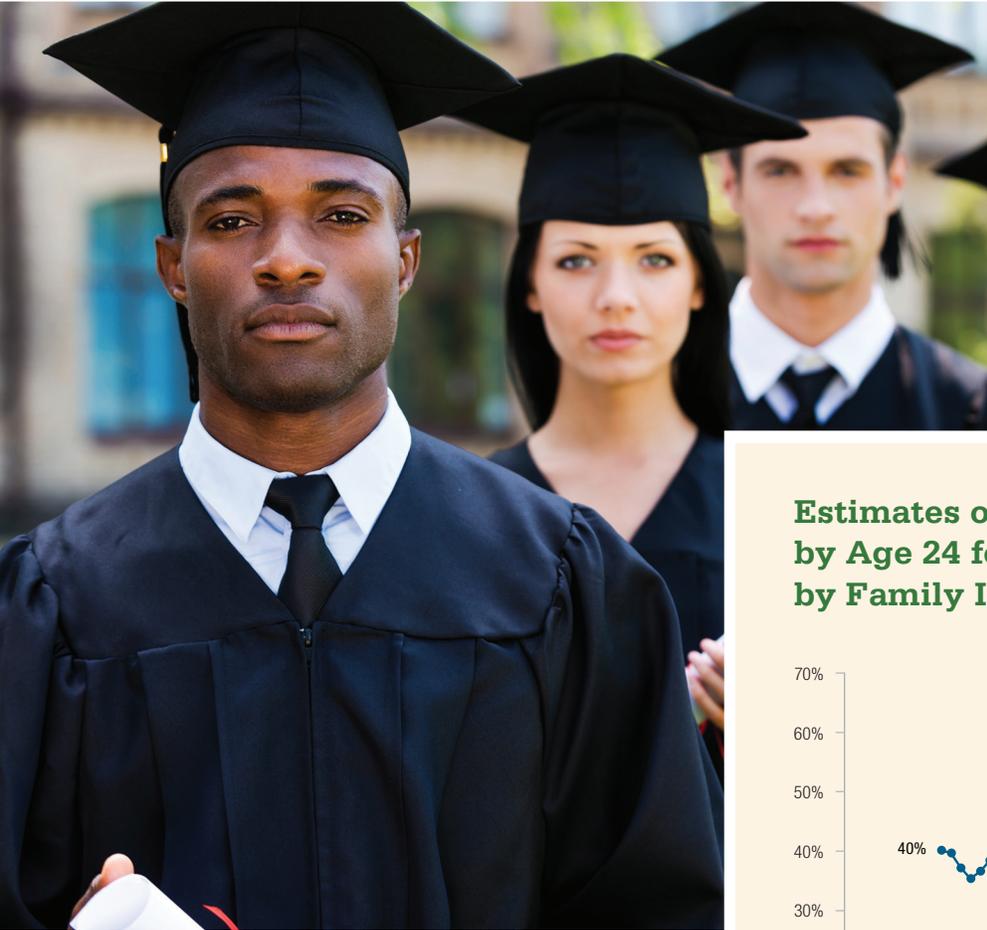


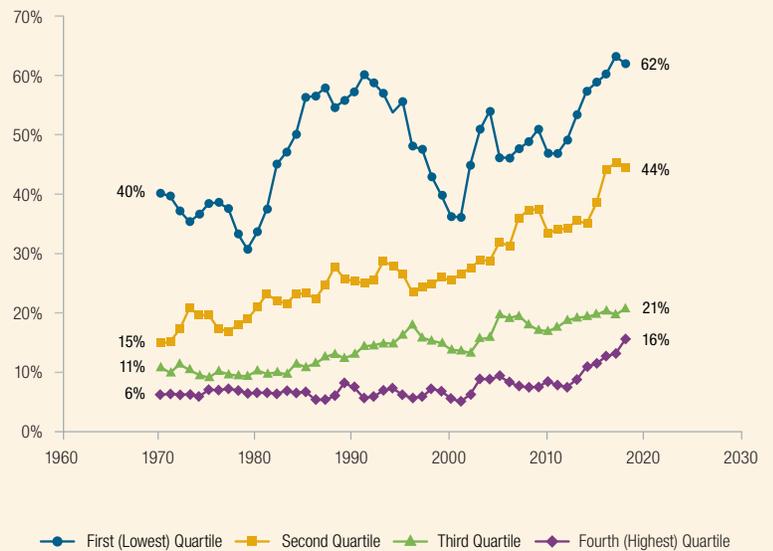
INDICATORS

OF HIGHER EDUCATION EQUITY IN THE UNITED STATES



2020 HISTORICAL TREND REPORT

**Estimates of Bachelor's Degree Attainment
by Age 24 for Dependent Family Members
by Family Income Quartile: 1970 to 2018**



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

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 *2020 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 2020 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
GATES *foundation*

The Pell Institute and PennAHEAD thank Lumina Foundation and the Bill and Melinda Gates Foundation (BMGF) for their financial support of the *Indicators of Higher Education Equity in the United States: 2020 Historical Trend Report* and the accompanying Search for Solutions Shared Dialogues. While we heartily acknowledge their support, any errors of omission or interpretation and the opinions expressed in the report are the sole responsibility of the authors.

ACKNOWLEDGEMENTS

This report represents an ongoing collaboration between the Pell Institute for the Study of Opportunity in Higher Education of the Council for Opportunity in Education (COE) and the Alliance for Higher Education and Democracy at the University of Pennsylvania (PennAHEAD). We are most grateful for the contributions of many persons and organizations. We acknowledge first the teams of the U.S. government and contractor statisticians, data collectors, and data processors who have painstakingly used their technical expertise over many years to produce the historical and current estimates included in the *Indicators* reports. We thank the past and present staff from the Current Population Survey (CPS) and American Community Survey (ACS) from the U.S. Census Bureau and past and present government and contractor staff from the National Center for Education Statistics (NCES) studies including: High School Longitudinal Studies program, National Postsecondary Student Aid Study (NPSAS), Beginning Postsecondary Students Longitudinal Study (BPS), Baccalaureate and Beyond Longitudinal Study (B&B), and Integrated Postsecondary Education Data System (IPEDS). We especially thank Tara Spain of Travelers, Susan Johnson, Wendy Sedlak, and Katherine Wheatle of Lumina Foundation, and Jamey Rorison and Jennifer Engle of the Bill and Melinda Gates Foundation for their advisory guidance over the years since this series was begun and the financial support of the organizations they represent. We also heartily acknowledge the feedback, technical assistance, and suggestions for future reports provided by the Improving Equity in Higher Education Advisory Panel listed on the back of this report.

A number of persons at COE and Penn contributed to various aspects of this 2020 report. We especially thank Maureen Hoyler, President of COE, Kim Jones, Holly Hexter, and Terrance Hamm of COE for their assistance, feedback, and production support. This report series owes much to Colleen O'Brien, former Director of the Pell Institute and author of the 2004 and 2005 *Indicators* reports. Much of the trend data presented in this and earlier reports was originally compiled by Tom Mortenson, Senior Scholar at the Pell Institute, with the assistance of Nicole Brunt, for inclusion in the *Postsecondary Education Opportunity* Newsletter.

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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: 2020 Historical Trend Report*, the sixth in this series, 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. Family income remains the primary focus of the subsequent reports. 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 and 2020 *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 *Indicators* report, we add disaggregation by dependency status (dependent and independent without dependents, and independent with dependents) where data are available.

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 2015 to 2017 *Indicators* reports 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.

2020 Essays. In-light of the public health COVID-19 pandemic which has upended much of everyone's lives in a concluding "What Does it Mean?" section to the 2020 report, we include two new essays entitled:

- *Will the Dual Crises of Climate Change and the COVID-19 Pandemic be Portals to Widening Opportunity or Will the Doors Close Even Tighter? Strategies for a More Equitable, Resilient, and Ecologically Sustainable US Higher Education System*, and
- *Where Do We Go from Here? Reflections on the Impact of COVID-19 and Higher Education from Two Recent TRIO Graduates*

Online Tools. To download the EXCEL files used to produce the figures in this report, find links to the 2016 to 2020 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/>.

New for 2020 Infographics and Interactive Data Tool. Throughout 2020, 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

As this report is going to press, we are in the public health emergency of the COVID-19 pandemic. By mid-May 2020 worldwide there were over 4 million confirmed COVID-19 cases, and well over 400,000 deaths. Within the U.S. the number of cases had reached over 1.3 million, with over 80,000 deaths. By the May 20, 2020 date on which this report is scheduled to be released, we know these statistics will be even more stark. Although none of us can predict what the outcomes of the pandemic will be, we do know that the statistics reported in the future *Indicators* reports will be greatly impacted. Award winning author, Arundhati Roy has recently released a video of a selection from her forthcoming book.¹ She states:

“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.”

This 2020 report and the associated shared solutions dialogues for 2020 are dedicated to the hope that COVID-19 will indeed be a portal that will lead us together to “recover, reimagine and rebuild” a more equitable, resilient, and ecologically sustainable higher education system.

Renewed Commitment in the Light of Dual Emergencies of COVID-19 and Climate Change. As we begin the sixth report in this series in the light of the new reality of COVID-19, 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.

Commitment of Non-Zero-Sum Game Higher Education Opportunity 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 2020. 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 been and is a major challenge, even without the pandemic and climate change. However, taking an “empathetic inquiry systems perspective,” in facing new challenges, we keep our hope that we can evolve

¹ Arundhati Roy (forthcoming September 2020) *Azadi: Freedom. Fascism. Fiction*. Haymarket, Video excerpt link retrieved April 2020 <https://youtu.be/7hgQFaeaeo0>.

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 educational system.

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. In the original report of this series we included a quote from the forward 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 2020 *Indicators* show persisting inequality in higher education opportunity based on family income, race/ethnicity, parent education, geographic location 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 are evolving, as education becomes one of the chief ways of differentiating wages and salaries and quality of life indicators.⁵

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

2 Richmond, B. *Introduction to Systems Thinking, STELLA 1992-1997, 2000, 2001, 2004, 2005* (see 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 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>.

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.

In the wake of growing student debt and a renewed focus on the rise of economic inequity in the United States, in recent years a number of proposals have been advanced for “tuition free” and “debt free” higher education.⁷ Scholars and politicians have begun again to speak of high-quality higher education as a 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 made 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. 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.⁹

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 other developed countries.¹¹

A Question of Will. 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.*”¹² Fifty years later, these words could be applied to many current social problems, including persisting inequality in higher education opportunity and outcomes. This 2020 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 2020 *Indicators* report, like previous reports, shows that higher education opportunity and outcomes remain highly inequitable across family income groups. On many indicators, gaps are larger now than in the past. The disinvestment of state funds for public colleges

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- 7 An example is the Debt Free College Act of 2019, which was introduced in the U.S. Senate by Senator Brian Schatz of Hawaii (<https://www.congress.gov/bill/116th-congress/senate-bill/672/text>). 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; extend Pell Grant eligibility to DREAMer students; repeal suspension of federal aid eligibility for drug-related offenses; require state public institutions to tie cost increases to the consumer price index, and provide additional support for minority-serving institutions.
 - 8 With a stated goal of improving college affordability, several states (including Tennessee, Oregon, and New York) have 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>.
 - 9 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 and ranking at every level. In the wake of increasingly apparent difficulties in fairly implementing the so called “merit” system of admissions, these policies are receiving more critical interest. 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.”
 - 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. Their views are summarized in a short blog: Why we should select students by lottery; <https://wonkhe.com/blogs/why-we-should-select-students-by-lottery/>.
 - 11 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. See Kerry, B., Pickett, K.E. & Wilkinson, R. (2010, August). The Spirit Level: 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 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>.

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 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.¹³

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?
- 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?

2. Equity Indicator 2: What type of postsecondary educational institution do students attend?

- How does the level of institution attended vary by Pell or other Federal Grant receipt?
- How does the control of institution attended vary by Pell or other 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?

3. Equity Indicator 3: Does financial aid eliminate the financial barriers to paying college costs?

- 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?

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?

13 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." <https://www.bloomberg.com/news/articles/2019-03-20/if-america-can-t-fix-education-it-won-t-beat-inequality>.

- 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?
- How does students' bachelor's degree completion within 6 years of entering college vary by family income and dependency 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?
- 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?

Setting the Stage

Before presenting the equity indicators, we first present data on the structure and context of postsecondary education in the United States.¹⁴ 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 2020 edition, as in 2019, 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 2017-18, there were 4,313 2-year and 4-year undergraduate degree-granting institutions in the United States; 34 percent were 2-year institutions and 66 percent were 4-year. There were also about 2,200 non-degree granting institutions not represented in STS Figure 1, of which about 92 percent ($n = 1,700$) were private for-profit.¹⁵

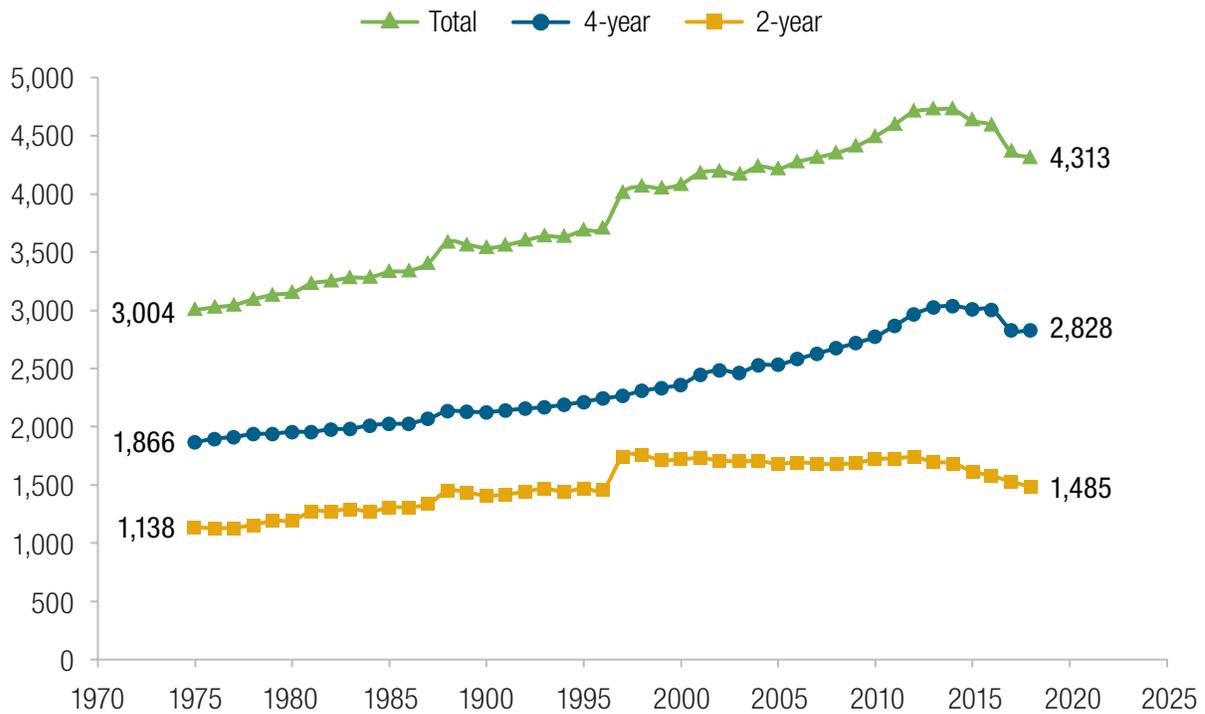
STS Figure 1 illustrates trends in the numbers of 2- and 4-year degree-granting institutions in the United States from 1974-75 to 2017-18. Although the total number of 2- and 4-year degree-granting institutions declined from a peak of 4,726 in 2012-13 to 4,313 in 2017-18, taking a longer view, the total number of degree-granting institutions (including branch campuses) increased from 3,004 in 1974-75 to 4,313 in 2017-18, an increase of 44 percent. The increases from 1974-75 to 2017-18 were 30 percent for 2-year institutions and 52 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).

14 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.

15 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 2017, “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 2017-18



NOTE: Data represent 1974-75 to 2017-18 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.

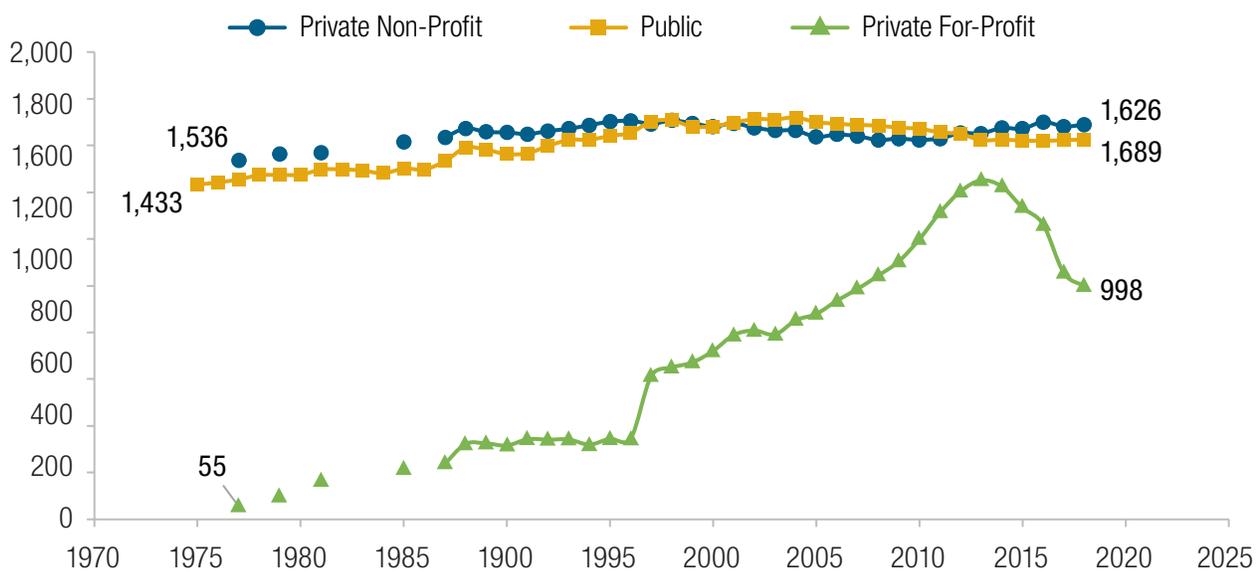
SOURCE: U.S. Department of Education, National Center for Education Statistics, *Education Directory, Colleges and Universities, 1949-50 through 1965-66*; Higher Education General Information Survey (HEGIS), "Institutional Characteristics of Colleges and Universities" surveys, 1966-67 through 1985-86; Integrated Postsecondary Education Data System (IPEDS), "Institutional Characteristics Survey"(IPEDS-IC:86-99); and IPEDS Fall 2000 through Fall 2017, Institutional Characteristics component as included in Digest of Education Statistics 2018, [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 2017-18, the number of public institutions increased by 8 percent and the number of private non-profit institutions increased by 4 percent. Starting from a much lower reported base, the number of private for-profit institutions increased by 366 percent, rising from 214 in 1984-85 to 998 by 2017-18.¹⁶ The number of private for-profit institutions reached a peak of 1,451 in 2013 and then declined by 453 institutions by 2017-18.

Between 1995 and 2005, the number of for-profit institutions more than doubled, rising from 345 in 1994-95 to 879 in 2004-05, and then increased again to a peak of 1,451 in 2012-13. Since then, the number of for-profit institutions has fallen to 998 by 2017-18. This level is roughly that of 2007 before 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 2017-18



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 2018*. Retrieved from https://nces.ed.gov/programs/digest/d18/tables/dt18_317.10.asp.

16 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 2018*.

Enrollment Trends. In fall 2020, National Center for Education Statistics (NCES) estimates that approximately 16.9 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.¹⁷ Trends in enrollment are linked, at least in part, to trends in employment opportunities (e.g., the Great Recession between 2008 and 2010). In periods of fewer job opportunities and higher unemployment, college enrollment generally increases. 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 2016, reaching 16.9 million. In 2018, total undergraduate enrollment was estimated to be 16.8 million. NCES projections for 2020 are 16.9 million.

Enrollment by Institutional Control and Level. In fall 2017, public institutions accounted for 78 percent of undergraduate enrollment, private non-profit institutions accounted for 17 percent, and private for-profit institutions accounted for 5 percent (STS Figures 3 and 4).¹⁸ 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 2017-18, 38 percent of institutions were public, 39 percent were private non-profit, and 23 percent were private for-profit.

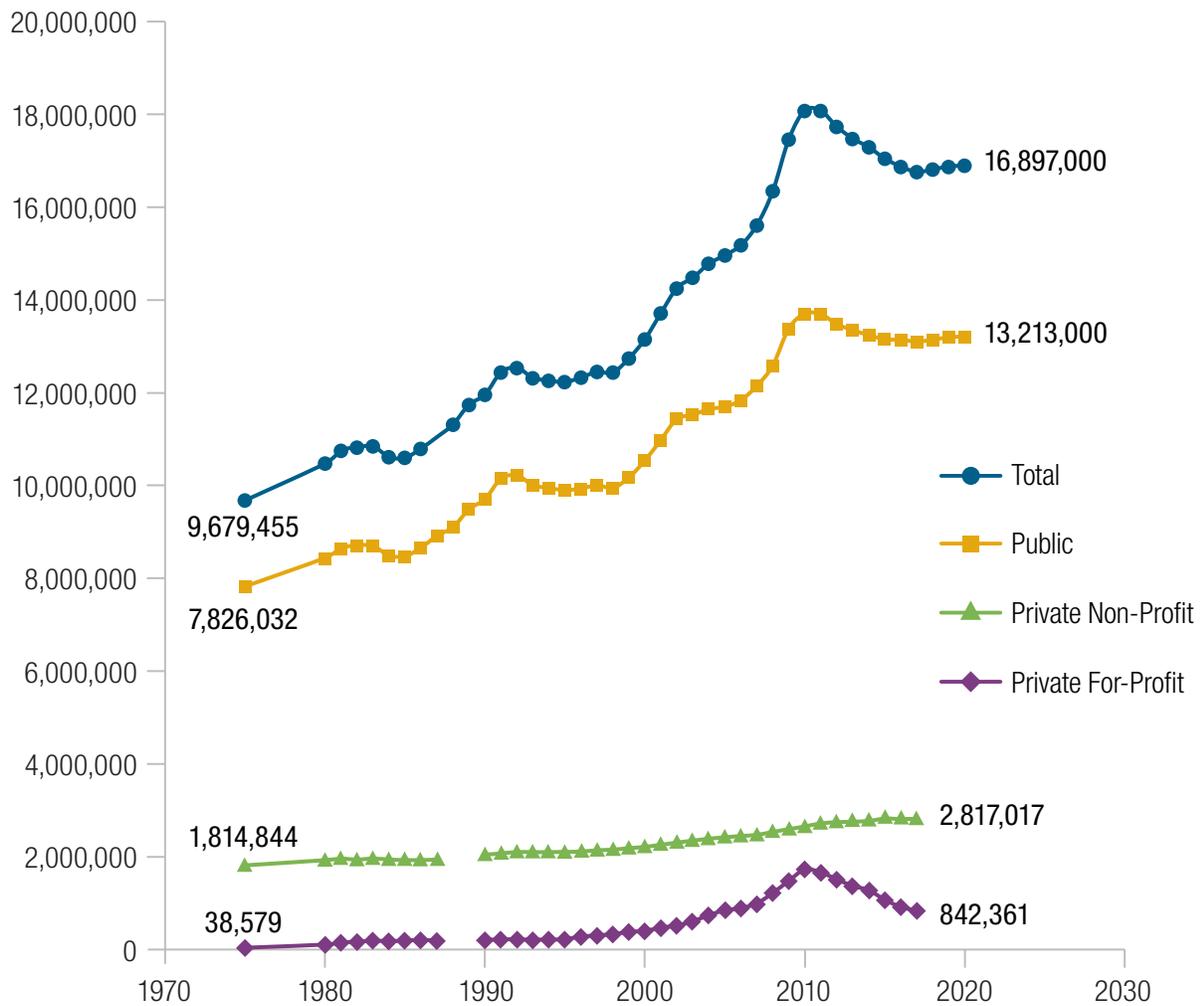
While there have been some fluctuations in the share of enrollments in public institutions since 1975, public institutions have consistently enrolled over 70 percent of undergraduates. In 1975, 81 percent of undergraduates were enrolled in public institutions. The public share declined to 76 percent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

In 2017, about 16.8 percent of undergraduates were enrolled in private non-profit institutions (16.5 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 5 percent in fall 2017.

¹⁷ In most recently published estimates, NCES does not project undergraduate enrollment to reach the level of 2010 (18,082,427) by 2027. The projection now is 17,214,000 for 2028—the last year for which projections were made. NCES (2018). *Digest of Education Statistics 2019* [Table 303.70]. Retrieved from https://nces.ed.gov/programs/digest/d18/tables/dt18_303.70.asp?current=yes.

¹⁸ Total and public enrollment data for 2018 to 2020 are estimates from NCES. Estimates for 2018 to 2020 are not available for private non-profit or private for-profit institutions. For these groups, the last years displayed in STS Figure 3 are 2017.

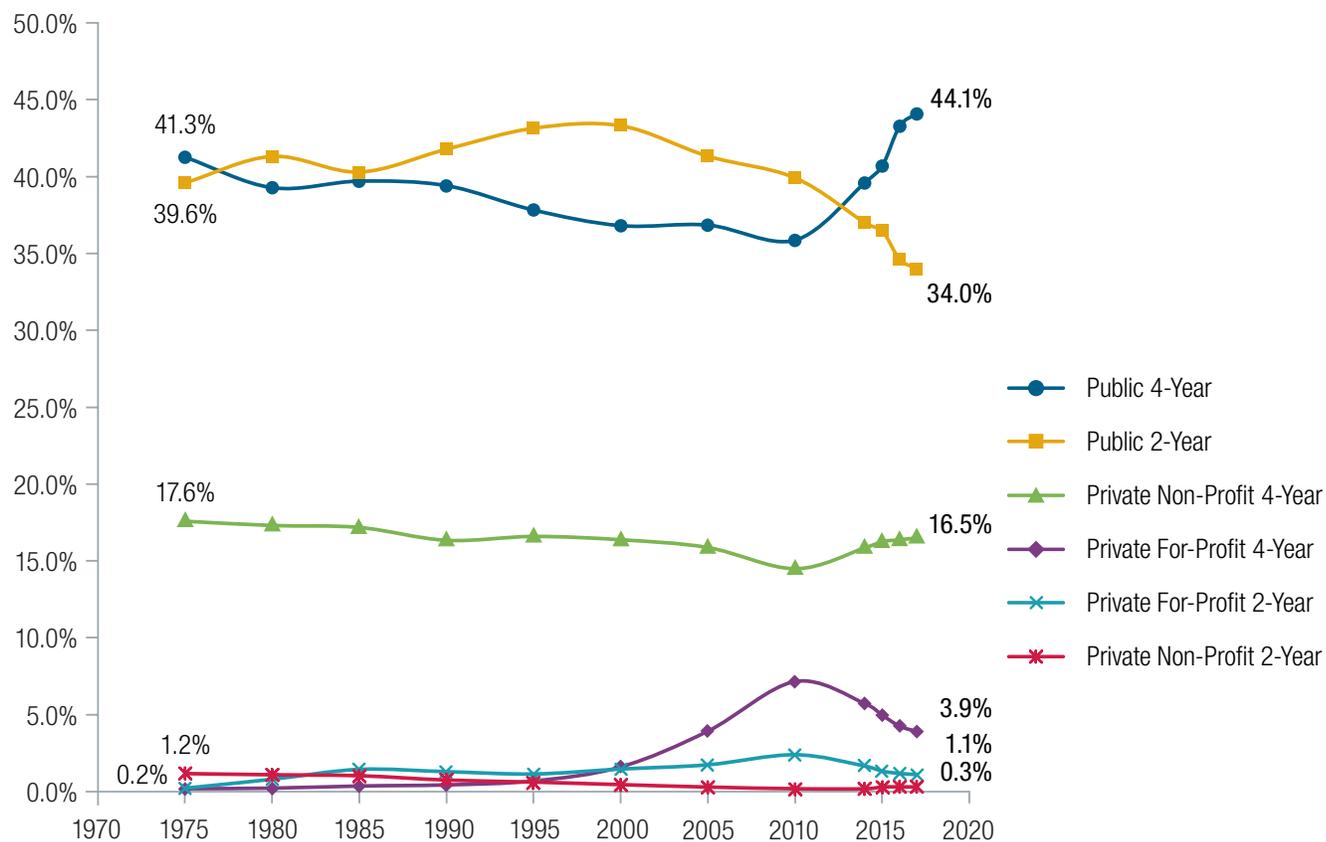
STS Figure 3: Undergraduate fall enrollment in degree-granting institutions by institutional control: Fall 1975 to projected 2020



NOTE: Total and public enrollment data for 2018 to 2020 are projected estimates. Estimates for 2018 to 2020 are not available for private non-profit or private for-profit institutions. For these groups, the last years displayed are 2017. 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 2028, as included in *Digest of Education Statistics 2018*, [Table 303.70]. Retrieved from https://nces.ed.gov/programs/digest/d18/tables/dt18_303.70.asp?current=yes.

STS Figure 4: Percentage distribution of undergraduate fall enrollment in degree-granting institutions by institution control and level: 1975 to 2017

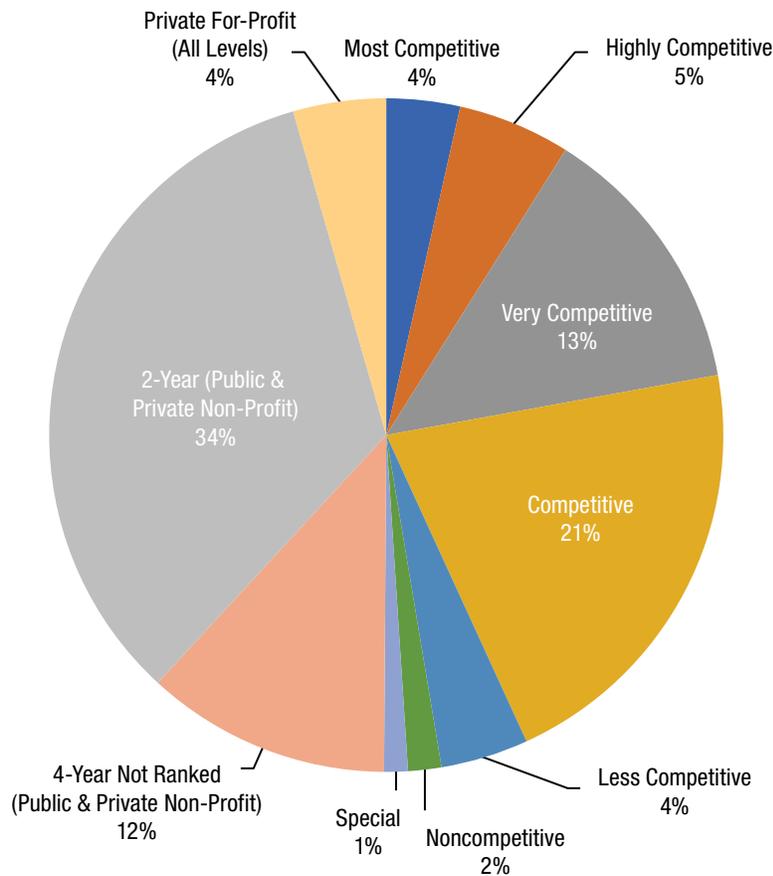


NOTE: See notes for STS Figure 3.

SOURCE: U.S. Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Data System (IPEDS), *Digest of Education Statistics 2018*, [Table 303.70]. Retrieved from https://nces.ed.gov/programs/digest/d18/tables/dt18_303.70.asp?current=yes.

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, 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

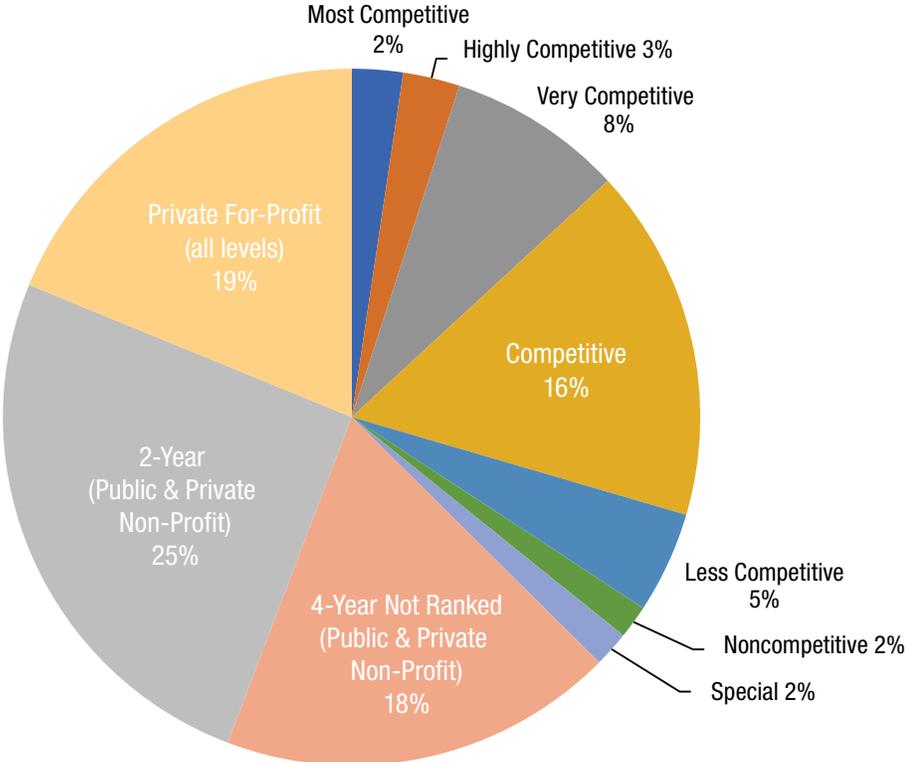


NOTE: This figure uses Barron’s Admissions Competitiveness Index for 2016 and IPEDS fall 2018 enrollment data (full-and part-time enrollment captured by the “EFTOTLT” variable). Students attending institutions not ranked by Barron’s are classified by institutional level and control. We include only public 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 2019 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 2017-18.

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 increased

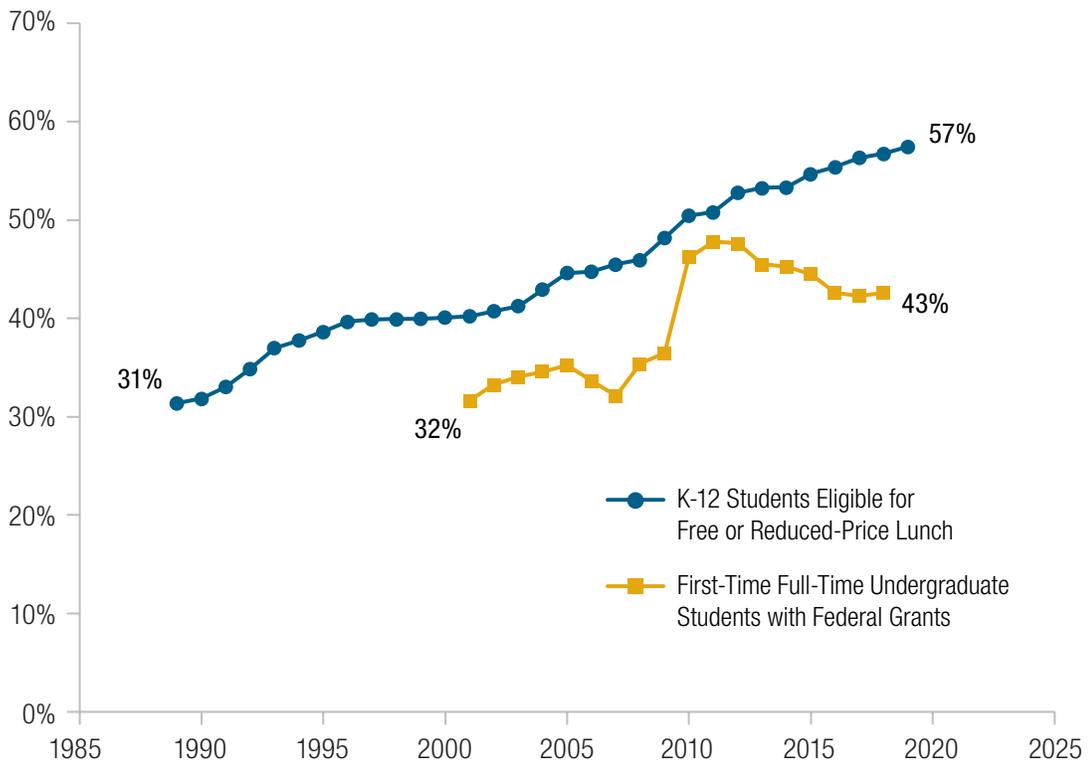
from 31 percent in 1989 to 53 percent in 2012 and was 57 percent in 2019. Increases over time may reflect changes in use patterns across school districts (e.g., schools with more than a certain percentage of low-income students enroll the entire school), as well as the impact of the Great Recession.

The percentage of first-time, full-time undergraduates enrolled at public and private non-profit institutions who received Pell or other Federal Grants was 32 percent in 2001. This percentage fluctuated between 32 percent in 2001 and 35 percent in 2008.¹⁹ 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 43 percent in 2018. 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.

19 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 2018 are for full-time, first-time undergraduates. Estimates for all undergraduates are generally higher, at around 50 percent.

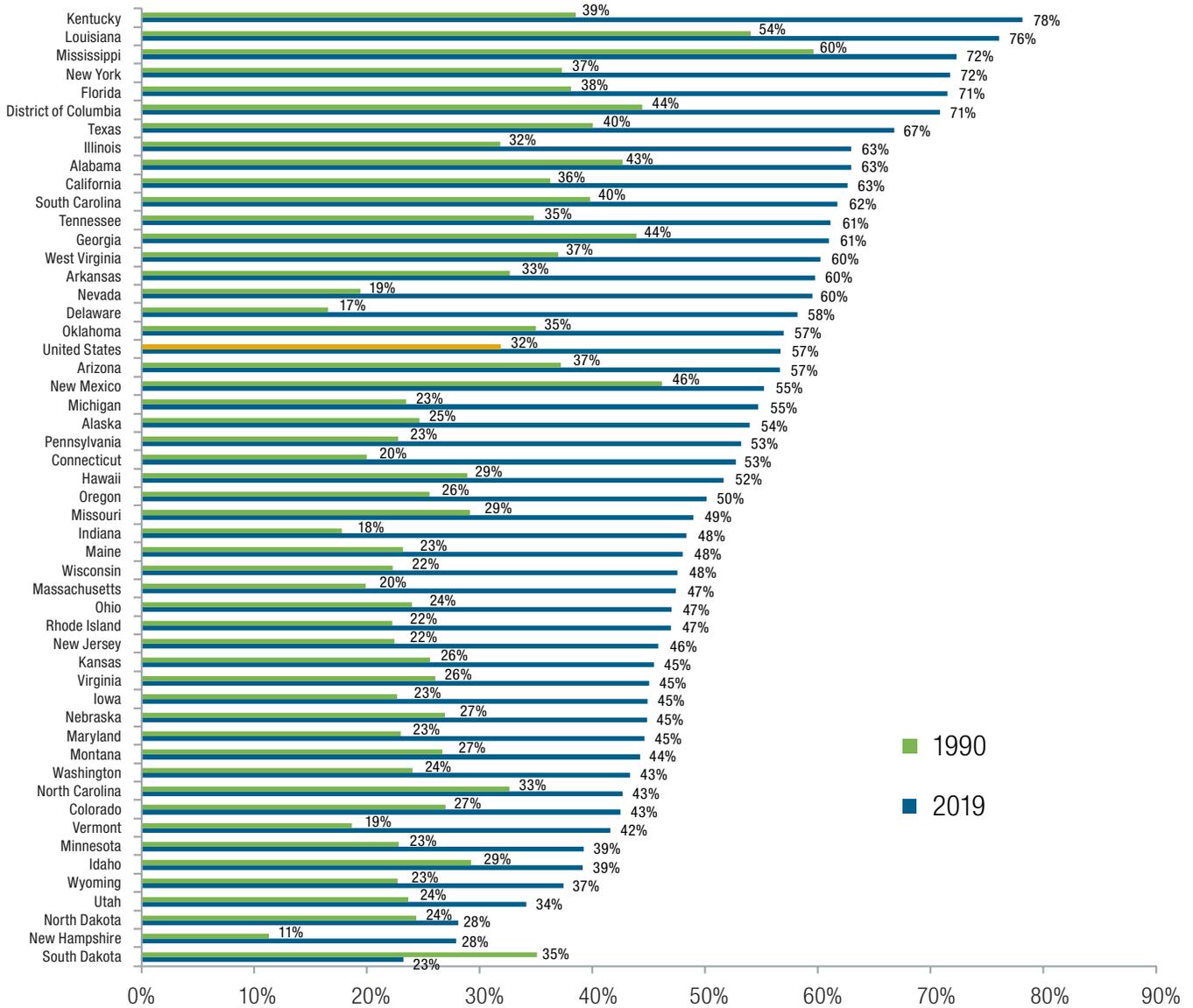
STS Figure 6a: Percentage of K-12 students approved for Free or Reduced-Price Lunch (1989 to 2019) and percentage of first-time full-time degree-seeking undergraduates with Pell or other Federal Grants (2001 to 2018)



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, 2002-03, 2005-06 - 2016-17) and provisional data (2003-04, 2004-05, 2017-18) 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 2019.

STS Figure 6b: Percentage of K-12 students approved for Free or Reduced-Price Lunch by state: 1990 and 2019



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 2019, as compiled by Tom Mortenson and Nicole Brunt.

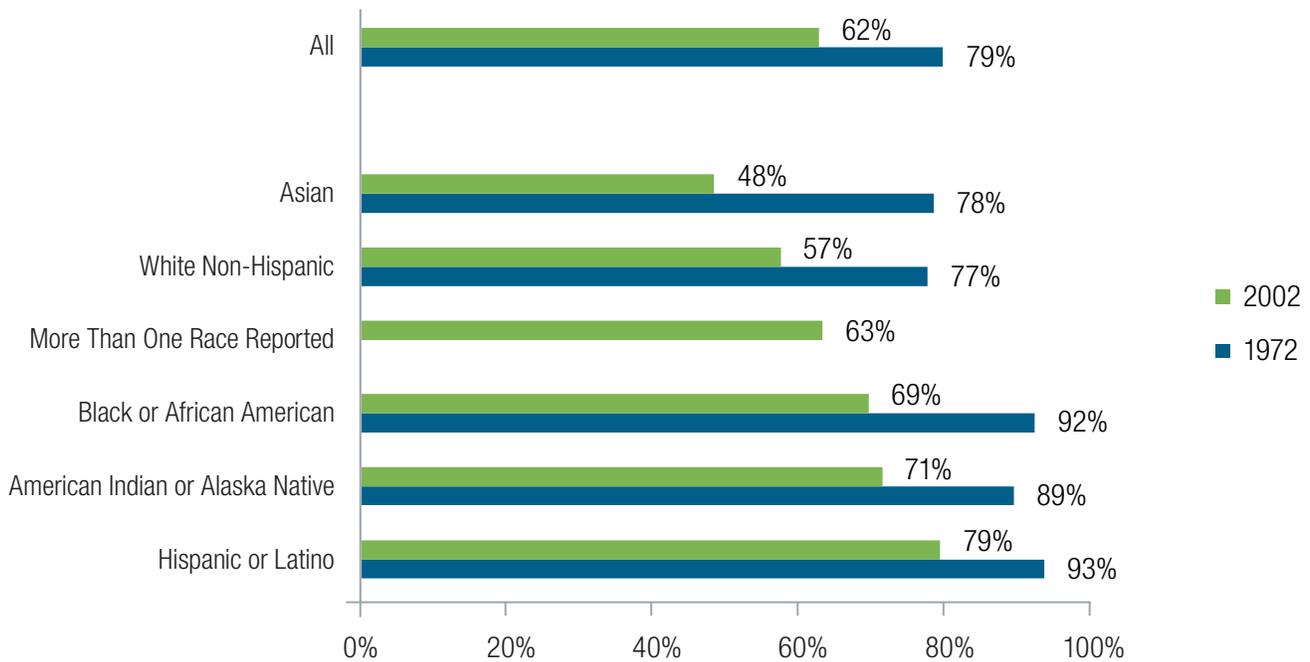
Percentage of Youth Who Are First-Generation to College. Measures of educational achievement (e.g., test scores, college entrance rates, and college degree attainments) are highly correlated with parental education. STS Figure 7a uses data from the National Longitudinal Study of the High School Class 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 than of Whites and Asians are potential first-generation to college. In 1972, 93 percent of Hispanic or Latino students, 92 percent of Black students, 89 percent of American Indian or Alaska Native students, 77 percent of White students, and 78 percent of Asian 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 2017 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 also show that by 2017 rates of being first-generation remain high especially among traditionally underrepresented minorities. In 2017, 80 percent of Hispanic children, 79 percent of Pacific Islander children, 79 percent of American Indian/Alaska Native children, 74 percent of Black children, 57 percent of children of "Some Other Race," and 54 percent of children of "Two or More Races" had the potential to be first-generation to college. About half of Whites (48 percent) and a third of Asians (32 percent) are potentially first-generation college. 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.

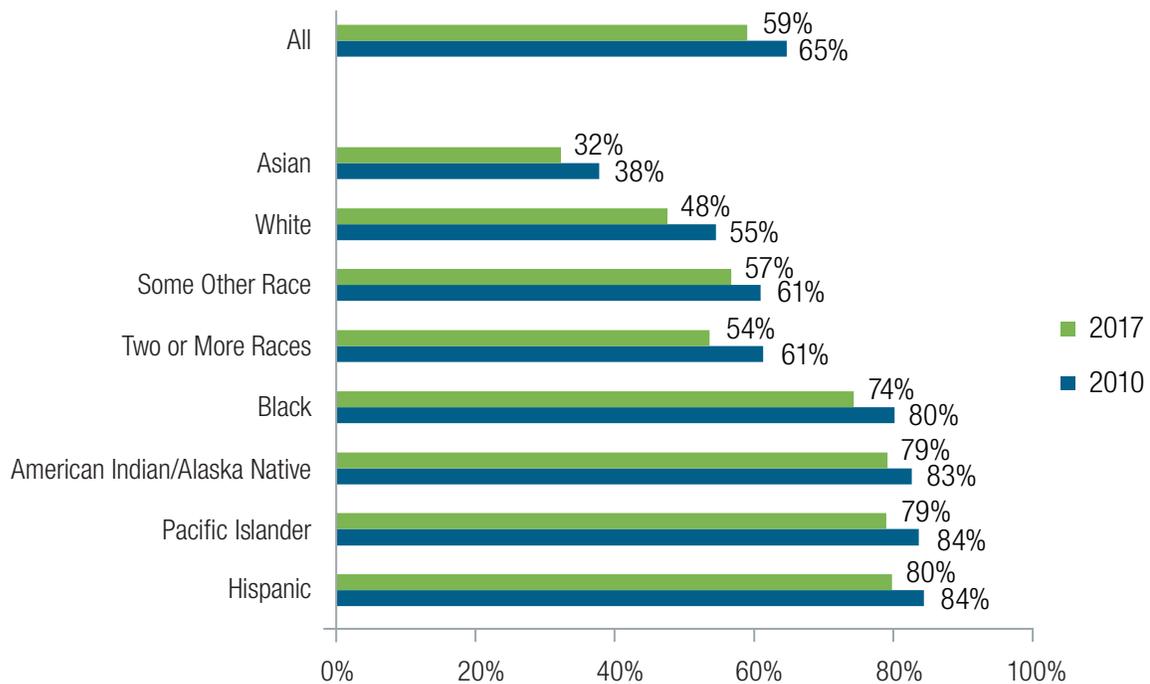
STS Figure 7a: Percentage of high school students who had the potential to be first-generation college by race/ethnicity: 1972 (National Longitudinal Study of High School Class of 1972) and 2004 (Educational Longitudinal Study: ELS:2002/2004)



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>. [Figure 9], 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 2017



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. Census Bureau, American Community Survey (2010 and 2017) as included in U.S. Department of Education, National Center for Education Statistics (2018). *Digest of Education Statistics 2018*, [Table 104.70]. Retrieved from https://nces.ed.gov/programs/digest/d18/tables/dt18_104.70.asp?current=yes.

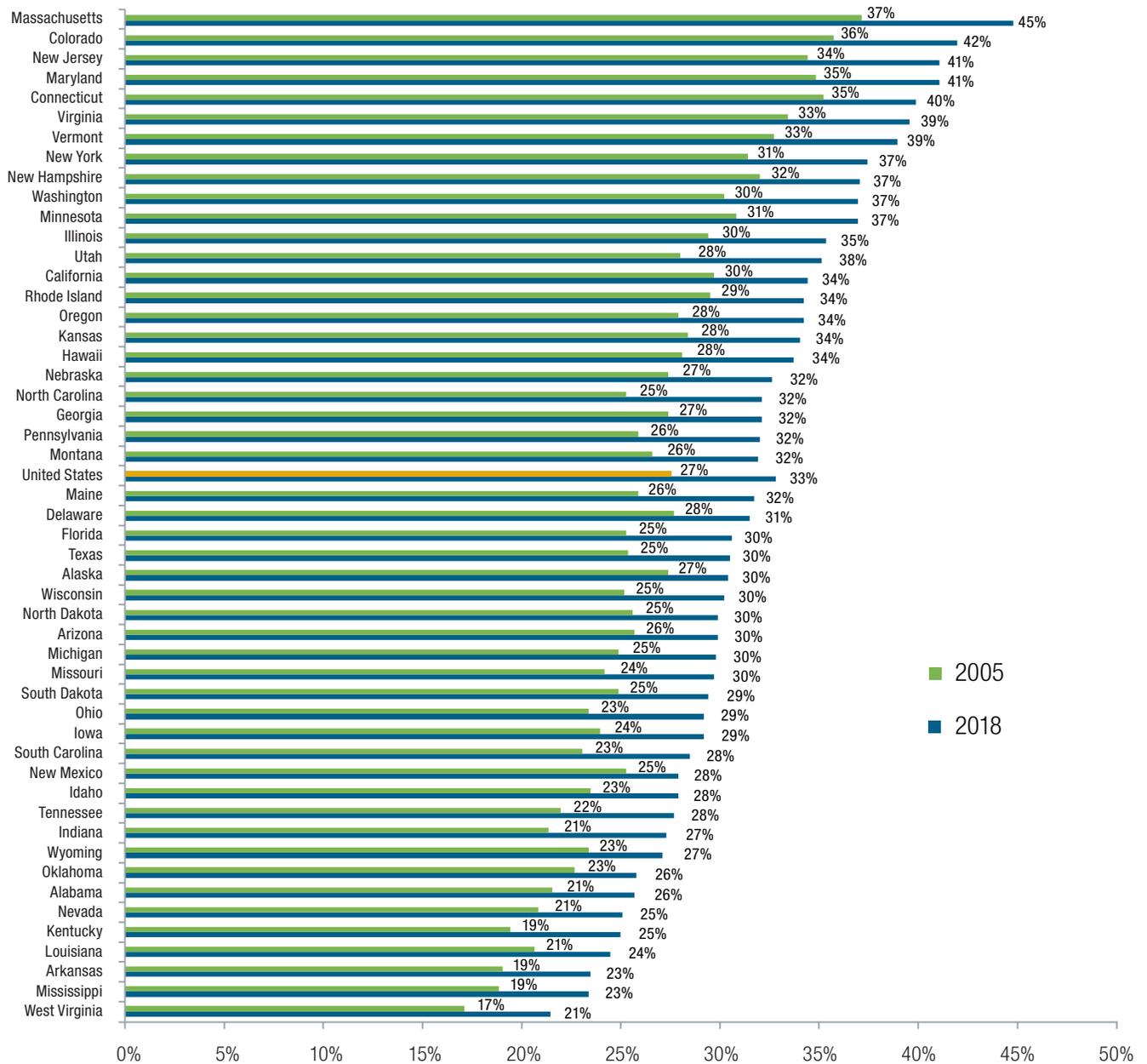
Differences in Educational Attainment by States. Educational attainment of the adult population is a strong positive predictor of educational achievement of youth, as measured by such indicators as scores on the National Assessment of Educational Progress (NAEP), high school completion, and college entrance and completion.²⁰ Using 2005 and 2018 data from the Census Bureau American Community Survey, STS Figure 7c displays the percent of the population age 25 and older that has attained a bachelor's degree or higher.

In 2018, the percentage of adults 25 and older with at least a bachelor's degree ranged from 21 percent in West Virginia, 23 percent in Mississippi and Arkansas, and 24 percent in Louisiana, to 41 percent in Maryland and New Jersey, 42 percent in Colorado, and 45 percent in Massachusetts.

Overall, the United States had a 20 percent increase in the percentage of adults with at least a bachelor's degree, increasing from 27 percent in 2005 to 33 percent in 2018. The states with the largest percentage increase between 2005 and 2018 were Kentucky and Indiana (28 percent), North Carolina (27 percent), and Tennessee and Utah (26 percent).

20 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>.

STS Figure 7c: Percentage of adults age 25 and over with a bachelor's degree or higher: 2005 and 2018



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. Department of Commerce, Census Bureau, 2005 & 2018 American Community Survey (ACS) 1-Year Public Use Microdata Sample (PUMS) data. Retrieved from <https://www.census.gov/programs-surveys/acs/data.html>.

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.²¹ The data come from the Census Bureau’s household Current Population Survey (CPS),²² the Internal Revenue Services’ (IRS) Statistics of Income (SOI) data compiled from a large sample of individual income tax returns,²³ and the Federal Reserve’s triennial Survey of Consumer Finance.²⁴ 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 1979.²⁵

The Rise in the Gini Index. STS Figure 8a displays trends in the Gini index from 1979 to 2016 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 higher in 2016 than in 1979. The Market Income Gini Index was 0.59 in 2016, up from 0.47 in 1979. The After Transfers and Tax Income Gini Index increased from 0.35 in 1979 to 0.42 in 2016.

21 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>.

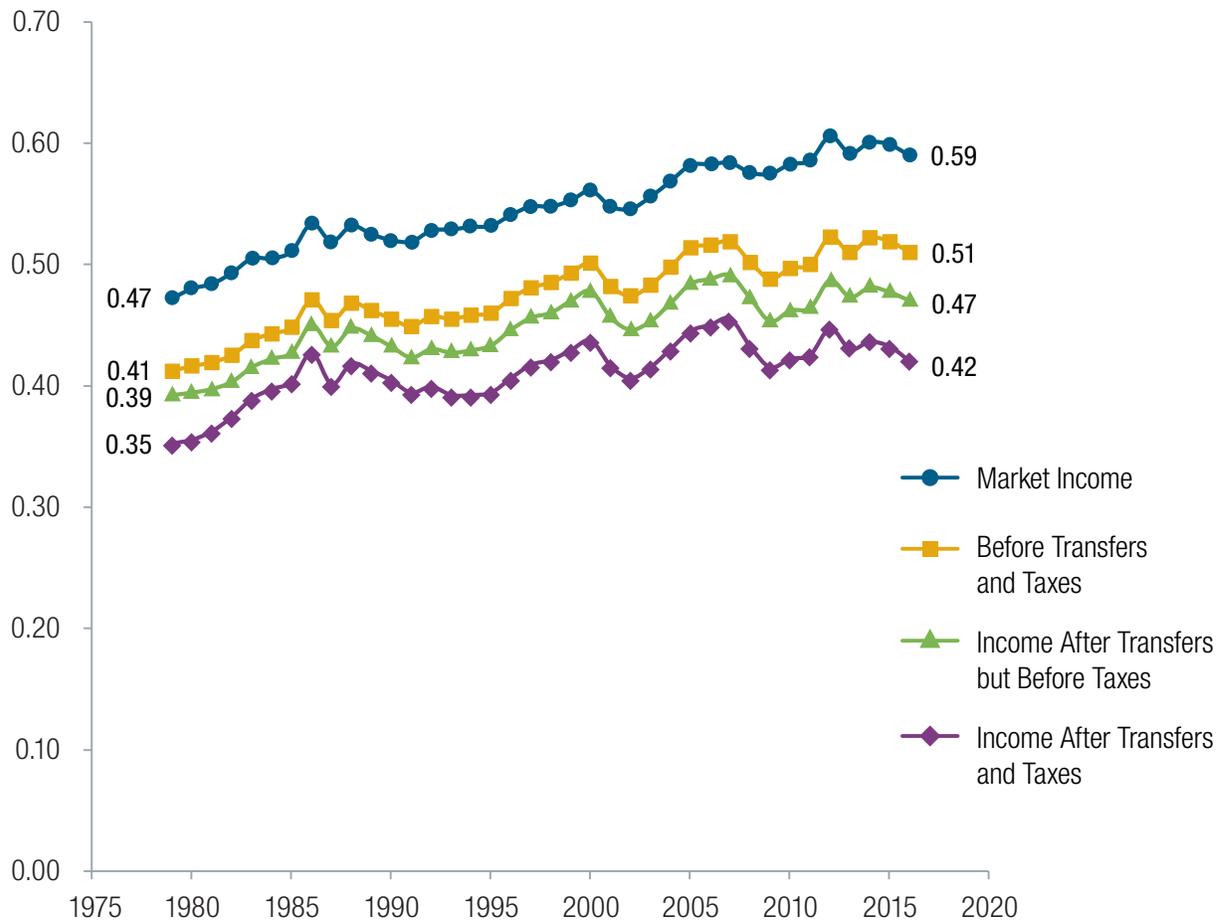
22 The Census Bureau publishes annual reports on income, poverty, and health insurance coverage in the U.S. based on the CPS data <http://www.census.gov/topics/income-poverty/income.html>.

23 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 <https://www.irs.gov/uac/soi-tax-stats-individual-income-tax-returnspublication-1304-complete-report>.

24 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>.

25 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 2016



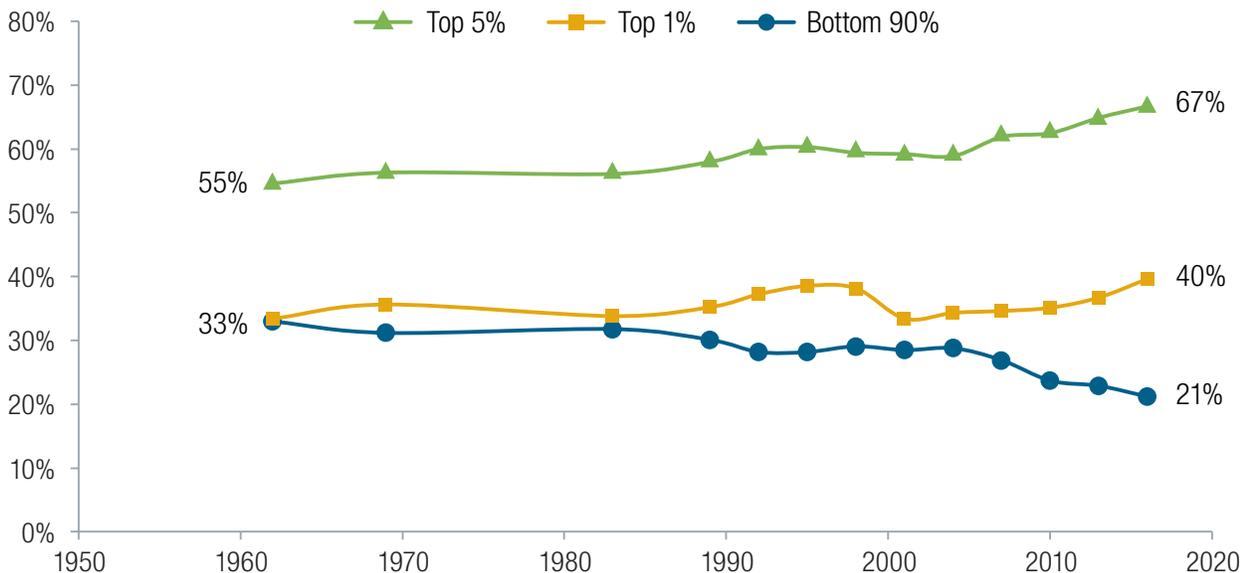
NOTE: The Gini index is a measure of income inequality that ranges from zero (the most equal distribution) to 1.0 (the least equal distribution). Gini indexes are calculated using income measures adjusted for household size. The larger the Gini index, the higher the inequality level. Market income consists 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 (July 9, 2019). *Distribution of Household Income, 2016*. Retrieved from <https://www.cbo.gov/publication/55413>.

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.

Related data is presented using IRS reports from Emmanuel Saez and Gabriel Zucman (2016),²⁶ in analyses 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. 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).²⁷

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>.

- 26** 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>.
- 27** 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 2016 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.

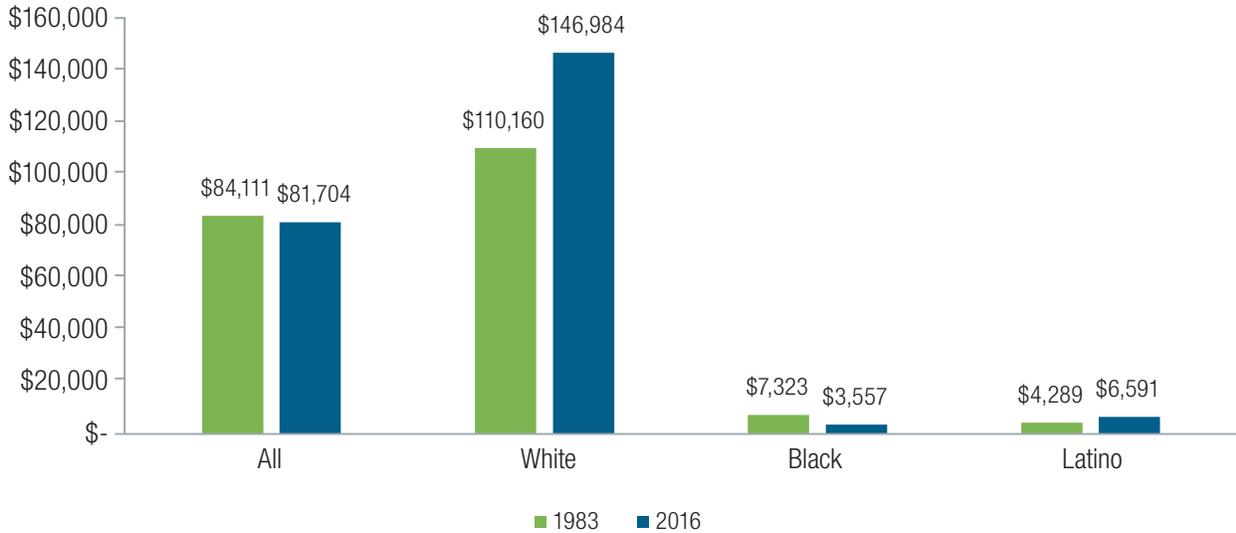
Overall median family wealth declined by 2 percent in constant 2016 dollars between 1983 and 2016, falling from \$84,111 to \$81,704. But the overall medians mask the stark contrast between the high median family wealth of Whites and the low median family wealth of Blacks and Latinos. Moreover, differences in median family wealth increased between 1983 and 2016.

Between 1983 and 2016, White median family wealth increased by 33 percent in constant 2016 dollars, rising from \$110,160 to \$146,984. At the same time, Black median family wealth fell by 51 percent, declining from \$7,323 to \$3,557. 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 54 percent in constant 2016 dollars, increasing from \$4,289 in 1983 to \$6,591 in 2016. But White median family wealth was 26 times higher than Latino family wealth in 1983 and 22 times higher in 2016.

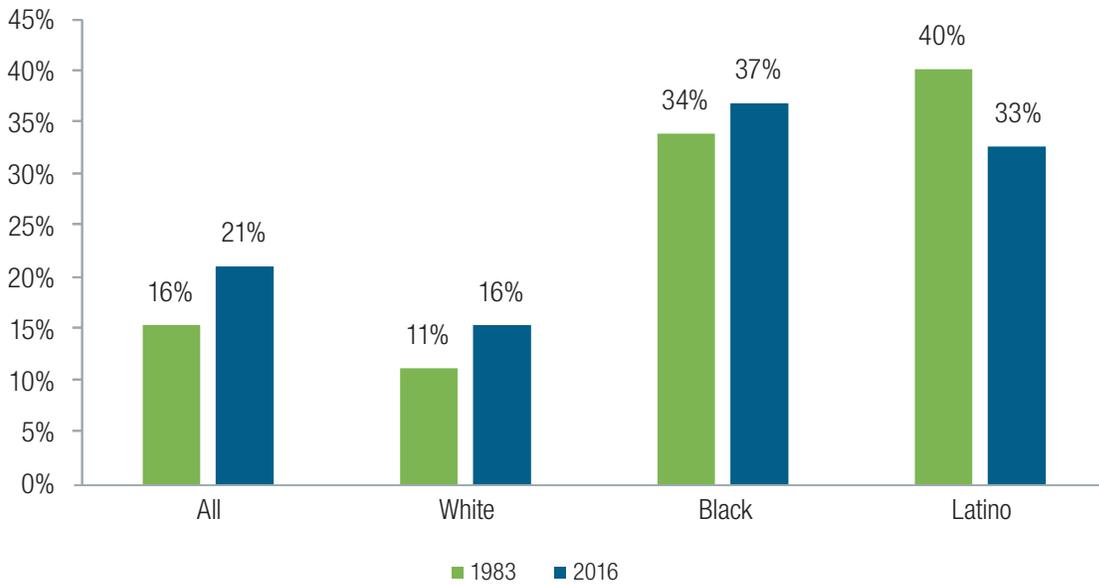
Negative Family Wealth. Among the most disturbing of the wealth data by race/ethnicity is the percent of families with negative wealth, meaning that they owe more than they have in assets. The percent of all families with negative wealth was 21 percent in 2016, up from 16 percent in 1983. More than one-third (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.

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

Median Wealth



Percent with Negative Wealth



NOTE: This figure presents data on the median wealth of families by race/ethnicity in 2016 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>.

Household Income Distribution by Quintiles. The Current Population Survey (CPS) data on household income by income quintiles from 1967 to 2018 also shows growing inequality (STS Figure 8c). The highest 20 percent of the nation's households had 52 percent of the income in 2018, up from 44 percent in 1967. The bottom 20 percent of households had 3 percent of the nation's household income in 2018, about the same share as in 1967 (4 percent).

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 2016, the highest 20 percent of households had a market income that was 14 times higher than the lowest quintile (\$291,000 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 (\$215,000 versus \$35,000). 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.²⁸

Median Household Income by State. STS Figure 8e displays median household income by state in 1990 and 2018. 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 1989.²⁹

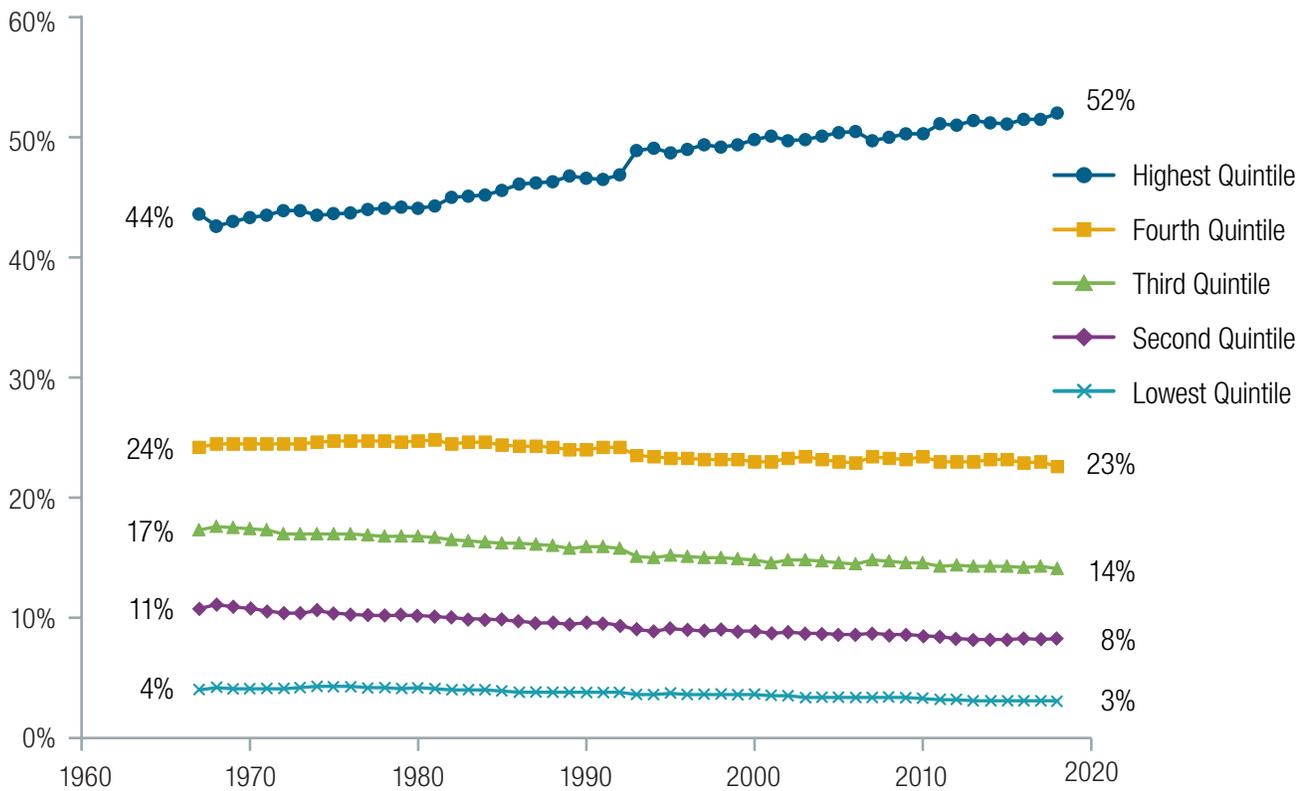
Median household income varies widely across states, and in 2018 ranged from less than \$45,000 in Mississippi (\$42,781), to more than \$85,000 in the District of Columbia (\$85,750), Maryland (\$86,223), and Massachusetts (\$86,345).

Poverty and Gini Index by State. STS Figure 8f displays the percent in poverty and the Gini index by state. In 2018, average poverty rates ranged from 6 percent in New Hampshire and 7 percent in Maryland to 20 percent in Louisiana and Mississippi. Gini index rates ranged from .43 in Utah and Alaska, .44 in Iowa and North Dakota, .50 in Connecticut, .51 in New York, and .52 in the District of Columbia.

28 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.

29 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 www.postsecondary.org.

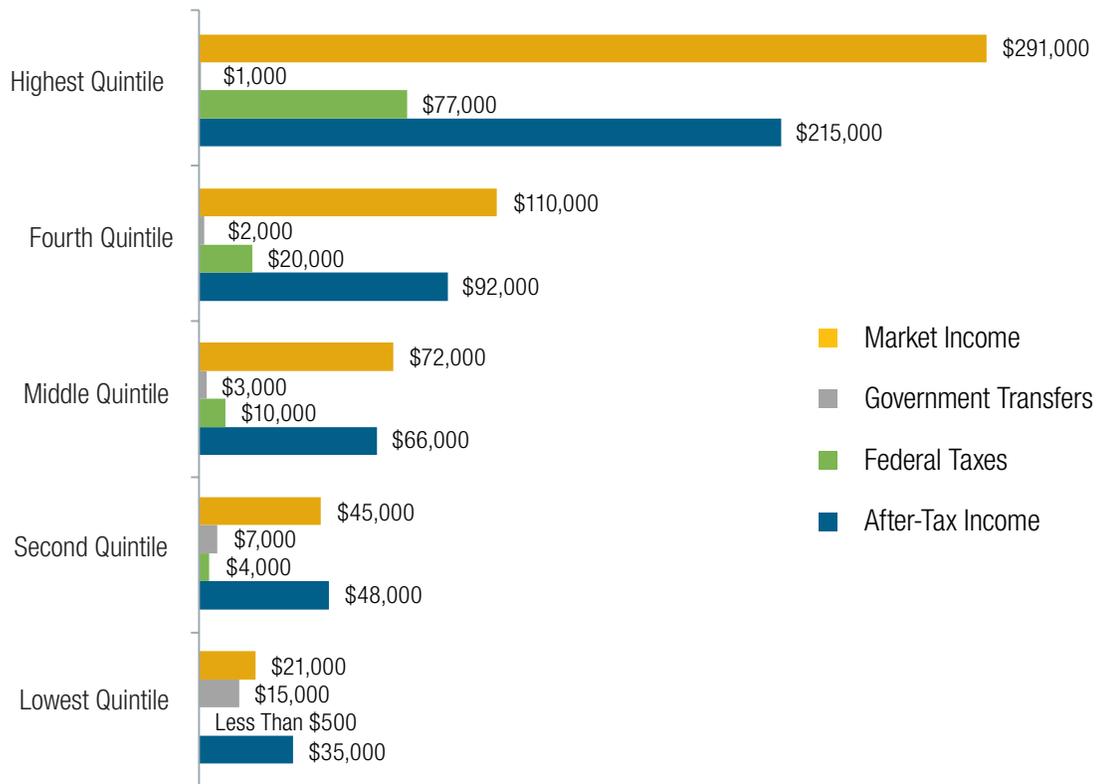
STS Figure 8c: Shares of United States household income by quintiles: 1967-2018



NOTE: Income in 2018 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: 1967-2018. Retrieved from <https://www.census.gov/data/tables/time-series/demo/income-poverty/historical-income-inequality.html>.

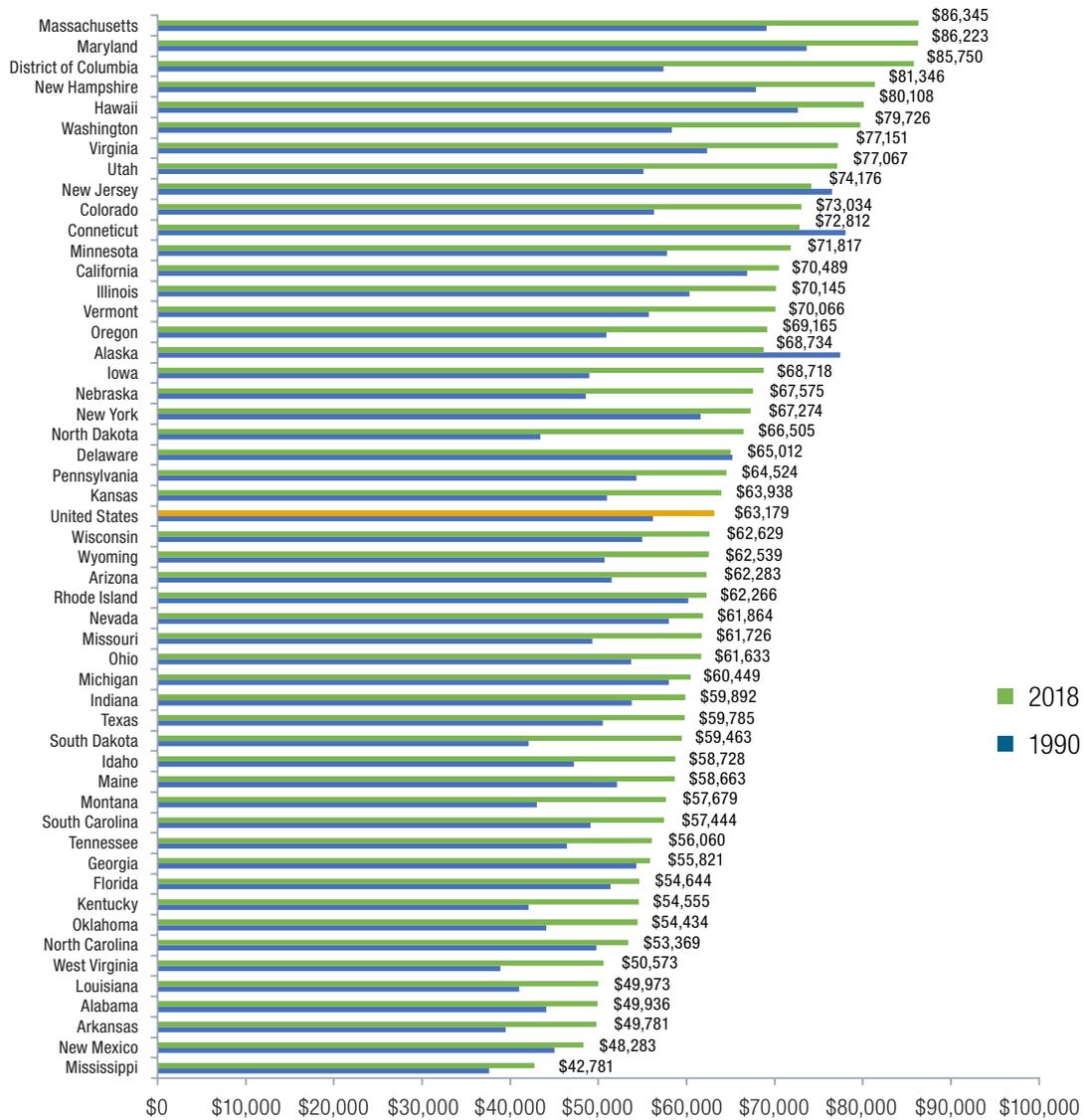
STS Figure 8d: Average household market income and after-tax-income by before-tax income quintiles: 2016



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 (2019). The Distribution of Household Income and Federal Taxes 2016. Retrieved from <https://www.cbo.gov/system/files/2019-07/55413-CBO-distribution-of-household-income-2016.pdf>.

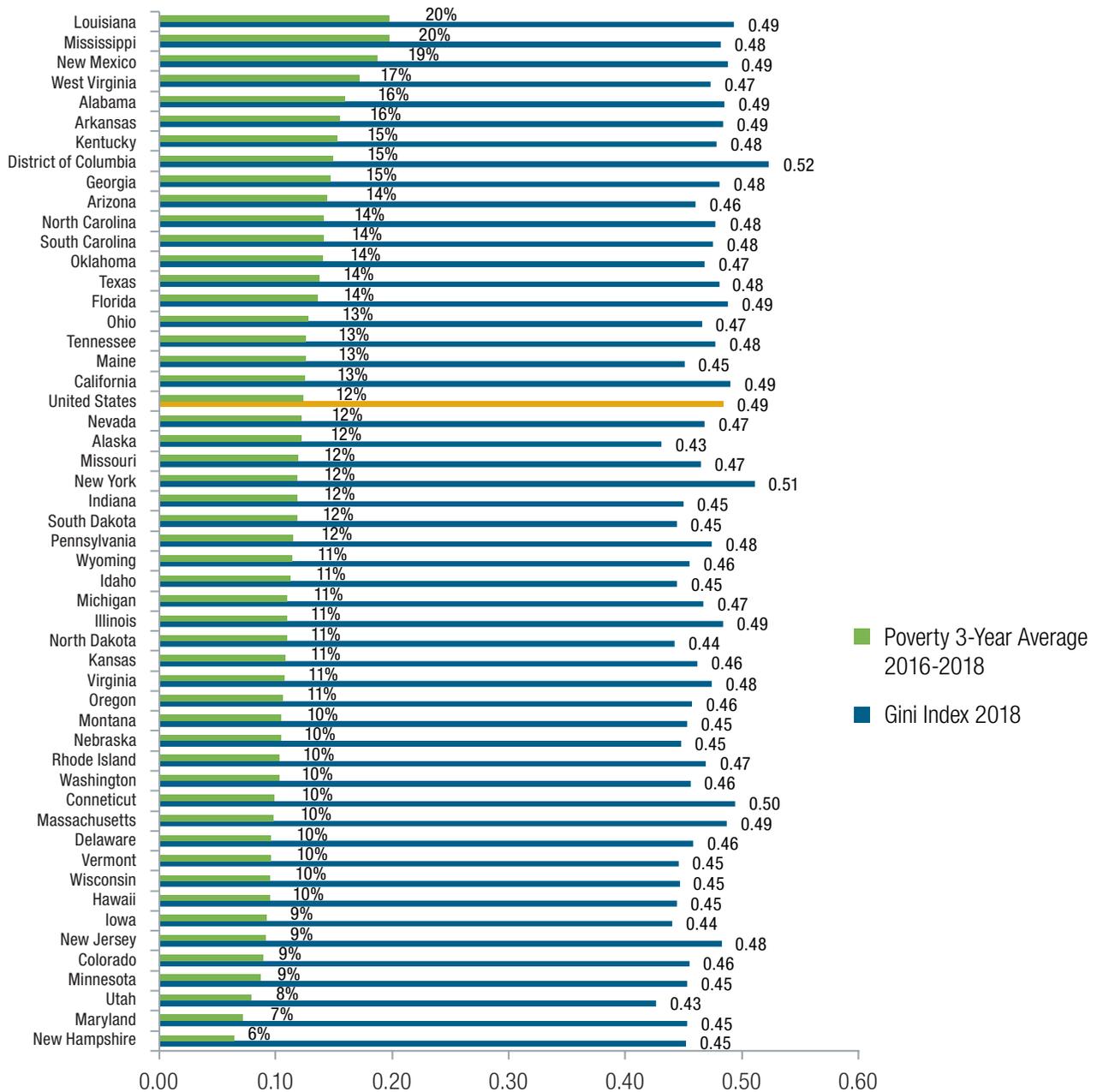
STS Figure 8e: Median household income by state: 1990 and 2018



NOTE: Constant dollars adjusted by the Consumer Price Index research series using 2018 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, from <https://www.census.gov/hhes/www/income/data/historical/state/state1.html>; Decennial Census, 2000, Summary Social, Economic, and Housing Characteristics; Census 2000 Summary File 4 (SF 4), retrieved March 28, 2005, from <https://www.census.gov/census2000/SF4.html>; and Current Population Survey (CPS) Table H-8 Median Household Income by State (2018). 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: 2016-2018



NOTE: Poverty rates represent 3-year averages for 2016-2018. The Gini index is a measure of income inequality ranging from 0 to 1.0, with 0 indicating complete equality (all households having an equal share of income) and one indicating complete inequality (one household having all the income and the rest having none). The 2017 Gini index for the U.S was 0.481.

SOURCE: U.S. Census Bureau, Current Population Survey, 2016 to 2019 Annual Social and Economic Supplements (Poverty rates). Retrieved from <https://www.census.gov/data/tables/2019/demo/income-poverty/p60-266.html>; American Community Survey, Retrieved from: <https://www.census.gov/content/dam/Census/library/publications/2019/acs/acsbr18-01.pdf>.

Inequality and Intergenerational Mobility. In a recent review of research entitled, “*Are today’s inequalities limiting tomorrow’s opportunities?*”³⁰ Elizabeth 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.³¹

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).³² 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 1940.³³

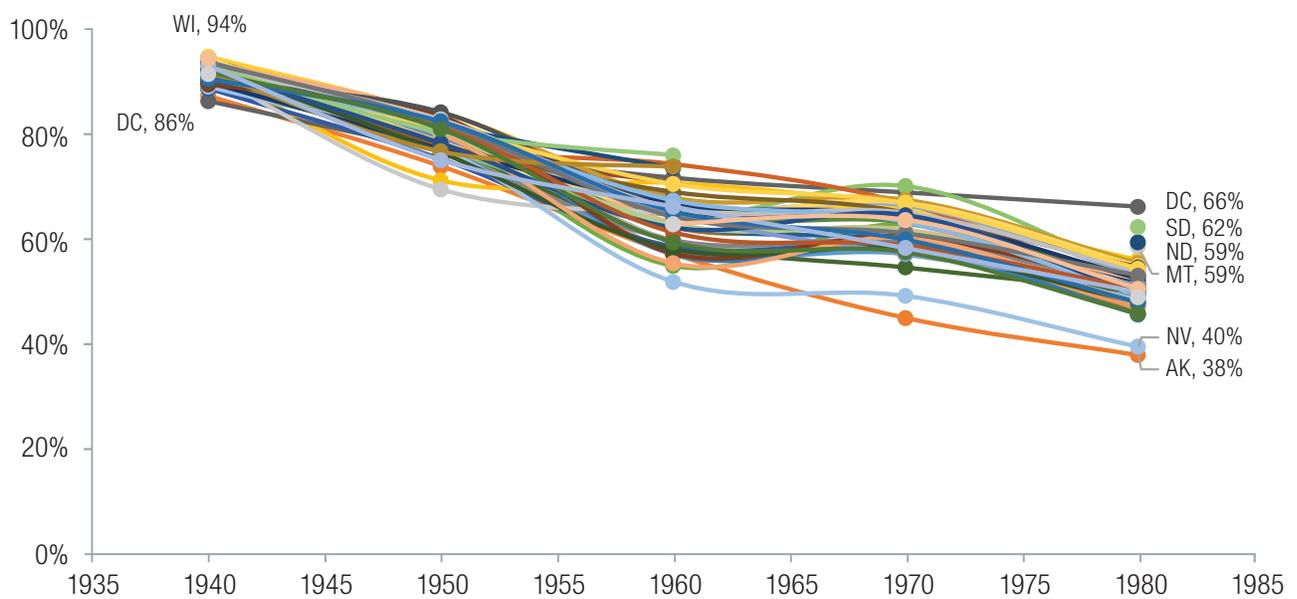
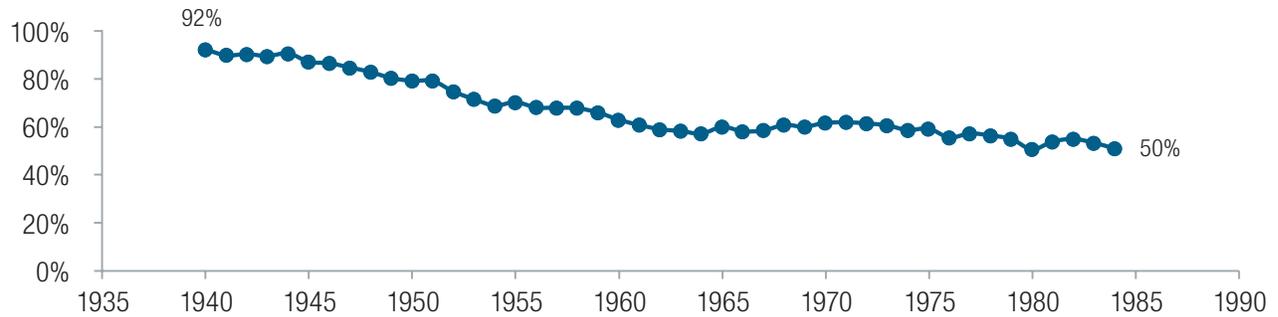
STS Figure 9 uses national and state data provided on the *Opportunity Insights* website to document the decline in the percent of children who at age 30 earn more than their parents as also measured at age 30, for cohorts born from 1940 to 1984.³⁴ As Chetty and colleagues conclude:

*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.*³⁵

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

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- 30 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/>.
- 31 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>.
- 32 Corak, M. (2013). Income Inequality, Equality of Opportunity and Intergenerational Mobility. *Journal of Economic Perspectives*, 27(3), 79–102.
- 33 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.
- 34 *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.*”
- 35 Chetty, R., et al. (2019). Retrieved from website in February 2019 <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: 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.

EQUITY INDICATOR 1:

WHO ENROLLS IN POSTSECONDARY EDUCATION?

In 2018, an estimated 75 percent of 18-to 24-year-olds from the highest family income quartile enrolled in postsecondary education, compared with 51 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 65 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 the 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 (HSLs) of 9th graders in 2009; Education Longitudinal Study of 10th graders in 2002 (ELS: 2002); National Education Longitudinal Study of 8th graders in 1988 (NELS:88); and 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).³⁶ 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 2020 *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 or 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.³⁷

- ³⁶ 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.
- ³⁷ 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 www.postsecondary.org.

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

- **Cohort College Participation Rate**³⁸ 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 on 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 2018, 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 \$43,063
 - *Second quartile:* \$42,064 to \$76,823
 - *Third quartile:* \$76,824 to \$132,701
 - *Highest quartile:* \$132,702 and above.

In 2018, the maximum income for the lowest quartile (\$43,063) was less than one-third (32 percent) of the minimum income level of the highest quartile (\$132,702). Reflecting growing income inequality in the United States, the difference between the highest and lowest family income quartiles has increased since 1987.³⁹

- **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 the notes to the 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 5 NCES high school longitudinal studies, SES was derived using 5 equal-weighted components: father's/guardian's

38 In the 2015 to 2017 editions of the *Indicators* report, we used the term Cohort College Continuation Rate. In the 2018 to 2020 edition, 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.

39 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.⁴⁰

- **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).⁴¹ 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 2020 for the 2020–21 school year, will you be 24 by January 1st, 2020 (i.e., were you born before Jan. 1, 1997)?
 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?⁴²
 - **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 are paying for your own bills and educational expenses.”

40 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.

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

42 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 many 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 2018.⁴³ For all income groups, the cohort college participation rate was higher in 2018 than in 1980. The college participation rate for the lowest income quartile was relatively stable from 1970 to 1990 but has generally increased since 1990. In 2018, 75 percent of high school leavers between the ages of 18 and 24 from the highest family income quartile had enrolled in college, compared with 51 percent of those in the lowest quartile. College participation rates for high school leavers from the lowest quartile increased from 32 percent in 1990 to 51 percent in 2018. Over the same period, the share of high school leavers from the highest income quartile who were enrolled in college was 75 percent in 1990 and 75 percent in 2018. 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 2018 (24 percentage points) than in 1970 (46 percentage points) and 1990 (43 percentage points).

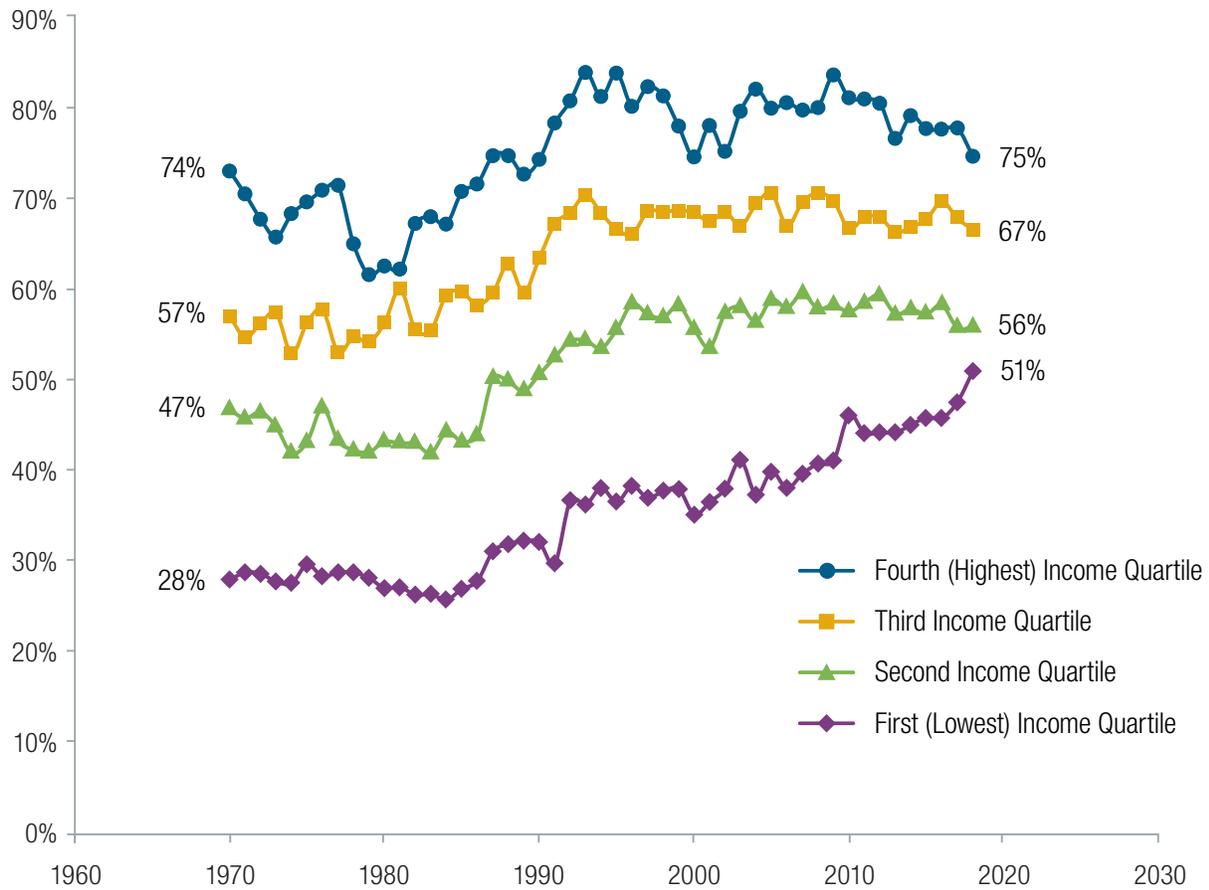
Since 1990, college participation rates increased for students in the lowest income quartile but remained relatively unchanged for students in the three higher income quartiles. Nonetheless, in 2018 college participation rates were 24 percentage points lower for students in the lowest income quartile than for those in the highest quartile.

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. For high school graduates in the highest family income quartile, the college continuation rate was 84 percent in 2018, up from 79 percent in 1990 (and 79 percent in 1970). For high school graduates in the lowest quartile, the college continuation rate was 65 percent in 2018, up from 48 percent in 1990 (and 46 percent in 1970). The gap in college continuation rates for high school graduates in the highest and lowest income quartiles was 19 percentage points in 2018, down from 31 percentage points in 1990 (and 33 percentage points in 1970).

43 In the 2015 to 2017 editions of the *Indicators* report, we used the term Cohort College Continuation Rate. In the 2018, 2019, and 2020 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 2018



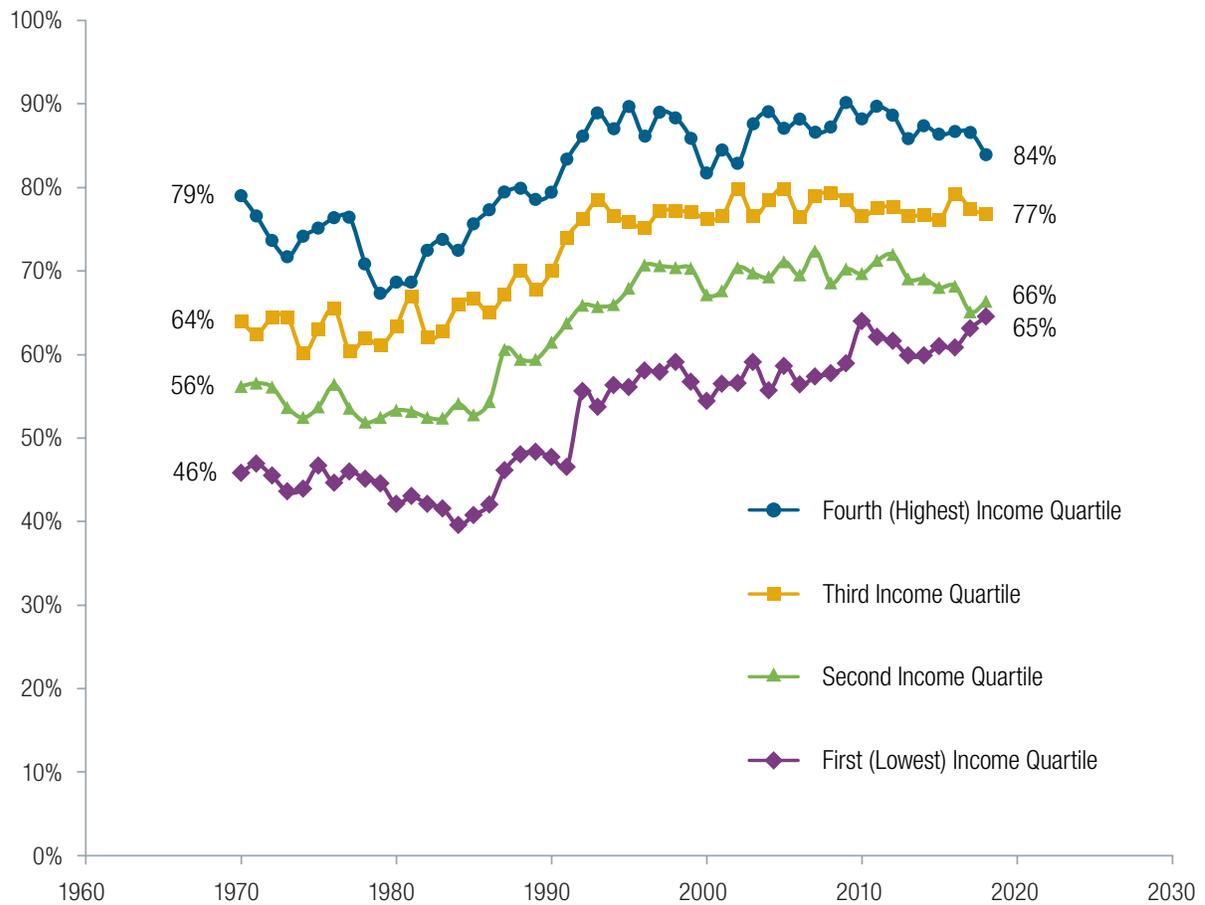
Indicator Status: High Inequality but Narrowing Gap

There was a 24 percentage-point gap in college enrollment between dependent 18-to-24-year-olds in the highest and lowest income quartiles in 2018, compared with a 43 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: 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, <https://dataferrett.census.gov/>; School Enrollment Data, 1970-2018, compiled by Nicole Brunt and Tom Mortenson.

Equity Indicator 1b: High School Graduates College Continuation Rates by family income quartile: 1970 to 2018



Indicator Status: High Inequality but Narrowing Gap

There was a 19 percentage-point gap in college continuation rates between high school graduates in the highest and lowest income quartiles in 2018, compared with a 31 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: 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 DataFerrett, <https://dataferrett.census.gov/>; School Enrollment Data, 1970-2018, compiled by Nicole Brunt and Tom Mortenson.

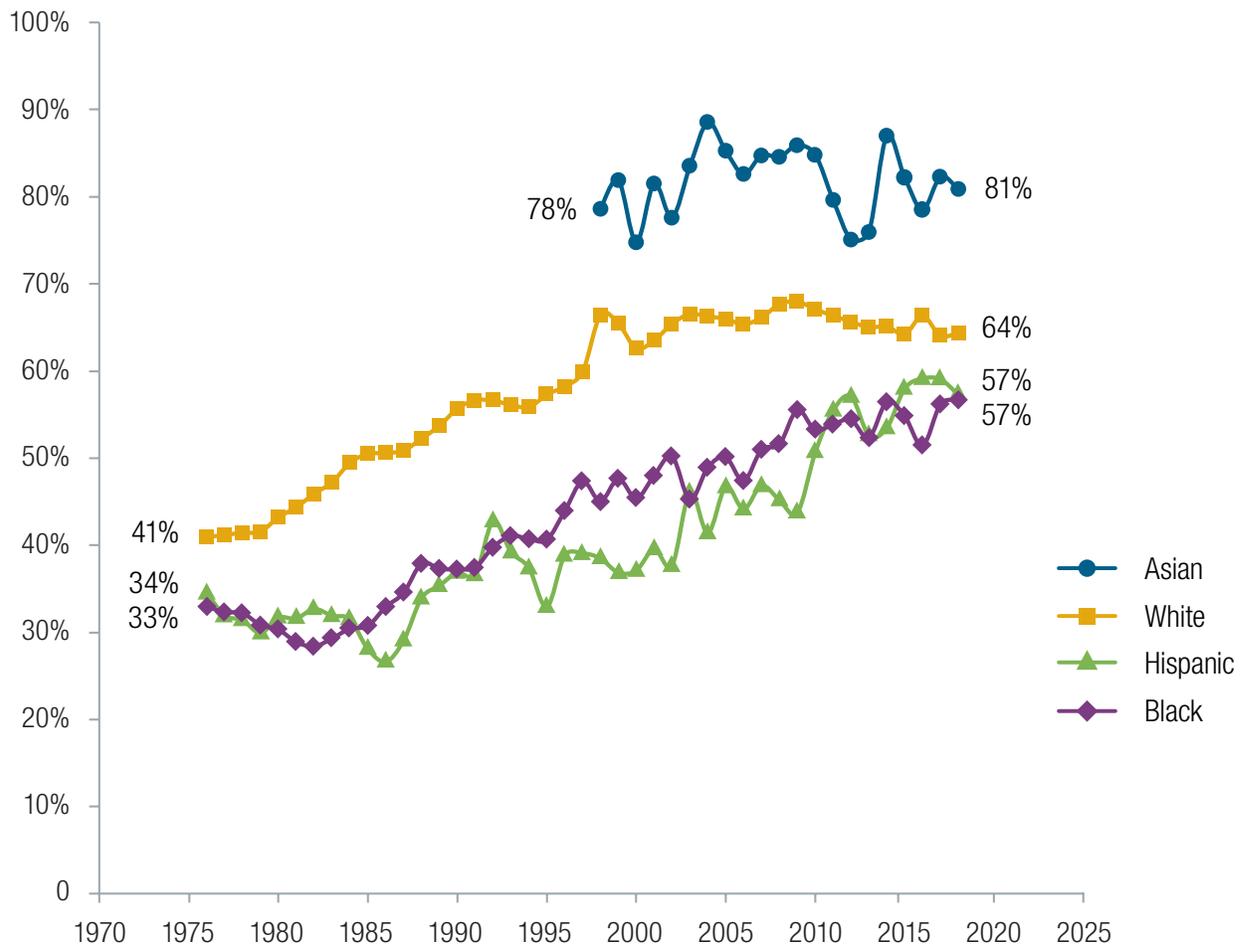
Equity Indicator 1c(i): How Do Cohort College Participation Rates of High School Leavers Vary by Race/Ethnicity?

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 1976 to 2018. 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, 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.⁴⁴ 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 2018, 81 percent of Asian and 64 percent of White recent high school leavers enrolled in college, compared with 57 percent of Hispanics and 57 percent of Blacks. In 1976, about 41 percent of White high school leavers enrolled in college, compared with 33 percent of Blacks and 34 percent of Hispanics. Between 1976 and 2018, college participation rates were consistently higher for Asian and White high school leavers than for Black and Hispanic high school leavers.

44 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.

Equity Indicator 1c(i): Cohort College Participation Rates of recent high school leavers by race/ethnicity: 1976 to 2018



Indicator Status: Gaps Persist by Race/Ethnicity

Among dependent 18-to-24-year-old individuals who are not enrolled in high school, Cohort College Participation Rates in 2018 were 7 percentage points higher for Whites than for Blacks, and 7 percentage points higher for Whites than for Hispanics. In 1976, college participation rates were 8 percentage points higher for White high school leavers than for Blacks and 7 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. Data represent 3-year moving averages.

SOURCE: U.S. Census Bureau, 1976-2018, as adapted by Tom Mortenson, *Postsecondary Educational Opportunity (PEO) Newsletters* and database, Washington, DC: The Pell Institute for the Study of Opportunity in Higher Education. Retrieved from www.postsecondary.org. 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, <https://dataferrett.census.gov/>.

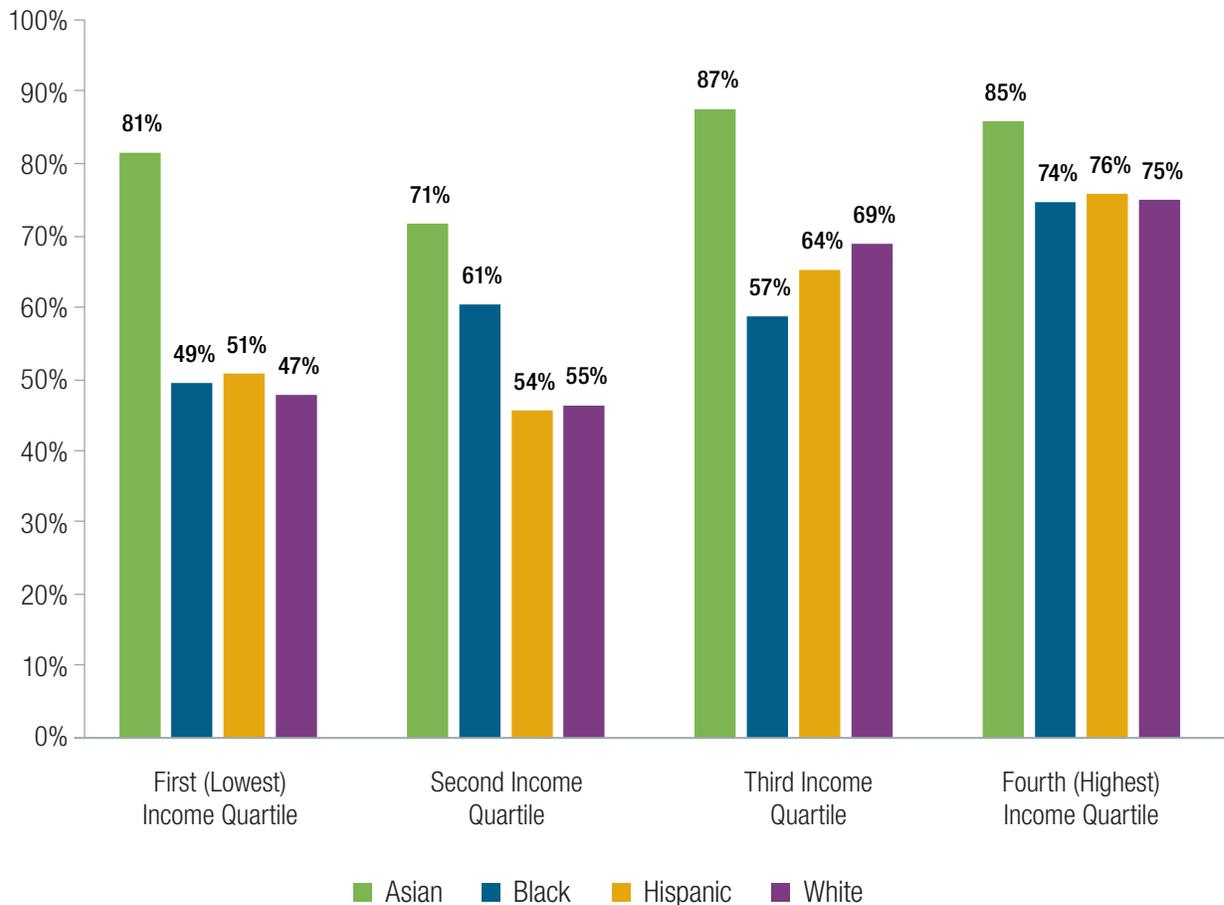
Equity Indicator 1c(ii): How Do Cohort College Participation Rates of High School Leavers Vary by Race Ethnicity and Family Income Quartiles?

Equity Indicator 1c(ii) displays Cohort College Participation Rates for 2018 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 total population.⁴⁵ As seen in Appendix A Figure A-3, there are large differences in this distribution by race/ethnicity. For example, only 11 percent of Hispanics and 13 percent of Blacks were in the highest income quartile, in comparison with 33 percent of Whites and 26 percent of Asians.

Indicator 1c(ii) shows that disaggregating by family income quartile reduces the differences by race/ethnicity observed in Indicator 1c(i).⁴⁶ 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 49 percent for Blacks, 51 percent for Hispanics, and 47 percent for Whites. For those in the highest income quartile, the 2018 cohort college participation rate was 74 percent for Blacks, 76 percent for Hispanics, and 75 percent for Whites. Asians' (as a group, ignoring differences within this aggregated category) cohort participation rates show a less clear pattern by family income quartile.

-
- 45** As shown in the Appendix A Figure A-3 and in Figure 8b(ii) there are large differences in income and wealth distributions between race/ethnicity groupings in the U.S.
- 46** 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(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: 2018



Indicator Status:

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

NOTE: Race categories exclude persons of Hispanic ethnicity. The Cohort College Participation Rate is tabulated based on the total number of 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.

SOURCE: U.S. Census Bureau, 1976-2018, as adapted by Tom Mortenson, *Postsecondary Educational Opportunity (PEO)* database. Washington, DC: The Pell Institute for the Study of Opportunity in Higher Education. Retrieved from www.postsecondary.org. Calculated from October Current Population Survey File School Enrollment Report, tabulated using the U.S. Census Bureau online data retrieval tool, Dataferrett, <https://dataferrett.census.gov/>.

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).⁴⁷ As with Indicators 1c(i) and 1c(ii), caution is needed in interpreting Indicator 1d 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.” Because of sampling error concerns due to relatively smaller sample sizes, we report 3-year moving averages. 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 2018 than in 1976. Although there are some fluctuations in rates over this period, college continuation rates were 48 percent higher in 2018 than 1976 for Whites (rising from 50 percent to 74 percent), 53 percent higher for Hispanics (rising from 54 percent to 69 percent), 51 percent higher for Blacks (rising from 45 percent to 68 percent), and 8 percent higher for Asians (rising from 81 percent to 88 percent).⁴⁸

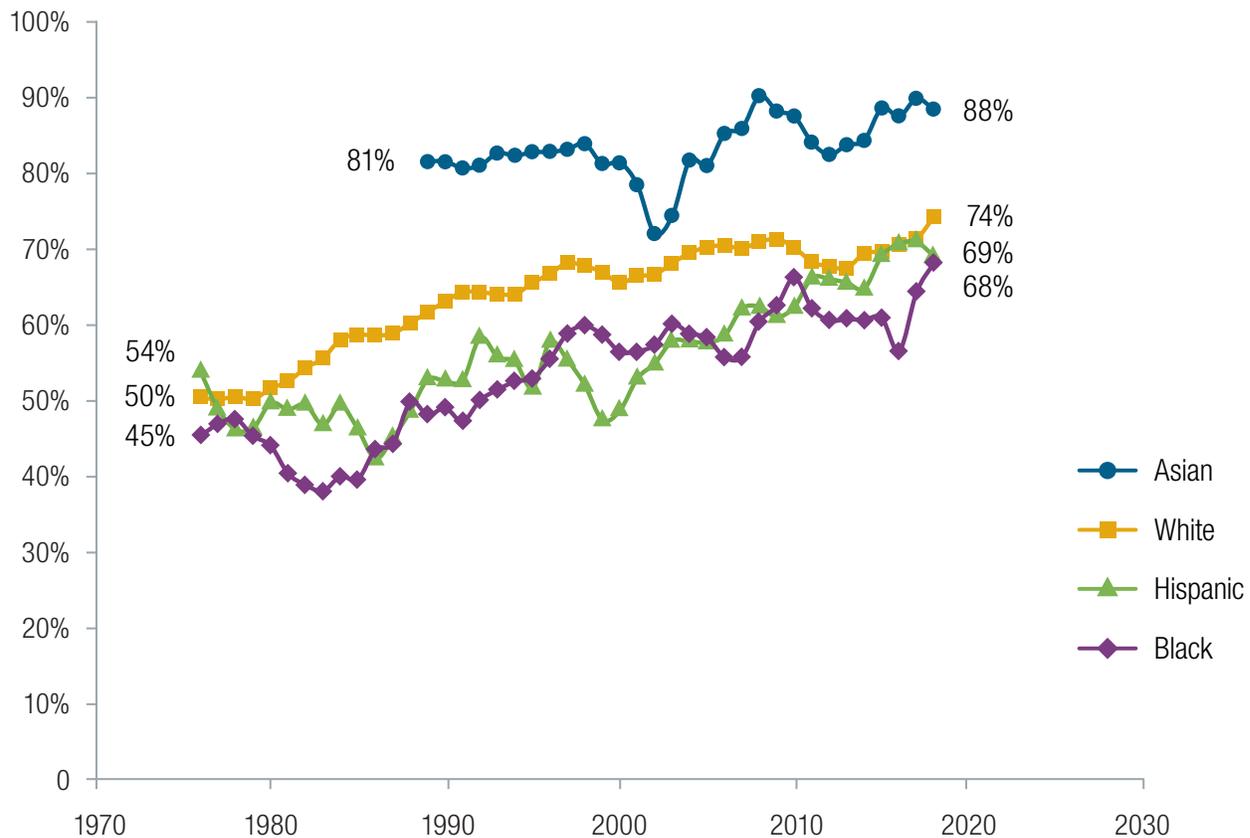
While caution is needed in interpreting these data, Indicator 1d(i) illustrates the gains that Hispanic recent high school graduates have made in college enrollment, especially since 2006.⁴⁹ College enrollment rates for Black high school graduates have also generally increased over time.

⁴⁷ 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.

⁴⁸ Asian percent change calculated from 1989, the first year in which data is available.

⁴⁹ 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: 1976 to 2018



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 this 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. A 3-year moving average is used because of higher levels of sampling error for disaggregated data. The 3-year average was calculated by averaging three years. For example, the percentage for 1977 was calculated by adding percentages for 1976, 1977 and 1978 and dividing by 3. The end point years (i.e., 1975 and 2018) were based on a 2-year average. Some data have been revised from previously published figures.

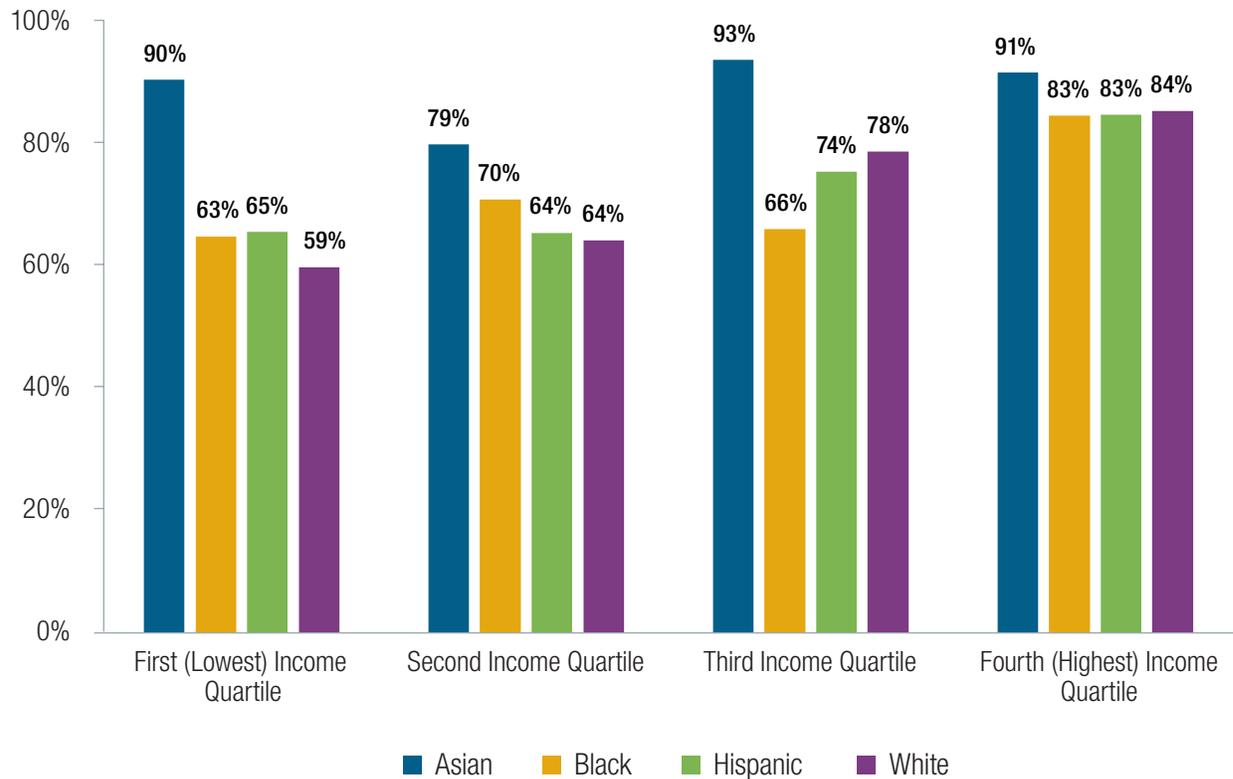
SOURCE: U.S. Census Bureau, 1976-2018, as adapted by Tom Mortenson, *Postsecondary Educational Opportunity (PEO) Newsletters* and database, Washington, DC: The Pell Institute for the Study of Opportunity in Higher Education. Retrieved from www.postsecondary.org. Calculated from October Current Population Survey File (formerly Table 14 in Census Bureau’s School Enrollment Report), tabulated using the U.S. Census Bureau online data retrieval tool, DataFerrett, <https://dataferrett.census.gov/>.

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 2018 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 noted in Equity Indicator 1c(ii), Hispanics and Blacks are underrepresented in the highest income quartiles and overrepresented in the lowest income groupings. For example, 43 percent of Blacks and 38 percent of Hispanics were in the lowest quartile (see Appendix A Figure A-3).

As with Indicator 1c(ii), this figure shows that observed differences by race/ethnicity in college continuation rates of high school graduates are reduced when disaggregated within family income quartiles. Among Black high school graduates, college enrollment rates ranged from 63 percent for those in the lowest family income quartile (for Blacks) to 83 percent for those in the highest income quartile (for Blacks). Among White high school graduates, college entrance rates ranged from 59 percent for those in the lowest quartile (for Whites) to 84 percent in the highest quartile. Among Hispanic high school graduates, college enrollment rates ranged from 65 percent in the lowest income quartile (for Hispanics) to 83 percent in the highest quartile (for Hispanics).

Equity Indicator 1d(ii): High School Graduates College Continuation Rates by race/ethnicity and family income quartiles: 2018



Indicator Status:

Observed differences in college enrollment by race/ethnicity are reduced when the data are disaggregated by family income quartile within each racial/ethnic group.

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: Bureau of Labor Statistics (BLS) and U.S. Census Bureau, 1976-2018, as adapted by Tom Mortenson, *Postsecondary Educational Opportunity (PEO)* database. Washington, DC: The Pell Institute for the Study of Opportunity in Higher Education. Retrieved from www.postsecondary.org. Calculated from October Current Population Survey File School Enrollment Report, tabulated using Census online data retrieval tool, Dataferrett, <https://dataferrett.census.gov/>.

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

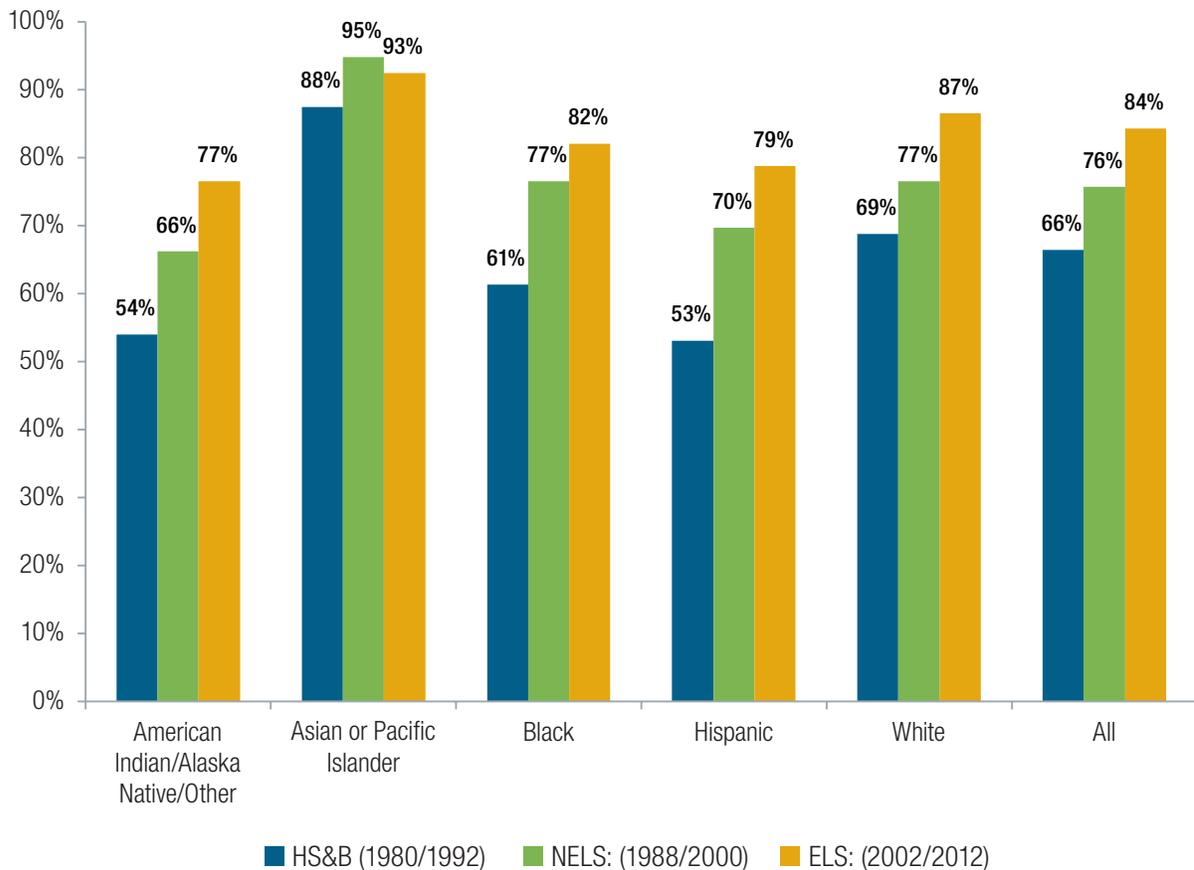
The high school longitudinal studies conducted by the National Center for Education Statistics (NCES) approximately every 10 years shed light on longitudinal trends in college enrollment within 8 or 10 years of expected high school graduation. Because college enrollment is measured within 8 or 10 years 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:88) 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.⁵⁰

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), 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.

⁵⁰ 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)?

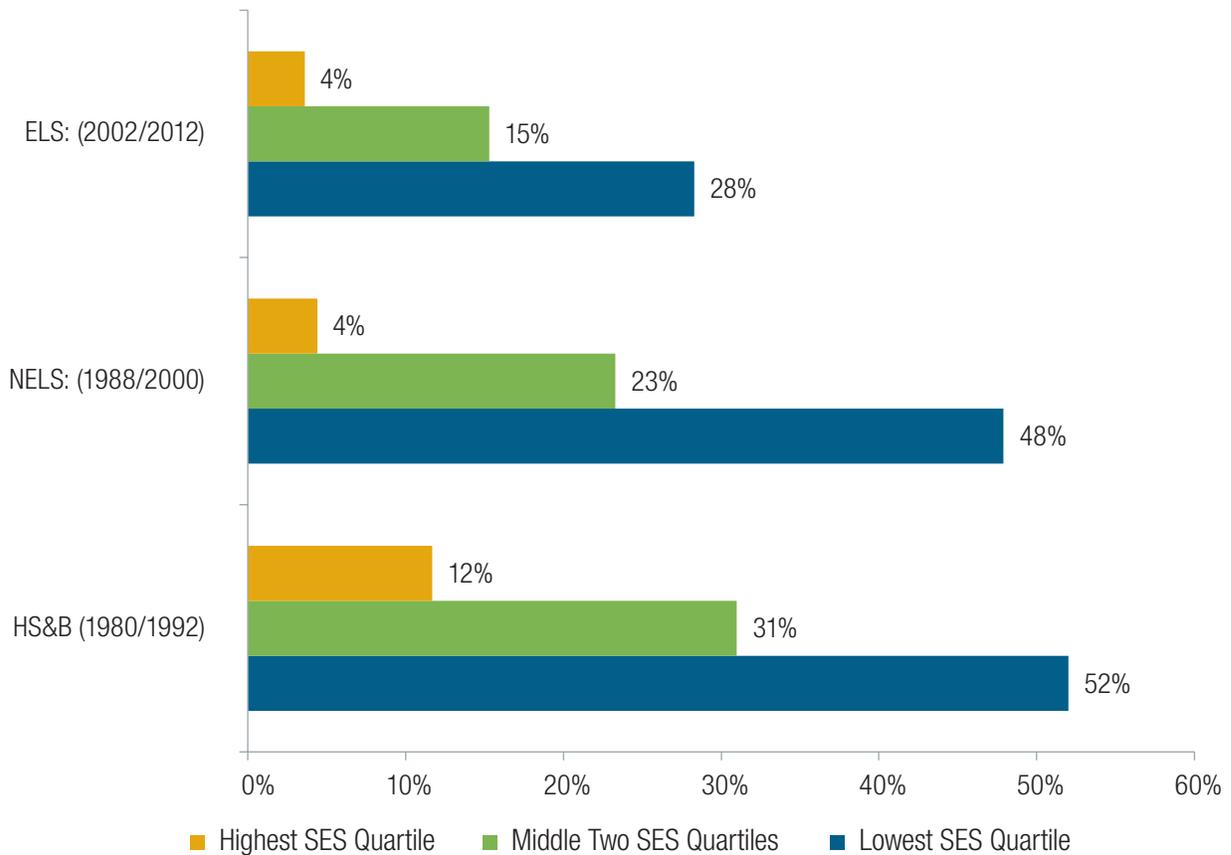
Indicator 1f documents the percent of young adults who reported that they had not enrolled in postsecondary education within 8 or 10 years of their scheduled high school graduation by parents' socioeconomic status (SES), using data from the three NCES-sponsored high school longitudinal studies. SES is 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.⁵¹

Across the 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 from 52 percent of 1980 10th graders (HS&B), to 48 percent of 1988 8th graders (NELS), to 28 percent of 2002 10th graders (ELS).

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).

51 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.

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 (HSLs: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).

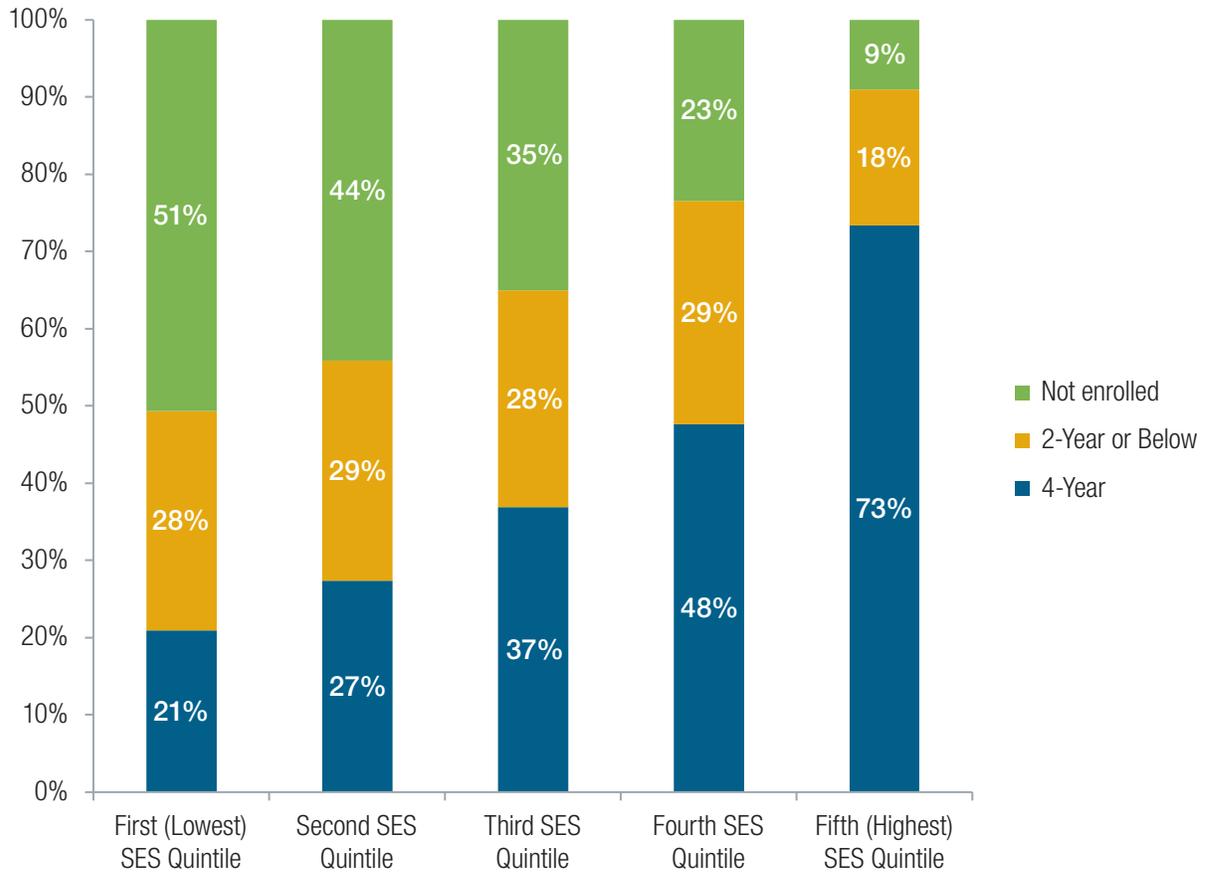
Enrollment in College in the Fall After Scheduled High School Graduation. Indicator 1g (i) uses parents' socioeconomic status (SES) quintiles (five equal-sized groups) and shows 2-year and 4-year enrollment and non-enrollment in 2013, the fall after scheduled high school graduation. The findings from 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 SES quintiles and race/ethnicity. 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.

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

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)



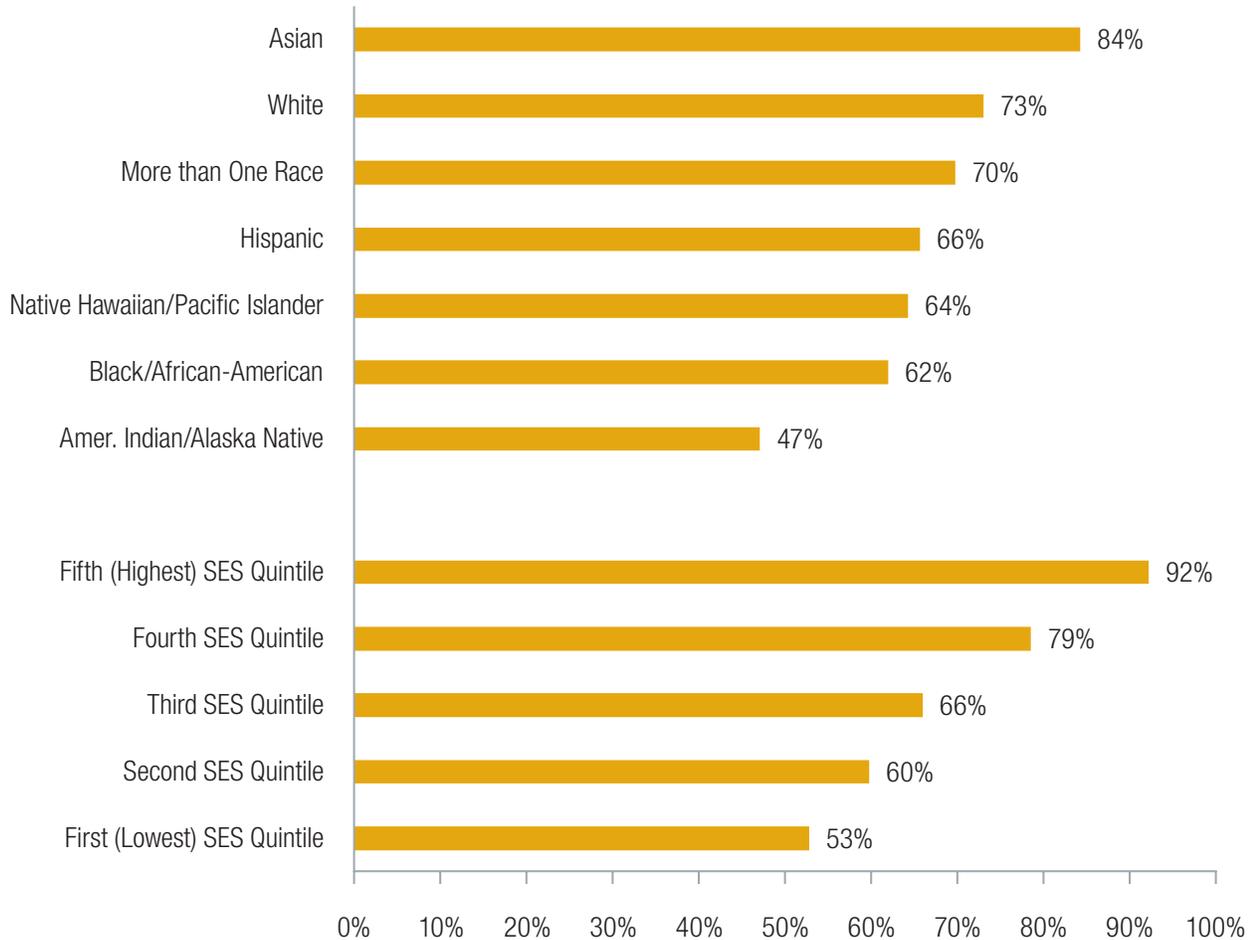
Indicator Status: High Inequality

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 (HSL: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 (HSL: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 (HSL:2009/2016)". Tabulated using NCE PowerStats.

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

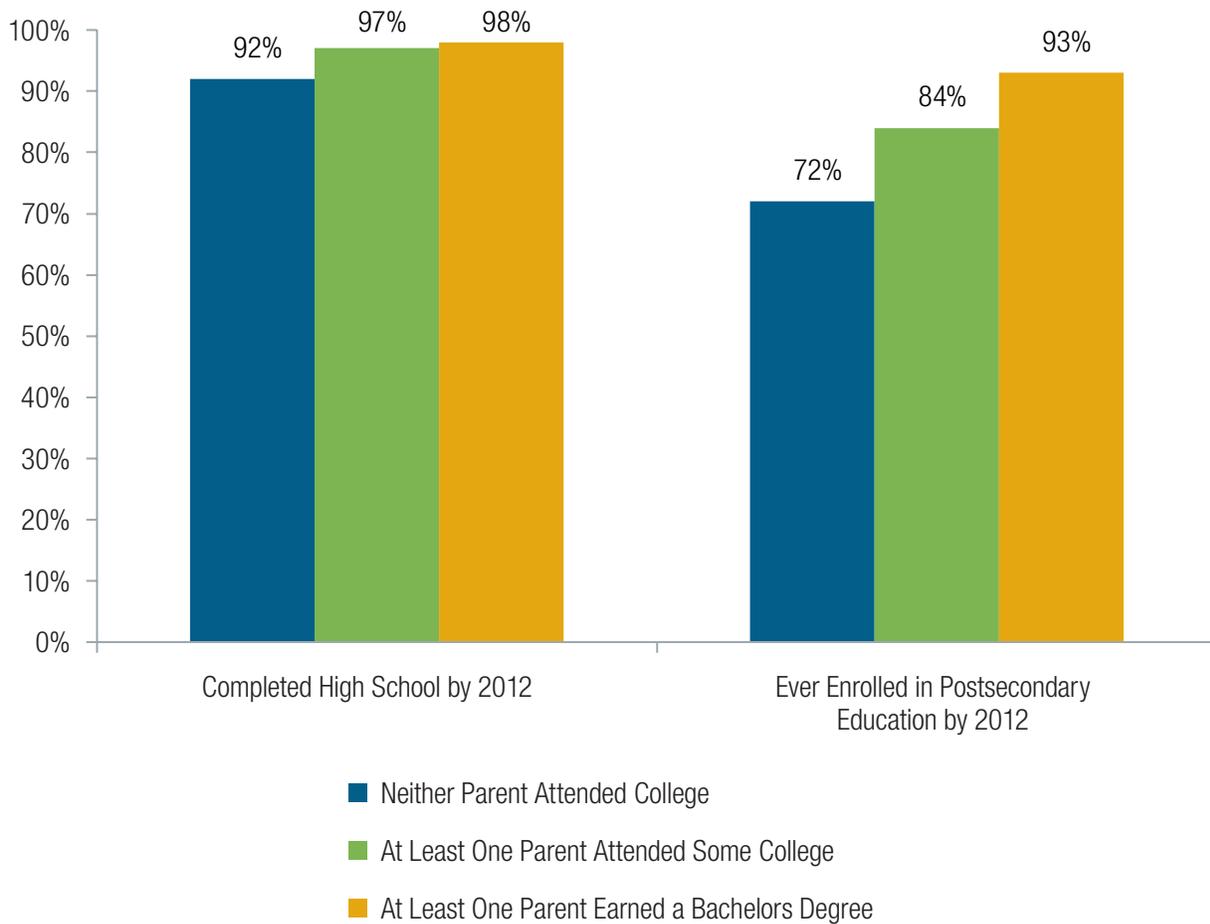
Indicator 1h uses the ELS:2002/2012 data to examine differences in high school completion and college entrance by first-generation college status. First-generation college status can be defined in different ways. The Higher Education Opportunity Act (HEOA), which defines eligibility for many Federal 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.⁵²

High School Diploma. Indicator 1h 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 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.

⁵² 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: 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). Washington, DC: U.S. Department of Education, Figure 2.

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.⁵³ This information does not provide direct estimates of the percent of low-income youth within the state that are enrolled in college.⁵⁴ 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 or 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 or Reduced-Price Lunch among states and migration of Pell recipients into and out of states. As such, we urge caution in interpreting this Indicator.⁵⁵ 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 Wyoming, Texas, and Kentucky, and 24 percent in West Virginia; to 45 percent in New Hampshire and Rhode Island, 46 percent in Massachusetts, 48 percent in New York and Connecticut, 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.⁵⁶

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.

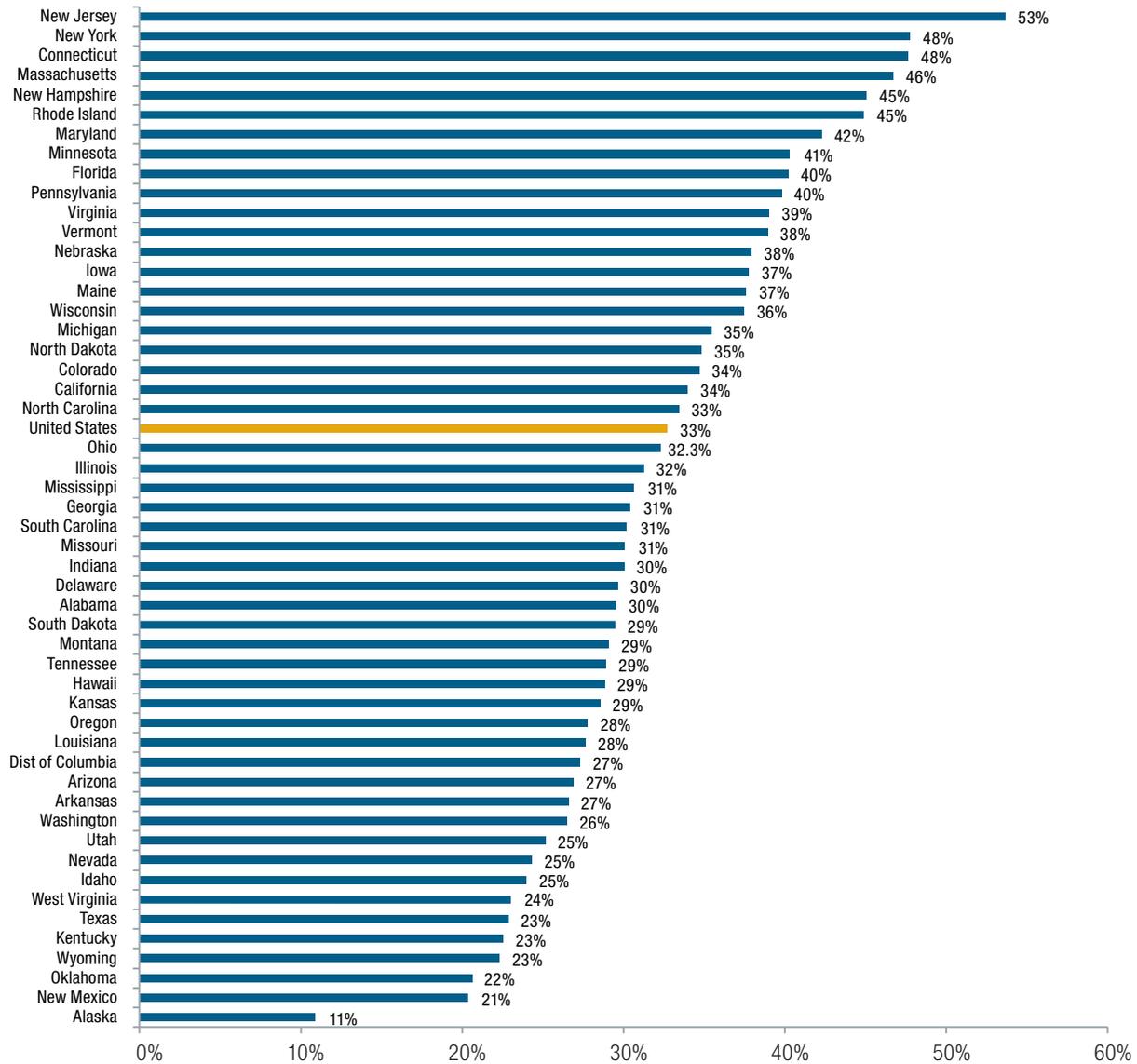
53 U.S. Department of Education, Office of Postsecondary Education, Office of Student Financial Aid, Federal Pell Grant Program Annual Data Reports, <https://www2.ed.gov/finaid/prof/resources/data/pell-data.html>.

54 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 www.postsecondary.org.

55 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.

56 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 www.postsecondary.org.

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



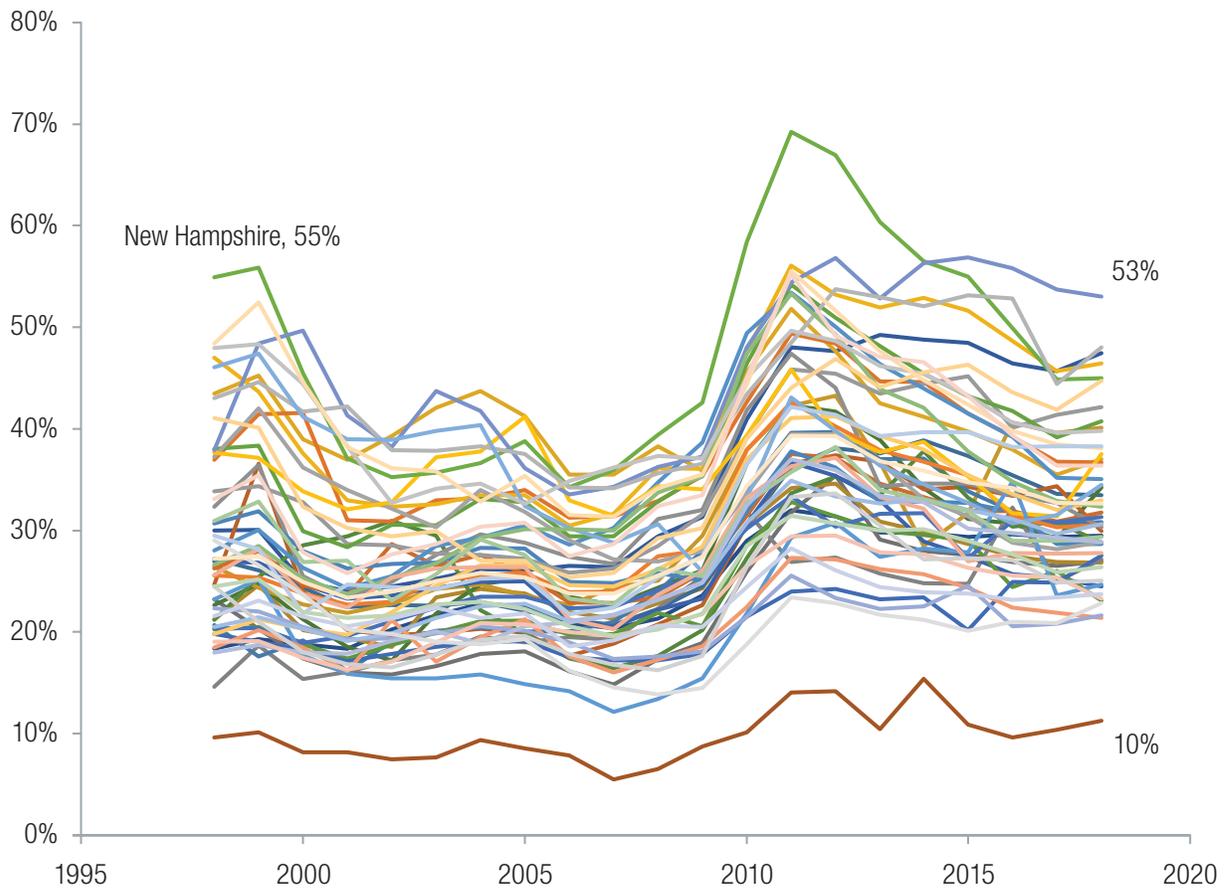
Indicator Status:

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 www.postsecondary.org.

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: 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 www.postsecondary.org.

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, 43 percent of 18- to 24- year-olds nationwide were enrolled in some type of postsecondary education. Enrollment rates exceed 50 percent in Rhode Island (57 percent), District of Columbia (56 percent), and Massachusetts (53 percent). The lowest enrollment rates were in Alaska (29 percent), Nevada (31 percent), Montana (33 percent) and New Mexico (33 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 27 percent for Hispanics, 37 percent for Blacks, and 43 percent for Whites.

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



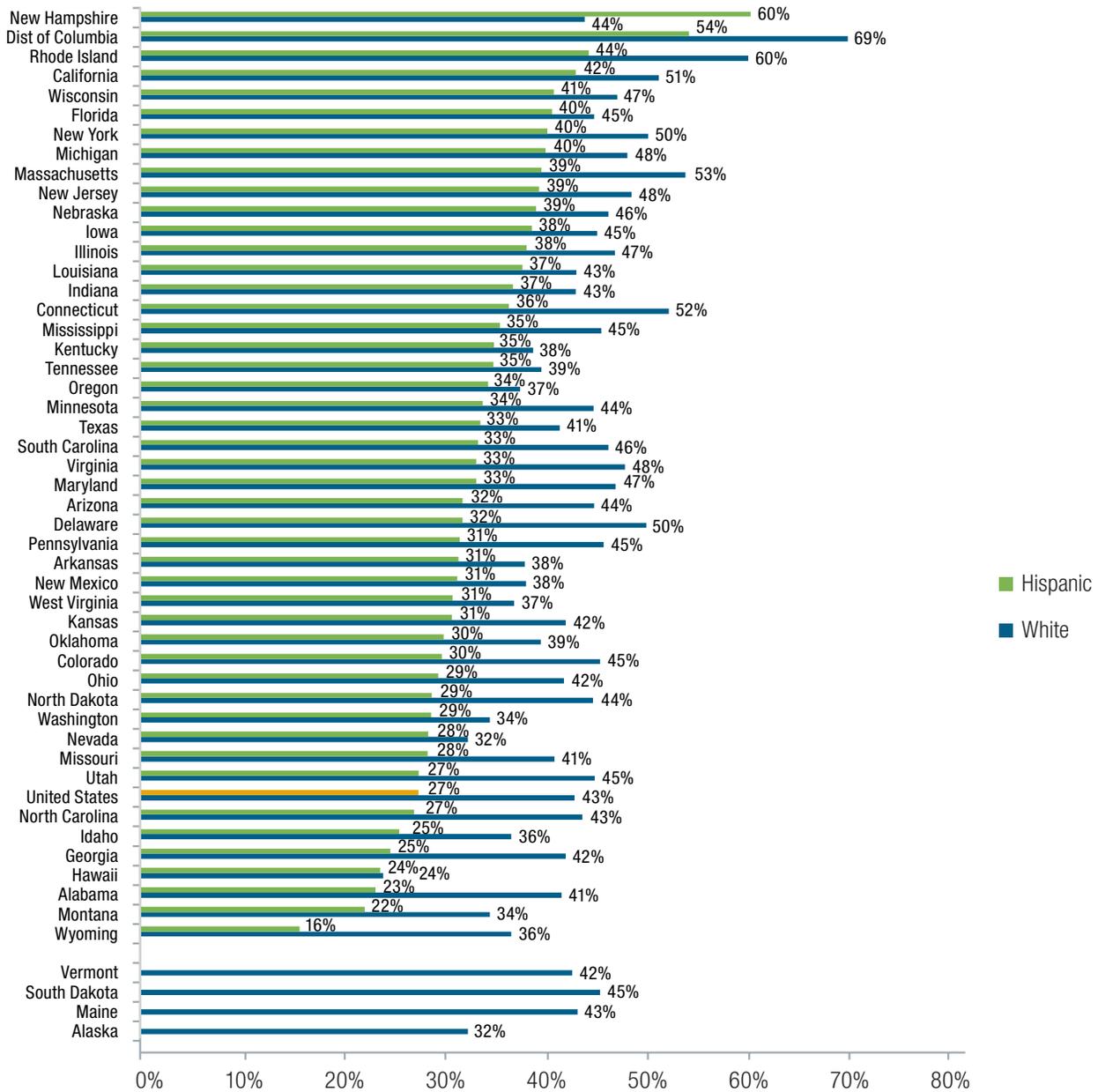
Indicator Status:

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



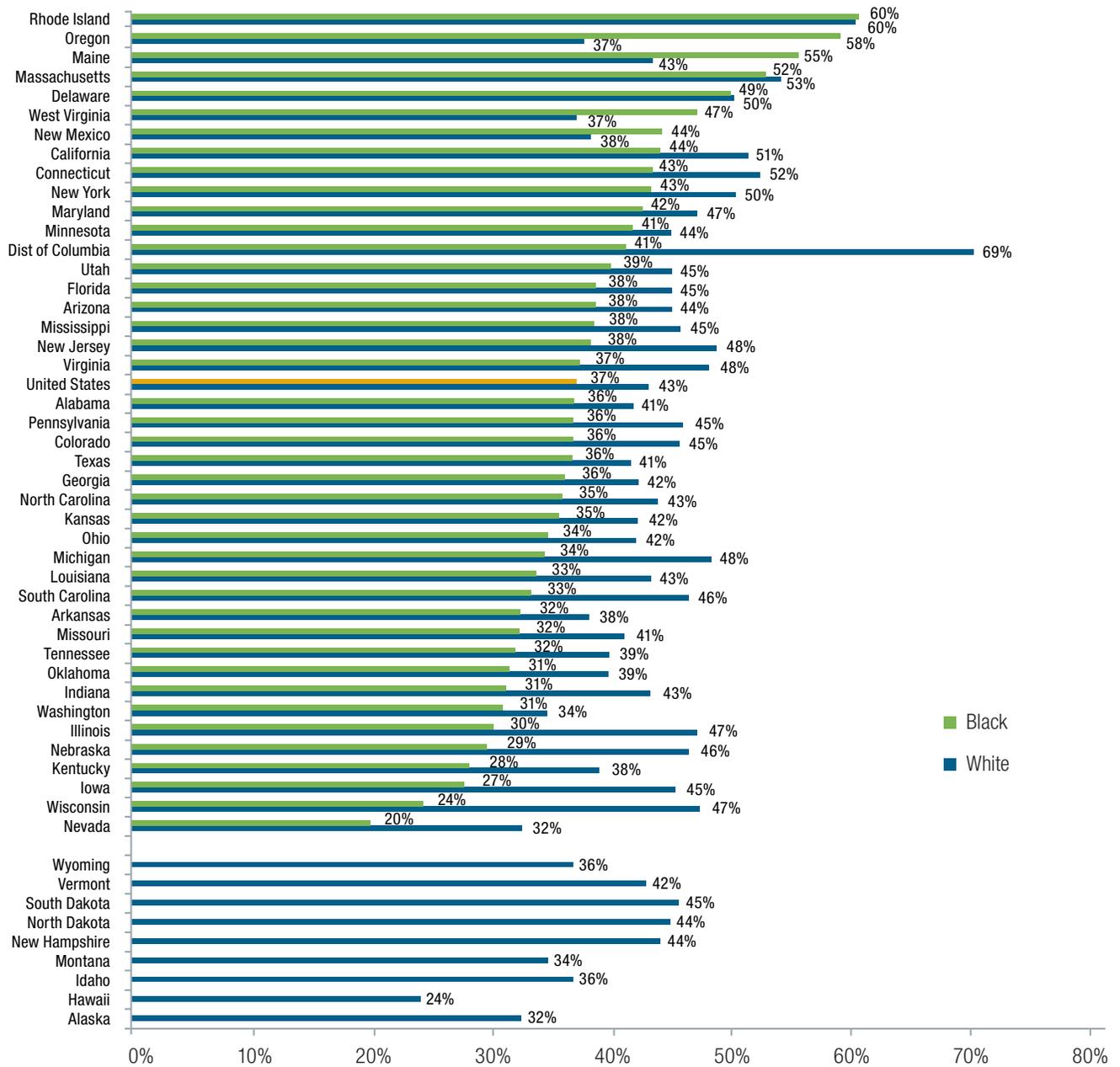
Indicator Status:

In 2018, college participation rates for Hispanics ranged from 16 percent in Wyoming to 60 percent in New Hampshire.

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 Nevada to 60 percent in Rhode Island.

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.

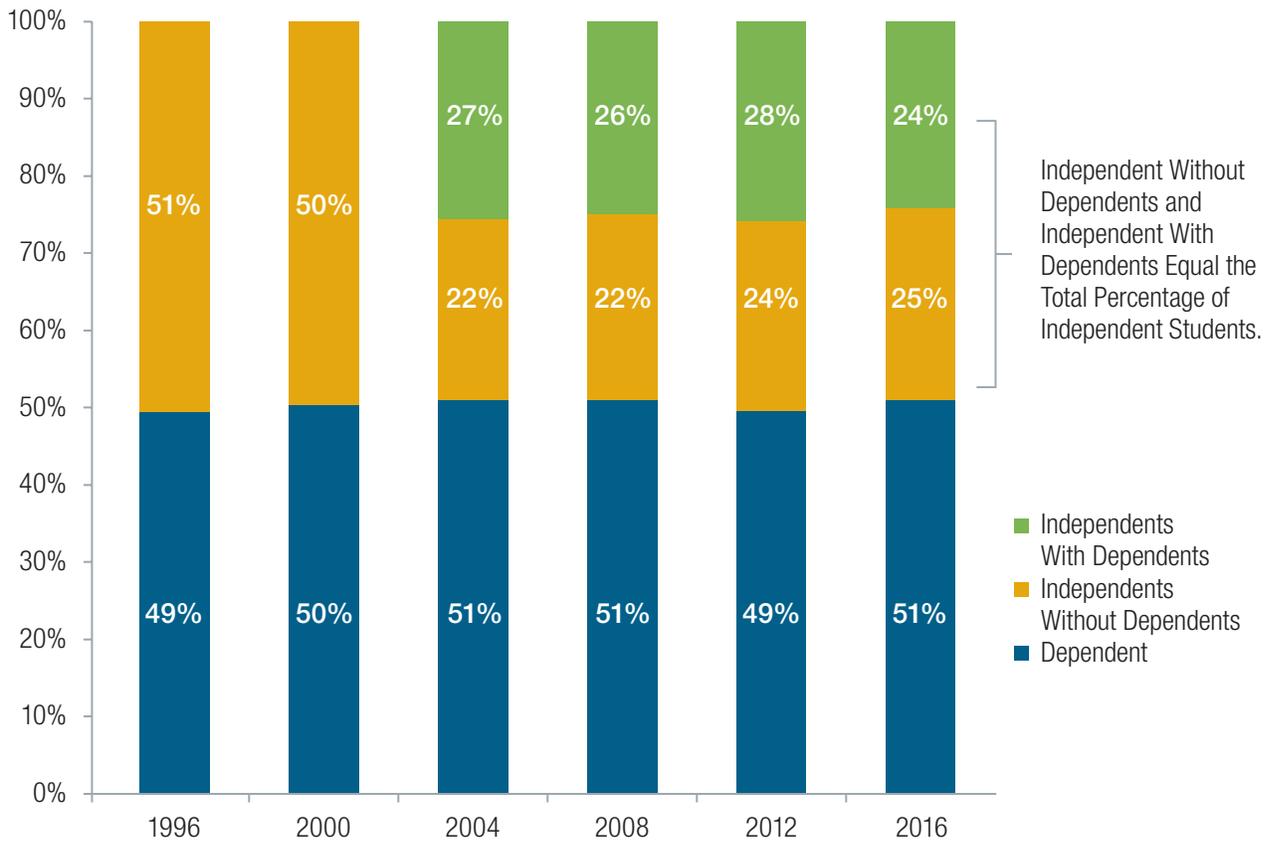
Indicator 1k (i to vi): What is the Dependency Status of Enrolled Students and How Do Dependent and Independent Students Differ From Each Other on Demographic and “Risk” Characteristics?

Indicator 1k 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.

Distribution of Undergraduate Students by Dependency Status. Indicator 1k(i) shows that, since 1996, about half of all undergraduate students have been classified as financially independent. In 2004, NPSAS began reporting whether independent students had dependents. In 2016, 24 percent of all undergraduates were independent students with dependents and 25 percent were independent students without dependents.

Age by Dependency Status. 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.

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



Indicator Status:

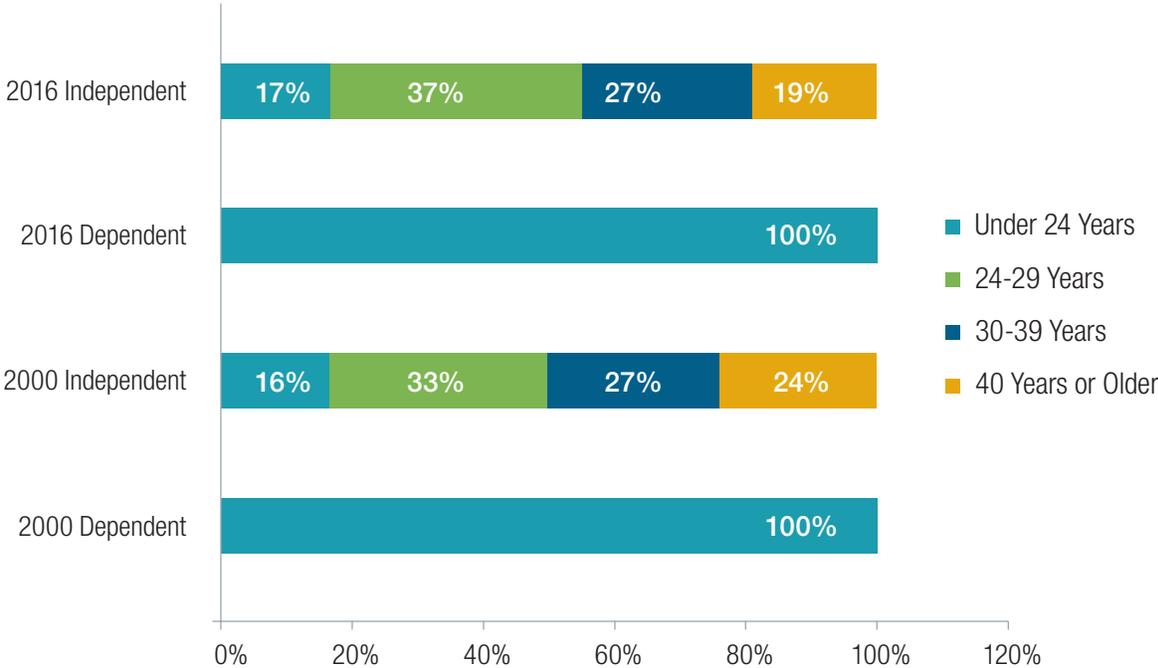
Since 1996, about half of all undergraduate students have been classified as financially independent.

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.

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, 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 age 40 and older declined (from 24 percent to 19 percent).

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 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.

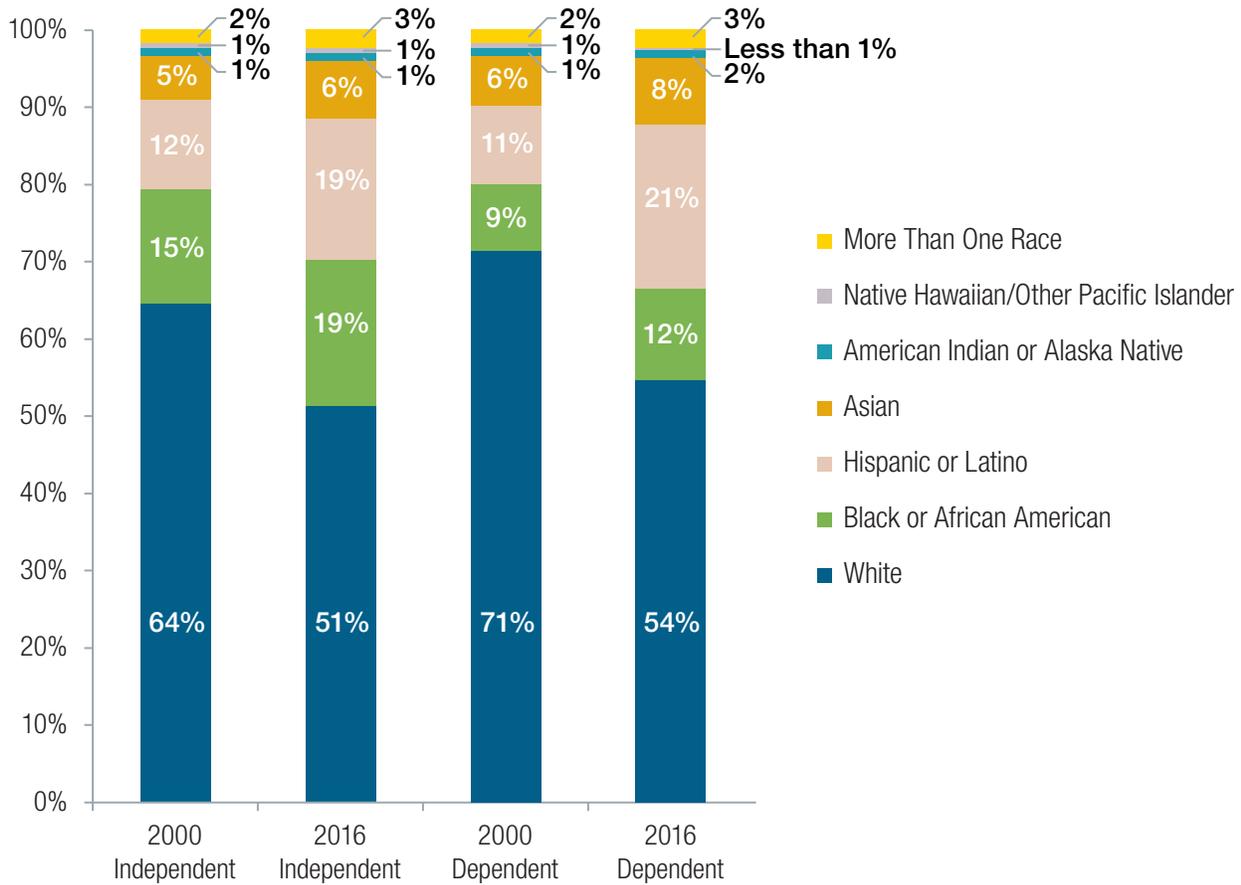
Race/Ethnicity by Dependency Status. Equity Indicator 1k(iii) shows the distributions of independent and dependent students in 2000 and in 2016 by race/ethnicity. Indicator 1k(iv) shows the percentage of each racial/ethnic group that is financially independent. Caution is needed in interpreting these 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 39 percent) and among dependent students, the percentage increased from 29 percent to 46 percent (an increase of 59 percent). In 2016, 19 percent of independent students reported being Hispanic, up from 12 percent in 2000. 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 were much 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. Forty-one percent of independent students without dependents had Pell Grants. In 2012 at the time of the Great Recession there were increased percentages of independent students who were Pell Grant recipients (64 percent in 2012 in 2012 and 59 percent in 2016).

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



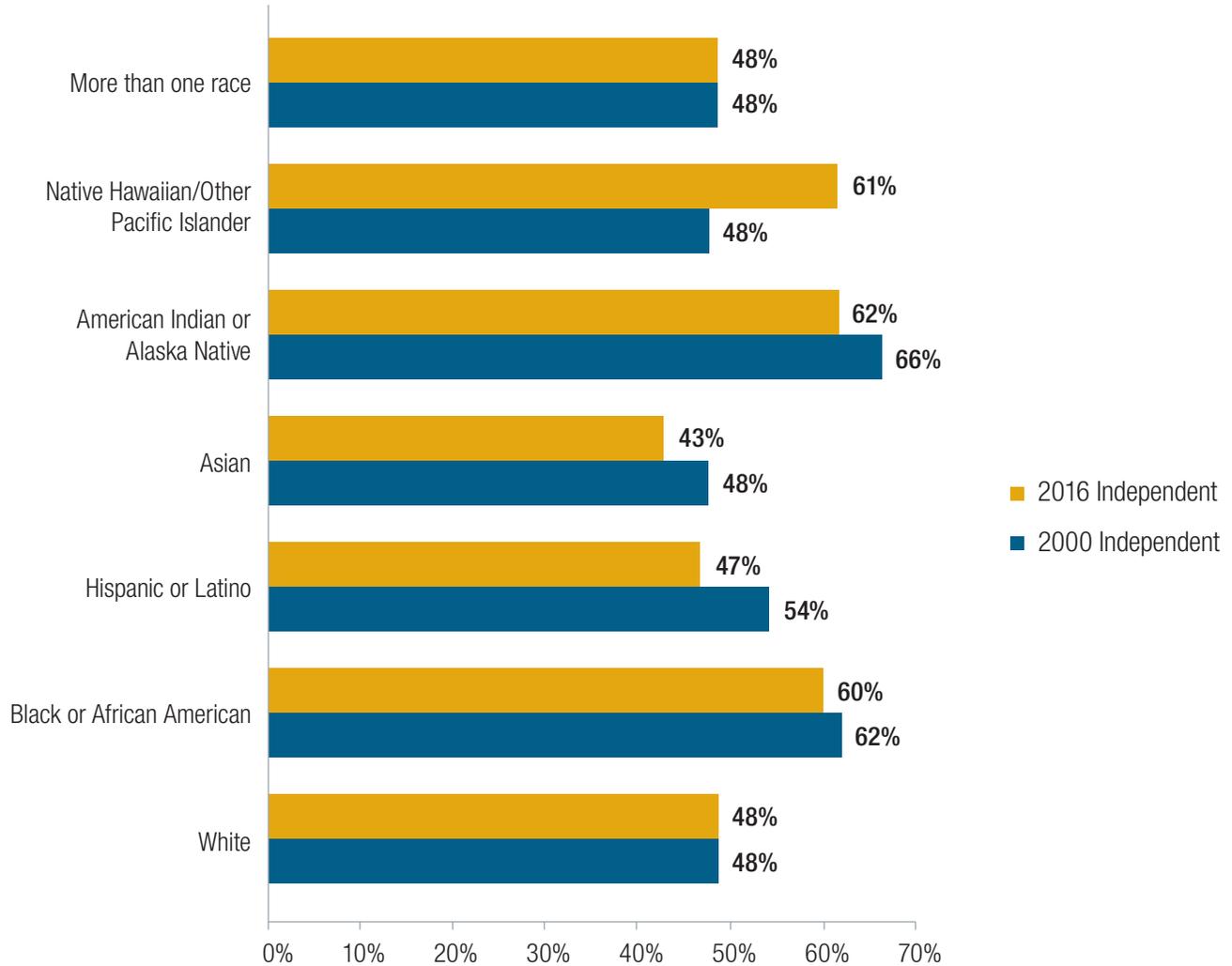
Indicator Status:

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



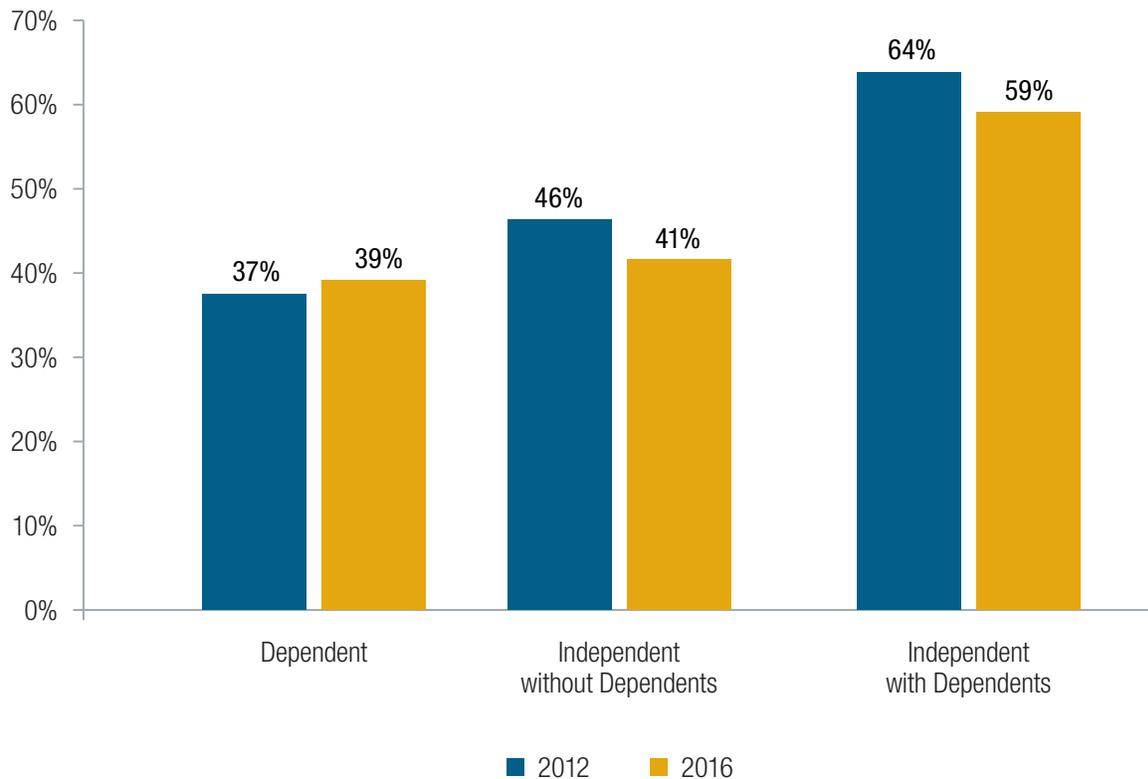
Indicator Status:

In 2016, more than 60 percent of Native Hawaiian/Other Pacific Islanders (62 percent), American Indian or Alaska Natives (61 percent), and Blacks (60 percent) were independent 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 by 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 much 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 there were increased percentages of students who 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*⁵⁷ 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:

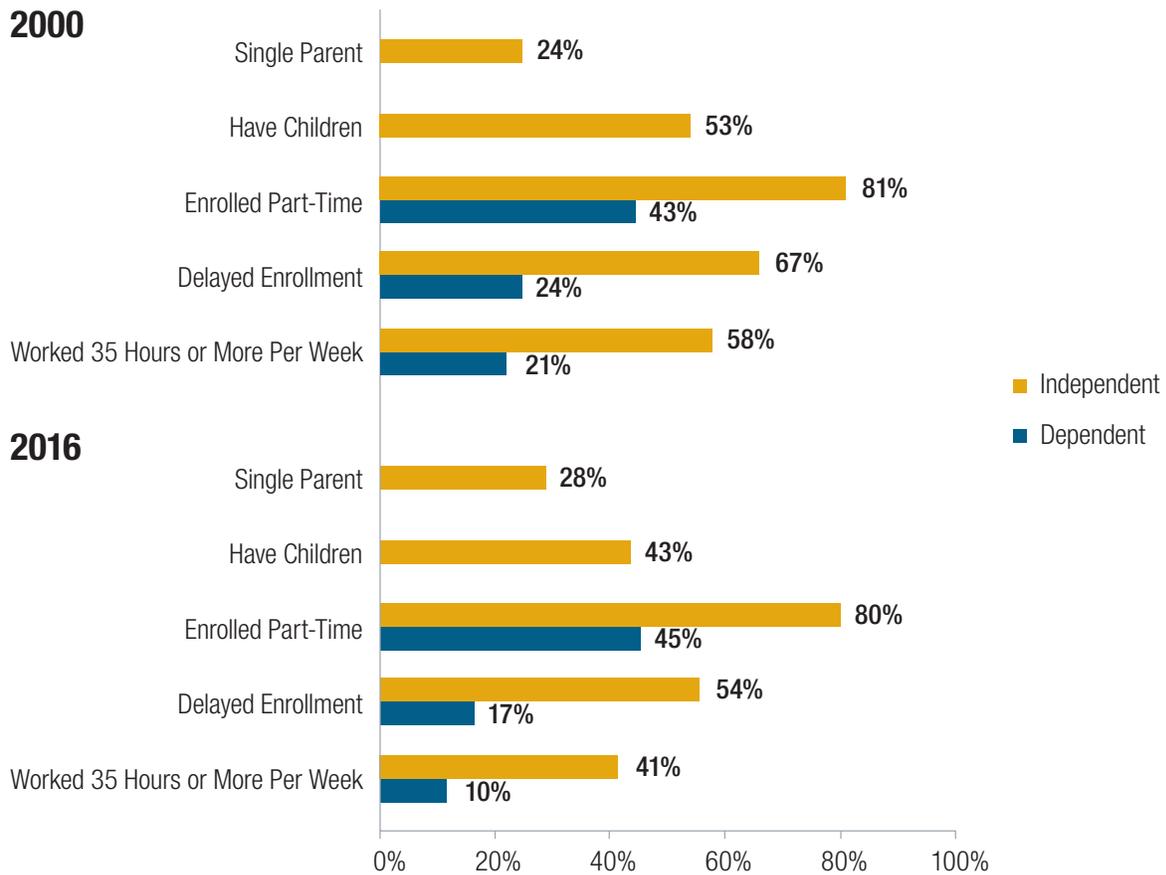
- Worked 35 Hours or More Per Week,
- Delayed Enrollment,
- No Regular High School Diploma,
- Enrolled Part-Time,
- Have Children, and
- Single Parent.

Equity Indicator 1k(vi) replicates the NPSAS: 2000 data for selected risk characteristics and shows the same variables from NPSAS:16⁵⁸. Indicator 1k(vi) shows that in both 2012 and 2016 higher shares of independent than dependent students have the identified risk characteristics. For example, in 2000, 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.

⁵⁷ 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>.

⁵⁸ 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 in 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 INDICATOR 2:

WHAT TYPE OF POSTSECONDARY EDUCATIONAL INSTITUTION DO STUDENTS ATTEND?

In 2017, 59 percent of degree-seeking undergraduates who received Federal Pell or other grants were enrolled at a 4-year institution rather than a 2-year institution. By comparison, among undergraduates who did not receive a Federal Grant, 77 percent attended a 4-year institution rather than a 2-year institution.

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).

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 1986⁵⁹; 2) five NCES high school longitudinal studies; 3) the NCES National Postsecondary Student Aid Study (NPSAS:2016), and 4) 2016 Barron’s Admissions Competitiveness Index.

- **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.⁶⁰ 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.⁶¹ 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.⁶² In this

⁵⁹ 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.

⁶⁰ 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.

⁶¹ National Center for Education Statistics, IPEDS Data Center. Retrieved from <https://nces.ed.gov/ipeds/datacenter/selectVariables.aspx>.

⁶² 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.

report, Federal Grant aid is also referred to as “Pell or other Federal Grants.”

- **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 2018-19 award year, 6.8 million students received a Pell Grant at a total cost of \$28.2 billion. This figure was down from a peak of 9.4 million students in 2011-12 during the Great Recession.⁶³ In the 2019-20 award year, the maximum Pell Grant award was \$6,195.
- **High School Longitudinal Studies Data by Family Socioeconomic Status and Institutional Selectivity.** The five NCES high school longitudinal studies include 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 and, for the five NCES longitudinal studies, 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.⁶⁴ 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.⁶⁵

63 U.S. Department of Education (n.d.). *Federal Pell Grant Program End-of-Year Report 2016-17*. Retrieved from <https://www2.ed.gov/finaid/prof/resources/data/pell-data.html>; Federal Student Aid (n.d.). Title IV Program Volume Reports. Aid Recipients Summary [Data file]. Retrieved from <https://studentaid.gov/sites/default/files/fsawg/datacenter/library/AidRecipientsSummary.xls>.

64 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>.

65 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.

- **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.⁶⁶ 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 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.⁶⁷ 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.⁶⁸

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 2016-17, 59 percent of Federal Grant recipients were enrolled at 4-year rather than 2-year institutions, compared with 77 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 2001 to 18 percentage points in 2017.

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 2016-17, 69 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. About 70 percent of non-recipients were enrolled at public institutions, 25 percent were enrolled at private non-profit institutions, and about 5 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 11 percent in 2015-16 and 2016-17.

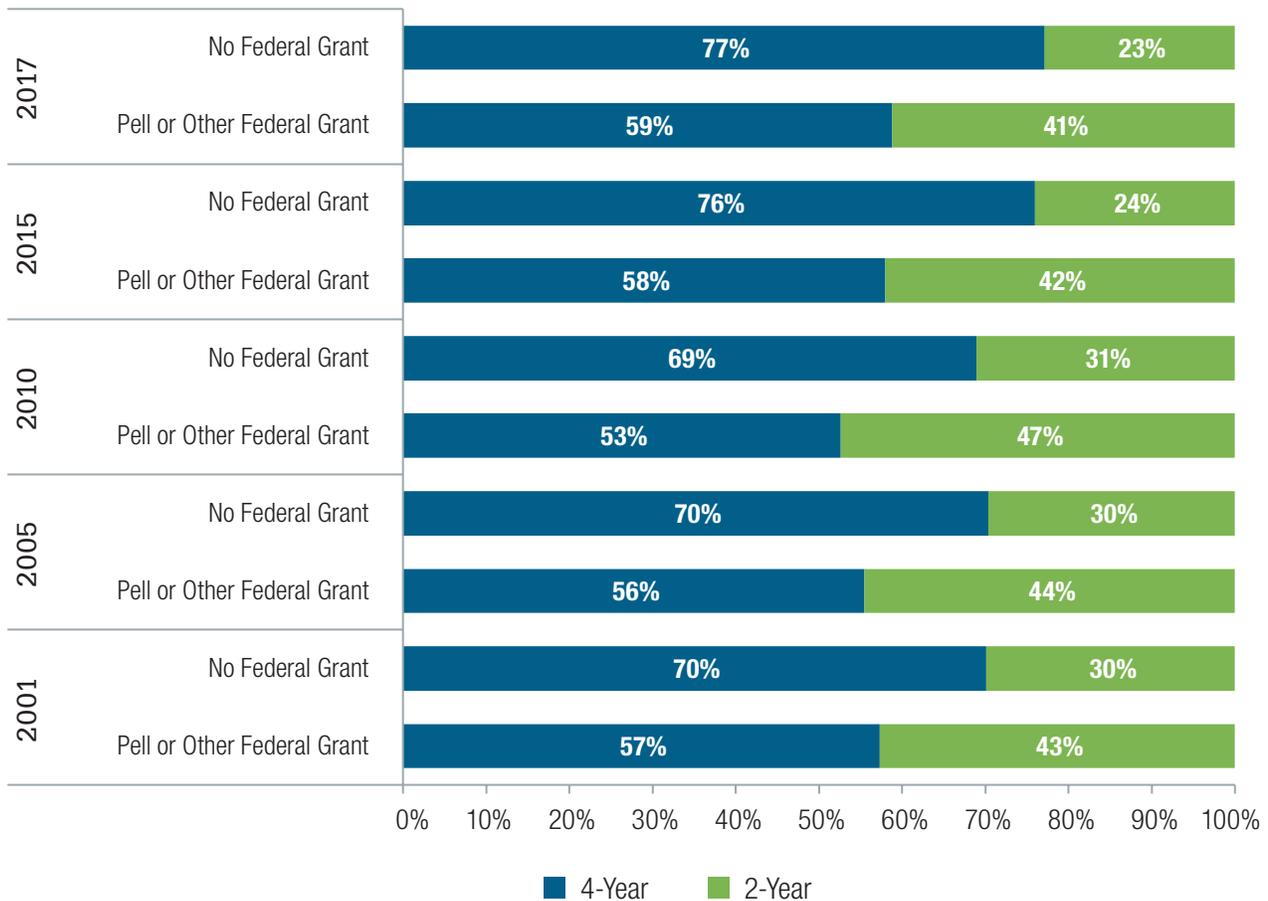
In 2016-17, as in prior years, Federal Grant recipients were 3 times as likely as those who did not receive Federal Grants to be enrolled at for-profit institutions rather than public or private non-profit institutions (11 percent versus 4 percent).

⁶⁶ 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>.

⁶⁷ 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>.

⁶⁸ 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, and 2017



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 2001 to 18 percentage points in 2017.

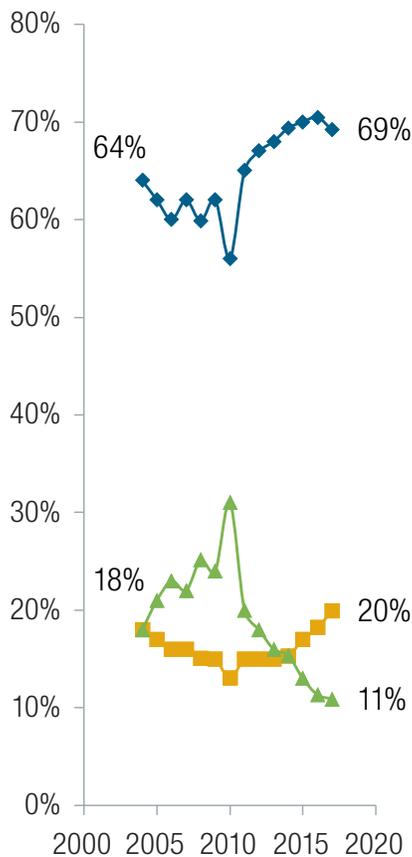
NOTE: Federal Grant aid is comprised primarily of Pell Grants but also includes Federal Supplemental Educational Opportunity Grants (FSEOG) and grants from federal agencies other than the U.S. Department of Education such as the Department of Veterans Affairs and the Department of Labor.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), as included in *Digest of Education Statistics 2018*, [Table 331.20]. Retrieved from https://nces.ed.gov/programs/digest/d18/tables/dt18_331.20.asp?current=yes.

Equity Indicator 2b: Percentage distribution of full-time, first-time degree-seeking undergraduate students by control of institution attended by receipt of federal grant status: 2004 to 2017

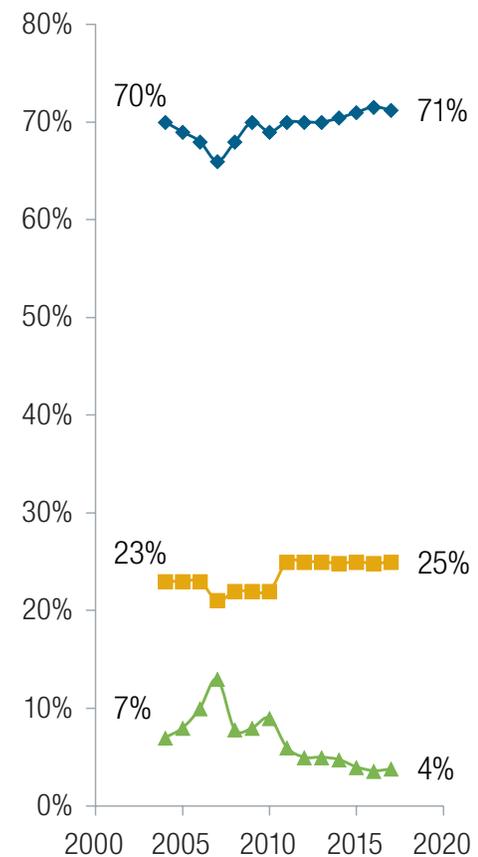
Percentage Distribution of Pell and Federal Grant Recipients

- ◆ Federal Grant Public
- Federal Grant Private Non-Profit
- ▲ Federal Grant Private For-Profit



Percentage Distribution of Non-Recipients

- ◆ No Federal Grant Public
- No Federal Grant Private Non-Profit
- ▲ No Federal Grant Private For-Profit



Indicator Status:

Pell and other Federal Grant recipients were 3 times as likely as Federal Grant non-recipients to attend a private for-profit institution in 2017 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.

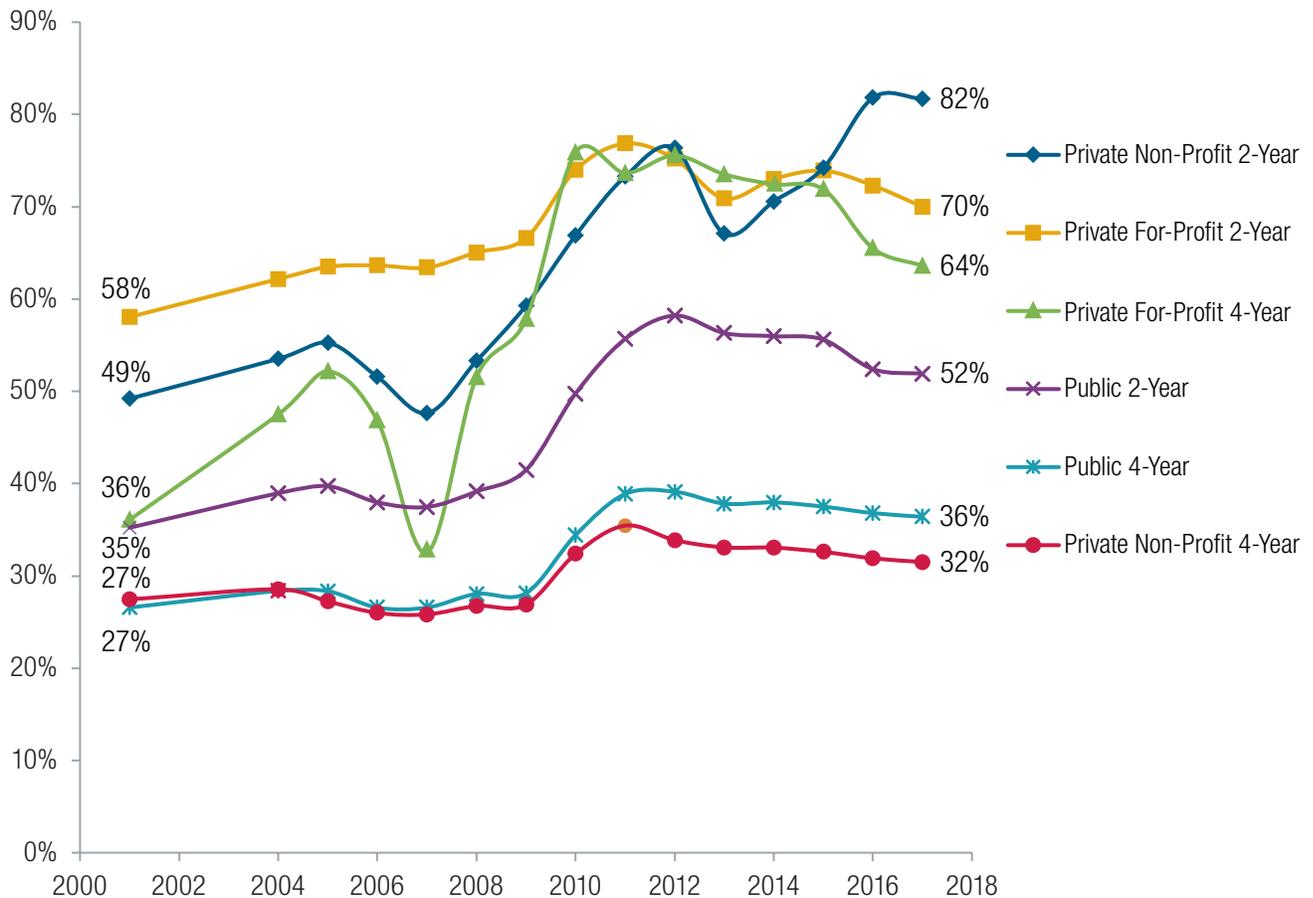
SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS). (2017), as included in *Digest of Education Statistics 2018*, [Table 331.20]. Retrieved from https://nces.ed.gov/programs/digest/d18/tables/dt18_331.20.asp?current=yes.

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 2016-17, two-thirds (64 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 (32 percent) institutions. About 70 percent of FTFT undergraduates at private for-profit 2-year institutions and 82 percent of those attending private non-profit 2-year institutions received Federal Grants in 2016-17, compared with half (52 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 2016-17 than in 2014-15. Between 2015 and 2017, the percentage of FTFT undergraduates receiving Pell and other Federal Grants declined by 8 percentage points at private for-profit 4-year institutions (from 72 percent to 64 percent), 4 percentage points at private for-profit 2-year institutions (from 74 percent to 70 percent), 4 percentage points at public 2-year institutions (from 56 percent to 52 percent), 2 percentage points at public 4-year institutions (from 38 percent to 36 percent), and 1 percentage point at private non-profit 4-year institutions (from 33 percent to 32 percent). At private non-profit 2-year institutions, the percentage of FTFT undergraduates receiving Federal Grants increased from 74 percent in 2015 to 82 percent in 2017.

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 2017



Indicator Status: High Inequality

In 2017, 64 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 28 percentage points in 2017 (36 percent versus 64 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 2018*, [Table 331.20]. Retrieved from https://nces.ed.gov/programs/digest/d18/tables/dt18_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 2004.⁶⁹ 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 Figure A-4 and A-5) 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.⁷⁰ 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).

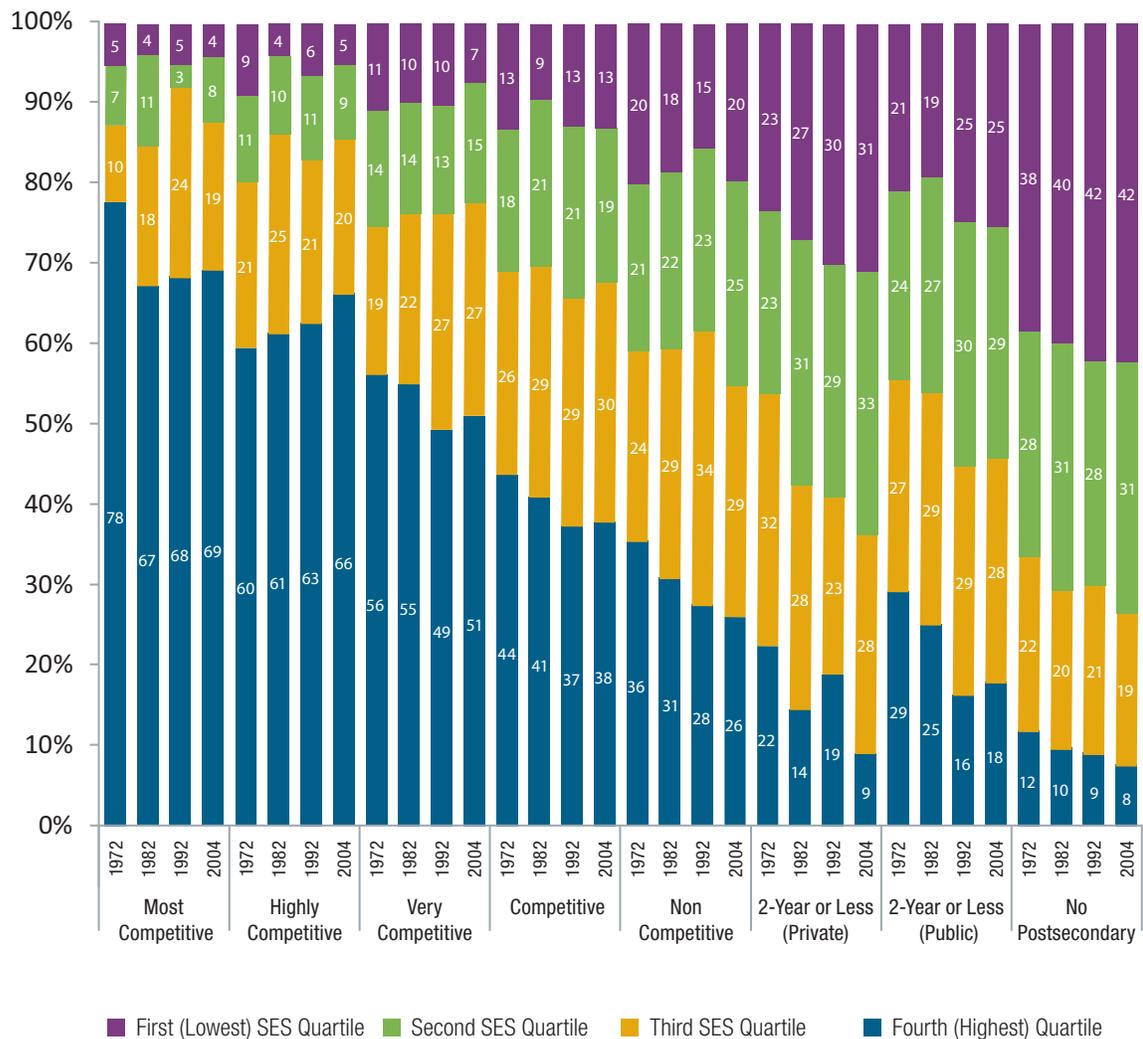
In both 1972 and 2004, among students whose institutional destination was the “most competitive” colleges and universities, 88 percent came from the two highest family SES quartiles and 12 percent came from the bottom half of the SES distribution.

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) and 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).

69 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>.

70 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 three most recent high school longitudinal studies, 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. In interpreting this chart, it is important to keep in mind that overall only about 2 percent of students planned to attend a “Most Competitive” institution. For example, in 2004 the percentage of students planning to attend the “Most Competitive” institutions ranged from 0.5 percent for the first (lowest) SES quartile to 6.2 percent for the fourth (highest) SES quartile. See Appendix A for tables showing the percentages of students in each competitiveness category.

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> 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 2017-2018 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 2017-18, only 17 percent of students enrolled at the "Most Competitive" institutions received Pell or other Federal Grants, compared with 60 percent of students enrolled at "Noncompetitive" institutions.

Although the representation of students receiving Federal Grants was higher in 2017-18 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 2017-18 than in 1999-00 (17 percent versus 15 percent). In contrast, the share of FTFT undergraduates receiving Federal Grants was 19 percentage points higher in 2018 than in 2000 at 2-year public institutions (57 percent versus 38 percent), 10 percentage points higher at "Noncompetitive" institutions (60 percent versus 50 percent), and 13 percentage points higher at for-profit 2-year and 4-year institutions (67 percent versus 54 percent).⁷¹

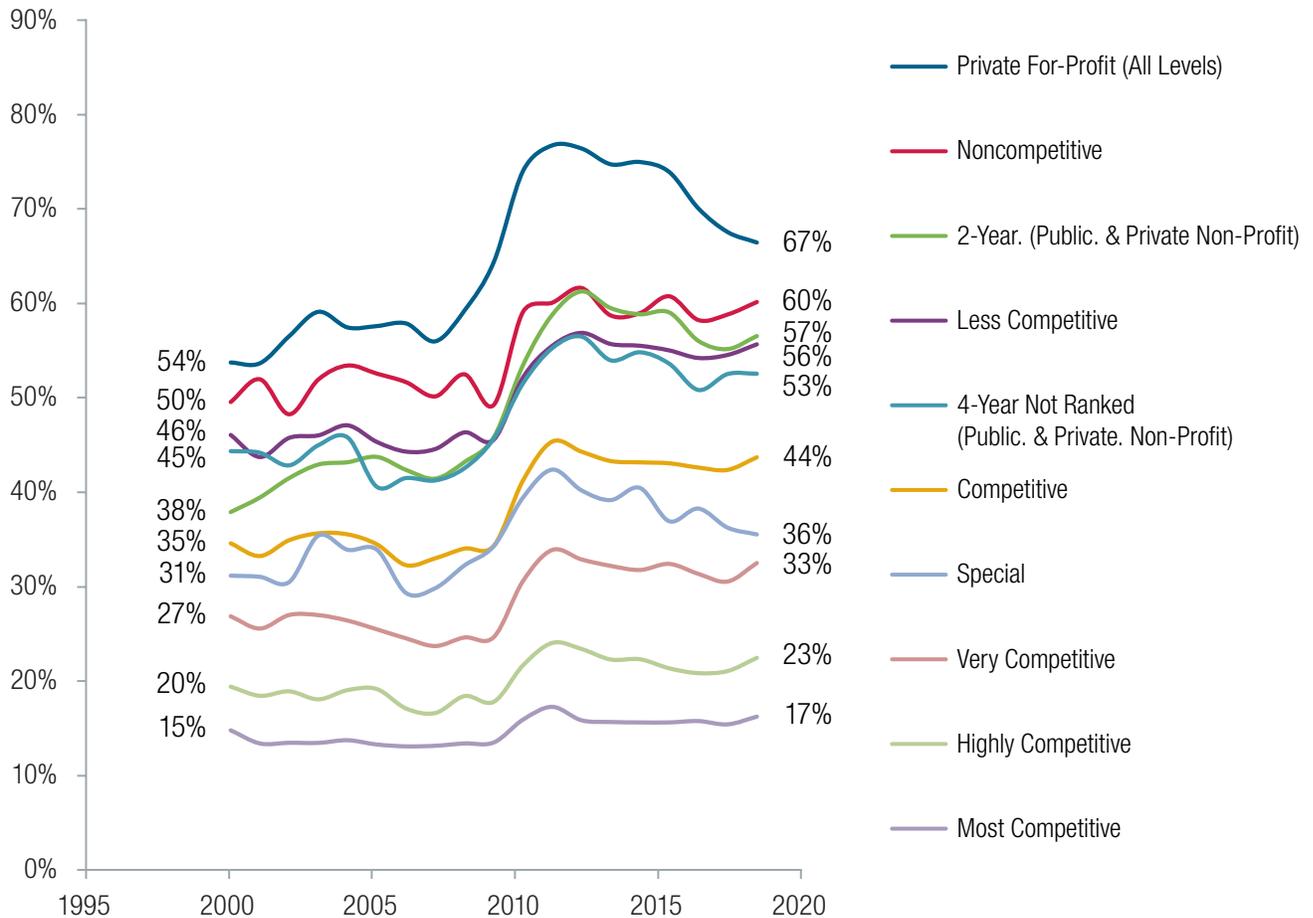
Equity Indicator 2f: How Does Immediate College Enrollment by Competitiveness of the Institution Vary by Socioeconomic Status (SES)?

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.

⁷¹ 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 2017-2018), 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 2017-2018



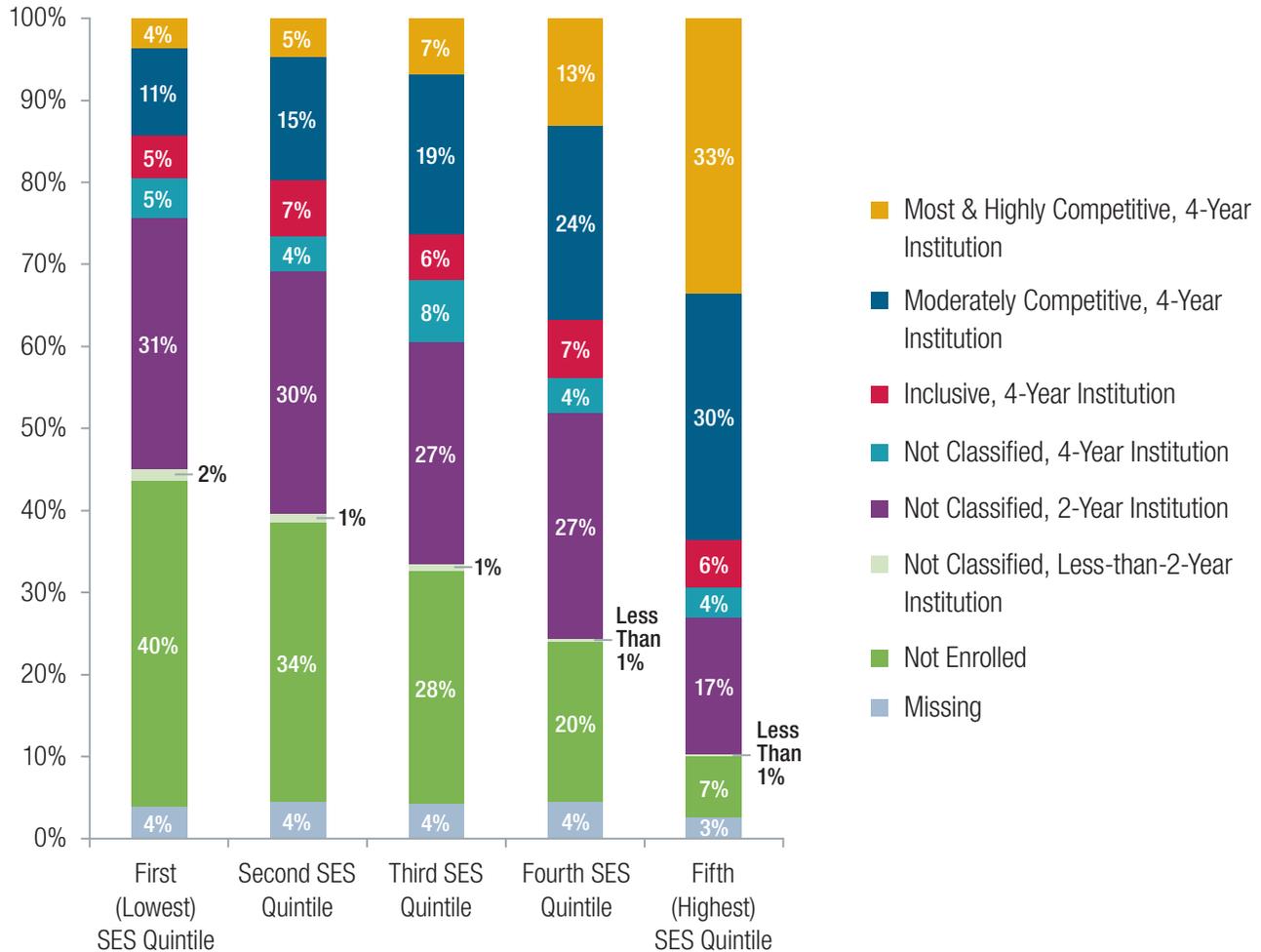
Indicator Status: High Inequality and Widening Gaps

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 2018.

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), 2018, 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.

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.

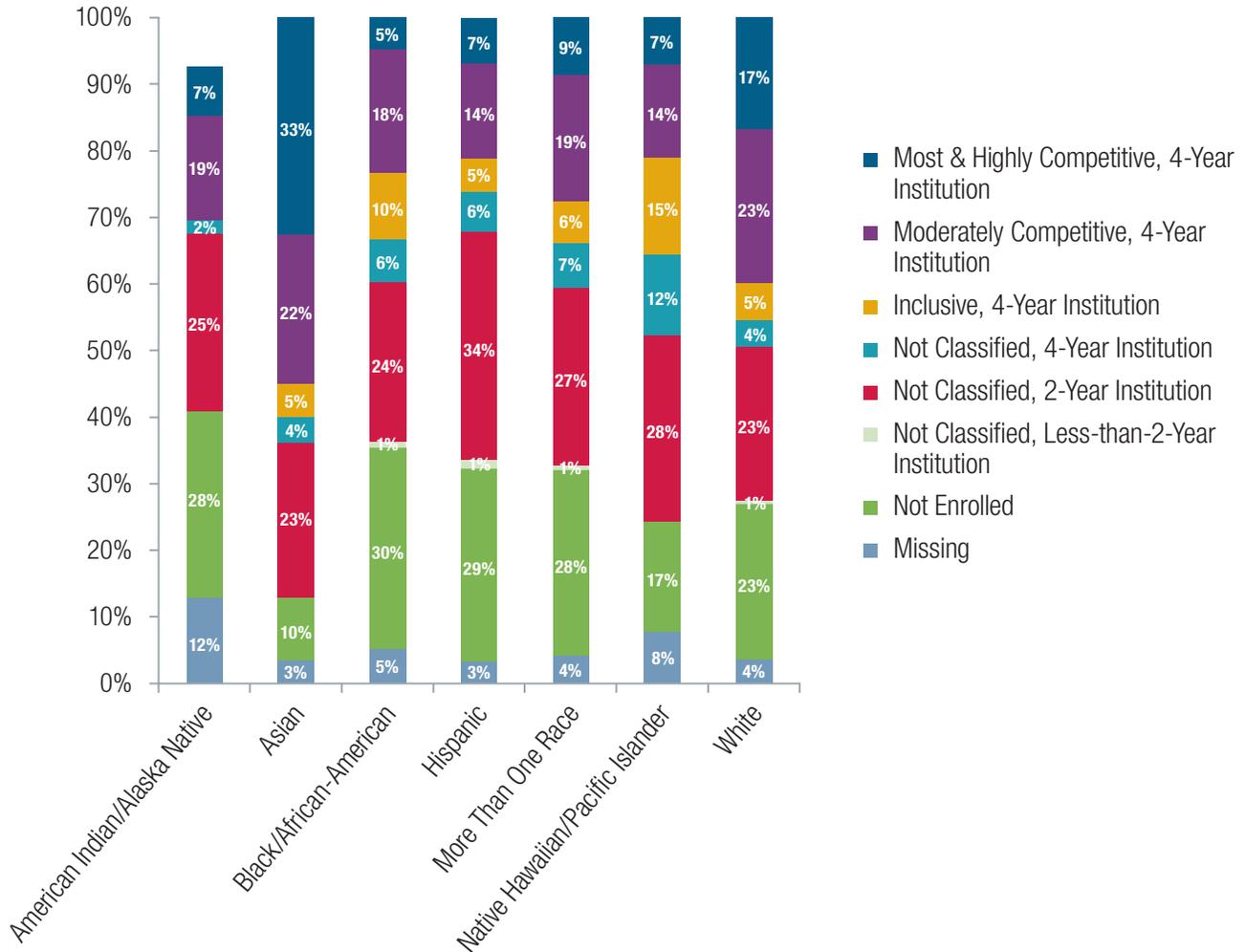
SOURCE: U.S. Department of Education, National Center for Education Statistics, High School Longitudinal Study (HSL:2009). Tabulated using NCES PowerStats.

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 Natives, More than One Race, and Native Hawaiian/Pacific Islanders as the estimates are not stable. Some columns do not sum to 100 percent due to data disclosure suppression of cells.

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 2h: How Do Institutional Level and Control Vary by Dependency Status and Pell Grant Status?

Using data from NPSAS:2016, Indicator 2h(i) shows the distribution of undergraduate students by institution level and control by dependency status. Indicator 2h(ii), also using NPSAS:2016, shows the level and control of institutions attended within each of the dependency categories disaggregated by whether the student did or did not receive a Pell Grant.

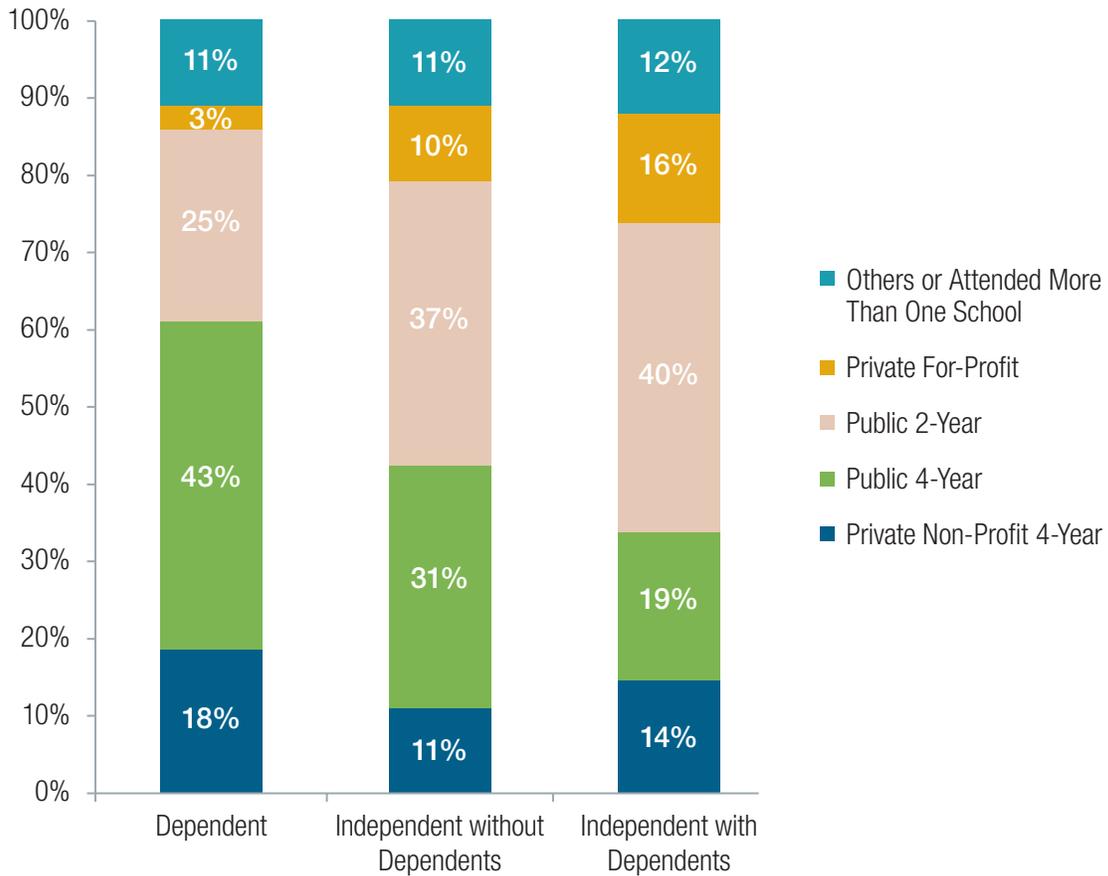
Dependency Status and Attendance at 4-Year Public and 4-Year Non-Profit Institutions. Indicator 2h(i) shows that almost two-thirds (61 percent) of dependent undergraduate students in 2016 were enrolled in a 4-year public or private non-profit institution. Smaller shares of independent students were enrolled 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(ii) shows variations in the level and control of institutions 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 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).

Among independent students without dependents, students who received Pell Grants were more likely than students who did not receive Pell Grants to attend a for-profit institution (14 percent versus 7 percent) and less likely to attend a public 2-year institution (29 percent versus 43 percent). Following the same pattern, among independent students with dependents, students who received Pell Grants were more likely than students who did not receive Pell Grants to attend a for-profit institution (20 percent versus 9 percent) and less likely to attend a public 2-year institution (37 percent vs. 44 percent).

Equity Indicator 2h(i): Percentage distribution of undergraduate students by level and control of institution and dependency status: 2016

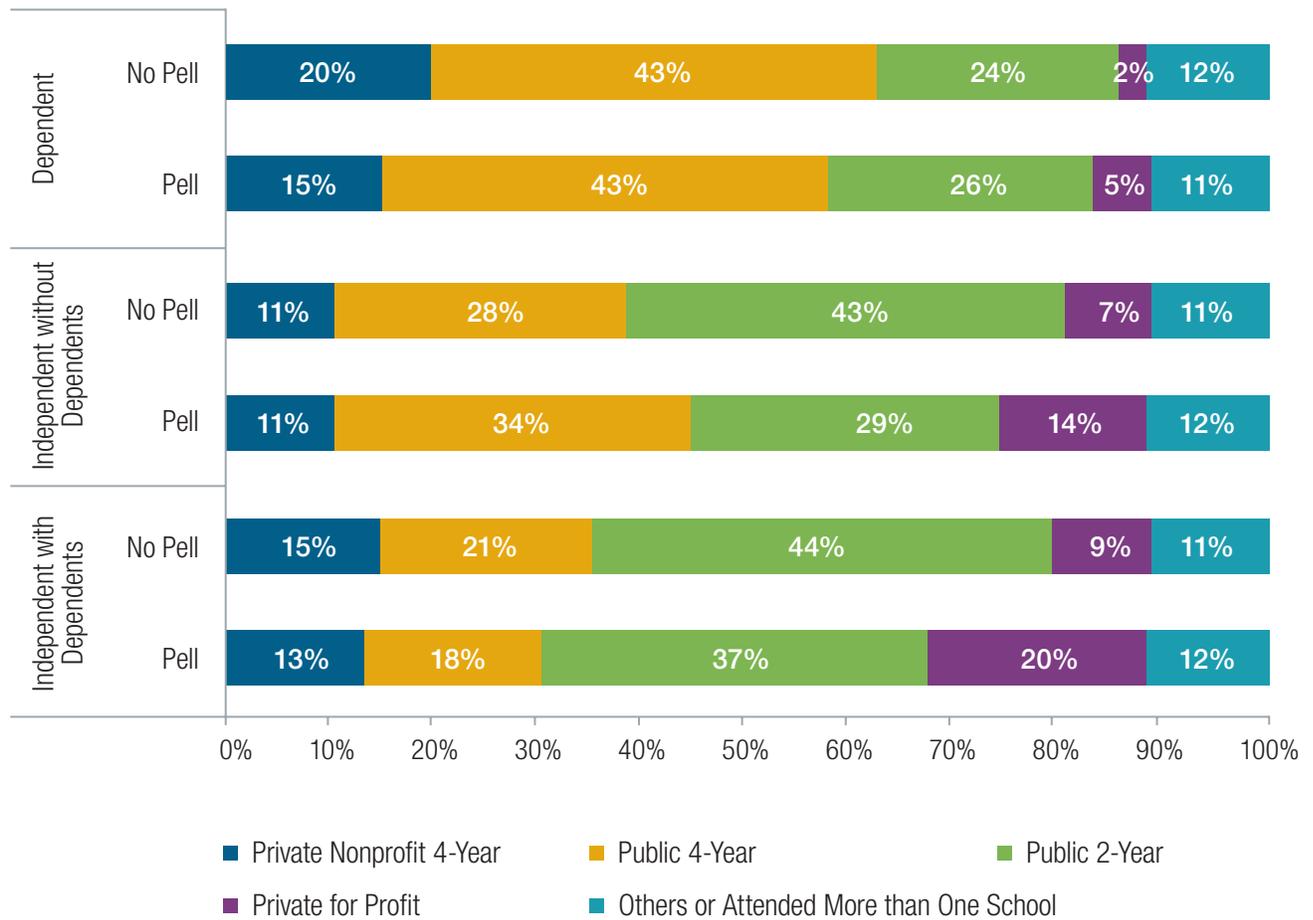


Indicator Status:

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.

Equity Indicator 2h(ii): Percentage distribution of undergraduate students by level and control of institution attended by dependency and 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 NCES PowerStats.

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

Attendance at Selective Institutions. 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.

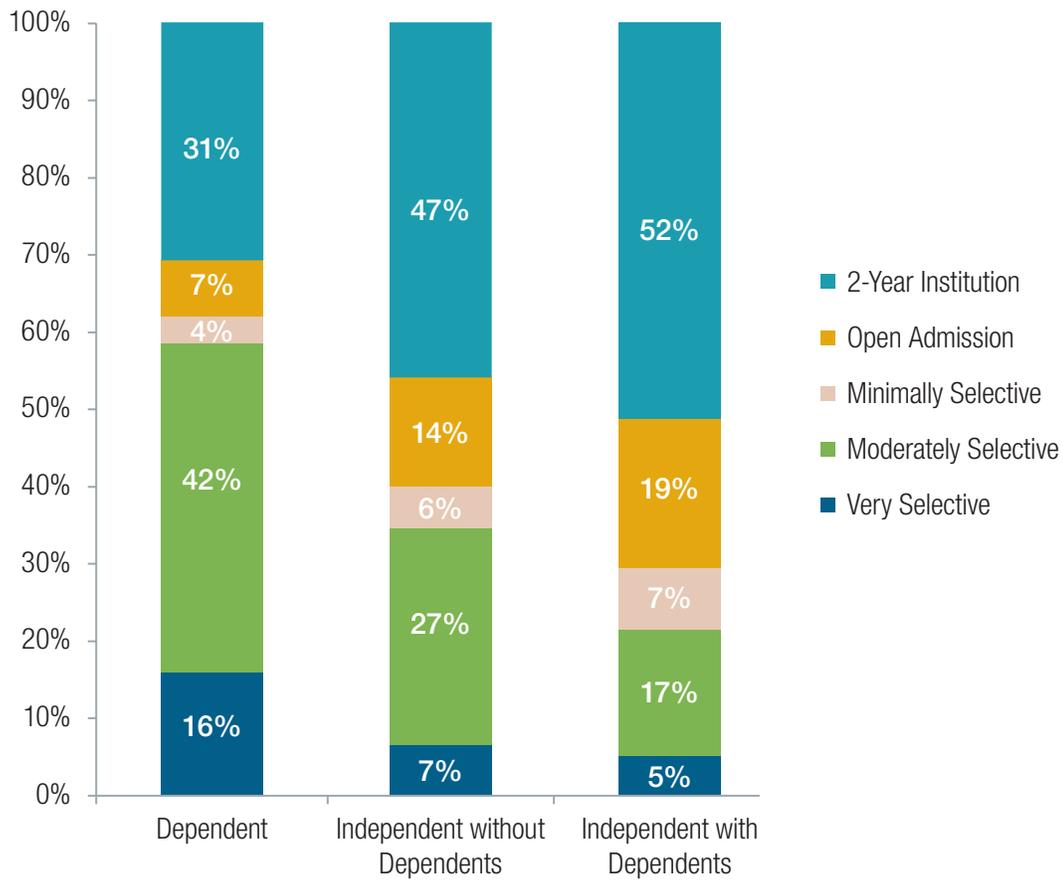
Attendance at 2-year and Open Admission 4-year Institutions. Independent students are more likely than dependent students to attend 2-year⁷² and open admission 4-year institutions. In 2016, 47 percent of independent students without dependents and 52 percent of independent students with dependents attended 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.

Selectivity, Dependency, and Pell Receipt. 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 for-profit institutions (52 percent of Pell recipients and 54 percent of non-Pell recipients).

⁷² The categories that NCES provides for the selectivity variable [SELECTV3] are very selective, moderately selective, minimally selective, open admission, and non-4-year. We assume that “non-4-year” means 2-year.

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

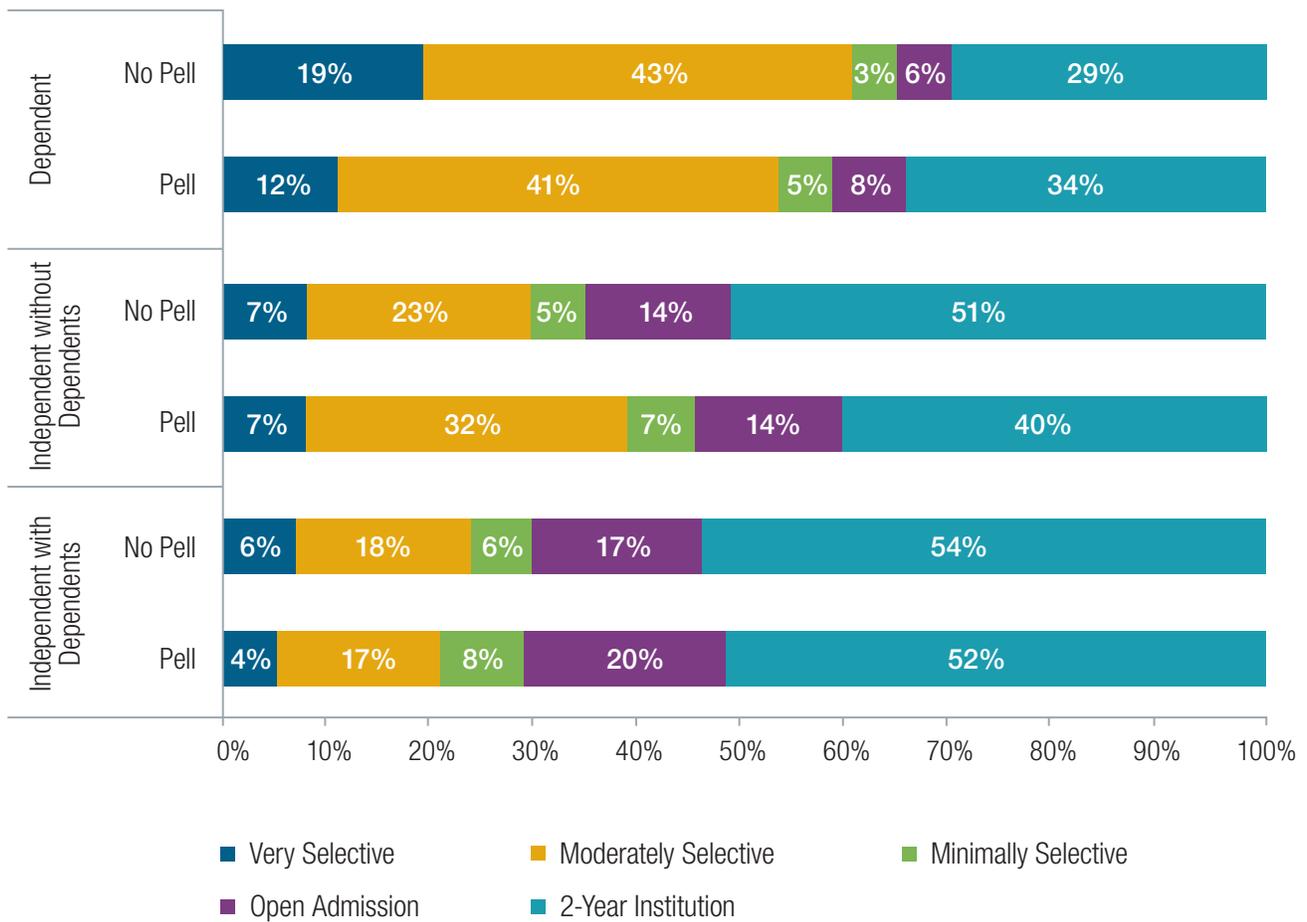


Indicator Status:

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.

Equity Indicator 2i(ii): Percentage distribution of undergraduate students by institutional selectivity, dependency, 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.

EQUITY INDICATOR 3:

DOES FINANCIAL AID ELIMINATE THE FINANCIAL BARRIERS TO PAYING COLLEGE COSTS?

The maximum Federal Pell Grant covered 67 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 \$16,484 rather than \$6,095 in 2018-19.

Equity Indicator 3(a-c): Definitions

Indicator 3 tracks statistics related to college cost and the amount of cost covered by Federal Pell Grants. 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 AY2019-20 award year (July, 2019 to June 30, 2020) is \$6,195.

- **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, which take into account 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 spouses' incomes (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).

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 2018 dollars) in 2017-18 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 (\$8,978) than in 1974-75 (\$9,501). After 1980, average costs rose steadily to \$23,835 in 2017-18.⁷³

Public vs. Private Costs. Average costs in constant 2018 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 (\$16,309 vs. \$7,889) and in 2017-18 (\$43,139 vs. \$20,050). Costs were also about twice as high at 2-year private institutions than at 2-year public institutions in 1974-75 (\$12,413 vs. \$6,415 in 2018 dollars) and 2.5 times higher in 2017-18 (\$25,596 vs. \$10,281).

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 2018 dollars, average costs at 4-year public institutions were 23 percent higher than 2-year public costs in 1974-75 (\$7,889 vs. \$6,415). By 2017-18, average costs were 95 percent higher for 4-year public institutions than 2-year public colleges (\$20,050 vs. \$10,281).

Between 1974-75 and 2017-18, average costs for 4-year public postsecondary institutions increased 2.5 times in constant dollars while average costs for 2-year public institutions increased 1.6 times. Over the same period,

⁷³ U.S. Department of Education, National Center for Education Statistics. (2018). *Digest of Education Statistics 2018*, [Table 330.10]. Retrieved from https://nces.ed.gov/programs/digest/d18/tables/dt18_330.10.asp?current=yes.

average costs for 4-year private institutions rose 2.6 times and average private 2-year costs rose 2 times. By comparison, median family income of families increased only 1.4 times (35 percent) between 1975 and 2018 (rising from \$58,381 to \$78,646 in constant 2018 dollars), with most of the increase occurring prior to 1999.⁷⁴

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 2017-18 average college costs for full-time undergraduates, weighted by enrollment, by state as reported by NCES.⁷⁵

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 2017-18 ranged from less than \$15,000 in Utah, Wyoming, and Florida to more than \$25,000 in Illinois, Connecticut, Massachusetts, Pennsylvania, New Jersey, New Hampshire, and Vermont.

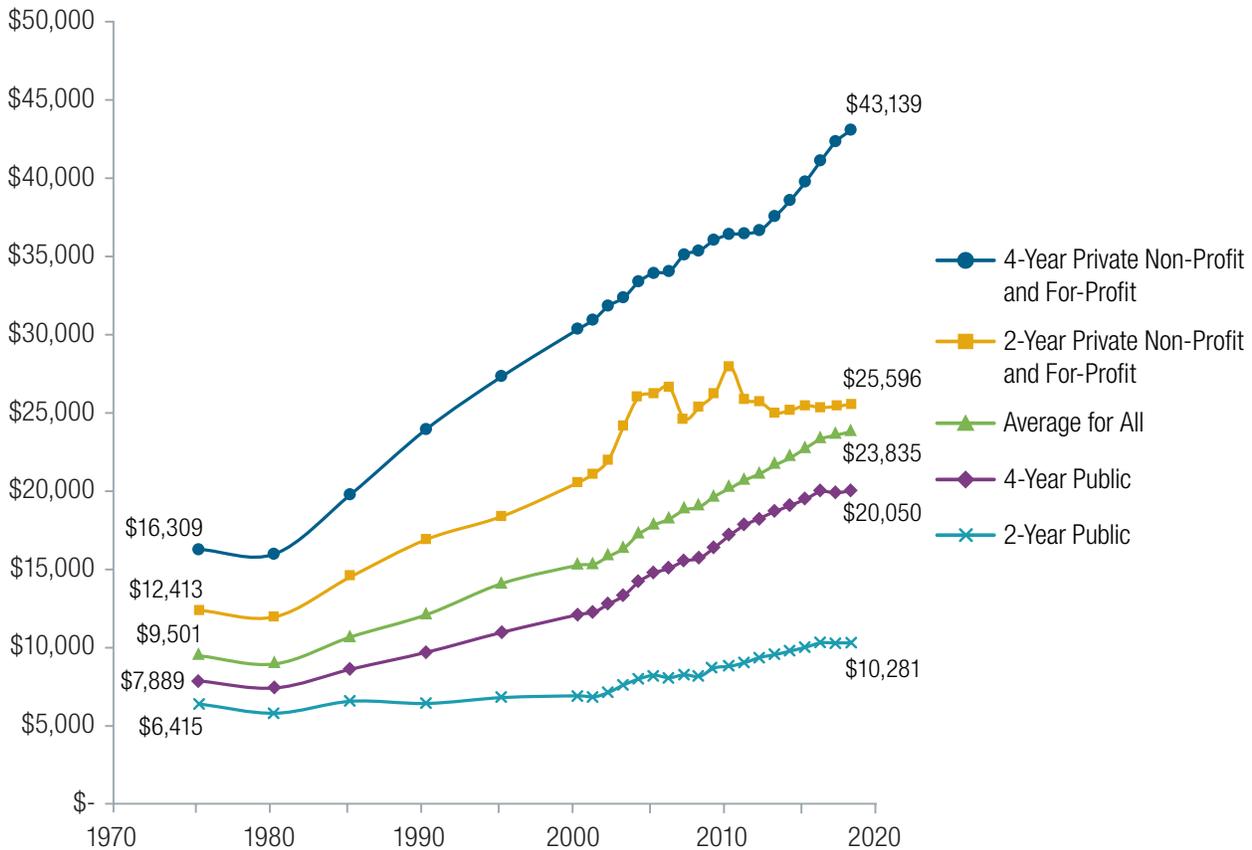
Indicator 3a(iii) shows that, at 4-year private (including non-profit and for-profit) institutions, average costs (tuition and fees, room and board) for full-time students varied from \$13,488 in Idaho and \$15,389 in Utah to more than \$55,000 in Maryland, Vermont, District of Columbia, and Massachusetts.

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 \$1,268 in California and \$1,666 in New Mexico, compared with \$7,337 in New Hampshire.

⁷⁴ See Appendix A for median income for all families and for families with children under 18.

⁷⁵ Additional breakouts by in-state and out of state are available at the following NCES website: https://nces.ed.gov/programs/digest/d18/tables/dt18_330.10.asp?current=yes.

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 2017-18 (constant 2018 dollars)



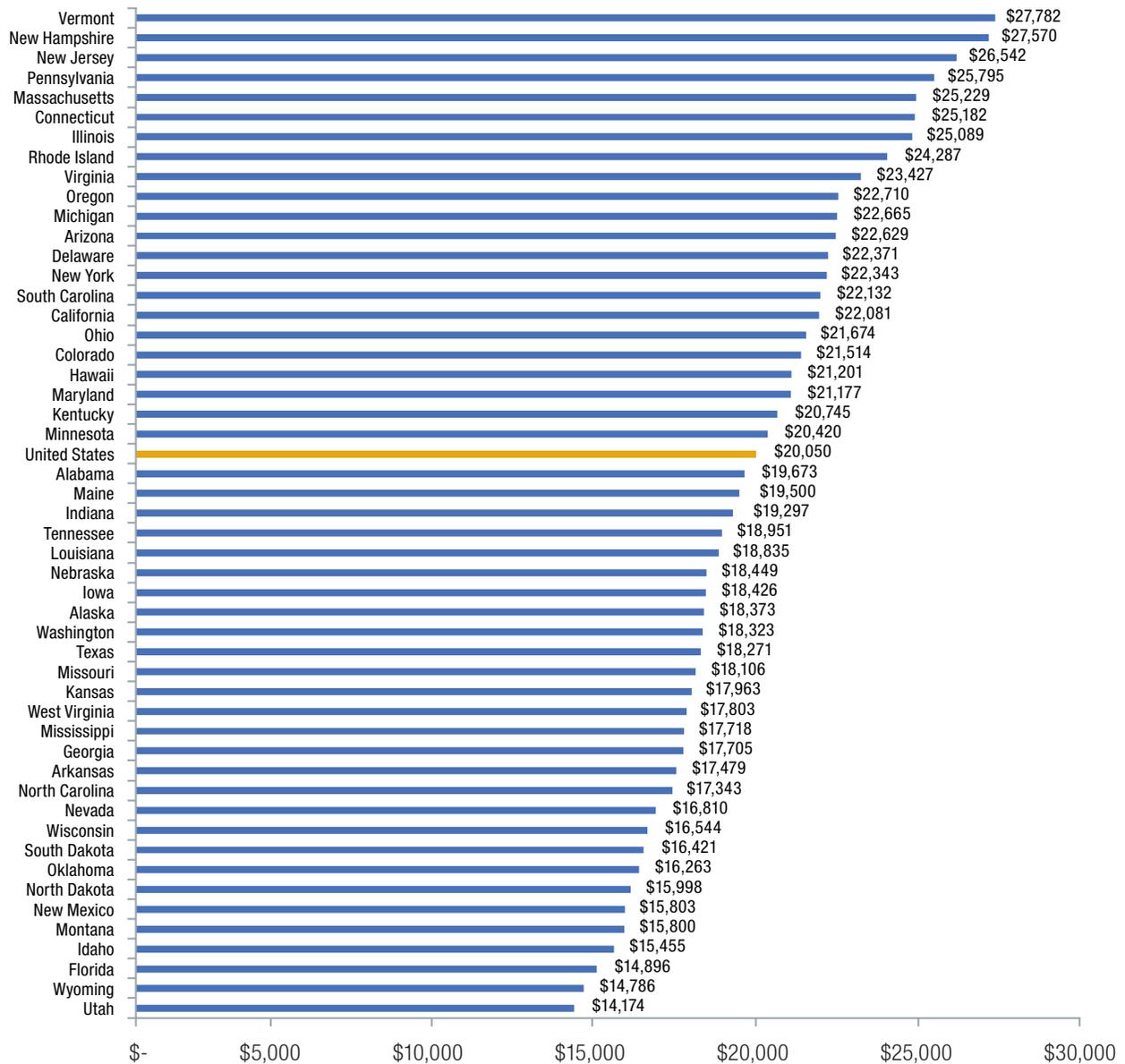
Indicator Status: Large Increases in College Costs and Growing Difference in Costs between Institution Sectors.

In constant dollars, between 1974-75 and 2017-18, average costs increased 2.5 times for 4-year public postsecondary institutions and 1.6 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 (2018). *Digest of Education Statistics 2018*, [Table 330. 10]. Retrieved from https://nces.ed.gov/programs/digest/d18/tables/dt18_330.10.asp?current=yes.

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: 2017-18



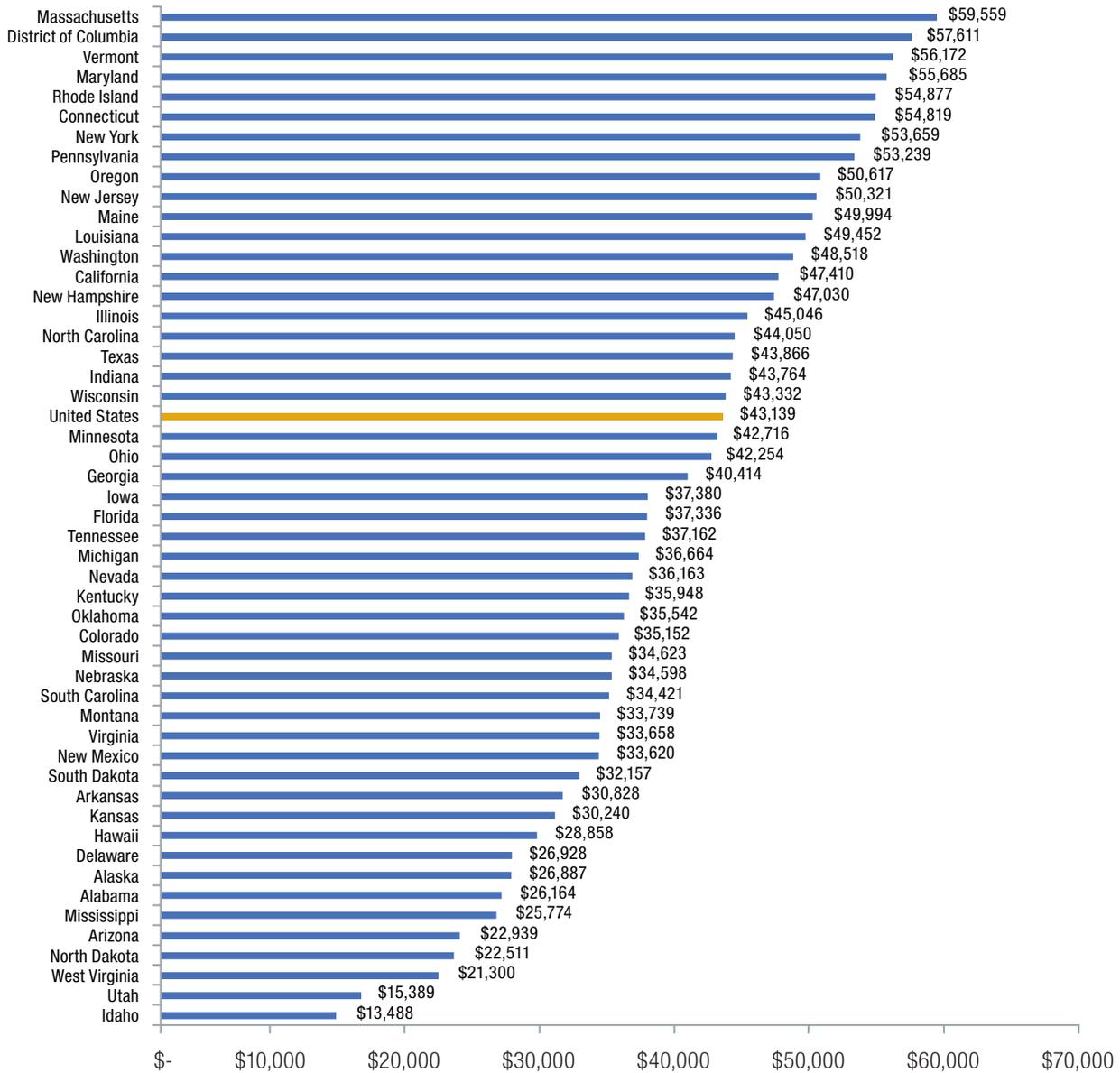
Indicator Status:

Wide variation in average college costs across states ranging from \$14,174 in Utah to \$27,782 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. 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 (2018). *Digest of Education Statistics 2018*, [Table 330.20]. Retrieved from https://nces.ed.gov/programs/digest/d18/tables/dt18_330.20.asp?current=yes.

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: 2017-18



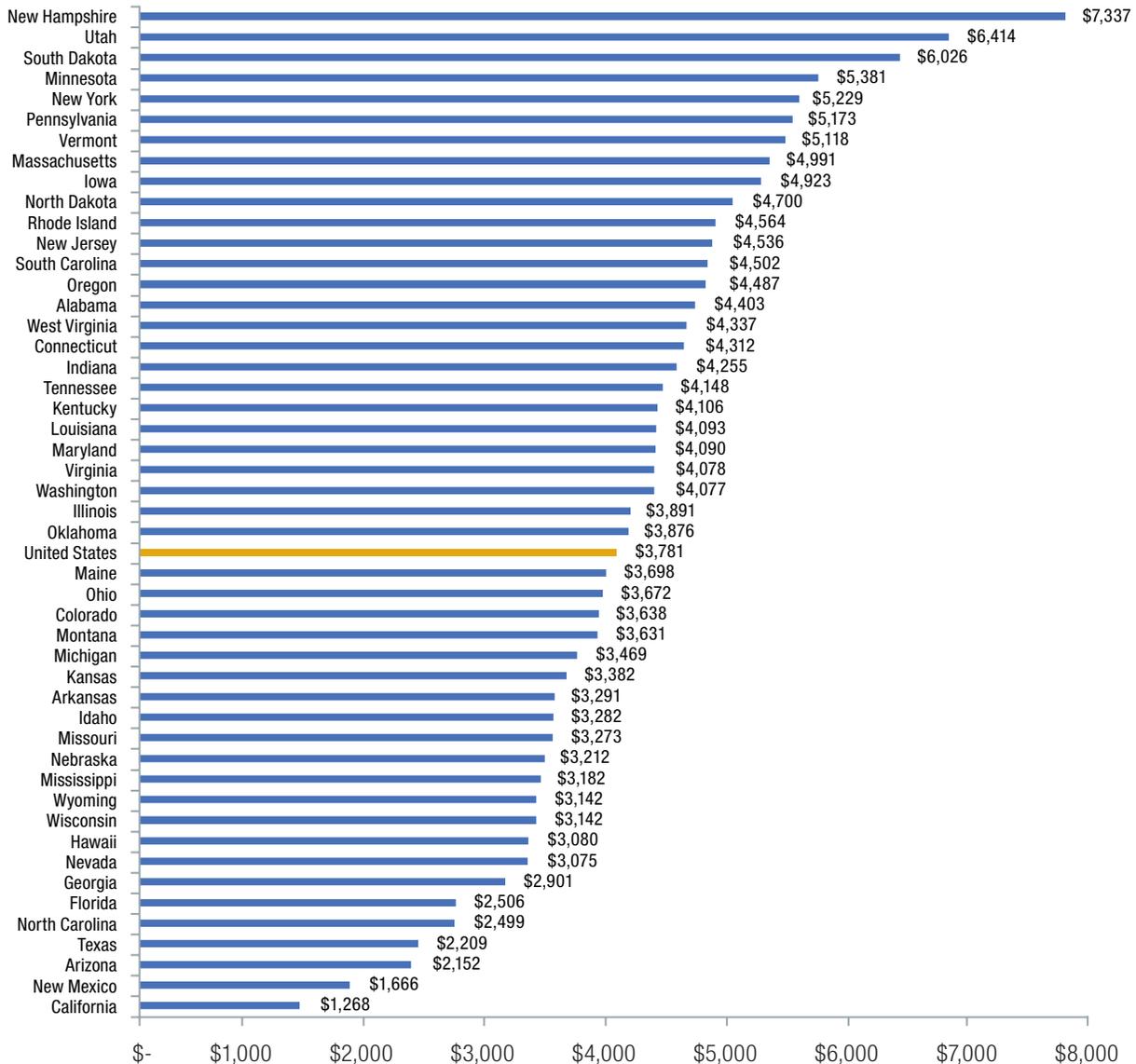
Indicator Status:

Wide variation in average costs across states ranging from \$13,488 in Idaho to \$59,559 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 (2018). *Digest of Education Statistics 2018* [Table 330.20]. Retrieved from https://nces.ed.gov/programs/digest/d18/tables/dt18_330.20.asp?current=yes.

Equity Indicator 3a(iv): Average costs (undergraduate tuition and fees) charged by public 2-year institutions for full-time in-state students by state: 2017-18



Indicator Status:

Wide variation in average college costs across states. In 2017-18, average costs (undergraduate tuition and fees) of attending a public 2-year institution ranged from \$1,268 in California to \$7,337 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, District of Columbia as these costs are not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics (2018). *Digest of Education Statistics 2018* [Table 330.20]. Retrieved from https://nces.ed.gov/programs/digest/d18/tables/dt18_330.20.asp?current=yes.

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

The maximum Pell Grant is set by Congress.⁷⁶ 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.⁷⁷

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 2018 dollars from 1975-76 to 2018-19. Average college costs increased from \$9,778 in 1975-76 to an estimated \$24,603 in 2018-19.⁷⁸ This is an increase of 152 percent in constant dollars. In contrast, the Pell Maximum shows fluctuations but little change over the same period. In constant 2018 dollars the maximum Pell award was \$6,509 in 1975-76 and \$6,095 in 2018-19. The average Pell award increased from \$3,538 to \$4,160 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 2018 dollars, the percent of average college costs covered by the maximum Pell Grant peaked in 1975-76 and has had a generally declining trend over the period, falling from a high of 67 percent in 1975-76 to 40 percent by 1986-87, and to 25 percent in the most recent period.

Amount of Maximum Pell 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.⁷⁹ 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 \$16,484 rather than \$6,095.

As seen in Appendix Figure A-6 summarizing Pell spending from 1974 to 2019, the increase in Pell maximum necessary to restore funding to near the 1976 levels of covering about two-thirds of average college (from \$6,095 to \$16,484) would require an estimated increase of about \$48 billion per year over the \$28 billion 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 \$716 billion.⁸⁰

⁷⁶ 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.

⁷⁷ College Board (2019). *Trends in Student Aid*. Retrieved from <https://research.collegeboard.org/trends/student-aid>.

⁷⁸ 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.

⁷⁹ 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.

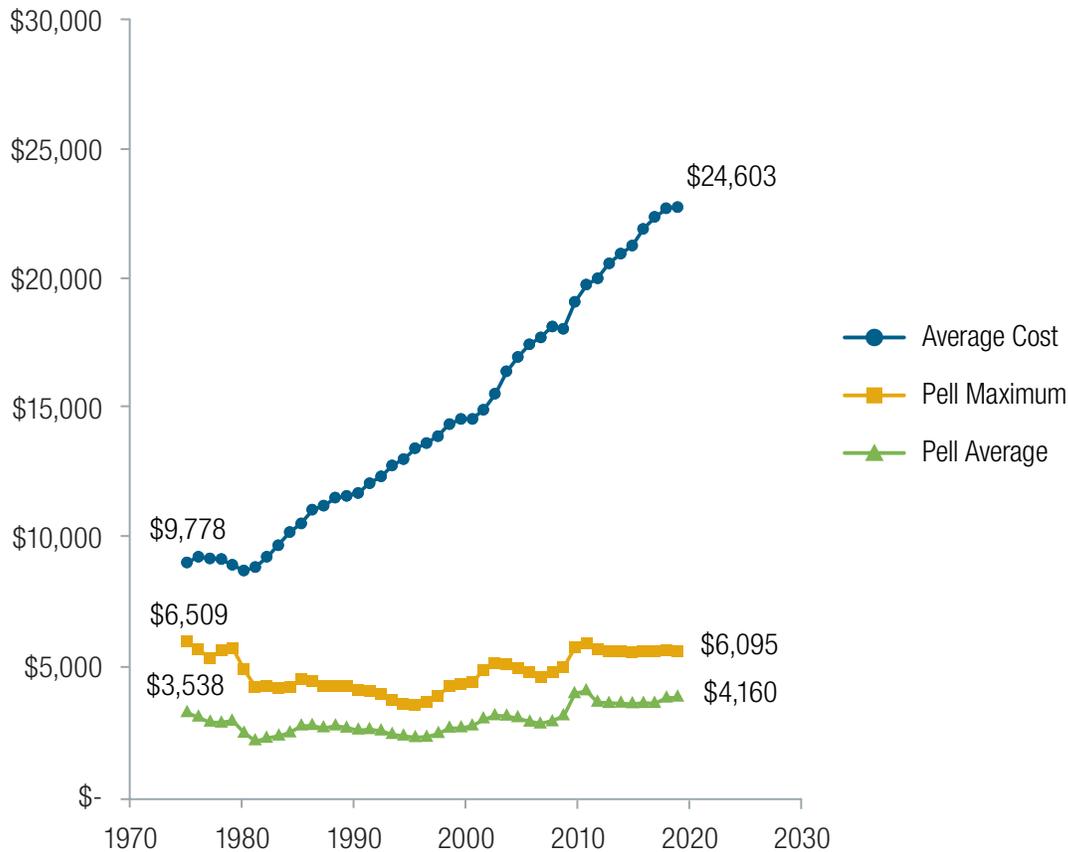
⁸⁰ The Defense budget for 2020 is estimated to be about \$738 billion and the estimated Pell budget for 2020 remains under \$29 billion. Macro Trends Download U.S. Military Spending/Defense Budget 1960-2020, Retrieved from www.macrotrends.net.

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.⁸¹ The student budgets for 2019-20 including tuition and fees, room and board, books and supplies, transportation, and other expenses, as published by the College Board, were:

- \$17,930 at 2-year public institutions for commuter students within district;
- \$25,890 at 4-year public institutions for in-state students living on campus;
- \$41,950 at 4-year public institutions for out-of-state students living on campus, and
- \$52,500 at 4-year private non-profit institutions for students living on campus.

⁸¹ College Board, <https://research.collegeboard.org/trends/college-pricing/figures-tables/average-estimated-undergraduate-budgets-sector-2019-20>.

Equity Indicator 3b(i): Average costs (tuition and required fees plus room and board) for full-time undergraduate enrollment and maximum and average Pell Grant awards: 1975-76 to 2018-19 (constant 2018 dollars)



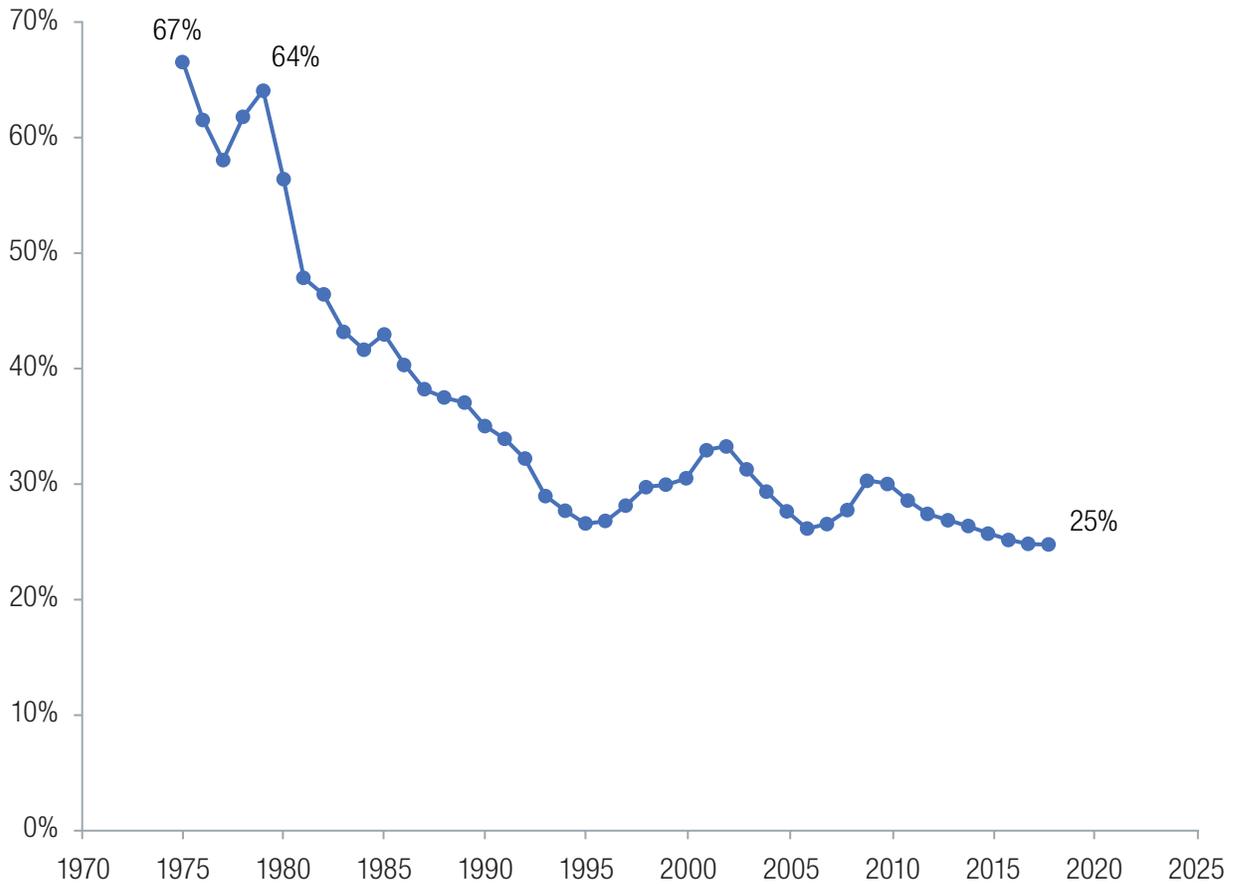
Indicator Status: Widening Gap between Average College Costs and Pell Awards

Comparing 1975-76 to 2018-2019, average college costs in constant dollars increased by 152 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?current=yes. College costs reported in Equity Indicator 3a(i) represent the average for all types of institutions from 1974-75 to 2017-18. As average costs were not yet available from NCES for 2018-19, we estimated the average cost figures for 2018-19 based on the 2017-18 data and recent average rates of increase. 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: 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>; National Center for Education Statistics (2018). *Digest of Education Statistics 2018* [Table 330.10]. Retrieved from https://nces.ed.gov/programs/digest/d18/tables/dt18_330.10.asp?current=yes.

Equity Indicator 3b(ii): Percentage of average costs (tuition and required fees plus room and board) covered by the maximum Pell Grant: 1975-76 to 2018-19 (constant 2018 dollars)



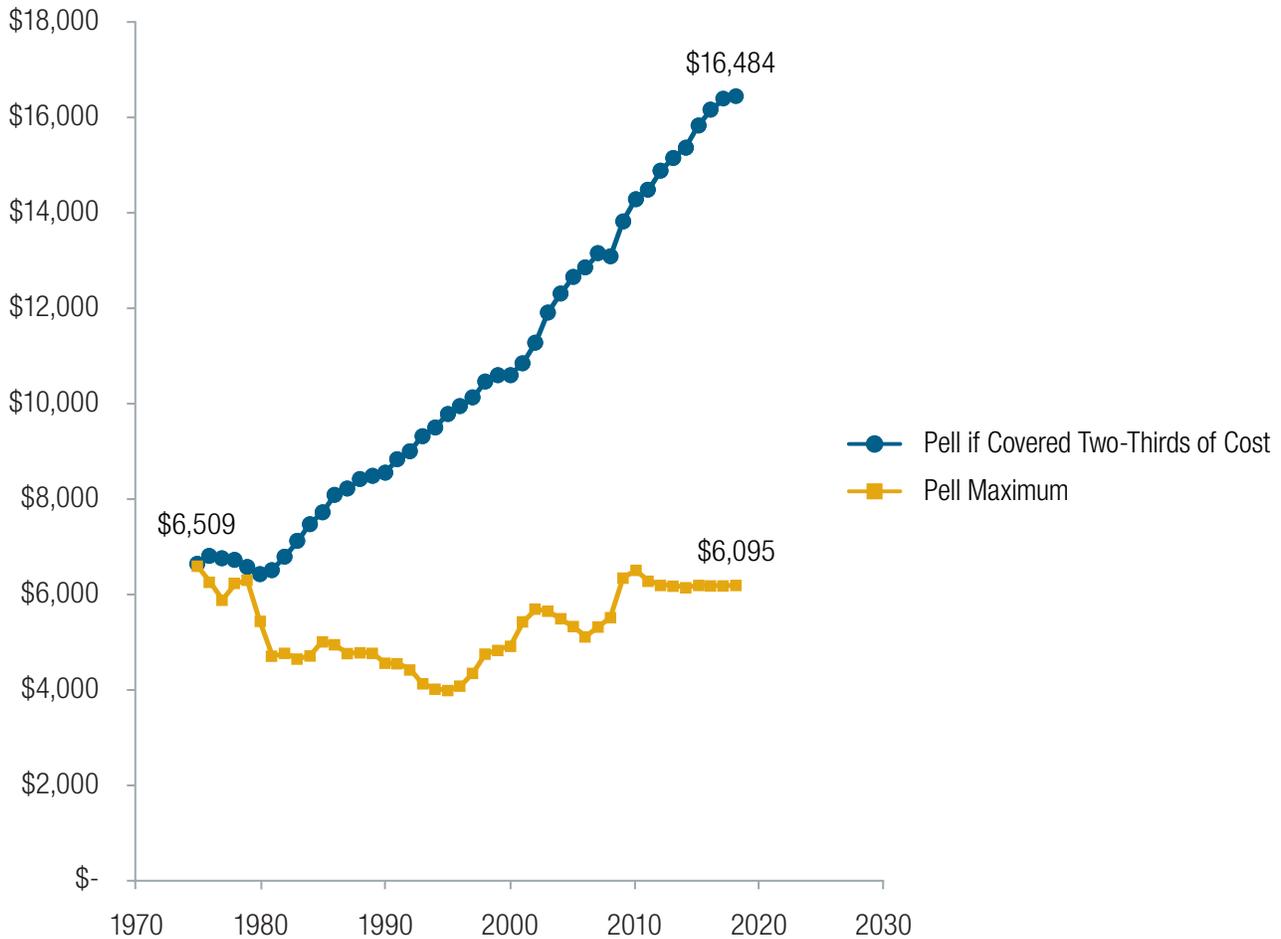
Indicator Status: Large Declining Opportunity

The percentage of average college costs covered by the maximum Pell Grant peaked in 1975-76 when the grant covered about 67 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: 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>; National Center for Education Statistics (2018). *Digest of Education Statistics 2018* [Table 330.10]. Retrieved from https://nces.ed.gov/programs/digest/d18/tables/dt18_330.10.asp?current=yes.

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): 1975-76 to 2018-19 (constant 2018 dollars)



Indicator Status: Reduced Opportunity

The maximum Pell Grant in 2018-19 would be \$16,484 rather than \$6,095 if it covered about two-thirds of college costs as in 1975-76.

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: U.S. Department of Education (various years). *Summary Pell Grant Statistics for Cross-Year Comparison, Pell End of Year Report*. Retrieved from <https://www2.ed.gov/finaid/prof/resources/data/pell-data.html> College Board (2019). *Trends in Higher Education*, [Figure 21A]. Retrieved from <https://www.trends.collegeboard.org/student-aid/figures-tables/maximum-and-average-pell-grants-over-time>. National Center for Education Statistics (2018). *Digest of Education Statistics 2018* [Table 330.10]. Retrieved from https://nces.ed.gov/programs/digest/d18/tables/dt18_330.10.asp?current=yes.

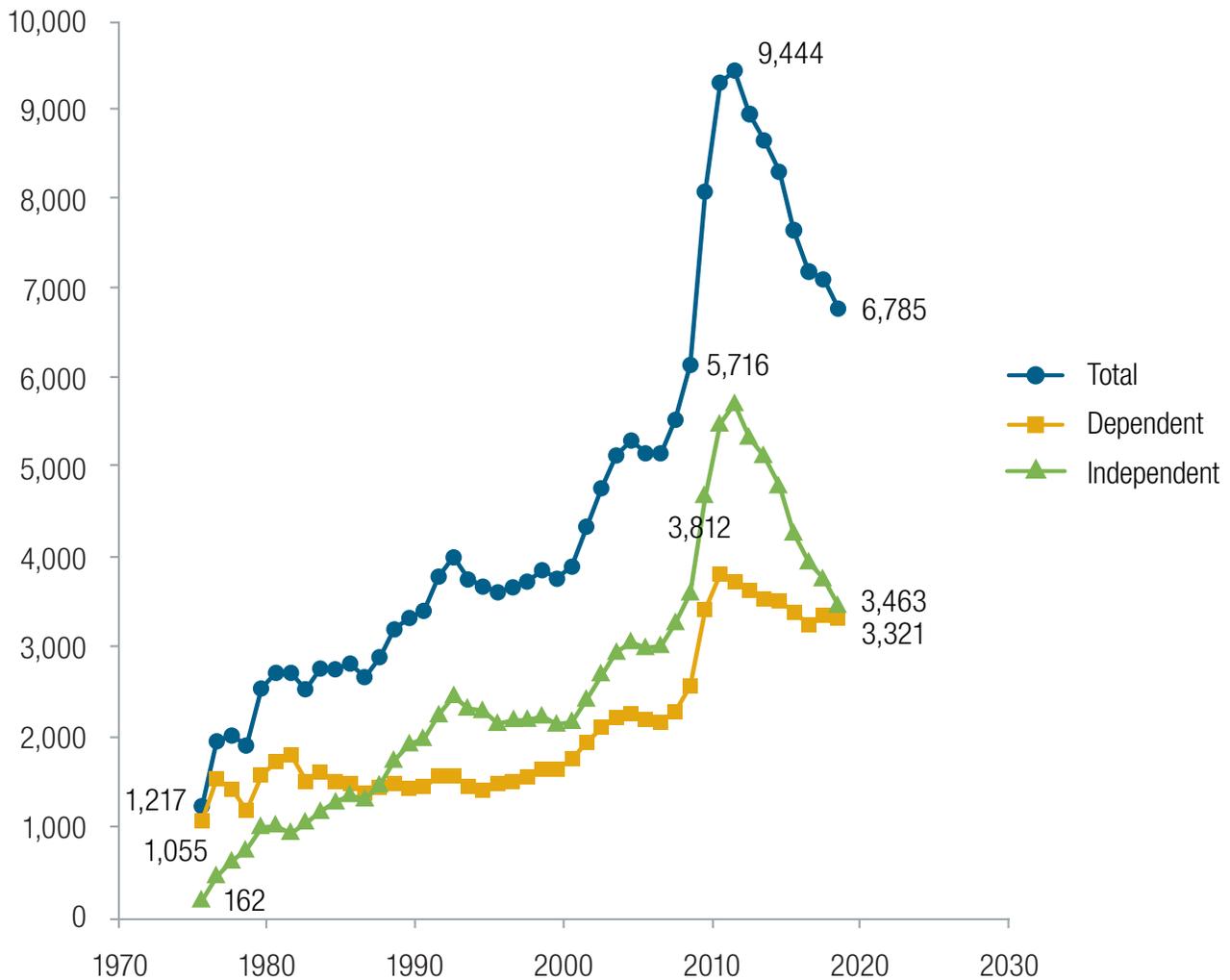
Growth in Pell Recipients and in Percentage Who Are Independent Students. Between 1975-76 and 2018-19 the number of Pell recipients per year has generally increased. There were 1.2 million Pell recipients in 1975-76 and 6.8 million in 2018-19 (see Equity Indicator 3b(iv)). The increase is attributable to increases in total postsecondary enrollment (from 9.6 million in 1975 to over 17 million in 2020) and 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 43 percent by 2018 (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 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 3,016 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(iv)).

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)).

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



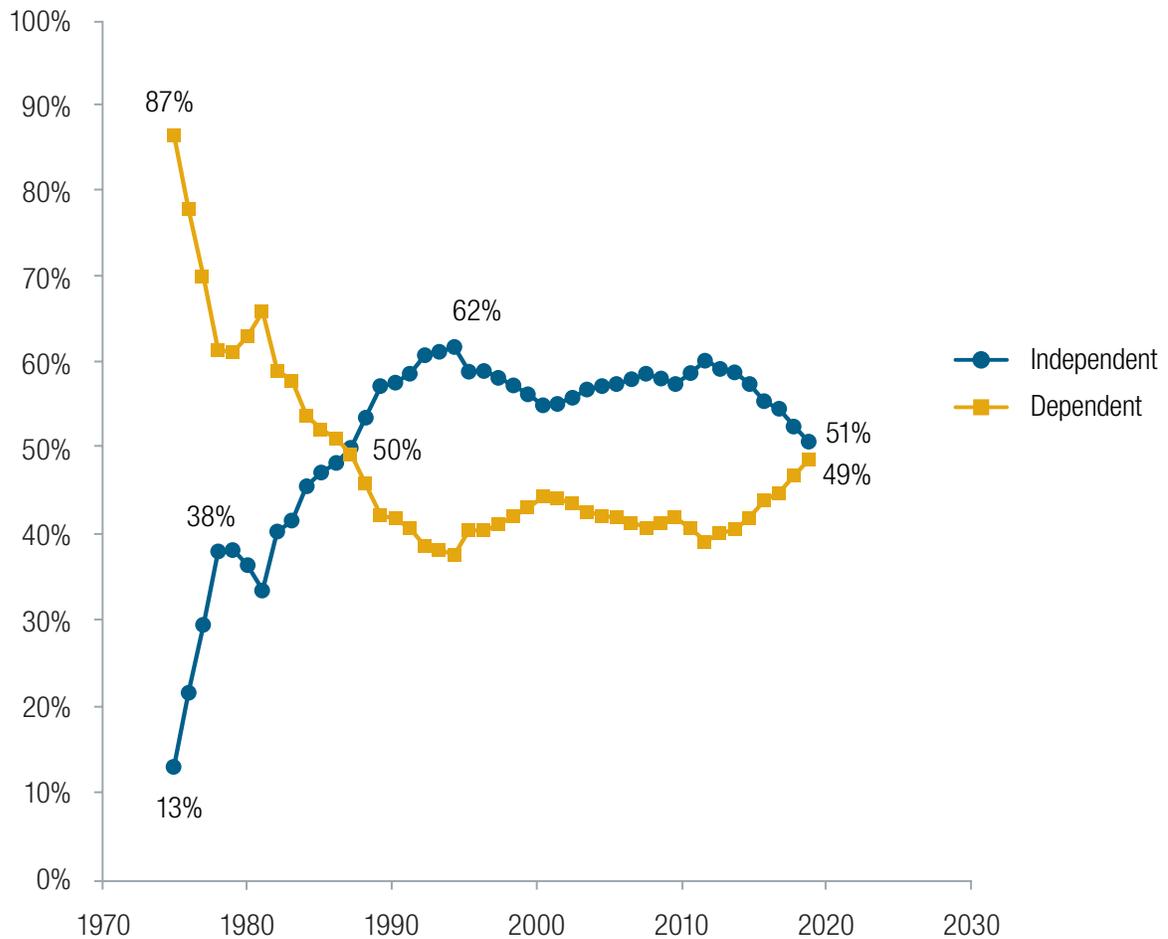
Indicator Status:

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: 1975-2018



Indicator Status: Reduced Opportunity

The percentage of Pell 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>.

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.⁸² For ease of comparison, all NPSAS data have been re-tabulated to reflect 2018 constant dollars.

Growth in Unmet Financial Need Among Lower Quartiles and Increase in Surplus Among 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 \$9,575 in unmet need while dependent full-time students in the highest family income quartile had, on average, a surplus of \$28,269. Average unmet financial need for dependent full-time undergraduates in the lowest family income quartile was 2.5 times higher in 2016 than in 1990 in constant 2018 dollars (\$9,575 vs. \$3,966).

Dependent full-time students in the second-lowest family income quartile also averaged high levels of unmet need. In 2016, their unmet need averaged \$8,027 (up from \$3,270 in constant dollars in 2008). In contrast, in 2016 dependent full-time students in the third highest quartile averaged a small negative unmet need (-\$629), and students in the fourth/highest quartile averaged a large negative unmet need (-\$28,269).⁸³

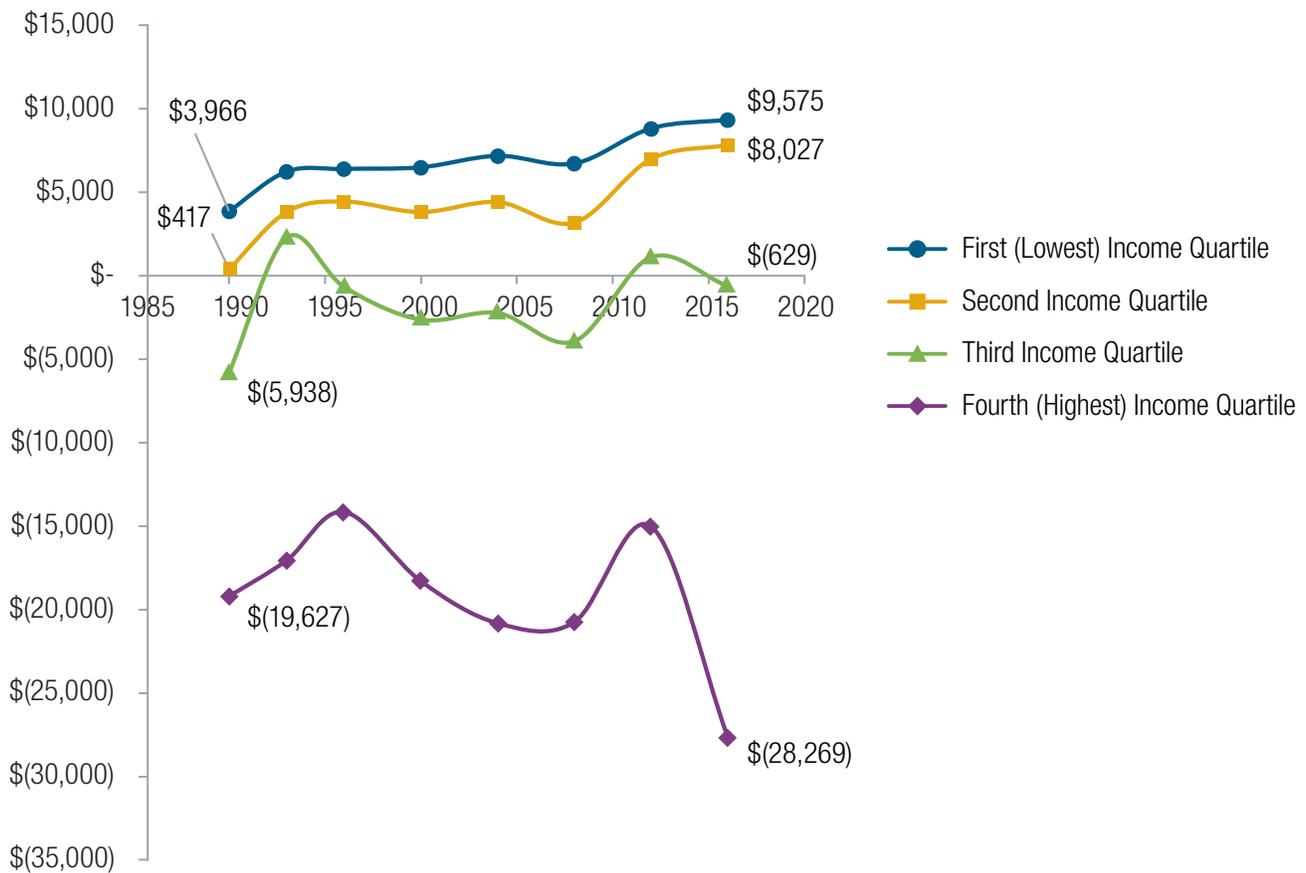
Unmet Financial Need for by Dependency Status: 2000-2016. Indicator 3c(ii) shows that average unmet need was substantially higher for full-time independent undergraduates in 2016 than for full-time dependent students. Average unmet need was \$16,822 for independent students with dependents and \$16,367 for independent students without dependents, compared with \$10,734 for dependent students.

⁸² Indicator 3a on “unmet need” in the *2019 Indicators* report presented NPSAS data in 2016 constant dollars and hence differs slightly from the amounts in 2020 Indicators report for Indicator 3a(i) which are in 2018 constant dollars.

⁸³ 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 (\$10,785 versus \$16,822 in constant 2018 dollars), 96 percent higher for full-time independent students without dependents (\$8,892 versus \$16,367), and 72 percent higher for full-time dependent students (\$6,225 versus \$10,734).

Equity Indicator 3c(i): Unmet financial need of dependent full-time undergraduates by family income quartile: 1990 to 2016 (in constant 2018 dollars)



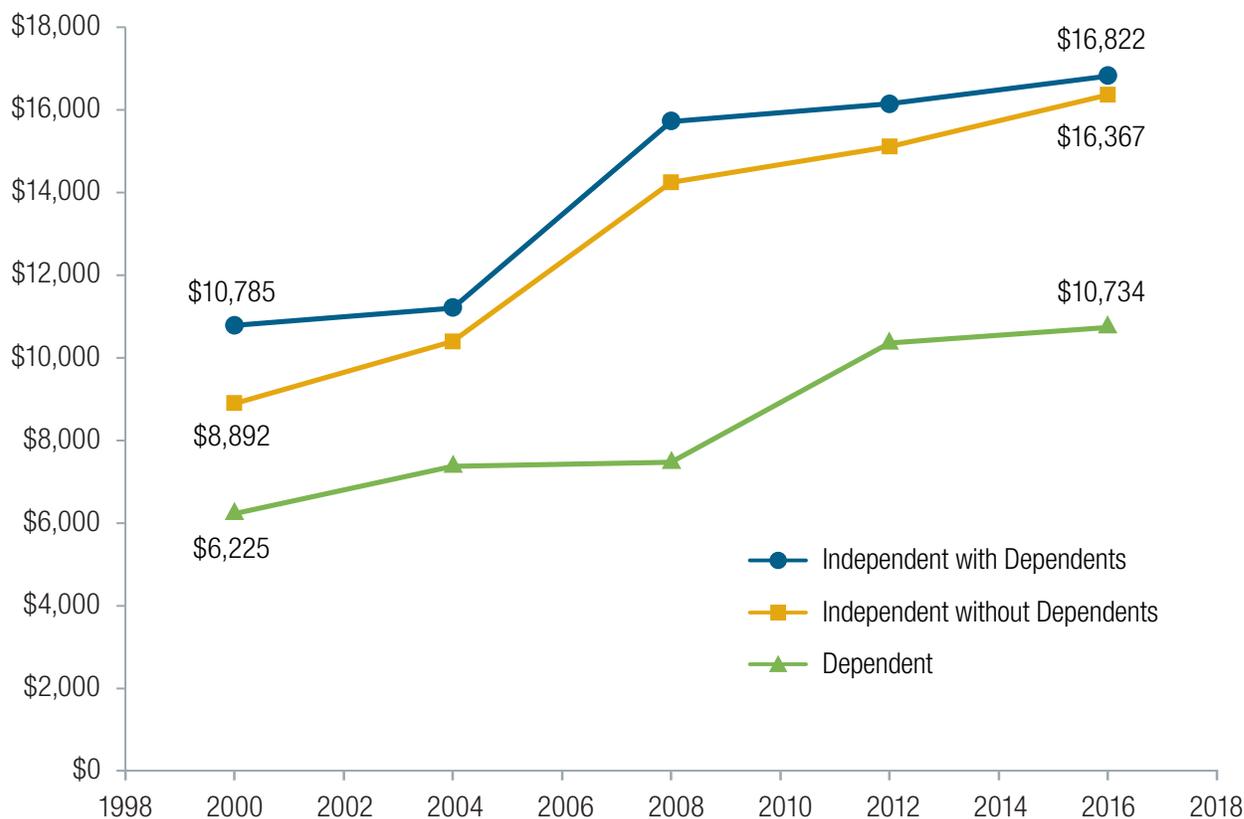
Indicator Status: High Inequality

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 \$9,575 in unmet need in 2016, while dependent students from the highest income quartile had a surplus of \$28,269. Unmet financial need for students in the lowest family-income quartile has increased since 1990 and was 2.5 times higher in 2016 than in 1990.

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 www.postsecondary.org.

Equity Indicator 3c(ii): Unmet financial need among full-time undergraduates by dependency status: 2000 to 2016 (in constant 2018 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 (\$10,785 versus \$16,822 in constant 2018 dollars), 96 percent higher for full-time independent students without dependents (\$8,892 versus \$16,367), and 72 percent higher for full-time dependent students (\$6,225 versus \$10,734).

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.

EQUITY INDICATOR 4:

HOW DO STUDENTS IN THE UNITED STATES PAY FOR COLLEGE?

Since 1980, the percent of college costs paid by state and local public funds has decreased, and the percent of costs paid by students and their families has increased. The percent of total costs borne by parents and students fluctuated around 33 percent from 1975 to 1981, but rose to 48 percent by 2018. The net average price of attendance represented 94 percent of the average family income for those in the lowest family income quartile in 2016.

Equity Indicator 4(a-e): 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 Expenditures, Federal Government Expenditures, 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.⁸⁴
- 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), Annual Pell Grant Award End of Year Reports. These reports are published yearly since the beginning of the Pell Grant program in the mid-1970s.⁸⁵
- National Center for Education Statistics (NCES), National Postsecondary Student Aid Studies (NPSAS) that have been conducted at approximately 4-year intervals from 1990 to 2016.
- The Institute for College Access and Success (TICAS) Project on Student Debt, which collects voluntary data on student debt levels from institutions across the nation.

⁸⁴ Palmer, J. (2019). *About the Grapevine Data*. Retrieved from <https://education.illinoisstate.edu/grapevine/about/>.

⁸⁵ 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>.

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 were as follows: First (lowest), \$16,105; Second, \$50,736; Third, \$96,689; Fourth (highest), \$214,338.⁸⁶
- **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 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.
- **Debt Burden** is the average cumulative debt for those graduating with a bachelor’s degree in a given year. Data are from the NPSAS surveys administered between 1990 and 2016 and the TICAS Project on Student Debt annual survey. We report debt burden among those who have any debt.

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

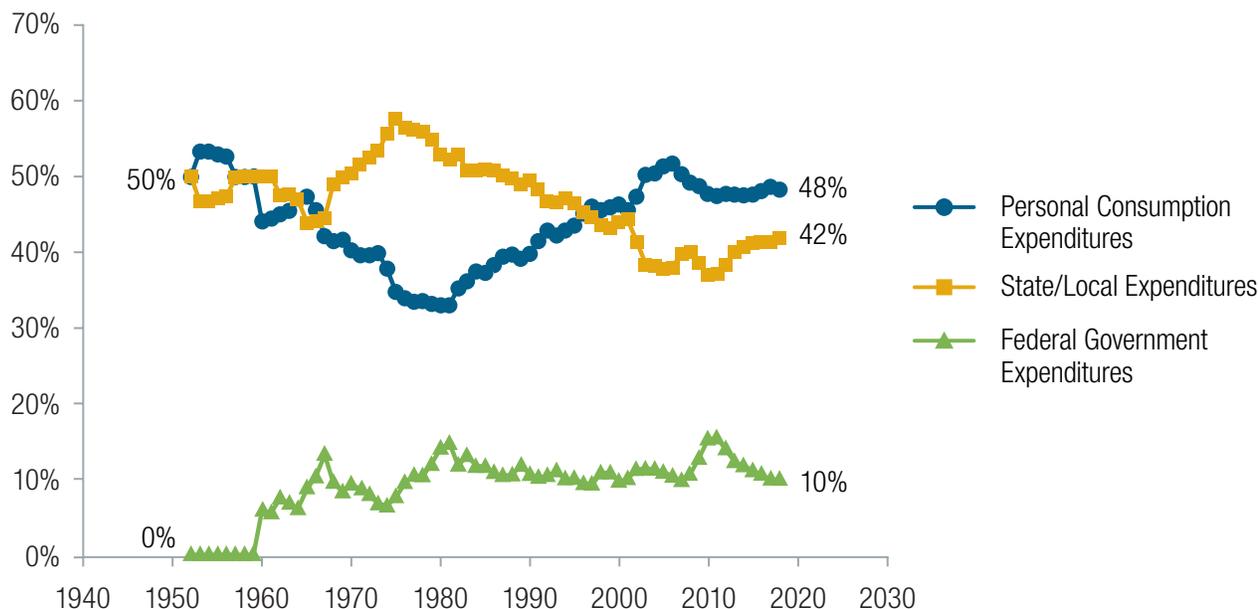
Equity Indicators 4a(i-iii) present data on funding for higher education. We first give a national overview of the distribution of funding responsibilities for higher education and then look at trend data on state appropriations and need-based aid.

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 2018. 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. State and local sources accounted for 58 percent of higher education expenditures in 1975 but just 42 percent in 2018. The percent of total costs borne by parents and students fluctuated around 33 percent from 1975 to 1981 but rose to 48 percent in 2018.

⁸⁶ Mortenson, T. (2018). Trends in Financial Barriers to Higher Education for Dependent Undergraduate Students: 1990 to 2016, *Postsecondary Opportunity Newsletter*, 300. Washington, DC: The Pell Institute for the Study of Opportunity in Higher Education. Retrieved from www.postsecondary.org.

The share of higher education costs provided by the federal government was about the same in 2018 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(i): Percentage distribution of higher education funding responsibilities: 1952 to 2018



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

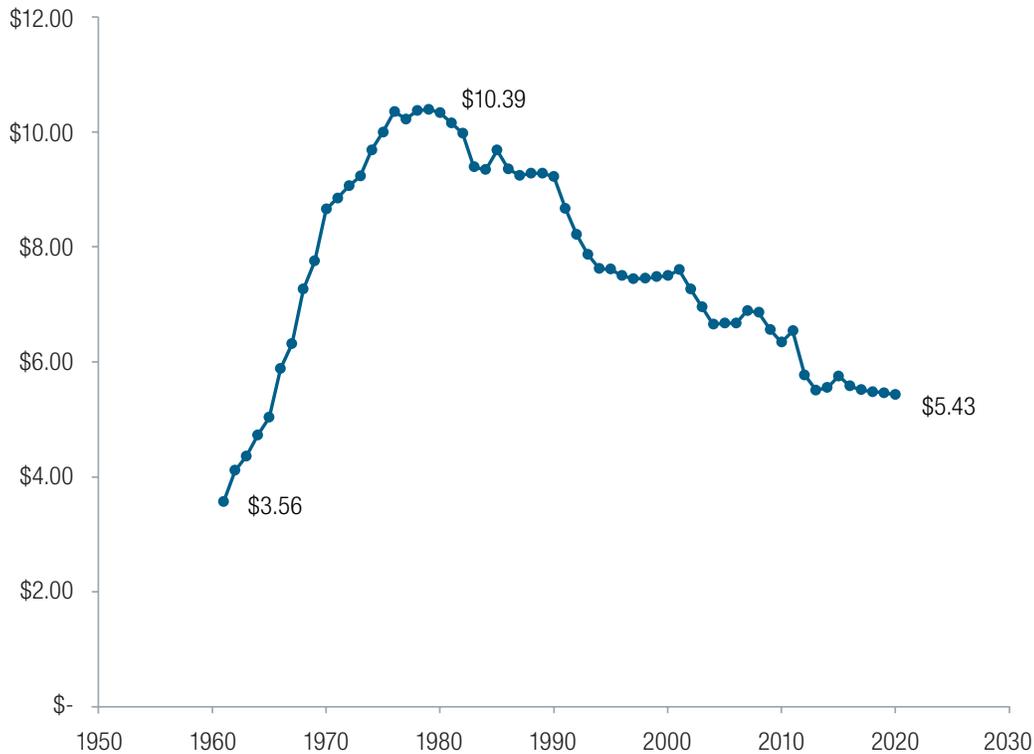
The share of higher education expenditures paid by students and families increased from one-third (33 percent) in the late 1970s to almost one-half (48 percent) in 2018.

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

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis (2019). National Income and Product Accounts (NIPA). [Table 1.1.5] [Table 2.4.5] [Table 3.16] Retrieved from <https://apps.bea.gov/iTable/iTable.cfm?reqid=19&step=2#reqid=19&step=2&isuri=1&1921=survey>. Accessed on March 4, 2020 and tabulated by Tom Mortenson *Higher Education's Share of Gross Domestic Product and Distribution of Higher Education Funding Responsibilities: 1952 to 2018*.

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.⁸⁷ 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 1980.⁸⁸ 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 were \$10.34 in 1980 and \$5.43 in 2020.

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 for Higher Education

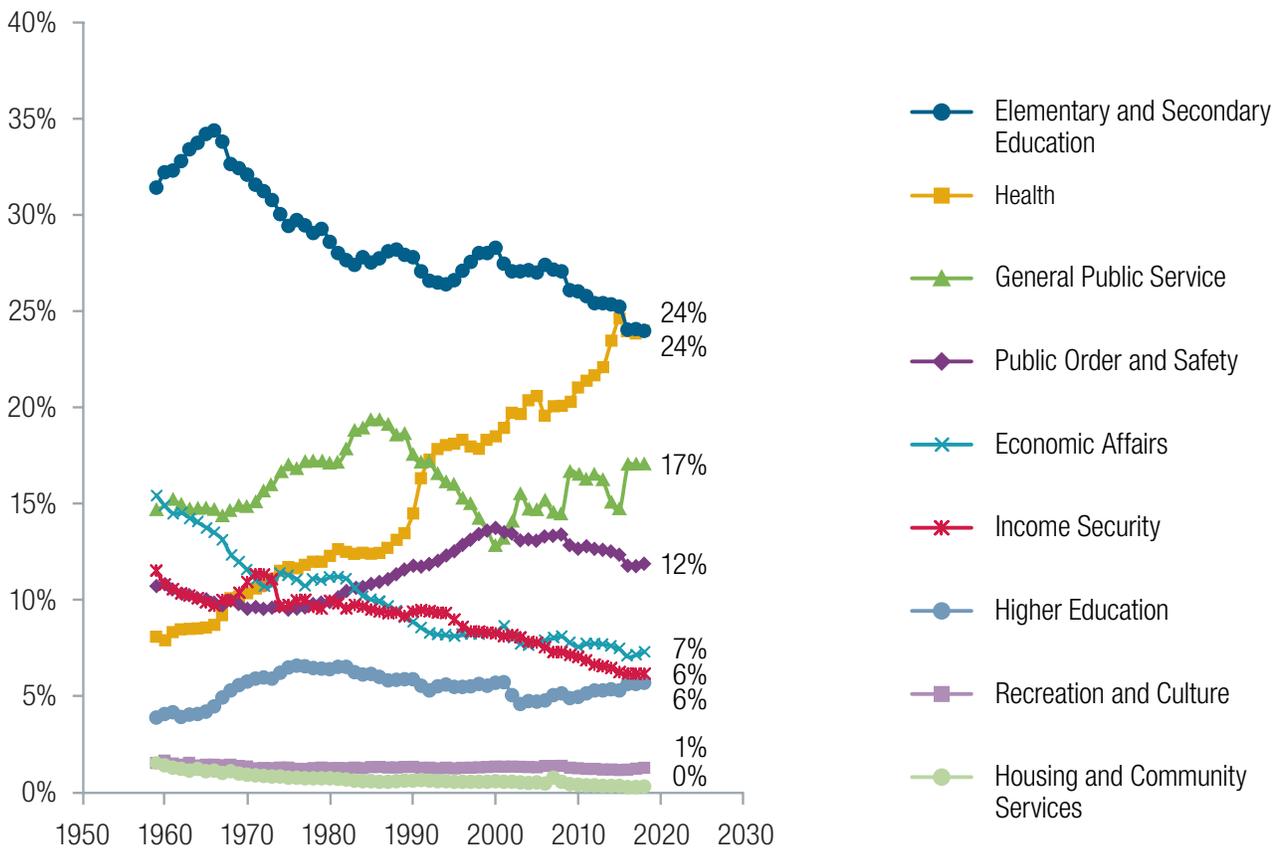
Considered relative to per capita income, state appropriations for higher education have declined since 1980. FY2020 state funding for higher education was 72 percent of the FY2000 effort and 52 percent of the FY1980 effort.

SOURCE: Mortenson, T. (2020). State Fiscal Investment Effort in Higher Education: FY1961 to FY2020, *Postsecondary Education Opportunity*, 292. Washington, DC: The Pell Institute for Study of Opportunity in Higher Education. 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).

- ⁸⁷ 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/>.
- ⁸⁸ Mortenson, T. (2017). State Fiscal Investment Effort in Higher Education: FY1961 to FY2017, *Postsecondary Education Opportunity*, 292. Washington, DC: The Pell Institute for the Study of Opportunity in Higher Education. Retrieved from www.postsecondary.org.

Equity Indicator 4a(iii) shows changes in the relative distribution of state appropriations by function between 1959 and 2018. The share of state appropriations allocated to higher education increased from 4 percent in 1959 to 7 percent in the late 1970s and early 1980s. In 2018, 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 the 1960's to 24 percent in 2018. In contrast, since 1959 the proportion of state appropriations allocated to health increased from 8 percent in 1959 to 24 percent in 2018.

Equity Indicator 4a(iii): Distribution of state appropriations by function: 1959-2018



Indicator Status: Higher Education Spending Declines as Relative Share of State Appropriations

The share of state appropriations allocated to higher education increased from 4 percent in 1959 to 7 percent in the late 1970s and early 1980s. In 2018, 6 percent of state appropriations were allocated to higher education.

NOTE: 0% indicates less than 1 percent.

SOURCE: Mortenson, T. (2020). State Fiscal Investment Effort in Higher Education: FY1961 to FY2018, *Postsecondary Education Opportunity*, 292. Washington, DC: The Pell Institute for the Study of Opportunity in Higher Education. Retrieved from www.postsecondary.org; Per capita income data from Bureau of Economic Analysis. Retrieved from <https://bea.gov/regional/index.htm>; State appropriation data compiled by the Grapevine Project. Retrieved from <https://education.illinoisstate.edu/grapevine/>. Grapevine is an annual compilation of data on state fiscal support for higher education. It 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(iv) and 4a(v): State Need-Based Aid Relative to Pell Grant Aid

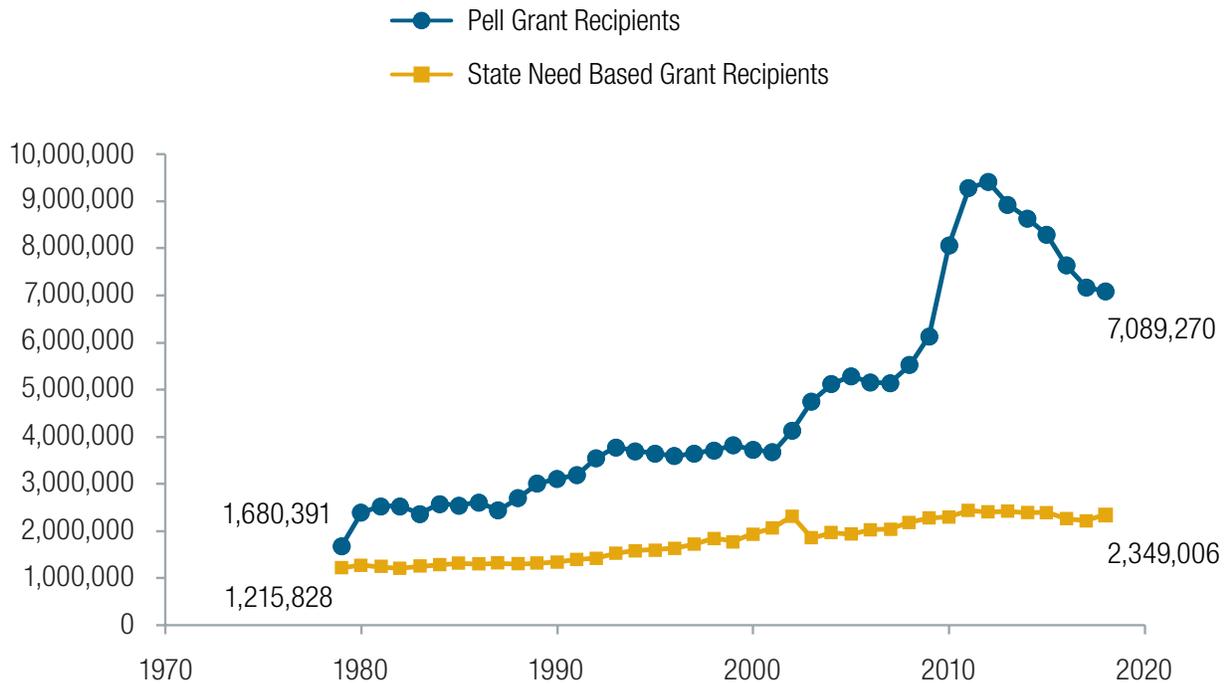
Award Numbers. In FY2018, 7 million undergraduate students received Federal Pell Grants and 2.3 million undergraduates received state need-based grants (Equity Indicator 4a(iv)). The number of Federal Pell Grant recipients was 322 percent higher in 2018 than in 1979, while the number of state need-based 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 \$648 billion.⁸⁹

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% in Pennsylvania, 80% in Minnesota, and to 90% in Vermont.

⁸⁹ Macro Trends Download U.S. Military Spending/Defense Budget 1960-2020, Retrieved from www.macrotrends.net; College Board (2019). Trends in Higher Education [Table 8]. Retrieved from <https://www.trends.collegeboard.org/student-aid/figures-tables/maximum-and-average-pell-grants-over-time> Table 8. Federal Pell Grants in Current and in 2018 Dollars, 1973-74 to 2018-19.

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



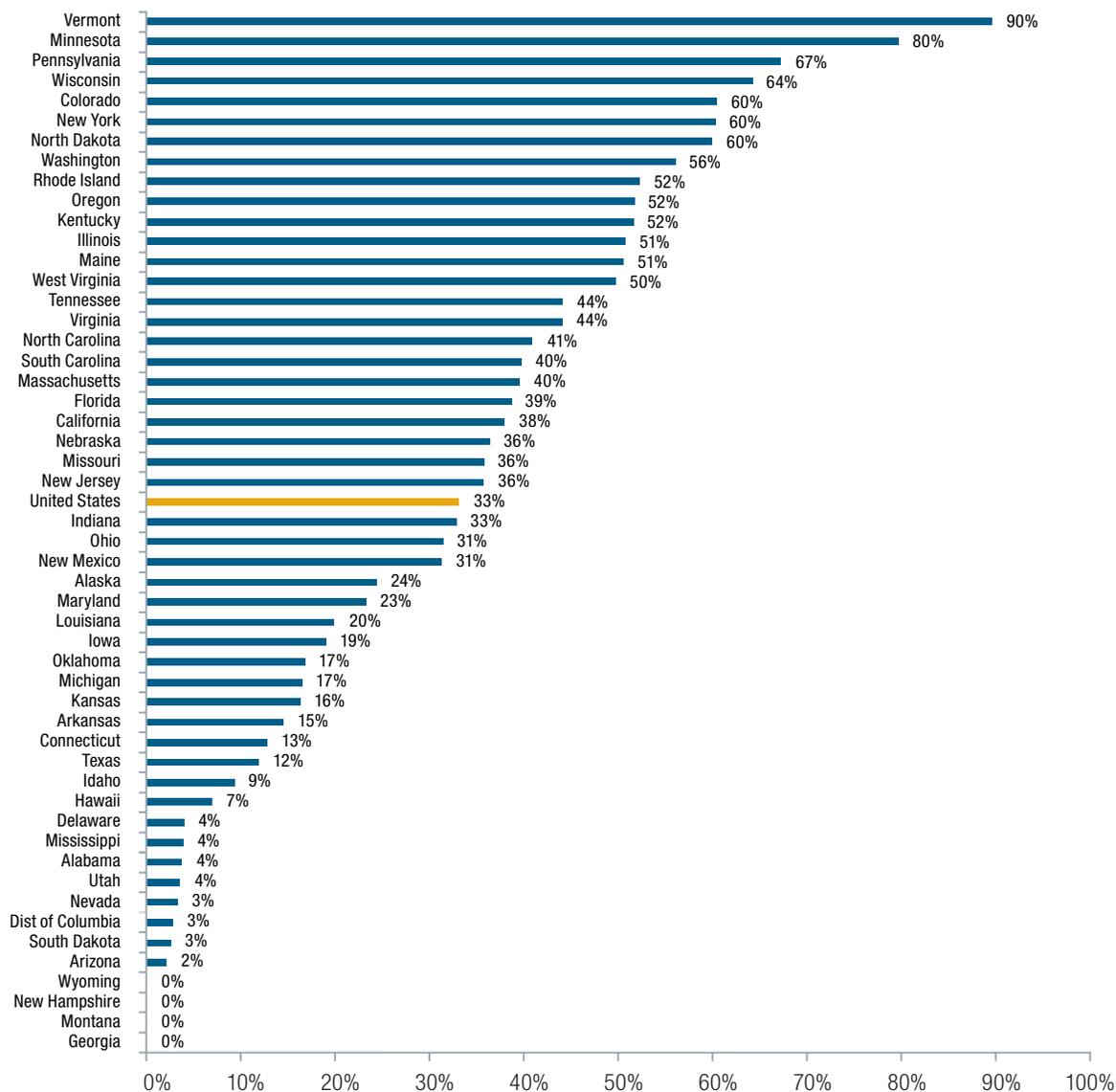
Indicator Status:

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 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. Washington, DC: The Pell Institute for the Study of Opportunity in Higher Education. Retrieved from www.postsecondary.org.

Equity Indicator 4a(v): State need-based grant recipients as a percentage of Pell 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% Pennsylvania, 80% in Minnesota, and to 90% in Vermont.

NOTE: Annual state student financial 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 www.postsecondary.org.

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

Using NPSAS data from 1990 to 2016,⁹⁰ 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.⁹¹ Net price does not include loans. For ease of comparison, all amounts are in constant 2018 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 2018 dollars) ranged from \$12,347 for those in the lowest income quartile to \$20,566 for those in the highest income quartile. In 2016, average net price ranged from \$15,913 for those in the lowest income quartile to \$31,604 for those in the highest income quartile.

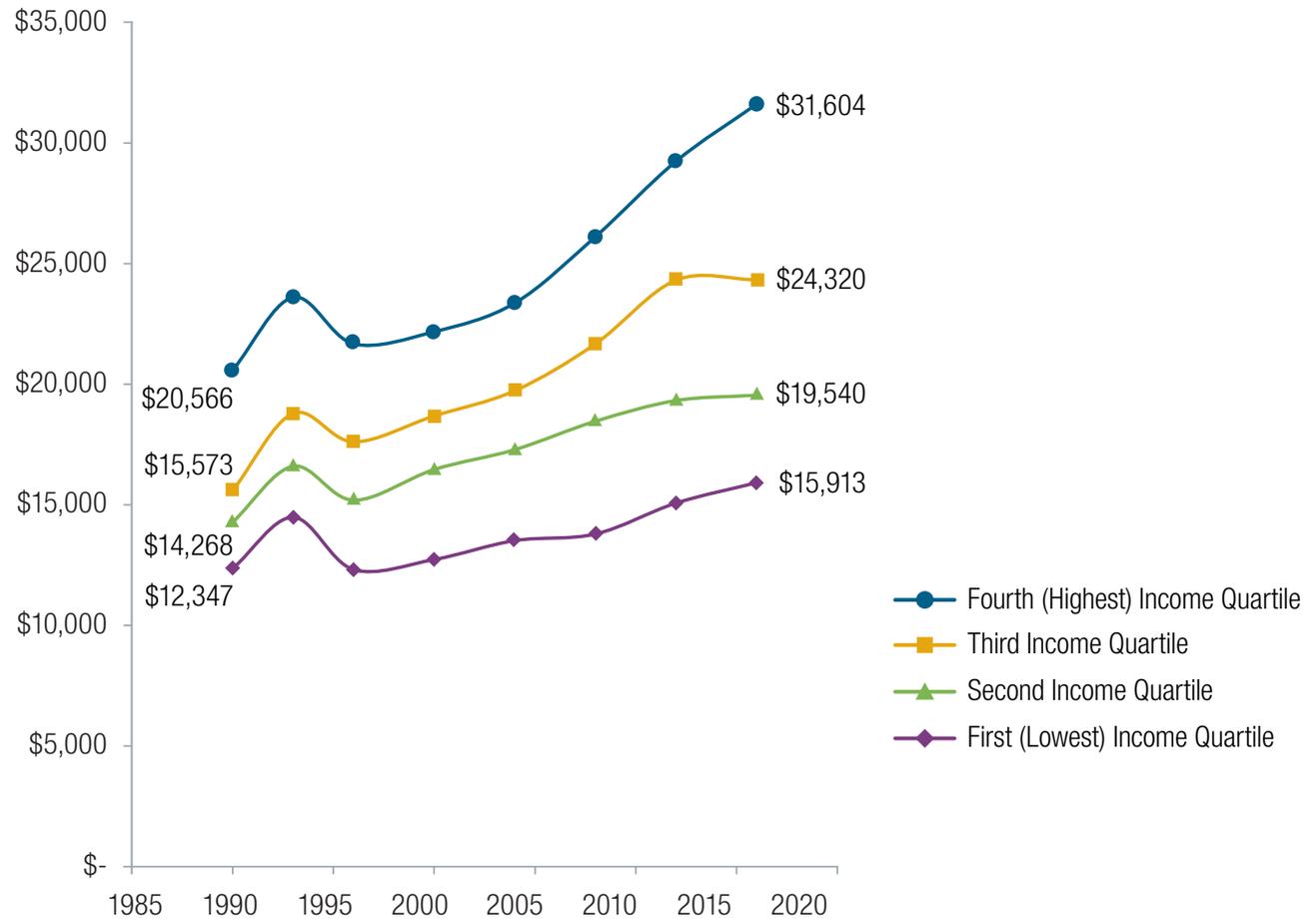
The implication of the widening gap in average net price by family income is ambiguous. On the one hand, a widening gap may signify that institutions have allocated available financial aid to students with the greatest financial need. On the other hand, the widening gap may indicate that net price has 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 colleges in the United States have over time become more segregated by family income and that students are increasingly sorted by family income into colleges they can afford to attend.

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. In so far as differences in net price reflect differences in educational quality and market rewards, then the increasing difference in average net price for students in the upper- and lower-family income quartiles may reflect growing inequity and increased stratification of the nation's higher education system.

90 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.

91 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.

Equity Indicator 4b(i): Average net price for dependent full-time undergraduate students by family income quartile: 1990 to 2016 (constant 2018 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 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 Educational Opportunity*, 300, and Mortenson, T. (2018). Financial Barriers to Higher Education for Dependent Undergraduate Students: 2015-16, *Postsecondary Educational Opportunity*, 299. Washington, DC: The Pell Institute for the Study of Opportunity in Higher Education. Retrieved from www.postsecondary.org.

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.⁹² 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.

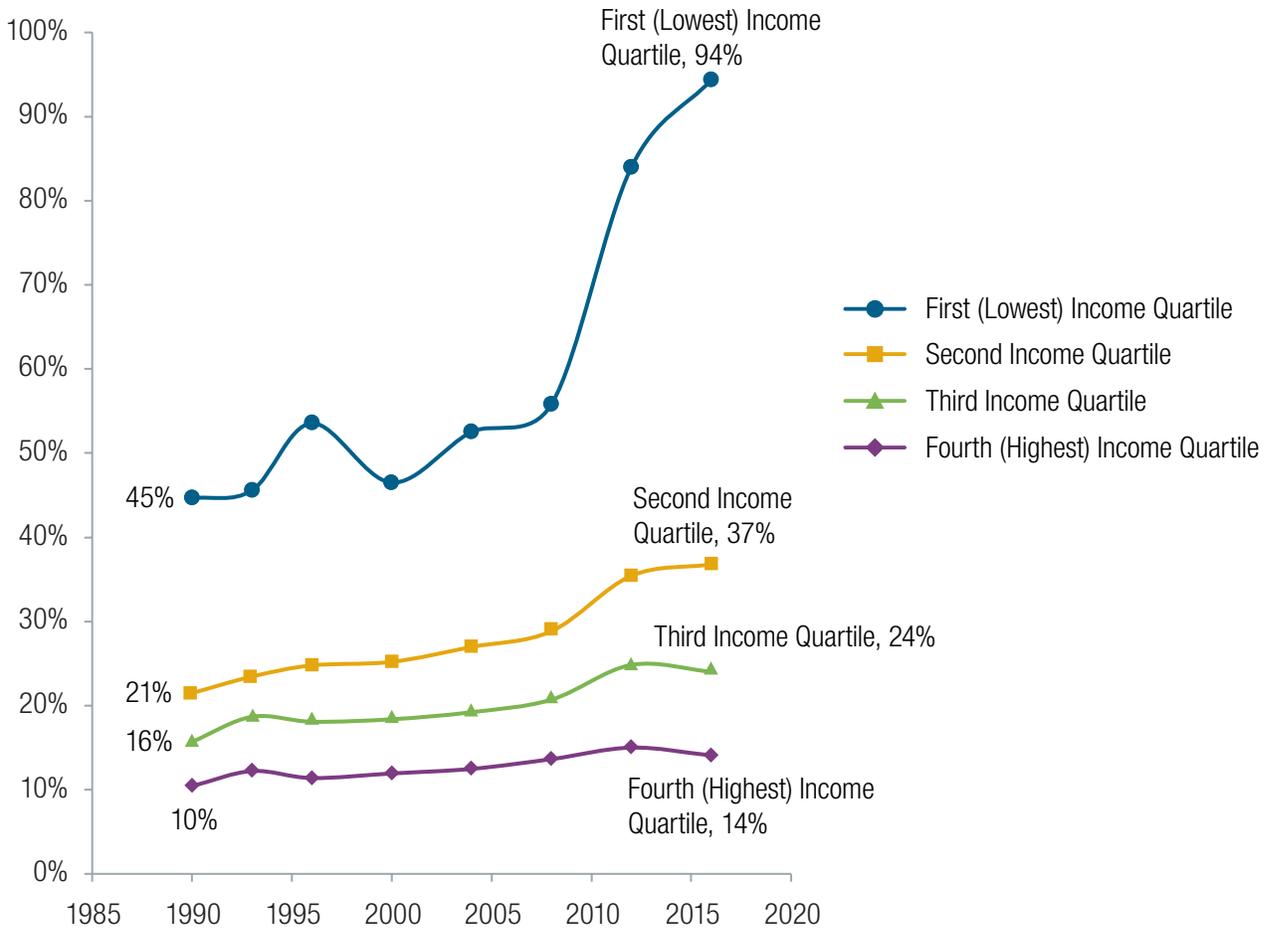
Between 1990 and 2008, average net price as a percentage of family income increased for dependent full-time undergraduate students in all four family income quartiles. For students in the lowest family income quartile, the percentage increased from 45 percent in 1990, to 56 percent in 2008. Between 2008 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. For these students, average net price as a percentage of average family income increased from 56 percent in 2008 to 84 percent in 2012, before rising again to 94 percent in 2016.⁹³

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.

⁹² 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.

⁹³ Choitz, V., & Reimherr, P. (2013). *Mind the Gap: High Unmet Financial Need Threatens Persistence and Completion for Low-income Community College Students*. Washington, DC: Center for Postsecondary and Economic Success at CLASP.

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

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 were as follows: First (lowest), \$16,105; Second, \$50,736; Third, \$96,689; Fourth (highest), \$214,338.

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 www.postsecondary.org.

Equity Indicator 4c: What Percentage of Students Borrow? How Do Rates of Borrowing Vary by the Type of Institution Students Attend and Students' Race/Ethnicity?

Using NPSAS data, Indicators 4c(i) through 4c(iv) show increases in the percentages of bachelor's and associate's degree completers who ever received loans by institutional control of the graduating institution⁹⁴ and race/ethnicity. The loans include federal and non-federal loans to students and Parent PLUS Loans taken out by parents of dependent students and used toward the students' undergraduate education.⁹⁵

Indicator 4c(i) 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 (87 percent in 2016).⁹⁶

Indicator 4c(ii) shows that borrowing rates for 2016 associate's degree completers were 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).

Indicator 4c(iii) shows that, between 2000 and 2016, borrowing rates among bachelor's degree completers varied 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.

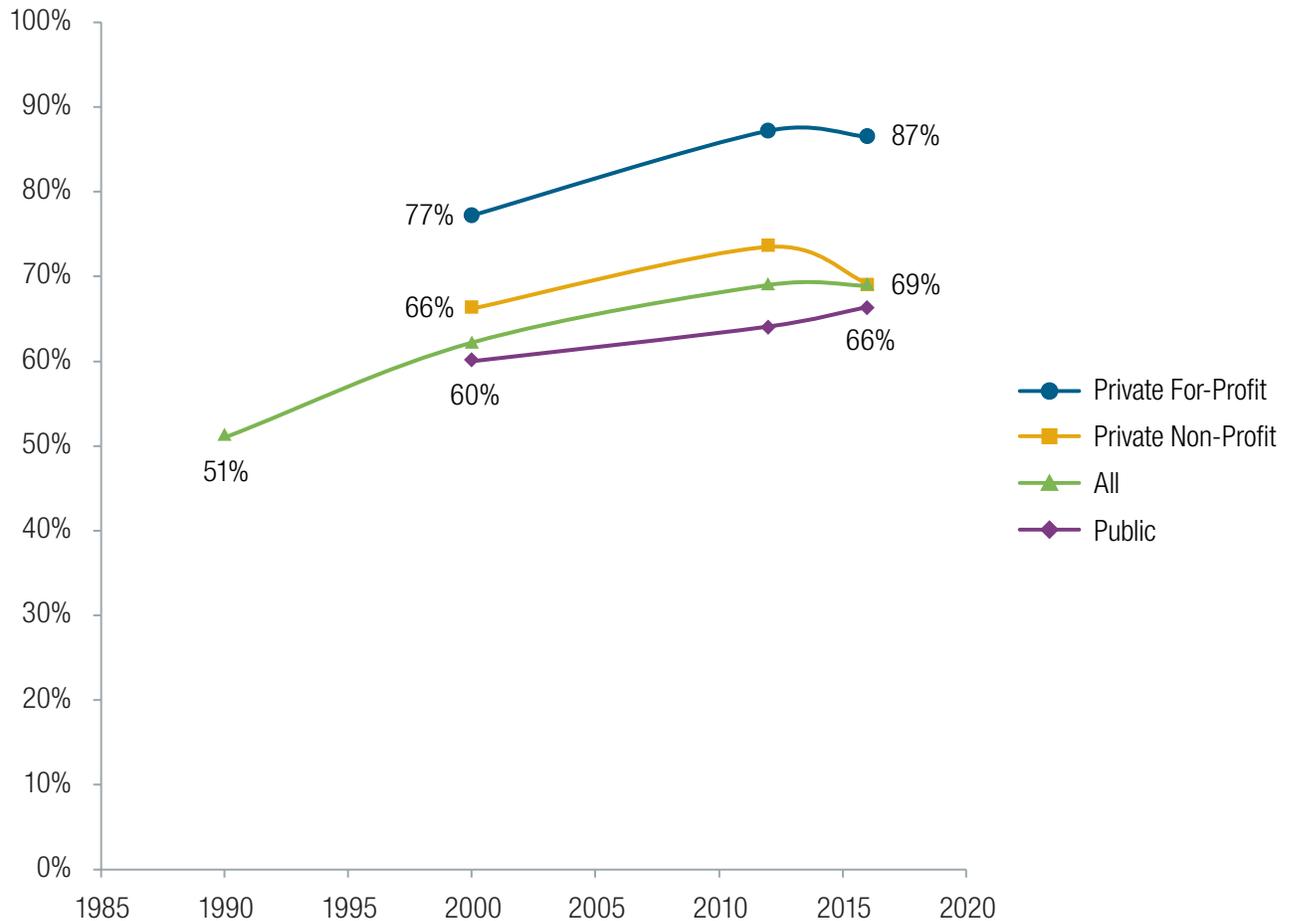
Indicator 4c(iv) shows that, in 2016, borrowing rates were higher for Black and American Indian/Alaska Native (67 percent) associate's degree completers than among White (50 percent), Hispanic (35 percent), and Asian associate's degree completers (27 percent). Borrowing rates among Black associate's degree completers increased from 45 percent in 2000 to 67 percent in 2016.

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

95 Since 2010, Parent PLUS Loans have been referred to as Direct PLUS Loans.

96 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(i): Percentage of bachelor's degree completers who ever received loans (federal and non-federal loans to students and Parent Plus Loans) by institutional control: Selected years from 1990 to 2016



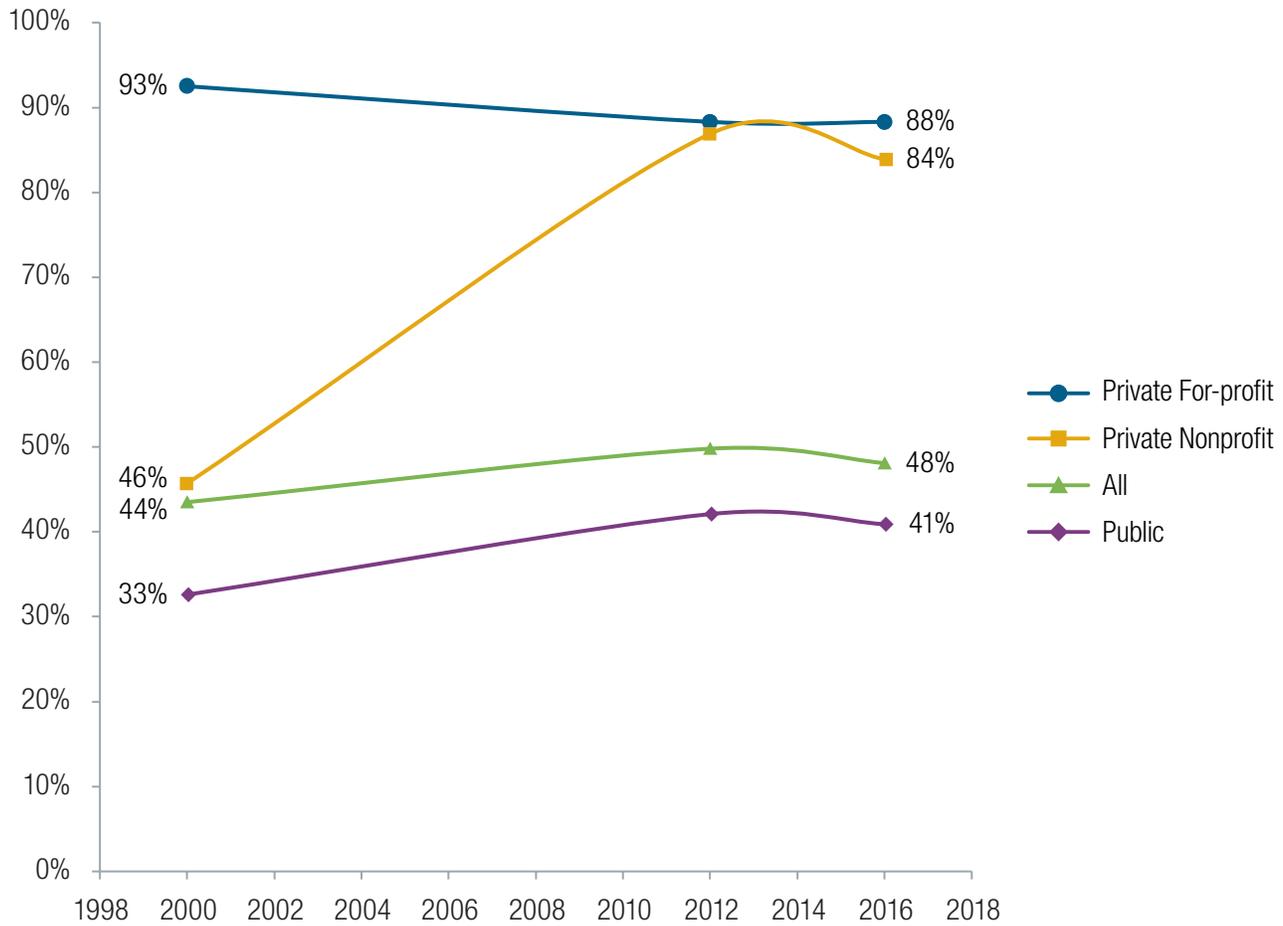
Indicator Status: Higher Percentage of Students Are Borrowing

The percentage of bachelor's degree completers who ever borrowed was 69 percent in 2016, up from 51 percent in 1990. Borrowing rates are highest for bachelor's degree completers at private for-profit institutions (87 percent in 2016).

NOTE: Includes federal and non-federal loans to students and Parent PLUS Loans taken out by parents of dependent students and used toward the students' undergraduate education. Since 2010, Parent PLUS Loans have been referred to as Direct PLUS Loans. Data for 1990 are not precisely comparable with later years and 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.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1989-90, 1999-2000, 2011-12, 2015-16, National Postsecondary Student Aid Study (NPSAS:1990, NPSAS:2000, NPSAS, 2012, NPSAS 2016). *Digest of Education Statistics 2019*, Table [331.95]. Retrieved from https://nces.ed.gov/programs/digest/d18/tables/dt18_331.95.asp?current=yes.

Equity Indicator 4c(ii): Percentage of associate's degree completers who ever received loans (federal and non-federal loans to students and Parent Plus Loans) by institutional control and level: 2000, 2012 and 2016



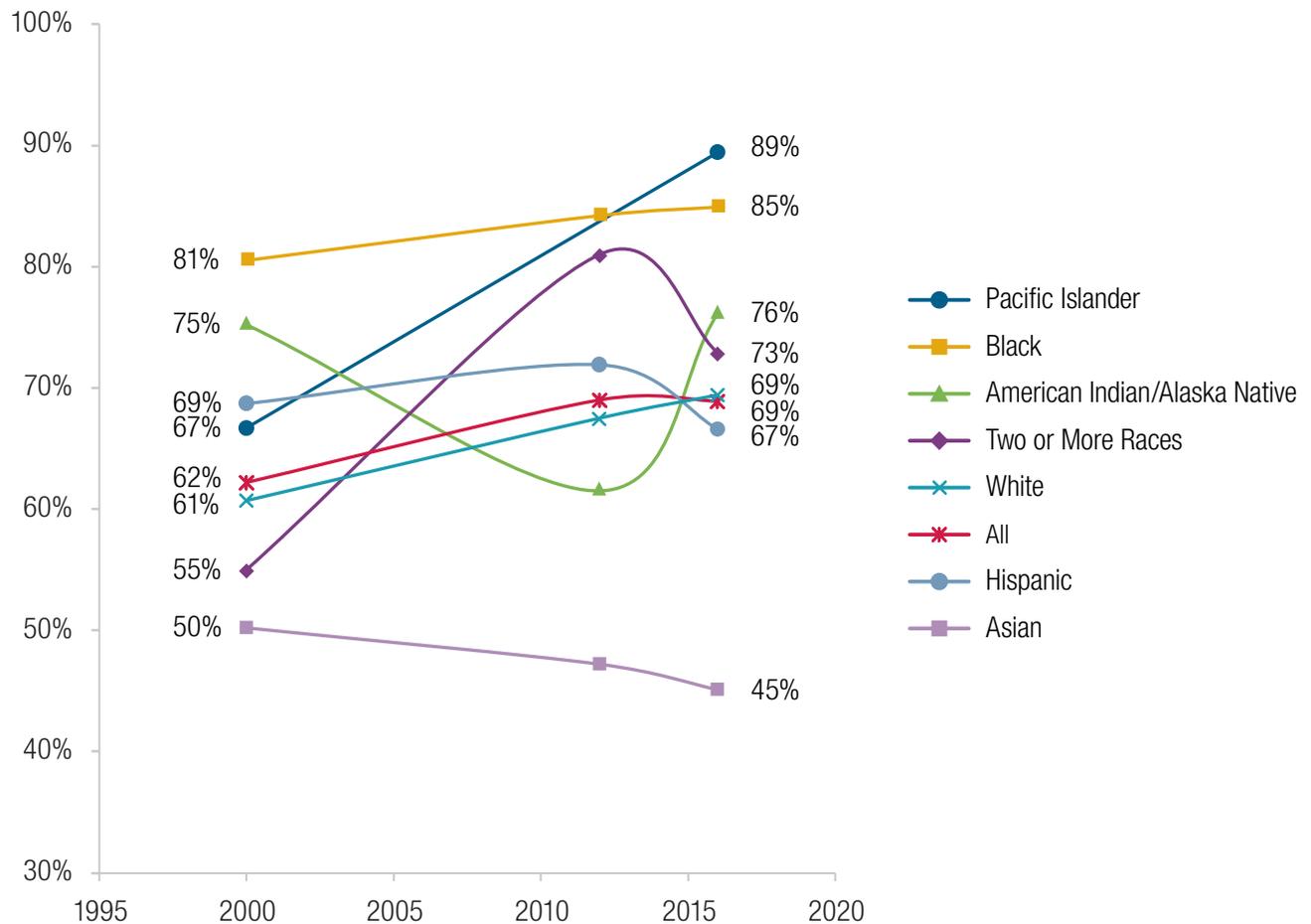
Indicator Status: Higher Rates of Borrowing at Private For-Profit and Private Non-Profit than at Public Institutions

In 2016, over 80 percent of associate's degree completers at private for-profit and private non-profit institutions borrowed, compared with 41 percent of associate's degree completers at public institutions.

NOTE: Includes federal and non-federal loans to students and Parent PLUS Loans taken out by parents of dependent students and used toward the students' undergraduate education. Since 2010, Parent PLUS Loans have been referred to as Direct PLUS Loans. Data are from NPSAS: 2000, 2012, and 2016 and represent the percentage of associate's degree completers who ever borrowed.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1999–2000, 2011–12, and 2015–16 National Postsecondary Student Aid Study (NPSAS:2000, NPSAS:12, and NPSAS:16). *Digest of Education Statistics 2019*, Table [331.95]. Retrieved from https://nces.ed.gov/programs/digest/d18/tables/dt18_331.95.asp?current=yes.

Equity Indicator 4c(iii): Percentage of bachelor's degree completers who ever received loans (federal and non-federal loans to students and Parent Plus Loans) by race/ethnicity: 2000, 2012, and 2016



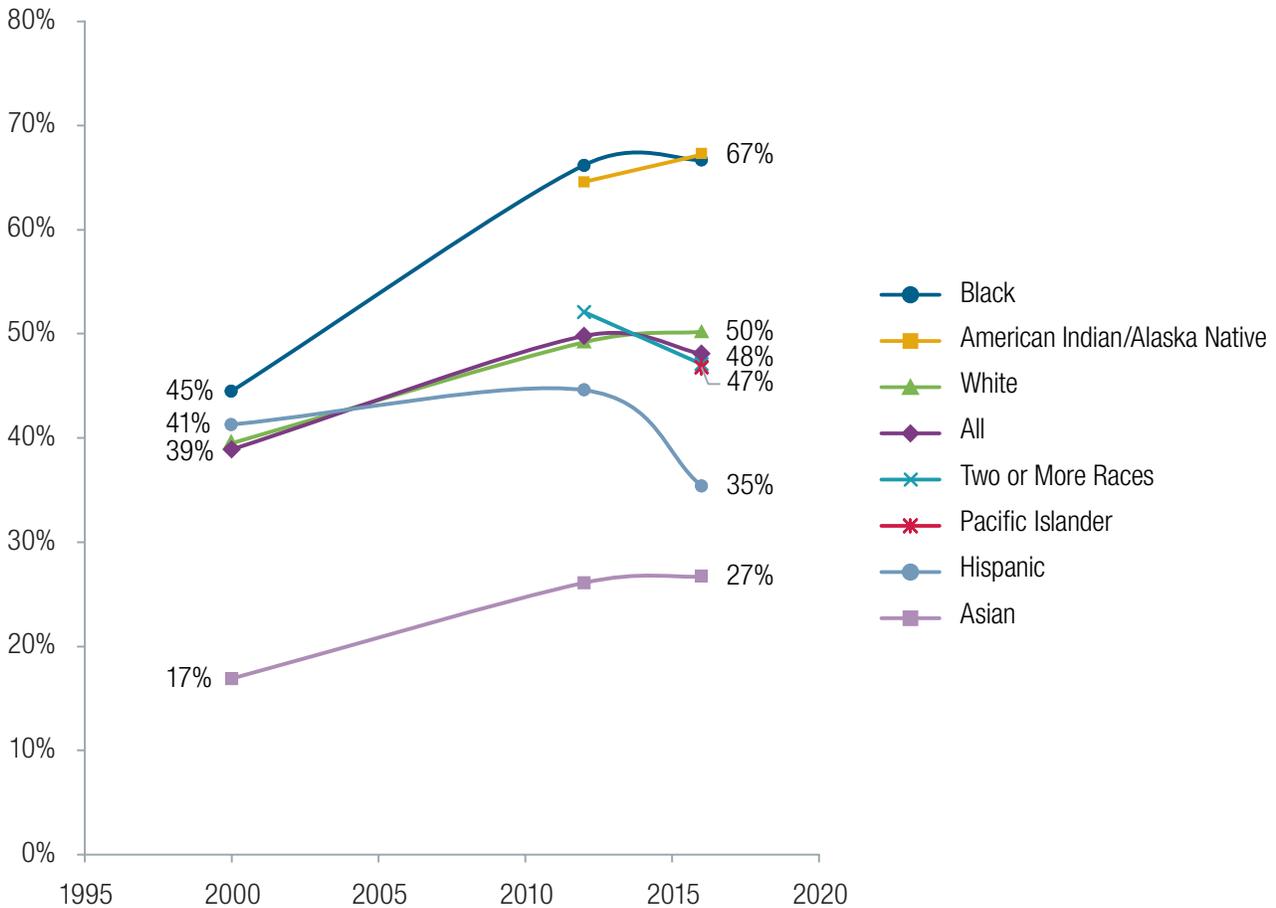
Indicator Status: Higher Rates of Borrowing Among Pacific Islanders and Blacks

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: Includes federal and non-federal loans to students and Parent PLUS Loans taken out by parents of dependent students and used toward the students' undergraduate education. Since 2010, Parent PLUS Loans have been referred to as Direct PLUS Loans. Data are from NPSAS: 2000, 2012, and 2016 and represent the percentage of bachelor's degree completers who borrowed. Due to sampling error, for small population groups, caution is needed in interpreting data variation over the separate NPSAS surveys. Large fluctuations between NPSAS years such as between 2000 and 2012 and 2016 for American Indian/Alaska Native students are likely to be due to sampling error.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1999–2000, 2011–12, and 2015–16 National Postsecondary Student Aid Study (NPSAS:2000, NPSAS:12, and NPSAS:16). *Digest of Education Statistics 2019*, Table [331.95]. Retrieved from https://nces.ed.gov/programs/digest/d18/tables/dt18_331.95.asp?current=yes.

Equity Indicator 4c(iv): Percentage of associate's degree completers who ever received loans (federal and non-federal loans to students and Parent Plus Loans) by race/ethnicity: 2000, 2012, and 2016



Indicator Status: Higher Rates of Borrowing for Blacks and American Indians/Alaska Natives

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: Includes federal and non-federal loans to students and Parent PLUS Loans taken out by parents of dependent students and used toward the students' undergraduate education. Since 2010, Parent PLUS Loans have been referred to as Direct PLUS Loans. Data are from NPSAS: 2000, 2012, and 2016 and represent the percentage of bachelor's degree completers who borrowed. Due to sampling error, for small population groups, caution is needed in interpreting data variation over the separate NPSAS surveys.

SOURCE: Department of Education, National Center for Education Statistics, 1999–2000, 2011–12, and 2015–16 National Postsecondary Student Aid Study (NPSAS:2000, NPSAS:12, and NPSAS:16). *Digest of Education Statistics 2019*, Table[331.95]. Retrieved from https://nces.ed.gov/programs/digest/d18/tables/dt18_331.95.asp?current=yes.

Indicator 4d: How Much Do Students Borrow? How Does the Amount Students Borrow Vary by the Type of Institution Students Attend and Students' Race/Ethnicity?

Indicators 4d(i) to 4d(iv) present the average cumulative amount borrowed among those who borrowed including federal and nonfederal loans to students and Parent Plus Loans for dependent students. The average cumulative amount borrowed by bachelor's degree completers increased by 22 percent between 2000 and 2016 in constant 2018 dollars (from \$26,150 in 2000 to \$31,790 in 2018). In 2018, the average cumulative amount borrowed by bachelor's degree completers ranged from \$28,620 at public institutions, to \$33,900 at private non-profit institutions, to \$43,920 at private for-profit institutions (Indicator 4d(i)).

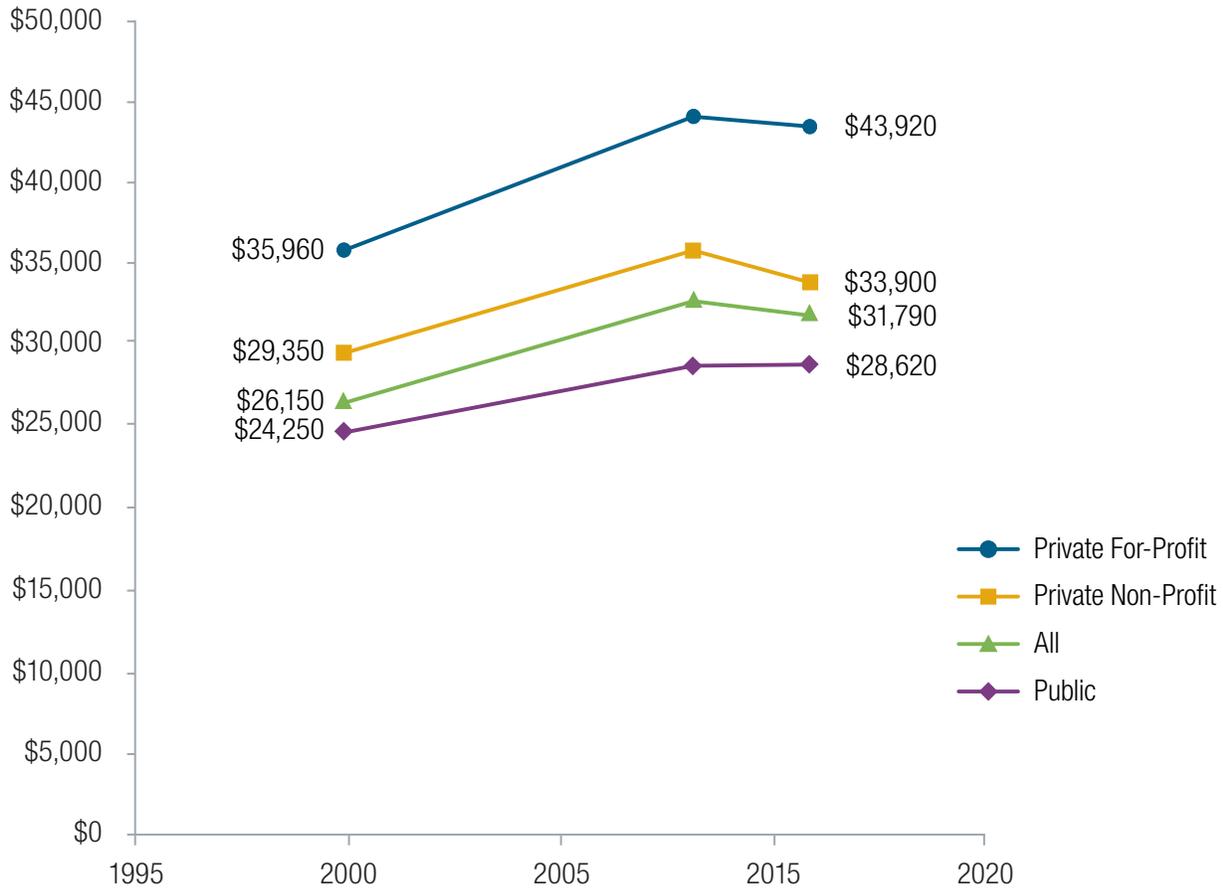
Over this same period, the average cumulative amount borrowed among associate's degree completers increased by 39 percent in constant 2018 dollars, rising from \$14,190 in 2000 to \$19,720 in 2016. Indicator 4d(ii) shows that, in 2016, the average cumulative amount borrowed among associate's degree completers ranged from \$16,620 at public institutions, to \$26,390 at private non-profit institutions, to \$28,080 at private for-profit institutions.

Blacks average higher cumulative student loan amounts among bachelor's degree completers than bachelor's degree completers from other racial/ethnic groups. Indicator 4d(iii) shows that, in 2016, Black bachelor's degree completers averaged \$36,140 in cumulative loans, compared with \$28,510 for Hispanics and \$27,050 for Asians (in 2018 dollars).

Average higher cumulative loan associate's degree completers are also higher for Blacks than for completers from other racial/ethnic groups. Indicator 4d(iv) shows that, in 2016, average cumulative loan debt was \$22,710 for Black associate's degree completers, compared with \$18,080, on average, for Whites, \$17,140 for Asians, and \$16,270 for Hispanics.

Cumulative loan amounts increased between 2000 and 2016 by 67 percent in constant 2018 dollars among Black associate's degree completers, rising from \$14,210 in 2000 to \$23,710 in 2016. By comparison, average cumulative loans increased by 39 percent in constant 2018 dollars among all associate's degree completers, rising from \$14,190 in 2000 to \$19,720 in 2016.

Equity Indicator 4d(i): Average cumulative loan amounts for bachelor's degree completers who ever received loans (federal and non-federal loans to students and Parent Plus Loans) by institution control: 2000, 2012, and 2016 (constant 2018 dollars)



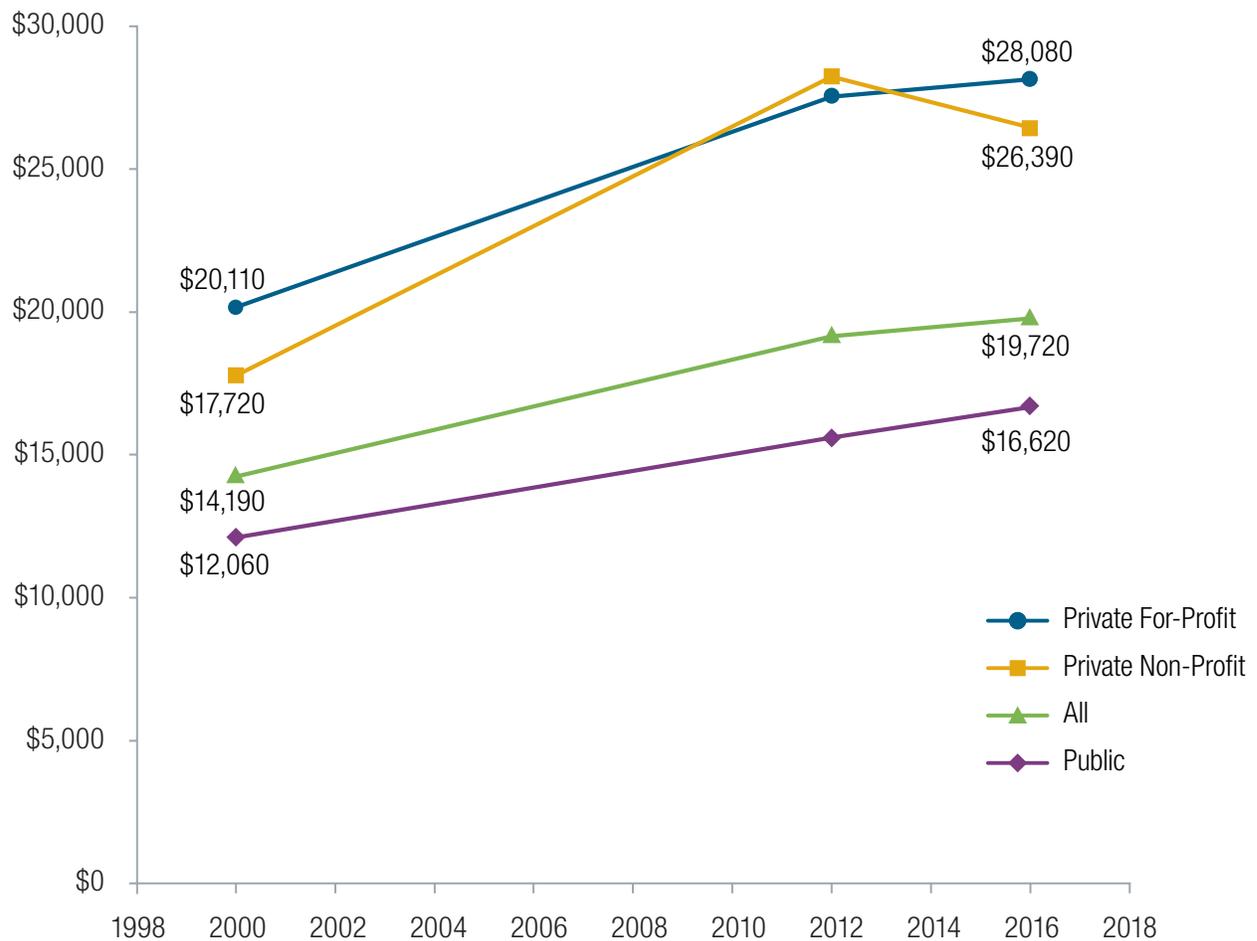
Indicator Status: Fluctuating increase peaking in period of Great Recession in 2012

Considering the period of 2000 to 2016, the average cumulative amount borrowed by bachelor's degree completers who borrowed increased by 22 percent in constant 2018 dollars.

NOTE: Data are from NPSAS: 2000, 2012 and 2016 and represent cumulative loan amounts among bachelor's degree completers having loans.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1999–2000, 2011–12, and 2015–16 National Postsecondary Student Aid Study (NPSAS:2000, NPSAS:12, and NPSAS:16). *Digest of Education Statistics 2019*, Table [331.95]. Retrieved from https://nces.ed.gov/programs/digest/d18/tables/dt18_331.95.asp?current=yes.

Equity Indicator 4d(ii): Average cumulative loan amounts for associate's degree completers who ever received loans (federal and non-federal loans to students and Parent Plus Loans) by institution control: 2000, 2012, and 2016 (constant 2018 dollars)



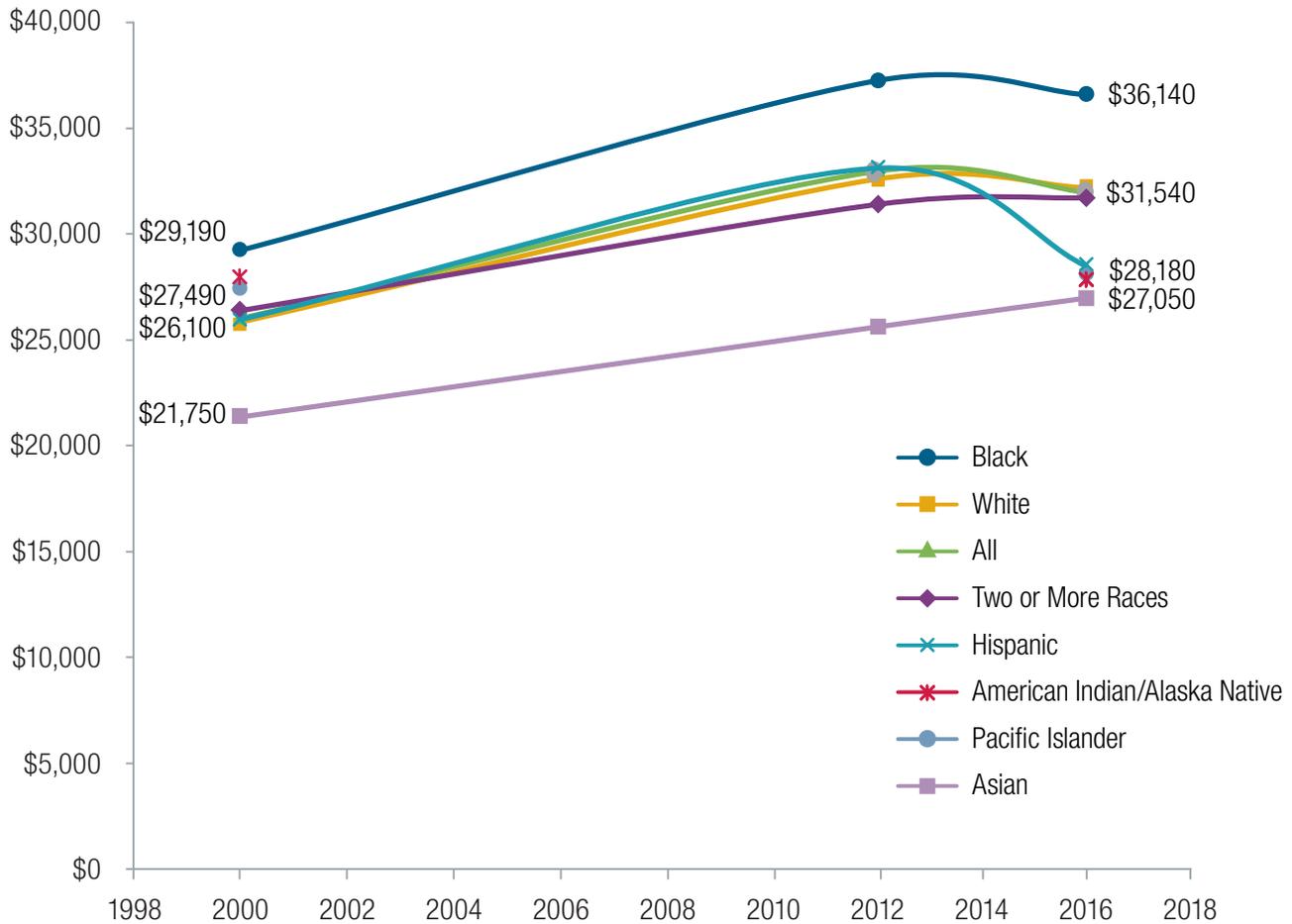
Indicator Status: Increase in Cumulative Loan Amounts

The average amount borrowed among associate's degree completers increased between 2000 and 2016 by 39 percent in constant 2018 dollars, rising from \$14,190 in 2000 to \$19,720 in 2016.

NOTE: Data are from NPSAS: 2000, 2012 and 2016 and represent cumulative loan amounts among associate's degree completers having loans.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1999–2000, 2011–12, and 2015–16 National Postsecondary Student Aid Study (NPSAS:2000, NPSAS:12, and NPSAS:16). *Digest of Education Statistics 2019*, Table [331.95]. Retrieved from https://nces.ed.gov/programs/digest/d18/tables/dt18_331.95.asp?current=yes.

Equity Indicator 4d(iii): Average cumulative loan amounts for bachelor's degree completers who ever received loans (federal and non-federal loans to students and Parent Plus Loans) by race/ethnicity: 2000, 2012, and 2016 (constant 2018 dollars)



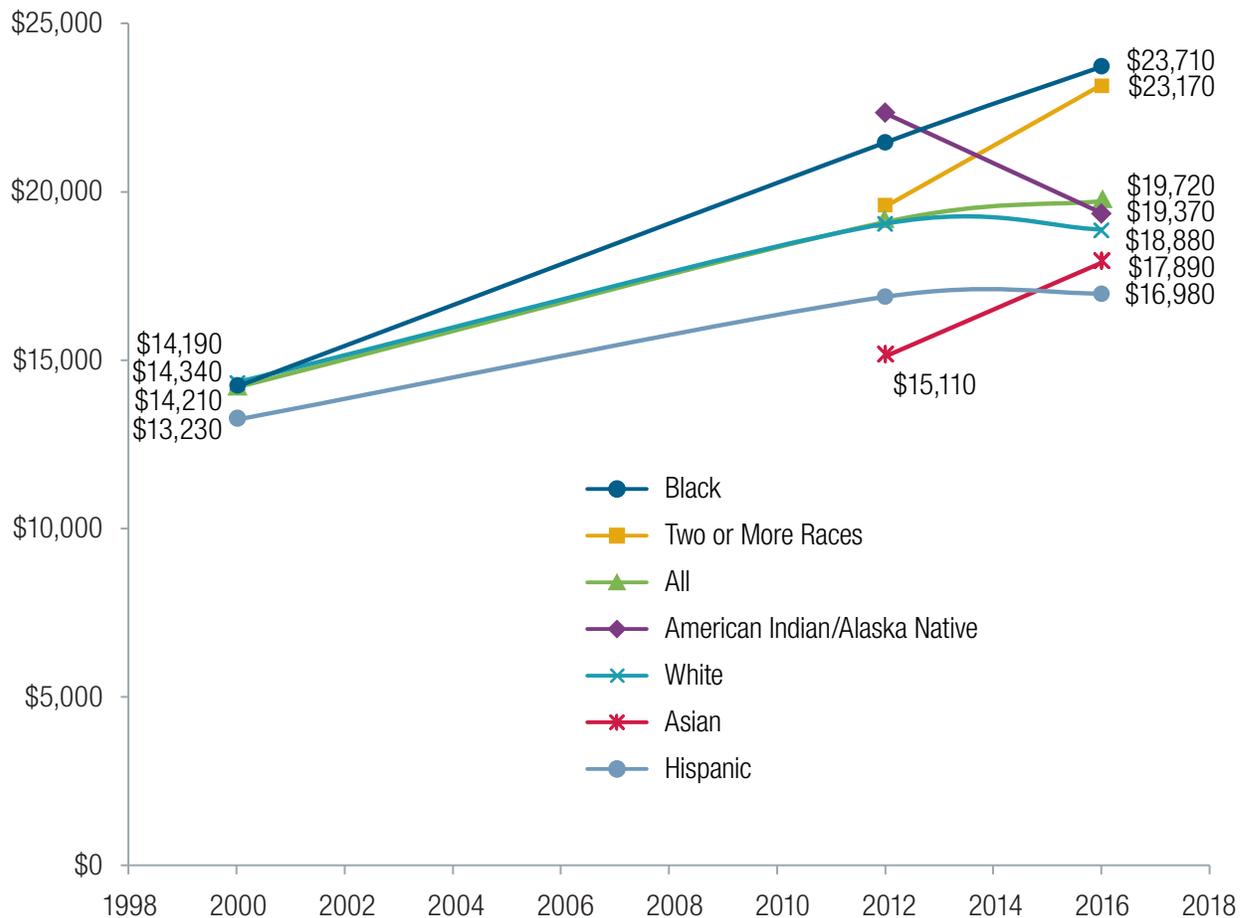
Indicator Status: Higher Average Debt for Blacks

Black bachelor's degree completers average higher cumulative loan amounts than bachelor's degree completers of other racial/ethnic groups.

NOTE: Data are from NPSAS: 2000, 2012 and 2016 and represent cumulative loan amounts among bachelor's degree completers who reported having loans.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1999–2000, 2011–12, and 2015–16 National Postsecondary Student Aid Study (NPSAS:2000, NPSAS:12, and NPSAS:16). *Digest of Education Statistics 2019*, Table [331.95]. Retrieved from https://nces.ed.gov/programs/digest/d18/tables/dt18_331.95.asp?current=yes.

Equity Indicator 4d(iv): Average cumulative loan amounts for associate's degree completers who ever received loans (federal and non-federal loans to students and Parent Plus Loans) by race/ethnicity: 2000, 2012, and 2016 (constant 2018 dollars)



Indicator Status: Higher Average Cumulative Debt for Blacks

Average cumulative loan debt in 2016 was \$23,710 for Black associate's degree completers, compared with \$18,880, on average, for Whites.

NOTE: Data are from NPSAS: 2000, 2012 and 2016 and represent the cumulative loan amounts among associate's degree completers who reported having loans.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1999–2000, 2011–12, and 2015–16 National Postsecondary Student Aid Study (NPSAS:2000, NPSAS:12, and NPSAS:16). *Digest of Education Statistics 2019*, Table [331.95]. Retrieved from https://nces.ed.gov/programs/digest/d18/tables/dt18_331.95.asp?current=yes.

Equity Indicator 4e: What Are Rates of Borrowing and Average Amount Borrowed by State?

Indicators 4e(i) and 4e(ii) show the estimated percentages of 2018 bachelor's degree recipients who borrowed and, among those who borrowed, the average cumulative amounts borrowed, by state. The federal government does not collect cumulative student debt from institutions. As such, this indicator relies on data from the 2018 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.⁹⁷ The limitations of relying on voluntarily-reported data underscore the need for federal collection of cumulative student debt data for all institutions.

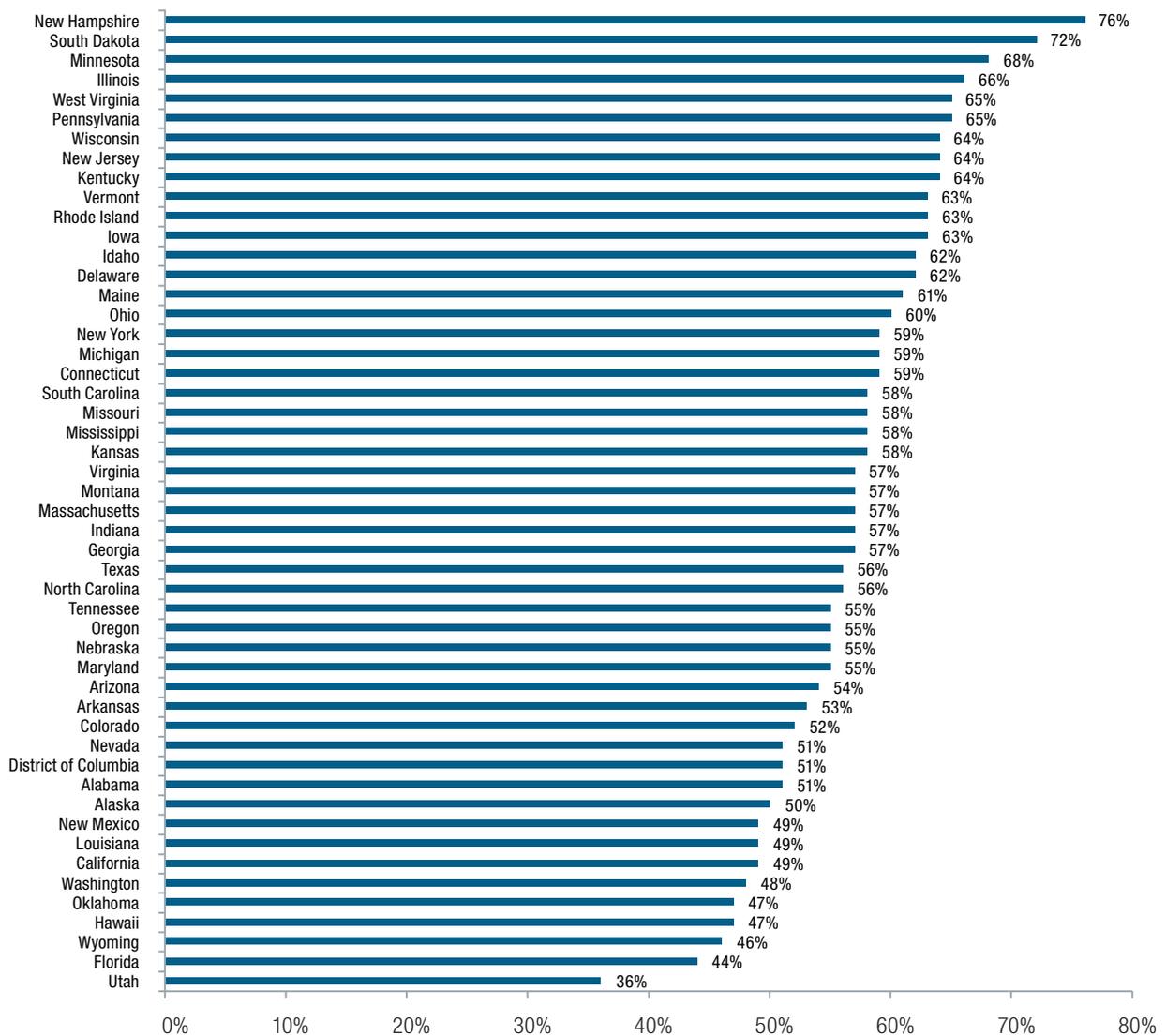
As with all state comparisons, caution is needed in interpreting differences by state. States may have higher or lower rates of borrowing and amounts borrowed for many reasons, including differences in the rate at which low-income and middle-income students participate in college, availability of need-based grant aid, average college costs, and economic differences between the states.

Indicator 4e(i) shows that, in 2018, 76 percent of bachelor's degree recipients graduated with debt in New Hampshire. By comparison, fewer than 50 percent of bachelor's degree recipients graduated with debt in Utah (36 percent), Florida (44 percent), Wyoming (46 percent), Hawaii and Oklahoma (47 percent), Washington (48 percent), and California, Louisiana, and New Mexico (49 percent).

Indicator 4e(ii) shows that the average amount borrowed by those who borrowed ranged from less than \$23,000 in Utah (\$19,728), New Mexico (\$21,858), California (\$22,585), and Nevada (\$22,600), to more than \$36,000 in Rhode Island (\$36,036), New Hampshire (\$36,776), Pennsylvania (\$37,061), and Connecticut (\$38,669).

97 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. The state-level report by TICAS covers 72 percent of all bachelor's degree recipients at public and non-profit 4-year colleges in 2017-18. Ahlman, L., Fung, A., & Gonzalez, V. (2019). *Student Debt and the Class of 2018, 14th Annual Report*. Oakland: The Institute for College Access & Success (TICAS). Retrieved from <https://ticas.org/wp-content/uploads/2019/09/classof2018.pdf>.

Equity Indicator 4e(i): Percentage of bachelor's degree recipients with debt by state: 2018



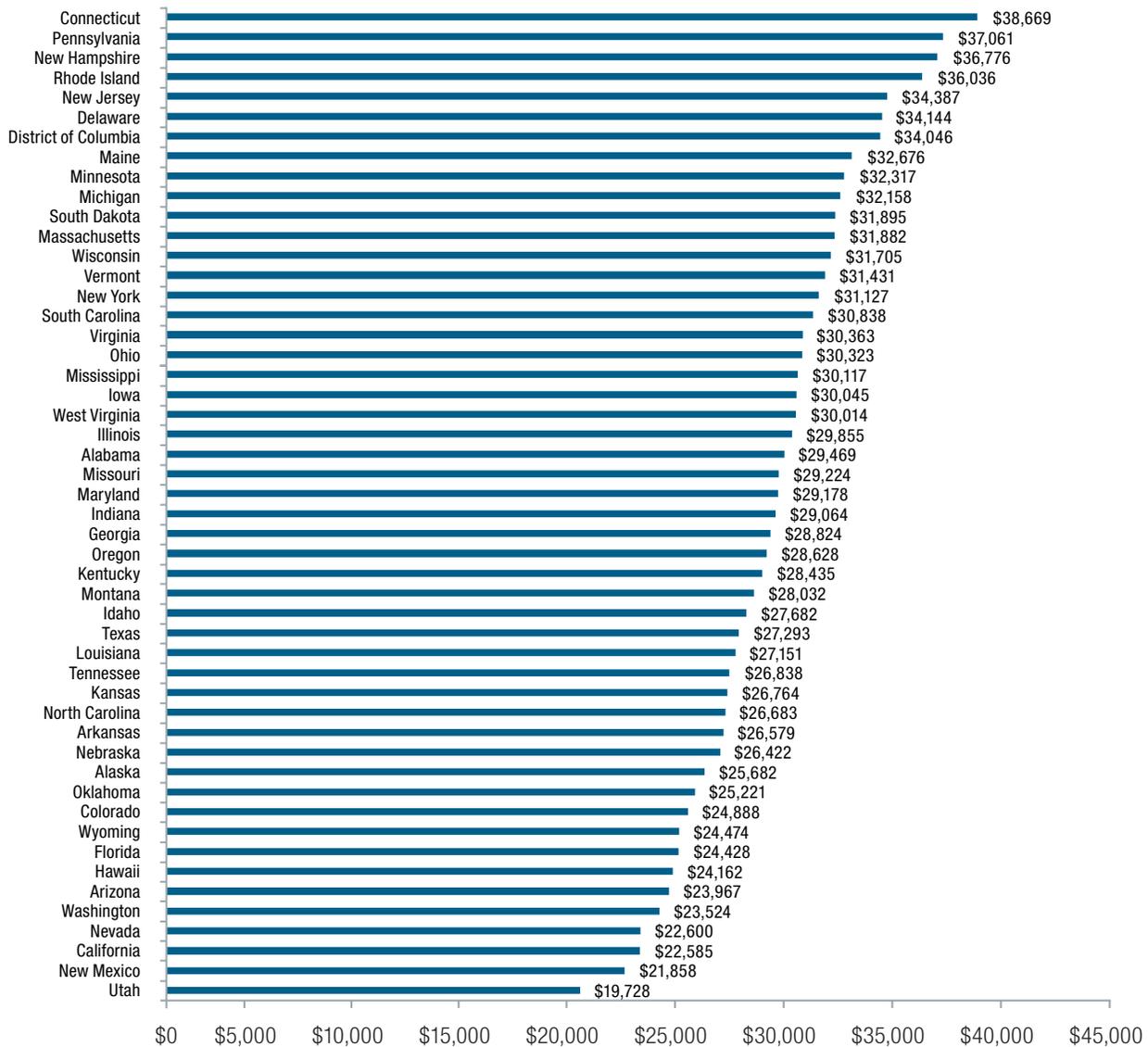
Indicator Status:

The percentage of 2018 bachelor's degree recipients who borrowed ranged from 36 percent in Utah to 76 percent 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/>. Alaska and Arizona use data from 2017. 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: Ahlman, L., Fung, A., & Gonzalez, V. (2019). *Student Debt and the Class of 2018, 14th Annual Report*. Oakland: The Institute for College Access & Success (TICAS). Retrieved from <https://ticas.org/wp-content/uploads/2019/09/classof2018.pdf>.

Equity Indicator 4e(ii): Average amount of debt among bachelor's degree recipients who borrowed by state: 2018



Indicator Status:

The average amount borrowed among 2018 bachelor's degree recipients who borrowed ranged from \$19,728 in Utah to \$38,669 in Connecticut.

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/>. Alaska and Arizona use data from 2017. 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: Ahlman, L., Fung, A., & Gonzalez, V. (2019). *Student Debt and the Class of 2018, 14th Annual Report*. Oakland: The Institute for College Access & Success (TICAS). Retrieved from <https://ticas.org/wp-content/uploads/2019/09/classof2018.pdf>.

EQUITY INDICATOR 5:

HOW DO EDUCATIONAL ATTAINMENT RATES AND EARLY OUTCOMES VARY BY FAMILY CHARACTERISTICS?

In 2018, estimated bachelor's degree attainment rates by age 24 based on CPS household survey data were 4 times greater for dependent family members from the highest family income quartile than for those from the lowest family income quartile (62 percent vs. 16 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 for outcomes of recent college graduates; 6) Census Bureau data on educational attainment rates by state for various age groupings; and 7) NCES IPEDS Graduation Rate data by state. 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 degree 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.⁹⁸

- **Percentage of first-time beginning postsecondary dependent and independent students earning bachelor's degrees within 5 or 6 years of initial enrollment by income quartile and TRIO eligibility.** These measures use data from the Beginning Postsecondary Students Longitudinal Study (BPS). BPS tracked students first enrolling in a postsecondary educational institution in academic years 1989-90, 1996-97, 2003-04, and 2011-12. Bachelor's degree attainment rates 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).⁹⁹
- **Percentage of first-time beginning postsecondary students who persisted or earned any postsecondary credential 4 and 6 years after enrolling in postsecondary by dependency status, and for dependent students by family income quartile.** These measures use data from the most recent BPS cohort beginning in 2011-12 for whom 4-year and 6-year follow-up data are available.
- **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.** Using data from NCES's Baccalaureate and Beyond Longitudinal study (B&B), this Indicator reports post-baccalaureate enrollment, annual income, and unemployment for 2008 bachelor's degree recipients. Data are from the 4-year follow-up in 2012 by parents' income quartile¹⁰⁰.
- **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 Graduation Rates by State** provides cohort data on 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.

98 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.

99 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, Student Support Services (SSS), Educational Opportunity Centers (EOC), Ronald E. McNair Post-Baccalaureate 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.

100 The third B&B cohort was drawn from the 2008 NPSAS sample. This group of approximately 19,000 sample members was followed up with in 2009 and 2012. The students were interviewed again in 2018 for an 8-year follow up. As of Spring 2020, the data had not yet been released.

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 2018.¹⁰¹ 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 remain highly unequal. In 2018, an estimated 16 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, 44 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 46 percentage points in 2018. Estimated bachelor's degree attainment rates by age 24 were 3.9 times higher for dependent family members in the highest income quartile than for the lowest income quartile (62 percent vs. 16 percent) in 2018. 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).

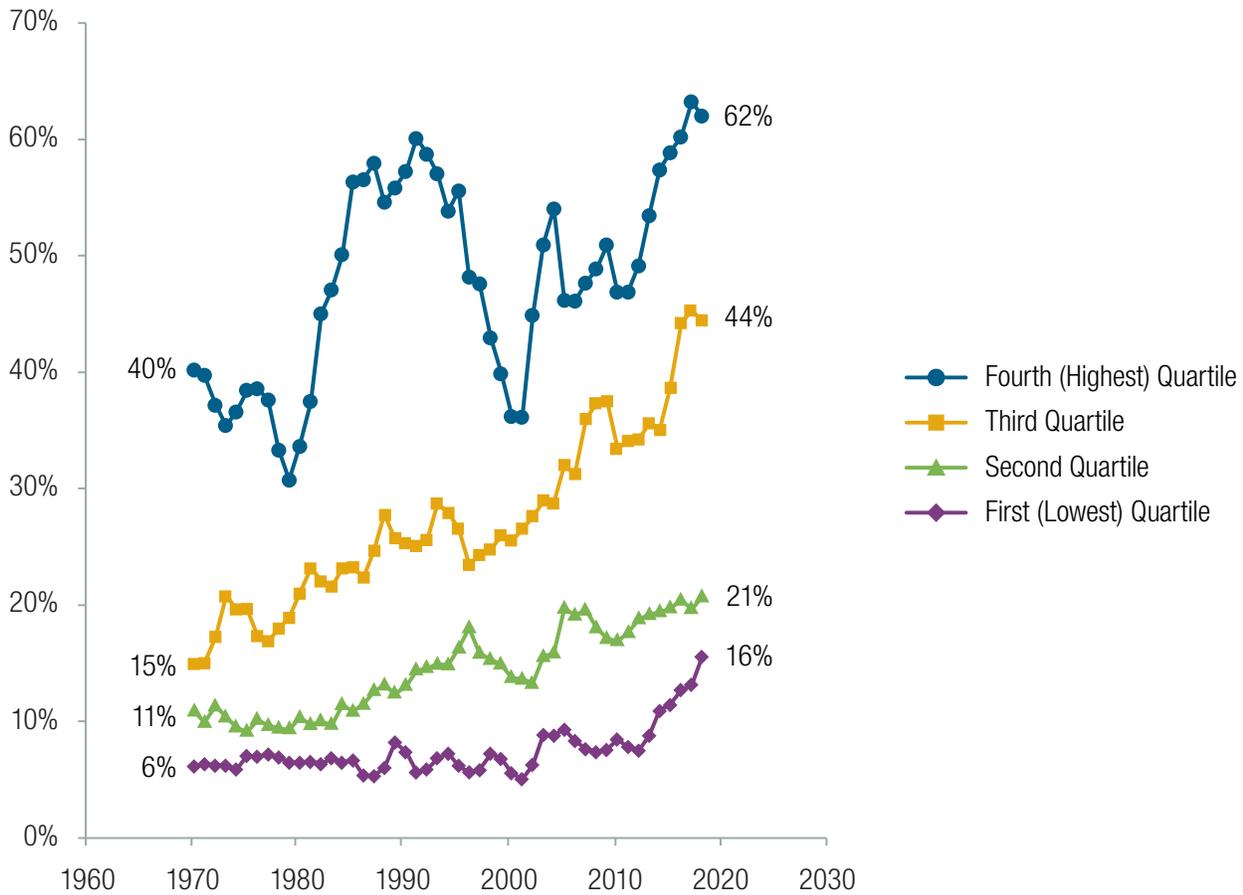
The rate of increase in bachelor's degree attainment for dependent family members by age 24 between 1970 and 2018 was highest for the third quartile, with a 193 percent increase (from 15 percent in 1970 to 44 percent in 2018). The rate of increase in bachelor's degree attainment was lowest for the highest quartile, with attainment rates increasing from 40 percent to 62 percent (55 percent increase). Bachelor's degree attainment rates increased by 166 percent for the lowest quartile, increasing from 6 percent in 1970 to 16 percent in 2018, and by 91 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 2018, dependent family members in the top two income quartiles accounted for 73 percent of the bachelor's degrees awarded, with 42 percent going to the fourth quartile (the top quartile) and 31 percent to the third quartile. Only 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, 15 percent and 12 percent, respectively. The largest relative gains were made by individuals in the third quartile (increasing from 20 percent to 31 percent), with a corresponding decline in the percentage going to the top quartile (from 52 percent to 42 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 2018.

¹⁰¹ 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 2018



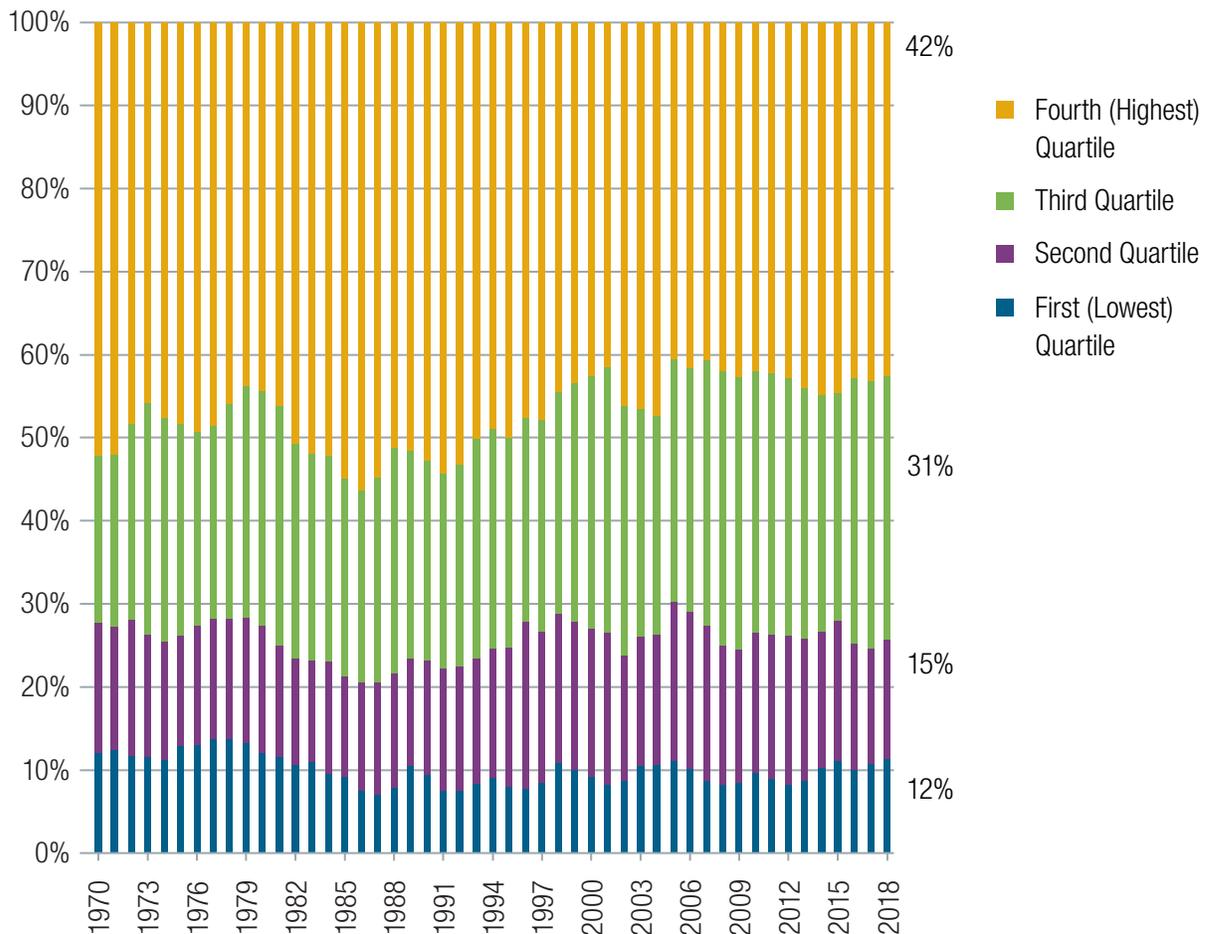
Indicator Status: High Persisting Inequality

Estimated bachelor's degree attainment rates by age 24 were 3.9 times higher for dependent family members in the highest income quartile than for those in the lowest income quartile (62 percent vs. 16 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, 1970-2018. Data from 1970 to 1986 consider unmarried 18- to 24-year-olds and data from 1987 to 2018 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 (2006-2018). Mortenson, T. (in press). Estimated Baccalaureate Degree Attainment by Age 24 by Family Income Quartiles: 1970 to 2018, *Postsecondary Educational 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 2018



Indicator Status: High Persisting Inequality

In 2018, the upper two quartiles accounted for 73 percent of the bachelor's degrees awarded to dependent students age 18 to 24 (42 percent for the highest quartile and 31 percent for the third quartile). The bottom two family income quartiles accounted for 27 percent of degrees (15 percent for second quartile and 12 percent for the first (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, 1970-2018. Data from 1970 to 1986 consider unmarried 18- to 24-year-olds and data from 1987 to 2016 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 (2006-2018). Mortenson, T. (in press). Estimated Baccalaureate Degree Attainment by Age 24 by Family Income Quartiles: 1970 to 2018, *Postsecondary Educational 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.¹⁰² 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.¹⁰³

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,¹⁰⁴ thereby altering the composition of schools and students (despite non-response adjustments by NCES) in the three samples.¹⁰⁵

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

102 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.

103 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.

104 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.

105 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.

for the NELS:88 cohort (8 percent). But the percentage of individuals from the lowest SES quartile who 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 (see Appendix A). Thus, this caution may be more applicable for understanding trends over time in completion rates for the lowest quartile than the highest quartile.¹⁰⁶

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).

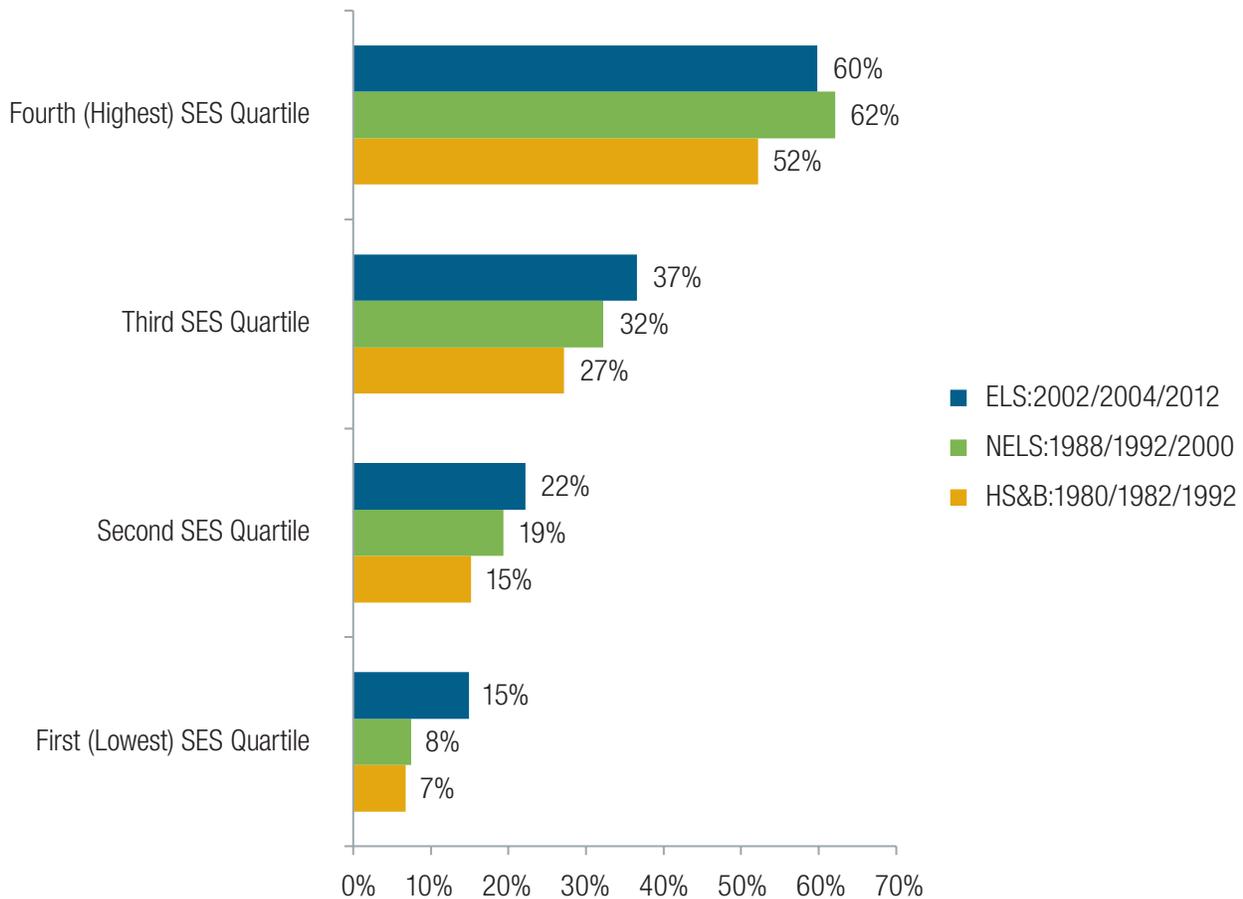
Bachelor's degree attainment rates also increased across the three cohorts for youth in the middle SES quartiles. Attainment rates for youth in the second SES quartile increased from 15 percent in the HS&B:1980 cohort, to 19 percent in the NELS:88 cohort, to 22 percent in the ELS:2002 cohort. For those in the third SES quartile, bachelor's degree attainment rates increased from 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 a correspondence with the CPS data shown in Indicator 5a(i).¹⁰⁷ Equity Indicator 5b shows that, 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). For the 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).

106 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/cheersdotorg/exploring-demographic-and-selected-state-policy-correlates-of-state-level-educational-attainment-and-achievement-indicators-aera2007-cahalan>.

107 In 2018, estimated bachelor's degree attainment rates by age 24 based on CPS household survey data were 3.9 times greater for dependent family members from the highest family income quartile than for those from the lowest family income quartile (62 percent vs. 16 percent). In 1970, those 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).

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 a Bachelor's Degree?

Whether first enrolling in a 4-year or 2-year postsecondary institution, most students report aspiring to obtain a bachelor's degree.¹⁰⁸ 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.¹⁰⁹

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 were followed 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(v)).

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 the students followed in 2009, and 21 percent for the student's 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 small 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).

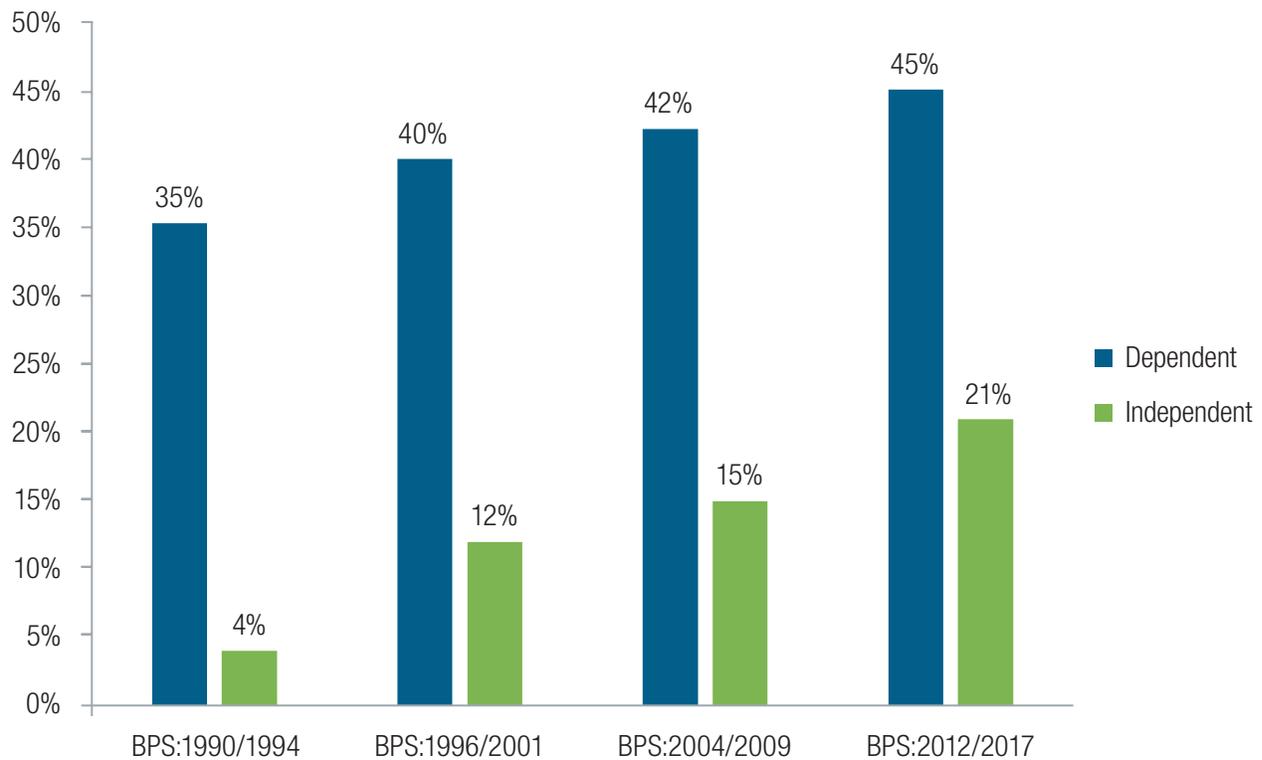
¹⁰⁸ For example, data from ELS:2002 show that 80 percent of all high school students, and 60 percent of those in the lowest SES quartile, hoped to obtain a bachelor's degree or higher. See Cahalan, M., Ingels, S., Burns, L., & Planty, M. (2006). *United States High School Sophomores: A Twenty-two Year 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>.

¹⁰⁹ 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.

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 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 education 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)



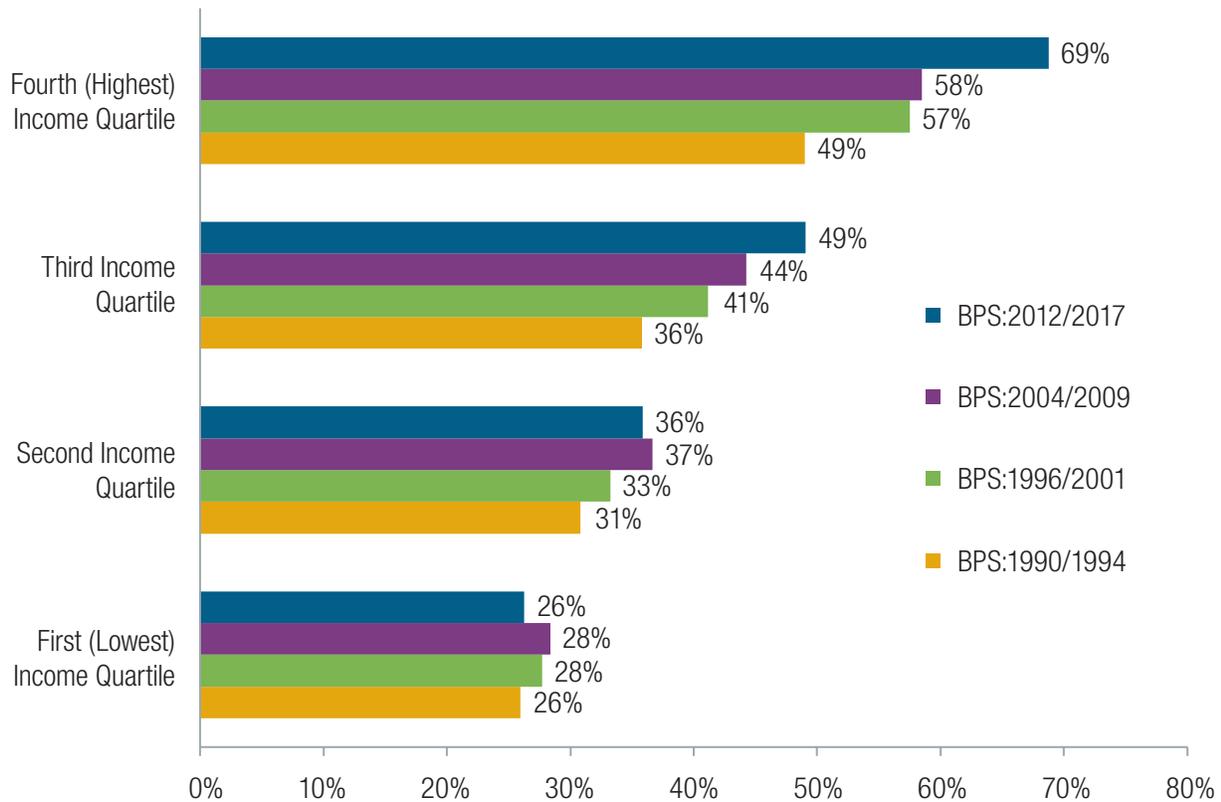
Indicator Status: High Inequality in Completion Rates Between Dependent and Independent Completion Rates

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 Persistent 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 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 NCE 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.

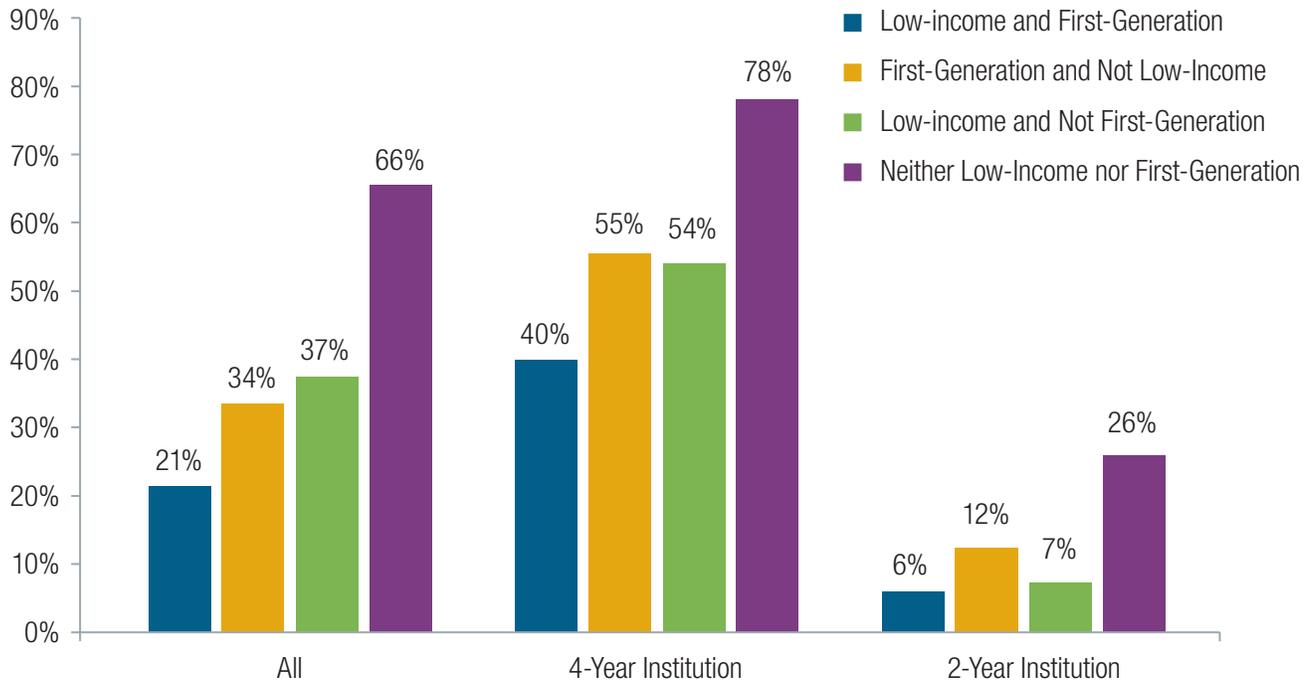
Equity Indicator 5c(iii): What Percentage of Beginning First-Time TRIO Eligible and Non-TRIO-Eligible Students Complete Bachelor's Degrees within 6 Years?

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 who first entered 2-year and 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.

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 Four and Six 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, four and six years after first enrolling. This indicator uses data from the 4-year (2015) and 6-year (2017) follow-ups for the BPS:2011/17. 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, four 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 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.¹¹⁰

About half (49 percent) of independent students had not completed a degree or certificate and were not enrolled six 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.¹¹¹

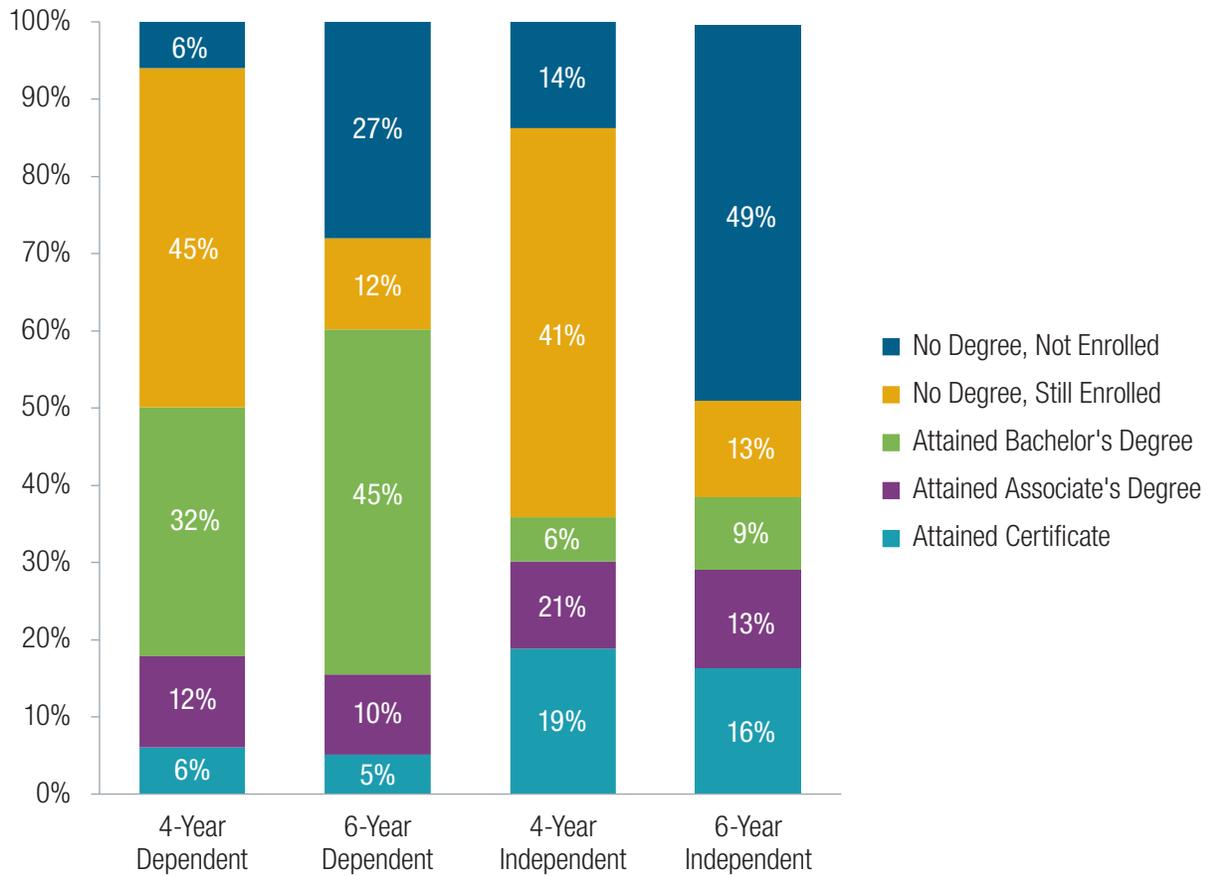
Enrollment and completion for dependent students by parent's family income. Indicator 5c(v) shows enrollment and degree completion status six years (2017) after dependent students first enrolled in 2011-12 by family income quartile. The percent of dependent students who attained any credential within six years was 46 percent for those in the lowest income quartile, 55 percent for those in the second quartile, 65 percent for the third quartile, and 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 six years after first enrolling was 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.

110 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-ups.

111 See footnote 13, for reason that the degrees below bachelor's decreased between 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



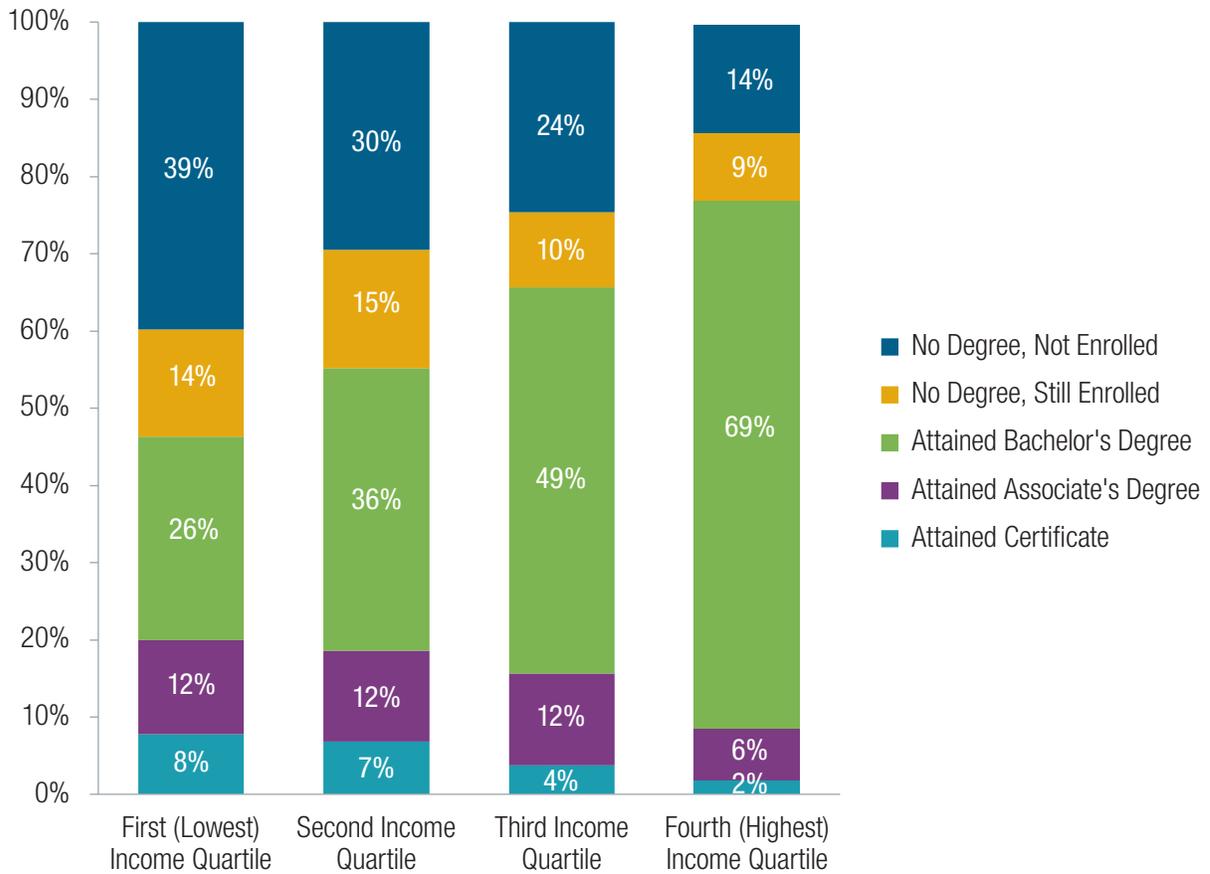
Indicator Status: High Inequality

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 six 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 study. 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 2018. 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 2018, 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 18 percent of the total population and 22 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 24.¹¹²

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 24.¹¹³ 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 2018, Blacks were closer to parity in the percentage of degrees earned but continued to be underrepresented relative to their representation in the population. In 2018, Blacks were 14 percent of the population age 18 to 24

112 In 2018, 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.

113 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 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.

but received 13 percent of associate's degrees (89 percent parity), 10 percent of bachelor's degrees (73 percent of parity), 14 percent of master's degrees (95 percent parity), and 9 percent of doctoral degrees (63 percent of parity).

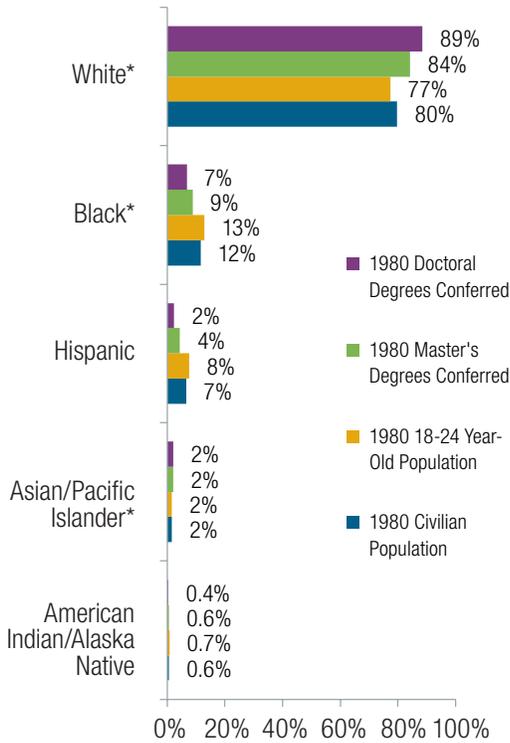
In 1980, those of Hispanic origin represented 7 percent of the total civilian population and 8 percent of the population age 18 to 24, yet they received 4 percent of associate's degrees and 2 percent of bachelor's, master's and doctoral degrees conferred. By 2018, Hispanics were about 18 percent of the civilian population and 22 percent of those age 18 to 24 and received 23 percent of associate's degrees (102 percent of parity relative to the population age 18 to 24); 14 percent of bachelor's degrees (63 percent of parity), 11 percent of master's degrees (48 percent of parity), and 8 percent of doctoral degrees (37 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 2018, Asians represented 6 percent of the civilian population and the population age 18 to 24, and received 6 percent of associate's degrees (103 percent of parity), 8 percent of bachelor's degrees (138 percent of parity), 7 percent of master's degrees (128 percent of parity), and 13 percent of doctoral degrees (222 percent of parity).

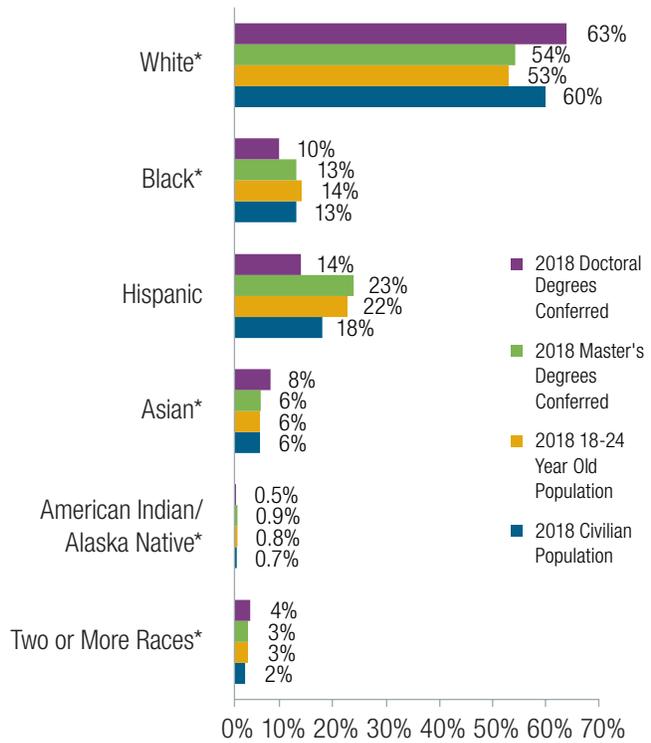
In 2018, Whites remained overrepresented in degrees conferred relative to their representation in the total population (60 percent) and population age 18 to 24 (53 percent). Whites were awarded 54 percent of associate's degrees (102 percent of parity relative to population age 18 to 24), 63 percent of bachelor's degrees (118 percent of parity), 65 percent of master's degrees (122 percent of parity), and 67 percent of doctoral degrees (125 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 2018

1980 Associate's and Bachelor's



2018 Associate's and Bachelor's



Indicator Status: Gains in Equity Since 1980

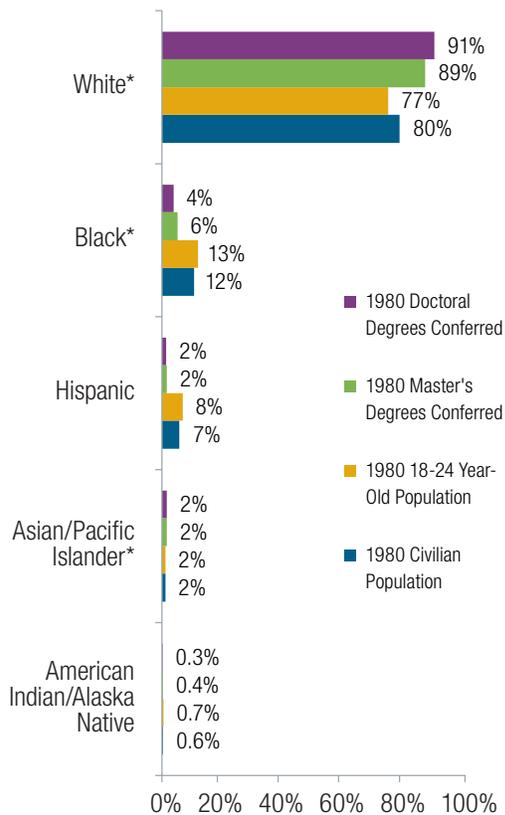
The representation of Blacks and Hispanics among degree recipients has increased since 1980, but, in 2018, Blacks and Hispanics continued to be underrepresented among degree recipients relative to their representation in the population.

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 2018, 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.

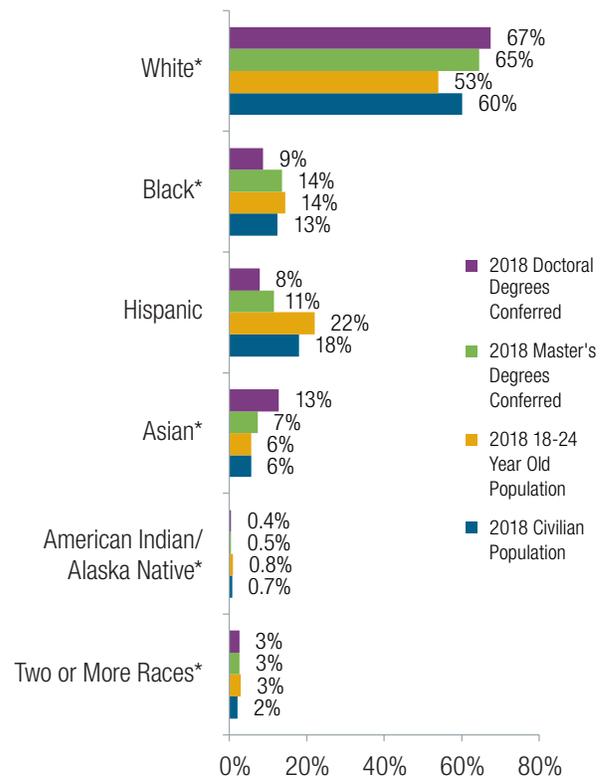
SOURCE: U.S. Department of Education, National Center for Education Statistics (2019). *Digest of Education Statistics 2019* [Table 101.20] [Table 321.20] [Table 322.20]. Retrieved from https://nces.ed.gov/programs/digest/d19/tables/dt19_321.20.asp. Hobbs, F., & Stoops, N. (2002). *Demographic Trends 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 2018

1980 Doctoral and Master's Degrees



2018 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 in 2018, 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 2017 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 (2019). *Digest of Education Statistics 2019* [Table 101.20] [Table 323.20] [Table 324.20]. Retrieved from https://nces.ed.gov/programs/digest/d19/tables/dt19_323.20.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: What are the Differences in Post-Baccalaureate Outcomes by Parent Family Income Quartiles?

Using data from the NCES Baccalaureate and Beyond Longitudinal study (B&B) for the 2008 cohort of graduating bachelor's degree recipients, Indicators 5e(i), 5e(ii), and 5e(iii) report selected outcomes 4 years after graduation (in 2012).¹¹⁴ The analyses include only those who were classified as dependent students for financial aid purposes when they were first surveyed in NPSAS:2008. Data are displayed according to parents' income quartile as derived from NPSAS:2008. While the B&B is a stratified, nationally representative sample of graduating seniors, caution is warranted when interpreting the data displayed in the indicators. Disaggregating the sample by multiple categories (such as dependent students' parents' income, post-baccalaureate degree program enrollment, and employment status) increases sampling errors, especially for categories that have a small number of graduates.

Enrollment of 2008 Bachelor's Degree Recipients in Further Schooling by 2012. Indicator 5e(i) presents the percent of graduates who had enrolled in further schooling and the highest post-baccalaureate degree program in which 2008 bachelor's degree graduates had enrolled 4 years after graduation (in 2012) by parents' income quartile.¹¹⁵ About half (47 percent) of all dependent 2008 bachelor's degree recipients enrolled in some form of further schooling within 4 years of receiving their bachelor's degree.

Indicator 5e(i) suggests that enrollment in graduate school or other further schooling was more common among dependent bachelor's degree recipients from the highest family income quartile (51 percent), than among dependent bachelor's degree recipients from the three lower quartiles, ranging from 44 percent to 46 percent. The higher rate of post-baccalaureate enrollment for those in the highest-income quartile is attributable to their higher rate of enrollment in doctoral degree programs. About 14 percent of dependent bachelor's degree recipients in the highest family income quartile enrolled in a doctoral degree program within 4 years of earning a bachelor's degree, compared with 8 percent to 9 percent of dependent bachelor's degree recipients in the lowest three income quartiles. Rates of enrollment in master's degree programs did not vary by parents' income quartile (26 percent to 29 percent).

Annualized Income by the 4-Year Follow-Up. Indicator 5e(ii) displays average annualized income in 2012 for 2008 bachelor's degree recipients who were dependent students by parents' income quartile. The average annualized income reported in Indicator 5e(ii) 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 jobs in 2012, 4 years after graduation.¹¹⁶

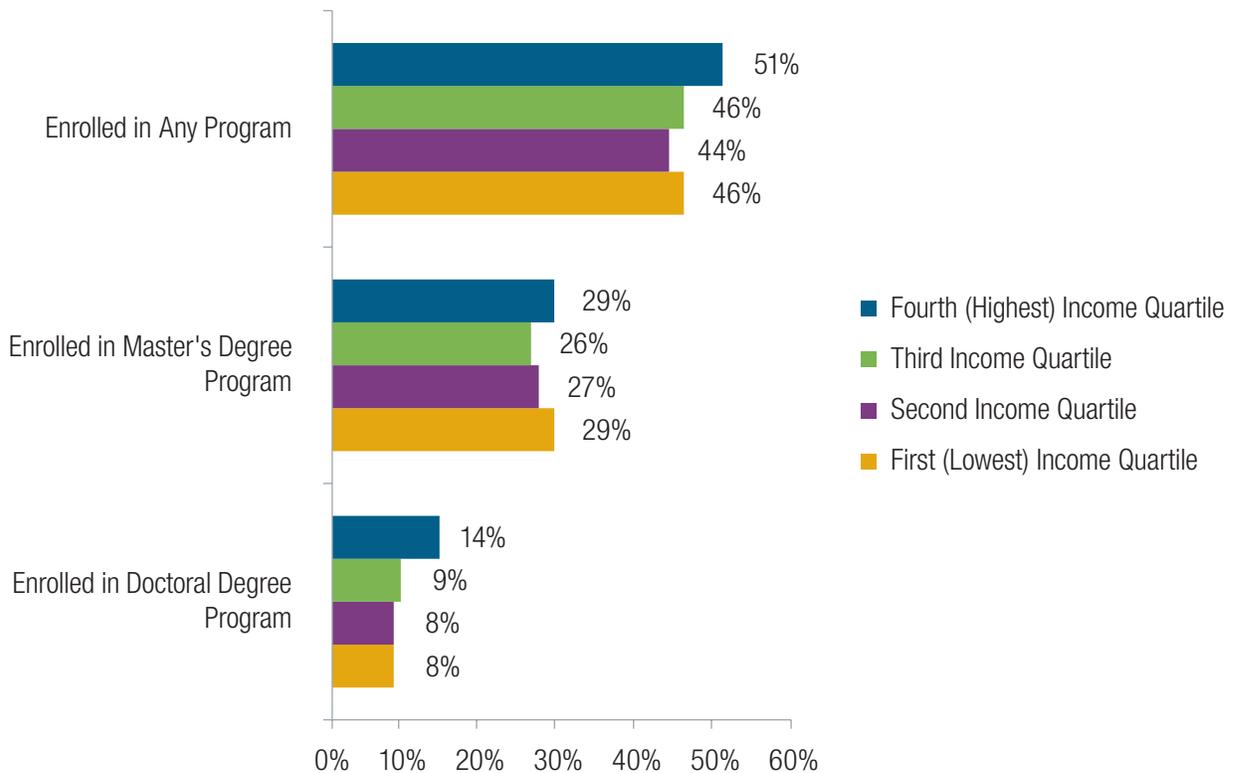
Indicator 5e(ii) shows that average annualized income for dependent bachelor's degree recipients who were not enrolled in educational programs 4 years after graduation was higher for those whose parents' income was in the highest quartile than for other graduates. There is little difference in average annualized income for bachelor's degree recipients from the first through third family income quartiles. The mean annualized income of dependent bachelor's degree recipients whose parents' income was in the top quartile was about \$51,000, while the average annualized income for bachelor's degree recipients in the other three family income quartiles was about \$43,000.

114 A B&B2008 follow-up was conducted in 2018, but the data have not yet been released by NCES.

115 Most respondents were enrolled in master's and doctoral degree programs, but the analyses also include the approximately 0.8 percent of respondents who reported enrollment in a post-master's certificate and 2.8 percent who reported enrollment in a post-baccalaureate certificate program.

116 The mean incomes reported in the 2017 Indicators 5e(i) and 5e(ii) did not exclude those who were enrolled in further schooling and thus are lower than those reported in the 2018 and 2019 Indicator 5e(ii).

Equity Indicator 5e(i): Percentage of dependent students who received bachelor's degrees in 2008 who had enrolled in graduate school or other further schooling programs by parents' family income quartile: 2012 (4-year follow-up)



Indicator Status:

Among dependent students who received bachelor's degrees in 2008, the rate of enrolling in a doctoral degree program within four years of graduation was higher for those in the highest family income quartile than for those in lower income quartiles (14 percent versus 8 percent to 9 percent).

NOTE: In addition to master's and doctoral degree programs, "Enrolled in Any Program" also includes small percentages of individuals enrolled in other programs (e.g., post-baccalaureate certificates, post-master's degree certificates, undergraduate certificates, associate's degrees, and additional bachelor's degrees).

SOURCE: U.S. Department of Education, National Center for Education Statistics, Baccalaureate and Beyond Longitudinal Study (B&B 2008/2012). Tabulated using NCES PowerStats.

Equity Indicator 5e(ii): Average annualized income for dependent students who received bachelor's degrees in 2008 who were not enrolled in education and who were employed at the 4-year follow-up in 2012 by parents' income quartile



Indicator Status:

Average annualized income of dependent students who received bachelor's degrees in 2008 was higher at the 4-year follow-up for those from the highest income quartile than for those from lower income quartiles. (This comparison includes only individuals who were employed and who were not enrolled in educational programs.)

NOTE: Mean annualized incomes are for dependent 2008 bachelor's degree recipients who were not enrolled in any educational program at the time of the 2012 follow-up and who were employed full-time or part-time with one job or more jobs. The mean incomes reported in the 2017 Equity Indicators 5e(i) and 5e(ii) did not exclude those who were enrolled in further schooling and thus are lower than those reported in the 2018 -2020 reports.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Baccalaureate and Beyond Longitudinal Study (B&B 2008/2012). Tabulated using NCES PowerStats.

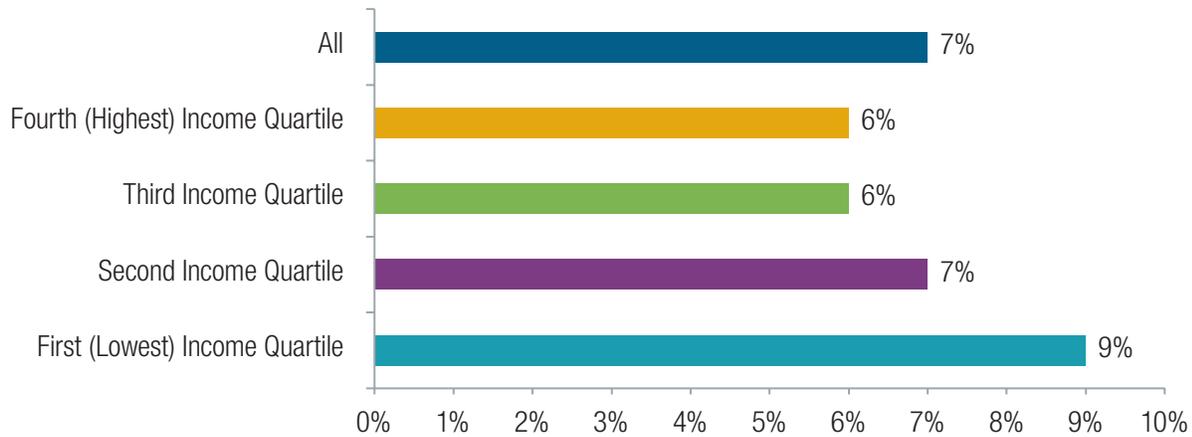
Unemployment among Bachelor’s Degree Recipients at the Time of the 4-Year Follow-Up. Indicator 5e(iii) shows the percentage of dependent bachelor’s degree recipients who were not employed, not enrolled in any educational program, and did not report they were out of the labor force for family or other reasons when they were surveyed 4 years after graduation (in 2012).¹¹⁷

Indicator 5e(iii) shows that 9 percent of bachelor’s degree recipients from the lowest family income quartile were “unemployed” 4 years after graduation, compared with 7 percent of those in the second lowest income quartile and 6 percent of those from the top two income quartiles.¹¹⁸

117 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.

118 In 2012, during the Great Recession, the unemployment rate reported by BLS based on CPS data was 8.3 percent overall and 4.3 percent for college graduates over age 25. Recent college graduates typically have higher unemployment rates than older graduates. For younger college graduates, the national unemployment rate was 10.4 percent in 2010 and 9.4 percent in 2012. Discussion of college graduates’ employment has also focused on underemployment, defined as those working in jobs that did not require a college degree. For 2012, the U.S. Census Bureau Current Population Survey estimated that 44 percent of recent college graduates age 22 to 27 were “underemployed” by this definition. <https://www.theatlantic.com/business/archive/2013/06/44-of-young-college-grads-are-underemployed-and-thats-good-news/277325>. For discussion of employment and underemployment trends see: Wething, H. Sabadish, N., and Shierholz, H. (2012). *Labor Market for Young Graduates*. Economic Policy Institute. Retrieved from <https://www.epi.org/publication/bp340-labor-market-young-graduates/> and https://fredblog.stlouisfed.org/2014/03/unemployment-rates-by-educational-attainment/?utm_source=series_page&utm_medium=related_content&utm_term=related_resources&utm_campaign=fredblog.

Equity Indicator 5e(iii): Percentage of dependent students who received bachelor's degrees in 2008 who were "unemployed" (not enrolled in further schooling, not employed, and in the labor force) at the time of the 4-year follow-up in 2012



Indicator Status:

Bachelor's degree recipients who were in the lowest family income quartile were "unemployed" at a rate 50 percent higher than that of the highest two income quartiles (9 percent versus 6 percent).

NOTE: "Unemployed" bachelor's degree recipients were not employed and not enrolled in education programs, 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 2008/2012). Tabulated using NCES PowerStats.

Equity Indicator 5f (i to v): What are Differences in Educational Attainment by State?

Equity Indicator 5f(i-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 6-year graduation rates as reported to NCES through IPEDS. To provide context to 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 2018. 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 6-year graduation rates in 2000 and 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 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.¹¹⁹

State Variation in High School and College Attainment Rates: 1940 to 2018. Indicators 5f(i) to (iii) use Census Bureau data to show the percent of the population 25 years of age and older that has attained a high school credential 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 2018 data are from the American Community Survey.¹²⁰ 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 2018.

Over the 78 years from 1940 to 2018, 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 by state in the percentage that has attained at least a bachelor's degree.

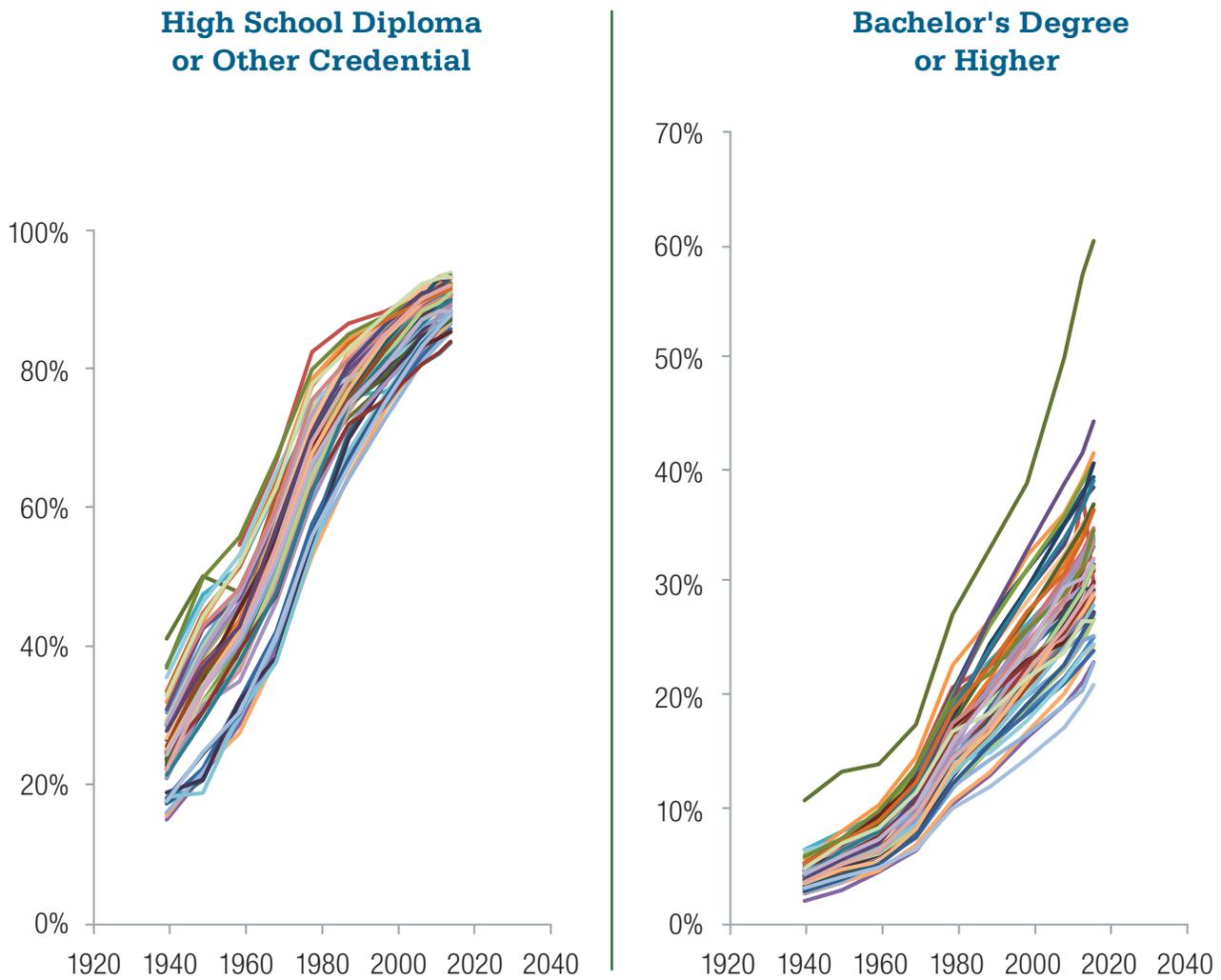
High School Attainment of Population 25 and older: 1940 and 2018. As displayed in Indicator 5f(ii), the percent of the population age 25 and older with a high school diploma or other credential averaged 24 percent for the United States as a whole in 1940 and ranged from 15 percent to 41 percent across 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 2018, 88 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 and Texas to at least 90 percent in 31 states. Montana and Vermont had the highest high school attainment rates in 2018 (94 percent).

¹¹⁹ Perna, L.W., & Finney, J. (2014). *The attainment agenda: State policy leadership in higher education*. Baltimore, MD: Johns Hopkins University Press.

¹²⁰ 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?d=ACS%201-Year%20Estimates%20Subject%20Tables&g=0100000US.04000.001&tid=ACSST1Y2018.S1501&t=Educational%20Attainment&hidePreview=true&y=2018&tp=false&moe=false>. Data are also available from the NCHES Information System, <http://www.higheredinfo.org/>. The data from the decennial census are not subject to sampling error, but are subject to coverage error.

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: 1940-2018



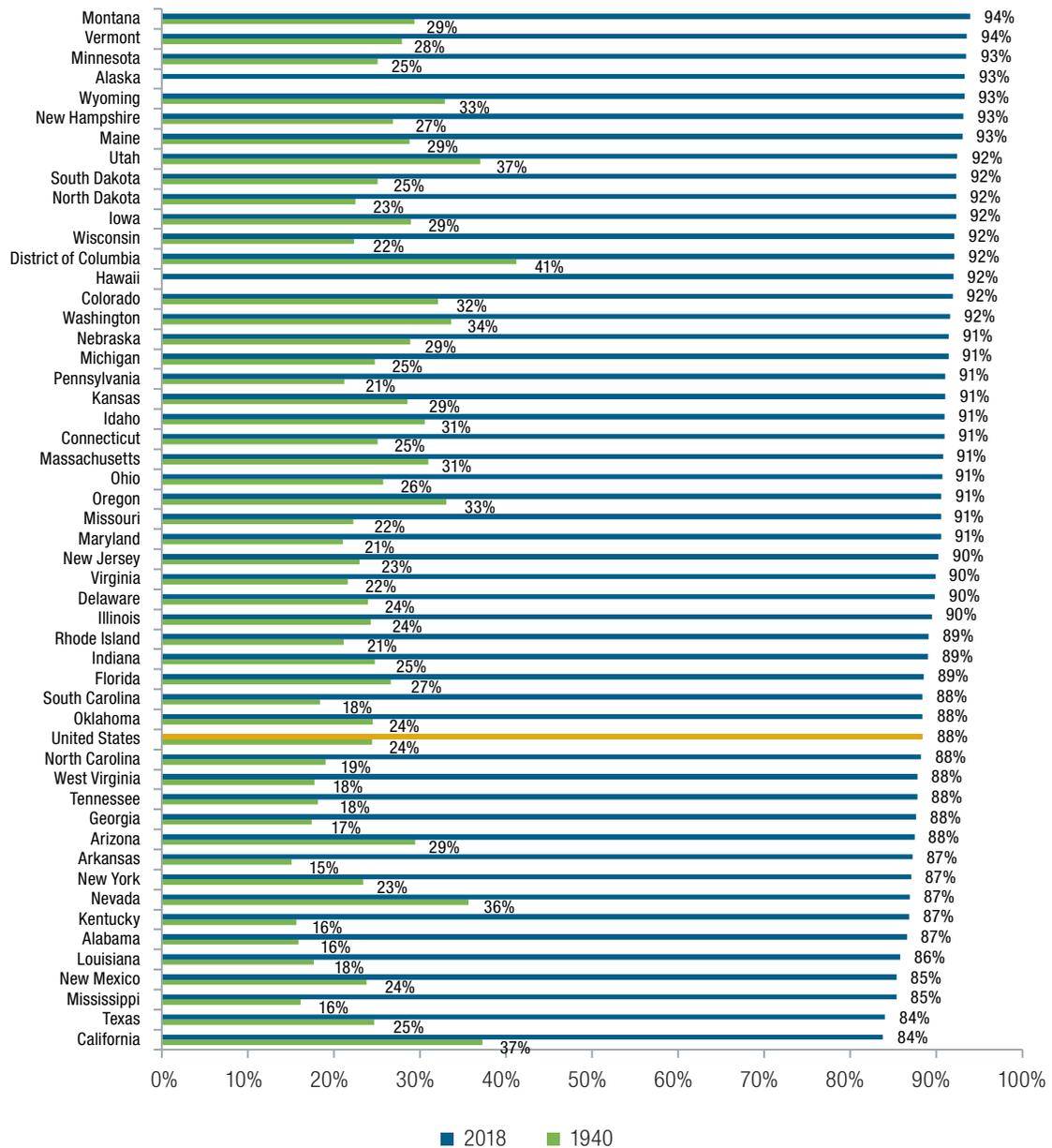
Indicator Status:

Differences across states in high school attainment rates lessened over the 75-year period from 1940 to 2018. 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 2018 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, 2018 1-Year Estimates, [Table S. 1501]. Retrieved from <https://data.census.gov/cedsci/table?d=ACS%201-Year%20Estimates%20Subject%20Tables&g=0100000US.04000.001&tid=ACSST1Y2018.S1501&t=Educational%20Attainment&hidePreview=true&y=2018&tp=false&moe=false>.

Equity Indicator 5f(ii): Percentage of the population age 25 and older with a high school diploma or equivalent credential by state: 1940 and 2018



Indicator Status:

In 2018, at least 90 percent of the population age 25 and older had completed high school in 30 states.

NOTE: Data from 1940 are from the decennial census and data from 2018 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, 2018 1-Year Estimates, [Table S. 1501]. Retrieved from <https://data.census.gov/cedsci/table?id=ACS%201-Year%20Estimates%20Subject%20Tables&g=0100000US.04000.001&tid=ACSS1Y2018.S1501&t=Educational%20Attainment&hidePreview=true&y=2018&tp=false&moe=false>.

Percent of Population who Attained a Bachelor's Degree or Higher: 1940 and 2018. 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 had attained at least a bachelor's degree in the District of Columbia, bachelor's degree attainment rates were lower in the 50 states. In the 50 states, bachelor's degree attainment rates in 1940 ranged from 2 percent (Arkansas) to 7 percent (California and Nevada).

In 2018, 32 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). Five states had bachelor's degree attainment rates of 40 percent or higher: Connecticut (40 percent), Maryland (41 percent), New Jersey (41 percent), Colorado (42 percent), and Massachusetts (45 percent). Bachelor's degree attainment rates were 25 percent or lower in 6 states: West Virginia (21 percent), Mississippi (23 percent), Arkansas (23 percent), Louisiana (24 percent), Kentucky (25 percent), and Nevada (25 percent).

Differences in Graduation Rates of Bachelor's Degree-Seeking Students by State. In 1997, as mandated by Congress, NCES through IPEDS began collecting six-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 degree, 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.

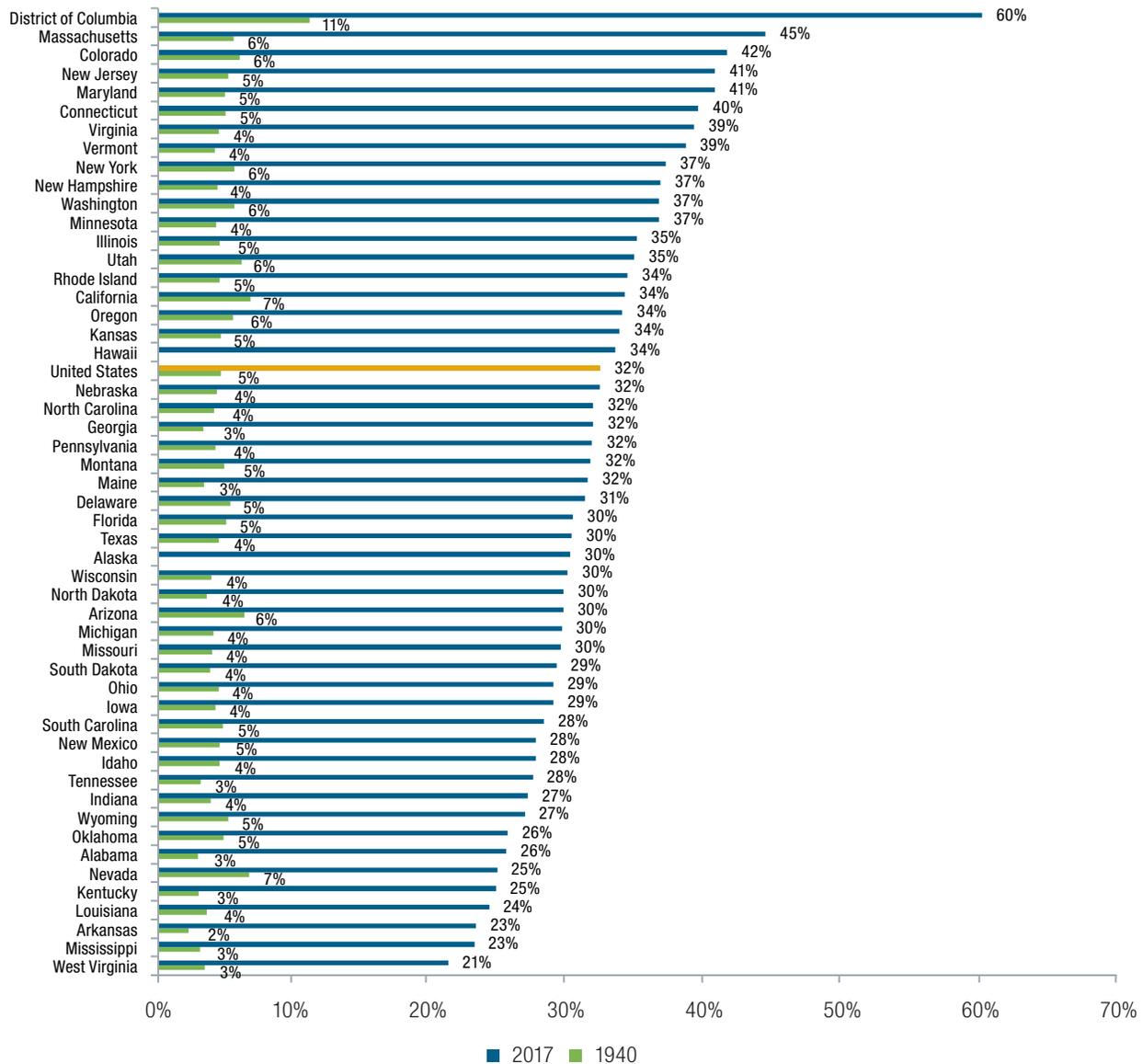
In 2015, 6-year completion rates for bachelor's degree-seeking students who first enrolled in a 4-year institution in 2009 ranged from 32 percent in Alaska, 33 percent in Nevada, and 39 percent in Georgia, to 68 percent in Rhode Island, 68 percent in Connecticut, and 71 percent in Massachusetts.

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 2018.¹²¹ Nationwide, the percentage of 25- to 34-year-olds with at least a bachelor's degree increased from 30 percent in 2005 to 36 percent in 2018.

In 2018, bachelor's degree attainment rates for adults age 25 to 34 were less than 25 percent in Nevada (23 percent), New Mexico (23 percent), and Mississippi (23 percent) and more than 45 percent in Vermont (46 percent), New York (46 percent), New Jersey (47 percent), and Massachusetts (53 percent).

121 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 grouping than for the total adult population.

Equity Indicator 5f(iii): Percentage of the population age 25 and older with a bachelor's degree or higher by state: 1940 and 2018



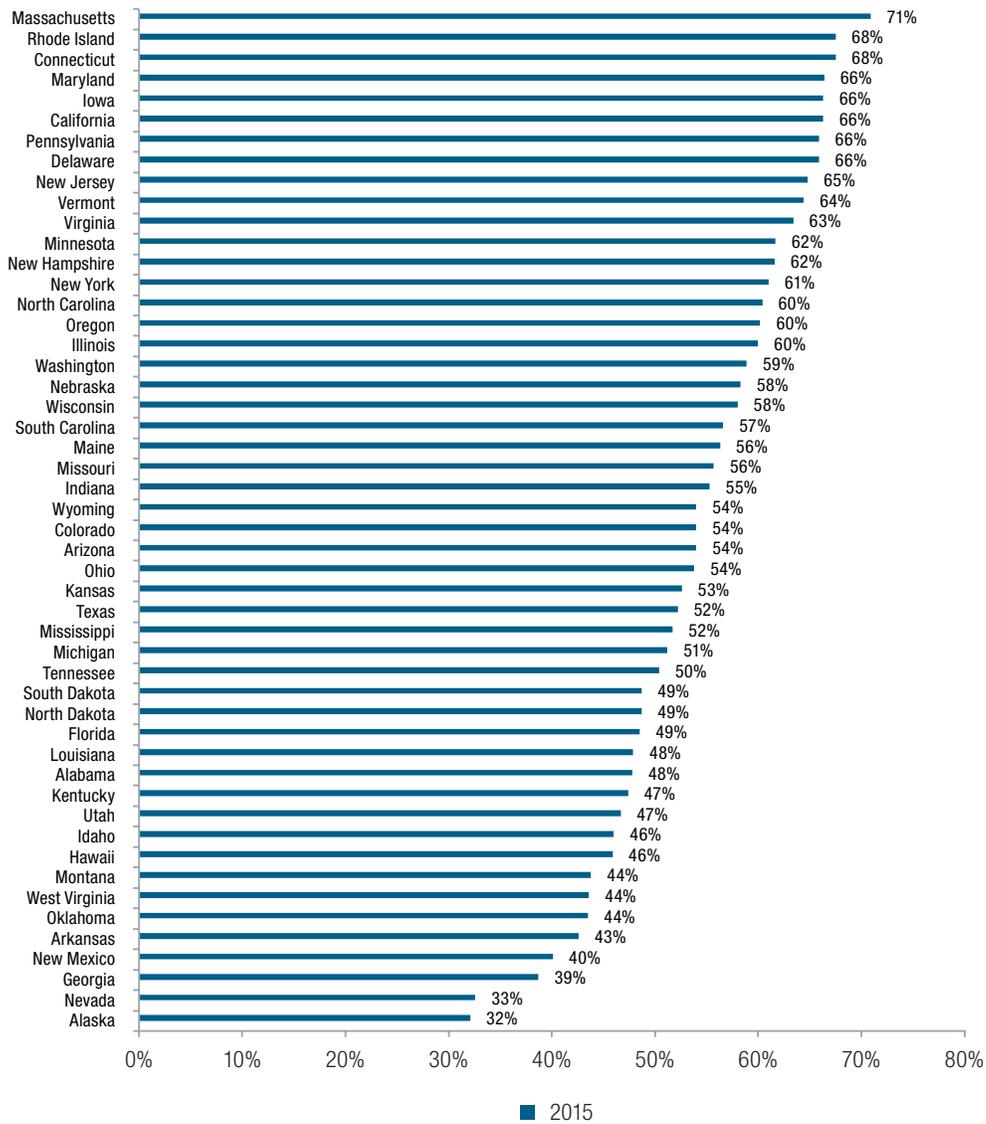
Indicator Status:

Excluding the District of Columbia, bachelor's degree attainment rates ranged across states from 2 percent to 7 percent in 1940 (a 5 percentage point difference). In 2018, 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. Data from 2018 are from the American Community Survey (ACS) and are subject to sampling error.

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, 2018 1-Year Estimates, [Table S. 1501]. Retrieved from <https://data.census.gov/cedsci/table?id=ACS%201-Year%20Estimates%20Subject%20Tables&g=0100000US.04000.001&tid=ACST1Y2018.S1501&t=Educational%20Attainment&hidePreview=true&y=2018&tp=false&moe=false>.

Equity Indicator 5f(iv): Percentage of first-time, full-time bachelor’s degree-seeking students earning any formal award (certificate, associate’s degree, or bachelor’s degree) at the institution of first enrollment within six years by state of institution: 2015



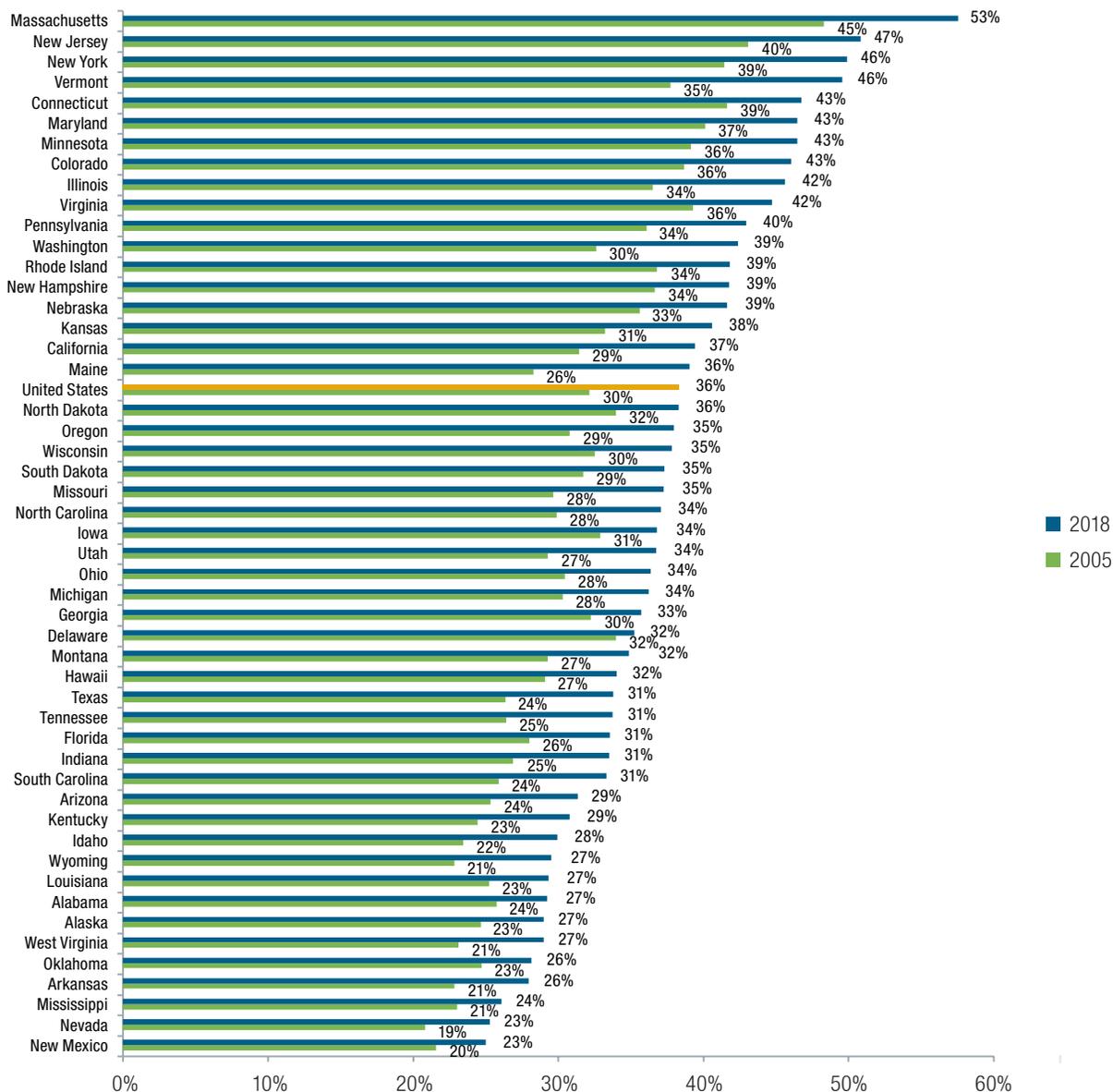
Indicator Status:

The percentage of first-time, full-time bachelor’s degree-seeking students who completed a credential at the institution of first enrollment within six 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 2018



Indicator Status:

By 2018, ten states had bachelor's degree attainment rates for the population age 25 to 34 above 40 percent (Virginia, Illinois, Colorado, Minnesota, Maryland, Connecticut, Vermont, New York, New Jersey, and Massachusetts). Three states had bachelor's degree attainment rates for the population 25 to 34 below 25 percent (New Mexico, Nevada, 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 <https://data.census.gov/cedsci/table?d=ACS%201-Year%20Estimates%20Subject%20Tables&g=0100000US.04000.001&tid=ACSST1Y2018.S1501&t=Educational%20Attainment&hidePreview=true&y=2018&tp=false&moe=false>; NCHEMS Information System. <http://www.higheredinfo.org/>.

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 19th in 2018 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.”¹²² 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.¹²³

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 2018.¹²⁴

¹²² For a systematic international review of widening participation see: Kirsty Younger, Louise Gascoine, Victoria Menzies & Carole Torgerson (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.

¹²³ For more information on the methods used and limitations of international comparisons, see OECD (2019). *Education at a Glance 2019: OECD Indicators*. Paris: OECD Publishing. Retrieved from https://www.oecd-ilibrary.org/education/education-at-a-glance-2019_f8d7880d-en.

¹²⁴ 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 www.postsecondary.org.

As defined in the OECD's glossary of statistical terms:¹²⁵

- **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).¹²⁶ 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 2018. For Japan, the most recent year of data for type A tertiary attainment (Indicator 6a) is 2017.

¹²⁵ 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;jsessionid=h9eKtF8fJsoPp7Ayv_d9vutL.ip-10-240-5-166.

¹²⁶ OECD (2019). *Education at a Glance 2019: OECD Indicators*. Paris: OECD Publishing. Retrieved from https://www.oecd-ilibrary.org/education/education-at-a-glance-2019_f8d7880d-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 2018 Lithuania (56 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 19th out of the 45 countries reporting bachelor's degree attainment in 2018 (with a 39 percent attainment rate). In 2018, the bachelor's degree attainment rate of the U.S. was the same as the average for all OECD nations reporting these data.

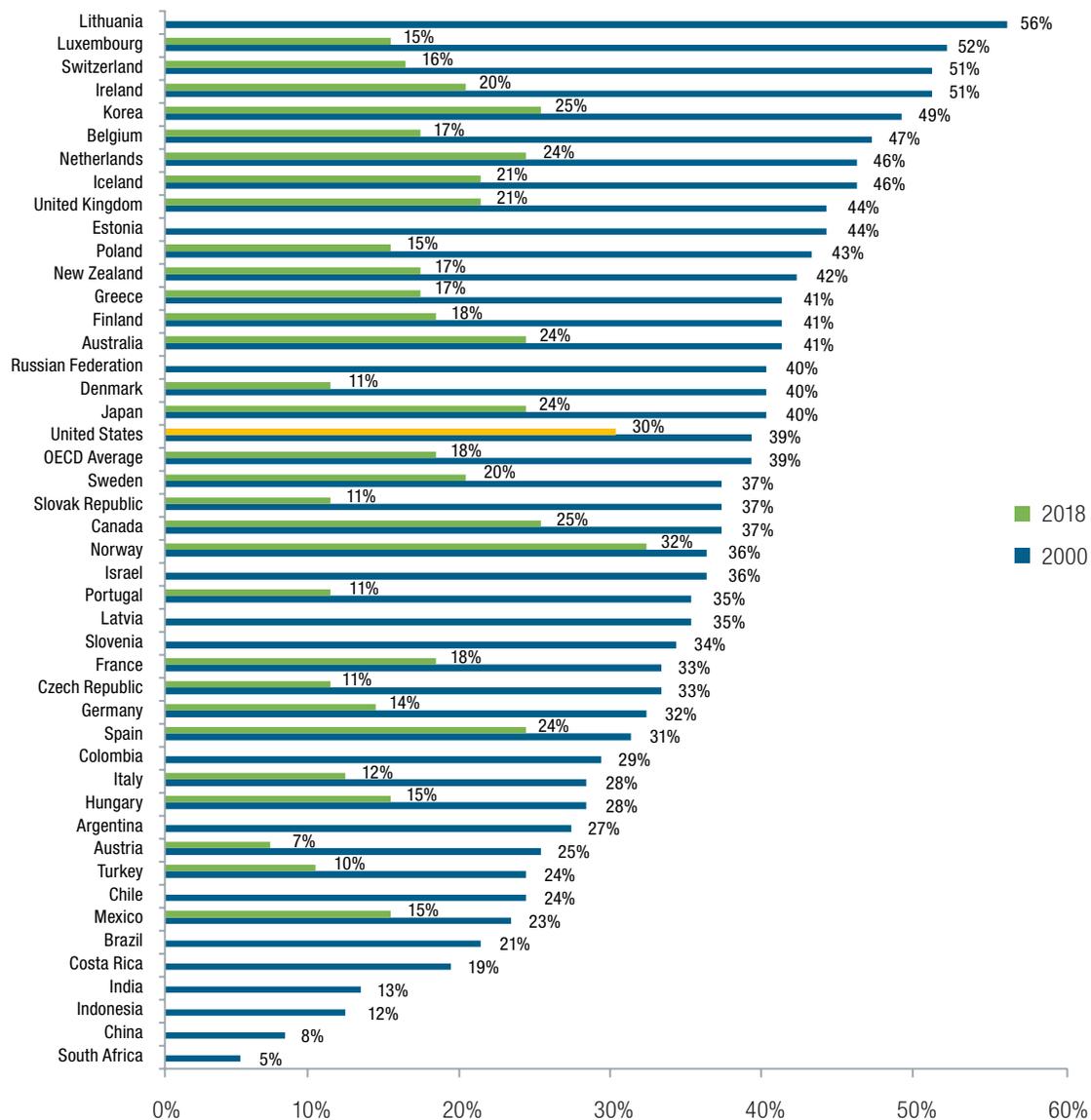
Equity Indicator 6a shows that each of the countries that ranked above the U.S. in 2018 (and reported data in both 2000 and 2018) had attainment rates for 25- to 34-year-olds below that of the U.S. in 2000 (30 percent). These countries were Luxembourg, Switzerland, Ireland, Korea, Belgium, Netherlands, Iceland, United Kingdom, Poland, New Zealand, Greece, Finland, Australia, and Denmark.

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. In the U.S., the percentage of adults age 25 to 34 with at least a bachelor's degree increased by 30 percent between 2000 and 2018. For countries with higher rates of bachelor's degree attainment than the U.S. in 2018, the average rate of increase in attainment between 2000 and 2018 was 147 percent.

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 2018 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 2018 ranged from 23 percent in Nevada and New Mexico to 53 percent in Massachusetts. Indicator 6a shows that, across nations, bachelor's degree attainment rates in 2018 ranged from 5 percent in South Africa to 56 percent in Lithuania. Massachusetts (at 53 percent) had a bachelor's degree attainment rate in 2018 for 25 to 34-year-olds that was similar to the rate of Luxembourg, the country with the second highest attainment rate in 2018 (52 percent). The U.S. states with the next highest rates of bachelor's degree attainment in 2018 were New Jersey (47 percent) and New York and Vermont (46 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 2018



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. (2019). *Education at a Glance 2019: OECD Indicators*, Figure A1.3. Percentage of 25-34 Year-olds with Tertiary Education by Level of Tertiary Education (2018). Paris: OECD Publishing. Retrieved from: https://www.oecd-ilibrary.org/education/distribution-of-25-34-year-olds-with-tertiary-education-by-level-of-tertiary-education-2018_dcb6b98a-en.

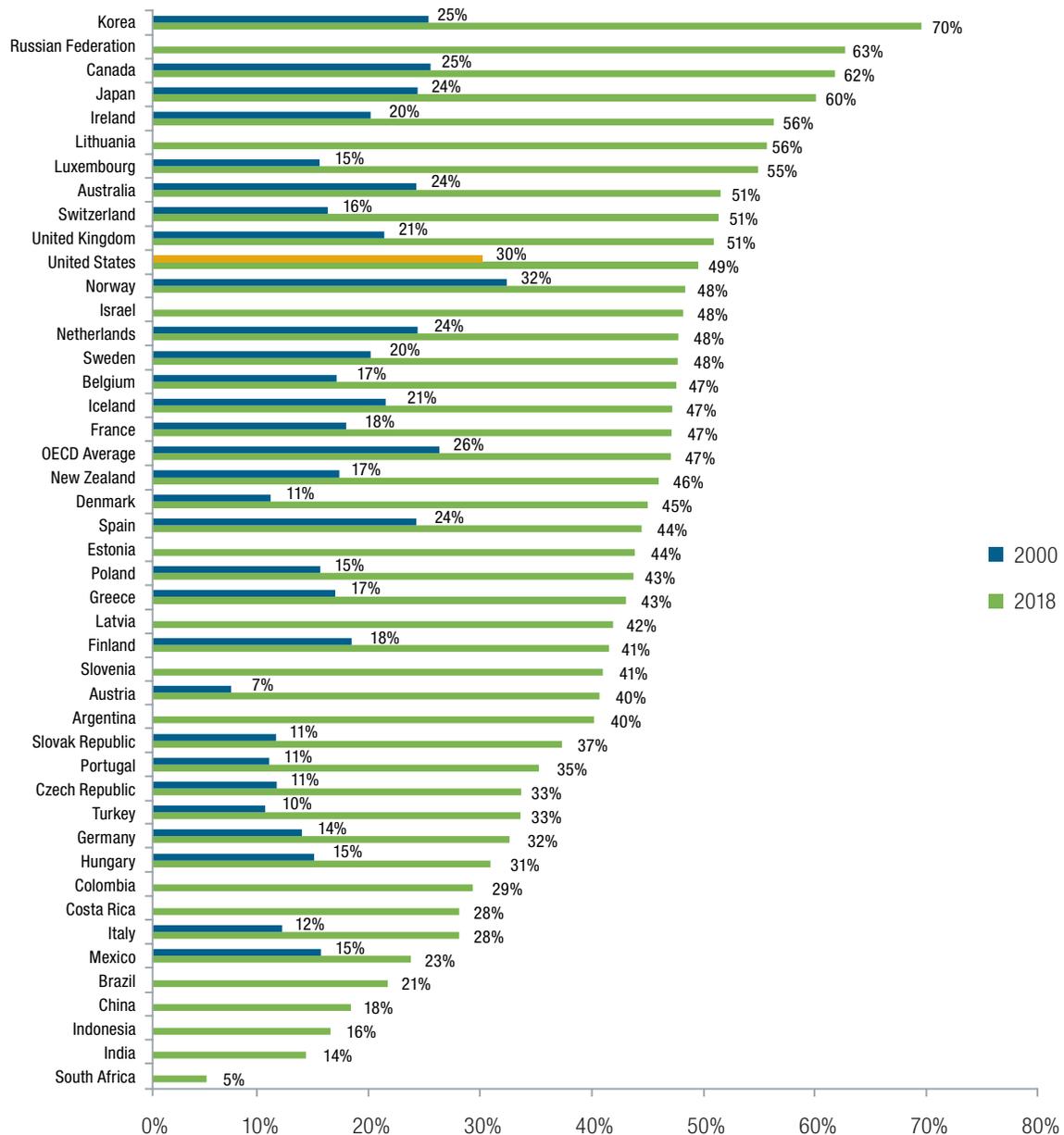
Equity Indicator 6b: What Percentage of 25- to 34-Year-Olds has Completed a Type A (Bachelor's or above) or a Type B (Short-Cycle or Associate's) Tertiary Degree?

In 2018, 49 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 11th of 45 countries on this indicator in 2018, down from 2nd of 30 countries in 2000.

By 2018, at least half of the 25- to 34-year-old population had attained a type A or type B tertiary degree in 8 countries: Korea (70 percent), Russian Federation (63 percent), Canada (62 percent), Japan (60 percent), Ireland and Lithuania (56 percent), Luxembourg (55 percent), Australia, Switzerland, and the United Kingdom (51 percent).

Between 2000 and 2018, the share of the U.S. population age 25 to 34 that had attained a type A or type B tertiary degree increased by 63 percent, rising from 30 percent in 2000 to 49 percent in 2018. The average rate of type A or type B attainment for adults age 25 to 34 among all OECD countries rose from 26 percent in 2000 to 47 percent in 2018, an 81 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 2018



NOTE: Caution is needed in making international comparisons given differences in educational degree classifications among countries and reporting differences across years. The percentage for 2018 for Brazil, Colombia, Slovak Republic, Finland, Poland, Estonia, Switzerland, and Lithuania is the same in Indicator 6a due to these countries not separating their type B tertiary degrees.

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 Retrieved from: <http://stats.oecd.org/>; OECD (2019). *Education at a Glance 2019: OECD Indicators*, Figure A1.3. Percentage of 25-24 Year-olds with Tertiary Education, by Level of Tertiary Education (2018). Paris: OECD Publishing. Retrieved from: https://www.oecd-ilibrary.org/education/distribution-of-25-34-year-olds-with-tertiary-education-by-level-of-tertiary-education-2018_dcb6b98a-en.

WHAT DOES IT MEAN? THE SEARCH FOR SOLUTIONS-SHARED DIALOGUES ESSAYS

In this concluding section, two timely essays are presented addressing policy implications and strategies for increasing equity of college participation in the United States.

The *Indicators* report series is written to inform the conversation about higher education equity issues and to foster the mandate to both monitor our progress and search for and support policy and practices leading to greater equity in educational opportunity. In spring of 2020, we are in the COVID-19 public health emergency. Our essays in this 2020 edition of the *Indicators* report, present reflections from differing perspectives on implications of this emergency on higher education in the U.S. in both the shorter-term recovery and the longer-term rebuilding. We offer them as part of the conversation in these hard times. It is the intent of the project that each year's report will initiate yearly dialogues that will accompany the annual monitoring of our progress.

Will the Dual Crises of the COVID-19 Pandemic and Climate Change be Portals to Widening Opportunity or Will the Doors Close Even Tighter? Strategies for a Transition to a More Equitable, Resilient, and Ecologically Sustainable US Higher Education System

By Margaret Cahalan

Pell Institute for the Study of Opportunity in Higher Education

In the light of the COVID-19 pandemic Award-winning author, Arundhati Roy in April of 2020 released a video of a selection from her forthcoming book.¹²⁷ She states:

“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.”

She goes on to say that a return to “normal” in/after this pandemic would in many ways be the worst thing that could happen to our society. Others have echoed her insight, that we cannot return to “normal,” including a group of C40 mayors of some of the world’s largest cities and another group of award winning artists, activists and noble prize winning scientists.¹²⁸ Nearly 40 mayors representing more than 700 million people in cities across the globe have issued a joint 9 point statement calling for a transformative recovery from the Covid-19 crisis that fundamentally alters global economic and energy systems, warning that a mere return to “business as usual” means accepting a world barreling toward climate catastrophe and with gross inequality.¹²⁹

Covid-19 has laid bare the systemic inequities too often found at the heart of our communities—and as we start to emerge from this crisis, we must rebuild an economy that truly works for everyone,” Los Angeles Mayor Eric Garcetti, chair of C40 Cities.

Another letter/statement cosigned by 200 of the world’s award-winning and noble laureate artists, activists and scientists, was co-drafted by actress, Juliette Binoche and astrophysicist Aurélien Barrau. It calls for a “radical transformation” in how the “world works” in order to address the oncoming climate crisis and inequality. The letter recognizes that the problem is systematic and “adjustments are not enough” and demands that the planet’s leaders not attempt to “go back to normal” after the coronavirus pandemic passes, calling for substantive and swift action to address the climate crisis, consumerism, and economic inequality in the wake of the crisis.

“The ongoing ecological catastrophe is a meta-crisis: the massive extinction of life on Earth is no longer in doubt, and all indicators point to a direct existential threat. Unlike a pandemic, however severe, a global ecological collapse will have immeasurable consequences”¹³⁰

Noam Chomsky the linguist and dissident social thinker from MIT speaks of the need to make public policy decisions as well as our own personal decisions¹³¹ based upon the likely outcomes that we know will ensue

¹²⁷ Arundhati Roy (forthcoming September 2020) *Azadi: Freedom. Fascism. Fiction*. Haymarket, Video excerpt link retrieved April 2020 <https://youtu.be/7hgQFaeaeo0>.

¹²⁸ <https://www.commondreams.org/news/2020/05/07/return-business-usual-means-climate-catastrophe-worlds-mayors-demand-transformative>; <https://www.commondreams.org/news/2020/05/07/problem-systemic-over-200-artists-and-scientists-dare-world-envision-different-post>.

¹²⁹ https://www.c40.org/press_releases/taskforce-principles#principles

¹³⁰ https://www.lemonde.fr/idees/article/2020/05/06/please-let-s-not-go-back-to-normal_6038793_3232.html

¹³¹ Noam Chomsky: (April 29, 2020). Interview by C.J. Polychroniou., COVID-19 Interview, TRUTHOUT.

from our decisions. Considering the horror of the Nazi actions in the mid-20th century, Hannah Arendt speaks of the “banality of evil” stemming from abdicating our responsibility to think about the consequences of our daily actions. She states:

*“The sad truth is that most evil is done by people who never make up their minds to be good or evil...This inability to think created the possibility for many ordinary men to commit evil deeds on a gigantic scale, the like of which had never been seen before. The manifestation of the wind of thought is not knowledge but the ability to tell right from wrong, beautiful from ugly. **And I hope that thinking gives people the strength to prevent catastrophes in these rare moments when the chips are down.**” Hannah Arendt.¹³²*

While uncertainty remains, we do have the gift of the *ability to think*, and we live in a data rich era in which science, using remote and direct sensing tools, has measured and modeled the unescapable facts concerning the outcomes of various human activity decisions on environmental systems such as the earth’s climate. We also know the socioeconomic differences represented by U.S. zip codes and race/ethnicities can predict differences in average life expectancy or the likelihood of deaths from pandemics such as COVID-19.¹³³



Within higher education, the statistics we track in the Indicators series, reveal to us certain patterns and trends. For example, we know from Census Data that only about 12 percent of the bachelor’s degrees awarded in any given year will go to those who are from the lowest family income quartile (Indicator 5 series). We also know from NCES’s *Beginning Postsecondary Longitudinal (BPS)* studies over several rounds that low-income and first-generation entering college students have about a 21 percent chance of completing a bachelor’s degree in 6 years, compared with a 66 percent chance for students who are not low-income and first-generation college. (Indicator 5 series).¹³⁴ This outcome reflects the fact that the average *Unmet Need* for students in the lowest family income quartile was 94 percent of the average family income for these students (Indicator 3 series).¹³⁵ Given these conditions, it is not surprising that low-income students have low completions rates.

As I write this essay, in mid-May 2020, in the United States, we have over 80,000 persons dead in under 8 weeks from COVID-19. As the social thinkers, artists, scientists and large city mayors strongly put it to us, we have had for some time solid scientific consensus predictions of massive existential harm to come if we do not quickly address the climate change crisis. Do we have the right to ignore these public health, climate, and higher education equity facts as we seek ways to recover, adapt and rebuild our lives in the face of COVID-19? Just

¹³² Hannah Arendt *“The Life of the Mind”*. Book by Hannah Arendt. Chapter: “Thinking”, 1978.

¹³³ In California, Latinos represent 70% of all coronavirus related deaths within the demographic of those 18 to 49-years-old, despite making up just 43% of the population, according to data from the California Department of Public Health. “That’s the occupational side of this—a disproportionate number of black and brown communities are not teleworking or not home working. They’re right on the front lines,” said California Gov. Gavin Newsom, during one of his daily coronavirus updates. In New York City, Hispanics are dying at rates more than 50% higher than their white counterparts, and more than twice the rate of Asians, according to the New York City Health Department.

¹³⁴ Cahalan, Margaret W., Perna, Laura W., Addison, Marisha, Murray Chelsea, Patel, Pooja R., & Jiang, Nathan. (2020) *Indicators of Higher Education Equity in the United States: 2020 Historical Trend Report*. Washington, DC: The Pell Institute for the Study of Opportunity in Higher Education, Council for Opportunity in Education (COE), and Alliance for Higher Education and Democracy of the University of Pennsylvania (PennAHEAD). Indicator 5 series. This report citation is referred to subsequently in this essay as *Equity Indicators Report:2020*. <http://pellinstitute.org/>.

¹³⁵ 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).

how much of this information can we ignore or put aside to address later, as we look to our own institutional and personal needs?

As the social thinkers communicate to us from the past and present, we are **indeed not justified** in ignoring this information that our science has produced. As we recover and rebuild, we are seriously negligent if we do not work harder to understand the infrastructure and underlying interrelationships that have led us to this juncture. In higher education, as in other areas, we need to develop bold action plans that do not allow us to return to our normalcy without addressing underlying issues. I hope that what has been identified by systems thinkers as an “empathetic inquiry”¹³⁶ will lead to an awareness that everyone benefits from the development of a more egalitarian, ecologically sustainable, inclusive, and diverse higher educational system.



A Question of Will—Not a Lack of Talent, Technology, or Resources. Largely due to the contributions of the enterprise we call “higher education” across the globe, we actually do have the informational data, technology, and resources to tackle and solve these issues.¹³⁷ If we can muster the will and courage to do it, we can rebuild a U.S. higher education that is more just, and transitions us into the existential imperative of a new green economy. In the introduction to this 2020 and previous Indicators reports we quote a speech by Martin Luther King entitled *Where Do We Go from Here?* Dr. King argued that: “*There is no deficit in human resources, the deficit is in human will.*”¹³⁸

Along these lines we note that many private and public higher education institutions are increasingly funded not by disinterested money for the common good, but by the very interests that are currently blocking progress on public health, equity, food security, and climate and environmental justice for all citizens. Many aspects of the higher education system in the US, if looked at critically, seem designed to maintain and foster the very inequalities that must be addressed if we are to move forward justly. Maybe the COVID-19 crisis is sending a message to higher education leaders that it is time to break these ties and have the strength to use our gift of thinking, as Hannah Arendt said: **“to prevent catastrophes in these rare moments when the chips are down.”**

Many aspects of the higher education system in the US, if looked at critically, seem designed to maintain and foster the very inequalities that must be addressed if we are to move forward justly.

I believe that if we can seize this slightly open portal, we can rebuild a more equitable, resilient, and environmentally sustainable higher education system. This will be a system that is strong precisely because it is diverse and inclusive, and one that provides an opening wide for the winds of opportunity. It will be a system that excels at preparing our diverse population for contributory work that pays living wages, helps restore public health, combats the climate crisis, increases food security, reduces air and water pollution, and restores our urban areas, suburbs, agriculture lands and forests.

¹³⁶ Richmond, B. (1997, 2005) *Introduction to Systems Thinking*, STELLA isee systems, Inc. “Being able to empathize is a skill that can be developed—and is in some ways, the ultimate Systems Thinking skill. . .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.” Retrieved from: <https://www.fi.muni.cz/~xpelane/IV109/jaro07/IST.pdf>.

¹³⁷ In the case of climate, there are two exceptionally useful efforts that focus on solutions to climate. Drawdown <https://www.drawdown.org/> and <https://www.climateinteractive.org>.

¹³⁸ 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>.

An international friend of mine characterized COVID-19 as the “universe’s way of revealing to us and telling us about underlying issues that we have put off addressing far too long that we must now face.” Below are my

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thoughts and “reimagining” about what I think needs to happen. I also issue a challenge to those who are reading this essay to reimagine for themselves what changes they think need to happen.

Underlying Concerns That Must Be Addressed

1. Higher Education As Basic Human Right as a Starting Point. Within the U.S. we need to start by acknowledging that, as the U.N. Declaration on Social and Cultural Rights affirms, higher education, is a universal human right¹³⁹ and not an “investment commodity” to be bought and sold.¹⁴⁰ This is the right of every person to an education that develops their talents and equips them to be full contributory participants in their period of history. In the U.S. in the 21st century information age, this increasingly means a policy imperative to move away from viewing the right to education as stopping at 12th grade.

2. Taking a Systems Approach and Equalization of Institutional Resources and Quality. To address our pressing concerns, we must take a less competitive and more systems-thinking approach. Each higher education institution whether public, private non-profit or private for profit is part of a wider interrelated eco-system, in which many interrelated components are needed to function. Equalization of institutional resources and quality does not mean a reduction in diversity or excellence, but it does mean embedding the consideration of equity issues in every step of institutional recovery and rebuilding. The current U.S. higher education system is characterized as having a notable degree of institutional stratification and homogenization of student enrollment by socio-economic status (SES), and the SES proxy measures of ACT and SAT scores measuring academic preparedness. Correspondingly there is a high degree of focus on college rankings and unequal levels of resources among institutions. To the extent that students measure their own self-worth with the ranking of the institutions to which they gain admittance and attend there is also an additional source of inequality. A contrasting system would be Norway.¹⁴¹ Compared with many other higher education systems, the Norwegian system can be considered to have a relatively low degree of hierarchy, with institutions intentionally designed to be “equal in terms of prestige and quality.” There needs to be a conscious overt policy to promote more equalization. This must also involve a reform policy that gifts made by private donors need to be disinterested and not result in whole departments being under the thumb of the corporate interests.

Equalization of institutional resources and quality does not mean a reduction in diversity or excellence, but it does mean embedding the consideration of equity issues in every step of institutional recovery and rebuilding.

3. Transition from Competitive Merit Based Admissions to Inclusive Mastery Requirements. There must also be a retreat from harmful so called “merit based” competitive ranking of students in high school to determine

¹³⁹ 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.” This covenant has been ratified by over 166 nations not including the United States, who has never ratified this U.N. Covenant.

¹⁴⁰ Cahalan M Franklin K, and Yamashita M, (2016). Is Higher Education a Human Right or a Competitive Investment Commodity? (.pdf)

¹⁴¹ Higher Education Funding Council for England (2013). *International Research on the Effectiveness of Widening Participation*. London, England: Author. Retrieved from https://webarchive.nationalarchives.gov.uk/*/http://www.hefce.ac.uk/.

The merit admission system fundamentally destroys the ideal of a university as a center for innovative, collaborative learning and thinking. Ecologically we know that monocultures are weak and that a diversity of many attributes is needed for a healthy ecosystem. This is also true for a higher education eco-system.

college admissions. As we have seen in the Indicator 2 series of this report, there is a consistent inverse relationship between the percent of low-income students and the selectivity of the institution. Generally speaking there is also a strong correlation between the selectivity of the institution and its national rankings and ratings; indeed entering student scores are a major component of how institutions are ranked. This form of admissions does not serve the public good and is not consistent with an equal right to education. Moreover the merit admission system fundamentally destroys the ideal of a university as a center for innovative, collaborative learning and thinking. Ecologically we know that monocultures are weak and that a diversity of many attributes is needed for a healthy ecosystem. This is also true for a higher education eco-system. In a complex society many different talents are needed, not just those apparent on standardized tests, or high school grades, resumes, and essays used to judge the “merit” of applicants. The evidence is growing that this overly competitive

environment, morally justified only because it is asserted that it will lead to more learning or excellence, is harmful both to the winners and losers in the game. It is also destructive to the positive learning that higher education has a mission to ensure.

The Introduction to each of the Indicators reports has cited the important work of the Equality Trust epidemiologists, Richard Wilkinson and Kate Pickett. Their research found that rates of eleven different health and social problems: physical health, mental health, drug abuse, education attainment, imprisonment, obesity, social mobility, trust and community life, violence, teenage pregnancies, and child well-being were higher among developed countries having more inequality among both poor and rich and that these indicators were more related to inequality levels than the absolute income differences among developed countries.¹⁴² They conclude that there are: “pernicious effects that inequality has on societies: eroding trust, increasing anxiety and illness, (and) encouraging excessive consumption.” More directly, 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.”¹⁴³ With a focus on England, Lee Elliot Major and Stephan Manchin advocate a lottery admissions system for students meeting transparent entrance requirements.¹⁴⁴

4. Setting Place Based Achievable Targets and Providing the Means to Attain the Goals (National, State, Local, and Individual Levels)—At the individual level, research by ACT has demonstrated that having “specific career goals” is even more linked to academic success in college than test scores or prior academic performance.¹⁴⁵ On the national and state levels, in 2009 President Obama challenged the country to set goals that by 2020 would result in the U.S. once again being number 1 in bachelor’s degree attainment.¹⁴⁶ In many cities

¹⁴² Wilkinson, R.G and Pickett, K.E (2009), *The Spirit Level: Why More Equal Societies Almost Always Do Better* (2009) Allen Lane. Pickett, K.E. & Wilkinson, R.G. (2015). Income Inequality and Health: A Causal Review. *Social Science & Medicine*, 128, 316-326.

¹⁴³ Lani Guinier (2016) *Tyranny of the Meritocracy, Democratizing Higher Education in America*, ????

¹⁴⁴ Major, L.E., & Manchin, S. (2018). *Social Mobility: And Its Enemies*. Pelican Books. Their views are summarized in a short blog: Why we should select students by lottery; <https://wonkhe.com/blogs/why-we-should-select-students-by-lottery/>

¹⁴⁵ ACT and Council for Opportunity in Education. (2015). *The Condition of College and Career Readiness 2014*. Iowa City: ACT Inc.

¹⁴⁶ President Obama, Address to a Joint Session of Congress, February 24, 2009.

and states this call was heeded with new initiatives to increase college enrollment and completion.¹⁴⁷ A decade later, we know that as a nation, we have not reached this goal. Instead as shown in the Indicator 6 series in this report, the U.S., second in the OECD charts in 2000, and 12th in 2009, was 18th in 2018 in the OECD tracking.¹⁴⁸

Action Plans to Address the Widening Gap Between the 50 U.S. States in College Attainment. To have achieved Obama’s 2020 goal, the U.S. would need to have had about 56 percent of the population aged 25 to 34 having a bachelor’s degree (the highest-ranking country in the OECD listing in 2018 was Lithuania with 56 percent (see Equity Indicator 6 series). Of our U.S. states by 2018—only Massachusetts attained a rate over 50 percent (53 percent). Moreover, as shown in Equity Indicator 5, disturbingly, there is a widening gap among the U.S. states with the lowest states in 2018 having only 23 percent attainment among the 25 to 34-year-olds. In the U.S. we have seen a corresponding widening of political and economic divides among the states. State differences have long roots and are complex, but we need to study the reasons for these gaps and intentionally develop ambitious programs to equalize education attainment across the 50 US states.

Learning from Examples of Countries That Have Notably Increased Participation. International comparisons are not always what they seem, but two examples can be cited of countries that have articulated ambitious college attainment goals and seemingly reached these goals or are on track to reaching them. One example is the Netherlands. Since the mid-2000s, the Netherlands has had an articulated goal that by 2020, 50 percent of the 25 -34-year-old workforce would have a higher education degree. It was argued that to reach the nation’s goal to become “a top-five leading knowledge economy,” the Netherlands needed to seriously invest to increase higher education participation, particularly by non-traditional underrepresented student groups, such as mature students, part-time students, associate degree students, professional master’s students and ethnic minority students.¹⁴⁹ Correspondingly to attain these goals, the Netherlands initiated a generous system of support for students consisting of low tuition, and grants and loans for living expenses. If students completed their degrees within 15 years, they did not have to repay the amounts of the government support. A look at the OECD data reveals that the Netherlands went from 24 percent bachelor’s attainment of 25-34- year-olds in 2000 to 46 percent by 2018. Australia is another country that set concrete achievable goals. For example, the Australian government set formal aspirational goals of reaching 40 percent bachelor’s attainment of 25 to 34-year-olds by 2025.¹⁵⁰ By 2018 they had exceeded this goal going from 24 percent in 2000 to 41 percent in 2018. Australia also has a formal “proportional representational equity goal” of having 20 percent of enrolled students come from the lowest income quartile by 2020.

Perhaps the lesson from these statistics and examples is the importance of setting goals not “to be first in the world”, but to set goals that are specific to the local setting combined with the specific means to attain the goals. In 2000, the U.S. had a national attainment rate of 30 percent, at that time second among the OECD countries. By 2018 the U.S. had increased up to 39 percent and was just at the OECD average.¹⁵¹ More ambitious goals cannot be reached in the U.S. unless rates of completion are increased for all groups, but especially those in the bottom

147 An example of which is illustrated by the 55 Thousand Degrees initiative in Louisville Kentucky—a community project that yearly tracks college going in the *Greater Louisville’s Education Scorecard 2014 Update*, 55 Thousand Degrees, http://www.55000degrees.org/wp-content/uploads/2014/12/55K_PR14_WhitePaper_Web.pdf.

148 President Obama, Address to a Joint Session of Congress, February 24, 2009.

149 J.J. (Hans) Vossensteyn, Centre for Higher Education Policy Studies, *Widening Participation in Higher Education in the Netherlands* Report submitted to HEFCE and OFFA October 2013 http://www.hefce.ac.uk/media/hefce/content/pubs/indirreports/2013/wpinternationalresearch/2013_WPeffectivenessNeth.pdf.

150 Trevor Gale and Stephen Parker, Deakin University, *Australia Widening Participation in Australian Higher Education Report submitted to HEFCE and OFFA* October 2013 http://www.hefce.ac.uk/media/hefce/content/pubs/indirreports/2013/wpinternationalresearch/2013_WPeffectivenessAus.pdf.

151 See Indicator 6a in the 2020 report.

half of the income distribution and among those U.S. states in the bottom half of the state distribution. It's clear that many U.S. states will need more help than others to reach goals reflecting full participation in a knowledge economy. It is also inescapable not to notice from the international statistics on educational attainment in Indicator 6 that the countries that have made the most advances in educating their population are ones that are relatively less burdened than the U.S. since World War II in military spending and the production of weapons or dependent on the sale of weapons to other countries keep their economies going. As seen in Appendix A to this report, annual military spending in the US is about 26 times (\$738 billion vs. \$28 billion) the amount spent on Pell Grants serving over 7 million students annually.¹⁵²

It's clear that many U.S. states will need more help than others to reach goals reflecting full participation in a knowledge economy.

In the next section, we discuss some specific strategies that we believe will help in achieving our goal of transitioning to a more equitable, resilient and environmentally sustainable higher education system.

Key Transition Strategies

5. Transitioning to Debt-Free College for All. The COVID-19 pandemic reveals the need to revisit our goal setting with a realistic systems-based approach that provides not just the goals but the means to attain them. Without real change in the levels of federal grant support relative to college-cost, we cannot hope for significant progress in college completion rates. The evidence from the U.S. high school longitudinal studies is that U.S.

The evidence from the U.S. high school longitudinal studies is that U.S. students from all social groups have for some time had high aspirations for postsecondary education. For example, already by 2002, at the start of the 21st century over 80 percent of high school students aspired to attain a bachelor's degree or higher. Our students have bachelor's completion goals but for most low-income students there are just too many strong barriers to achieve these goals.

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Support Pell Grant Restoration. The period since 1980's there has been a steady decline in the financial support provided to low-income students in the United States. These ever-increasing cost barriers lead some to conclude that the system is intentionally set up to reduce completion rates among low-income students. When Pell Grants were first legislated, they were discussed as intended to cover three-fourths of the cost of postsecondary education. This goal was never reached but in the late 1970s maximum Pell grants did cover two-thirds of the average cost of attendance.¹⁵⁴ Since 1980, the maximum Pell Grant has fallen and covered only 25 percent of college costs in 2018. Average college costs for all institutions, weighted by full-time undergraduate enrollment, were 2.5 times higher (in constant 2018 dollars) in 2017-18 than in 1974-75. To restore Pell to its 1970's proportion of college costs would require a Pell maximum of about \$16,484 rather than the maximum of the \$6,195 of 2019-20.

¹⁵² Equity Indicators Report: 2020, Appendix A, Figure A-6

¹⁵³ Cahalan, M, Ingles, S, Burns, L, Planty, M., (2006), *United States High School Sophomores: A Twenty-Two Year Comparison, 1980–2002*, Statistical Analysis Report, U.S. Department of Education, NCES 2006–327 <http://nces.ed.gov/pubs2006/2006327.pdf>.

¹⁵⁴ Mensel, F. (2013). Birth of the Pell Grant: The Community College Role. *In Reflections on Pell: Championing Social Justice through 40 Years of Education Opportunity*. Washington, D.C.: Pell Institute for the Study of Opportunity in Education.

Covering Full-Cost of Attendance -Imperative to Pass Some Version of State-Federal Partnerships for Debt Free College.

In 2019, legislation entitled the Debt Free College Act of 2019, which was introduced in the U.S. Senate by Senator Brian Schatz of Hawaii.¹⁵⁵ The bill proposes to establish a federal-state grant partnership 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. The bill requires state public institutions to tie institutional charges increases to the consumer price index; and provides additional support for minority-serving institutions. This act or an equivalent act that builds upon the existing systems in place needs to happen and happen quickly.

Leveraging our Progressive IRS Tax System to Implement Forgiveness Plans for the Student Loan Crisis.¹⁵⁶

COVID-19 has resulted in a temporary suspension of student debt payments, but clearly there is a need to address the underlying failure and unfairness of using student loans to finance higher education. According to Forbes, by the end of 2019, total student loan debt was \$1.56 trillion and the total U.S. borrowers with student debt was 44.7 million. The default rate was 11.4 percent (90 days delinquent). The total amount of money in default (360+ days delinquent) was \$101 billion from 5.1 million borrowers. Much has been written about the negative impacts on the lives of former students after college and we know low-income and minority students are more likely to have debt and higher debt and to be impacted disproportionately.¹⁵⁷ The system is overly complex in addition to being unfair. It is clear we cannot address the needs of future generations of students to have debt free college without a debt forgiveness pathway for those who are already struggling with life choices impacted by the yoke of this debt. As countries such as Australia have shown, using a progressive tax system is one way to manage student debt in a simpler and more egalitarian manner that avoids the serious issues of default. Providing the program is progressive and provides forgiveness plans based on income and wealth, the IRS system provides a feasible way to fairly work toward debt forgiveness for student loans.

6. Imperative to Increase the Reach and Resources for College Access and Success Support Programs.

Recognizing that financial aid was not enough to foster a more equitable education system, the Higher Education Act of 1965, included provisions from the beginning for services that would eventually become known as TRIO. These services become especially important in times such as are being faced in the Spring of 2020 during the COVID-19 pandemic and its aftermath. TRIO programs address the holistic needs of low-income, first-generation students, and students with disabilities. As such they play an essential role in mitigating against the barriers often faced by low-income students such as low self-esteem, academic unpreparedness, and lack of basic needs. TRIO fosters greater inclusivity, positive identity, empowerment, leadership, academic excellence, emergency aid, and engagement of the students they serve. Despite the mounting evidence from rigorous evaluation studies that *TRIO Works* and can increase access and completion rates as much as 40 to 50 percent, TRIO services, like Pell Grants remain greatly under-funded. At current funding levels annually TRIO services reach less than 2 percent of eligible students with intensive programs, and about 5 percent with light touch programs. Using data from an NCES nationally representative sample of US high school

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¹⁵⁵ The Debt Free College Act of 2019 <https://www.congress.gov/bill/116th-congress/senate-bill/672/text>.

¹⁵⁶ www.forbes.com/sites/zackfriedman/2019/02/25/student-loan-debt-statistics-2019

¹⁵⁷ Equity Indicators Report:2020 (Indicator 4 series)

students in the 1990s, Horn and Chen found in correlational analysis that participation in any type of pre-college program doubled the odds for enrolment in a 4-year college after controlling for other factors known to be related to college entrance.¹⁵⁸ The random assignment evaluation of Upward Bound (UB) high school program found that participation in UB, the most intensive of the Federal pre-college programs, resulted in a 50 percent higher BA attainment rate in 6 years among low income and first generation students who were randomly assigned in middle school or early high school to Upward Bound and who entered the program.¹⁵⁹ The TRIO Student Support Services (SSS) program provides academic tutoring, peer mentoring, counseling, and other supports to low-income, first-generation students already enrolled in college. Reports on SSS published by the US Department of Education in 2015 and 2019 have found substantial and significant impacts on completion from SSS participation.¹⁶⁰ For example, the 2015 report found that three years after entering 2-year institutions as freshmen, 41 percent of SSS participants earned a certificate or associate's degree or transferred to a 4-year institution as compared with just 21 percent of a national sample of similarly situated students. The SSS completion rate was 50 percent by the end of the fourth year as compared with 28 percent of the national sample. SSS currently serves about 200,000 students per year and the seven-college access and completion TRIO programs (UB, SSS, TS, EOC, UBMS, VUB, and McNair) taken together serve almost 800,000 students per year. Programs like TRIO are even more critically needed in these times of crisis. In times of COVID-19 emergency, the TRIO infrastructure for serving low-income and first generation students should be fully utilized to increase the number served and ensure that the impact of COVID-19 is mitigated for cohorts of entering students, students in the midst of their college experience, graduating seniors, and adults returning to education in times of unemployment. The TRIO EOC program especially needs to be fully supported in anticipation of the entering of unemployed workers to college to transition to new work opportunities. The Council for Opportunity in Education (COE)'s plan for emergency funding to mitigate the COVID-19 crisis for students can be accessed at the address in the footnote below.¹⁶¹

7. Suspending and Rethinking the Satisfactory Academic Progress (SAP) Pell Grant Requirements. In the light of the disruptions of the COVID-19 pandemic on student progression, as well considering the results of repeated studies that conclude that the SAP requirements are not working as intended, current SAP requirements should be suspended and not re-instated. Pell Grants have always had performance requirements meant to require federal aid recipients meet certain institution requirements for academic progress in order to continue to receive aid. For many years this was defined as being in “good standing” at the institution, and time requirements were implemented by limits on the number of semesters a student could receive funding. In an effort, supposedly to encourage students to progress more quickly, and to use scarce Pell resources more “efficiently” the recent decades have seen the imposition of much more stringent and confusing requirements. Not only do students have to have a certain GPA, but they must show on an annual basis that they have successfully completed a high percentage of the courses they attempt (withdrawals count as not-completing) and also that they are on track to graduate from their program within 150 percent of the time ordinarily required. These requirements, combined with the lack of Pell grant coverage of college costs, has led to another a serious barrier for low-income students

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- 158** 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.
- 159** Cahalan M, *Addressing Study Error in the Random Assignment National Evaluation of Upward Bound: Do the Conclusions Change?*; http://www.pellinstitute.org/publications-Do_the_Conclusions_Change_2009.shtml.
- 160** Kristina L. Zeiser, Tsze Chan, Ruth Heuer, Melissa Cominole (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>. Kristina L. Zeiser, Ruth Heuer, Melissa Cominole, (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>.
- 161** See this Site for an update on COE's proposals in the light of the COVID-19 emergency www.bit.ly/TRIOCOVIDP4

who must juggle working long hours against these requirements. The Center for Analysis of Postsecondary Education and Employment (CAPSEE) at Columbia University Teachers College has conducted several studies of the SAP requirements.¹⁶² Their rigorous research using regression discontinuity and differences of differences methods found that high percentages of Pell recipients—approximately 40 percent of first-term recipients—were at risk of losing aid due to SAP failure. They also found that most students despite programs to inform them of the requirements did not understand that they would lose their aid until it was too late. There was little evidence that SAP resulted in higher academic performance or program completion. They conclude:

“A key implication of our research is that the primary effect of SAP policy appears to be punitive—simply limiting students’ access to aid—rather than formative.... The discouragement effects of the policy mean that some students who could have earned a degree are dissuaded from reenrolling.”

These results suggest that especially in these times of COVID-19 that these punitive requirements should be permanently suspended and rethought. Programs like “Binding Study Advice” (BSA) such as exist in Netherlands and similar programs in South Africa that initiate requirements such as limits to work hours, and tutoring requirements to help students get back on track may be a better approach than the U.S. regulation of removal of the Pell Grant for lack of progress.

8. Five Year Pandemic and Green Transition Grants for Those Institutions and Groups Most Impacted. In responding to the dual crises of COVID-19 pandemic and of the Climate/Environmental crisis there is a need for a series of transition grants to help all parts of the higher education system, but especially those institutions and groups that are most vulnerable become more resilient.

Cost Equalization Between Public and Private Institutions. While 78 percent of college enrollment in 2018 was at public institutions, because private colleges on average are smaller than public colleges, about 60 percent of our postsecondary institutions are private (38 percent private non-profit and 23 percent private for-profit).¹⁶³ We know that many of these colleges reported being in serious financial trouble, even before the COVID-19 pandemic. While all institutions will be impacted by COVID-19, except for a small percentage of elite private institutions, we know that most private colleges and the students they serve will be severely impacted by COVID-19.

Currently the average net price for students (price after all grants and discounts but not loans are considered) at a 4-year private non-profit college is two times higher than 4-year public costs (\$26,840 vs.\$13,760) (Appendix Figure A-11). In hard times, many students will simply choose the public option. The ideal of “going” away to live in a dormitory at a small private college across the country may lose some of its appeal. COVID-19 will also accelerate the already clear trend to on-line degrees and digital learning. This will leave many private colleges with expensive under used facilities to maintain. We know that many of those institutions in danger of not surviving are those that have inspiring records of serving minority students and students with less entering resources in terms of academic scores and for whom the local private college is a real opportunity for mobility. The sense of community, inclusion and identity provided by these small private colleges is important to preserve. If we are not to see rapid private college closures, as we move to “free public college,” provision needs to be made to increase support so that that a higher portion of the cost of attendance can be covered for needy students at private as well as public institutions. This support should ensure institutions adopt innovative

162 Schudde, L., & Scott-Clayton, J. (2014). Pell grants as performance-based aid? An examination of satisfactory academic progress requirements in the nation’s largest need-based aid program (CAPSEE Working Papers). Judith Scott-Clayton & Lauren Schudde (2017). Performance Requirements in Need-Based Aid: What Roles Do They Serve, and Do They Work? CAPSEE website: <http://capseecenter.org/pell-grants-as-performance-based-aid/>

163 Over the last 50 years in the US about 75 percent of undergraduate students are enrolled at public colleges (78 percent in 2018), about 16 to 18 percent at private non-profit (17 percent in 2017), and from 5 to 10 percent at private for-profit institutions (5 percent in 2017).

learning strategies to ensure the success of the students admitted, and that more inclusive admission policies are developed by selective colleges. Private colleges would be helped by an increase in Pell Grant maximum to \$16,434, the amount needed to restore coverage to what it was before 1980 (about two-thirds of the average cost among all types of colleges).

Transition Grants for Private Colleges Re-Structuring. A look at the history of many private and public institutions shows that most have had transitions as one mode of organization is no longer sustainable and another is born. There is a need to transition private colleges institutional funding models and examine the options for institutions impacted by COVID-19. Several other countries have developed dual funding systems that support differing types of institutions based on enrollment and widening participation goals. These transition grants might include monies for repurposing facilities, faculty contracts, green and social distancing living designs and new industry partnerships for building green infrastructure. It might also include funding in some cases to become a public university or forming consortium's with other private colleges, building on or developing special strength niches within the enrollment market.

Transition Grants for Current and Returning Students Enrolled at Private Schools in Danger of Closure. These grants would be targeted on helping the students enrolled at marginal or closing institutions to be able to complete their degrees at the institution or through on-line programs.

9. Supporting a Green New Deal for Higher Education- Green Infrastructure Transition Grants. The broad concepts outlined in the Green New Deal include recognition of the interconnections of health care, free higher education, and job opportunities. Although opponents to the Green New Deal site higher education as the incubator of the movement toward “green socialism for sustainability,” and the source of the introduction of these ideas into Congress¹⁶⁴ thus far there has actually been very little federal support for sustainability initiatives in higher education.



Need for Well-Funded Concrete Federal Initiatives—Funding of the Federal Higher Education Sustainability Act (HESA) of 2019. In 2008, Congress did authorize the Higher Education Sustainability Act (HESA) provisions as part of the Higher Education Opportunity Act (HR 4137) amendment signed by then President Obama. There is however, very little evidence that it remains funded. The bill contained provisions for Sustainability Summits to identify best practices in sustainability and a Sustainability Grant Program which authorized competitive grants to colleges and universities to establish sustainability research programs. More recently, in February of 2019 a new version of the legislation was introduced from U.S. Senator Sheldon Whitehouse (D-R.I.), known as the Higher Education Sustainability Act of 2019. This act would create a competitive grant program that could award institutions of higher education \$200,000 to \$500,000 grants to establish sustainability programs for their campus and sustainability programs for students. As of this writing this legislation had not been passed but had been referred to committee.

Thus far sustainability initiatives in the U.S. higher education system have been much more linked to individual state efforts. It is fired mostly by the inescapable solid science research conducted in academia itself, and by such things the U.N. Higher Education Sustainability Initiative (HESI).¹⁶⁵ Obviously there is a need for the U.S. federal government, in emergency COVID-19 recovery and higher education rebuilding to support emergency

¹⁶⁴ Rachele, Peterson, How Higher Education Birthed The Green New Deal And Eco-Socialism, The Federalist, <https://thefederalist.com/2019/02/20/higher> She writes: “The Green New Deal is the campus sustainability movement grown up and gone to Congress.”

¹⁶⁵ Examples are the Higher Education Sustainability Initiative (HESI) that provides a platform for Higher Education Institutions to engage and contribute to the 2030 U.N. Sustainable Development Goals. <https://sustainabledevelopment.un.org/sdinaction/hesi>. Another example is the Association for the Advancement of Sustainability in Higher Education (AASHE) which has developed a self-reporting tool (Stars) where colleges and The <https://stars.aashe.org/>.

sustainability provisions as soon as possible, and following that in the next full reauthorization of HEOA.

Generous GI Like Education Support Bill for Independent Students Wishing to Return to College to Train for Green Transition Employment Following the COVID-19 Loss of Employment.

As in other economic downturns we can expect there to eventually be increased enrollment of those seeking higher education when other opportunities to support themselves are blocked or pose health risks. It is imperative that we develop the underlying structures that will ensure that these entering or returning students get the financial grant aid, career counseling, and on-going support to complete their degrees/certificates. Many of these students are independent students with dependent children, the group with the most risk factors for non-completion (Indicators 1 and 5 series). We need a generous bold Green-GI-Like bill that provides grants not just for tuition costs but also living stipends so that independent students with and without families can pursue new careers. These are careers that both pay living wages and prepare them for sustainable forward- looking careers, that do not contribute to further environmental destruction.



There is an enormous amount to work that needs to be done, developing and implementing solutions to public health, environment, education, and basic needs such as food, transportation and energy. Recently published Oxford University research found that “green stimulus” spending on sustainable energy projects would be more effective than conventional stimulus measures in repairing the widespread economic damage done by the coronavirus pandemic.¹⁶⁶ Thanks to our gifts of thinking, and the hard work of academia throughout the world, we now do have the technology, data, and resources to address these issues. We Can Do It, if we can only have the will and work together!

166 <https://www.theguardian.com/environment/2020/may/05/green-stimulus-can-repair-global-economy-and-climate-study-says> The paper, is co-authored by the Nobel prize-winning economist Joseph Stiglitz, and Lord Nicholas Stern, the climate economist, and catalogues more than 700 stimulus policies and makes comparisons with the global financial crisis of 2008. Oxford Review of Economic Policy, May 2020.

Where Do We Go from Here? Reflections on the Impact of COVID-19 on Higher Education in the United States from Two Recent TRIO Graduates

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The United States is praised for its stand-up fight for equality, freedom, diversity, and unity; despite the realities of misogyny, xenophobia, structural racism, and income inequality constantly conflicting these ideas. This juxtaposition is no accident, but by design, to systematically disadvantage the most vulnerable population in the United States. As a result of this alarming socioeconomic structure, education emerged as the universal solution to dismantle the inequalities and grow the economy of the United States. In the United States, education is marketed as a key component to social upward mobility, and current and prospective college students view higher education as attainable. However, during a global pandemic, this reality is weary. The Chronicle of Higher Education and several representatives of research institutions argue the novel coronavirus pandemic has the potential to disrupt higher education more than any other recession in the past. Consequently, this early warning has already unfolded.

The current pandemic threatens the national achievements of the United States higher education system¹⁶⁷ and forces students to make life-altering decisions based upon cost of attendance (COA), transportation, access to technology, food, and housing. COVID-19 also exacerbates the underlying income inequality and the stratification of the United States higher education system. Furthermore, these obstacles are disproportionately having crippling effects on first-generation, low-income, and other under-represented students. In order to understand the impact of this pandemic on the United States higher education system, this essay first tries to understand the present repercussions then hypothesizes about the underlying causes of these outcomes. Secondly, this essay reflects on methods to amend and strengthened the United States' higher education system.

The Costly Effect

The recognition of the historical inequalities deeply rooted in the United States propelled the efforts to redesign the United States higher education system, with a goal of widening opportunities for traditionally disadvantaged students to pursue a postsecondary degree. Nation-wide, institutions have closed facilities temporarily or permanently for the rest of the academic school year. At the end of March 2020, at least 1,102 colleges and universities have closed temporarily and moved to a digital platform, impacting over 14 million students.¹⁶⁸ Although, the closure of thousands of institutions was necessary to curtail the spread of the novel coronavirus pandemic, the socioeconomic implications disclose another story.

The pandemic uncovered the complexities of the stratification in the higher education system. In a matter of weeks, thousands of students became susceptible to homelessness, victims of the digital divides¹⁶⁹, and

¹⁶⁷ Today, more than 24 million students have access to higher standards preparing them for college than they did a few years ago. That includes approximately 4 million black students, 3.5 million Hispanic students, 2.8 million students with disabilities, and 1.5 million English learners. To see full list of the progress made in the United States Education System visit the following website: <https://www.ed.gov/k-12reforms>.

¹⁶⁸ Hess, A. (2020). How Coronavirus Dramatically Changed College for Over 14 Million Students. Retrieved from <https://www.cnbc.com/2020/03/26/how-coronavirus-changed-college-for-over-14-million-students.html>.

¹⁶⁹ Merriam-Webster define the digital divide as the economic, educational, and social inequalities between those who have computers and online access and those who do not.

unemployed¹⁷⁰, posing a challenge to their ‘place’ in the higher education system. *How could a couple of weeks, reverse these vulnerable students’ seemingly obtained privilege they acquired by pursuing a higher education?*¹⁷¹ College was supposed to eliminate these inequalities and present new economic opportunities, but the pandemic has revealed these vulnerable students were never truly equal to their middle- and upper-class peers. This horror is the covert reality of the double standards in the United States higher education system at the expense of the low-income, first-generation, and other under-represented students.

Foreshadowing of the Effects Based Upon the Great Recession

Based on statistical changes observed in statistics in the 2020 *Indicators* report¹⁷², the next few paragraphs hypothesize some of the long-term repercussions that students may face post-pandemic. During the Great Recession, undergraduate enrollment increased by nearly 2.5 million, jumping from 15.6 million in the fall of 2007 to a peak of 18.1 million in the fall of 2010.¹⁷³ The identified explanation of this upward trend is that it was due to an increase in unemployment which funneled many students to hide in school¹⁷⁴ and others to return to complete degrees or certificates.

While all families may experience an increase of financial pressure during economic turmoil, it disproportionately liquefies the amount of disposable income for low-income families who can barely afford the rising COA and usually have to incur debt to attend college. Equity Indicator 1a indicates from 2007 to 2012, the college participation rate for dependent 18- to 24-year-olds increased for all family income quartiles. However, for the lowest-income quartile,¹⁷⁵ the rate of college participation staggered around 41 percent from 2007 to 2009. Additionally, Equity Indicator 1a also demonstrates that low-income students did not reach an increase rate of college participation until 2010. Similarly, Equity Indicator 1i(ii) supports this pattern by estimating¹⁷⁶ low-income students’ participation rates by state and nationally from 1998 to 2018. The estimation for college participation rate for students from low-income families between 2007 and 2011 were the following: 26 percent in 2008 and 2007, 27 percent in 2009, 34 percent in 2010, and 39 percent in 2011. Both Indicators 1a and 1i(ii) illuminate that an immediate increase in low-income student’s college participation rates does not occur initially during a recession.

Evidently, this pandemic has the potential to further delay and stagger college participation rates for low-income students as well. Thus, a priority is needed to aid traditionally disadvantaged students.

170 NBC News reported the United States had 26 million in job losses, equating to the entire job growth since the 2008 recession. To see full article visit the following website <https://www.nbcnews.com/business/business-news/u-s-jobless-claims-reach-26-million-coronavirus-hit-wiping-n1190296>.

171 Attending or obtaining a postsecondary degree is a privilege in the United States, as it has widely become a prerequisite to occupational and social advancement.

172 Cautious is needed when examining historical trends, it is not a wholistic guide to interpreting the long-term consequences due to the coronavirus pandemic being an unapparelled event.

173 The Hechinger Report is dedicated to covering inequality and researching innovative solutions on how the United States education system can be improved. Barshay, J. (2020). How the 2008 Great Recession Affected Higher Education. Will History Repeat? Retrieved from <https://hechingerreport.org/how-the-2008-great-recession-affected-higher-education-will-history-repeat/>.

174 This phrase is used to describe how students felt they needed to continue their postsecondary education or receive vocational training to counteract the loss of jobs during a recession.

175 \$43,063 and lower

176 Participation rates for low-income students are estimated based on: 1) public school enrollment figures; 2) percent of 4th to 9th graders nine years earlier that were 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.

Low Income Students' Journey Ahead

The federal government, recognizing the power of education during the Great Recession, encouraged all United States citizens to go to school.¹⁷⁷ While the federal government was advocating for everyone to pursue a higher education, state support for higher education dropped and tuitions for several institutions surged to nearly 30 percent between 2007-08 and 2014-15, while median income fell 6.5 percent during the same period.¹⁷⁸ Pell Grant coverage related to Average College Costs continued to fall. Equity Indicator 3a(i) demonstrate further the stratification of higher education, showing that in 2017-2018, tuition for full-time undergraduate enrollment were 2.5 times higher in 2017-2018 than in 1974-75. In comparison, median family income of the United States households over 25 increased only 1.3 times (30 percent) between 1975 and 2017 with most of the increase occurring prior to 1999.

One of the biggest financial resources during the Great Recession was the Free Application for Federal Aid (FAFSA) due to it having the potential to influence how low-income students participated in college enrollment. FAFSA is the direct ticket to the federal Pell Grant, which although declining in the percent of costs covered saw an increase in the period of the Great Recession (See Equity Indicator 3b(i)). Many students heavily depend on FAFSA, but as of March 13, 2020, the National Association of Student Financial Aid Administrators (NASFAA) reported a .7% decrease in FAFSA applications which equates to 10,000 applicants.¹⁷⁹ As a result, more of the burden will be on families and students at the same time that unemployment rates are growing. Equity Indicator 4b(ii) demonstrates that the net price¹⁸⁰ as percent of parents' family income has increased for everyone especially during the Great Recession, but it was higher for students in the lowest income quartile, reaching 94 percent of the percentage of average family income for those in the lowest quartile. As many students did not have the economic means to invest a sustainably amount of funds towards their education, borrowing increased.

The Hechinger Report indicates between 2007 and 2010, student loans increased by \$22 billion, an historic record for annual college borrowing. Furthermore, the Hechinger Report also note that 2010 was also the year student loan debt surpassed credit card debt. Equity Indicator 4c(i) supports this claim displaying that loans for bachelor's degree completers increased from 51 percent in 1990 to 69 percent in 2016. With the foreshadowing challenges of this pandemic, EFC is also likely to decline, and low-income students will have to pick up the tab and take out additional loans to counteract income loss.

It must be noted that in the wake of the novel coronavirus pandemic, higher education institutions have been trying their best to accommodate all students, faculty, and staff, but it is unavoidable that some students will be left behind. According to Brookings, tuitions are the largest single revenue for both public and private institutions.¹⁸¹ As a result, institutions are faced with the questions of increasing tuition costs to recover from the revenue loss, knowing that numerous families cannot afford this burden. The fate of higher education institutions is unclear, but what is clear is that the road to recovery is long and the aftermath of this pandemic will be felt

177 Barshay, J. (2020). How the Last Recession Affected Higher Education. Will History Repeat? Retrieved from <https://hechingerreport.org/how-the-2008-great-recession-affected-higher-education-will-history-repeat/>.

178 Friga, P. (2020). The Great Recession Was Bad for Higher Education. Coronavirus Could Be Worse. Retrieved from <https://www.chronicle.com/article/The-Great-Recession-Was-Bad/248317>.

179 Daughterty, O. (2020). Decline in FAFSA Completions Could Spell Trouble as High School Seniors Finish Year From Home. Retrieved from https://www.nasfaa.org/news-item/21414/Decline_in_FAFSA_Completions_Could_Spell_Trouble_as_High_School_Seniors_Finish_Year_From_Home. See also Equity Indicator 4a(iv).

180 The net price is the price that the student paid to attend their individual institution.

181 Startz, D. (2020). Coronavirus Poses Serious Financial Risks to US Universities. Retrieved from <https://www.brookings.edu/blog/brown-center-chalkboard/2020/04/21/coronavirus-poses-serious-financial-risks-to-us-universities/>.

decades later, unless systematic changes are made.¹⁸²

The United States' Response and Action Plan

Since the novel coronavirus pandemic, there have been 4,234 higher education institutions impacted and 25,798,790 students affected.¹⁸³ Those statistics are alarming, and we must act now to protect the power of a higher education as a tool to mitigate inequalities. In response to the novel coronavirus pandemic, the United States has already injected 14 billion dollars to assist higher education institutions and students through the CARES Act. An estimated 90 percent of the funds are directly given to the institutions and 50 percent of this must be allotted for direct emergency aid for students.¹⁸⁴ However, flushing money out will not solve the cracks in our higher education systems. The CARES Act is a start, but it missed the opportunity to serve everyone, only truly assisting current and former students.

The novel coronavirus pandemic has shown us that low-income populations are bearing a disproportionate share of the impacts, as they are often on the front lines to provide care and essential services. COVID-19 dramatically shows us the impacts of inequality and that upward mobility for most low-income students is ever out of reach. This unprecedented event provides the United States higher education system the opportunity to be redesigned with a purpose as a universal instrument that not only mitigate these inequalities but serves everyone, not just the wealthy families. The discussion of the search for a more equitable system must be transformed into an action plan for the wellbeing of everyone and the sustainability of the power of education. However, this requires the inclusion of all players of the system and including those that have allowed the very problem to survive—students, funders, policymakers, community members, financial institutions, and education institutions. Until then, the United States higher education system is obstinate and will continue to mask its role in deepening inequalities or worst, possibly, crumble the next time around.

182 Seltzer, R. (2019). Public Higher Education Continues to Feel Pinch from Great Recession a Decade Later. Retrieved from <https://www.insidehighered.com/news/2019/06/05/public-higher-education-continues-feel-pinch-great-recession-decade-later>.

183 Entangled. Solutions (2020). COVID-19: Higher Education Resource Center (H.E.R.C). Retrieved from <https://www.entangled.solutions/>.

184 Banerjee, A. (2020). How the CARES Act Supports Higher Education. Retrieved from <https://www.clasp.org/blog/how-cares-act-supports-higher-education>.

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Appendix A: Additional Figures and Methodological Notes

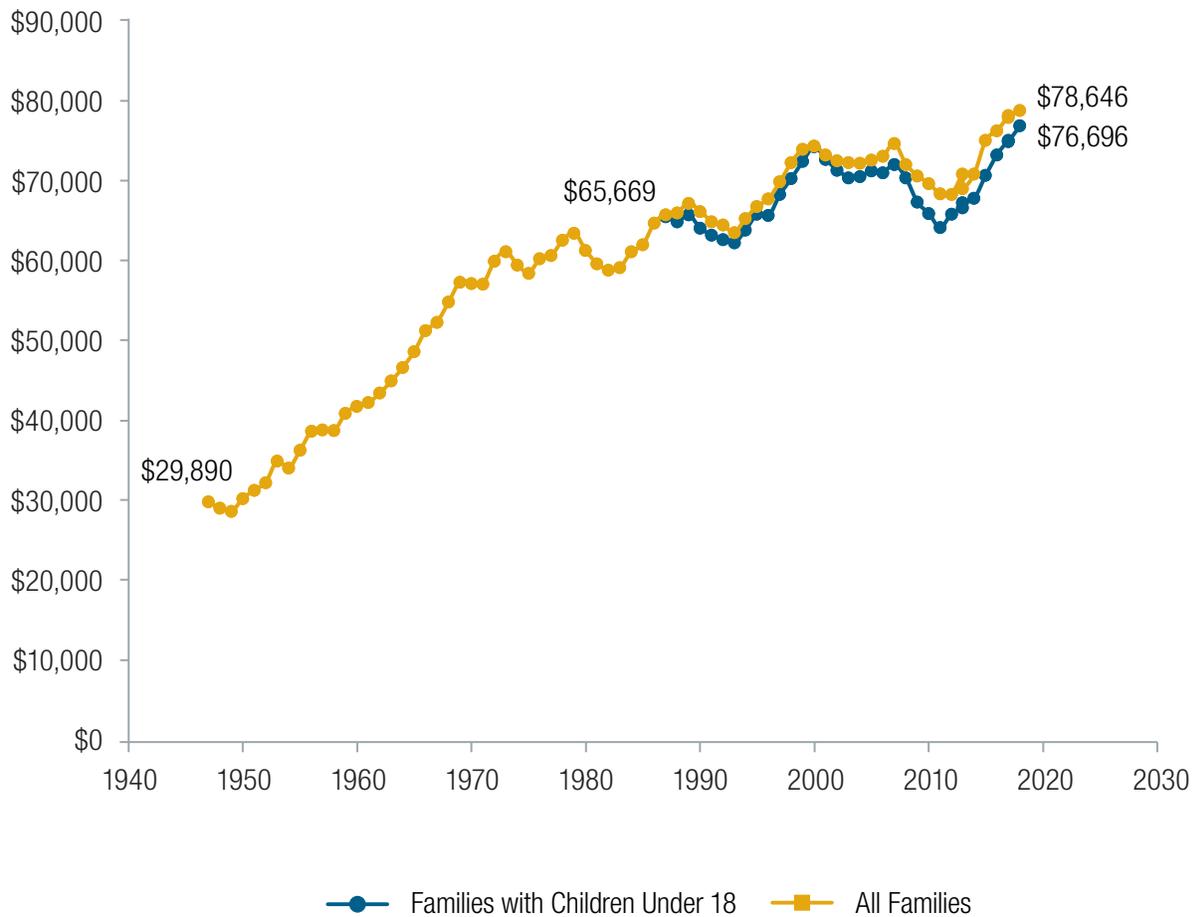
This Appendix includes additional figures and tables and methodological notes not included in the report body. Notes and Figures are ordered under the headings of the sections in which the notes and figures are most applicable.

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 2018, and for families with children under 18 from 1987 to 2018, in 2018 constant dollars. Appendix Figure A-2 shows the upper limits of each Census CPS family income quartile from 1987 to 2018 in constant 2018 dollars.

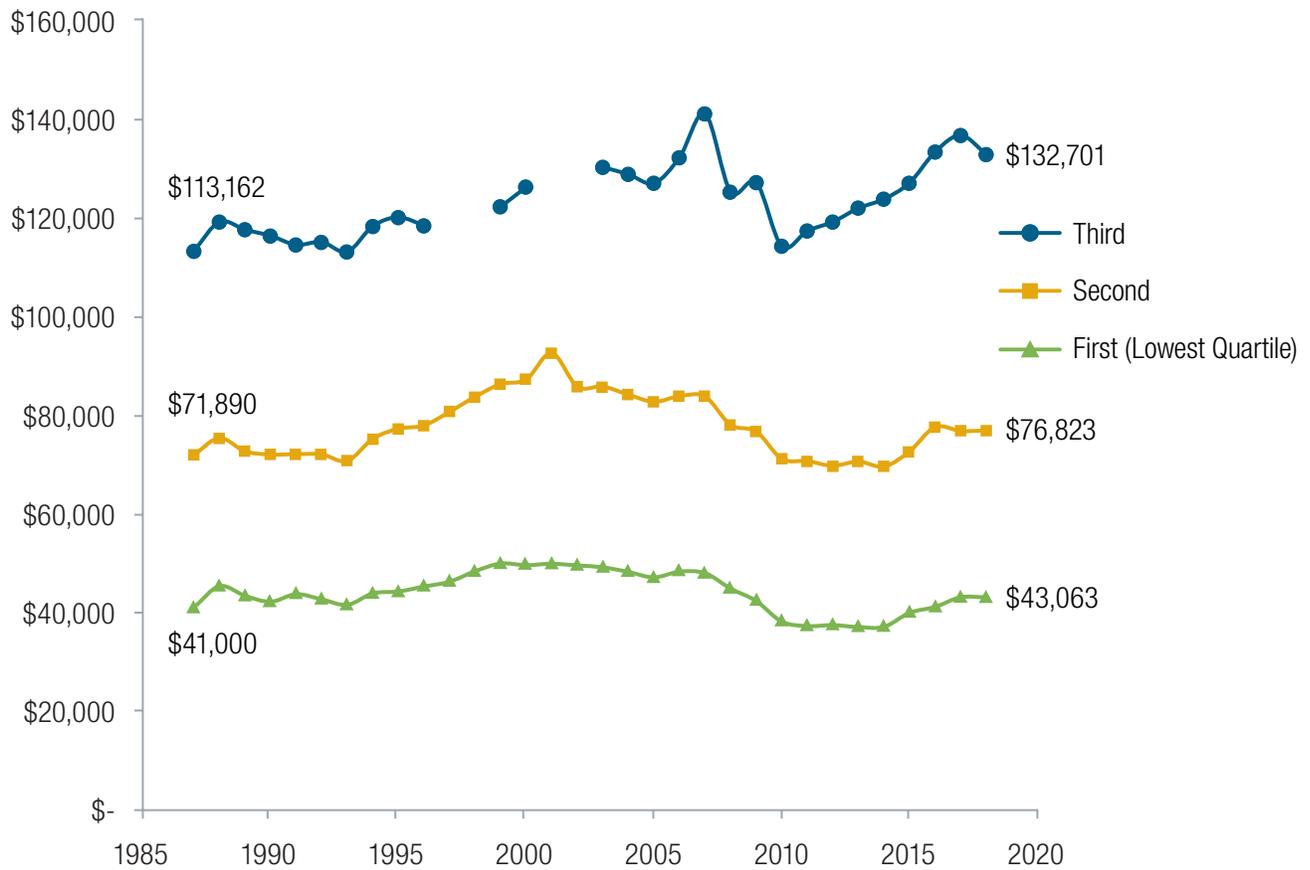
Appendix Figure A-1: Median family income for all families: 1947 to 2018, and for families with children under 18: 1987-2018 (constant 2018 dollars)



This chart on median family income echo's the fluctuations in economic prosperity in the United States, with the rapid post-World War II growth up to the 1970's 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), second, and third income quartiles for families of dependent 18- to 24-year-olds: 1987 to 2018 (in constant 2018 dollars)



This chart reveals the gradual widening of the gap between the upper limit of the third quartile and the bottom two quartiles in family income.

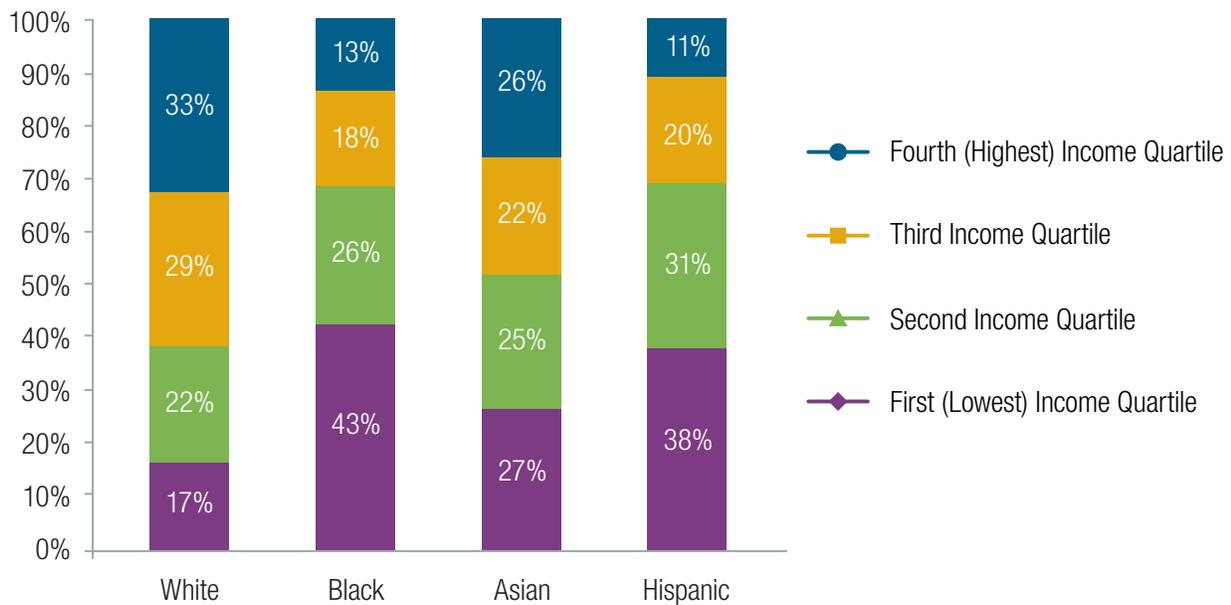
NOTE: Upper family income limits of the quartiles in constant 2018 dollars using the revised CPI-U-RS. The upper limit (maximum) of the third quartile is the minimum for the fourth (highest) quartile. The fourth (highest) quartile minimum is thus \$132,702. The maximum for the fourth (highest) quartile is not reported.

SOURCE: U.S. Census Bureau, CPS data. Calculated from the October Current Population Survey File (Formerly Table 14 in the Census Bureau's School Enrollment Report) and compiled by Tom Mortenson and Nicole Brunt.

Equity Indicator 1: Who Enrolls in Postsecondary?

Equity Indicators 1c(ii) and 1d(ii) show data on college enrollment by race/ethnicity disaggregated by family income quartile. Appendix Figure A-3 shows the percentage distribution of the family income quartiles of dependent 18 to 24 -year-olds by race/ethnicity for 2018. Appendix Figure A-3 reveals the large differences in family income by race/ethnicity. For example, 11 percent of Hispanics and 13 percent of Blacks were in the highest quartile. In comparison 33 percent of Whites and 26 percent of Asians were in the highest quartile.

Appendix Figure A-3: Percentage distribution of the family income quartiles of dependent 18 to 24-year-olds by race/ethnicity: 2018



This figure reveals the large differences in family income by race/ethnicity. For example, 11 percent of Hispanics and 13 percent of Blacks were in the highest quartile, in comparison with 33 percent of Whites and 26 percent of Asians.

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, CPS data. Calculated from the October Current Population Survey File (Formerly Table 14 in the Census Bureau's School Enrollment Report) and compiled by Tom Mortenson and Nicole Brunt.

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-4 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-5 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, 2018) 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-4: 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-5: 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-6 summarizes Pell spending from 1974 to 2020 in billions of 2018 dollars. To put this amount in perspective, the annual defense budget is presented over the same period.¹⁸⁵

Appendix Figure A-6: Annual budgets/spending for Pell Grants and for Military Spending/Department of Defense: 1974 to 2018-19 (in 2018 billions of constant dollars)



NOTE: The Defense budget for 2020 is estimated to be about \$738 billion and the estimated Pell budget for 2020 remains under \$29 billion.

SOURCE: Macro Trends Download U.S. Military Spending/Defense Budget 1960-2020, Retrieved from www.macrotrends.net; College Board (2019). Trends in Higher Education [Table 8]. Retrieved from <https://www.trends.collegeboard.org/student-aid/figures-tables/maximum-and-average-pell-grants-over-time>. Table 8. Federal Pell Grants in Current and in 2018 Dollars, 1973-74 to 2018-19.

¹⁸⁵ The Defense budget for 2020 is estimated to be about \$738 billion and the estimated Pell budget for 2020 remains under \$29 billion. Macro Trends Download U.S. Military Spending/Defense Budget 1960-2020 Retrieved from www.macrotrends.net.

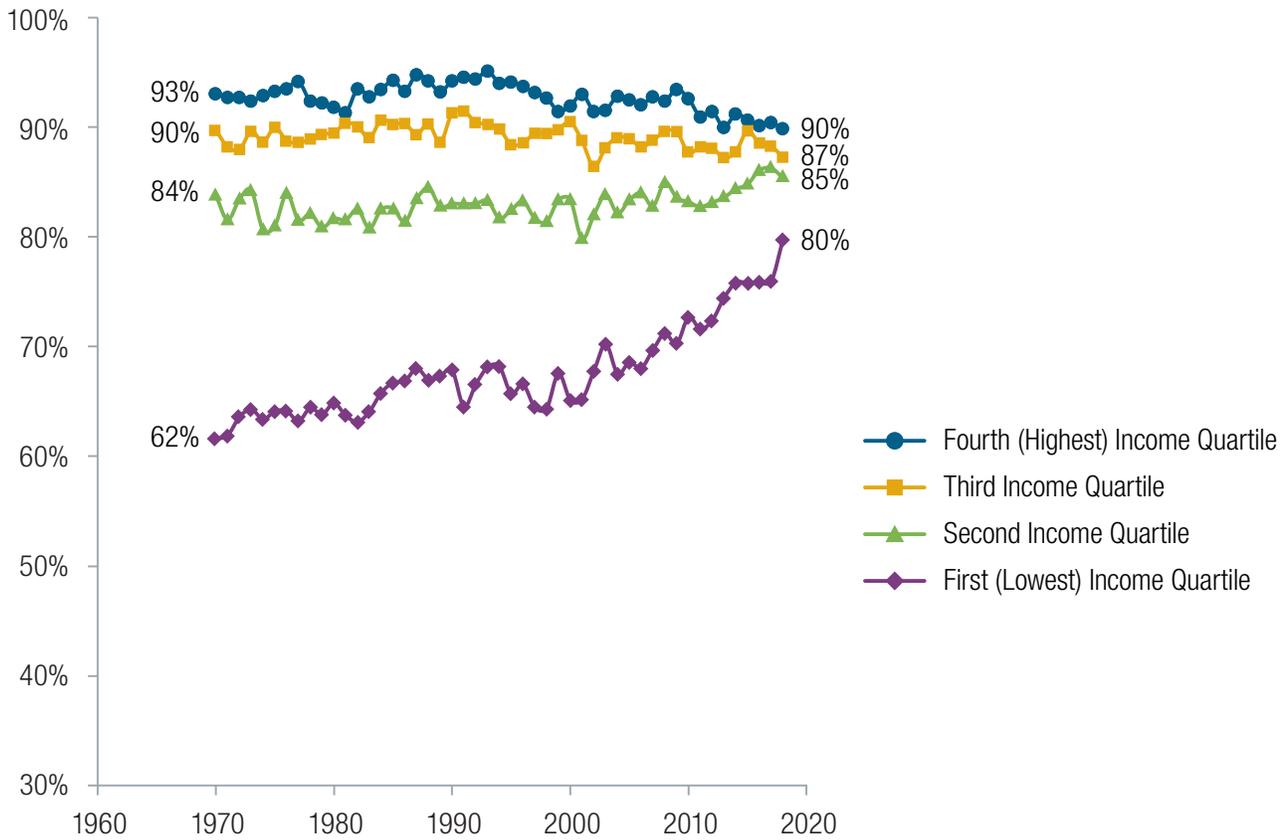
Equity Indicator 5: How Do Educational Attainment Rates and Early Outcomes Vary by Family Characteristics?

- **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 the high school graduation rates by family income quartile from 1970 to 2018. 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* reports 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), second, and 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 2020 *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 1970 to 2018 from the CPS data.

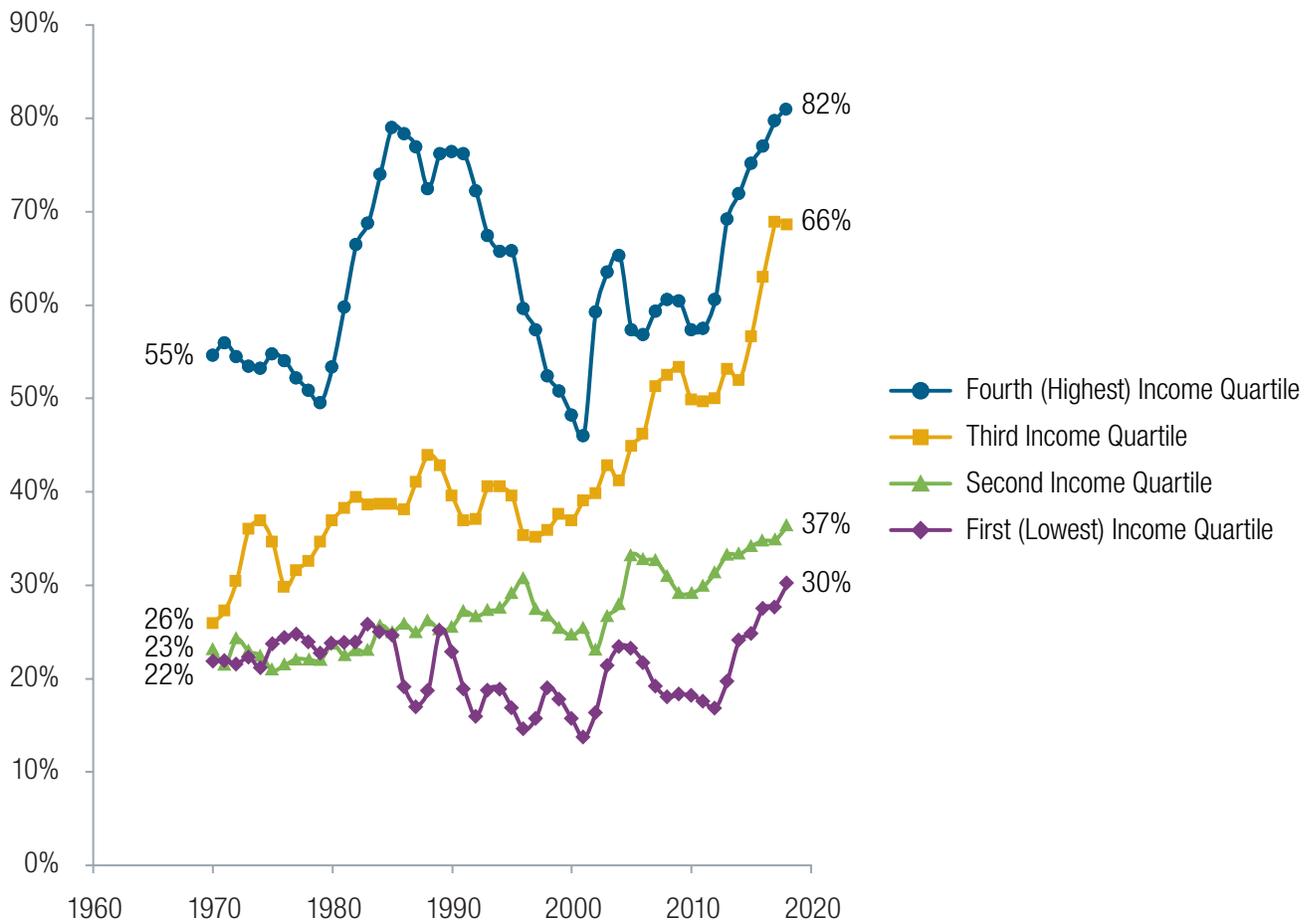
For 2020, we also include in Indicator 5a(ii) the 100 percent distribution of bachelor's degrees by age 24 by family income categories for dependent students. Appendix Figure A-8 shows these estimates using the same methods for attainment by age 24 among those who already began college from 1970 to 2018.

Appendix Figure A-7: High school graduation rates by family income quartile for dependent 18- to 24-year-olds: 1970 to 2018



SOURCE: U.S. Census Bureau, CPS data as reported by BLS. Compiled by 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 2018



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.

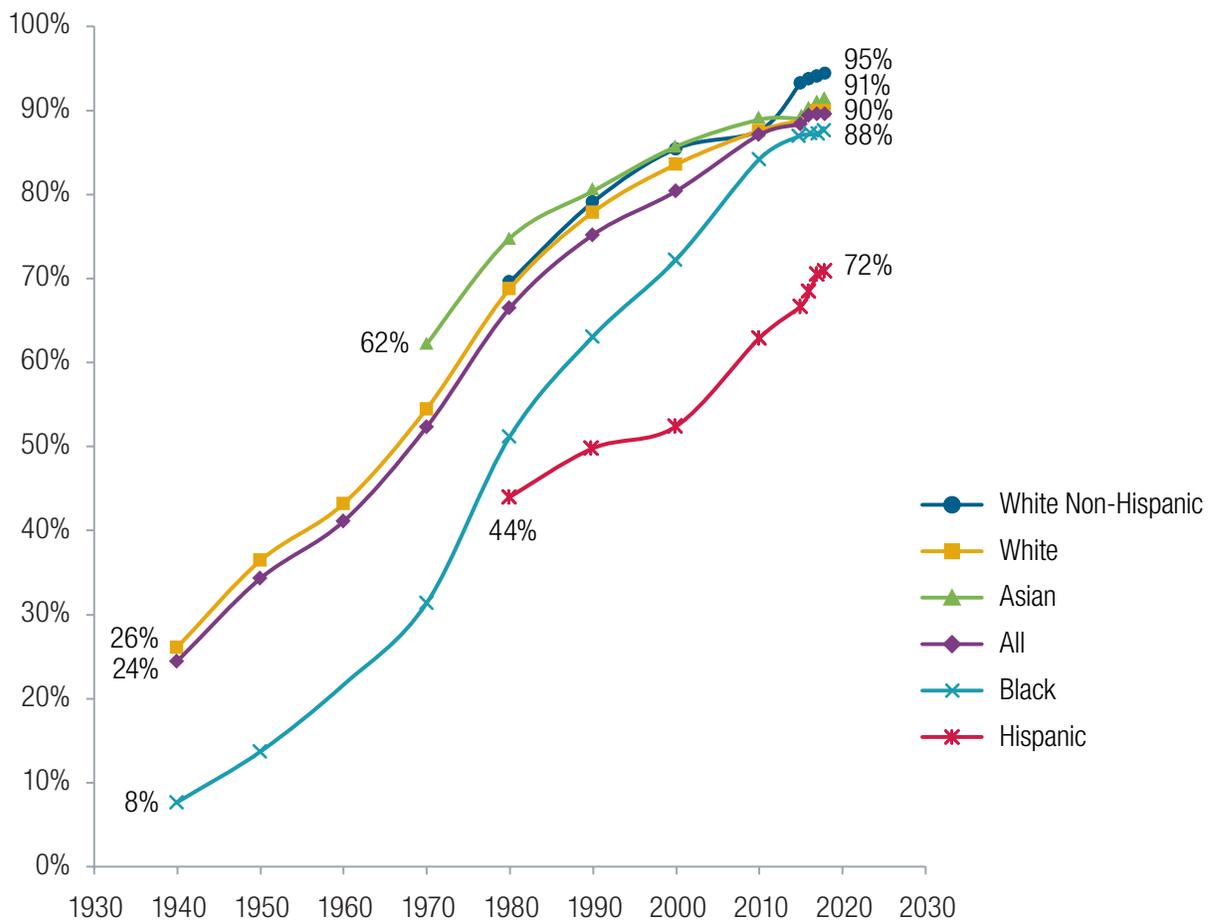
SOURCE: U.S. Census Bureau, CPS data as reported by BLS. Compiled by Tom Mortenson.

- Beginning Postsecondary Students Longitudinal Study (BPS) Income Quartiles for Dependent 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. 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 parent's 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.
- Historical Data on Educational Attainment of the Population Age 25 and Older by Race/ Ethnicity.** Equity Indicators 5f(i), 5f(ii), and 5f(iii) in the body of this 2020 *Indicators* report include data from 1940 to 2018 from the Decennial Census and the American Community Survey (ACS) on differences in educational attainment of the population 25 years of age and older by state. Appendix Figures A-9 and A-10 use these same data sources to present data by race/ethnicity on high school and bachelor's degree attainment from 1940 to 2019. As discussed in the body of this report, classifications used for race/ethnicity have changed over the 75-year period, and caution must be used in interpreting these data over time.

What Does it Mean? The Search for Solutions-Shared Dialogues Essays

Appendix Figure A-11 is a Figure on Net Price by institution level that is called out in the essay section.

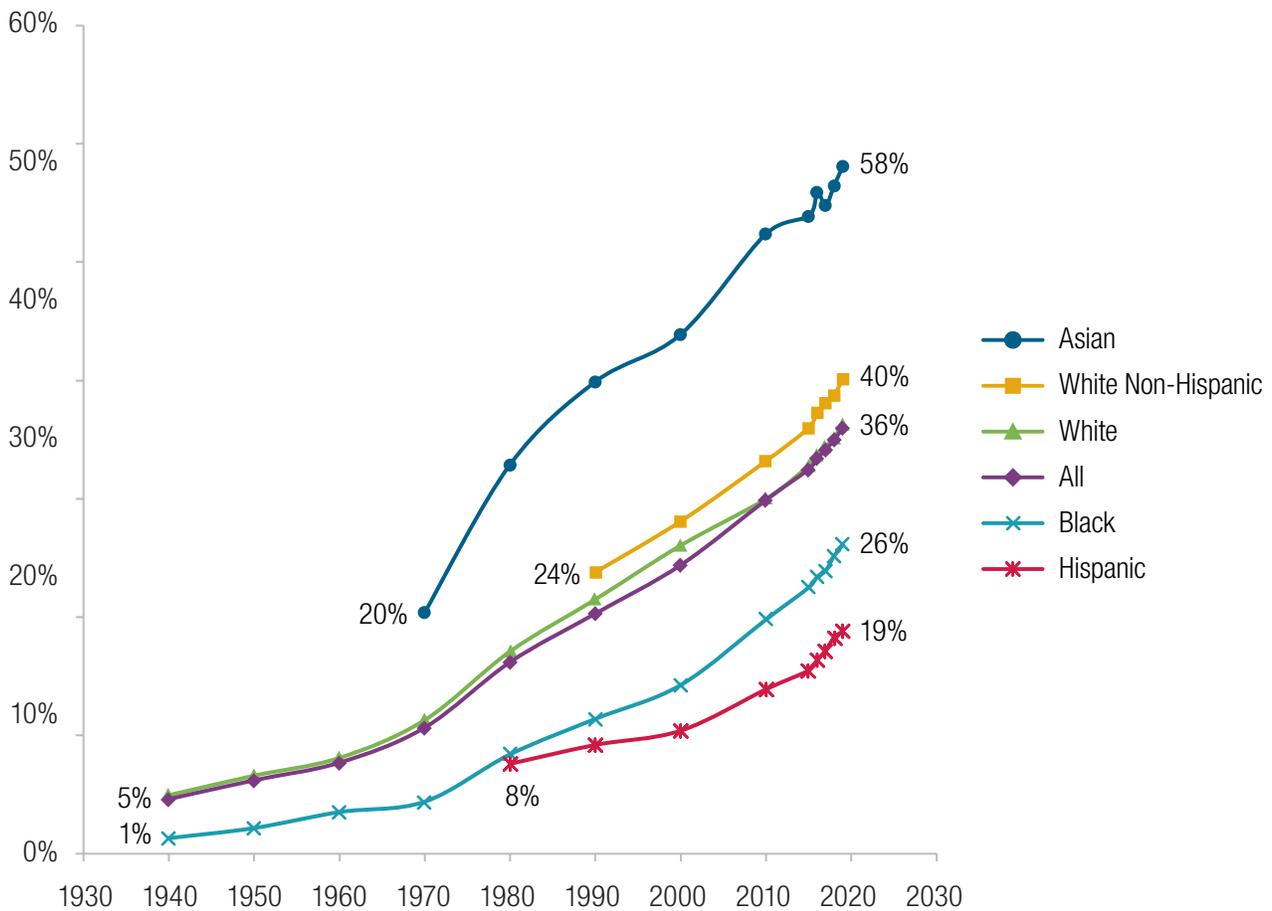
Appendix Figure A-9: Percentage of the population 25 years of age and older who attained a high school diploma or equivalent by race/ethnicity: selected years 1940-2019



NOTE: 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 2019 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>.

Appendix Figure A-10: Percentage of the population 25 years of age and older who attained a bachelor's degree or higher by race/ethnicity: selected years 1940-2019



NOTE: 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 2019 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>.

Appendix Figure A-11: Average net price for first-time, full-time degree/certificate-seeking students awarded Title IV aid, by control and level of institution: 2016-17 (in constant 2018 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), 2015-16 through Winter 2017-18, Student Financial Aid component. Table 331.30.

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