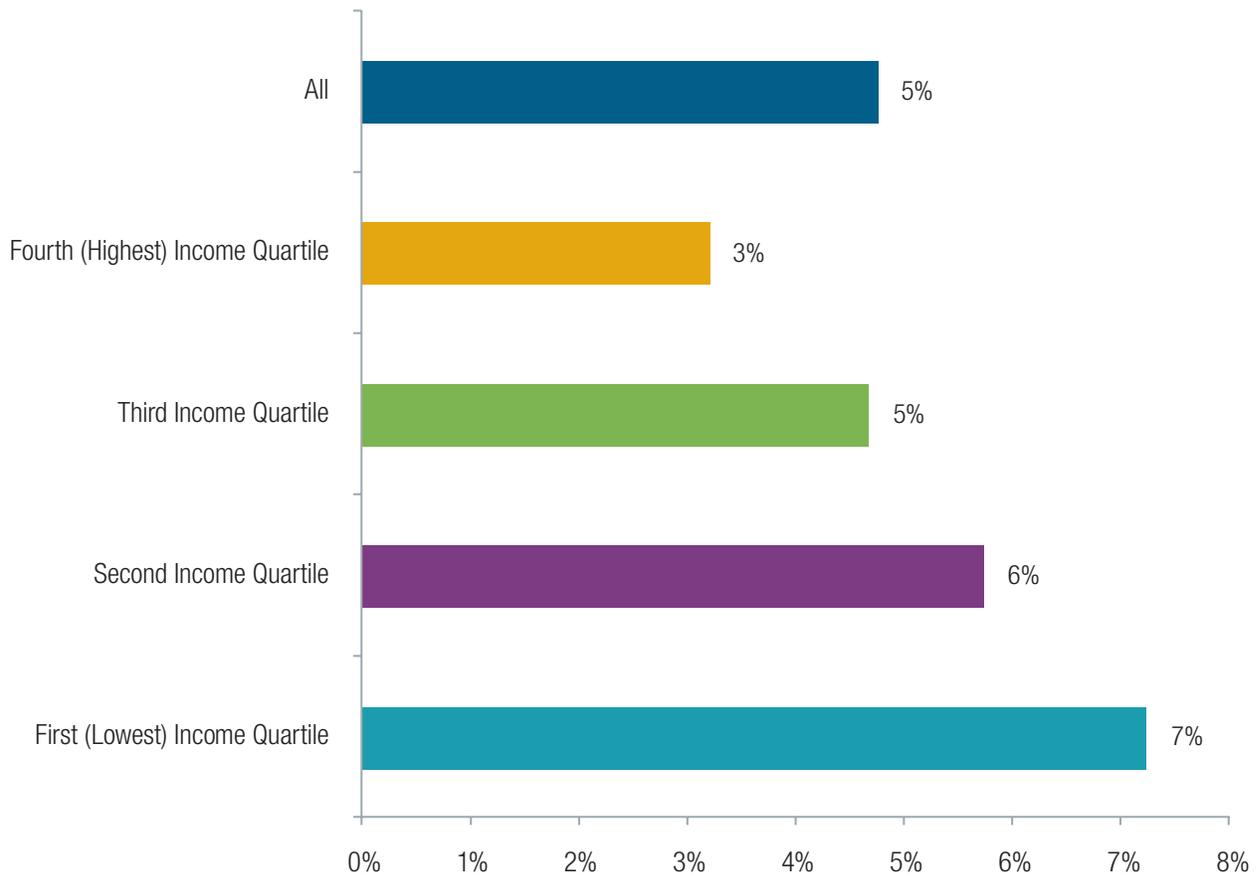
Unemployment at the Time of the 1-Year Follow-Up. Indicator 5e(iv) shows the percentage of dependent bachelor's degree recipients who were not employed, not enrolled in any educational program, and did not report they were out of the labor force for family or other reasons when they were surveyed 1 year after graduation (in 2017).¹²⁷

Indicator 5e(iv) shows that 7 percent of bachelor's degree recipients from the lowest family income quartile were "unemployed" 1 year after graduation, compared with 6 percent of those in the second lowest income quartile, 5 percent of those from the third income quartile, and 3 percent from the highest income quartile.¹²⁸

127 This indicator represents the percentage of non-employed graduates who were not enrolled in further schooling in 2012. It excludes those who indicated that they were "out of the labor force" for any reason.

128 COVID-19 has disrupted the decline unemployment in the recovery from the Great Recession. See STS Figures 10a and 10b for recent COVID-19 statistics on unemployment rate.

Equity Indicator 5e(iv): Percentage of dependent students who received bachelor's degrees in 2016 who were “unemployed” (not enrolled in further schooling, not employed, and in the labor force) at the time of the 1-year follow-up in 2017



Indicator Status:

Bachelor's degree recipients who were in the lowest family income quartile were “unemployed” at a rate 40 percent higher than that of the highest income quartile (7 percent vs. 3 percent).

NOTE: “Unemployed” bachelor's degree recipients were not employed, were not enrolled in an educational program, and did not report that they were out of the labor force.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Baccalaureate and Beyond Longitudinal Study (B&B 2016/2017). Tabulated using NCES PowerStats.

Indicators 5e(v) and 5e(vi): What are the Differences in Post-Baccalaureate Outcomes of 2007-08 Bachelor's Degree Recipients by Demographic Characteristics 10 years After Completion, in 2018?

Indicators 5e(v) and 5e(vi) also use data from the Baccalaureate and Beyond Longitudinal Study (B&B), but the data are from the earlier 2008 cohort followed in 2018, 10 years after graduation.¹²⁹ These indicators show post-baccalaureate degree or certificate completion by race/ethnicity and parent's highest education. Post-baccalaureate awards include research doctoral, first professional degrees, master's degrees and any other degree or certificate awarded after bachelor's degree completion, including other undergraduate degrees or certificates.

Post-Baccalaureate Highest Degree Attainment by Race/Ethnicity. Indicator 5e(v) shows that 10 years after obtaining their bachelor's degree, over 40 percent of each race/ethnicity group had obtained post-baccalaureate degrees or certificates. Among the race/ethnicity groupings, rates were highest among Asians, Other or Two or Races, and Blacks (49, 48, and 46 percent, respectively).

Among bachelor's degree recipients, rates of obtaining a research doctoral degree as the highest degree by 10 years after the bachelor's degree narrowly ranged from 2 to 3 percent for each race/ethnicity group. However, considering the first-professional degrees, Asians stand out as having the highest percentage who attained a first professional or other doctoral degree (12 percent). The largest percentage of post-baccalaureate degrees overall were master's degrees, with 24 to 30 percent of all bachelor's degree completers having attained a master's degree as their highest degree by 10 years after bachelor's completion. Blacks had the largest percentage of bachelor's completers who had attained a Master's degree as the post-baccalaureate highest degree (30 percent).

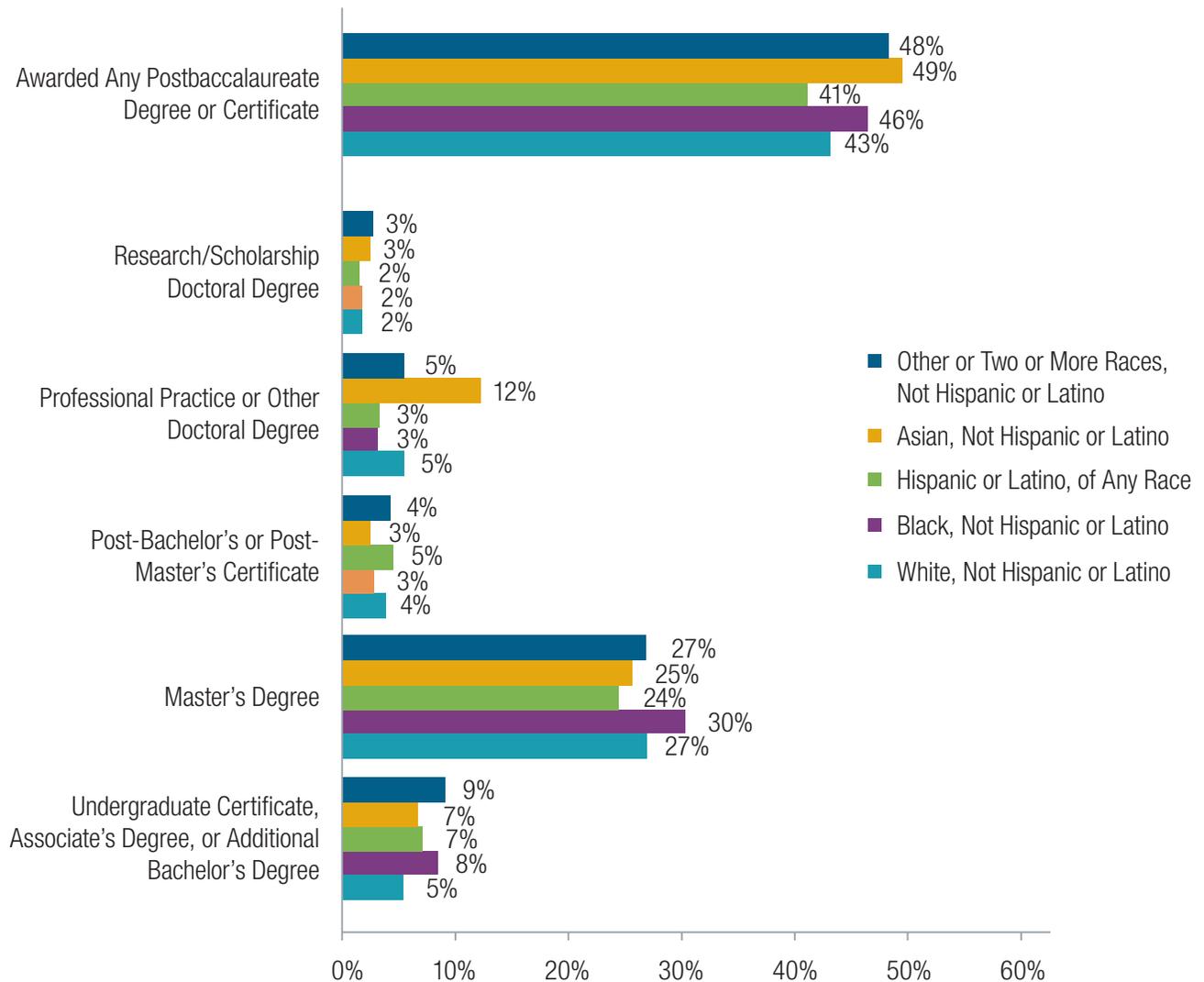
Post-Baccalaureate Highest Degree by Parent's Highest Level of Education. As seen in previous Indicators throughout this report, parental education is highly associated with whether students enroll in postsecondary education, where they enroll, how much student debt they will incur, and whether they will complete a degree once enrolled. Indicator 5e(vi) uses B&B:2008/2018 data to examine the extent to which parental education is also associated with post-baccalaureate attainment after the bachelor's degree. Overall, Indicator 5e(vi) shows, that although parental education remains related to post-baccalaureate attainment, the differences are most substantial when comparing students whose parents have graduate degrees, to those students whose parents do not have graduate degrees.

Just over half (51 percent) of those bachelor's degree recipient whose parents had obtained a graduate or professional degree had also obtained a post-baccalaureate degree by 10 years after their bachelor's graduation. There are fewer differences in post-baccalaureate degree completion rates among those whose parents' highest education level was below the graduate level. For example, rates of attaining any post-baccalaureate degree were 42 percent for those whose parents had a bachelor's degree as their highest degree, 40 percent for those whose parents had some college, and 38 percent for those whose parents had high school or less.

Notably, those baccalaureate completers who had a parent with a graduate degree also had the highest rates of obtaining doctoral or professional degrees. For example, 12 percent of bachelor's degree recipients in 2008 who had a parent a with graduate degree had obtained a doctoral or professional degree by 2018, compared with 7 percent whose parents' highest degree was a bachelor's and 3 percent of those whose parents were first-generation college (defined as neither parent having a bachelor's degree).

¹²⁹ The B&B 2008 10-Year Follow-up includes approximately 14,700 college graduates.

Equity Indicator 5e(v): Percentage of 2008 bachelor's degrees completers awarded further degrees or certificates by 10 years after bachelor's completion by race/ethnicity: Baccalaureate and Beyond (B&B) 2008/2018



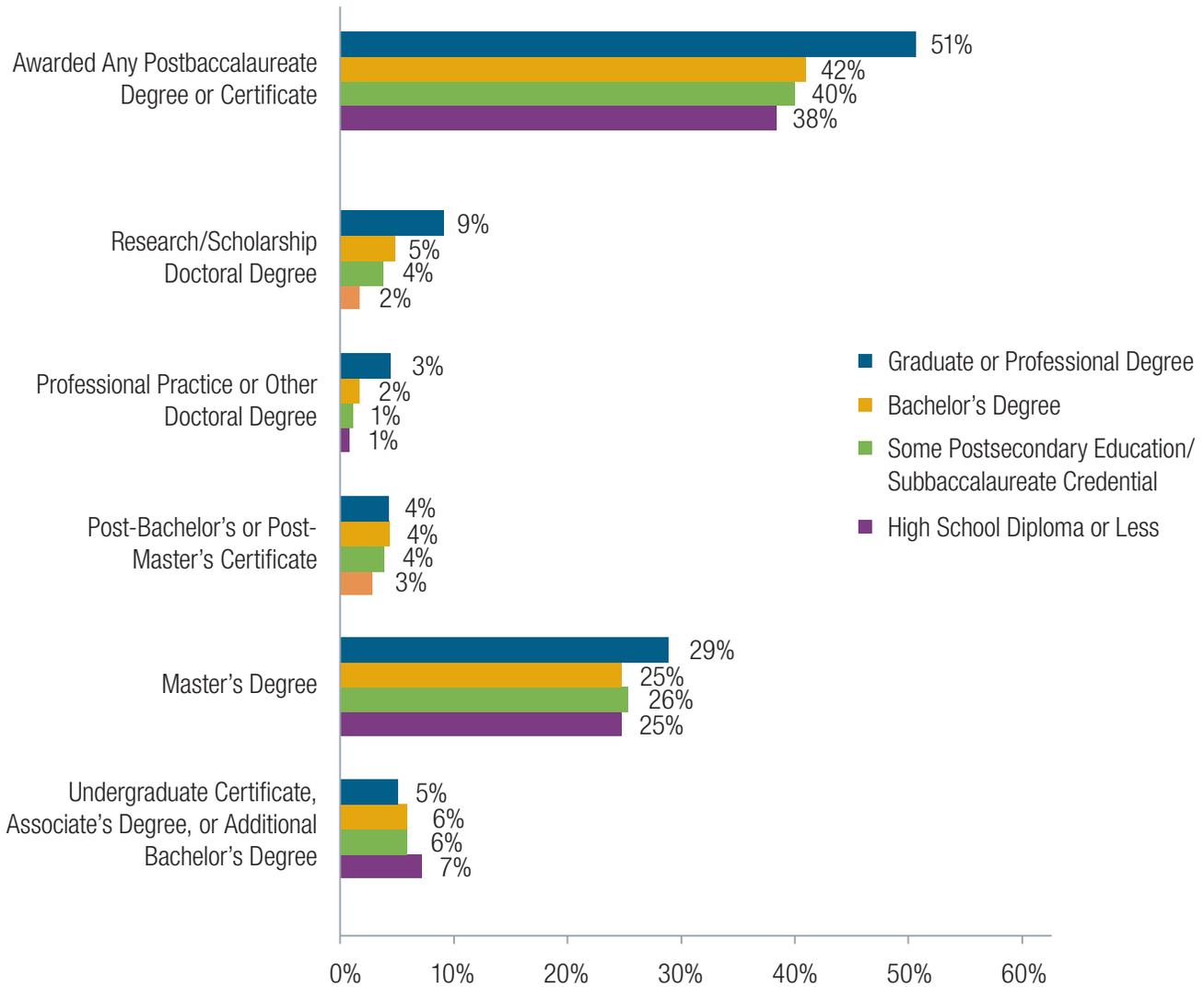
Indicator Status:

Between 41 and 49 percent of bachelor's degree completers of all race/ethnicity groups earned post-baccalaureate degrees or certificates. Asians had the highest percentage awarded professional practice degrees and Blacks the highest percentage awarded master's degrees.

NOTE: Professional practice degrees include M.D., O.D., and J.D.

SOURCE: Table A-3 in Baccalaureate and Beyond (B&B:08/18): First Look at the 2018 Employment and Educational Experiences of 2007–08 College Graduates (NCES 2021-241). U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved from <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2021241>.

Equity Indicator 5e(vi): Percentage of 2008 bachelor's degrees completers awarded further degrees or certificates by 10 years after bachelor's completion by level of parental education: Baccalaureate and Beyond (B&B) 2008/2018



Indicator Status: Educational Attainment Shows Intergenerational Impact

Parental education levels remain associated with degree attainment at the post-baccalaureate levels and more so for those whose parents have earned graduate degrees. Just over half (51 percent) of those whose parents had obtained a graduate or professional degree had also obtained a post-baccalaureate degree by 10 years after their bachelor's graduation, compared with about 38 to 42 percent for those whose parents lack graduate degrees.

NOTE: Professional practice degrees includes M.D, O.D, and J.D.

SOURCE: Table A-3 in Baccalaureate and Beyond (B&B:08/18): First Look at the 2018 Employment and Educational Experiences of 2007–08 College Graduates (NCES 2021-241). U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved [date] from <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2021241>.

Equity Indicators 5f(i) to 5f(v): What are Differences in Educational Attainment by State?

Equity Indicators 5f(i) to 5f(v) describes educational attainment by state. The Indicator draws on data from the Census Bureau's decennial censuses and the American Community Survey (ACS), and the institutional data on graduation rates as reported to NCES through IPEDS. To provide context for current differences by state, we first use Census data to look at historical differences in attainment of the population age 25 years and older from 1940 to 2019. Given the relationship between high school graduation and college entrance, this historical review includes both high school and college attainment rates. We also use data from IPEDS Graduation Rate Survey of institutions to show graduation rates by state in 2015. Finally, we observe differences in attainment of bachelor's degrees by state for 24- to 34-year-olds in the same period using data from the American Community Survey.

Interpreting state-by-state comparisons is complex. State educational attainment rates are influenced by historical events, geographic patterns, age distributions of a state's population, and demographic migrations into and out of the state, as well as the characteristics and structures of a state's higher education system and state policies that influence educational attainment.¹³⁰

State Variation in High School and College Attainment Rates: 1940 to 2019. Indicators 5f(i) to 5f(iii) use Census Bureau data to show the percent of the population 25 years of age and older that has attained a high school credentials and a bachelor's degree or higher by state. The data from 1940 to 2000 are from the decennial census, and the 2010, 2015, and 2019 data are from the American Community Survey.¹³¹ We provide data from 1940 to give historical context to recent observed differences by state. To display the range of variation by state and changes in that variation over time, Indicator 5f(i) plots high school and bachelor's degree attainment rates at 10-year intervals without identifying individual states. Indicators 5f(ii) and 5f(iii) present the same information in bar charts displaying high school and bachelor's degree attainment rates for individual states for 1940 and 2019.

Over the 79 years from 1940 to 2019, there has been a convergence across states in the percent of the population age 25 and older with a high school diploma or other credential. At the same time, there has been divergence among states in the percentage that has attained at least a bachelor's degree.

High School Attainment of Population 25 and older: 1940 and 2019. As displayed in Indicator 5f(ii), the percent of the population age 25 and older with a high school diploma or other credential averaged 24 percent for the United States in 1940 and ranged from 15 percent to 41 percent across states. The states with the lowest high school attainment rates in 1940 were: Arkansas (15 percent), Kentucky, Alabama, and Mississippi (16 percent), Georgia (17 percent), and Louisiana, West Virginia, Tennessee, and South Carolina (18 percent). The states with the highest high school completion rates were: District of Columbia (41 percent), California (37 percent), Utah (37 percent), and Nevada (36 percent).

By 2019, 89 percent of the U.S. population age 25 and older had attained at least a high school credential. High school attainment continued to vary across states, ranging from 84 percent in California to at least 90 percent in 32 states including DC. In 2019, Wyoming had the highest high school attainment rates (95 percent).

Bachelor's Degree or Higher Attainment: 1940 and 2019. In 1940, 5 percent of the U.S. population age 25 and older had attained at least a bachelor's degree. Although 11 percent of the population age 25 and older

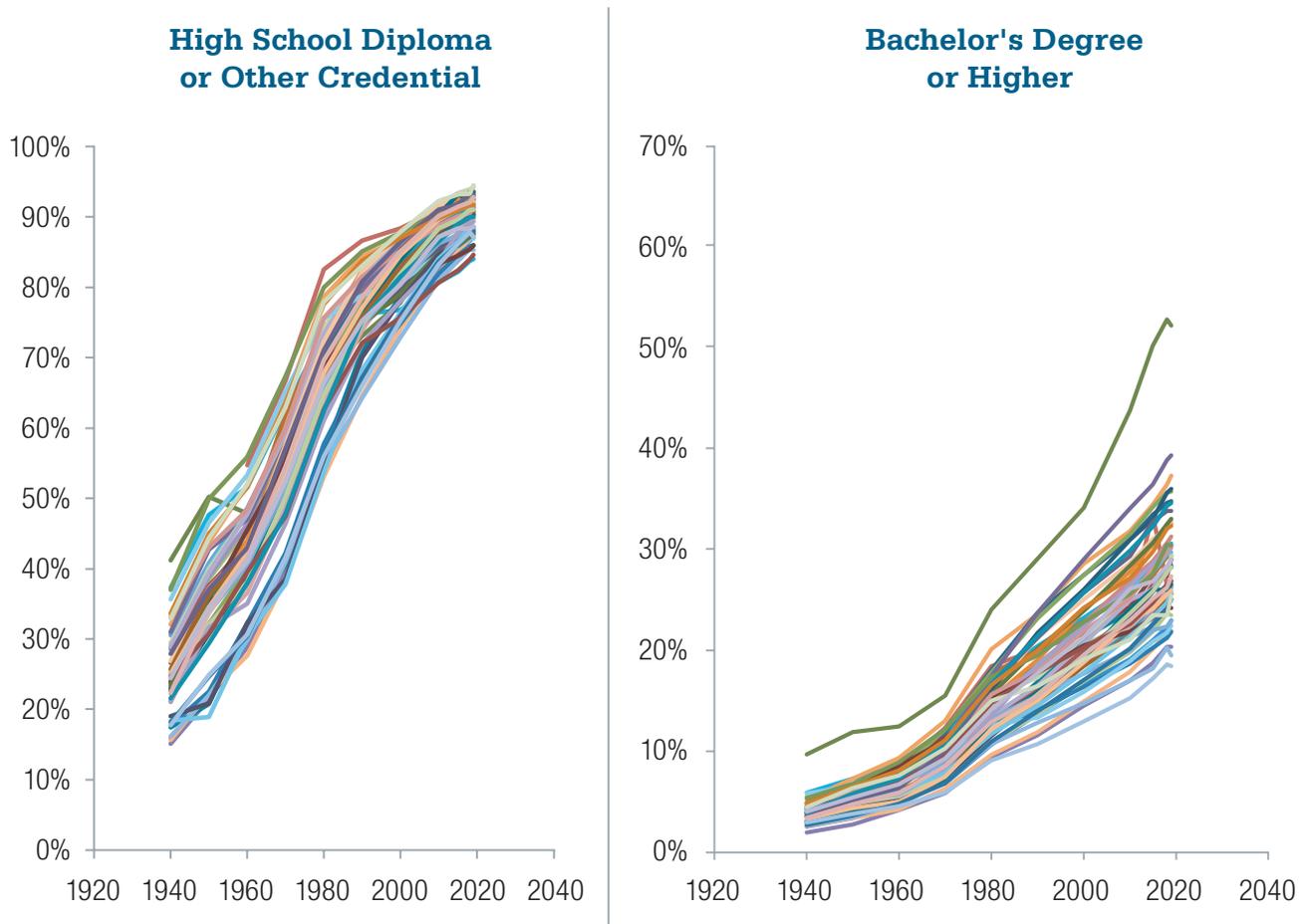
130 Perna, L.W., & Finney, J. (2014). *The attainment agenda: State policy leadership in higher education*. Baltimore, MD: Johns Hopkins University Press.

131 The sample design for American Community Survey is representative at the state level. However, all sample surveys are subject to sampling error. The Census Bureau publishes tables for download with sampling errors for these statistics at the following site: <https://data.census.gov/cedsci/table?q=educational%20attainment%20population%2025%20and%20older&g=0100000US,.04000.001&y=2019&tid=ACSS1Y2019.S1501&hidePreview=true>. The data from the decennial census are not subject to sampling error, but are subject to coverage error.

had attained at least a bachelor's degree in the District of Columbia, bachelor's degree attainment rates were lower in the 50 states. Bachelor's degree attainment rates in 1940 ranged from 2 percent (Arkansas) to 7 percent (California and Nevada).

By 2019, 33 percent of the U.S. population age 25 and older had attained at least a bachelor's degree. Bachelor's degree attainment rates continued to be highest in the District of Columbia (60 percent). Six states had bachelor's degree attainment rates of 40 percent or higher: Connecticut and Virginia (40 percent), Maryland (41 percent), New Jersey (41 percent), Colorado (43 percent), and Massachusetts (45 percent). Bachelor's degree attainment rates were 25 percent or lower in 5 states: West Virginia (21 percent), Mississippi (22 percent), Arkansas (23 percent), Louisiana (25 percent), and Kentucky (25 percent).

Equity Indicator 5f(i): Scatter plots of the percentage of the population age 25 and older who had attained a high school diploma or equivalent credential and who had attained a bachelor's degree or higher by state: 1940-2019



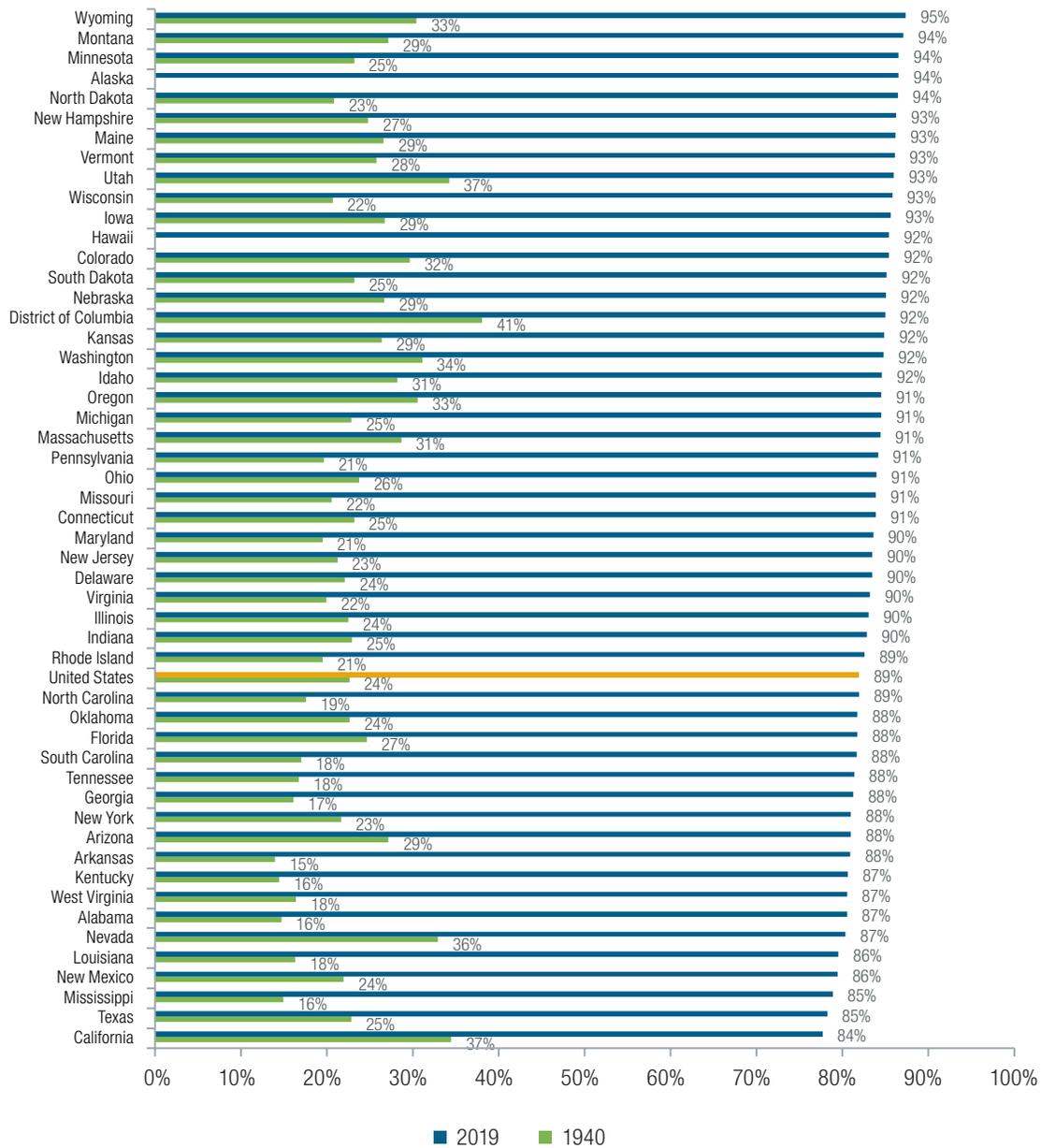
Indicator Status:

Differences across states in high school attainment rates lessened over the 79-year period from 1940 to 2019. Over the same period, differences by state in bachelor's degree attainment rates increased.

NOTE: Data from 1940 to 2000 are from the decennial census. Data from 2010, 2015, and 2019 are from the American Community Survey.

SOURCE: U.S. Census Bureau (2015). *A Half-century of Learning: Historical Statistics on Educational Attainment in the United States, 1940 to 2000*. [Tables]. Retrieved from <https://www.census.gov/data/tables/time-series/demo/educational-attainment/educational-attainment-1940-2000.html>. U.S. Census Bureau (n.d.). American Community Survey, 2005, 2010, 2015, 2019 1-Year Estimates, [Table S. 1501]. Retrieved from <https://data.census.gov/cedsci/table?q=educational%20attainment%20population%2025%20and%20older&g=0100000US,.04000.001&y=2019&tid=ACSST1Y2019.S1501&hidePreview=true>.

Equity Indicator 5f(ii): Percentage of the population age 25 and older with a high school diploma or equivalent credential by state: 1940 and 2019



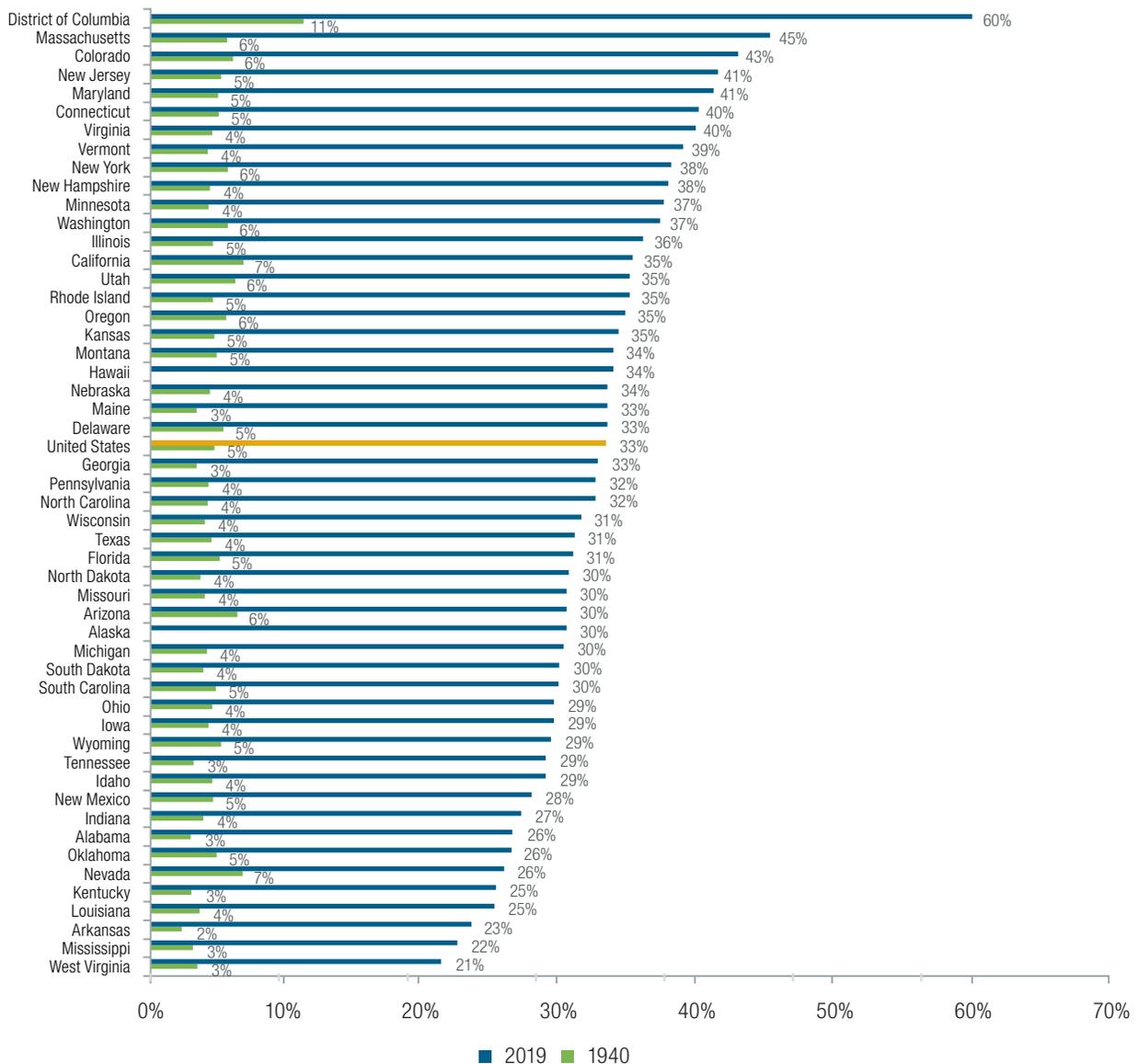
Indicator Status:

In 2019, at least 90 percent of the population age 25 and older had completed high school in 32 states.

NOTE: Data from 1940 are from the decennial census and data from 2019 are from the American Community Survey.

SOURCE: U.S. Census Bureau (2015). *A Half-century of Learning: Historical Statistics on Educational Attainment in the United States, 1940 to 2000*. [Tables]. Retrieved from <https://www.census.gov/data/tables/time-series/demo/educational-attainment/educational-attainment-1940-2000.html>. U.S. Census Bureau (n.d.). American Community Survey, 2005, 2010, 2015, 2019 1-Year Estimates, [Table S. 1501]. Retrieved from <https://data.census.gov/cedsci/table?q=educational%20attainment%20population%2025%20and%20older&g=0100000US,.04000.001&y=2019&tid=ACSST1Y2019.S1501&hidePreview=true>.

Equity Indicator 5f(iii): Percentage of the population age 25 and older with a bachelor's degree or higher by state: 1940 and 2019



Indicator Status:

Excluding the District of Columbia, in 1940, bachelor's degree attainment rates ranged across states from 2 percent to 7 percent (a 5 percentage-point difference). By 2019, bachelor's degree attainment rates ranged across states from 21 percent to 45 percent (a 24 percentage-point difference).

NOTE: Data from 1940 are from the decennial census and data from 2019 are from the American Community Survey.

SOURCE: U.S. Census Bureau (2015). *A Half-century of Learning: Historical Statistics on Educational Attainment in the United States, 1940 to 2000*. [Tables]. Retrieved from <https://www.census.gov/data/tables/time-series/demo/educational-attainment/educational-attainment-1940-2000.html>. U.S. Census Bureau (n.d.). American Community Survey, 2005, 2010, 2015, 2019 1-Year Estimates, [Table S. 1501]. Retrieved from <https://data.census.gov/cedsci/table?q=educational%20attainment%20population%2025%20and%20older&g=0100000US,.04000.001&y=2019&tid=ACSST1Y2019.S1501&hidePreview=true>.

Differences in Graduation Rates of Bachelor’s Degree-Seeking Students by State. In 1997, as mandated by Congress, NCES through IPEDS began collecting 6-year graduation rates from institutions participating in the federal financial aid system (Title IV). The number of students upon which the calculations are based increased from 958,000 in the 1991/1997 cohort to 1.79 million students in the 2009/2015 cohort.

Using IPEDS data, Indicator 5f(iv) reports the percentage of first-time, full-time bachelor’s degree-seeking students earning any formal award (certificate, associate’s, or bachelor’s degree) at the institution of first enrollment within 6 years by state of institution in 2015. The national 6-year completion rate at the first institution in which the student was enrolled was 54 percent in 2015. This completion rate has fluctuated from 52 percent to 56 percent since the first reporting for the 1991 entering cohort. Completion rates measure completion at the institution of first enrollment; they do not take into account transfers among institutions.

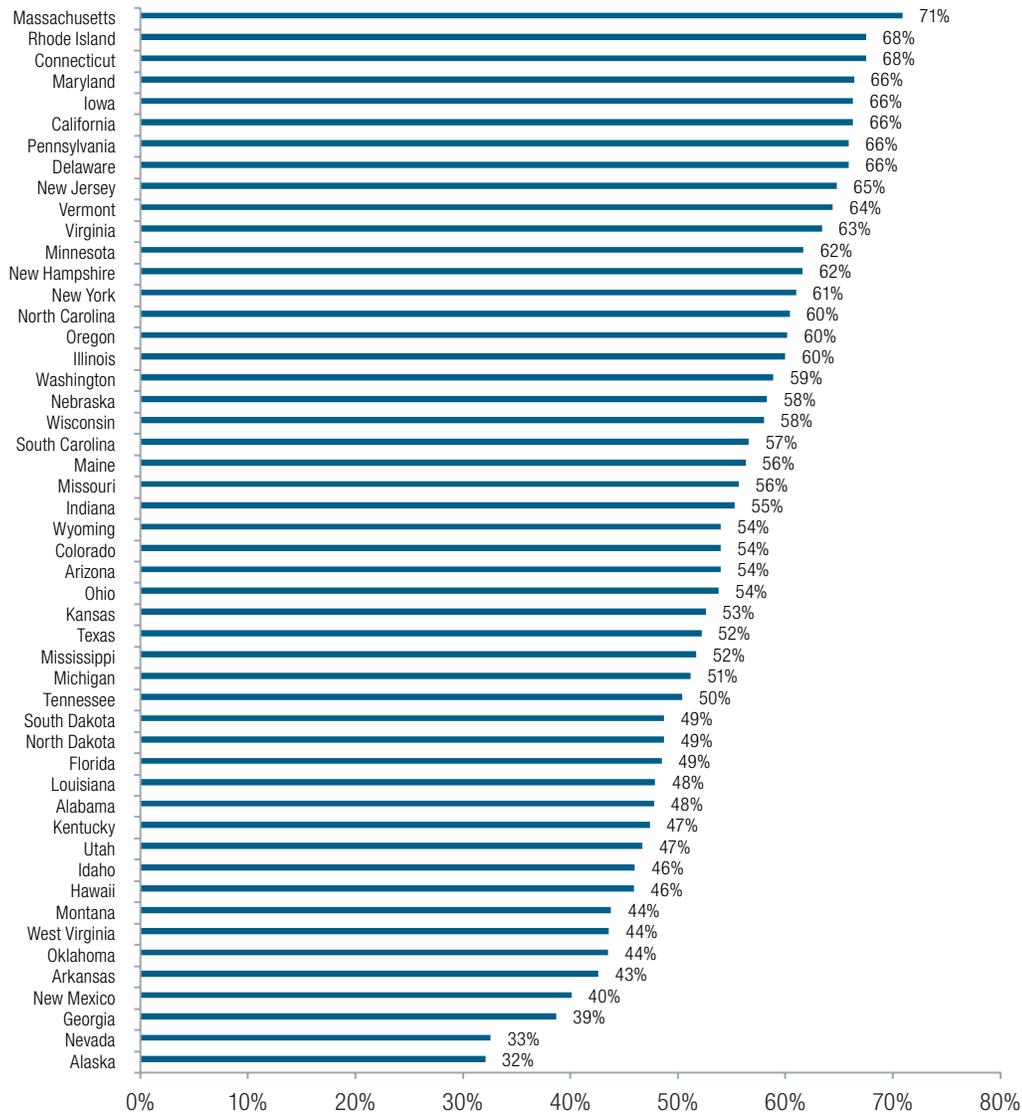
In 2015, 6-year completion rates for bachelor’s degree-seeking students who first enrolled in a 4-year institution in 2009 ranged from 32 percent in Alaska, 33 percent in Nevada, and 39 percent in Georgia, to 68 percent in Rhode Island, 68 percent in Connecticut, and 71 percent in Massachusetts.

Bachelor’s Degree Attainment Rates for the 25- to 34-Year-Old Population by State. Equity Indicator 5f(v) uses data from the American Community Survey to show bachelor’s degree attainment for the population age 25 to 34 in 2005 and 2019.¹³² Nationwide, the percentage of 25- to 34-year-olds with at least a bachelor’s degree increased from 30 percent in 2005 to 37 percent in 2019.

In 2019, bachelor’s degree attainment rates for adults age 25 to 34 were less than 25 percent in Nevada (24 percent), New Mexico (24 percent), and Mississippi (23 percent) and more than 45 percent in New York (47 percent), New Jersey (48 percent), and Massachusetts (54 percent).

132 Indicator 5f(v) shows attainment rates for the population age 25 to 34, while Indicator 5f(iii) shows attainment for the population age 25 and older. Generally, attainment rates are higher for the younger age group than for the total adult population.

Equity Indicator 5f(iv): Percentage of first-time, full-time bachelor's degree-seeking students earning any formal award (certificate, associate's or bachelor's degree) at the institution of first enrollment within 6 years by state of institution: 2015



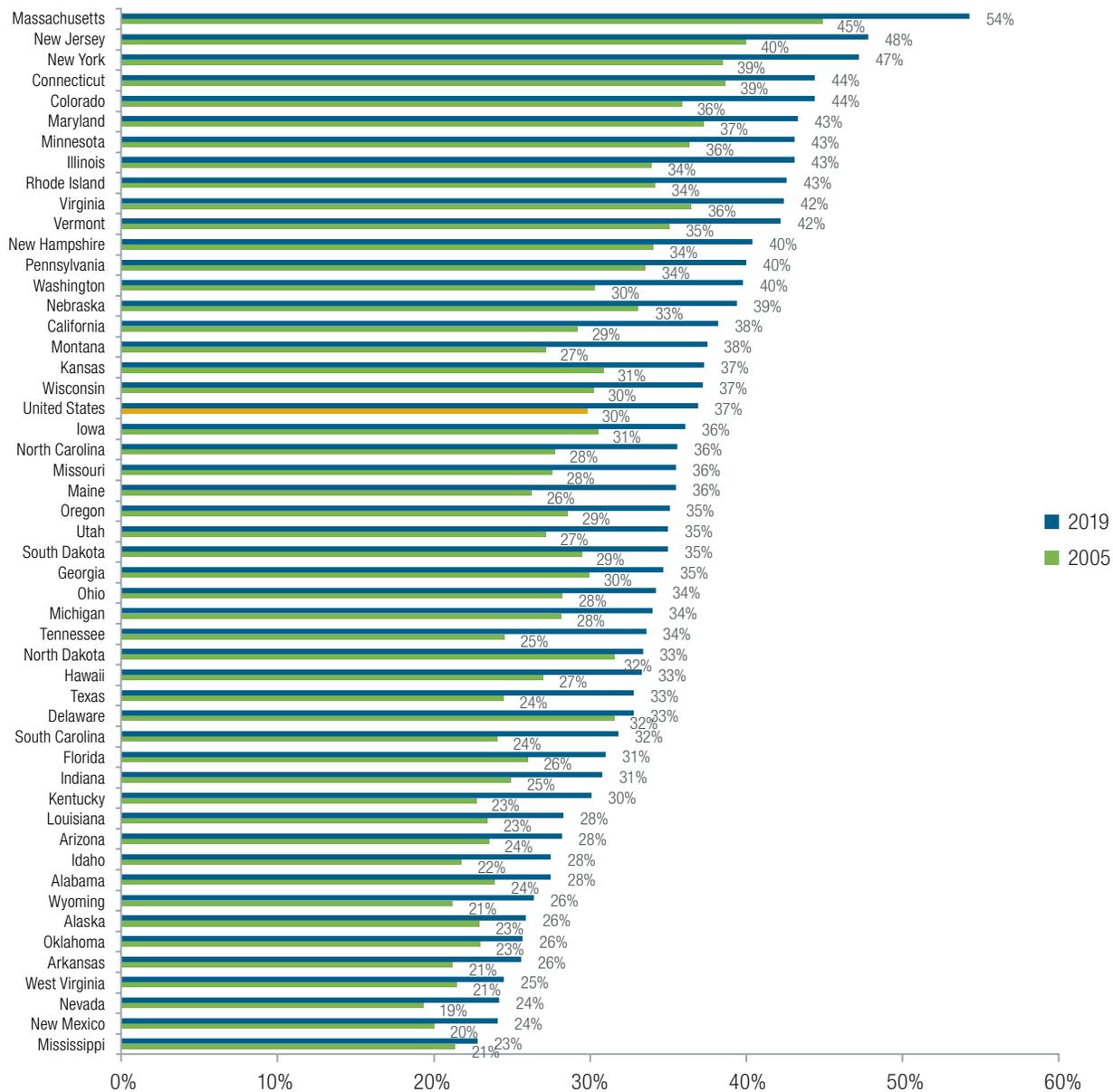
Indicator Status:

The percentage of first-time, full-time bachelor's degree-seeking students who completed a credential at the institution of first enrollment within 6 years ranged from 32 percent in Alaska to 71 percent in Massachusetts.

NOTE: The Graduation Rate Survey of IPEDS completion rate is the percentage of first-time full-time bachelor's degree-seeking students earning any formal award (certificate, associate's degree, or bachelor's degree) within 6 years at institutions participating in the federal financial aid system (Title IV). Completion rates are calculated by IPEDS based on the total number of students in a state in a given cohort that began 6 years before the expected 6-year graduation date. The calculation does not account for transfers across institutions.

SOURCE: U.S. Department of Education, National Center for Educational Statistics. IPEDS Graduation Rate Survey, Washington, D.C.: U.S. Department of Education.

Equity Indicator 5f(v): Percentage of population age 25 to 34 who had attained a bachelor's degree by state: 2005 and 2019



Indicator Status:

By 2019, 11 states had bachelor's degree attainment rates for the population age 25 to 34 above 40 percent (Vermont, Virginia, Rhode Island, Illinois, Minnesota, Maryland, Colorado, Connecticut, New York, New Jersey, and Massachusetts). Three states had bachelor's degree attainment rates below 25 percent for that population (Nevada, New Mexico, and Mississippi).

NOTE: The American Community Survey data are based on sample surveys; thus, they contain statistical errors that are associated with any sample survey.

SOURCE: U.S. Census Bureau, 2005 and 2018 American Community Survey, NCHEMS Information System. <http://www.higheredinfo.org>.

Equity Indicator 5g: What are Differences in IPEDS Institutional Completion Rates by Pell Receipt Status?

In 1997, as mandated by Congress, NCES through IPEDS began collecting graduation rates from institutions participating in the federal financial aid system (Title IV). The Reauthorization of the Higher Education Opportunity Act of 2008 (HEOA:2008), extended this mandate to also require higher education institutions to report completion rates disaggregated by Pell Grant status. These data are collected in the IPEDS Outcomes Measures Component.¹³³ The first entering cohort in which the disaggregation by Pell Grant status mandate applied to the 2010 cohort. In 2017, NCES released postsecondary completion rates disaggregated by Pell status by institution for the beginning 2010 cohort.¹³⁴ These rates measure completion at the institution reporting and do not account for transfers among institutions. Nor are institutions allowed to count those students who transfer into the institution who graduate from the institution.

Indicator 5g(i) shows 6-year completion rates by institution control and type, by Pell Grant recipient status; and Indicator 5g(ii) looks at differences by Pell Grant receipt status in 6-year completion rates by institutional acceptance rates as reported to IPEDS, as a measure of selectivity. As the institutions vary greatly in cohort numbers and in the distribution of Pell Grant recipients vs. non-Pell Grant recipients, the data reported below should be used with reference to the total numbers and relative distribution between Pell and non-Pell Grant recipients. These data are reported in the Digest of Education Statistics.¹³⁵

Completion of an Award by 6 years by Institution Type and Control and Pell Grant Receipt Status. Among public 2-year institutions, a higher percentage of Pell Grant recipients than non-Pell Grant recipients completed an award at the institution in which they started (26 percent of Pell Grant recipients vs. 22 percent of non-Pell Grant recipients).¹³⁶ Among 4-year public institutions, 6-year completion rates for degree-seeking students were 44 percent for Pell Grant recipients and 49 percent for non-recipients. The largest differences between those receiving and not receiving Pell Grants appear in private non-profit 4-year institutions, with 49 percent of Pell Grant recipients graduating, compared with 64 percent of non-Pell Grant recipients. Among 4-year private for-profit institutions, the 6-year completion rate was 27 percent for Pell Grant recipients and 33 percent for non-Pell Grant recipients.

Six-Year Completion Rates at 4-Year Institutions by Percent of Applicants Accepted by Pell Grant Recipient Status. Equity Indicator 5g(i) shows the percentage of degree-seeking undergraduate students in the 2010 cohort entering a 4-year postsecondary institution who completed a degree or certificate within 6 years at the same institution, by percent of applicants accepted by Pell Grant recipient status. The percentage of the total 4-year cohort that completed an award was 47 percent. As Indicator 5g(ii) shows, as the acceptance rate decreases, the completion rate increases. For each of the acceptance rate categories, completion rates for Pell Grant recipients were lower, except for the largest group, the open admissions category. Completion rates at the same institution for which the student began for open admission 4-year institutions were 31 percent for Pell Grant recipients and 27 percent for non-Pell Grant recipients. Completion rates at the most selective institutions (those for which 25 percent of applicants or less were accepted) were 88 percent for non-Pell Grant recipients and 76 percent for Pell Grant recipients.

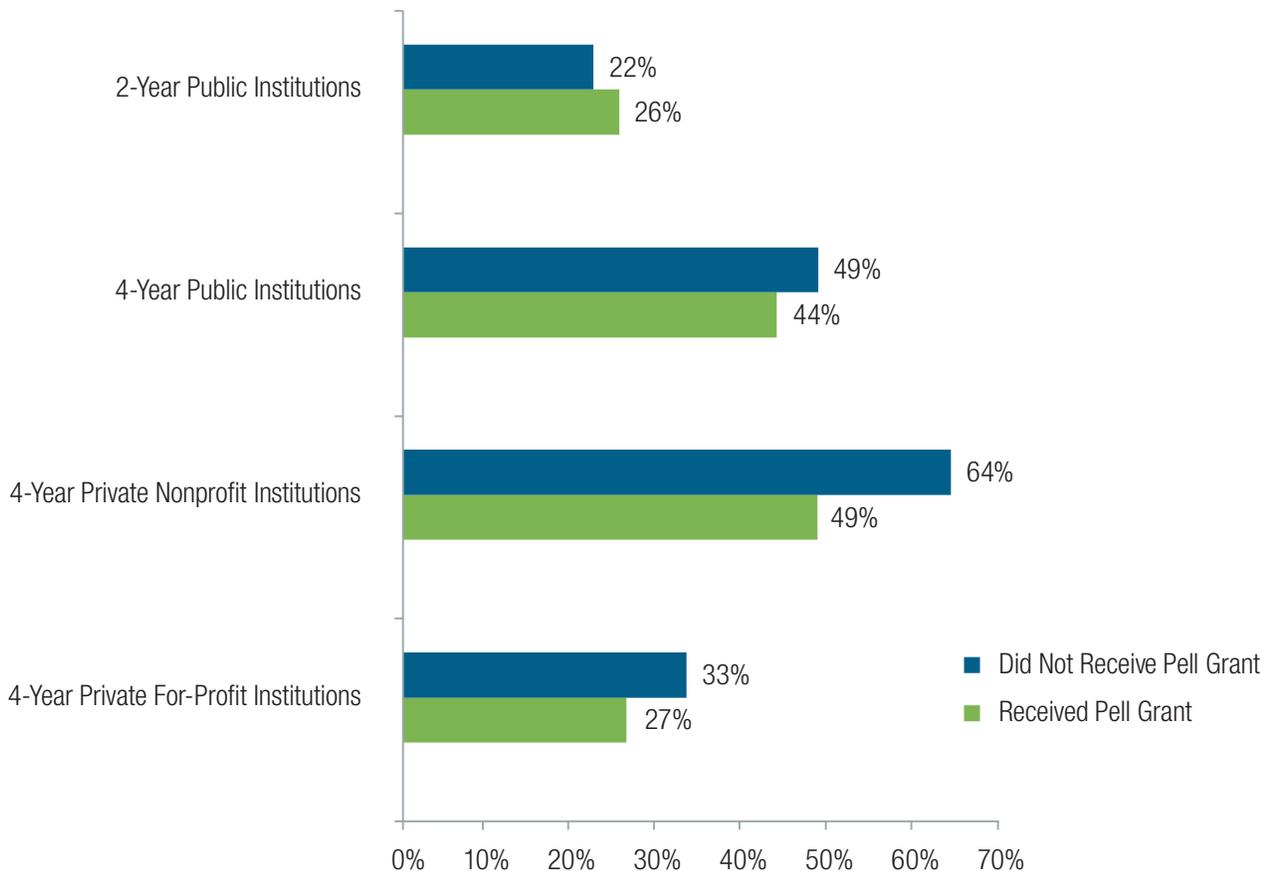
133 U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), Winter 2018–19, Outcome Measures component.

134 Whistle, W. and Hiler, T. (2018). *The Pell Divide: How Four-Year Institutions are Failing to Graduate Low- and Moderate-Income Students*. Third Way. Retrieved from <https://www.thirdway.org/report/the-pell-divide-how-four-year-institutions-are-failing-to-graduate-low-and-moderate-income-students>.

135 https://nces.ed.gov/programs/digest/d19/tables/dt19_326.27.asp?current=yes.

136 NCES also reports completion rates by Pell Grant receipt status for 2-year private non-profit and 2-year private for-profit institutions. They are not included here due to small cohort sizes relative to public 2-year institutions. Among the private 2-year institutions, completion rates are higher overall, but there are no significant differences between Pell Grant recipients and non-recipients.

Equity Indicator 5g(i): Percentage of degree/certificate-seeking undergraduate students entering a postsecondary institution who completed an award by 6 years at the same institution, by institution level and control by Pell Grant Recipient status, Cohort entry year 2010



Indicator Status:

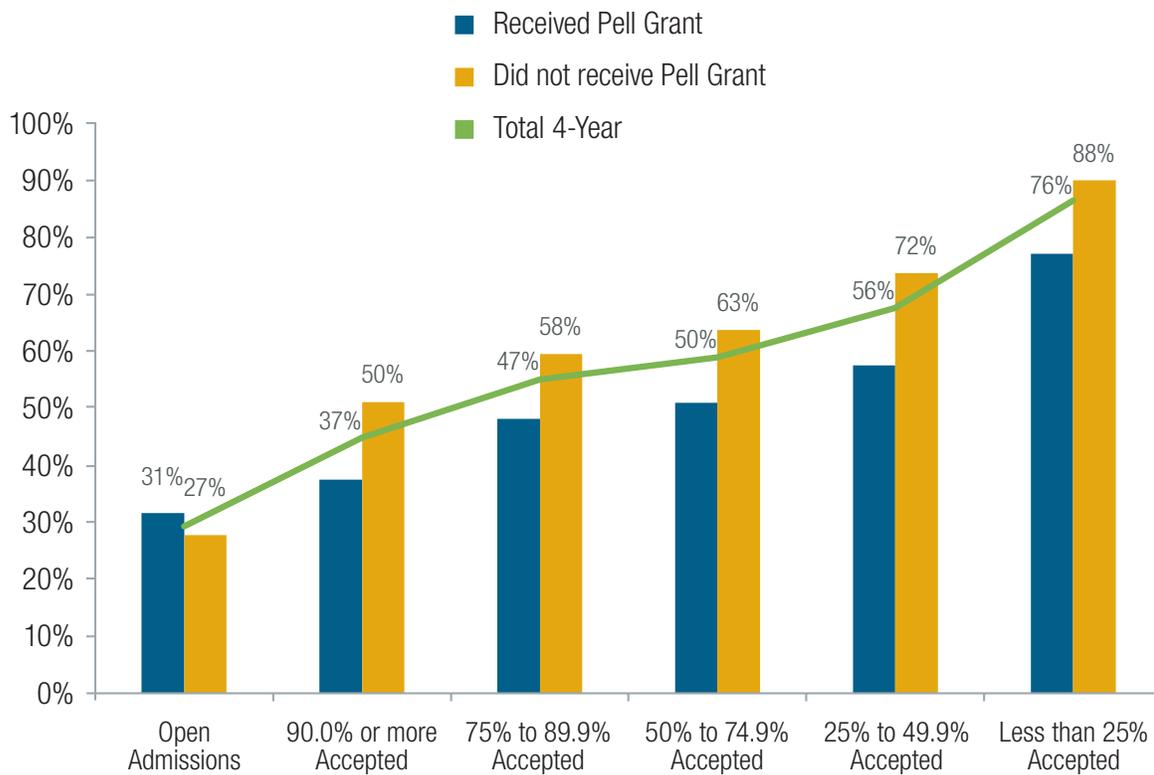
The largest differences between those receiving and not receiving Pell Grants were in private non-profit 4-year institutions, with less than half (49 percent) of Pell Grant recipients graduating, compared with almost two-thirds (64 percent) of non-Pell Grant recipients. Among 4-year private for-profit institutions, the 6-year completion rate was 27 percent for Pell Grant recipients and 33 percent for non-Pell Grant recipients.

NOTE: The 2010 entry cohort includes all degree/certificate-seeking undergraduate students who entered a degree-granting institution between July 1, 2010 and June 30, 2011. The adjusted cohort excludes students who died or were totally and permanently disabled as well as students who left school to serve in the armed forces (including those called to active duty), to serve with a foreign aid service of the federal government (e.g., the Peace Corps), or to serve on official church missions. Includes only those awards that were conferred by the reporting institution (i.e., the institution that the student entered in 2010-11); excludes awards conferred by institutions to which the student later transferred. NCES also reports completion rates by Pell Grant Receipt status for 2-year private non-profit and private for-profit institutions. Due to small numbers of students in the cohort, they are not included here but are available at the source listed below.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), Winter 2018–19, Outcome Measures component; and IPEDS Fall 2010, Institutional Characteristics component. Retrieved from U.S. Department of Education, National Center for Education Statistics (2020). *Digest of Education Statistics 2020*, [Table 326.27]. Retrieved from https://nces.ed.gov/programs/digest/d19/tables/dt19_326.27.asp?current=yes.

Equity Indicator 5g(ii): Percentage of degree-seeking undergraduate students entering a 4-year postsecondary institution who completed an award at the institution by 6 years by percent of applicants accepted by Pell Grant recipient status, Cohort entry year 2010

All 4-Year Institution Average = 47%



Indicator Status:

As acceptance rate goes down, completion rates go up for both Pell Grant and non-Pell recipients. Except for the largest enrollment group (open admissions), higher percentages of non-Pell recipients than Pell recipients’ complete degrees. At open admission institutions, 6-year completion rates were 31 percent for Pell Grant recipients and 27 percent for non-recipients. Completion rates at the most selective institutions (those for which 25 percent of applicants or less were accepted) were 88 percent for non-Pell Grant recipients and 76 percent for Pell Grant recipients.

NOTE: The 2010 entry cohort includes all degree/certificate-seeking undergraduate students who entered a degree-granting institution between July 1, 2010 and June 30, 2011. For 4-year institutions, the cohort includes only bachelor’s degree-seeking students. Awards include certificates, associate’s degrees, and bachelor’s degrees. Includes only those awards that were conferred by the reporting institution (i.e., the institution that the student entered in 2010-11); excludes awards conferred by institutions to which the student later transferred.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), Winter 2018–19, Outcome Measures component; and IPEDS Fall 2010, Institutional Characteristics component. *Digest of Education Statistics 2020*, [Table 326.27]. Retrieved from https://nces.ed.gov/programs/digest/d19/tables/dt19_326.27.asp?current=yes.

EQUITY INDICATOR 6:

HOW DOES EDUCATIONAL ATTAINMENT IN THE U.S. COMPARE WITH OTHER COUNTRIES?

Among countries reporting bachelor's attainment information, the U.S. has fallen from 2nd in 2000 to 16th in 2019 in tertiary-type A (bachelor's) degree attainment of adults age 25 to 34.

Equity Indicator 6 compares educational attainment in the United States with other countries. The stated mission of the U.S. Department of Education reflects interest in international comparison as the Department seeks “to promote student achievement and preparation for global competitiveness by fostering educational excellence and ensuring equal access.”¹³⁷ Indicator 6 uses data from the Organisation for Economic Co-operation and Development (OECD) to compare educational attainment in the United States with other countries. Since 1991, OECD has reported educational attainment by country in its annual report, *Education at a Glance*. Differences across countries in educational systems and degree classifications, as well as reporting issues from year to year, limit international comparisons. However, OECD strives to apply common definitions across countries and collect and report data in a consistent manner over time.¹³⁸

Equity Indicator 6(a-b): Definitions

Indicator 6 tracks the percentage of the population that has attained tertiary degrees in different countries. Indicator 6a reports tertiary-type A degree attainment and Indicator 6b combines attainment of tertiary-type A degrees (the equivalent of a bachelor's degree or above) with tertiary-type B degrees (the equivalent of an associate's degree). For both Indicators, we present attainment for the population age 25 to 34 in the years 2000 and 2019.¹³⁹

¹³⁷ For a systematic international review of widening participation see Younger, K., Gascoine, L., Menzies, V., & Torgerson, C. (2019). A systematic review of evidence on the effectiveness of interventions and strategies for widening participation in higher education, *Journal of Further and Higher Education*, 43:6, 742-773, DOI: 10.1080/0309877X.2017.1404558.

¹³⁸ For more information on the methods used and limitations of international comparisons, see OECD (2020). *Education at a Glance 2020: OECD Indicators*. Paris: OECD Publishing. Retrieved from https://www.oecd-ilibrary.org/education/education-at-a-glance-2020_69096873-en.

¹³⁹ For detailed analysis on upper secondary graduation rates and bachelor's degree attainment rates between 1996 and 2017, see Mortenson, T. (2019). *Make American Education Great Again. Postsecondary Education Opportunity, 301*. Washington, D.C: The Pell Institute for the Study of Opportunity in Higher Education. Retrieved from <http://www.pellinstitute.org/peo.shtml>.

As defined in the OECD's glossary of statistical terms:¹⁴⁰

- **Tertiary-type A programs** are largely theory-based and are designed to provide sufficient qualifications for entry to advanced research programs and professions with high skill requirements. Tertiary-type A programs have a minimum cumulative theoretical duration of 3 years full-time equivalent study at the tertiary level, although they typically last 4 or more years. These programs are not exclusively offered at universities. This classification is comparable to the BA or BS or above in the U.S. system. Starting in May 2014, OECD began to use a more detailed classification of levels of education to align with the International Standard Classification of Education (ISCED 2011).¹⁴¹ These are the ISCED 2011: level 5 (short-cycle tertiary education), level 6 (bachelor's or equivalent level), level 7 (master's or equivalent level), and level 8 (doctoral or equivalent level). In this report, we combine levels 6 through 8 and refer to this category as tertiary-type A (the equivalent of a bachelor's degree or higher).
- **Tertiary-type B programs** are typically shorter than tertiary-type A degrees and focus on practical, technical, or occupational skills for direct entry into the labor market, although some theoretical foundations may be covered in the programs. These programs have a minimum duration of 2 years full-time equivalent study at the tertiary level. We present data on ISCED 2011 level 5 (short-cycle tertiary education) as equivalent to tertiary-type B programs (the equivalent of an associate's degree or higher). We use the terms tertiary-type B programs, short-cycle tertiary education, and associate's degree interchangeably.

Additional Caution Needed in International Comparisons. Due to differences in higher education systems and reporting differences across countries, caution is needed in interpreting these results. Some categories might be included in other categories. Please refer to Education at a Glance Database, <http://stats.oecd.org> for details. For most countries, the most recent year of data reported is 2019. For Japan, the most recent year of data for type A tertiary attainment (Indicator 6a) is 2017.

140 OECD (2008). *OECD Glossary of Statistical Terms*. Paris: OECD Publishing. Retrieved from https://www.oecd-ilibrary.org/economics/oecd-glossary-of-statistical-terms_9789264055087-en.

141 OECD (2020). *Education at a Glance 2020: OECD Indicators*. Paris: OECD Publishing. Retrieved from https://www.oecd-ilibrary.org/education/education-at-a-glance-2020_69096873-en.

Equity Indicator 6a: What Percentage of 25- to 34-Year-Olds Has Completed a Type A (Bachelor's or above) Tertiary Degree?

Using the OECD classifications described above, in 2019, Ireland (63 percent) had the highest rate of bachelor's degree attainment among the 25- to 34-year-old population. The U.S. ranked 2nd out of 30 countries on this indicator in 2000 (with a 30 percent attainment rate), but 16th out of the 45 countries reporting bachelor's degree attainment in 2019 (with a 40 percent attainment rate). In 2019, the bachelor's degree attainment rate of the U.S. was the same as the average for all OECD nations reporting these data.

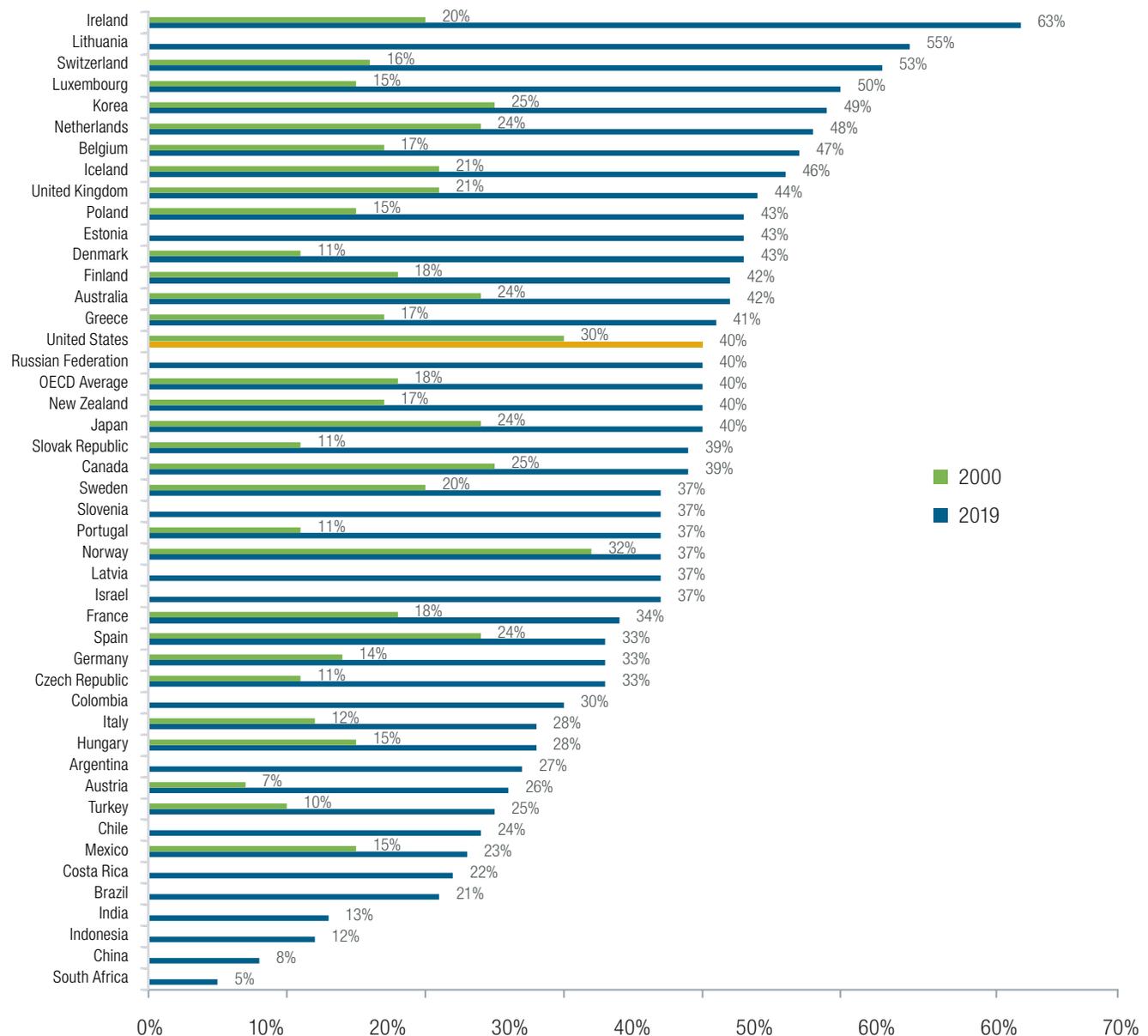
Equity Indicator 6a shows that each of the countries that ranked above the U.S. in 2019 (and reported data in both 2000 and 2019) had attainment rates for 25- to 34-year-olds below that of the U.S. in 2000 (30 percent). These countries were Denmark, Poland, Luxembourg, Switzerland, Belgium, Greece, Finland, Ireland, United Kingdom, Iceland, Australia, Netherlands, and Korea.

The rate of increase in bachelor's degree attainment in the U.S. was lower than the average rate of increase among countries that now have higher attainment rates than the U.S. For countries with higher rates of bachelor's degree attainment than the U.S. in 2019, the average rate of increase in attainment between 2000 and 2019 was 162 percent. In the U.S., the percentage of adults age 25 to 34 with at least a bachelor's degree increased by 33 percent between 2000 and 2019.

Variation within the United States and International Variation. Indicator 5f(v), in the previous section, displays rates of attaining at least a bachelor's degree among the 25- to 34-year-old population in 2005 and 2019 for each of the 50 U.S. states.

In the U.S., the share of adults age 25 to 34 with at least a bachelor's degree in 2019 ranged from 23 percent in Mississippi to 54 percent in Massachusetts. Indicator 6a shows that, across nations, bachelor's degree attainment rates in 2019 ranged from 5 percent in South Africa to 63 percent in Ireland. Massachusetts (at 54 percent) had a bachelor's degree attainment rate in 2019 for 25 to 34-year-olds that was similar to the rate of Switzerland, the country with the third highest attainment rate in 2019 (53 percent). The U.S. states with the next highest rates of bachelor's degree attainment in 2019 were New Jersey (48 percent) and New York (47 percent).

Equity Indicator 6a: Percentage of adults age 25 to 34 with a type A (equivalent of bachelor's degree or above) tertiary degree: 2000 and 2019



NOTE: Caution is needed in making international comparisons given differences in educational degree classifications among countries and reporting differences across years. Japan has not updated the attainment rates for adults age 25 to 34 with a type A tertiary degree. For Japan, the 2017 attainment rate is recorded.

SOURCE: Organisation for Economic Co-operation and Development (n.d.). OECD Stat Educational Attainment and Labour Market Outcomes by Skills: Fields of Education and Labour Market Outcomes [Data file]. Retrieved from: <http://stats.oecd.org>, OECD. (2020). *Education at a Glance 2020: OECD Indicators*, Figure A1.6. Share of 25–34-year-olds with tertiary education, by level of tertiary education. (2019). Paris: OECD Publishing. Retrieved from: https://www.oecd-ilibrary.org/sites/69096873-en/1/3/2/1/index.html?itemId=/content/publication/69096873-en&_csp_=b68ed930151b9d0f354aa48ee27178db&itemIGO=oecd&itemContentType=book#figure-d1e2626.

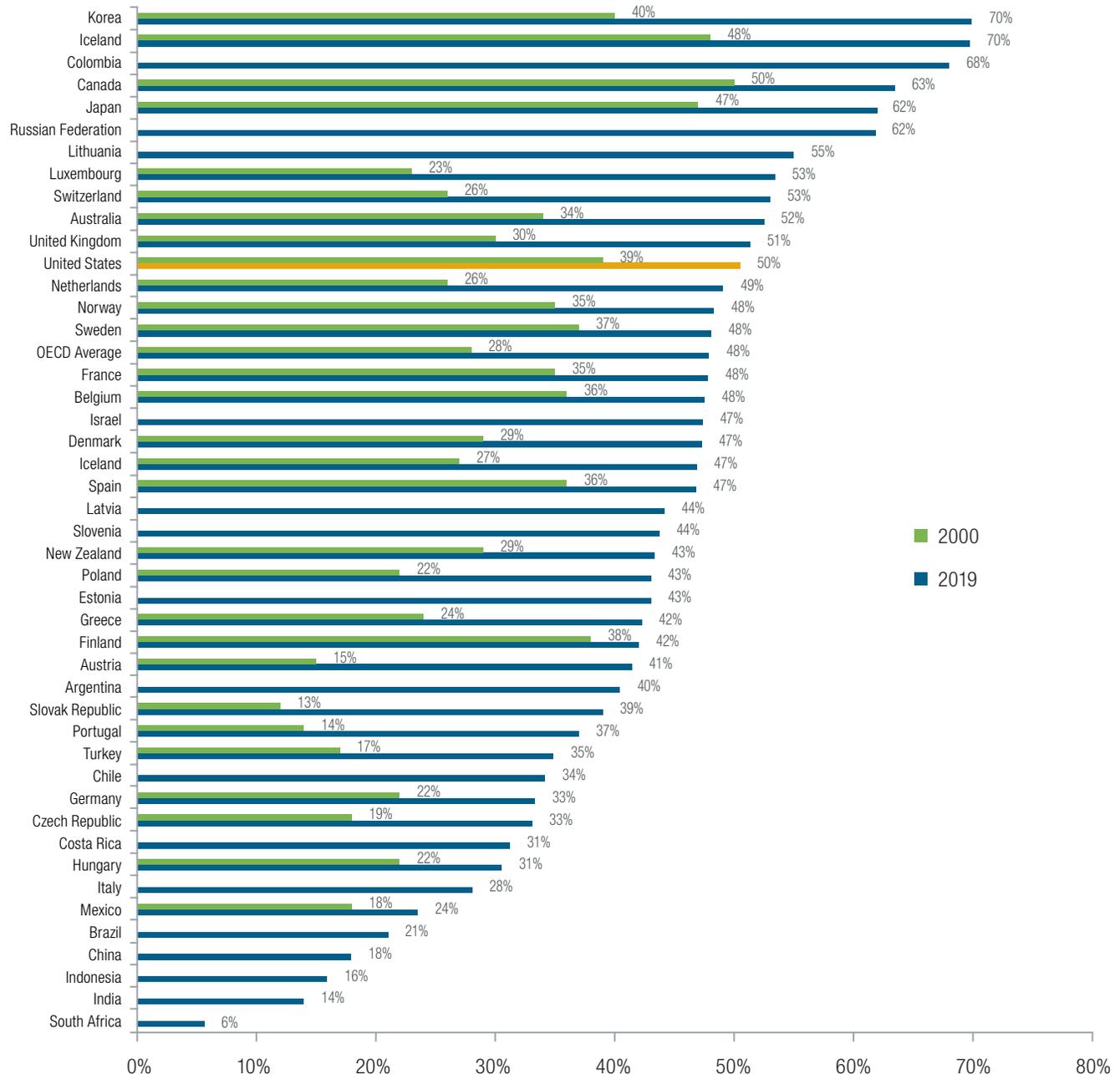
Equity Indicator 6b: What Percentage of 25- to 34-Year-Olds has Completed a Type A (Bachelor's or above) or a Type B (Short-Cycle or Associate's) Tertiary Degree?

In 2019, 50 percent of adults age 25 to 34 in the U.S. had attained the equivalent of at least a 2-year (type B) or 4-year or above (type A) tertiary degree. The U.S. ranked 12th of 45 countries on this indicator in 2019, down from 5th of 30 countries in 2000.

By 2019, at least half of the 25- to 34-year-old population had attained a type A or type B tertiary degree in 11 countries: Korea and Ireland (70 percent), Colombia (68 percent), Canada (63 percent), Russian Federation (62 percent), Japan (62 percent), Lithuania (55 percent), Luxembourg and Switzerland (53 percent), Australia (52 percent), and the United Kingdom (51 percent).

Between 2000 and 2019, the share of the U.S. population age 25 to 34 that had attained a type A or type B tertiary degree increased by 28 percent, rising from 39 percent in 2000 to 50 percent in 2019. The average rate of type A or type B attainment for adults age 25 to 34 among all OECD countries rose from 28 percent in 2000 to 48 percent in 2019, a 71 percent increase.

Equity Indicator 6b: Percentage of adults age 25 to 34 with a type A (bachelor's or above) or type B (short-cycle or associate's) tertiary degree: 2000 and 2019



NOTE: Caution is needed in making international comparisons given differences in educational degree classifications among countries and reporting differences across years. Brazil, India, Indonesia, China, South Africa, Argentina, and Russia Federation year of reference differs from 2019. Refer to the *Education at a Glance 2020* source table for more details. For Japan, data for tertiary education include upper secondary or post-secondary non-tertiary programs (less than 5% of adults are in this group).

SOURCE: Organisation for Economic Co-operation and Development (n.d.). OECD Stat Educational Attainment and Labour Market Outcomes by Skills: Fields of Education and Labour Market Outcomes [Data file]. Retrieved from: <http://stats.oecd.org>, OECD. (2020). *Education at a Glance 2020: OECD Indicators*, Figure A1.6. Share of 25–34-year-olds with tertiary education, by level of tertiary education (2019). Paris: OECD Publishing. Retrieved from: https://www.oecd-ilibrary.org/sites/69096873-en/1/3/2/1/index.html?itemId=/content/publication/69096873-en&_csp_=b68ed930151b9d0f354aa48ee27178db&itemIGO=oecd&itemContentType=book#figure-d1e2626.

EQUITY INDICATOR 7:

THE FEDERAL TRIO PROGRAMS: WHO, WHAT, WHERE, WHEN, WHY AND HOW DOES TRIO WORK?

In 2020, an estimated 808,545 students participated in one of the 7 Federal TRIO programs. National studies have shown that participation in TRIO substantially increases college entrance, persistence, completion, and graduate school enrollment among low-income, first-generation, and students with disabilities. For example, both TS (80 percent) and UB (86 percent) and UBMS (89 percent) have college entrance rates that far exceed the national average of 45-50 percent for the lower half of the family income distribution. Likewise, in repeated national studies, UB participants have been found to be 2 to 3 times as likely to attain a bachelor's degree in 6 years when compared to similar students not receiving comparable services. Looking at the support programs for students already enrolled in college, SSS participants at 2-year colleges were 78 percent more likely to complete an associate degree certificate or transfer to a 4-year college (50 percent for SSS participants vs. 28 percent for the national sample) and SSS participants at 4-year college were 24 percent more likely to complete a bachelor's degree. McNair Scholars have an almost a 70 percent graduate school entrance rate compared with a 45 percent national graduate entrance rate by 4-years after the bachelor's degree. Given current funding levels, however, TRIO reaches only about 1 percent of the eligible population for the more intensive TRIO programs and only about 3 percent for the more extensive outreach programs in any given year.

Equity Indicator 7 (a-d): Sources

Recognizing that financial aid alone was not enough to foster a more equitable education system, the Higher Education Act of 1965 included provisions for services that would eventually become known as TRIO. Seeing firsthand the positive impact of the federal TRIO outreach and student services programs, regional and state Education Opportunity Associations and TRIO professionals across the nation founded the Council for Opportunity in Education (COE) in 1981. COE represents the interests of low-income, first-generation, and students with disabilities before the U.S. Congress. In 2015, TRIO celebrated its 50th anniversary and this year COE is celebrating its 40th anniversary. As such, we deemed it appropriate in this, the seventh edition of the *Indicators Historical Trend Report*, to include a chapter that can serve as a reference for the who, what, where, when, why, and how of the Federal TRIO programs.

The sources of data for Equity Indicator 7 are:

- **U.S. Department of Education, Office of Postsecondary Education**, which contains programmatic information for each of the TRIO programs [TRIO Home Page \(ed.gov\)](#) and periodic Fact Sheet publications.
- **TRIO Annual Performance Reports (APR)**. Each TRIO grantee submits annual reports to the Department of Education. These reports provide detailed information on a yearly basis on the services, participant characteristics, and outcomes of each TRIO program.
- **National Student Clearinghouse (NSC) Data and National Student Loan Data System (NSLDS)**. The National Student Clearinghouse collects student enrollment and degree award data nationally and shares this information with the National Student Loan Data System (NSLDS). This information is used to track postsecondary outcomes of TRIO participants.
- **TRIO Evaluation and Outcomes Reports**. The Department of Education, Office of Federal TRIO Programs funds periodic outcomes reports and evaluations of the TRIO programs. These studies make use of APR and NSC data to track the outcomes for TRIO participants. To provide baseline and comparison data, the studies use related national data sets from the Census, CPS School Enrollment reports, and the NCES national studies of college attendance and attainment such as the Beginning Postsecondary Study (BPS) and the Baccalaureate and Beyond (B&B) study.
- **Data from Other Related Government Sources**. Data are also utilized from other government sources, including: Department of Education NCES national school enrollment statistics; Department of Agriculture Food and Nutrition Services, Free and Reduced-Price Lunch data; Office of Postsecondary Education (OPE) Annual Pell Grant End of Year Report; the Census Bureau's American Community Survey of Veterans Status, and the Bureau of Labor Statistics unemployment data.

What is the Mission and Context for TRIO and When Was Each Program Created?

Today, TRIO is a set of 7 Congressionally mandated and federally funded educational opportunity outreach programs.¹⁴² TRIO grew out of the social movements for civil rights and the focus on addressing poverty of the 1960s and 1970s. All TRIO programs share a mission to support college access and success for students who are low-income, potentially first-generation, and students with disabilities. TRIO projects are implemented through five-year competitive grants awarded to colleges and universities and community organizations. As of 2021, over 3,000 TRIO projects serve more than 808,000 participants yearly. TRIO projects are in every state and territory in the nation. The federal TRIO programs were the first set of national college access and retention programs to begin to address and mitigate the role of socioeconomic disadvantages in the United States education system.¹⁴³

Initiation of the 7 TRIO Programs. In 1964, the Economic Opportunity Act established a pilot program known

142 There are 8 programs, but one is a staff training program that aims to motivate and support training to enhance the skills and expertise of project directors and staff employed in the Federal TRIO Programs (<https://www2.ed.gov/programs/triotrain/index.html>).

143 The Higher Education Act of 1965 was reauthorized in 1968, 1972, 1976, 1980, 1986, 1992, 1998, and 2008. Since the last reauthorization in 2008 was over 10 years ago, there have been several HEA reauthorization proposals discussed in Congress, but thus far none have been adopted by both houses of Congress. In the current Congress (117th), many bills have been introduced to address the issue of student debt and college cost. As cited in the Introduction to this report, in April 2021, Sen. Bernie Sanders (I-Vt.) and Rep. Pramila Jayapal (D-Wash.) introduced the *College for All Act*. This act focuses on addressing major issues of college cost, but the bill also provides for substantial increases in TRIO funding.

as **Upward Bound (UB)** in response to the War on Poverty. The pilot project was first administered by the Department of Labor. One year later, in 1965, the Higher Education Opportunity Act (HEOA) incorporated Upward Bound into the Department of Education and created a second outreach program called **Talent Search (TS)**. The Upward Bound and Talent Search programs are focused on preparation for and access to college for low-income and potentially first-generation college students. Upward Bound participants must be at least rising 9th graders and typically enter the program at least by the time they are rising 12th graders. Talent Search is an outreach program that serves students in middle school through high school graduation. In 1968, the third program, the Services for Disadvantaged Students, later renamed **Student Support Services (SSS)** was launched and became the third TRIO program. The SSS program's special mission is successful college completion support for both traditional-age and nontraditional students. Collectively, these three programs were called "TRIO" and together are designed to provide equal access to and support for successful college participation and completion for low-income students.

Since 1968, five more TRIO programs have been added. **Veterans Upward Bound (VUB)** began in 1969, and **Educational Opportunity Centers (EOC)** began in 1972. Both these programs have a special focus on adult or nontraditional students who need services to prepare to begin college or to return to postsecondary education. In 1976, the **Training Program for Federal TRIO programs** was initiated to help prepare TRIO professionals to meet their program objectives and comply with regulations. In 1986, the **Ronald E. McNair Postbaccalaureate Achievement Program (McNair)** was created, with a focus on preparation for graduate school and entry into the professoriate for underrepresented students. The **Upward Bound Math-Science (UBMS)** program was added in 1990 to foster increased interest in STEM majors and careers.

What are the Trends in Number of Participants, Projects, and Funding Levels for TRIO?

Equity Indicators 7a(i to vi) present trend data on the TRIO programs. These include: the number of participants (Indicator 7a(i)); the number of projects (Indicators 7a (ii and iii)); the total TRIO funding and funding per participant (7a(iv and v)), and the estimates of the coverage of the program relative to eligible persons (Indicator 7a(vi)).

Number of Participants. Equity Indicator 7a(i) shows the historical trend in total and per-program numbers of TRIO participants. In 1965, there were 3,261 participants; that number rose to 808,545 participants in 2020. Overall, participation in TRIO program experienced a 247 percent increase in the span of 56 years.

Differences in Number of Participants by Program. Equity Indicator 7a(ii) shows a detail of the number of participants in each of the TRIO programs in 2020.¹⁴⁴ In that year, TRIO programs ranged in participant size from the intensive McNair program, which serves just over 5,000 participants per year at a cost of about \$10,000 per participant, to the extensive Talent Search program, which serves about 310,000 participants at a cost of about \$543 per participant (See Indicator 7a(vi)). In 2020, Upward Bound Programs (UB, UBMS, and VUB) combined served 91,793 low-income, first-generation students.

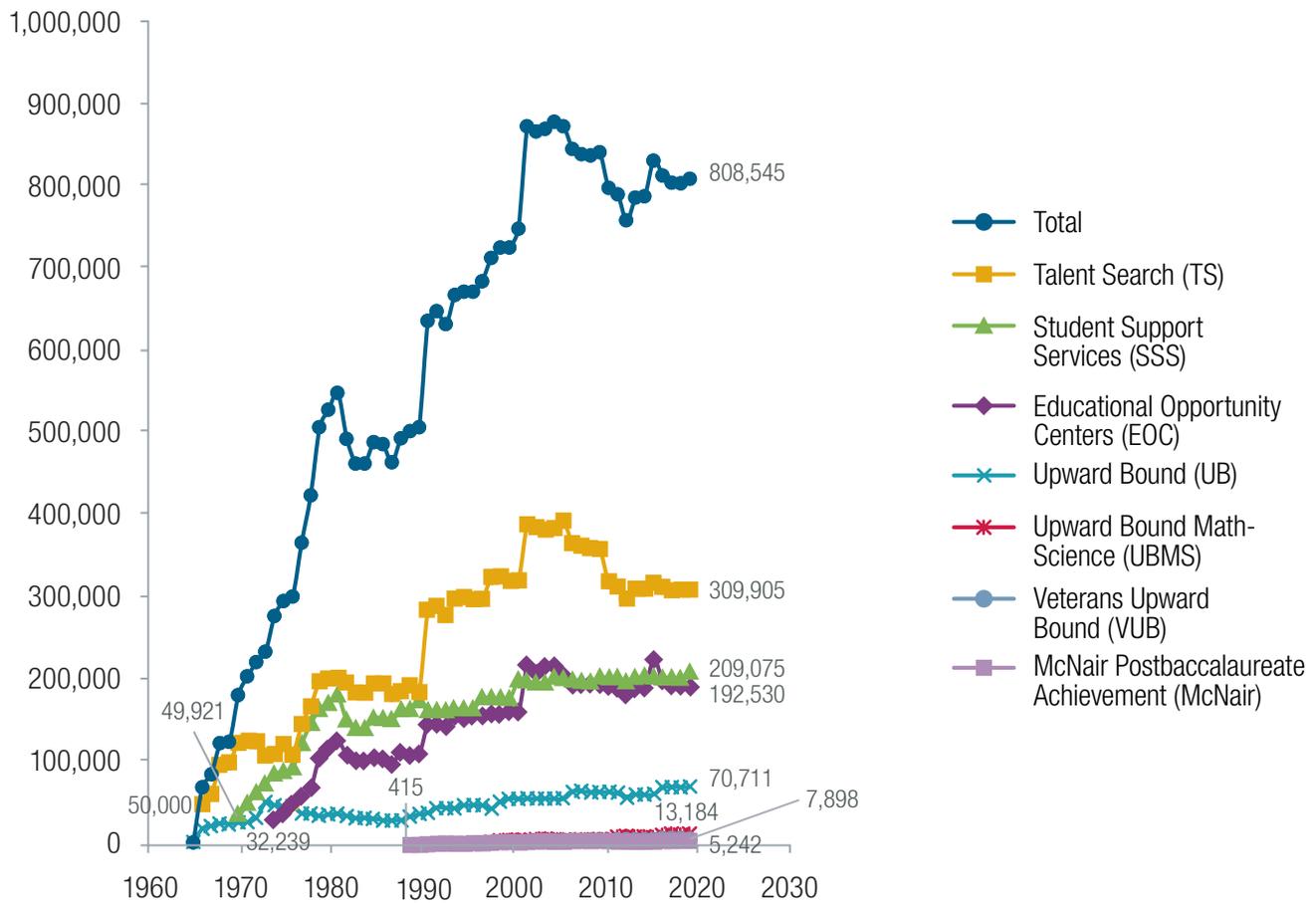
Number of Projects. Equity Indicator 7a(iii) shows data on the number of projects from 1997 to 2020. The number of TRIO projects in 2020 ranged from 60 VUB projects to 1,156 SSS projects. The largest number of projects remains in the original three TRIO programs, SSS, UB, and TS in that order. Over the period in the chart 1997 to 2020, the number of SSS projects increased by 45 percent, from 796 in 1997 to 1,156 in 2020. In the same period, the number of Upward Bound projects increased by 61 percent, from 601 to 966, and the number of Talent Search projects increased by 48 percent, from 319 to 473. The programs begun after the original three projects have remained smaller in numbers, but overall have had the largest rates of increase. Upward Bound Math-Science has shown the largest percentage increase, 162 percent, going from 81 projects in 1997 to 212

¹⁴⁴ See Appendix A-9 to see more information for each TRIO program.

projects in 2021. The number of McNair projects has risen 89 percent (from 99 projects to 187), and EOC projects by 88 percent (from 74 to 139). The number of VUB projects increased from 45 projects to 60 projects between 1997 and 2020.

Map of TRIO Projects by State. As Equity Indicator 7a(iv) displays, TRIO projects are in every state and in the U.S. territories. In general, the most populous states have the most TRIO projects. California has the largest number of projects with 405 projects, followed by Texas with 266 projects, Illinois with 152 projects, and New York with 111.

Equity Indicator 7a(i): Number of TRIO participants each year by program: 1965-2020



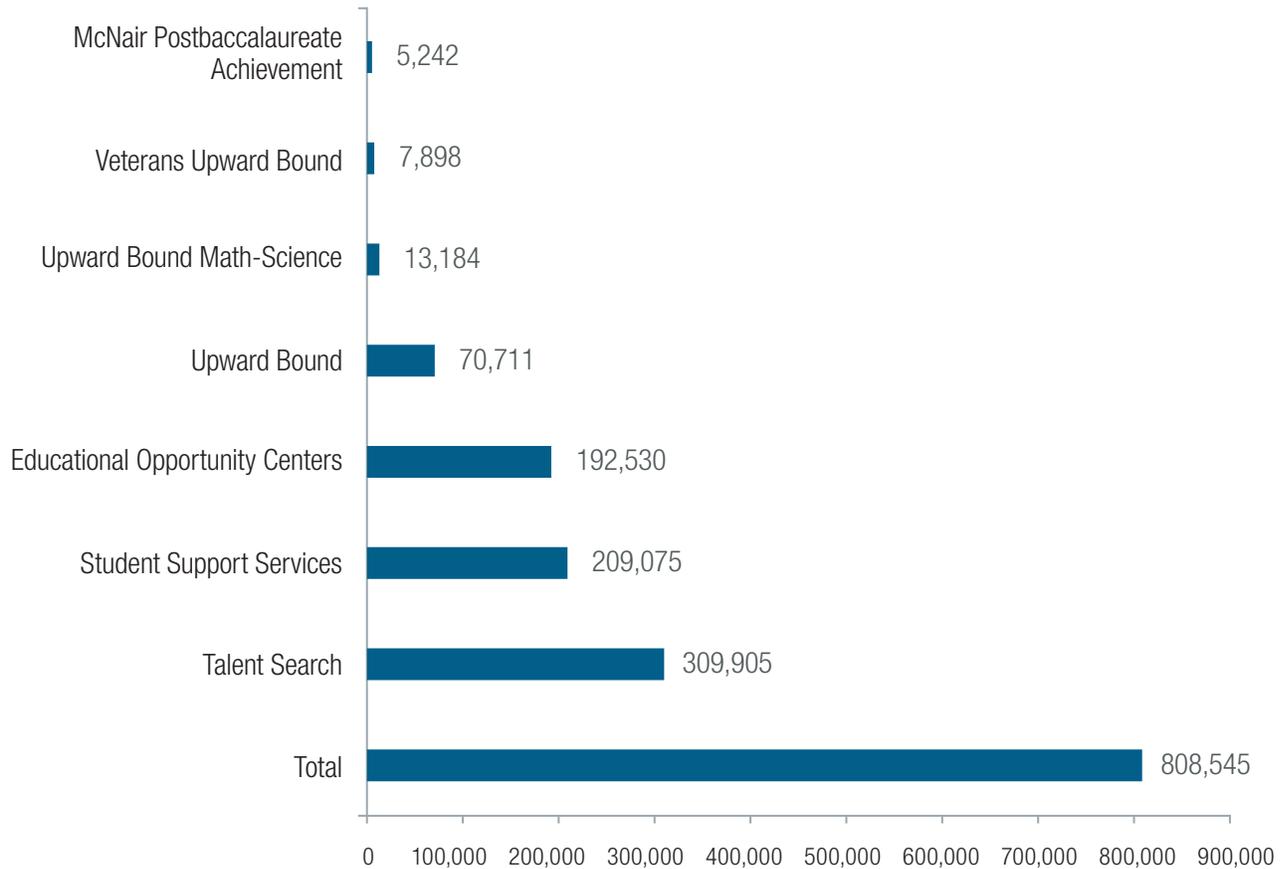
Indicator Status:

In 2020, 3,193 TRIO projects served 808,545 low-income students. The largest number of participants are in Talent Search (309,905), Student Support Services (209,075), and Educational Opportunity Centers (192,530).

NOTE: Includes participants from all 50 states, Washington, D.C., the Pacific Islands, and Puerto Rico.

SOURCE: U.S. Department of Education, Office of Federal TRIO Programs data from various years, 1965 to 2020. Retrieved from <https://www2.ed.gov/about/offices/list/ope/trio/index.html>.

Equity Indicator 7a(ii): Number of participants in each TRIO program: 2020



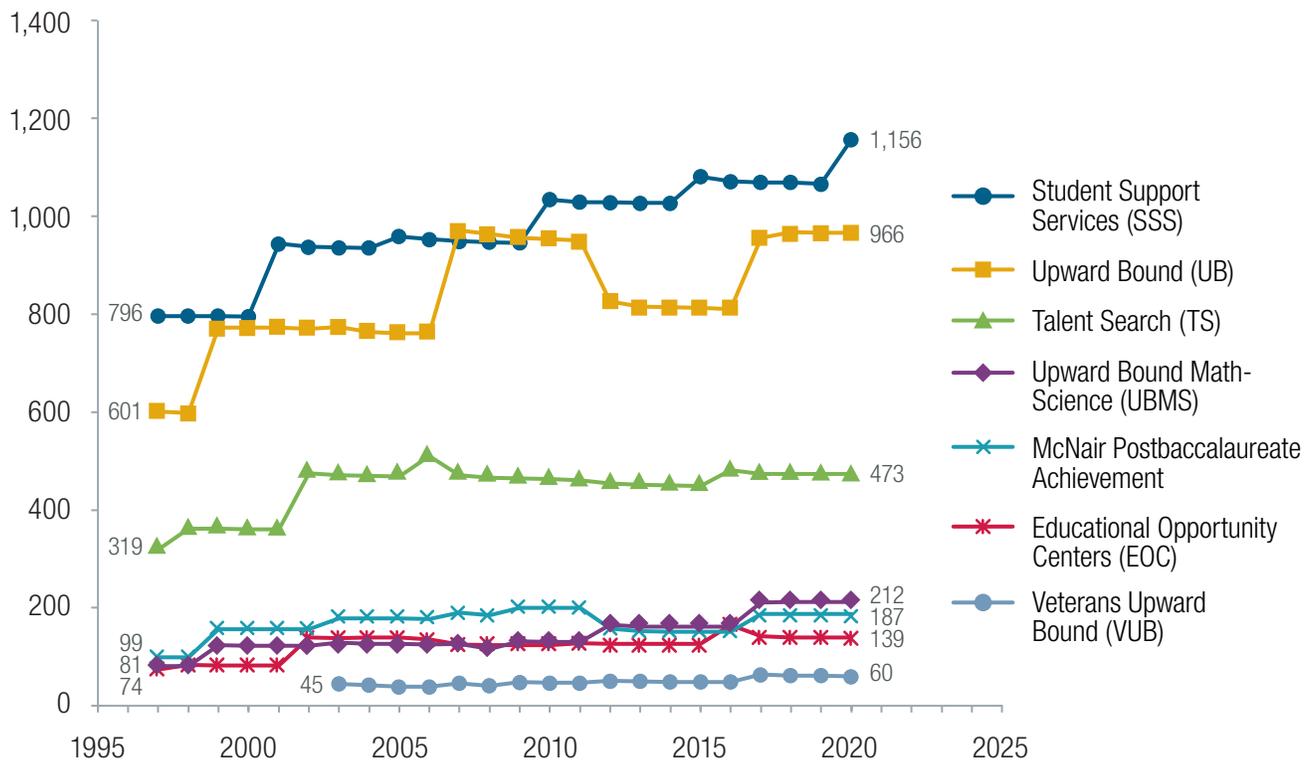
Indicator Status:

TRIO programs range in size from the McNair program, which serves just over 5,000 students per year to Talent Search, which serves about 310,000 per year. In 2020, Upward Bound Programs (UB, UBMS, and VUB) combined served 91,793 low-income, first-generation students.

NOTE: Includes participants from all 50 states, Washington, D.C., the Pacific Islands, and Puerto Rico.

SOURCE: U.S. Department of Education, Office of Federal TRIO Programs. Retrieved from <https://www2.ed.gov/about/offices/list/ope/trio/index.html>.

Equity Indicator 7a(iii): Number of TRIO projects: 1997-2020



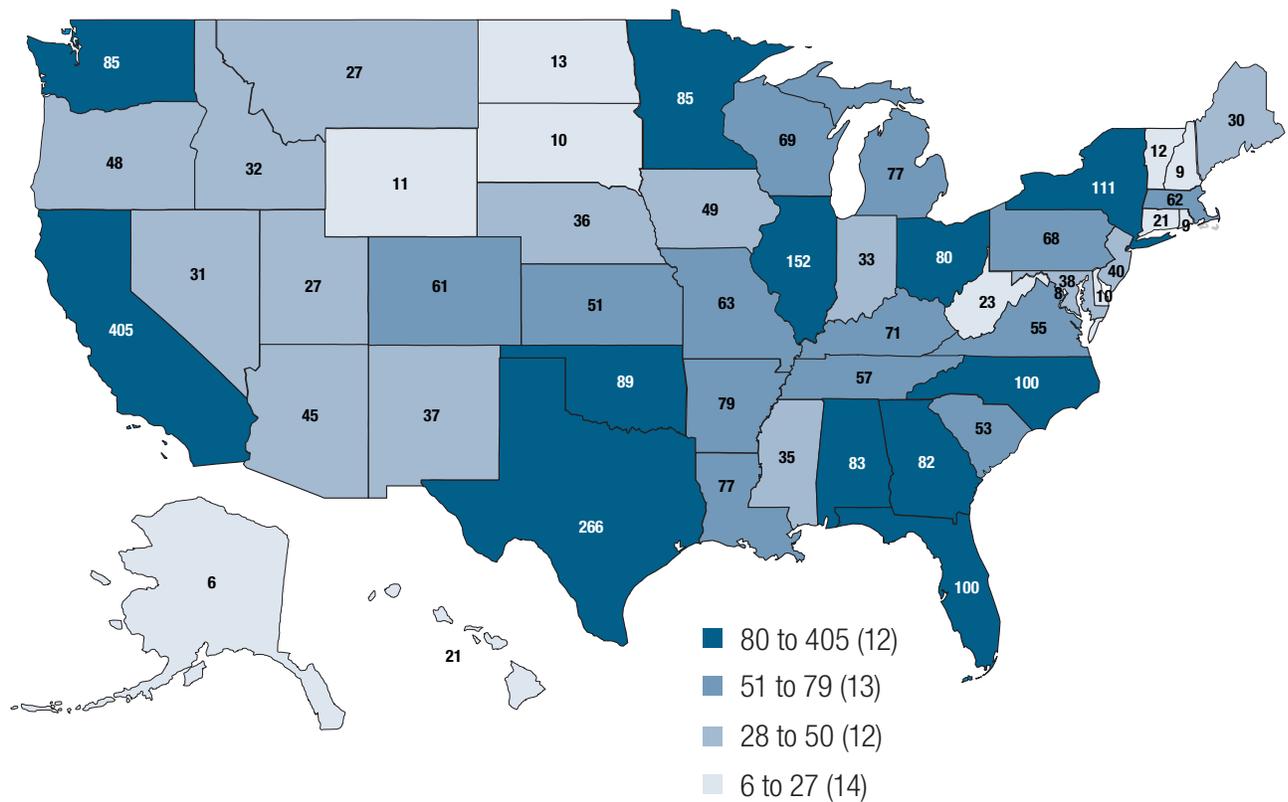
Indicator Status:

The largest numbers of projects are the original three TRIO programs, SSS, UB, and TS in that order. Between 1997 and 2020, the number of SSS projects increased by 45 percent. The programs begun after the original three have remained smaller in numbers but overall have had the largest rates of increase. The number of Upward Bound Math-Science projects has increased by 162 percent. The number of McNair projects has risen by 89 percent, and the number of EOC projects by 88 percent. The number of VUB projects has increased by one-third.

NOTE: Includes projects from all 50 states, Washington, D.C., the Pacific Islands, and Puerto Rico.

SOURCE: U.S. Department of Education, Office of Federal TRIO Programs data from various years 1997 to 2020. Retrieved from <https://www2.ed.gov/about/offices/list/ope/trio/index.html>.

Equity Indicator 7a(iv): Number of TRIO projects by state: 2020-21



Indicator Status:

TRIO projects are in every state and in the U.S. territories. In general, the most populous states have the most TRIO projects. California has the largest number of projects with 405 projects, followed by Texas with 266 projects, Illinois with 152 projects, and New York with 111.

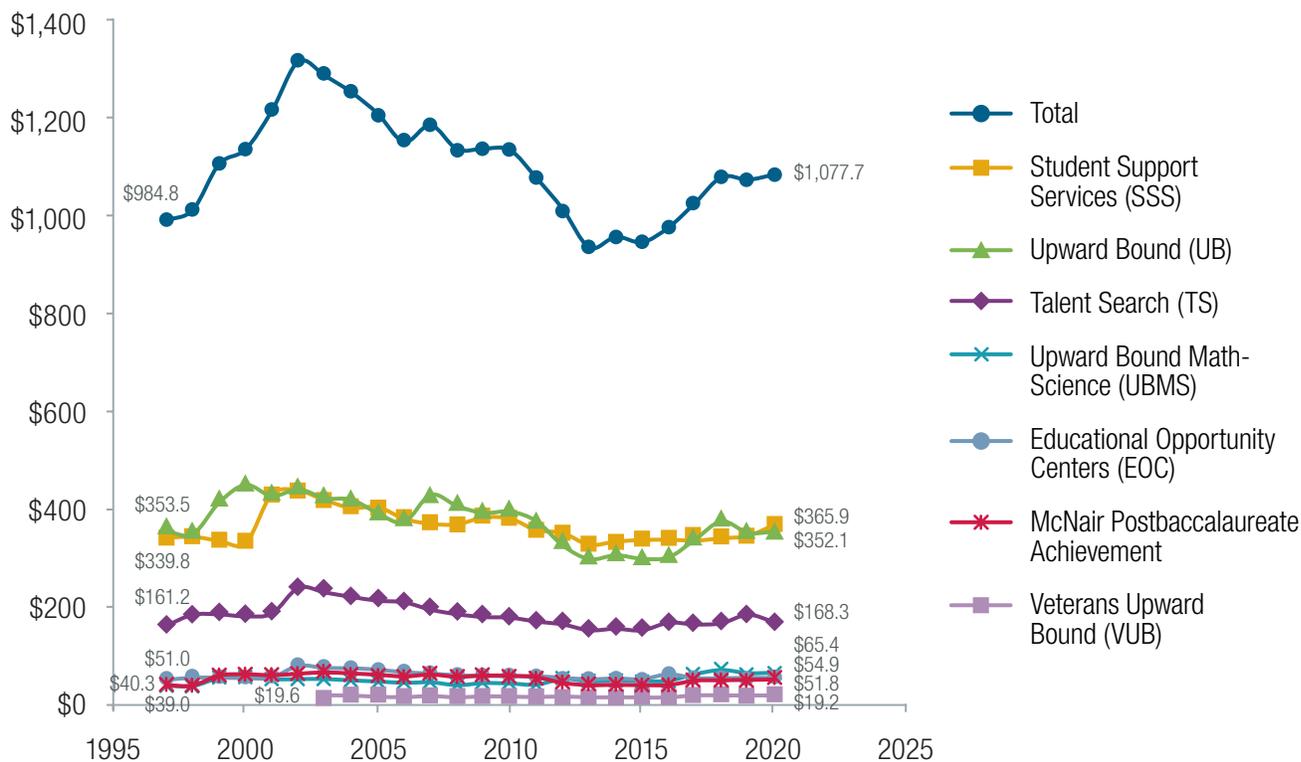
NOTE: Includes participants from all 50 states, Washington, D.C., the Pacific Islands, and Puerto Rico. See Indicator 7a(iv) Excel file for the number of projects by type of project by state.

SOURCE: U.S. Department of Education, Office of Federal TRIO Programs data from 2020. Retrieved from <https://www2.ed.gov/about/offices/list/ope/trio/index.html>.

TRIO Funding Levels. In constant 2020 dollars, total TRIO funding increased by 9 percent between 1997 and 2020, going from \$984.8 million to \$1.01 billion over the period (Indicator 7a(v)). Funding for SSS and EOC programs each increased by 8 percent. Upward Bound Math-Science had the largest percentage increase--68 percent. In the same period, funding for the “regular” or “classic” Upward Bound program decreased by .4 percent and Veterans Upward Bound decreased by 2 percent. The Talent Search program saw an increase of 4 percent and McNair an increase of 29 percent.

TRIO Funding Per Participant by Program. Between 1997 and 2020, in constant dollars, funding per participant for the least intensive of the TRIO programs, EOC (\$285 per participant) and Talent Search (\$543 per participant), has remained relatively stable (Indicator 7a(vi)). Per participant funding for SSS has increased in the same period (from \$965 to \$1,750). Funding per participant for the most intensive TRIO programs, McNair and the three Upward Bound programs, has decreased over the same period. However, McNair at \$9,878 per participant, UB/UBMS at just under \$5,000 per participant, and VUB at \$2,435 per participant continue to provide the most intensive services of all TRIO programs.

Equity Indicator 7a(v): TRIO funding for the total and by program: 1997-2020 (in millions of constant 2020 dollars)



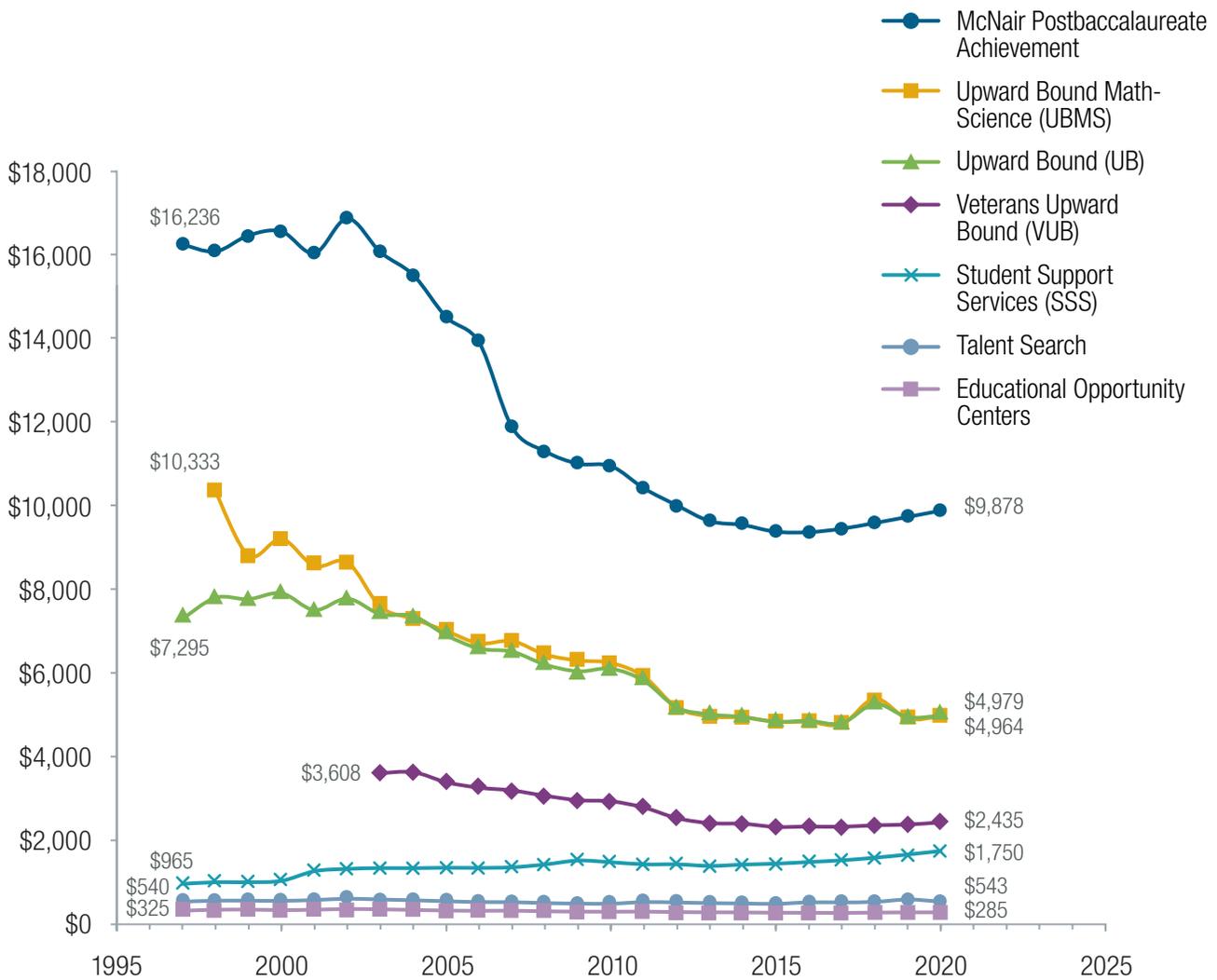
Indicator Status:

In constant 2020 dollars, total TRIO funding increased by 9 percent between 1997 and 2020, going from \$984.8 million to \$1.01 billion over the period. Funding for SSS and EOC each increased by 8 percent. Upward Bound Math-Science had the largest percentage funding increase (68 percent). In the same period, funding for “regular” or “classic” Upward Bound decreased by .4 percent and Veterans Upward Bound decreased by 2 percent. Talent Search funding had an increase of 4 percent and McNair of 29 percent.

NOTE: Includes participants from all 50 states, Washington, D.C., the Pacific Islands, and Puerto Rico.

SOURCE: U.S. Department of Education, Office of Federal TRIO Programs data from various years, 1997 to 2020. Retrieved from <https://www2.ed.gov/about/offices/list/ope/trio/index.html>.

Equity Indicator 7a(vi): TRIO funding per participant by program: 1997-2020 (in constant 2020 dollars)



Indicator Status:

Between 1997 and 2020, in 2020 constant dollars, funding per participant for the least intensive of the TRIO programs, EOC (\$285 per participant) and Talent Search (\$543 per participant), has remained relatively stable. Per participant funding for SSS has increased in the same period (from \$965 to \$1,750). Funding per participant for the most intensive TRIO programs, McNair and the three Upward Bound programs, has decreased over the same period. However, McNair at \$9,878 and UB/UBMS at just under \$5,000 per participant, and VUB at \$2,435 per participant continue to be the most intensive of all TRIO programs.

NOTE: Includes participants from all 50 states, Washington, D.C., the Pacific Islands, and Puerto Rico.

SOURCE: U.S. Department of Education, Office of Federal TRIO Programs data from various years, 1997 to 2020. Retrieved from <https://www2.ed.gov/about/offices/list/ope/trio/index.html>.

Who are the TRIO Participants?

Evolution of Eligibility Requirements. When the first three of the TRIO programs (Upward Bound, Student Support Services, and Talent Search) were established by Congress, the eligibility requirements were defined as being “socially and economically disadvantaged” but did not include specific income or parent education requirements. For the 1980 reauthorization of the Higher Education Act, the TRIO stakeholder community worked to help draft eligibility language that would keep the focus of TRIO on the students most in need, and at the same time be broad enough to include any student who met the family income and parent education needs. In HEA:80, the eligibility requirements for most of the TRIO programs were defined to be those who are low-income at the 150 percent of poverty levels, and those who are the first-generation college (defined as neither parent has completed a bachelor’s degree). This later concept became known as “first-generation college.” For most of the TRIO programs, two-thirds (2/3) of potential participants must be both low-income and first-generation college and the other one-third (1/3) must be either low-income or potentially first-generation college. For the SSS program, students with disabilities may be either low-income or first-generation. For the McNair program, students must be low-income, first-generation, or representatives of an underrepresented minority in graduate education.

What is the Distribution of TRIO Participants by the Eligibility Criteria? Indicator 7b(i) provides recently available data by the eligibility criteria mandated by Congress. Data are shown for Student Support Services (SSS), Talent Search (TS) and Upward Bound/Upward Bound Math-Science. Data for UB and UBMS are combined. Indicator 7b(ii) provides eligibility data for the Veterans Upward Bound (VUB) program, which has slightly different eligibility criteria.¹⁴⁵ The compiled national data show that TRIO is serving the intended populations for which the programs were established.

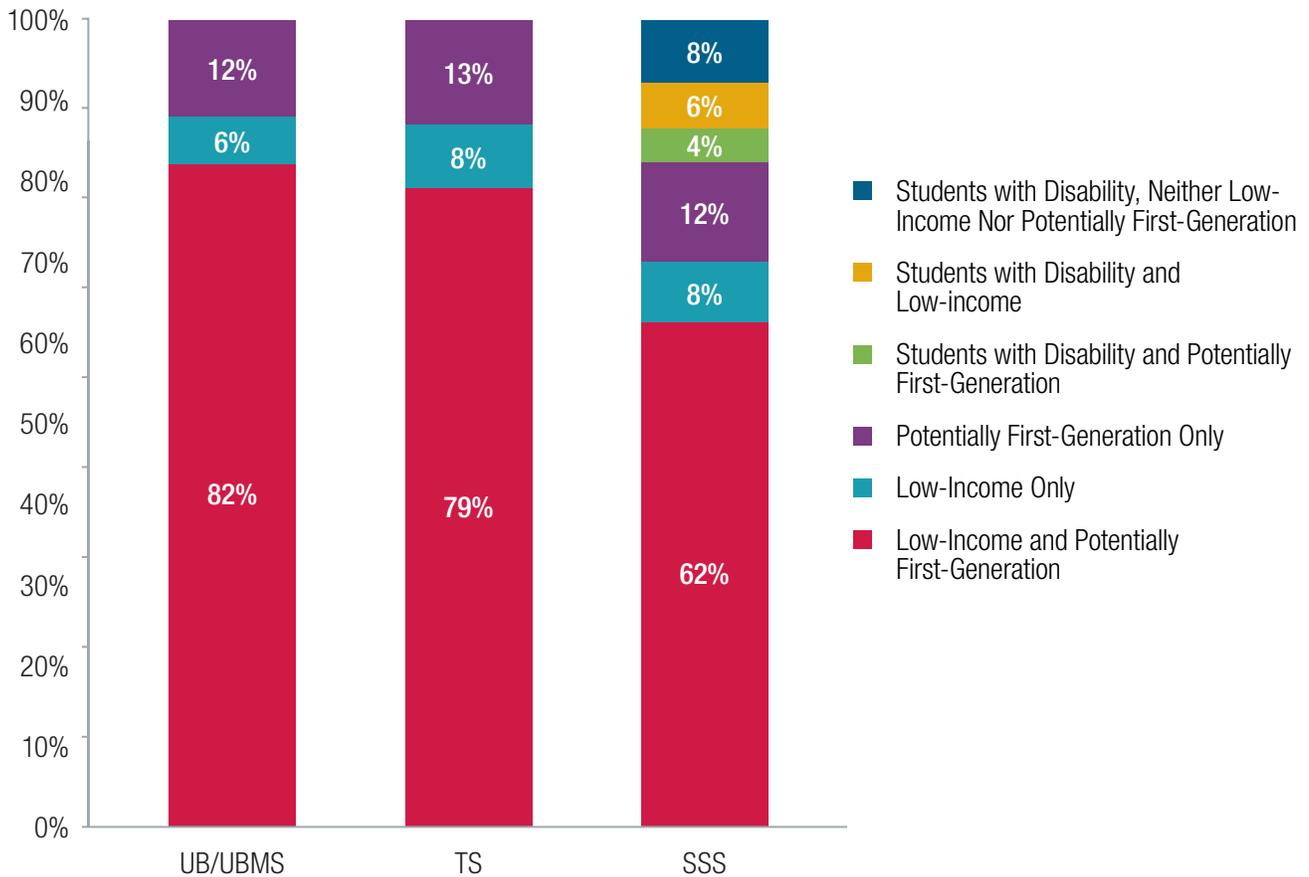
As displayed in Indicator 7b(i), UB/UBMS (with 82 percent) and TS (with 79 percent) exceed the requirement that two-thirds be both low-income and potentially first-generation college. The remainder of participants for both UB/UBMS and TS programs were either low-income or potentially first-generation college.

SSS also meets the formal eligibility requirements mandated by Congress. SSS eligibility requirements include special provisions for students with disabilities. Within SSS, 62 percent were low-income and potentially first-generation college, and 20 percent were low-income or first-generation. Eighteen percent were students with disabilities, of whom 10 percent were also low-income or first-generation. About 8 percent of the SSS participants who were students with disabilities were not low-income or first-generation.

Veterans Upward Bound (VUB) has eligibility requirements that differ somewhat from those of the other UB programs. VUB eligibility requirements include low-income and first-generation, as in other TRIO programs, but in addition, the possible eligibility criteria include “high risk for academic failure.” As displayed in Indicator 7b(ii), among VUB participants, 46 percent met all three eligibility requirements (low-income, first-generation, and at high risk of academic failure), and 25 percent were both low-income and first-generation but were not at high risk of academic failure. The other 28 percent met 2 of the criteria with some combination of low-income or first-generation, and academic risk criteria. Only 2 percent were neither low-income nor first-generation but were at high risk of academic failure.

¹⁴⁵ U.S. Department of Education, Office of Federal TRIO Programs; Retrieved from <https://www2.ed.gov/about/offices/list/ope/trio/index.html>. Fast Facts Report for the Student Support Services Program (2016); Fast Facts Report for the Talent Search Program (2016); Upward Bound and Upward Bound Math-Science Program Postsecondary Outcomes Report (September 2016); Fast Facts Report for the Veterans Upward Bound Program (2020).

Equity Indicator 7b(i): Percentage distribution of Upward Bound/Upward Bound Math-Science (UB/UBMS), Talent Search (TS), and Student Support Services (SSS) participants by program eligibility criteria: 2013-14



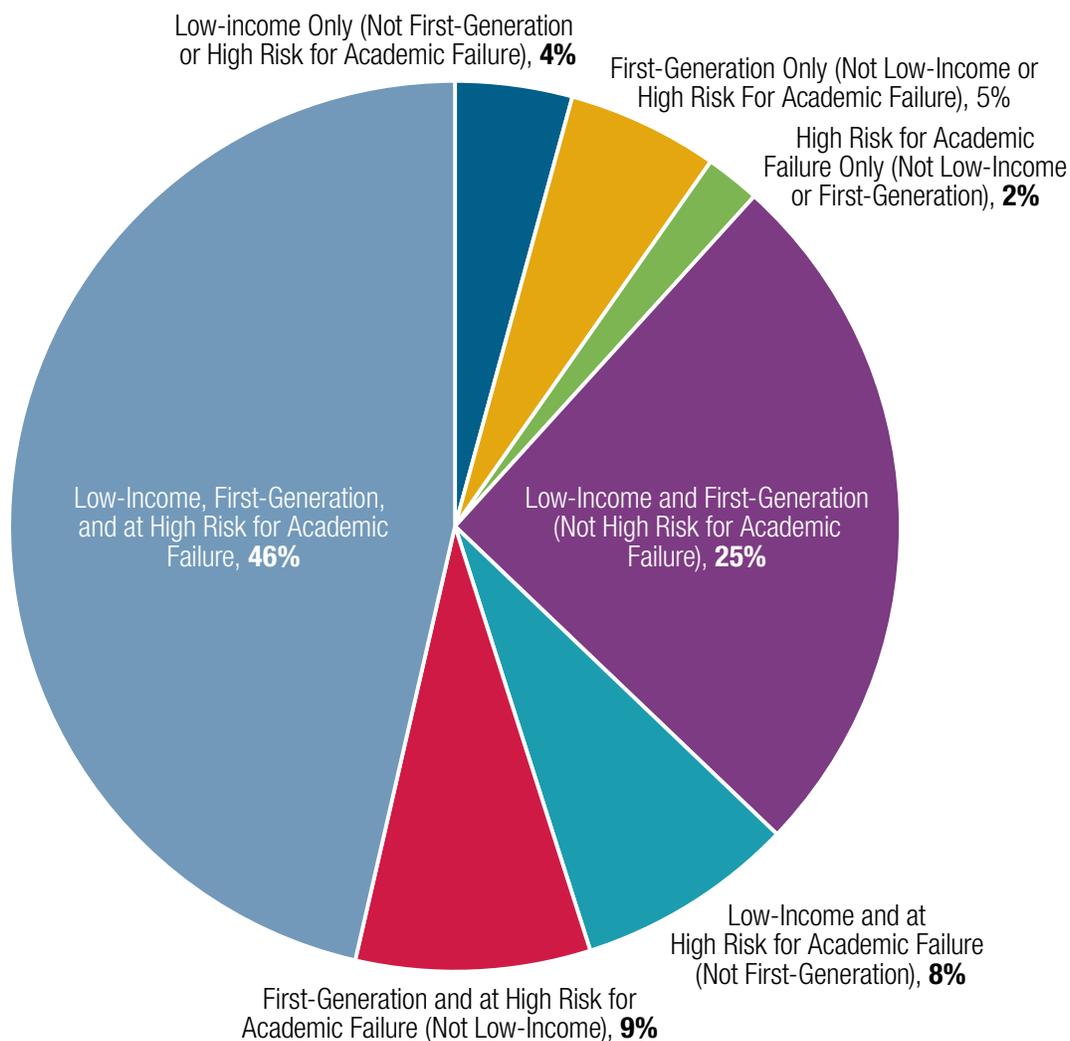
Indicator Status:

TRIO programs are serving the intended populations for which they were established.

NOTE: Includes participants from all 50 states, Washington, D.C., the Pacific Islands, and Puerto Rico.

SOURCE: U.S. Department of Education, Office of Federal TRIO Programs; Retrieved from <https://www2.ed.gov/about/offices/list/ope/trio/index.html>. Fast Facts Report for the Student Support Services Program (2016); Fast Facts Report for the Talent Search Program (2016); Heuer, R., Mason, M., & Lauff, E. (2016). Upward Bound and Upward Bound Math-Science Programs: Postsecondary Outcomes Report, U.S. Department of Education, Office of Postsecondary Education, Student Service, Washington, D.C., <http://www2.ed.gov/programs/trioupbound/resources.html>.

Equity Indicator 7b(ii): Percentage distribution of Veterans Upward Bound (VUB) participants by program eligibility criteria: 2013-14



Indicator Status:

Indicator Status: Among Veterans Upward Bound (VUB) participants, 46 percent met all three eligibility requirements (low-income, first-generation, and at high risk of academic failure), and 25 percent were both low-income and first-generation but were not at high risk of academic failure. The other 28 percent met 2 of the criteria with some combination of income or first-generation and the academic risk criteria. Only 2 percent were neither low-income nor first-generation but were at high risk of academic failure.

NOTE: Includes participants from all 50 states, Washington, D.C., the Pacific Islands, and Puerto Rico.

SOURCE: U.S. Department of Education, Office of Federal TRIO Programs; Retrieved from <https://www2.ed.gov/about/offices/list/ope/trio/index.html>. Fast Facts Report for the Veterans Upward Bound Program (2020).

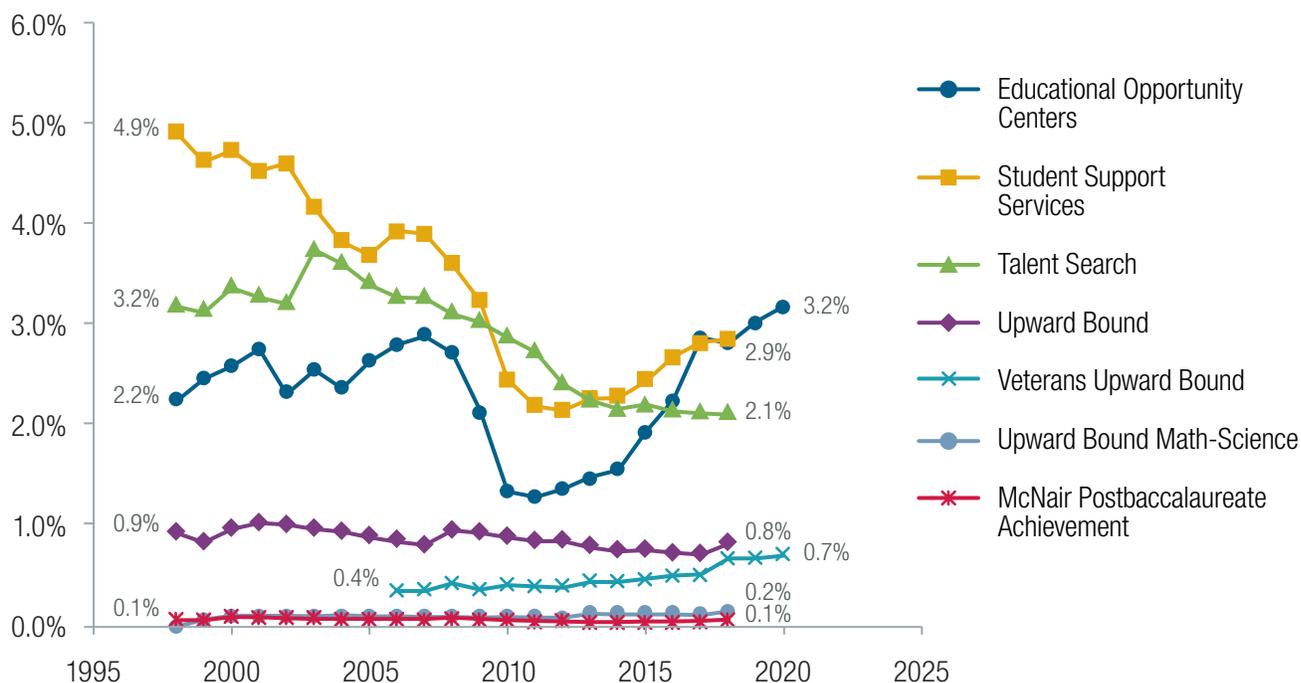
What is the Estimated Coverage of TRIO in Relationship to the Number of Persons Eligible for Services?

Based upon national statistical data on the populations related to the TRIO mission and eligibility criteria, Tom Mortenson and Nicole Brunt have estimated the “TRIO” coverage by program from 1998 to 2020.¹⁴⁶ The coverage is estimated based on available data on eligible population from other government statistics for appropriate years and varies by TRIO program eligibility. The SSS and McNair estimates of coverage use Pell Grant end-of-year published research tables. The estimates for UB, UBMS and TS use eligible grade appropriate data from the School K-12 Enrollment Data from NCES and the Free and Reduced-Lunch data from the US Department of Agriculture, Food and Nutrition Services. VUB coverage is estimated using U.S. Census data on veterans in poverty. EOC estimates of coverage use unemployment data from the Bureau of Labor Statistics (BLS). Using these data combined with the numbers of participants from the Office of Federal TRIO programs from the TRIO Annual Performance Reports, we can obtain some estimates on a year-by-year basis. These data are to be interpreted as rough estimates based on available data, and some caution is needed in interpreting the data and especially year-to-year fluctuations. They are tools to help us understand the general ratio of the number of participants to the number who might be eligible for services; however, they cannot provide precise estimates.

These estimates are reported in Indicator 7b(iii). These ratios indicate that in any given year, TRIO is serving a very small portion of those individuals who might be eligible for the programs based on national statistics. Estimated coverage ranges from 3.2 percent of the eligible population for the least intensive of the TRIO programs (Educational Opportunity Centers) and 2.1 percent for Talent Search (TS) to .1 percent for the most intensive program (McNair). The Upward Bound and Upward Bound Math-Science projects taken together serve about 1 percent of the eligible students. VUB serves about .7 percent of eligible veterans. Moreover, estimated yearly coverage has declined for TS and Student Support Services (SSS) over the period. TS declined from 3.2 percent to 2.1 percent of eligible students and SSS from 4.9 percent to 2.9 percent. These declines mainly represent growth in the percentages of K-12 and college enrollment that is low-income.

146 The SSS and McNair estimates of coverage use Pell Grant End-of-Year research tables. <http://www.ed.gov/finaid/prof/resources/data/pell-data.html>; UB, UBMS and TS use eligible grade appropriate data from the School K-12 Enrollment Data of the U.S. Department of Education (for example, https://nces.ed.gov/programs/digest/d17/tables/dt17_203.40.asp) and the Free and Reduced-Lunch data from the US Department of Agriculture, Food and Nutrition Services; VUB coverage is estimated using U.S. Census data on Veterans in Poverty, Table S2101, <https://data.census.gov/cedsci>. EOC estimates of coverage use unemployment data from the Bureau of Labor Statistics (BLS).

Equity Indicator 7b(iii): Estimated TRIO yearly coverage: ratio of number of participants to estimated eligible population by TRIO project: 1998-2017/20



Indicator Status:

These ratios indicate that in any given year, TRIO is serving a very small portion of those individuals who might be eligible for the programs based on national statistics. Estimated coverage ranged from 3.2 percent for the least intensive of the TRIO programs (Educational Opportunity Centers) and 2.1 percent for Talent Search (TS) to .1 percent for the most intensive program (McNair). The Upward Bound and Upward Bound Math-Science projects taken together serve about 1 percent of the eligible students. VUB serves about .7 percent of eligible veterans. Moreover, estimated yearly coverage has gone down for TS, and Student Support Services (SSS) over the period. TS declined from 3.2 percent to 2.1 percent of eligible students and SSS from 4.9 percent to 2.9 percent. These declines mainly represent growth in the percentages of K-12 and college enrollment that is low-income.

NOTE: Coverage is estimated based on available data on eligible population from other government statistics from the Bureau of Labor Statistics (BLS); the SSS and McNair estimates of coverage use Pell Grant End of Year research tables <http://www.ed.gov/finaid/prof/resources/data/pell-data.html>; UB, UBMS and TS use eligible grade appropriate data from the K-12 Enrollment Data of the U.S. Department of Education (for example, https://nces.ed.gov/programs/digest/d17/tables/dt17_203.40.asp and Free and Reduced Lunch data from the US Department of Agriculture, Food and Nutrition Services; VUB coverage is estimated using U.S. Census data on Veterans in Poverty, Table S2101, <https://data.census.gov/cedsci>).

SOURCE: U.S. Department of Education, Office of Federal TRIO Programs data from various years 1997 to 2020. Retrieved from <https://www2.ed.gov/about/offices/list/ope/trio/index.html>; Updated and maintained by Tom Mortenson and Nicole Brunt. For more details, visit the Indicators page at: The Pell Institute for the Study of Opportunity in Higher Education.

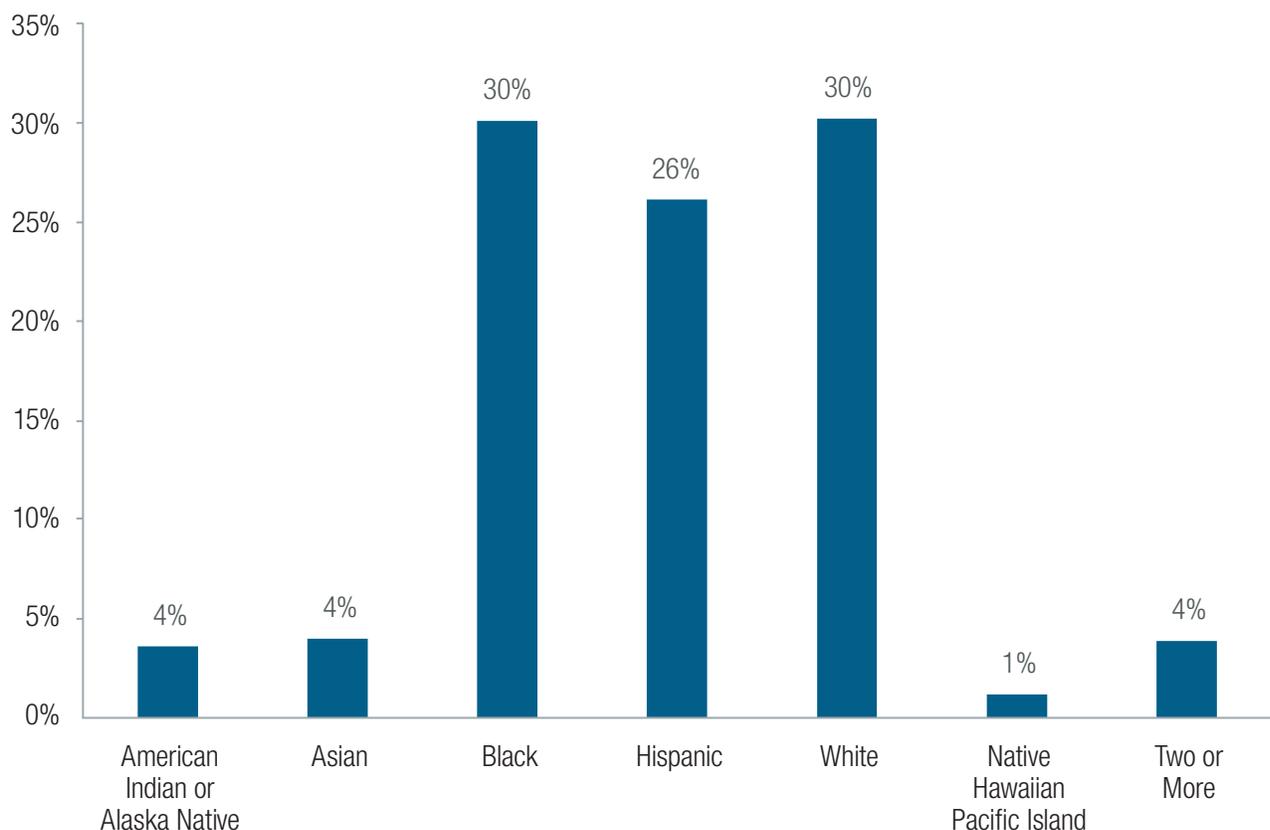
What is the Race/Ethnicity of TRIO Participants? Data on TRIO participants' race/ethnicities are obtained from the annual APR data and reflects the participants' self-identification as to race and ethnicity. These data are only periodically reported by the Department of Education in the various Fact Sheets and Outcomes reports. Combined data for all the diverse TRIO programs are not usually reported. Special tabulations were done in 2008-09 for COE allowing for combined data on the race/ethnicity of all TRIO participants. In 2008-09, combining data for all TRIO participants, 34 percent of TRIO students were White; 33 percent were Black; 21 percent were Hispanic; 5 percent were Asian or Pacific Islander; 3 percent were American Indian or Alaska Native, and 4 percent were "other," a category which included multiracial students. Since 2008-09, the race/ethnicity categories used have been updated to include more choices, including a mixed-race category and new specified breakouts for different groups.

Indicator 7b(iv) gives more recent published data with the revised categories for Talent Search, the largest of the TRIO programs. For the 2013-14 reporting period, 30 percent of TS participants identified as White, and 70 percent of the Talent Search participants identified as members of race/ethnicity minorities. These included: 30 percent Black; 26 percent Hispanic; 4 percent Asian; 4 percent American Indian or Alaska Native; 4 percent Two or More Races, and 1 percent Native Hawaiian Pacific Islander.

Comparisons of the Talent Search data for 2013-14 with the earlier 2008-09 combined data for all of TRIO must be made with caution as any changes noted might reflect differences in the combined totals versus just Talent Search, or differences in the race/ethnicity categories used over time. However, these differences suggest a consistency with U.S. demographic shifts, as well as the inclusion of new, more complex response choices. These comparisons suggest that there has been an increase in the percentage of TRIO participants who are identified as Hispanic (from 21 to 26 percent), a decline in White participants (from 34 to 30 percent) and a decline in Black participants (from 33 to 30 percent). In addition, the percentage of those in Asian groups has increased. Additional data by race/ethnicity for UB and SSS can be accessed at U.S. Department of Education, Office of Federal TRIO Programs from various published reports.¹⁴⁷

147 Data by race/ethnicity on some of the individual programs can be accessed at U.S. Department of Education, Office of Federal TRIO Programs; Retrieved from <https://www2.ed.gov/about/offices/list/ope/trio/index.html>. Fast Facts Report for the Student Support Services Program (2016); Fast Facts Report for the Talent Search Program (2016); Upward Bound and Upward Bound Math-Science Program Postsecondary Outcomes Report (September 2016); Fast Facts Report for the Veterans Upward Bound Program (2020).

Equity Indicator 7b(iv): Percentage distribution of participants for the largest TRIO program, Talent Search (TS), by race/ethnicity: 2013-14



Indicator Status:

TRIO is diverse, serving underrepresented students from a range of racial/ethnic groups. Seventy percent of Talent Search participants are racial/ethnic minorities.

NOTE: Additional detailed data by race/ethnicity for UB/UBMS, VUB, TS, and SSS can be accessed at U.S. Department of Education, Office of Federal TRIO Programs, from various published reports. <https://www2.ed.gov/about/offices/list/ope/trio/index.html>. Fast Facts Report for the Student Support Services Program (2016); Fast Facts Report for the Talent Search Program (2016); Upward Bound and Upward Bound Math-Science Program Postsecondary Outcomes Report (September 2016); Fast Facts Report for the Veterans Upward Bound Program (2020).

SOURCE: U.S. Department of Education, Fast Facts Report for the Talent Search Program (2016). Talent Search 2013-2014 <https://www2.ed.gov/programs/triotalent/ts-fastfacts2016.pdf>.

What Studies Have Been Done of TRIO Programs? How Is TRIO Evaluated?

The HEA authorizing legislation for TRIO includes language calling for periodic evaluations designed to foster program improvement. Periodically, the Department of Education (ED) has contracted for TRIO national evaluation studies. In the 1990s, several evaluation studies began examining the impact of TRIO, or TRIO-like programs, on college entrance and completion. Separate evaluation studies have most frequently been conducted for UB/UBMS and SSS. In addition, the Department of Education commissioned some secondary data analyses of national data sets to address the effectiveness of TRIO-like services. For example, in an analysis of the NCES National Educational Longitudinal Study (NELS), Horn and Chen (1998) found in correlational analysis that participation in any type of pre-college program doubled the odds for enrollment in a 4-year college after controlling for other factors known to be related to college entrance.¹⁴⁸ In the late 1990s, the Department began to issue contracts for maintaining longitudinal analyses files for the Annual Performance Reports (APR) for the TRIO programs and developing analyses and reports based on matching the APR data with other national data such as the National Student Clearinghouse (NSC) data.¹⁴⁹ Since the late 1990s, the APR reports have included individual student record outcome tracking data for the Upward Bound, SSS, and McNair programs, and this information has been used for the major outcome reports published in the current period.

The box below includes a listing and links to major evaluations, and outcomes reports, sponsored by the U.S. Department of Education. Space does not permit us to include charts from each of these reports, but we provide some information and citations for recent available information for each of the 7 programs.

- Indicators 7c(i to vi) summarize studies of the pre-college programs: UB/UBMS/VUB, Talent Search, and EOC.
- Indicators 7d (i to v) summarize studies of the TRIO college support programs, Student Support Services (SSS) and McNair.

This discussion does not include the many studies of individual TRIO programs being conducted, many of which form the basis for TRIO-related dissertations. The Pell website contains a resource listing of TRIO related dissertations from 1990 to 2017.¹⁵⁰

148 Horn, L. and Chen, X. (1998). *Toward Resiliency: At Risk Students Who Make It to College*, U.S. Department of Education, Office of Educational Research and Improvement, Washington D.C.

149 RTI, International is the prime contractor, with subcontractors for analyses of the TRIO performance reports.

150 For a listing of TRIO dissertations from 1990 to 2017, see [The Pell Institute for the Study of Opportunity in Higher Education — TRIO Dissertations](#).

Listing of TRIO National Evaluations and Outcomes Reports: 1979-2020

- Burkheimer, G., Riccobono, J., & Wisenbaker, J. (1979). *Final Report: Evaluation Study of the Upward Bound Program--A Second Follow-up.*, Research Triangle Park, NC: Research Triangle Institute.
- Steven M. Jung and Applied Systems Institute. (1984). *Reanalysis of High School and Beyond Data to Estimate the Impact of Upward Bound* (Washington, D.C.: Applied Systems Institute.
- Myers, D. (1991). "The Effects of Upward Bound and Supplemental Service Programs: Findings from Extant Data" (Rockville, MD: Westat, Inc.
- Cahalan, M., & Muraskin, L. (1994). National Study of Student Support Services Interim Report: Volume 1 Program Implementation [ED370512.pdf](#)
- Chaney, B., Muraskin, L., Cahalan, M., & Rak, R. (1997). National Study of Student Support Services. Third-Year Longitudinal Study Results and Program Implementation Study Update. ERIC - ED410805 - National Study of Student Support Services. [Third-Year Longitudinal Study Results and Program Implementation Study Update., 1997-Feb](#)
- Muraskin, L. (1997). "Best Practices" in Student Support Services: A Study of Five Exemplary Sites. Follow-up Study of Student Support Services Programs. Department of Education, Washington, DC. Office of Planning, Budget, and Evaluation. [ED411739.pdf](#).
- Horn, L. and Chen, X. (1998). *Toward Resiliency: At Risk Students Who Make It to College.* U.S. Department of Education, Office of Educational Research and Improvement, Washington D.C.
- Constantine, J.M, Seftor, N.S., Martin, E.S., Silva, T., & Myers, D. (2006). *A Study of the Effect of the Talent Search Program on Secondary and Postsecondary Outcomes in Florida, Indiana, and Texas: Final Report from phase II of the national evaluation.* Washington, D.C: U.S. Department of Education. Retrieved: <https://www2.ed.gov/rschstat/eval/highered/talentsearch-outcomes/ts-report.pdf>.
- Olsen, R., Seftor, N., Silva, T., Myers, D., DesRoches, D., & Young, J. (2008). *Upward Bound Math-Science: Program description and interim impacts.* Princeton, NJ: Mathematica Policy Research, Inc. Retrieved from: <https://www2.ed.gov/rschstat/eval/highered/upward-math-science/complete-report.pdf>.
- McCoy, A., Wilkinson, A., & Jackson, R. (2008). *Education and Employment Outcomes of the Ronald E. McNair Postbaccalaureate Achievement Program Alumni* By: Decision Information Resources, Inc. U.S. Department of Education Office of Planning, Evaluation and Policy Development Policy and Program Studies Service. [Education and Employment Outcomes of the Ronald E McNair Postbaccalaureate Achievement Program Alumni \(PDF\)](#).
- Cahalan, M. (2009). Addressing Study Error in the Random Assignment National Evaluation of Upward Bound: Do the Conclusions Change? Washington, D.C.: Pell Institute, Council for Opportunity in Education. http://www.pellinstitute.org/publications-Do_the_Conclusions_Change_2009.shtml.
- ChaneyB.W, (2010). National Evaluation of Student Support Services: Examination of Student Outcomes After Six Years Final Report. Rockville, MD: Westat. Prepared for: U.S. Department of Education Office of Planning, Evaluation and Policy Development Policy and Program Studies Service. [final-report.pdf \(ed.gov\)](#).
- U.S. Department of Education, (2013). Federal TRIO Programs, A Report on the Educational Opportunity Centers Program: 2007-08, with Select Comparative Data, 2002-07.
- Cahalan, M., & Goodwin, D. (2014). *Setting the Record Straight: Strong Positive Impacts Found from the National Evaluation of Upward Bound Re-Analysis Documents Significant Positive Impacts Masked by Errors in Flawed Contractor Reports.* Washington, D.C.: Council for Opportunity in Education. [publications-Setting_the_Record_Straight_June_2014.pdf \(pellinstitute.org\)](#).
- U.S. Department of Education. (2015). Ronald E. McNair Postbaccalaureate Achievement Program Grantee Level Performance Results: 2013-14, Washington, D.C.
- Zeiser, K.L., Chan, T., Heuer, R., & Cominole, M. (2015). *Persistence and Completion in Postsecondary Education of Participants in the TRIO Student Support Services Program*, Student Service Office of Postsecondary Education, US Department of Education. <https://www2.ed.gov/programs/triostudsupp/sss-heoa-report-2015.pdf>.
- Heuer, R., Mason, M., & Lauff, E. (2016). *Upward Bound and Upward Bound Math-Science Programs: Postsecondary Outcomes Report*, U.S. Department of Education, Office of Postsecondary Education, Student Service Washington, D.C., [Upward Bound and Upward Bound Math-Science Programs: Postsecondary Outcomes Report \(PDF\) \(ed.gov\)](#).
- U.S. Department of Education, Office of Postsecondary Education, Student Service. (2016). *Fast Facts Report for the Talent Search Program*, Washington, D.C. Available at <https://www2.ed.gov/programs/trioalent/ts-fastfacts2016.pdf>.
- Zeiser, K.L., Heuer, R., & Cominole, M. (2019). *Comparing Student Outcomes Between Student Support Services Participants and Nonparticipants in the 2004/09 Beginning Postsecondary Students Longitudinal Study May 2019.* Prepared for: Student Service Office of Postsecondary Education U.S. Department of Education. <https://www2.ed.gov/about/offices/list/ope/trio/sssparticipantsinbpls.pdf>.
- U.S. Department of Education. (2020). Office of Postsecondary Education, Student Service, Fast Facts Report for the Veterans Upward Bound Program, Washington, D.C. Retrieved from <https://www2.ed.gov/about/offices/list/ope/trio/vubfastfactsreport.pdf>.
- For a listing of TRIO dissertations from 1990, see [The Pell Institute for the Study of Opportunity in Higher Education – TRIO Dissertations](#).

Equity Indicators 7c (i to vi) What Do National Evaluation Studies and Annual Performance Report (APR) Studies of Outcomes Tell us About the TRIO Pre-College Access Programs?

The Upward Bound Studies. As shown in Indicators 7a(v), Upward Bound (UB), Upward Bound Math-Science (UBMS) and Veterans Upward Bound (VUB) taken together have the largest total funding among the TRIO programs with total yearly funding for the three programs of about \$437 million. Except for the McNair program, UB and UBMS are the most intensive of the TRIO programs and have the largest funding per participant (almost \$5,000 per participant for UB/UBMS in 2021). Upward Bound serves about 70,000 participants per year; UBMS, just over 13,000 per year, and VUB serves about 8,000 per year. The combined Upward Bound programs serve about 92,000 participants per year (Indicator 7a(ii)). Because of Upward Bound’s intensity of services and because it was the first and most well-known of the TRIO programs, Upward Bound is also the most studied.

In 1992, the Department began a random assignment study of the Upward Bound program conducted over more than a 10-year period, with the last follow-up covering 2003-04. Equity Indicator 7c(i) presents summary results of a re-analysis of the data from the National Evaluation of Upward Bound, by the Department of Education Technical Monitors.¹⁵¹ The analysis uses instrumental variables regressions estimating the impact of participation in Upward Bound on bachelor’s degree attainment by 6 years after expected high school graduation. The instrumental variables regression controlling for selection factors revealed that the sample members who participated in UB or UBMS were 3 times more likely to obtain a bachelor’s degree within 6 years of their expected high school graduation year when compared to sample members reporting no participation in college access services, and 1.4 times as likely when compared to those who reported participating in other less intensive services, including Talent Search. These findings from the National Evaluation of Upward Bound are very similar to the estimates of bachelor’s attainment for similar family income and socioeconomic status (SES) groups from Census Bureau and from the NCES high school longitudinal study from approximately the same time frame. The NCES National Educational Longitudinal Study (NELS:92/2000) found that 8 percent of the sample who were in the bottom SES quartile had attained a bachelor’s degree by 8 years after expected high school graduation (see Indicator 5b). Census Bureau CPS data from the time-period estimated that 6 percent of those from the bottom quartile and 10 percent from the bottom half of the income distribution had obtained a bachelor’s degree by age 24 (See Indicator 5a(i)).

Upward Bound Math-Science (UBMS) Evaluation. UBMS has a focus on reinforcing academic preparedness in math, science, and technology to encourage students to major in science, technology, engineering, and math (STEM) in college. UBMS, like regular Upward Bound, also provides academic and social support through tutoring, counseling, mentorship, cultural enrichment, field trips, and financial aid application assistance. Equity

151 Over more than a decade stemming from the early 1990s to 2007, the Department of Education commissioned a random assignment study of the Upward Bound program conducted under three succeeding contracts to Mathematica Policy Research. After serious sampling and non-sampling errors were found in the sample design and evidence was found of a flawed random assignment with serious bias in favor of the control group, the Department of ED staff responsible for the study conducted re-analyses designed to mitigate and correct the study errors. The results of the quality assurance studies, and re-analyses were subsequently published by COE see: Cahalan, M. (2009). *Addressing Study Error in the Random Assignment National Evaluation of Upward Bound: Do the Conclusions Change?* Washington, D.C.: Pell Institute, Council for Opportunity in Education. http://www.pellinstitute.org/publications-Do_the_Conclusions_Change_2009.shtml and Cahalan, M., & Goodwin, D. (2014). *Setting the Record Straight: Strong Positive Impacts Found from the National Evaluation of Upward Bound Re-Analysis Documents Significant Positive Impacts Masked by Errors in Flawed Contractor Reports*, Washington, D.C.: Pell Institute, Council for Opportunity in Education, [publications-Setting_the_Record_Straight_June_2014.pdf](http://www.pellinstitute.org/publications-Setting_the_Record_Straight_June_2014.pdf) ([pellinstitute.org](http://www.pellinstitute.org)). The technical monitors results were also independently verified by researchers at the University of Wisconsin in 2013 and 2014. Nathan, A.B. (2013). Dissertation, *Does Upward Bound Have an Effect on Student Educational Outcomes? A Reanalysis of the Horizons Randomized Controlled Trial Study*. University of Wisconsin-Madison; Harris, D., Nathan, A.B., & Marksteiner, R. (2014). *The Upward Bound College Access Program 50 Years Later: Evidence from a National Randomized Trial*. University of Wisconsin at Madison. *Institute for Research on Poverty Discussion Paper No. 1426-14 — The Upward Bound College Access Program 50 Years Later — Evidence from a National Randomized Trial*.

Indicator 7c(ii) shows results from the evaluation of UBMS conducted by Mathematica Policy Research Inc. (MPR) for a cohort of UBMS participants from 1993-95.¹⁵² UBMS participants outperformed a propensity-matched control group in the areas shown in the chart. For example, compared to similarly qualified students, UBMS students were 43 percent more likely to select math or science as a college major. This study was done soon after the UBMS program was begun. During the period of the early 1990s when this project began, there were 54 UBMS projects. This number grew to 81 projects by 1997, and over the past two decades, the number of UBMS projects has continued to grow. By 2017-18, there were 211 UBMS projects serving 13,132 participants per year.¹⁵³ Although UBMS witnessed an increase in projects and participation since the 1990s, in 2017-18, UBMS projects were serving less than .2 percent of the eligible population.¹⁵⁴

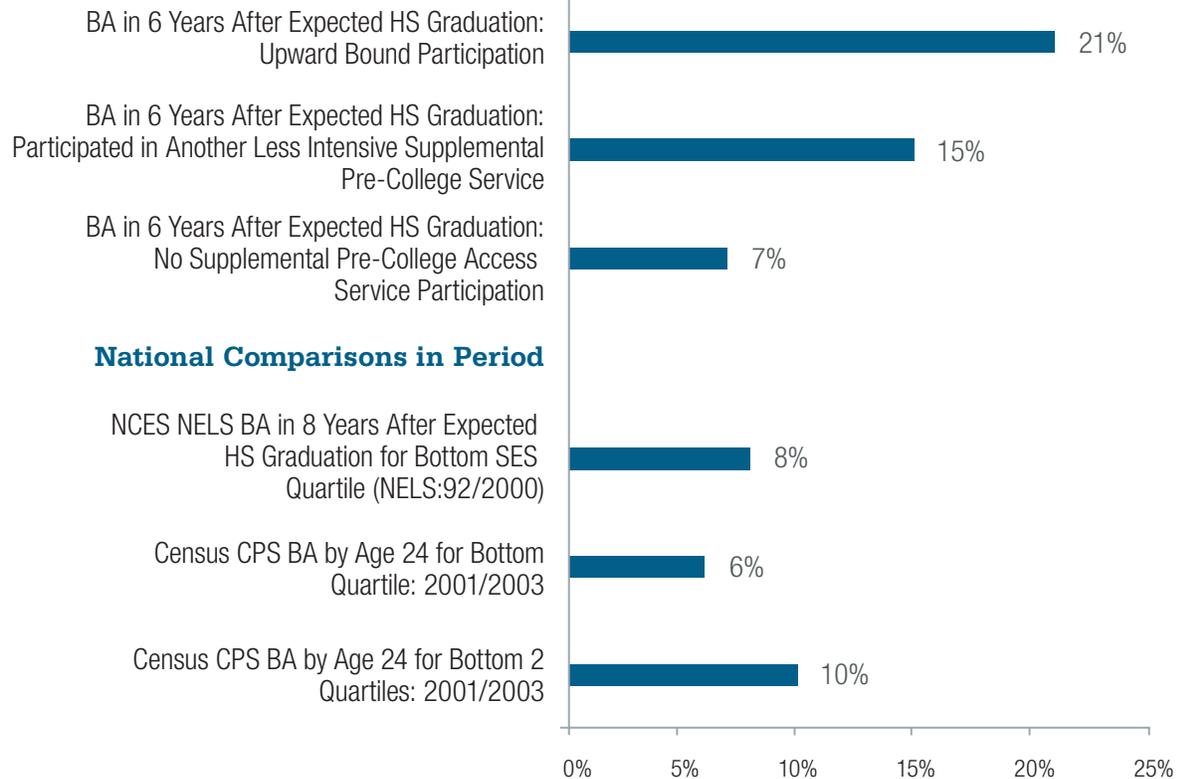
152 Olsen, R., Seftor, N., Silva, T., Myers, D., DesRoches, D., & Young, J. (2008). *Upward Bound Math-Science: Program Description and Interim Impacts*. Princeton, NJ: Mathematica Policy Research, Inc. Retrieved from: <https://www2.ed.gov/rschstat/eval/highered/upward-math-science/complete-report.pdf>.

153 U.S. Department of Education, (2016). Office of Postsecondary Education, Student Service, *Upward Bound and Upward Bound Math-Science Programs: Postsecondary Outcomes Report*, Washington, D.C. 2016, available at <https://www2.ed.gov/programs/trioupbound/ub-ubms-outcomes2016.pdf>.

154 Population that is eligible to participate in UBMS is calculated by 2017-18 total public-school enrollment divided by the percentage of eligibility for Free and Reduced-Price lunch (13,132/8,472,318).

Equity Indicator 7c(i): Instrumental variables two-stage regression, estimates of relative impact of participation in Upward Bound (UB) compared with various levels of pre-college access supplemental services on bachelor's degree (BA) attainment within 6 years of expected high school graduation: National Evaluation of UB study sample: 1994-2003 with national comparisons from the approximate study period

National Evaluation of Upward Bound



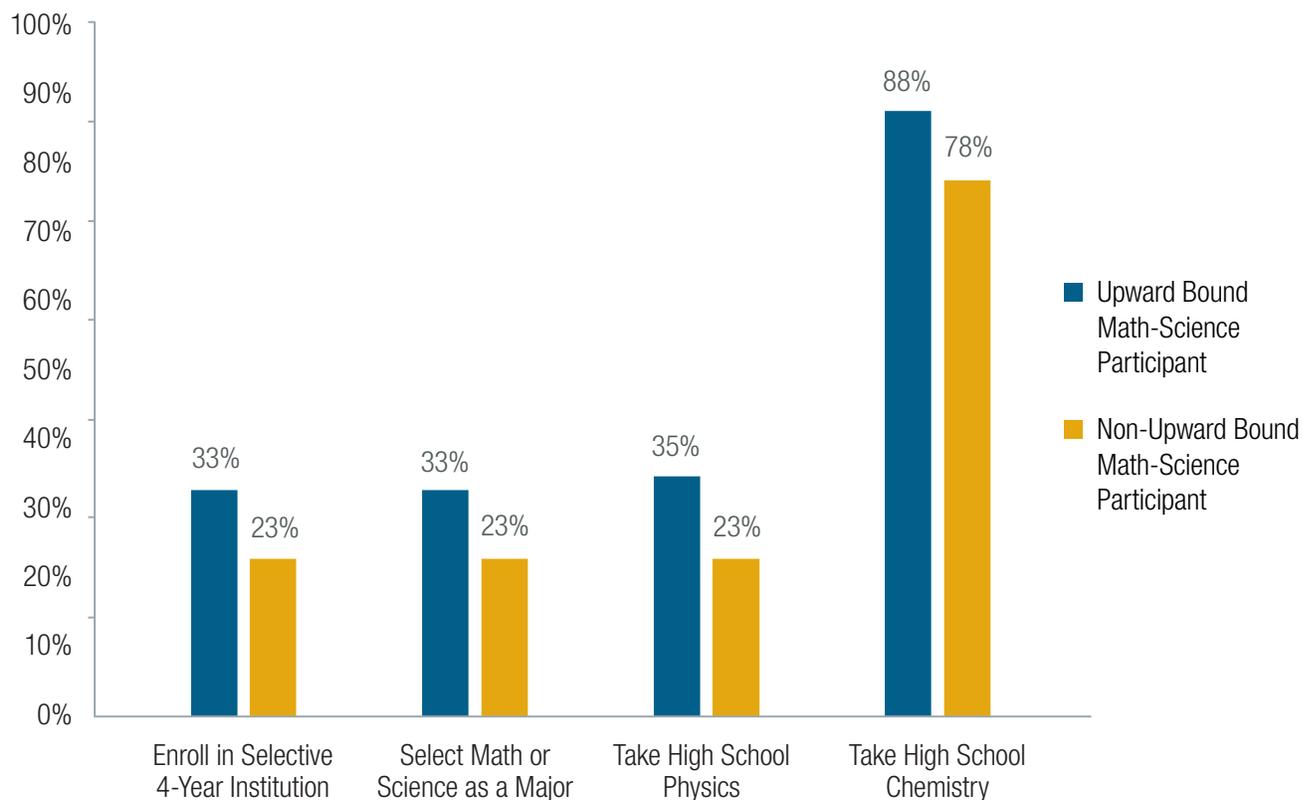
Indicator Status:

Attainment rates for a bachelor's degree by 6 years after expected high school graduation date were 3 times higher for Upward Bound participants than for those sample members who reported no participation in college access supplemental services, and 1.4 times higher for those who reported participation in less-intensive college access supplemental services.

NOTE: Upward Bound study involved multiple high school participant cohorts that spanned up to 5 years with expected high school graduation years from: 1994 to 1998, with most participants having high school graduation dates in 1995 to 1997. Results are based on data from 66 of 67 projects participating in a Random Assignment Study of about 3,000 middle school and early high school low-income and first-generation UB applicants. The estimates in the figures shown are based on longitudinal data in an analysis using instrumental two-stage regressions that first model factors related to differences in participation in services and then use these factors in the second stage to control for participation selection bias factors.

SOURCE: Cahalan, M., & Goodwin, D. (2014). *Setting the Record Straight: Strong Positive Impacts Found from the National Evaluation of Upward Bound*. Washington, D.C.: Council for Opportunity in Education. [publications-Setting_the_Record_Straight_June_2014.pdf](https://www.pellinstitute.org/publications-Setting_the_Record_Straight_June_2014.pdf) (pellinstitute.org).

Equity Indicator 7c(ii): National Evaluation of the Upward Bound Math-Science Program (Participant Cohorts: 1993-1995)



Indicator Status:

Compared to similarly qualified students, UBMS students were 43 percent more likely to select math or science as a college major.

NOTE: The controlled group consisted of a sample of 1,500 UBMS participants who applied to UB programs but did not participate in the UBMS and displayed similar demographic characterist.

SOURCE: Olsen, R., Seftor, N., Silva, T., Myers, D., DesRoches, D., & Young, J. (2008). *Upward Bound Math-Science: Program Description and Interim impacts*. Princeton, NJ: Mathematica Policy Research, Inc. As included in the Pell Institute publication, *National Studies Find TRIO Programs Effective at Increasing College Enrollment and Graduation*. Retrieved from http://www.pellinstitute.org/publications-Studies_Find_TRIO_Programs_Effective_May_2009.shtml.

Using the Annual Performance Reports (APR) Data and National Student Clearinghouse (NSC) Data to Study Upward Bound and Upward Bound Math-Science (UBMS) Outcomes.

The development of Annual Performance Reports (APR) that include data on individual students records that began around 2000, combined with the availability of matching these reports to federal aid files and data from the National Student Clearinghouse (NSC), has allowed for the tracking of national outcomes for TRIO Upward Bound participants. These data can be analyzed with related data from NCES and the Census Bureau data to provide benchmarks of the outcomes for TRIO projects relative to national data.

Enrollment in College in the Fall After Expected High School Graduation for Upward Bound and Upward Bound Math-Science.

Equity Indicator 7c(iii)) summarizes outcome data for Upward Bound and Upward Bound Math-Science for the 2013-14 high school graduation year cohort with comparisons using national data from the NCES High School Longitudinal Study (HSLs) in a similar period and the Census Current Population Survey (CPS) of the same period.¹⁵⁵ Upward Bound tracking data are obtained through the National Student Clearinghouse as contained in the National Student Loan Data System (NSLDS). These data indicate that students who participate in UB and UBMS have high rates of college entrance by fall after high school (89 percent for UBMS and 85 percent for UB). These rates far exceed the national average college entrance rates for students in the lower portion of the family income and SES distributions. The UB/UBMS rates are close to those of the highest SES quintile (91 percent; see Indicator 1g(i)). National enrollment rates for the bottom family income groups were about 45-49 percent in a comparable period. Participation in UB/UBMS increased the rate of college entrance by about 75 percent (86 percent compared to 49 percent).

APR and NSC Data Tracking on Completion of a Bachelor's in 6 Years for UB and UBMS. Equity Indicator 7c(iv) summarizes bachelor's degree attainment within 6 years for the 2008 high school graduation cohort by 2013-14. The data are from the APR reports, matched with the NSLDS system that contains the National Student Clearinghouse data. Although the available national data do not provide an exact comparison group for the UB and UBMS outcomes, these national estimates for students who would be eligible for Upward Bound can provide benchmarks for comparison with the outcomes for UB and UBMS. Equity Indicator 7c(iv) includes benchmark estimates from the Educational Longitudinal Study (ELS) for the bottom SES quartile on bachelor's attainment by 8 years after expected high school graduation and from the CPS on obtaining a bachelor's degree by age 24 for the bottom quartile from a similar time frame.

The longitudinal tracking found that 40 percent of UBMS participants, 29 percent of UB participants, and 30 percent of the combined UB and UBMS cohort had obtained their bachelor's degree within 6 years of their expected high school graduation year. During the same time period, among the bottom SES quartile, ELS found that 15 percent had attained a bachelor's degree in 8 years. In the same time frame, estimates based on Census CPS data were that 11 percent of the lowest family income quartile had attained a bachelor's degree by age 24. Averaging the CPS estimate of 11 percent with the NCES/ELS estimate of 15 percent we use 13 percent as a baseline for comparison. Using this baseline, we thus estimate that UB participants were 2.2 times more likely to obtain a bachelor's degree in 6 years (29 percent vs. 13 percent) and UBMS participants were 3.1 times more likely (40 percent vs. 13 percent).

¹⁵⁵ Heuer, R., Mason, M., & Lauff, E. (2016). *Upward Bound and Upward Bound Math-Science Programs: Postsecondary Outcomes Report*, U.S. Department of Education, Office of Postsecondary Education, Student Service Washington, D.C., <http://www2.ed.gov/programs/trioupbound/resources.html>.

Veterans Upward Bound (VUB) Descriptive Information. VUB was established to assist returning veterans transition into postsecondary education.¹⁵⁶ The majority of Veterans Upward Bound participants, are older than other college students, more likely to be married with dependents, and more likely to be working.¹⁵⁷ To participate in VUB, a veteran must be: (1) a potential first-generation college student; (2) a low-income individual; or (3) an individual who has a high risk for academic failure. The VUB program has not had a national evaluation as has Upward Bound and Upward Bound Math-Science; however, in 2020, the Department of Education published a descriptive report in the Fast Fact series. The 2020 Fast Facts Report for the VUB presents descriptive information on 6 risk factors displayed in Indicator 7c(v). The selected risk factors are related to program eligibility. In addition to low-income, and first-generation college, these include:¹⁵⁸ race/ethnicity, disability status, age, and type of high school credential earned. In the 2016-17 program year, 86 percent of VUB participants were potential first-generation college students and 84 percent were low-income. About 40 percent of VUB participants were 45 or older. About half (51 percent) were members of an underrepresented minority group, and 50 percent were persons with a disability. As seen in Indicator 7a(ii), and 7b(ii), in 2020 there were approximately 7,900 VUB participants served annually. This represents about .7 percent of the eligible population.¹⁵⁹

156 TRIO factsheet 50th anniversary. Retrieved from: <https://www2.ed.gov/about/offices/list/ope/trio/trio50anniv-factsheet.pdf>.

157 Radford, A. W. (2009). *Military Service Members and Veterans in Higher Education: What the New GI Bill May Mean for Postsecondary Institutions*. Washington, DC: American Council on Education. Retrieved from: <https://www.acenet.edu/news-room/Documents/Military-Service-Members-and-Veterans-in-Higher-Education.pdf>.

158 The set of risk factors does not include the program eligibility criterion of being an individual who has a high risk for academic failure since many of the cohort participants included in the postsecondary enrollment and degree completion results did not have data on this criterion. Because this criterion was not included in the set of risk factors, it is possible for a participant to have qualified for the VUB program by being an individual with a high risk for academic failure but without any of the other 6 risk factors.

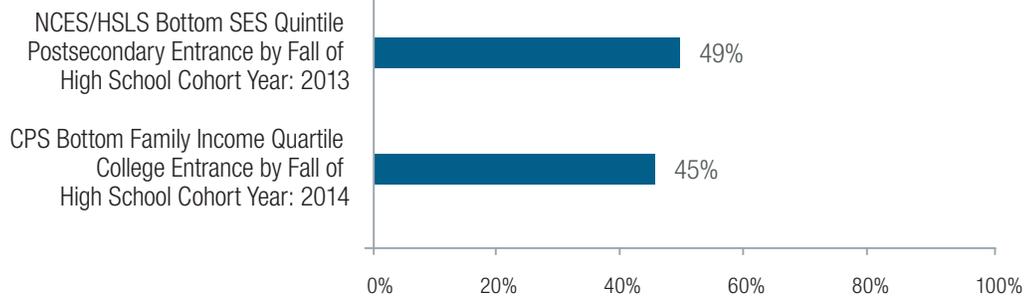
159 To determine the population eligible to participate in the Veterans Upward Bound Program, data are drawn from the Census table S2101 that examines Veterans 18 years old and over, that are living below the federal poverty level.

Equity Indicator 7c(iii): Percentage of Upward Bound (UB) and Upward Bound Math-Science (UBMS) participants who entered postsecondary education by fall of expected high school graduation year, and national benchmark data from NCES High School Longitudinal Study (HSLs) and Census Current Population Survey (CPS): 2013/14

UB and UBMS APR and NSC Data



Benchmark Data



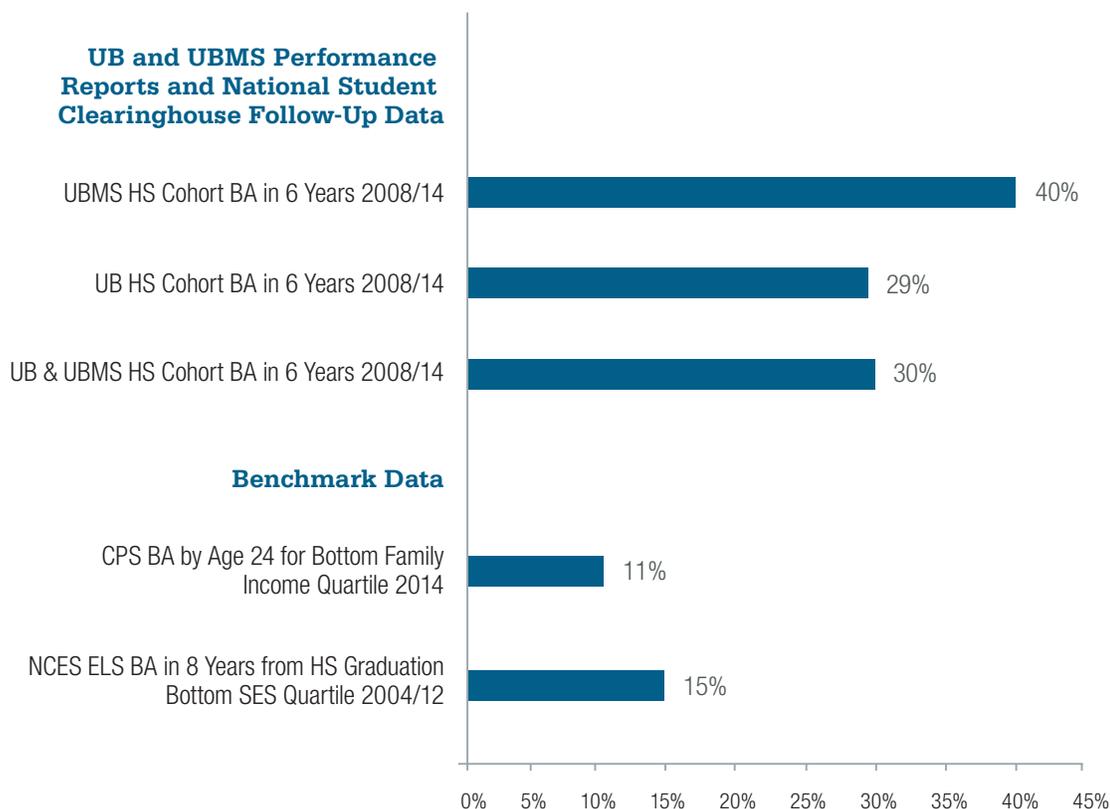
Indicator Status:

National Student Clearinghouse (NSC) tracking data indicate that students who participate in UB and UBMS enter college by fall after high school at rates (89 percent for UBMS and 85 percent for UB) that far exceed the national average college entrance rates for students in the bottom of the family income and SES distributions. The UB/UBMS rates are closer to those of the highest quintile (91 percent; see Indicator 1g(i)). Enrollment rates for the bottom income and SES group were about 45 to 49 percent in a comparable period. UB/UBMS increased the rate of college entrance by about 75 percent (86 percent compared to 49 percent).

NOTE: UB and UBMS data are based on 2013-14 expected high school graduation cohorts drawn from the APR longitudinal data files and from matching with the National Student Loan Data System (NSLDS) that contains National Student Clearinghouse (NSC) data. The benchmark data were obtained for a similar time period and are drawn from Equity Indicators 1a and 1g(i). High School Longitudinal Study (HSLs:2009) began with a nationally representative sample of 9th graders in 2009 and included follow-ups in 2013 (the fall after scheduled high school graduation); Census CPS data is from 2014. SES is an abbreviation for “Socioeconomic Status.” See sources cited for more methodological information.

SOURCE: Heuer, R., Mason, M., & Lauff, E. (2016). *Upward Bound and Upward Bound Math-Science Programs: Postsecondary Outcomes Report*, U.S. Department of Education, Office of Postsecondary Education, Student Service, Washington, D.C. <http://www2.ed.gov/programs/trioupbound/resources.html>. U.S. Department of Education, National Center for Education Statistics, High School Longitudinal Study (HSLs:2009/2013). Tabulated using NCES PowerStats; CPS data calculated from October Current Population Survey File (formerly Table 14 in Census Bureau’s School Enrollment Report), tabulated using the U.S. Census Bureau online data retrieval tools; School Enrollment Data, 1970-2018, and the U.S. Census Bureau, online extraction tool, MDAT, <https://data.census.gov/mdat/#/>; which replaces Datafarrett, using CPS School Enrollment Supplement dataset, 2019, compiled by Nicole Brunt and Tom Mortenson.

Equity Indicator 7c(iv): Percentage of Upward Bound (UB) and Upward Bound Math-Science (UBMS) participants who obtained a bachelor's degree (BA) by 6 years after scheduled high school completion, and national benchmarks from NCES Educational Longitudinal Study (ELS) and Census Current Population Survey (CPS) bottom SES and income quartiles: 2013/14 cohort



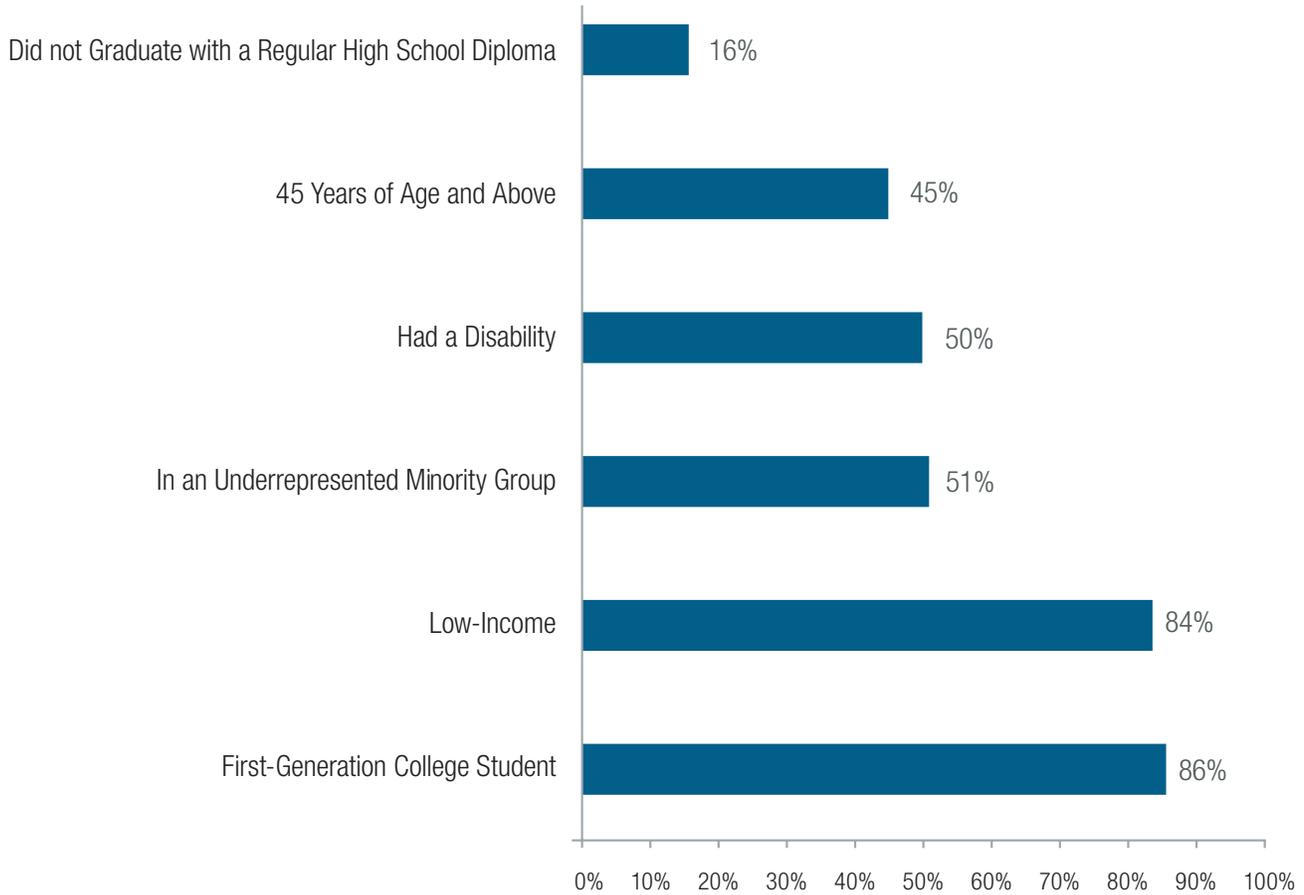
Indicator Status:

When compared with the Census' CPS and NCES' ELS estimates of bachelor's degree attainment for the lowest family income or SES quartiles, UB participants were 2.2 times more likely to obtain a bachelor's degree in 6 years (29 percent vs. 13 percent) and UBMS participants were 3.1 times more likely (40 percent vs. 13 percent).

NOTE: UB and UBMS data are based on cohorts drawn from the APR longitudinal data files and from matching with the National Student Data System (NSLDS) that contains National Student Clearinghouse (NSC) data. The UB and UBMS cohort tracked is the 2008 expected high school graduation cohort followed 6 years after HS graduation date in 2013-14. CPS (2014) and NCES ELS (2012) benchmark data were obtained for as close a time period as possible and are in Indicator 5a(i) and 5b. See sources below for more methodological information. SES is an abbreviation for "Socioeconomic Status."

SOURCE: (Upward Bound Data) Heuer, R., Mason, M., & Lauff, E. (2016). *Upward Bound and Upward Bound Math-Science Programs: Postsecondary Outcomes Report*, U.S. Department of Education, Office of Postsecondary Education, Student Service Washington, D.C., <http://www2.ed.gov/programs/trioupbound/resources.html>. (National Benchmark Data: see Equity Indicators 5a(i) and 5(b) U.S. Department of Education, National Center for Education Statistics, Educational Longitudinal Study (ELS:2002-class of 2004-2012 follow-up). Data tabulated using NCES Data Analysis System (DAS); U.S. Census Bureau, Current Population Survey, October Education Supplement, 1970-2019. Mortenson, T. (in press). *Estimated Baccalaureate Degree Attainment by Age 24 by Family Income Quartiles: 1970 to 2019*, *Postsecondary Education Opportunity*. Washington, D.C.: The Pell Institute for the Study of Opportunity in Higher Education.

Equity Indicator 7c(v): Percentage of Veterans Upward Bound (VUB) participants with select risk factors affecting postsecondary success: 2016–17



Indicator Status:

VUB participants have multiple postsecondary risk factors. Over 80 percent of VUB participants are low-income, and 86 percent are first-generation college. Almost half are 45 years of age and above. Half have a disability and half are members of a minority group.

SOURCE: U.S. Department of Education, Office of Postsecondary Education, Student Service, Fast Facts Report for the Veterans Upward Bound Program, Washington, D.C., 2020. Retrieved from <https://www2.ed.gov/about/offices/list/ope/trio/vubfastfactsreport.pdf>.

Talent Search (TS) is an extensive outreach program that serves youth in the 6th through 12th grades. As noted, TS is the largest of the TRIO programs in terms of number of participants with 309,905 participants in 2020-21 and as an extensive rather than intensive program it has among the lowest funding amounts per participant (\$543 per participant in 2020). Participants receive counseling and information about college admission requirements, scholarships, and financial aid assistants. Because TS is an extensive outreach program, it is more difficult to conduct the type of national evaluations that have been done for Upward Bound, for example, in which individual student records are tracked.

The National Evaluation of Talent Search began in the late 1990s and explored the feasibility of matching Talent Search participants to information in the federal aid records in selected states who also maintained a statewide data base. The study had to first obtain lists of TS participants from each TS project in the state and match these lists with student financial aid and state longitudinal data bases. Three states participated in the study: Florida, Indiana, and Texas.¹⁶⁰ The study examines outcomes of students who were in the 9th grade and TS participants from the 1995-96 cohort and follows them until 2002. Although all the sample population started with students who were 9th graders in 1995-96, Talent Search participants may have received services through the program at any point from grades 6 through 12. Equity Indicator 7c(vi) shows summary information from Florida and Texas. The study found that participants of the Talent Search programs were significantly more likely to attain a regular high school diploma, to be enrolled full-time at a public state institution, and to be first-time financial aid applicants compared to similarly qualified students from the state.¹⁶¹ A more recent Fast Facts outcome study by the Department of Education found that between 2011-12 and 2013-14, 80 percent of college-ready seniors who participated in TRIO's Talent Search program enrolled in college.¹⁶²

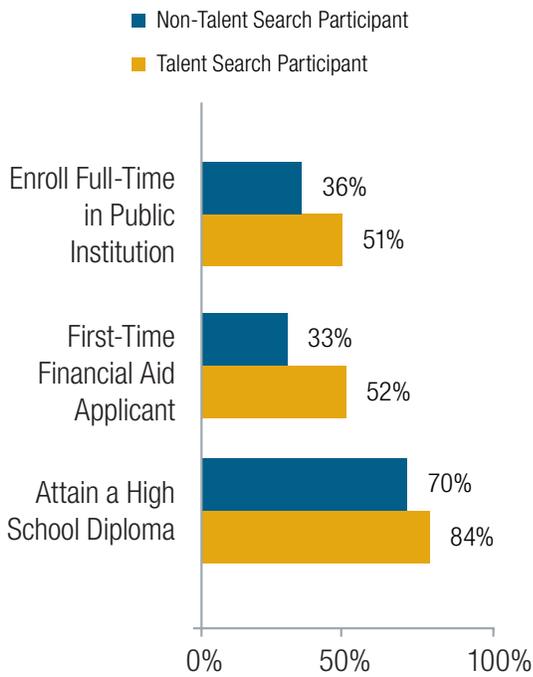
160 Indiana did not have a state-level data base but did have a statewide survey that was used for limited analysis.

161 See here for full report. Constantine, J.M, Seftor, N.S., Martin, E.S., Silva, T., & Myers, D. (2006). *A Study of the Effect of the Talent Search Program on Secondary and Postsecondary Outcomes in Florida, Indiana, and Texas: Final Report from Phase II of the National Evaluation*. Washington, D.C: U.S. Department of Education. Retrieved from <https://www2.ed.gov/rschstat/eval/highered/talentsearch-outcomes/ts-report.pdf>.

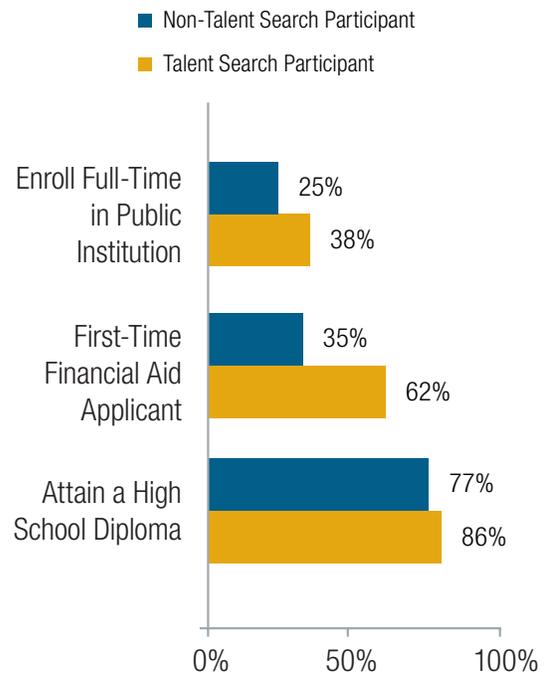
162 U.S. Department of Education, Office of Postsecondary Education, Student Service, *Fast Facts Report for the Talent Search Program*, Washington, D.C., 2016. Retrieved from <https://www2.ed.gov/programs/triotalent/ts-fastfacts2016.pdf>.

Equity Indicator 7c(vi): Results from the National Evaluation of Talent Search propensity matching studies using state longitudinal databases: Florida and Texas Talent Search cohort from 9th grade in 1995-96 followed until 2002

Florida State Analysis



Texas State Analysis



Indicator Status:

Studies using propensity matching with state data bases found that Talent Search participants had significantly higher rates of enrolling in a public institution, applying for financial aid, and attaining a high school diploma.

SOURCE: Constantine, J.M., Seftor, N.S., Martin, E.S., Silva, T., & Myers, D. (2006). *A Study of the Effect of the Talent Search Program on Secondary and Postsecondary Outcomes in Florida, Indiana, and Texas: Final Report from Phase II of the National Evaluation*. Washington, D.C: U.S. Department of Education. Retrieved from <https://www2.ed.gov/rschstat/eval/highered/talentsearch-outcomes/ts-report.pdf>.

Educational Opportunity Centers (EOC) provides academic counseling on college admissions to qualified adults who plan to pursue a postsecondary education. Educational Opportunity Centers (EOCs) target displaced or underemployed workers from low-income families. EOC serves just under 200,000 individuals yearly and has the lowest funding per participant of any of the TRIO programs (\$285 in 2020). EOC counselors help students choose colleges and navigate the maze of the financial aid process. Recent analyses of EOC found that more than half (58 percent) of “college-ready” students served by EOC enrolled in institutions of higher learning, and 71 percent of eligible EOC participants (high school seniors, postsecondary dropouts, etc.) applied to college.¹⁶³

Equity Indicators 7d (i to v) What Do National Evaluation Studies and Annual Performance Report (APR) Studies of Outcomes Tell us about the TRIO College Success Programs?

Student Support Services: National Study of the 1990s. SSS projects are hosted at both 2-year and 4-year higher education institutions, and next to Talent Search, the SSS program serves the largest number of students each year (209,000 in 2020). SSS provides academic tutoring, peer mentoring, counseling, and other supports to low-income, first-generation college students. In the 1990s, the Department of Education sponsored a National Study of Student Support Services. The study involved both qualitative and quantitative outcome studies that followed participants and non-participants for 6 years after college entrance. The study used propensity matching at both the institution and individual student levels to establish a control group. Relative to the control group, the study found positive impacts for SSS on college persistence and on graduation after 6 years.¹⁶⁴ The case studies (Muraskin, 1997) found that projects that provided a structured first-year learning experience and those that provided holistic services and acted as a “home base” for students had the most successful outcomes on average.¹⁶⁵ The most important common practices across the SSS projects showing exemplary outcomes were: (1) a project-designed, freshman-year experience; (2) an emphasis on academic support for developmental and popular freshman courses; (3) extensive student service contacts; (4) targeted participant recruitment and participation incentives; (5) dedicated staff and directors with strong institutional attachments, and (6) an important role on campus.

More Recent Studies of SSS Outcomes Using National Data Sets for Comparisons. Recent studies, using the APR data with comparisons to national data sets, have been published in 2015 and 2019. Equity Indicators 7d(i) and 7d(ii) display summary comparative information from the report published in 2015 based on SSS APR data and a national sample of eligible beginning students from the nationally representative Beginning Postsecondary Study (BPS). Indicators 7d(iii) and 7d(iv) display data from the 2019 report that uses propensity matching of SSS and non-SSS participants in the BPS sample. The comparison is with members from the BPS sample who did not participate in SSS but who had similar characteristics.

SSS APR Tracking with a National Sample. The report entitled *Persistence and Completion in Postsecondary Education of Participants in the TRIO Student Support Services Program*, is based on APR data for SSS cohorts

¹⁶³ U.S. Department of Education, *Federal TRIO Programs, A Report on the Educational Opportunity Centers Program: 2007-08, with Select Comparative Data, 2002-07*. See also https://coenet.org/files/national_trio_day_action_packet_2019.pdf.

¹⁶⁴ Chaney, B., Muraskin, L., Cahalan, M., & Rak, R. (1997). National Study of Student Support Services. Third-Year Longitudinal Study Results and Program Implementation Study Update. ERIC - ED410805 - National Study of Student Support Services. Third-Year Longitudinal Study Results and Program Implementation Study Update., 1997-Feb . Compared to similarly qualified students in the control group, SSS students were 12 percent more likely to be retained to the second year (67 percent vs. 60 percent) and 23 percent more likely to be retained to the third year (49 percent vs. 40 percent). Chaney, B.W. (2010). *National Evaluation of Student Support Services: Examination of Student Outcomes After Six Years Final Report*. Rockville, MD: Westat. Prepared for: U.S. Department of Education Office of Planning, Evaluation and Policy Development Policy and Program Studies Service. [final-report.pdf \(ed.gov\)](#).

¹⁶⁵ Muraskin, L. (1997). *“Best Practices” in Student Support Services: A Study of Five Exemplary Sites. Follow-up Study of Student Support Services Programs*. Department of Education, Washington, DC. Office of Planning, Budget, and Evaluation. [ED411739.pdf](#).

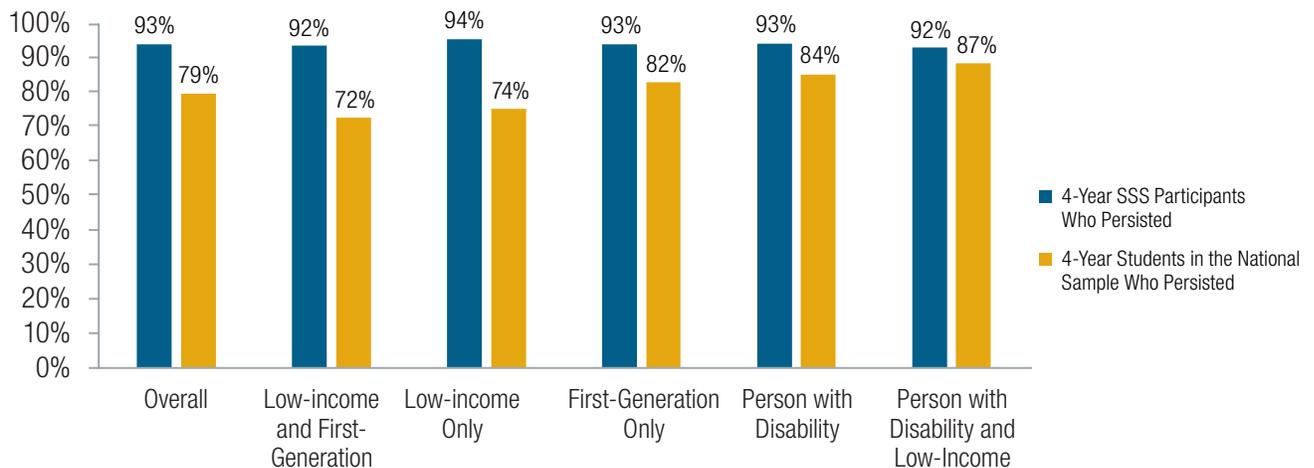
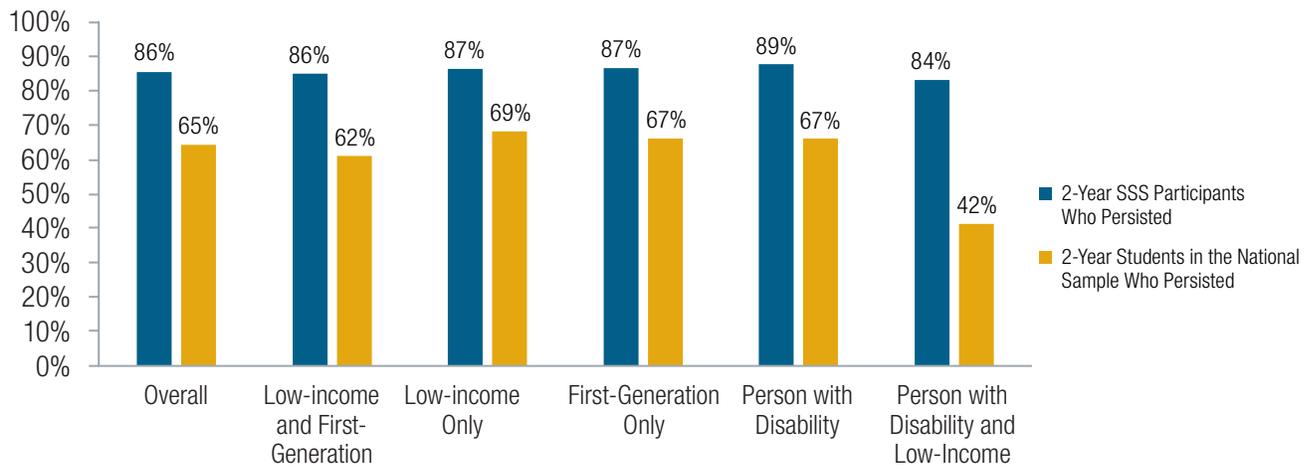
who began postsecondary in 2007-08 at 2-year and 4-year institutions.¹⁶⁶ The report compares the persistence and completion data with that from a national sample of students from the Beginning Postsecondary Study in the 2003-4 year. To create the national sample, the BPS:04/09 was subsampled to include students who met the SSS eligibility requirements of low-income status, first-generation status, or disability status, as well as demonstrated academic need. The percentages in the national sample are estimates based on the weighted BPS:04/09 national sample. Although a national sample was selected based upon BPS students who met the SSS eligibility criteria, there were some differences that limit the comparisons. First, the time frame has a 4-year difference. Second, the BPS national sample did not have a similar proportion of students who were both low-income and first-generation. For example, 65 percent of the SSS participants were both low-income and first-generation, while the national sample from BPS national subsample comparable had a smaller percentage that were both low-income and first-generation (32 percent at 2-year and 26 percent at 4-year were both low-income and first-generation). These later differences might tend to favor the national sample comparison group in outcome comparisons.

Given these limitations, as displayed in Indicator 7d(i), overall, 2-year SSS participants were 32 percent more likely to persist to the fall of the second year than the national sample meeting the SSS eligibility requirements drawn from the BPS 2004 entering cohort. SSS participants in 4-year colleges were 17 percent more likely to persist than the national sample of students entering at 4-year institutions. The SSS program's largest impact on persistence to the second year was for students with disabilities who were also low-income at the 2-year level (84 percent vs. 42 percent).

The 2015 report also includes data on degree or certificate completion. Indicator 7d(ii) shows SSS participants entering 2-year institutions were 78 percent more likely to complete an associate degree or certificate or to have transferred to a 4-year institution by 4 years after entering (50 percent for SSS participants vs. 28 percent for the national sample). SSS participants entering 4-year institutions were 23 percent more likely to obtain a bachelor's degree within 6 years of entering (49 percent for SSS participants vs. 40 percent for the national sample).

166 Zeiser, K.L., Chan, T., Heuer, R., & Cominole, M. (2015). *Persistence and Completion in Postsecondary Education of Participants in the TRIO Student Support Services Program*, Student Service, Office of Postsecondary Education, U.S. Department of Education. Appendix C. <https://www2.ed.gov/programs/triostudsupp/sss-heoa-report-2015.pdf>.

Equity Indicator 7d(i): Percentage of Student Support Services (SSS) participants and of the national sample entering 2-year and 4-year institutions who persisted to the fall of the second year by eligibility status: 2003–04 cohort



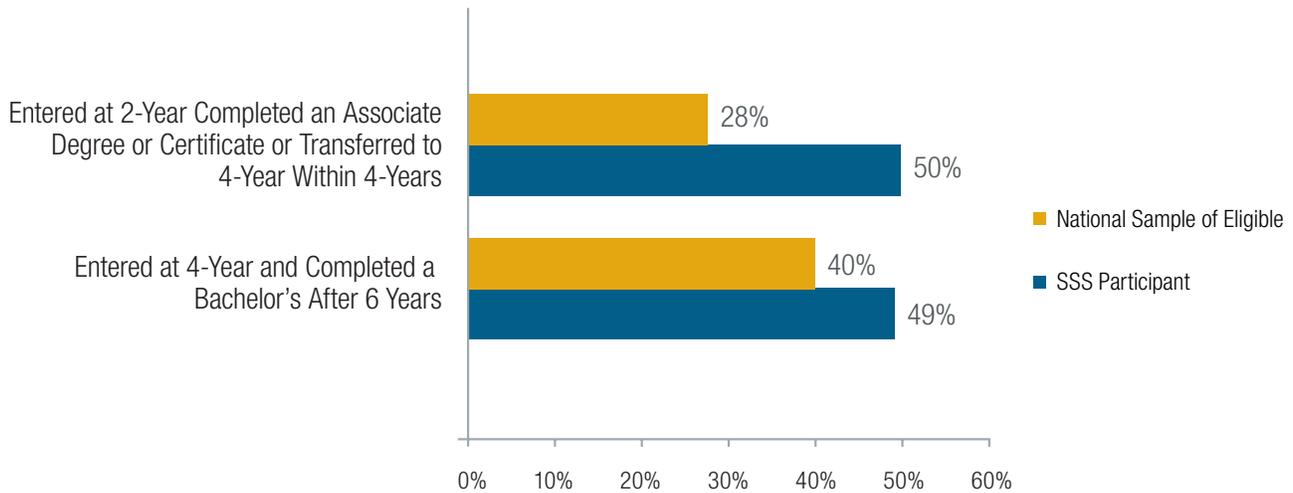
Indicator Status:

Overall, 2-year SSS participants were 32 percent more likely to persist than a national sample meeting the SSS eligibility requirements. SSS participants in 4-year colleges were 17 percent more likely to persist than the national sample from BPS. The largest impact of SSS participation was in students with disabilities who were also low-income at the 2-year level (84 percent vs. 42 percent).

NOTE: To create the national sample, the *BPS:04/09* was subsampled to include students who met the SSS eligibility requirements of low-income status, first-generation status, or disability status, as well as demonstrated academic need. The numbers and percentages in the national sample columns are estimates based on the weighted *BPS:04/09* national sample.

SOURCE: Zeiser, K.L., Chan, T., Heuer, R., & Cominole, M. (2015). *Persistence and Completion in Postsecondary Education of Participants in the TRIO Student Support Services Program*, Student Service, Office of Postsecondary Education, U.S. Department of Education. Appendix C. <https://www2.ed.gov/programs/triostudsupp/sss-heoa-report-2015.pdf>.

Equity Indicator 7d(ii): Percentage of Student Support Services (SSS) participants and of the national sample comparison group entering 2-year and 4-year institutions who completed degrees within 4 and 6 years: 2003–04 cohort



Indicator Status:

Overall, SSS participants entering 2-year institutions were 78 percent more likely to complete an associate degree or certificate or to have transferred to a 4-year institution by 4 years after entering (50 percent for SSS participants vs. 28 percent for the national sample). SSS participants entering 4-year institutions were 23 percent more likely to obtain a bachelor's degree within 6 years (49 percent for SSS participants vs. 40 percent for the national sample).

NOTE: To create the national sample, the BPS:04/09 was subsampled to include students who met the SSS eligibility requirements of low-income status, first-generation status, or disability status, as well as demonstrated academic need. The percentages in the national sample are estimates based on the weighted BPS:04/09 national sample.

SOURCE: Zeiser, K.L., Chan, T., Heuer, R., & Cominole, M. (2015). *Persistence and Completion in Postsecondary Education of Participants in the TRIO Student Support Services Program*. Student Service, Office of Postsecondary Education, U.S. Department of Education. see Appendix C <https://www2.ed.gov/programs/triostudsupp/sss-heoa-report-2015.pdf>.

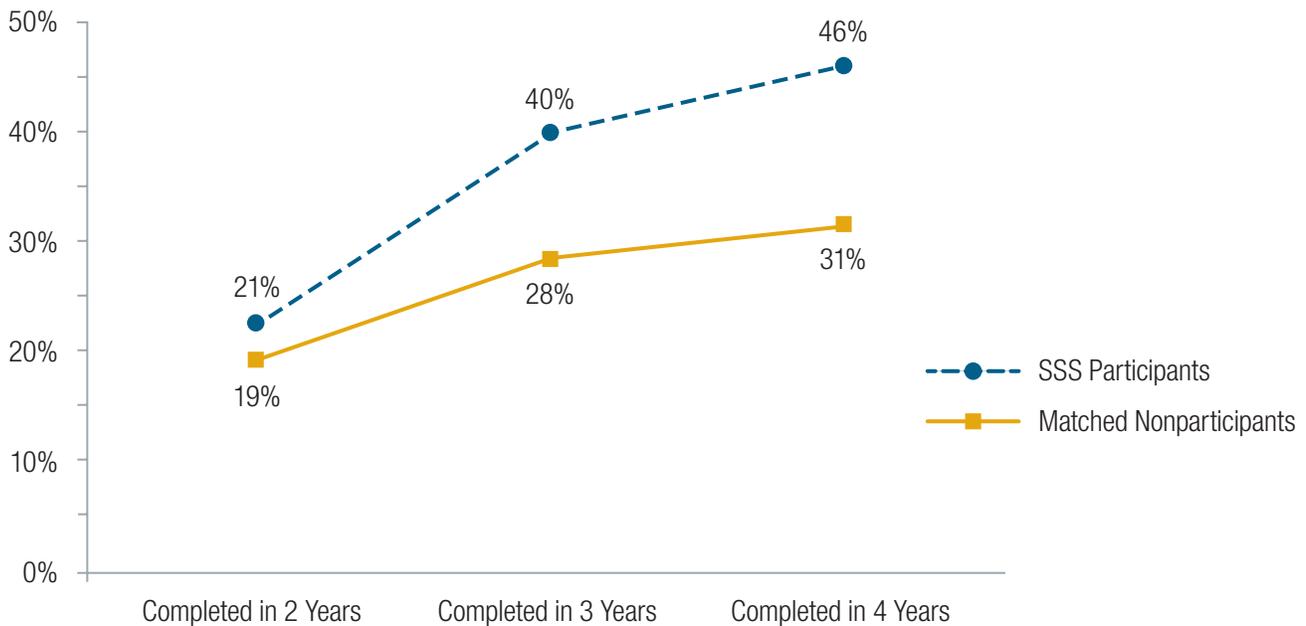
A Propensity-Matching SSS Study Based on the BPS National Sample. Equity Indicators 7d(iii) and 7d(iv) show findings from the report *Comparing Student Outcomes Between Student Support Services Participants and Nonparticipants in the 2004/09 Beginning Postsecondary Students Longitudinal Study*.¹⁶⁷ As in the 2015 study discussed before, this study also used the national BPS sample, but uses a propensity matching methodology based upon the SSS students found in the BPS sample. Within the BPS:2004 national sample, about 111 students were identified as SSS participants. This group was then matched to others who did not participate in SSS but resembled the SSS participants in key characteristics.¹⁶⁸

As shown in Indicator 7d(iii), the analysis found that SSS participants entering 2-year institutions were 48 percent more likely than non-participants to complete their associate degree or certificate or transfer to a 4-year institution in 4 years (46 percent vs. 31 percent). As shown in Indicator 7d(iv) SSS participants entering 4-year institutions were 18 percent more likely than non-participants to complete their bachelor's degree in 6 years compared with the matched comparison group (51 percent vs. 43 percent).

167 Zeiser, K.L., Heuer, R., & Cominole, R. (2019). *Comparing Student Outcomes Between Student Support Services Participants and Nonparticipants in the 2004/09 Beginning Postsecondary Students Longitudinal Study*. Student Service Office of Postsecondary Education U.S. Department of Education. <https://www2.ed.gov/about/offices/list/ope/trio/sssparticipantsinbpsls.pdf>.

168 To create the subset of matched nonparticipants, propensity-score modeling was performed to identify respondents in the BPS:04/09 who did not participate in the SSS program but had observed background characteristics like those of the SSS participants as identified in the BPS:04/09. The sample population was as follows: SSS participants (=150) and Matched non-participants (n=680).

Equity Indicator 7d(iii): Percentage of first-time freshman Student Support Services (SSS) participants and matched nonparticipants in the 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) who entered 2-year institutions in 2003-04 and completed an associate degree or certificate or transferred to a 4-year institution (with or without receiving an associate degree or certificate) within 2,3, and 4 years



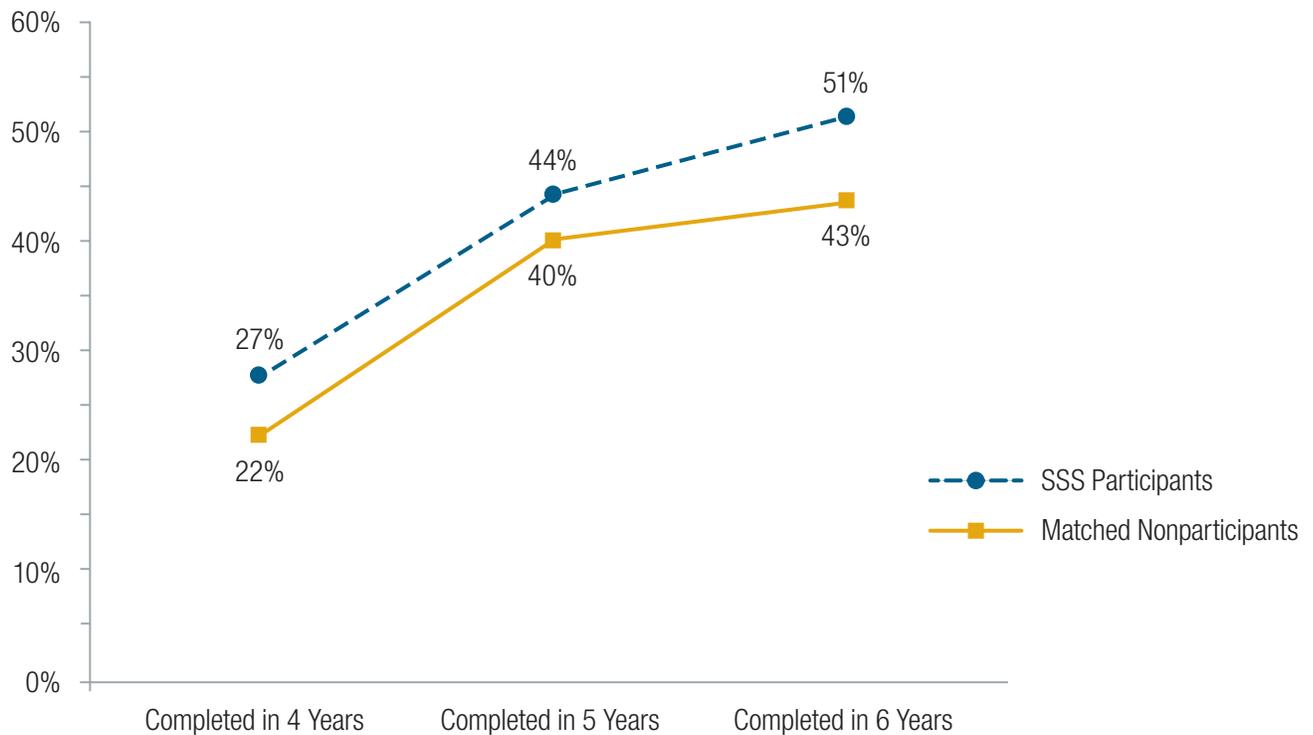
Indicator Status:

SSS participants were 48 percent more likely than nonparticipants to complete their associate degree or certificate or transfer to a 4-year institution in 4 years (46 percent vs. 31 percent).

NOTE: To create the subset of matched nonparticipants, propensity-score modeling was performed to identify respondents in the BPS:04/09 who did not participate in the SSS program but had observed background characteristics that were similar to those of the SSS participants identified in the BPS:04/09. The sample population was as follows SSS participants (n=150) and Matched non-participants (n=680).

SOURCE: Zeiser, K.L., Heuer, R., & Cominole, R. (2019). *Comparing Student Outcomes Between Student Support Services Participants and Nonparticipants in the 2004/09 Beginning Postsecondary Students Longitudinal Study*. Student Service Office of Postsecondary Education U.S. Department of Education. <https://www2.ed.gov/about/offices/list/ope/trio/sssparticipantsinbpls.pdf>.

Equity Indicator 7d(iv): Percentage of first-time freshman Student Support Services participants and matched nonparticipants in the 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) who entered 4-year institutions in 2003-04 and completed a bachelor's degree within 4, 5, and 6 years



Indicator Status:

SSS participants were 18 percent more likely to complete their bachelor's degree in 6 years compared with the matched comparison group of nonparticipants (51 percent vs. 43 percent).

NOTE: To create the subset of matched nonparticipants, propensity score modeling was performed to identify respondents in the BPS:04/09 who did not participate in the SSS program but had observed background characteristics that were similar to those of the SSS participants identified in the BPS:04/09. SSS participants (n=110) and Matched nonparticipants (n=510).

SOURCE: Zeiser, K.L., Heuer, R., & Cominole, M. (2019). *Comparing Student Outcomes Between Student Support Services Participants and Nonparticipants in the 2004/09 Beginning Postsecondary Students Longitudinal Study*. Student Service, Office of Postsecondary Education, U.S. Department of Education. <https://www2.ed.gov/about/offices/list/ope/trio/sssparticipantsinbpsls.pdf>.

Ronald E. McNair Postbaccalaureate Achievement Program (McNair): The McNair program encourages and prepares low-income and minority students for doctoral study and to pursue careers in college teaching and research. The McNair program provides research opportunities and faculty mentoring to the McNair scholars that prepares them for graduate school entrance with financial support. In 2020-21, there were 5,242 McNair scholars at a total of 187 project sites. Although the funding per participant has decreased since the early days of the program (see Indicator 7a(vi)), McNair remains the most intensive of the TRIO programs, and it serves about .1 percent of the eligible population.¹⁶⁹

In the early 2000s, the Department of Education sponsored a study describing outcomes for McNair participants who participated from 1989 to 1993.¹⁷⁰ The study concludes that “a high percentage (73 percent) of McNair participants with bachelor’s degrees had enrolled in graduate school at some-time within a five- to seven-year period after receiving their bachelor’s degree.”

More recent data from the 2013-14 APRs report that 69 percent of McNair Scholars who graduated in 2010-11 were enrolled in graduate school; and 83 percent of students who first enrolled in graduate school in 2012-2013 were found to have persisted in their studies.¹⁷¹

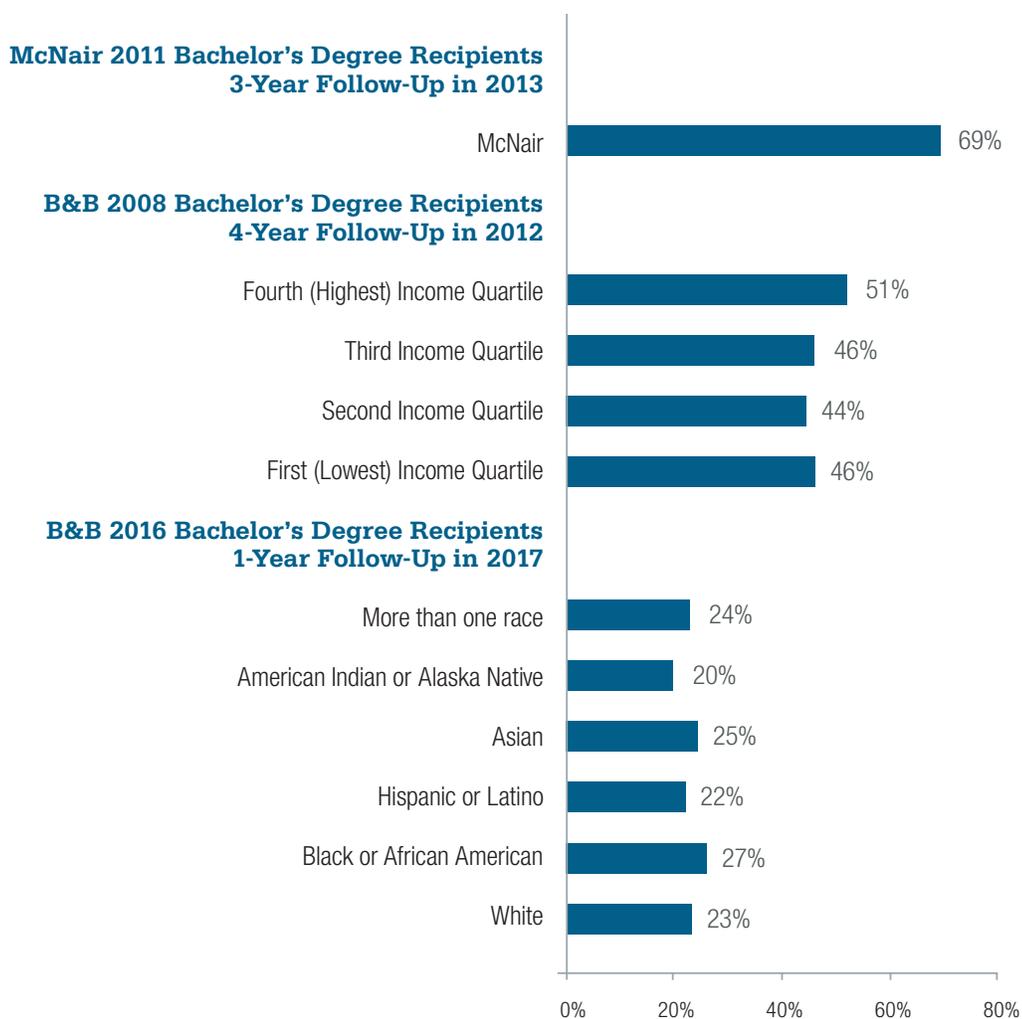
Indicator 7d(v) compares the findings from the McNair APR student tracking with national benchmarks. Although no exact time-period data can be found there are data from the most recent 1-year follow-up from B&B:2016/2017 and from an earlier B&B:2008/2012 4-year follow-up that can provide some national benchmarks. For example, the Baccalaureate and Beyond (B&B) longitudinal study found that for 2016 graduating cohort, 23 percent overall and 27 percent of recent black bachelor’s degree recipients had enrolled in any post-baccalaureate program one year later (Indicators 5e(i & ii)). Looking at the earlier B&B cohort that includes a 4-year follow up, we see that enrolling in any postbaccalaureate program by 4 years after obtaining a bachelor’s degree ranged from 44 to 46 percent for the bottom 3 quartiles to 51 percent for the highest family income quartile. McNair Scholars with a 69 percent graduate enrollment rate 3 years after bachelor’s award were thus 50 percent more likely to enroll in graduate school than the national averages at 4 years for similar populations (69 percent vs. 46 percent).

169 Eligibility determined by total amount of Pell Grant recipients.

170 McCoy, A., Wilkinson, A., & Jackson, R. (2008). *Education and Employment Outcomes of the Ronald E. McNair Postbaccalaureate Achievement Program Alumni*. Decision Information Resources, Inc. U.S. Department of Education, Office of Planning, Evaluation and Policy Development Policy and Program Studies Service. [Education and Employment Outcomes of the Ronald E McNair Postbaccalaureate Achievement Program Alumni \(PDF\)](#).

171 U.S. Department of Education. (2015). Ronald E. McNair Postbaccalaureate Achievement Program Grantee Level Performance Results: 2013-14, Washington, D.C.

Equity Indicator 7d(v): Percentage of McNair 2011 bachelor's degree recipients who enrolled in post-baccalaureate studies by 3-years after attaining a bachelor's degree, with benchmark data from B&B national data on enrollment rates in any post-baccalaureate degree program by 1 and 4 years after bachelor's award by family income quartiles and race/ethnicity



Indicator Status:

McNair Scholars were 50 percent more likely to enroll in graduate school 3 years after being awarded a bachelor's degree than the national averages at 4 years after bachelor's award for similar populations (69 percent vs. 46 percent).

NOTE: For the B&B statistics, in addition to master's and doctoral programs, "Enrolled in Any Program" also includes a small percentage of individuals enrolled in other programs (associate's degree, undergraduate certificate, additional bachelor's degree, and post-bachelor's certificates).

SOURCE: U.S. Department of Education. (2015). Ronald E. McNair Postbaccalaureate Achievement Program Grantee Level Performance Results: 2013-14, Washington, D.C.; U.S. Department of Education, National Center for Education Statistics, Baccalaureate and Beyond Longitudinal Study (B&B 2016/2017) U.S. Department of Education, National Center for Education Statistics, Baccalaureate and Beyond Longitudinal Study (B&B 2008/2012). B&B 2008/2012 data are included as Indicator 5e(i) in the 2020 Indicators report but not in the current 2021 report. Tabulated using NCES PowerStats.

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Appendix A: Additional Figures and Methodological Notes

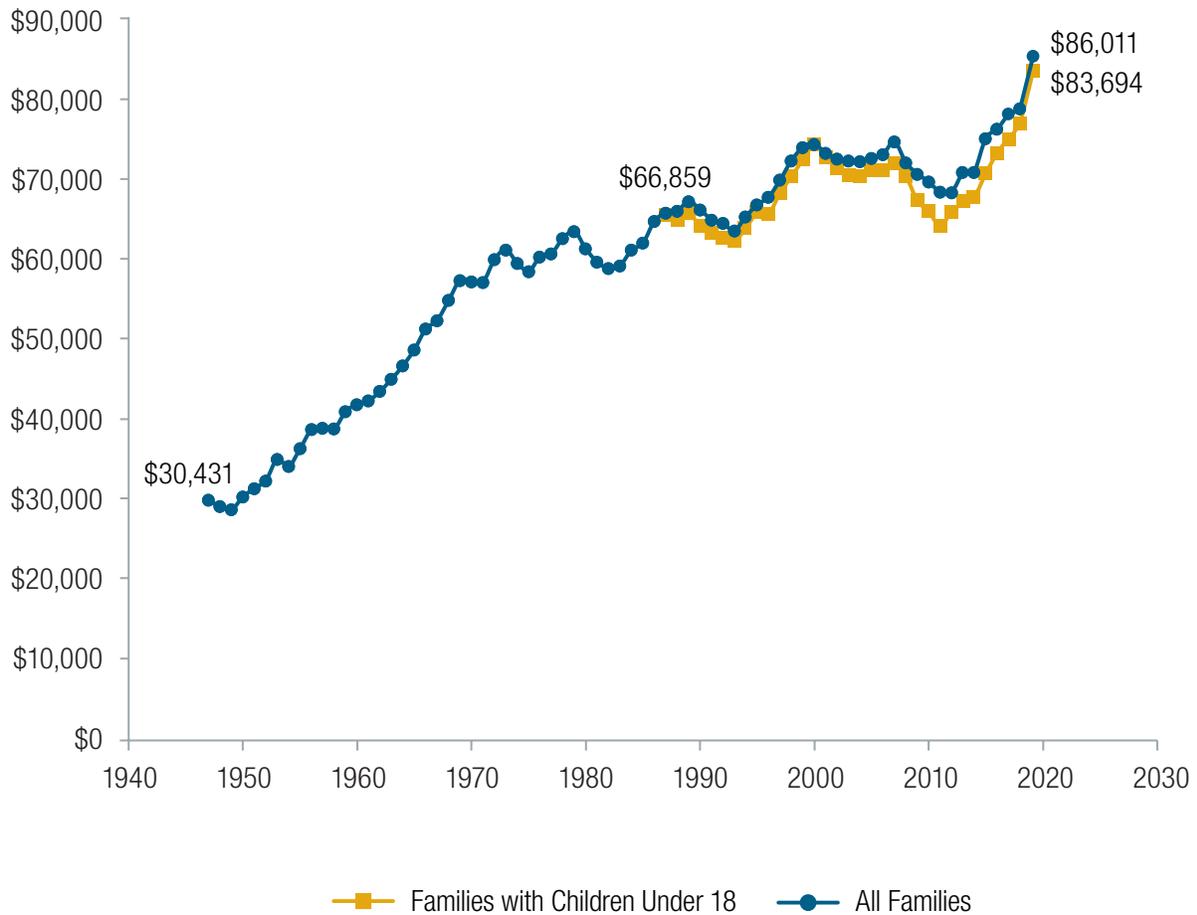
This Appendix includes additional figures and tables and methodological notes not included in the body of the report. Notes and Figures are ordered under the headings of the sections in which the notes and figures are most applicable.

Setting the Stage (STS)

STS Figures 5a and 5b: The data sources for STS Figure 5 are the Integrated Postsecondary Education Data System (IPEDS, 2018) and Barron’s Profiles of American Colleges (2016). The latter provides a competitiveness index of 4-year colleges and universities. The following notes provide details on the coding of institutions by competitiveness and the assigning of codes to institutions not ranked by Barron’s. The competitiveness index categories from Barron’s were matched (by name and state) to institutional enrollment data found in IPEDS. For those institutions that appeared in IPEDS but were not ranked by Barron’s, the institutional sector was used to develop the remaining categories (e.g., “4-Year Not Ranked” and “Private For-Profit”). All for-profit institutions were classified as “private for-profit” institutions even if ranked by Barron’s. All institutions that were administrative units or had zero undergraduate enrollment (e.g., medical schools) were omitted from the analyses as these schools do not enroll undergraduates (the variable we’re counting for this indicator). We also exclude institutions that are less-than-2-year institutions. To determine enrollment shares by competitiveness category, we first added total fall enrollment (IPEDS variable “DRVEF2015_RV” defined as “Total undergraduate men and women enrolled for credit in the fall of the academic year”; Stata variable name is EFUG). We then divided the number of students in each selectivity category by total undergraduates. Enrollment includes both part-time and full-time students.

Additional Figures: Appendix Figure A-1 shows Census data on the median family income for all families from 1947 to 2019, and for families with children under 18 from 1987 to 2019, in 2019 constant dollars. Appendix Figure A-2 shows the upper limits of each Census CPS family income quartile from 1987 to 2019 in constant 2019 dollars.

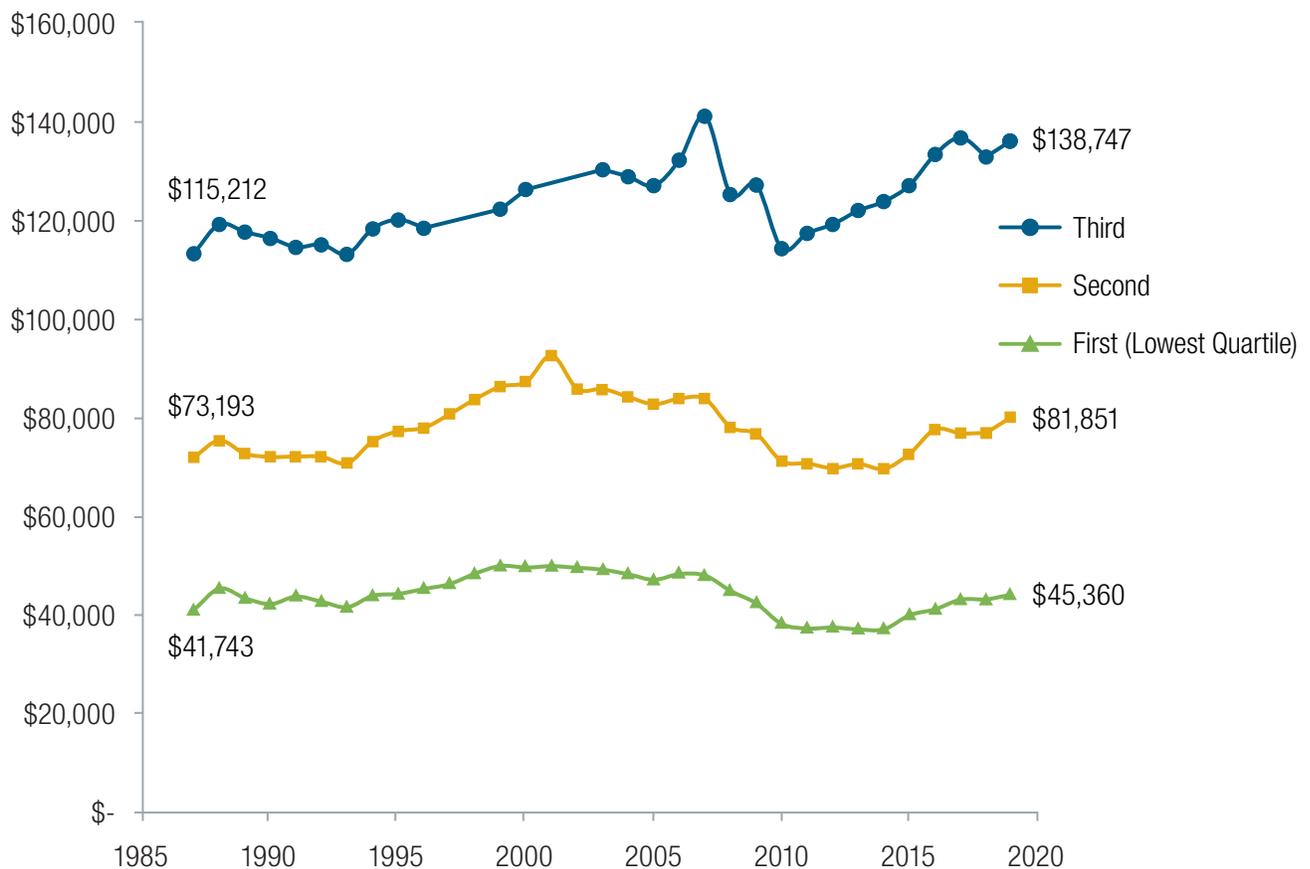
Appendix Figure A-1: Median family income for all families: 1947 to 2019, and for families with children under 18: 1987-2019 (constant 2019 dollars)



This chart on median family income mirrors the fluctuations in economic prosperity in the United States, with the rapid post-World War II growth up to the 1970s followed by much slower but continued growth with periodic recession-based declines. Sharp declines followed the Great Recession around 2008, followed by recovery and increases since 2011-12

SOURCE: U.S. Census Bureau, CPS data. Calculated from the October Current Population Survey File <https://www.census.gov/data/tables/time-series/demo/income-poverty/historical-income-families.html>; <https://www2.census.gov/programs-surveys/cps/tables/time-series/historical-income-families/f09ar.xls>.

Appendix Figure A-2: Upper limits for the first (lowest), the second, and the third income quartiles for families of dependent 18- to 24-year-olds: 1987 to 2019 (in constant 2019 dollars)



This chart reveals the gradual widening of the gap in family income between the upper limit of the third quartile and the bottom two quartiles.

NOTE: Upper family income limits of the quartiles is in constant 2019 dollars using the revised CPI-U-RS. The upper limit (maximum) of the third quartile is the minimum for the fourth (highest) quartile. The fourth (highest) quartile minimum is thus \$138,747. The maximum for the fourth (highest) quartile is not reported.

SOURCE: U.S. Census Bureau, 1976-2019, as adapted by Tom Mortenson, *Postsecondary Education Opportunity (PEO) Newsletters* and database, Washington, D.C.: The Pell Institute for the Study of Opportunity in Higher Education. Retrieved from www.pellinstitute.org/peo.shtml. Calculated from October Current Population Survey File (formerly Table 14 in Census Bureau's School Enrollment Report), tabulated using the U.S. Census Bureau online data retrieval tool. School Enrollment Data, 1970-2018, and the U.S. Census Bureau, online extraction tool, MDAT, <https://data.census.gov/mdat/#/>; which replaces Datafarrett, using CPS School Enrollment Supplement dataset, 2019, compiled by Nicole Brunt and Tom Mortenson.

Equity Indicator 2: What Type of Postsecondary Educational Institution Do Students Attend?

- **Indicator 2d:** This Indicator uses a data table in the online appendix (<http://www-personal.umich.edu/~bastedo/papers/EEPA-Appendix.pdf>) to the 2011 article, “Running in place: Low-income students and the dynamics of higher education stratification,” by Michael Bastedo and Ozan Jaquette, published in *Educational Evaluation and Policy Analysis*. To develop the data table, Bastedo and Jaquette constructed an analytic dataset using four federal longitudinal surveys: National Longitudinal Study of 1972 (NLS); High School and Beyond Study of 1980 (HS&B); National Education Longitudinal Study of 1988 (NELS), and Education Longitudinal Study of 2002 (ELS). In their analyses of the four surveys, the authors examined only students who were seniors in the specified year and who had graduated within 1.5 years of their scheduled high school graduation year. For more detailed explanation of dataset construction and analytic methodology, see Bastedo and Jaquette (2011). Appendix Figure A-3 shows Table 6 from the article’s online appendix, which presents the SES representation in each category of institutional destinations (row percentages). We used these data to construct Indicator 2d. Appendix Figure A-4 shows Table 3 from the body of the article and presents the distribution of students in each SES quartile across different categories of institutions (column percentages).
- **Indicator 2e:** The values reported in Indicator 2e represent the average of the percentage of undergraduates within an institution who receive Federal Grants by institutional selectivity and sector. The Integrated Postsecondary Education Data System (IPEDS, 2019) and Barron’s Profiles of American Colleges (2016) are the primary data sources for this Indicator. This Indicator is constructed by merging the Institutional Characteristics (IC) and Student Financial Aid (SFA) IPEDS survey components on Federal Grant (Pell and other Federal Grants) receipt with the information from the Barron’s 2016 publication. The IPEDS variables used were the “FGRNT_N” which NCES defines as “Number of full-time first-time undergraduates awarded federal grant aid” and “SCUGFFN” which NCES defines as “Total number of full-time first-time degree/certificate seeking undergraduates - financial aid cohort.” The percentage of federal aid is calculated as FGRNT_N divided by SCUGFFN. This Indicator tracks the percentage of undergraduate students who receive Federal Grant by institution each academic year from 1999-2000 to the most current year of available data. As in Figures 5a and 5b in *Setting the Stage*, institutional selectivity is measured using Barron’s Admissions Competitive Index (2016) and institutional sector as reported in IPEDS.

Appendix Figure A-3: SES representation in each institutional destination (row percentages) by cohort

TABLE 6

SES representation of each institutional destination (row percentages), by cohort

SES Quartile	1972				1982			
	SES Q1	SES Q2	SES Q3	SES Q4	SES Q1	SES Q2	SES Q3	SES Q4
No PSE	38.1%	28.1%	22.0%	11.9%	39.6%	30.6% **	20.0% *	9.7% ***
2yr/ LT 2yr (pub)	20.7%	23.5%	26.8%	29.1%	19.0%	26.7% **	29.2% *	25.0% ***
2yr/ LT 2yr (priv)	23.2%	22.7%	31.8%	22.3%	26.8%	30.5% ***	28.3%	14.4% ***
Non Competitive	19.9%	20.8%	23.9%	35.5%	18.4%	22.0%	28.8% **	30.8% **
Competitive	13.1%	17.7%	25.6%	43.6%	9.4% ***	20.8% **	29.0% *	40.8%
Very Competitive	10.8%	14.4%	18.9%	55.9%	9.8%	13.8%	21.6%	54.8%
Highly Competitive	8.9%	10.8%	20.8%	59.6%	4.0% **	9.7%	25.1%	61.2%
Most Competitive	5.2%	7.4%	9.9%	77.5%	3.8%	11.4%	17.8% **	67.0% **

SES Quartile	1992				2004			
	SES Q1	SES Q2	SES Q3	SES Q4	SES Q1	SES Q2	SES Q3	SES Q4
No PSE	41.8%	27.9% **	21.1%	9.1%	42.0%	31.2% **	19.1%	7.7%
2yr/ LT 2yr (pub)	24.6% ***	30.4% ***	28.7%	16.3% ***	25.2%	28.7%	28.2%	17.9%
2yr/ LT 2yr (priv)	29.8%	28.9%	22.5% *	18.8%	30.7%	32.8%	27.6%	9.0% ***
Non Competitive	15.4% *	22.7%	34.3% **	27.5%	19.6% **	25.4%	29.1% ***	25.9%
Competitive	12.7% ***	21.4%	28.6%	37.3% **	13.0%	19.1%	30.2%	37.8%
Very Competitive	10.2%	13.4%	27.2% ***	49.2% **	7.3% **	15.0%	26.8%	50.9%
Highly Competitive	6.4%	10.6%	20.5%	62.6%	5.0%	9.3%	19.5%	66.2%
Most Competitive	5.0%	2.9% ***	23.9% *	68.3%	4.1%	8.1% ***	18.7% *	69.0%

NOTE: Difference in proportion for SES quartile=*i* and cohort=*t* compared to proportion for SES quartile=*i* and cohort=*t*-1, significant at the 1% (***) , 5% (**), or 10% (*) level, two tailed tests.

SOURCE: Analyses of data from U.S. Department of Education, NCES, High School Longitudinal Studies (NLS, HS&B, NELS, ELS). Published as online Appendix Table 6 in Bastedo, M. N., & Jaquette, O. (2011). Running in Place: Low-income Students and the Dynamics of Higher Education Stratification. *Educational Evaluation and Policy Analysis*, 33(3), 318-339. Retrieved from <http://www-personal.umich.edu/~bastedo/papers/EEPA-Appendix.pdf>. Reprinted by permission from Sage Publishing Copyright Clearance Center.

Appendix Figure A-4: Distribution of students in each SES quartile across institutional destinations by cohort (column percentages)

TABLE 3

Institutional Destination by Cohort (Column Percentages), by SES Quartile, “Weighted SES” Sample

	SES Quartile 1				SES Quartile 2			
	1972 (%)	1982 (%)	1992 (%)	2004 (%)	1972 (%)	1982 (%)	1992 (%)	2004 (%)
No PSE	63.2	57.6***	48.2***	37.6***	52.3	41.9***	31.8***	25.8***
2yr/LT 2yr (pub)	14.2	19.9***	25.8***	31.5***	18.1	26.2***	31.5***	33.1
2yr/LT 2yr (priv)	4.7	6.2**	3.8***	3.9	5.2	6.7**	3.7***	3.8
Noncompetitive	6.9	6.8	6.9	11.2***	8.1	7.7	10.1***	13.5***
Competitive	6.5	5.5	9.0***	11.1**	9.8	11.3*	15.0***	15.2
Very competitive	3.1	3.1	4.3**	3.3*	4.6	4.1	5.6**	6.3
Highly competitive	0.9	0.5	1.1**	1.0	1.3	1.2	1.9*	1.7
Most competitive	0.4	0.3	0.8**	0.5	0.6	0.9	0.4*	0.8

	SES Quartile 3				SES Quartile 4			
	1972 (%)	1982 (%)	1992 (%)	2004 (%)	1972 (%)	1982 (%)	1992 (%)	2004 (%)
No PSE	40.3	27.6***	21.8***	14.7***	18.6	12.9***	9.5***	5.7***
2yr/LT 2yr (pub)	20.3	28.9***	26.9	30.3**	18.8	23.7***	15.3***	18.5***
2yr/LT 2yr (priv)	7.2	6.2	2.6***	3.0	4.3	3.0**	2.2*	0.9***
Competitive	9.2	10.2	13.8***	14.4	11.7	10.4	11.1	12.3
Very competitive	14.0	15.9*	18.1*	22.3***	20.4	21.5	23.7*	26.8**
Very competitive	6.0	6.6	10.3***	10.4	15.1	15.9	18.8***	18.9
Highly competitive	2.4	3.2	3.3	3.3	5.9	7.4**	10.0***	10.6
Most competitive	0.8	1.4**	3.3***	1.7***	5.2	5.2	9.5***	6.2***

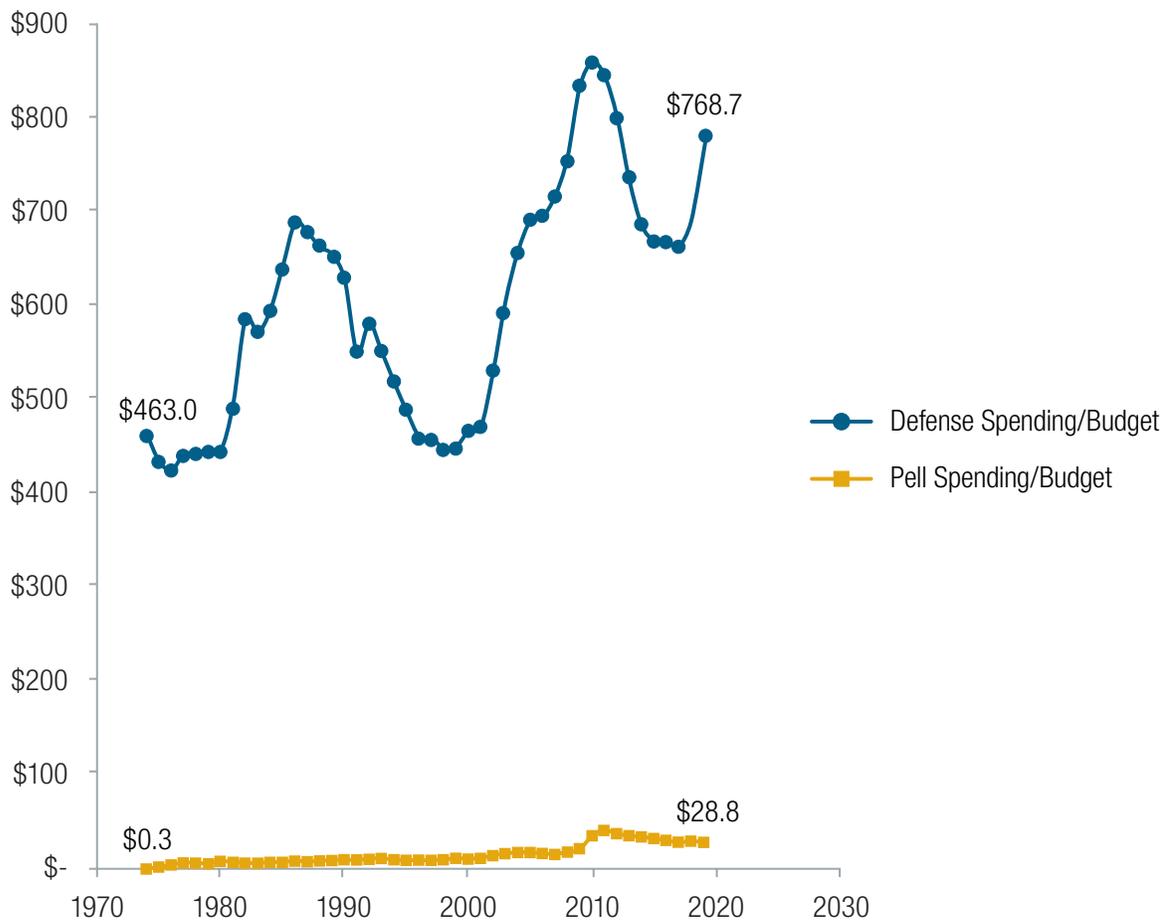
NOTE: SES = socioeconomic status. Difference in proportions for current and previous year is significant at the 1% (***), 5% (**), or 10% (*) level, two-tailed test.

SOURCE: Analyses of data from U.S. Department of Education, NCES, High School Longitudinal Studies (NLS, HS&B, NELS, ELS). Published as Table 3 in Bastedo, M. N., & Jaquette, O. (2011). Running in Place: Low-income Students and the Dynamics of Higher Education Stratification. *Educational Evaluation and Policy Analysis*, 33(3), 318-339.

Equity Indicator 3: Does Financial Aid Eliminate the Financial Barriers to Paying College Costs?

Appendix Figure A-5 summarizes Pell Grant spending from 1974 to 2019 in billions of constant 2019 dollars. To put this amount in perspective, the annual defense budget is presented over the same period.¹⁷²

Appendix Figure A-5: Annual budgets/spending for Pell Grants and for Military Spending/Department of Defense: 1994 to 2020 (in 2020 billions of constant dollars)



NOTE: The Defense budget for 2020 is \$768.7 billion, and the Pell Grant budget for 2020 remains under \$29 billion.

SOURCE: Stockholm International Peace Research Institute (SIPRI). Military Expenditures/Defense Budget 1974-2020. Retrieved from <https://www.sipri.org/databases/milex>; College Board (2020). Trends in Higher Education [Table 8]. Retrieved from <https://research.collegeboard.org/trends/student-aid>. Table 8. Federal Pell Grants in Current and in 2020 Dollars, 1973-74 to 2019-20.

¹⁷² Stockholm International Peace Research Institute (SIPRI). Military Expenditures/Defense Budget 1960-2020. Retrieved from <https://www.sipri.org/databases/milex>.

Appendix Figure A-6 presents the net price of attending institutions by type and control of the institution. Net price is the total cost of attendance minus grant and scholarship aid from the federal government, state or local governments, or institutional sources. The data are for Pell Grant or other Title IV aid recipients. The net price ranges from \$7,200 for 2-year public institutions to \$26,990 for 4-year private non-profit institutions. These data dispel the myth that on average, college grants and scholarships make a 4-year private college affordable for low-income students.

Appendix Figure A-6: Average net price for first-time, full-time degree/certificate-seeking students awarded Title IV aid, by control and level of institution: 2017-2018 (in constant 2019 dollars)



NOTE: Net price is the total cost of attendance minus grant and scholarship aid from the federal government, state or local governments, or institutional sources.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), Student Financial Aid component. *Digest of Education Statistics 2019*, [Table 331.30] Retrieved from: https://nces.ed.gov/programs/digest/d19/tables/dt19_331.30.asp.

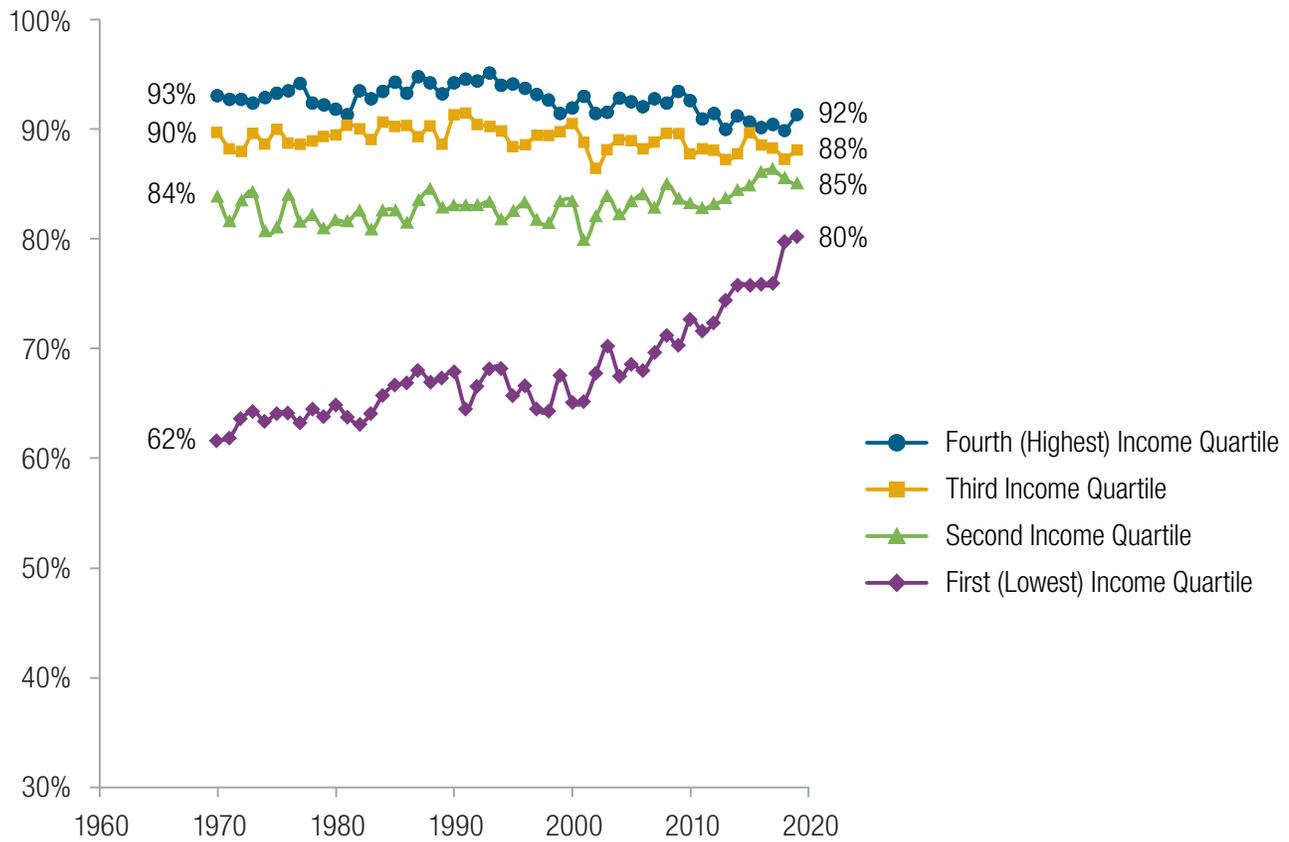
Equity Indicator 5: How Do Educational Attainment Rates and Early Outcomes Vary by Family Characteristics?

- **High School Graduation Rates:** Bachelor's degree attainment is possible only for those who graduate from high school. Using data from the CPS, Appendix Figure A-7 shows high school graduation rates by family income quartile from 1970 to 2019. These data show that, despite the rise in high school graduation rates for those in the first (lowest) income quartile, especially over the past decade, high school graduation rates continue to vary by family income.
- **Equity Indicators 5a-5f:** We report multiple measures of bachelor's degree attainment and completion for Indicator 5, given concerns about the limitations of each of the data sets, but particularly the annual CPS. The CPS is the only available annual source of data on bachelor's degree completion, but the data have important limitations. As a result, caution is needed in interpreting results using these data. The CPS data are based on household surveys and are reported in aggregate. The data are cross-sectional and include only individuals who were considered "primary dependent family members of the household" at the time of the CPS survey. Recent years have seen differential changes across income groups in dependency patterns and length of time for bachelor's degree completion. For these reasons, the *Indicators* report also present estimates of bachelor's degree completion using the NCES High School Longitudinal Studies and the Beginning Postsecondary Students (BPS). We also use IPEDS completions data to report associate's, bachelor's, master's, and doctoral degrees awarded by race/ethnicity.
- **Recalibration of Bachelors' Degree Attainment by Age 24:** In the first (2015) edition of the *Indicators* report, we included data on attainment rates by age 24 for the cohort (Indicator 5a) and for those who had entered college (Indicator 5b). The 2015 *Indicators* report used the HS&B longitudinal study of 1980 10th graders to calibrate the aggregate CPS data to arrive at an estimate of bachelor's degree attainment by age 24. These estimates were rightly criticized as overestimating degree attainment rates for the highest quartiles, given changes in dependency patterns that have occurred over time. Because of the strong positive relationships among family income, dependency status, and degree attainment, data published in the 2015 report using CPS data overestimated bachelor's degree attainment rates for the top income quartile. Since then, Tom Mortenson, who has analyzed these data for over 20 years, has updated these estimates using calibrations from the more recent NCES longitudinal studies corresponding with the time frames to be estimated. In addition to continuing to use the HS&B (1980 10th graders) to calibrate estimates for the earlier periods, he also used estimates from the more recent high school longitudinal studies, NELS (1988 8th graders) and ELS (2002 10th graders), to improve the estimates for the corresponding periods. Using data from these additional longitudinal surveys resulted in little change from the 2015 CPS-based estimates of bachelor's degree attainment rates for the first (lowest), the second, and the third income quartiles but reduced the CPS-based estimates of bachelor's degree attainment for the fourth (highest) quartile considerably.

Caution is still needed in using these adjusted CPS estimates in the subsequent *Indicators* reports, given the many underlying assumptions. For the 2016 *Indicators* report, this calibration work was still in progress and we reported only on the distribution of bachelor's degrees between the quartiles in Indicator 5a. In 2016, we presented a preliminary revision of estimates of attainment by age 24 in the Appendix of the 2016 *Indicators* report (Appendix Table A-6). The 2017 to 2021 *Indicators* reports presented these revised estimates for Equity Indicator 5a(i) using three-year moving averages of bachelor's degree attainment by age 24 for 1979 to 2019 from the CPS data.

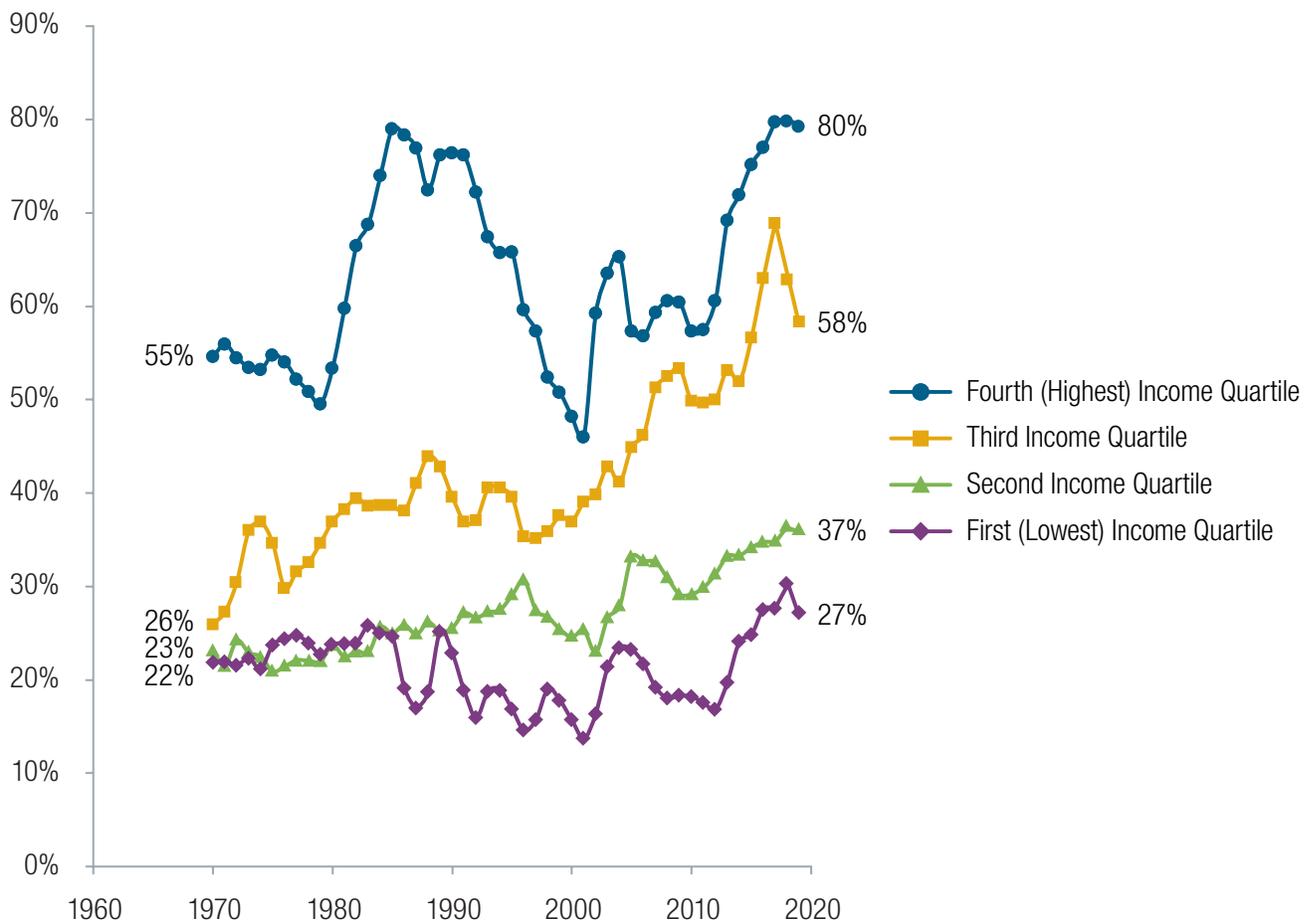
For 2021, we also include in Indicator 5a(ii) the 100 percent distribution of bachelor's degrees by age 24 by family income categories for dependent students. Appendix Figure A-8 shows these estimates using the same methods for attainment by age 24 among those who already began college from 1970 to 2019.

Appendix Figure A-7: High school graduation rates by family income quartile for dependent 18- to 24-year-olds: 1970 to 2019



SOURCE: U.S. Census Bureau, 1976-2019, as adapted by Tom Mortenson, *Postsecondary Education Opportunity (PEO) Newsletters* and database, Washington, D.C.: The Pell Institute for the Study of Opportunity in Higher Education. Retrieved from www.pellinstitute.org/peo.shtml. Calculated from October Current Population Survey File (formerly Table 14 in Census Bureau's School Enrollment Report), tabulated using the U.S. Census Bureau online data retrieval tool, Dataferrett; School Enrollment Data, 1970-2018, and the U.S. Census Bureau, online extraction tool, MDAT, <https://data.census.gov/mdat/#/>; which replaces Dataferrett, using CPS School Enrollment Supplement dataset, 2019, compiled by Nicole Brunt and Tom Mortenson.

Appendix Figure A-8: Estimates of bachelor's degree attainment by age 24 for dependent family members who began college by family income quartile: 1970 to 2019



NOTE: Based on three-year moving average using constant factors derived from HS&B, NELS, and ELS combined with the CPS data. Note these estimates are higher than those reported in Equity Indicator 5a(i) in the body of this report because they are for those who have entered college and not for the entire age cohort.

SOURCE: U.S. Census Bureau, 1976-2019, as adapted by Tom Mortenson, *Postsecondary Education Opportunity* (PEO) Newsletters and database, Washington, DC: The Pell Institute for the Study of Opportunity in Higher Education. Retrieved from www.pellinstitute.org/peo.shtml. Calculated from October Current Population Survey File (formerly Table 14 in Census Bureau's School Enrollment Report), tabulated using the U.S. Census Bureau online data retrieval tool, Dataferrett; School Enrollment Data, 1970-2018, and the U.S. Census Bureau, online extraction tool, MDAT, <https://data.census.gov/mdat/#/>; which replaces Dataferrett, using CPS School Enrollment Supplement dataset, 2019, compiled by Nicole Brunt and Tom Mortenson.

- Beginning Postsecondary Students Longitudinal Study (BPS) Income Quartiles for Dependents Students:** BPS represents students first beginning postsecondary and is a subsample drawn from the wider NPSAS sample, which represents students at every level of postsecondary education. A new BPS cohort is begun in every other NPSAS data collection year. In these years, beginning students are oversampled with corresponding weight adjustments, to ensure both adequate

sample sizes for the BPS longitudinal study follow-ups as well as the NPSAS goal of representing all levels of postsecondary enrollment for the applicable year. As such, the income quartiles for BPS families are different than those of the entire NPSAS sample families. For BPS, the income quartiles for dependent students represented in Indicator 5c(ii) are based on the applicable BPS/ NPSAS sub-sample parents' income for the previous year (for example, BPS:90 represents 1989-90 postsecondary enrollment and collected parents' income for 1988). The BPS family income quartiles for dependent students in the BPS sample years were:

- BPS: 1990—Lowest, less than \$26,098; Second, \$26,099-\$41,905; Third, \$41,906-\$61,639; Highest, \$61,640 and over.
- BPS: 1996—Lowest, less than \$25,000; Second, \$25,000-\$44,999; Third, \$45,000-\$69,999; Highest, \$70,000 and over.
- BPS: 2004—Lowest, less than \$31,999; Second, \$32,000-\$59,999; Third, \$60,000-\$91,999; Highest, \$92,000 and over.
- BPS: 2012—Lowest, less than \$29,999; Second, \$30,000-\$63,499; Third, \$63,500-\$106,999; Highest, \$107,000 and over.

Equity Indicator 7: The Federal TRIO Programs: Who, What, Where, When, Why and How Does TRIO Work?

Below are images of the historical trend data used for the charts in Indicator 7. The data includes the total programs, funding, participants, funding per program, participants, and TRIO coverage per program. To view these as Excel data files, please refer to the 2021 *Indicators* report on the Pell website. In most cases, the beginning date is 1997. Date varies depending on the availability of data. The starting date does not reflect the start of the programs.

Appendix Figure A-9: Historical characteristics of Federal TRIO programs, Education Opportunity Centers (EOC): 1997-2020

Award Year	Programs	Funding	EOC Participants	Funding per Program	Funding per Participant	HEPI	Funding per Participant in Constant \$	Participants per Program	Unemployed (000)	EOC Coverage
2020-21	139	\$ 54,926,989	192,530	\$ 395,158	\$ 285	1.00	\$ 285	1,385		
2019-20	140	\$ 54,100,779	193,530	\$ 386,434	\$ 280	0.98	\$ 285	1,382	6,073,924	3.2%
2018-19	140	\$ 51,681,910	193,530	\$ 369,157	\$ 267	0.95	\$ 280	1,382	6,385,787	3.0%
2017-18	142	\$ 50,649,719	199,722	\$ 356,688	\$ 254	0.93	\$ 273	1,406	7,093,912	2.8%
2016-17	165	\$ 56,186,996	225,678	\$ 340,527	\$ 249	0.90	\$ 276	1,368	7,854,801	2.9%
2015-16	126	\$ 46,606,423	189,733	\$ 369,892	\$ 246	0.89	\$ 277	1,506	8,417,793	2.3%
2014-15	126	\$ 46,876,529	189,733	\$ 372,036	\$ 247	0.87	\$ 284	1,506	9,776,089	1.9%
2013-14	126	\$ 44,067,484	181,581	\$ 349,742	\$ 243	0.84	\$ 287	1,441	11,634,201	1.6%
2012-13	126	\$ 45,901,792	189,131	\$ 364,300	\$ 243	0.83	\$ 292	1,501	12,691,553	1.5%
2011-12	128	\$ 47,676,723	192,196	\$ 372,474	\$ 248	0.82	\$ 303	1,502	14,035,049	1.4%
2010-11	124	\$ 46,724,127	194,445	\$ 376,807	\$ 240	0.80	\$ 301	1,568	15,070,017	1.3%
2009-10	124	\$ 46,830,291	194,445	\$ 377,664	\$ 241	0.79	\$ 304	1,568	14,430,158	1.3%
2008-09	124	\$ 46,830,291	194,795	\$ 377,664	\$ 240	0.77	\$ 310	1,571	9,059,270	2.2%
2007-08	125	\$ 47,006,891	195,795	\$ 376,055	\$ 240	0.74	\$ 325	1,566	7,190,052	2.7%
2006-07	135	\$ 47,726,296	205,915	\$ 353,528	\$ 232	0.72	\$ 323	1,525	7,134,635	2.9%
2005-06	139	\$ 48,971,567	217,565	\$ 352,313	\$ 225	0.68	\$ 330	1,565	7,752,574	2.8%
2004-05	139	\$ 48,971,567	217,265	\$ 352,313	\$ 225	0.66	\$ 343	1,563	8,253,377	2.6%
2003-04	138	\$ 47,694,915	210,065	\$ 345,615	\$ 227	0.63	\$ 358	1,522	8,876,698	2.4%
2002-03	139	\$ 48,011,331	217,836	\$ 345,405	\$ 220	0.60	\$ 365	1,567	8,545,431	2.5%
2001-02	82	\$ 33,234,295	160,836	\$ 405,296	\$ 207	0.59	\$ 349	1,961	6,953,239	2.3%
2000-01	82	\$ 30,504,684	160,836	\$ 372,008	\$ 190	0.56	\$ 340	1,961	5,827,823	2.8%
1999-00	82	\$ 29,794,380	158,036	\$ 363,346	\$ 189	0.54	\$ 352	1,927	6,094,656	2.6%
1998-99	83	\$ 29,000,000	159,236	\$ 349,398	\$ 182	0.52	\$ 348	1,919	6,459,066	2.5%
1997-98	74	\$ 25,790,000	156,686	\$ 348,514	\$ 165	0.51	\$ 325	2,117	6,983,292	2.2%

NOTE: EOC coverage is determined by EOC participants divided by number of unemployed.

SOURCE: U.S. Department of Education, Office of Federal TRIO Programs data from various years 1997 to 2020. Retrieved from <https://www2.ed.gov/about/offices/list/ope/trio/index.html>; Updated and maintained by Tom Mortenson and Nicole Brunt. For more details, visit the Excel files at <http://www.pellinstitute.org/peo.shtml>.

Appendix Figure A-10: Historical characteristics of Federal TRIO programs, McNair Postbaccalaureate Achievement Program (McNair): 1990-2020

Award Year	Programs	Funding	McNair Participants	Funding per Program	Funding per Participant	HEPI	Funding per Participant in Constant \$	Participants per Program	Pell Grant Recipients	McNair Coverage
2020-21	187	\$ 51,778,211	5,242	\$ 276,889	\$ 9,878	1.00	\$ 9,878	28		
2019-20	187	\$ 50,027,266	5,242	\$ 267,525	\$ 9,544	0.98	\$ 9,728	28		
2018-19	187	\$ 47,872,986	5,242	\$ 256,005	\$ 9,133	0.95	\$ 9,584	28		
2017-18	187	\$ 45,896,206	5,234	\$ 245,434	\$ 8,769	0.93	\$ 9,446	28	7,101,820	0.1%
2016-17	151	\$ 36,589,491	4,338	\$ 242,315	\$ 8,435	0.90	\$ 9,364	29	7,184,051	0.1%
2015-16	151	\$ 35,701,197	4,293	\$ 236,432	\$ 8,316	0.89	\$ 9,374	28	7,648,736	0.1%
2014-15	151	\$ 35,600,323	4,293	\$ 235,764	\$ 8,293	0.87	\$ 9,536	28	8,303,266	0.1%
2013-14	152	\$ 34,060,382	4,191	\$ 224,081	\$ 8,127	0.84	\$ 9,625	28	8,650,320	0.0%
2012-13	158	\$ 37,270,374	4,482	\$ 235,888	\$ 8,316	0.83	\$ 10,003	28	8,945,764	0.1%
2011-12	200	\$ 46,118,554	5,419	\$ 230,593	\$ 8,511	0.82	\$ 10,408	27	9,430,792	0.1%
2010-11	200	\$ 47,373,968	5,419	\$ 236,870	\$ 8,742	0.80	\$ 10,942	27	9,294,832	0.1%
2009-10	200	\$ 47,298,189	5,430	\$ 236,491	\$ 8,711	0.79	\$ 11,000	27	8,053,449	0.1%
2008-09	185	\$ 44,326,656	5,067	\$ 239,604	\$ 8,748	0.77	\$ 11,294	27	6,143,726	0.1%
2007-08	190	\$ 45,604,173	5,210	\$ 240,022	\$ 8,753	0.74	\$ 11,860	27	5,530,412	0.1%
2006-07	177	\$ 41,714,498	4,186	\$ 235,675	\$ 9,965	0.72	\$ 13,887	24	5,152,828	0.1%
2005-06	178	\$ 41,934,925	4,236	\$ 235,589	\$ 9,900	0.68	\$ 14,500	24	5,156,264	0.1%
2004-05	179	\$ 42,092,721	4,133	\$ 235,155	\$ 10,185	0.66	\$ 15,503	23	5,296,544	0.1%
2003-04	179	\$ 41,885,612	4,118	\$ 233,998	\$ 10,171	0.63	\$ 16,051	23	5,130,099	0.1%
2002-03	156	\$ 38,357,300	3,774	\$ 245,880	\$ 10,164	0.60	\$ 16,853	24	4,766,270	0.1%
2001-02	156	\$ 35,785,817	3,774	\$ 229,396	\$ 9,482	0.59	\$ 16,025	24	4,332,372	0.1%
2000-01	156	\$ 34,859,043	3,774	\$ 223,455	\$ 9,237	0.56	\$ 16,545	24	3,891,783	0.1%
1999-00	156	\$ 32,114,068	3,641	\$ 205,859	\$ 8,820	0.54	\$ 16,451	23	3,756,621	0.1%
1998-99	99	\$ 20,774,063	2,469	\$ 209,839	\$ 8,414	0.52	\$ 16,067	25	3,855,180	0.1%
1997-98	99	\$ 20,367,000	2,480	\$ 205,727	\$ 8,213	0.51	\$ 16,236	25	3,732,807	0.1%
1996-97	99	\$ 19,817,000	2,480	\$ 200,172	\$ 7,991	0.49	\$ 16,291	25	3,665,654	0.1%
1995-96	99	\$ 19,080,000	2,460	\$ 192,727	\$ 7,756	0.48	\$ 16,274	25	3,611,821	0.1%
1994-95	68	\$ 11,900,000	1,800	\$ 175,000	\$ 6,611	0.46	\$ 14,279	26	3,674,967	0.0%
1993-94	68	\$ 9,598,000	1,730	\$ 141,147	\$ 5,548	0.45	\$ 12,392	25	3,755,675	0.0%
1992-93	68	\$ 9,576,000	1,700	\$ 140,824	\$ 5,633	0.44	\$ 12,943	25	4,002,045	0.0%
1991-92	42	\$ 4,944,000	1,000	\$ 117,714	\$ 4,944	0.42	\$ 11,766	24	3,786,230	0.0%
1990-91	28	\$ 3,000,000	730	\$ 107,143	\$ 4,110	0.40	\$ 10,294	26	3,404,810	0.0%
1989-90	14	\$ 1,482,000	415	\$ 105,857	\$ 3,571	0.38	\$ 9,484	30	3,322,151	0.0%

NOTE: McNair coverage is determined by McNair participants divided by total Pell Grant recipients.

SOURCE: U.S. Department of Education, Office of Federal TRIO Programs data from various years 1989 to 2020. Retrieved from <https://www2.ed.gov/about/offices/list/ope/trio/index.html>; Updated and maintained by Tom Mortenson and Nicole Brunt. For more details, visit the Excel files at <http://www.pellinstitute.org/peo.shtml>.

Appendix Figure A-11: Historical characteristics of Federal TRIO programs, Student Support Services (SSS): 1997-2020

Award Year	Programs	Funding	SSS Participants	Funding per Program	Funding per Participant	HEPI	Funding per Participant in Constant \$	Participants per Program	Pell Grant Recipients	SSS Coverage
2020-21	1156	\$ 365,918,070	209,075	\$ 316,538	\$ 1,750	1.00	\$ 1,750	181		
2019-20	1066	\$ 337,107,672	202,255	\$ 316,236	\$ 1,667	0.98	\$ 1,699	190		
2018-19	1069	\$ 322,608,056	202,880	\$ 301,785	\$ 1,590	0.95	\$ 1,669	190		
2017-18	1069	\$ 310,042,423	202,913	\$ 290,030	\$ 1,528	0.93	\$ 1,646	190	\$ 7,105,237	2.9%
2016-17	1071	\$ 302,405,536	203,290	\$ 282,358	\$ 1,488	0.90	\$ 1,651	190	\$ 7,187,535	2.8%
2015-16	1081	\$ 297,256,676	205,263	\$ 274,983	\$ 1,448	0.89	\$ 1,632	190	\$ 7,652,519	2.7%
2014-15	1027	\$ 288,631,903	202,492	\$ 281,044	\$ 1,425	0.87	\$ 1,639	197	\$ 8,308,644	2.4%
2013-14	1027	\$ 274,739,441	197,068	\$ 267,516	\$ 1,394	0.84	\$ 1,651	192	\$ 8,655,816	2.3%
2012-13	1028	\$ 290,325,810	202,750	\$ 282,418	\$ 1,432	0.83	\$ 1,723	197	\$ 8,951,280	2.3%
2011-12	1029	\$ 290,572,674	202,921	\$ 282,384	\$ 1,432	0.82	\$ 1,751	197	\$ 9,436,532	2.2%
2010-11	1034	\$ 302,514,811	204,096	\$ 292,568	\$ 1,482	0.80	\$ 1,855	197	\$ 9,300,599	2.2%
2009-10	946	\$ 301,525,678	198,057	\$ 318,738	\$ 1,522	0.79	\$ 1,923	209	\$ 8,063,392	2.5%
2008-09	947	\$ 284,364,806	198,940	\$ 300,280	\$ 1,429	0.77	\$ 1,845	210	\$ 6,151,829	3.2%
2007-08	949	\$ 271,566,777	199,499	\$ 286,161	\$ 1,361	0.74	\$ 1,844	210	\$ 5,538,411	3.6%
2006-07	953	\$ 271,412,971	201,534	\$ 284,799	\$ 1,347	0.72	\$ 1,877	211	\$ 5,160,763	3.9%
2005-06	959	\$ 274,545,170	203,212	\$ 286,283	\$ 1,351	0.68	\$ 1,979	212	\$ 5,163,916	3.9%
2004-05	935	\$ 263,030,892	196,237	\$ 281,316	\$ 1,340	0.66	\$ 2,040	210	\$ 5,304,097	3.7%
2003-04	936	\$ 263,650,147	196,387	\$ 281,678	\$ 1,343	0.63	\$ 2,119	210	\$ 5,137,566	3.8%
2002-03	937	\$ 262,711,302	198,551	\$ 280,375	\$ 1,323	0.60	\$ 2,194	212	\$ 4,773,528	4.2%
2001-02	944	\$ 253,766,358	199,956	\$ 268,820	\$ 1,269	0.59	\$ 2,145	212	\$ 4,339,940	4.6%
2000-01	795	\$ 183,298,415	176,614	\$ 230,564	\$ 1,038	0.56	\$ 1,859	222	\$ 3,896,051	4.5%
1999-00	796	\$ 178,916,836	178,099	\$ 224,770	\$ 1,005	0.54	\$ 1,874	224	\$ 3,760,473	4.7%
1998-99	796	\$ 178,916,836	178,099	\$ 224,770	\$ 1,005	0.52	\$ 1,918	224	\$ 3,855,180	4.6%
1997-98	796	\$ 171,893,687	178,099	\$ 215,947	\$ 965	0.51	\$ 1,908	224	\$ 3,624,652	4.9%

NOTE: SSS coverage is determined by SSS participants divided by total Pell Grant recipients.

SOURCE: U.S. Department of Education, Office of Federal TRIO Programs data from various years, 1964 to 2020. Retrieved from <https://www2.ed.gov/about/offices/list/ope/trio/index.html>; Updated and maintained by Tom Mortenson and Nicole Brunt. For more details, visit the Excel files at <http://www.pellinstitute.org/peo.shtml>.

Appendix Figure A-12: Historical characteristics of Federal TRIO programs, Talent Search (TS): 1997-2020

Award Year	Programs	Funding	Talent Search Participants	Funding per Program	Funding per Participant	HEPI	Funding per Participant in Constant \$	Participants per Program	6th to 12th Grade Enrollments	Free and Reduced-Price Eligibility Rate	Low Income School Enrollment	Talent Search Coverage
2020-21	473	\$ 168,306,753	309,905	\$ 355,828	\$ 543	1.00	\$ 543	655				
2019-20	473	\$ 179,852,045	309,905	\$ 380,237	\$ 580	0.98	\$ 592	655				
2018-19	473	\$ 158,260,406	309,905	\$ 334,589	\$ 511	0.95	\$ 536	655				
2017-18	473	\$ 151,772,998	312,856	\$ 320,873	\$ 485	0.93	\$ 523	661	26,782,239	55.4%	14,833,667	2.1%
2016-17	481	\$ 150,635,825	318,723	\$ 313,172	\$ 473	0.90	\$ 525	663	26,630,109	56.3%	14,999,741	2.1%
2015-16	449	\$ 134,520,595	310,199	\$ 299,600	\$ 434	0.89	\$ 489	691	26,466,850	54.7%	14,473,698	2.1%
2014-15	450	\$ 134,613,873	310,747	\$ 299,142	\$ 433	0.87	\$ 498	691	26,370,350	53.3%	14,061,916	2.2%
2013-14	452	\$ 128,116,544	299,683	\$ 283,444	\$ 428	0.84	\$ 506	663	26,240,035	52.8%	13,848,705	2.2%
2012-13	454	\$ 135,968,652	313,641	\$ 299,490	\$ 434	0.83	\$ 521	691	26,189,533	53.3%	13,947,608	2.2%
2011-12	461	\$ 138,658,540	319,678	\$ 300,778	\$ 434	0.82	\$ 530	693	26,076,438	50.8%	13,246,410	2.4%
2010-11	463	\$ 141,646,643	359,740	\$ 305,932	\$ 394	0.80	\$ 493	777	26,124,583	50.4%	13,176,101	2.7%
2009-10	464	\$ 141,508,765	360,940	\$ 304,976	\$ 392	0.79	\$ 495	778	26,079,735	48.2%	12,566,408	2.9%
2008-09	466	\$ 142,743,840	363,300	\$ 306,317	\$ 393	0.77	\$ 507	780	26,137,944	46.0%	12,011,355	3.0%
2007-08	471	\$ 142,884,182	366,330	\$ 303,363	\$ 390	0.74	\$ 528	778	26,333,918	44.8%	11,785,919	3.1%
2006-07	510	\$ 149,627,580	392,743	\$ 293,387	\$ 381	0.72	\$ 531	770	26,423,662	45.5%	12,020,371	3.3%
2005-06	468	\$ 144,648,938	384,588	\$ 309,079	\$ 376	0.68	\$ 551	822	26,350,994	44.6%	11,758,724	3.3%
2004-05	469	\$ 144,230,198	382,541	\$ 307,527	\$ 377	0.66	\$ 574	816	26,209,144	42.9%	11,251,212	3.4%
2003-04	471	\$ 144,810,906	386,241	\$ 307,454	\$ 375	0.63	\$ 592	820	25,932,017	41.3%	10,701,892	3.6%
2002-03	475	\$ 143,505,809	389,454	\$ 302,117	\$ 368	0.60	\$ 611	820	25,536,764	40.7%	10,400,324	3.7%
2001-02	360	\$ 109,960,406	320,854	\$ 305,446	\$ 343	0.59	\$ 579	891	25,008,679	39.9%	9,987,542	3.2%
2000-01	360	\$ 100,544,841	320,854	\$ 279,291	\$ 313	0.56	\$ 561	891	24,498,211	40.0%	9,793,456	3.3%
1999-00	362	\$ 98,672,886	326,041	\$ 272,577	\$ 303	0.54	\$ 564	901	24,091,571	40.2%	9,688,033	3.4%
1998-99	362	\$ 95,960,000	324,341	\$ 265,083	\$ 296	0.52	\$ 565	896	25,922,041	40.1%	10,395,801	3.1%
1997-98	319	\$ 81,540,000	298,574	\$ 255,611	\$ 273	0.51	\$ 540	936	23,481,196	39.9%	9,371,586	3.2%

NOTE: Talent Search coverage is determined by TS participants divided by total amount of low-income school 6th to 12th grade enrollment. Data include programs in the Trust & Territories.

SOURCE: U.S. Department of Education, Office of Federal TRIO Programs data from various years, 1997 to 2020. Retrieved from <https://www2.ed.gov/about/offices/list/ope/trio/index.html>; Updated and maintained by Tom Mortenson and Nicole Brunt. For more details, visit the Excel files at <http://www.pellinstitute.org/peo.shtml>.

Appendix Figure A-13: Historical characteristics of Federal TRIO programs, Upward Bound: 1997-2020

Award Year	Programs	Funding	Upward Bound Participants	Funding per Program	Funding per Participant	HEPI	Funding per Participant in Constant \$	Participants per Program	Public High School Enrollments	Free and Reduced-Price Eligibility Rate	Low Income School Enrollment	Upward Bound Coverage
2020-21	966	\$ 352,094,127	70,711	\$ 364,487	\$ 4,979	1.00	\$ 4,979	73				
2019-20	966	\$ 343,356,535	70,742	\$ 355,442	\$ 4,854	0.98	\$ 4,948	73				
2018-19	967	\$ 355,592,015	70,914	\$ 367,727	\$ 5,014	0.95	\$ 5,262	73				
2017-18	956	\$ 312,052,710	70,001	\$ 326,415	\$ 4,458	0.93	\$ 4,802	73	15,319,685	55.4%	8,484,993	0.8%
2016-17	810	\$ 270,228,385	61,747	\$ 333,615	\$ 4,376	0.90	\$ 4,859	76	15,269,700	56.3%	8,600,849	0.7%
2015-16	813	\$ 263,412,436	61,361	\$ 324,001	\$ 4,293	0.89	\$ 4,839	75	15,185,571	54.7%	8,304,402	0.7%
2014-15	814	\$ 264,578,959	61,458	\$ 325,036	\$ 4,305	0.87	\$ 4,951	76	15,087,196	53.3%	8,045,206	0.8%
2013-14	816	\$ 250,117,297	59,097	\$ 306,516	\$ 4,232	0.84	\$ 5,013	72	14,940,332	52.8%	7,885,060	0.7%
2012-13	826	\$ 269,229,023	62,576	\$ 325,943	\$ 4,302	0.83	\$ 5,176	76	14,900,497	53.3%	7,935,472	0.8%
2011-12	951	\$ 305,387,247	64,262	\$ 321,122	\$ 4,752	0.82	\$ 5,812	68	14,911,921	50.8%	7,575,015	0.8%
2010-11	953	\$ 313,945,491	64,391	\$ 329,429	\$ 4,876	0.80	\$ 6,102	68	15,028,172	50.4%	7,579,555	0.8%
2009-10	956	\$ 308,930,189	64,566	\$ 323,149	\$ 4,785	0.79	\$ 6,042	68	15,116,364	48.2%	7,283,755	0.9%
2008-09	964	\$ 313,093,939	65,179	\$ 324,786	\$ 4,804	0.77	\$ 6,201	68	15,147,782	46.0%	6,960,968	0.9%
2007-08	971	\$ 315,176,549	65,587	\$ 324,590	\$ 4,805	0.74	\$ 6,511	68	15,260,968	44.8%	6,830,147	1.0%
2006-07	761	\$ 266,623,737	56,430	\$ 350,360	\$ 4,725	0.72	\$ 6,584	74	15,267,794	45.5%	6,945,462	0.8%
2005-06	761	\$ 265,975,770	56,450	\$ 349,508	\$ 4,712	0.68	\$ 6,901	74	14,979,739	44.6%	6,684,477	0.8%
2004-05	763	\$ 274,097,258	56,679	\$ 359,236	\$ 4,836	0.66	\$ 7,361	74	14,816,640	42.9%	6,360,572	0.9%
2003-04	774	\$ 266,183,250	56,721	\$ 343,906	\$ 4,693	0.63	\$ 7,406	73	14,526,266	41.3%	5,994,849	0.9%
2002-03	770	\$ 264,189,513	56,324	\$ 343,103	\$ 4,691	0.60	\$ 7,778	73	14,242,621	40.7%	5,800,573	1.0%
2001-02	772	\$ 251,154,772	56,564	\$ 325,330	\$ 4,440	0.59	\$ 7,504	73	13,917,030	39.9%	5,557,947	1.0%
2000-01	772	\$ 249,650,137	56,564	\$ 323,381	\$ 4,414	0.56	\$ 7,906	73	13,699,759	40.0%	5,476,644	1.0%
1999-00	772	\$ 220,500,637	52,960	\$ 285,623	\$ 4,164	0.54	\$ 7,766	69	13,552,240	40.2%	5,449,813	1.0%
1998-99	598	\$ 181,760,000	44,495	\$ 303,946	\$ 4,085	0.52	\$ 7,801	74	13,192,784	40.1%	5,290,847	0.8%
1997-98	601	\$ 178,810,000	48,462	\$ 297,521	\$ 3,690	0.51	\$ 7,295	81	13,053,787	39.9%	5,209,900	0.9%

NOTE: Upward Bound coverage is determined by UB participants divided by estimates of the total amount of low-income school enrollment.

SOURCE: U.S. Department of Education, Office of Federal TRIO Programs data from various years, 1997 to 2020. Retrieved from <https://www2.ed.gov/about/offices/list/ope/trio/index.html>; Updated and maintained by Tom Mortenson and Nicole Brunt. For more details, visit the Excel files at <http://www.pellinstitute.org/peo.shtml>.

Appendix Figure A-14: Historical characteristics of Federal TRIO programs, Upward Bound Math-Science Program: 1997-2020

Award Year	Programs	Funding	Upward Bound Participants	Funding per Program	Funding per Participant	HEPI	Funding per Participant in Constant \$	Participants per Program	Public High School Enrollments	Free and Reduced-Price Eligibility Rate	Low Income School Enrollment	Upward Bound Coverage
2020-21	212	\$ 65,439,438	13,184	\$ 308,677	\$ 4,964	1.00	\$ 4,964	62				
2019-20	212	\$ 63,521,110	13,184	\$ 299,628	\$ 4,818	0.98	\$ 4,911	62				
2018-19	212	\$ 67,687,618	13,184	\$ 319,281	\$ 5,134	0.95	\$ 5,388	62				
2017-18	211	\$ 58,256,458	13,132	\$ 276,097	\$ 4,436	0.93	\$ 4,779	62	15,296,801	55.4%	8,472,318	0.2%
2016-17	162	\$ 44,289,274	10,176	\$ 273,391	\$ 4,352	0.90	\$ 4,832	63	15,251,841	56.3%	8,590,790	0.1%
2015-16	162	\$ 43,050,368	10,034	\$ 265,743	\$ 4,290	0.89	\$ 4,836	62	15,168,208	54.7%	8,294,907	0.1%
2014-15	162	\$ 43,083,035	10,034	\$ 265,945	\$ 4,294	0.87	\$ 4,938	62	15,069,591	53.3%	8,035,818	0.1%
2013-14	162	\$ 40,547,999	9,676	\$ 250,296	\$ 4,191	0.84	\$ 4,963	60	14,922,688	52.8%	7,875,748	0.1%
2012-13	166	\$ 44,141,410	10,265	\$ 265,912	\$ 4,300	0.83	\$ 5,173	62	14,882,786	53.3%	7,926,039	0.1%
2011-12	131	\$ 33,812,442	6,992	\$ 258,110	\$ 4,836	0.82	\$ 5,914	53	14,883,417	50.8%	7,560,536	0.1%
2010-11	131	\$ 34,873,057	6,992	\$ 266,207	\$ 4,988	0.80	\$ 6,242	53	14,999,515	50.4%	7,565,101	0.1%
2009-10	132	\$ 35,203,799	7,057	\$ 266,695	\$ 4,988	0.79	\$ 6,299	53	15,098,261	48.2%	7,275,032	0.1%
2008-09	116	\$ 31,186,306	6,250	\$ 268,847	\$ 4,990	0.77	\$ 6,442	54	15,129,378	46.0%	6,952,511	0.1%
2007-08	126	\$ 33,976,483	6,808	\$ 269,655	\$ 4,991	0.74	\$ 6,762	54	15,242,047	44.8%	6,821,679	0.1%
2006-07	125	\$ 32,296,562	6,707	\$ 258,372	\$ 4,815	0.72	\$ 6,710	54	15,243,392	45.5%	6,934,362	0.1%
2005-06	127	\$ 32,592,037	6,817	\$ 256,630	\$ 4,781	0.68	\$ 7,003	54	14,950,764	44.6%	6,671,548	0.1%
2004-05	127	\$ 32,812,036	6,845	\$ 258,362	\$ 4,794	0.66	\$ 7,297	54	14,784,501	42.9%	6,346,775	0.1%
2003-04	129	\$ 33,392,693	6,947	\$ 258,858	\$ 4,807	0.63	\$ 7,585	54	14,505,094	41.3%	5,986,111	0.1%
2002-03	123	\$ 31,772,406	6,093	\$ 258,312	\$ 5,215	0.60	\$ 8,647	50	14,234,349	40.7%	5,797,204	0.1%
2001-02	123	\$ 30,847,003	6,093	\$ 250,789	\$ 5,063	0.59	\$ 8,556	50	13,900,348	39.9%	5,551,285	0.1%
2000-01	123	\$ 31,302,902	6,093	\$ 254,495	\$ 5,138	0.56	\$ 9,203	50	13,682,499	40.0%	5,469,744	0.1%
1999-00	124	\$ 29,276,284	6,200	\$ 236,099	\$ 4,722	0.54	\$ 8,807	50	13,534,586	40.2%	5,442,714	0.1%
1998-99	81	\$ 20,140,000	3,722	\$ 248,642	\$ 5,411	0.52	\$ 10,333	46	13,192,784	40.1%	5,290,847	0.1%
1997-98	81	\$ 19,740,000		\$ 243,704		0.51			13,053,787	39.9%	5,209,900	0.0%

NOTE: Upward Bound coverage is determined by UB participants divided by estimates of the total amount of low-income school enrollment.

SOURCE: U.S. Department of Education, Office of Federal TRIO Programs data from various years, 1997 to 2020. Retrieved from <https://www2.ed.gov/about/offices/list/ope/trio/index.html>; Updated and maintained by Tom Mortenson and Nicole Brunt. For more details, visit the Excel files at <http://www.pellinstitute.org/peo.shtml>.

Appendix Figure A-15: Historical characteristics of Federal TRIO programs, Veterans Upward Bound (VUB): 2004-2021

Award Year	Programs	Funding	Upward Bound Participants	Funding per Program	Funding per Participant	HEPI	Funding per Participant in Constant \$	Participants per Program	Veterans 18 and over that are below the Poverty Level	Upward Bound Coverage
2020-21	60	\$ 19,228,457	7,898	\$ 320,474	\$ 2,435	1.00	\$ 2,435	132		
2019-20	62	\$ 19,064,429	8,157	\$ 307,491	\$ 2,337	0.98	\$ 2,382	132	1,151,580	0.7%
2018-19	62	\$ 18,384,370	8,157	\$ 296,522	\$ 2,254	0.95	\$ 2,365	132	1,194,686	0.7%
2017-18	64	\$ 18,186,172	8,407	\$ 284,159	\$ 2,163	0.93	\$ 2,330	131	1,240,965	0.7%
2016-17	49	\$ 13,852,595	6,587	\$ 282,706	\$ 2,103	0.90	\$ 2,335	134	1,263,660	0.5%
2015-16	49	\$ 13,548,241	6,566	\$ 276,495	\$ 2,063	0.89	\$ 2,326	134	1,293,093	0.5%
2014-15	49	\$ 13,706,511	6,566	\$ 279,725	\$ 2,087	0.87	\$ 2,401	134	1,382,063	0.5%
2013-14	50	\$ 13,068,144	6,404	\$ 261,363	\$ 2,041	0.84	\$ 2,417	128	1,428,921	0.4%
2012-13	51	\$ 14,392,377	6,831	\$ 282,203	\$ 2,107	0.83	\$ 2,534	134	1,527,857	0.4%
2011-12	47	\$ 13,180,173	5,780	\$ 280,429	\$ 2,280	0.82	\$ 2,789	123	1,491,772	0.4%
2010-11	47	\$ 13,565,830	5,780	\$ 288,635	\$ 2,347	0.80	\$ 2,938	123	1,448,461	0.4%
2009-10	48	\$ 13,851,830	5,900	\$ 288,580	\$ 2,348	0.79	\$ 2,965	123	1,411,814	0.4%
2008-09	41	\$ 12,030,210	5,060	\$ 293,420	\$ 2,378	0.77	\$ 3,069	123	1,369,091	0.4%
2007-08	46	\$ 13,351,830	5,660	\$ 290,257	\$ 2,359	0.74	\$ 3,196	123	1,298,709	0.4%
2006-07	39	\$ 11,492,305	4,909	\$ 294,674	\$ 2,341	0.72	\$ 3,262	126	1,378,763	0.4%
2005-06	39	\$ 11,371,489	4,909	\$ 291,577	\$ 2,316	0.68	\$ 3,393	126	1,378,133	0.4%
2004-05	42	\$ 12,576,611	5,269	\$ 299,443	\$ 2,387	0.66	\$ 3,633	125		
2003-04	45	\$ 12,415,570	5,430	\$ 275,902	\$ 2,286	0.63	\$ 3,608	121		

NOTE: Veterans Upward Bound coverage is determined by total VUB participants divided by total Veterans 18 and over that are living below the poverty line.

SOURCE: U.S. Department of Education, Office of Federal TRIO Programs data from various years, 2003 to 2020. Retrieved from <https://www2.ed.gov/about/offices/list/ope/trio/index.html>; Updated and maintained by Tom Mortenson and Nicole Brunt. For more details, visit the Excel files at <http://www.pellinstitute.org/peo.shtml>.

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