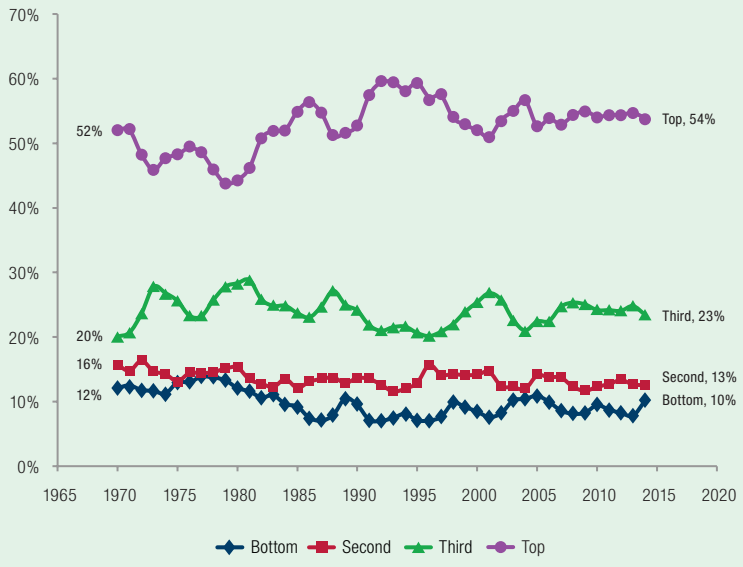
INDICATORS

OF HIGHER EDUCATION EQUITY IN THE UNITED STATES

2016 HISTORICAL TREND REPORT

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

Distribution by Family Income Quartile of Bachelor's Degrees Attained by Age 24: 1970 to 2014



THE PELL INSTITUTE
for the Study of Opportunity in Higher Education

PennAHEAD
Alliance for Higher Education and Democracy

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, 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 educational opportunity in postsecondary education. As such, the focus of the Council is assuring 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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The University of Pennsylvania Alliance for Higher Education and Democracy (PennAHEAD)

is dedicated to advancing higher education policy and practice that fosters 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, PennAHEAD 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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SPECIAL DEDICATION

ARNOLD MITCHEM & TOM MORTENSON

This *Indicators of Higher Education Equity: 2016 Historical Trend Report (2016 Indicators Report)* is dedicated to Arnold Mitchem and Tom Mortenson. Without the very different work of these two individuals, the report would not have been possible. Both have dedicated their work lives to creating greater equity in educational opportunity in the United States. By producing this 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 of higher education opportunity in the United States.

ACKNOWLEDGEMENTS

This report represents a collaboration between the Pell Institute for the Study of Opportunity in Higher Education (Pell Institute) of the Council for Opportunity in Education (COE) and the Alliance for Higher Education and Democracy at the University of Pennsylvania (PennAHEAD). We are grateful for the contributions of many persons and organizations that made this work possible. We especially wish to thank Maureen Hoyler, Beth Hogan, Holly Hexter, and Jodi Koehn-Pike of COE for their critical support, feedback, and production support while the report was in process. We also thank Ozan Jaquette, University of Arizona, for providing use of his compiled institutional data files and for his technical assistance for their use. This report series owes much to Colleen O'Brien, former Director of the Pell Institute, and author of the 2004 and 2005 *Indicators* reports, and Jennifer Engle, former Pell Research Analyst, who provided analytic support for the earlier reports. Much of the trend data presented in this *2016 Indicators Report* 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* newsletters. We also acknowledge the teams of U.S. government and contractor statisticians, data collectors, and data processors who have painstakingly used their technical expertise over many years to produce the estimates included in this *2016 Indicators Report*. We especially wish to thank the past and present staff from the Current Population Survey (CPS) School Surveys and American Community Survey (ACS) from the U.S. Census Bureau and past and present government and contractor staff from the High School Longitudinal Studies program, National Postsecondary Student Aid Study (NPSAS), and Integrated Postsecondary Education Data Systems (IPEDS) of the National Center for Education Statistics (NCES). We also appreciate the helpful critiques received from Susan Dynarski, Sandra Baum, and David Mundel concerning the use of CPS data and other aspects of the *2015 Indicators Report*.

While we heartily acknowledge the contributions of these individuals and groups, we take full responsibility for any errors of omission or interpretation contained in this report.

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TRAVELERS

The Pell Institute and PennAHEAD would like to thank the Travelers Foundation for its financial support of the *Indicators of Higher Education Equity in the United States: 2016 Historical Trend Report* and the accompanying *Search for Solutions-Shared Dialogues*. While we heartily acknowledge the support of Travelers, the opinions expressed in the report are those of the authors alone.

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 a 45-year trend report and initiated the Search for Solutions-Shared Dialogues. The current publication, *Indicators of Higher Education Equity in the United States: 2016 Historical Trend Report* directly follows on these earlier efforts. This publication brings together again in partnership, the Pell Institute with the Alliance for Higher Education and Democracy of the University of Pennsylvania (PennAHEAD). Both organizations have a core mission to promote a more open, equitable, and democratic system of higher education within the United States. 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, first-generation college students, and students with disabilities.

Purposes of the Report. The purposes of this equity indicators project are:

- To report the status of higher education equity in the United States and to identify changes over time in measures of equity; and
- To identify policies and practices that promote and hinder progress; and to 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. The *2015 Indicators Report* focused on equity in higher education based on measures of family income, and this measure remains the primary focus of the 2016 edition. However, in recognition of the need to address inequity based on other demographic characteristics, the 2016 edition also includes selected tables that look at differences by race/ethnicity and family socioeconomic status (SES), an index comprised of income, education, and occupation developed by the National Center for Education Statistics (NCES) for use in the high school longitudinal studies.

Methodological Issues. The *2015 Indicators Report* used Current Population Survey (CPS) data to estimate trends in bachelor's degree attainment. CPS is the only national source of yearly estimates for bachelor's degree attainment (the focus of Indicator 5), but it covers only dependent family members. It therefore has limitations for examining trends in bachelor's degree attainment by income-based quartiles due to differences in dependency patterns across income-based quartiles and changes in these patterns over time. For this 2016 edition, we have adjusted the CPS data to reflect more current estimates from the high school longitudinal studies. We present this data in the methodological Appendix A.

We also describe trends in bachelor's degree attainment using data from the National Center for Education Statistics (NCES) Beginning Postsecondary Study (BPS) and the NCES high school longitudinal studies that have been conducted at irregular intervals approximately once per decade since the 1970s.

Throughout this trend report, we present data on the specific Indicators as far back as comparable data warrant beginning with 1970. The methodological Appendix A provides additional notes and tables not covered in the body of the text.

The Search for Solutions-Shared Dialogues. In addition to providing longitudinal indicators of the status of equity, this report is written to advance productive conversation about the most effective policies and practices for improving equity in higher education opportunity and outcomes. To this end, the report includes three essays that connect the indicators to some current policy debates. These include discussions about how to reduce the stratification of college choice, higher education as a human right, and recommendations for the reauthorization of the Higher Education Act (HEA). We hope that, together, the indicators and essays promote productive dialogue about how to create meaningful progress in improving higher education equity.

Introduction

SETTING THE STAGE

In early 2015, First Lady Michelle Obama called education the "single most important" civil rights issue facing the country.[1] Others have similarly identified education as the "civil rights issue of our times" and some have asserted that "free higher education is a human right."[2] With these assertions, scholars, advocates, and politicians are echoing what the International Covenant on Economic, Social and Cultural Rights of the United Nations (the Covenant) also 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 was adopted by the United Nations (UN) General Assembly in 1966 and subsequently over the last 50 years was ratified as a binding covenant by 166 nations (excluding the U.S.).[3] Is higher education a basic human right, as articulated by the United Nations Covenant, or a moral imperative in a civilized society, with associated rights and responsibilities? Or, is higher education a personal or social investment or commodity? These fundamentally different views are important, as views about the role of higher education can influence decisions about funding, resource allocation, and governance.

> Article 13(2)(c) of the International Covenant on Economic, Social and Cultural Rights of 1966 [Adopted and proclaimed by UN General Assembly resolution 217 A (iii)] provides—"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."

Our understanding of the role of higher education also affects the degree to which "inequalities" are tolerated, fostered, or addressed through public policy. Internationally, some groups have called for renewed emphasis on higher education as a human right. As the European

1 On February 23, 2015, Michelle Obama called education the "single most important" civil rights issue facing the country—Feb 23, 2015 WASHINGTON (AP)—By Darlene Superville, Posted: 02/23/2015 2:22 pm EST Updated: 02/23/2015 2:59 pm EST.

2 While not typically drawing the same policy conclusions, as Professor Diane Ravitch has noted, reformers and advocates from both the right and the left in the U.S. have identified issues around education as: "the civil rights issue of our times" http://dianeravitch.net/2015/06/01/the-civil-rights-issue-of-our-time-2/. Recently the conversation about education as a civil right has been increasingly focused on higher education with such questions being included in the presidential debates. For example, when asked about the topic in a Democratic primary debate Presidential candidate B. Sanders stated "I think what we need to do is say yes, higher education should be a right."

3 Article 13(2)(c) of the International Covenant on Economic, Social and Cultural Rights of 1966 [Adopted and proclaimed by UN General Assembly resolution 217 A (III)]. President Carter signed this UN Covenant in 1977, but thus far no U.S. President, Democrat or Republican, has presented the Covenant for ratification by the U.S. Senate. The United States is one of a handful of countries worldwide that has not become a binding party to the Covenant.

Student Union (ESU) argues, "Education is a core institution of any society and one of the main pillars of modern civilization. It plays a central role in social and economic development, democratic empowerment and the advancement of the general well-being of societies. ESU believes that open access to all levels of education is the cornerstone of a socially, culturally and democratically inclusive society, and a pre-requisite for individual and societal development and well-being."[4]

The U.S. has a core constitutional and founding commitment to equity in opportunity for all citizens. A small body of high court decisions bars overt discrimination based on race/ethnicity within the United States and the U.S. Supreme Court is again considering the role of race/ethnicity in college admissions decisions in *Fisher v. University of Texas at Austin*. Yet, thus far, the courts have not ruled on inequities in access to higher education based on family income, parents' education, or social class. Greater attention to inequities in higher education opportunities and outcomes is warranted, given the increasing importance of higher education to the economic and social well-being of individuals and our society. 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 characteristic, should have equal opportunity to participate and benefit.

Whether we believe that higher education is a civil right, an essential element of a full democratic society, or a fundamental requirement to enabling all to achieve the American dream,[5] the *2016 Indicators Report* shows that higher education opportunity and outcomes are highly inequitable across family income groups. Moreover, on many indicators, gaps are larger now than in the past. The disinvestment of state funds for public colleges and universities since the 1980s and the declining value of federal student grant aid have aided in the creation of a higher education system that is deeply unequal. 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 achieve the vision of ensuring all Americans have the opportunity to use their creative potential to realize the many benefits of higher education and advance the well-being and progress of the nation.[6]

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4 European Student Union, "Executive Committee Document BM64/Part7, Policy paper on public responsibility, governance and financing of higher education, " March 2013. Similarly the Canadian Federation of Students has organized the "Education is a Right" campaign. http://cfs-ns.ca/education-is-a-right/ The Education is a Right campaign is a manifestation of students' collective vision for a well-funded, high-quality, public postsecondary education system that builds a fair and equitable society.

5 The original stated mission of the U.S. Department of Education, as adopted under President Jimmy Carter in the late 1970s, reflected a civil rights focus and simply stated the mission to be: "ensure equal access to education." The current U.S. Department of Education's mission statement, adopted in 2005 under President George W. Bush, is to "promote student achievement and preparation for global competitiveness by fostering educational excellence and ensuring equal access."
It can be found at: http://www2.ed.gov/about/overview/mission/mission.html.

6 As U.S. state and international comparisons show, 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. http://www.unicef.org/social policy/files/Insights_August2010_ENG%281%29.pdf. Bill Kerry, Kate E. Pickett and Richard Wilkinson, *The Spirit* Level: Why Greater Equality makes Societies Stronger, Child Poverty Insights, August 2010, Social and Economic Policy, UNICEF Policy and Practice.

The Equity Indicators

The equity indicators tracked in this report address the following 6 fundamental questions:

1. ***Equity Indicator 1: Who enrolls in postsecondary education?***
   - How do college continuation rates of high school leavers vary by family income?
   - How do college continuation rates of high school graduates vary by family income?
   - How do enrollment rates differ by race/ethnicity?
   - How does the percentage of young adults who have not enrolled in postsecondary education within 8 or 10 years of expected high school graduation vary by parents' socioeconomic status (SES)?
2. ***Equity Indicator 2: What type of postsecondary educational institution do students attend?***
   - How does the level and control of institutions attended vary by receipt of Federal Grants (Pell or Other Federal Grants)?
   - How does the representation of students by socioeconomic status (SES) vary by the selectivity of the institution?
   - How does the representation of students receiving Federal Grants (Pell or Other Federal Grants) vary by the selectivity of the institution?
3. ***Equity Indicator 3: Does financial aid eliminate the financial barriers to paying college costs?***
   - What is the maximum Pell Grant amount relative to average college costs?
   - What level of Pell Grant would be necessary to meet college costs?
   - What is the unmet need by family income?
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 and what percent of family income is needed to pay for college?
   - What percent of students borrow and how much do they borrow?
5. ***Equity Indicator 5: How do college attainment rates vary by family characteristics?***
   - What is the distribution of bachelor's degrees earned by age 24 by family income?
   - How does bachelor's degree attainment vary by family socioeconomic status?
   - How does dependent students' bachelor's degree attainment within 6 years after entering college vary by family income?
   - How does the distribution of bachelor's degrees differ by race/ethnicity?
6. ***Equity Indicator 6: How do educational attainment rates in the U.S. compare with rates in other nations?***
   - What percent of 25- to 34-year olds has completed a type A tertiary degree?
   - What percent of 25- to 34-year olds has completed a type A or type B tertiary degree?

We identify not only the current status of equity but also, when relevant data are available, trends in equity, observed from the point of view of students who have traditionally been at a disadvantage in terms of family income, parent education, or race/ethnicity. The final section of the *2016 Indicators Report* contains three essays that discuss the policy implications of the equity trends and offer recommendations for fostering greater equity in higher educational attainment in the United States.

Setting the Stage

Overview. Before presenting the Indicators, we first briefly describe the structure of postsecondary education in the United States, reviewing 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 increase in the percentage of youth that are poor as measured by eligibility for Federal Free or Reduced Price Lunch and receipt of Federal Grants.

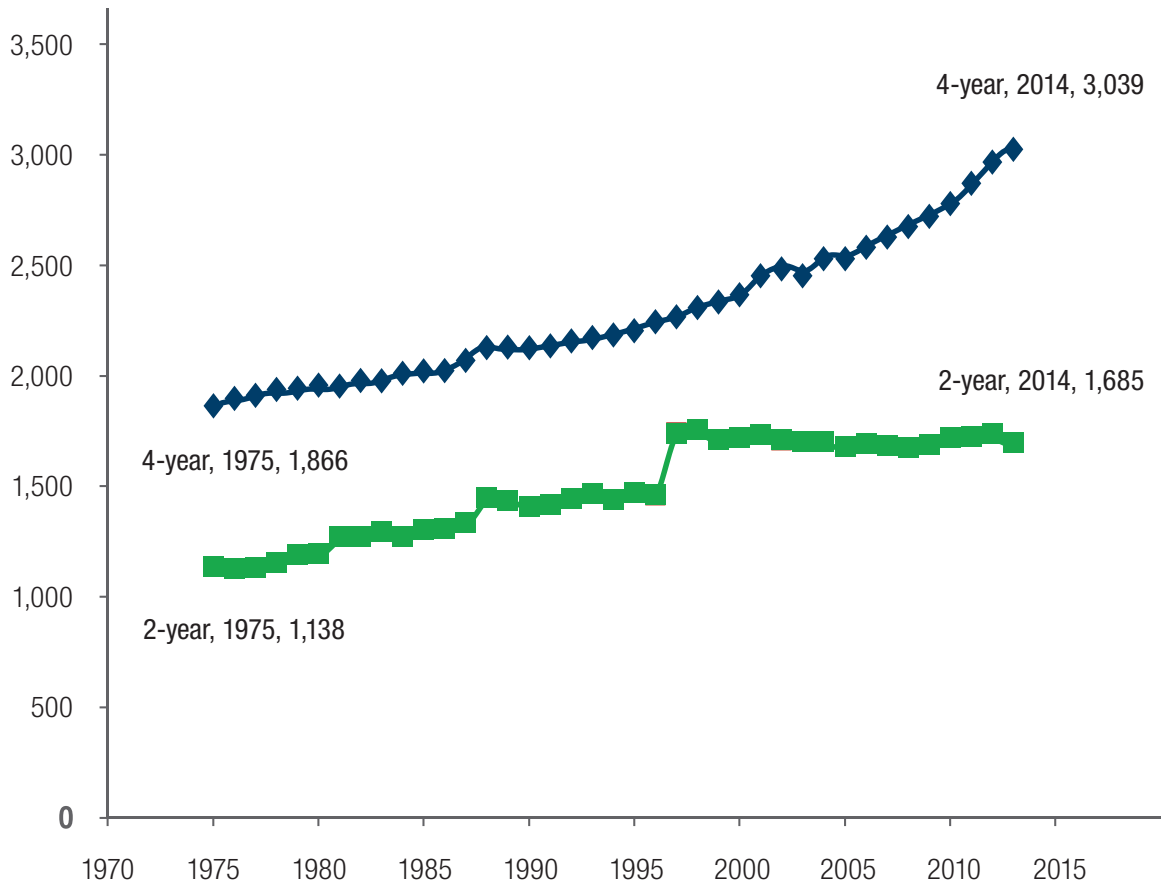
Institutional Type and Control. Figure 1 illustrates trends in the numbers of 2- and 4-year degree-granting institutions in the United States from 1974-75 to 2013-14.[7] The total number of degree-granting institutions (including branch campuses) increased from 3,004 in 1975 to 4,724 in 2014, an increase of 57 percent (63 percent for 4-year and 48 percent for 2-year). The number of 2-year degree-granting institutions has fluctuated around 1,700 since 1996-97. During the past decade the number of 4-year institutions increased by 20 percent, rising from 2,530 in 2003-04 to 3,039 in 2013-14.

Figure 2 shows trends in the number of institutions by control from 1975 to 2014. However, IPEDS data prior to 1985 reflect an unknown degree of coverage particularly of private for-profit institutions. For this reason, we take 1985 as a starting point for comparison. Between 1984-85 and 2013-14, the number of public institutions increased by 8 percent and the number of private non-profit institutions increased by 4 percent. While reporting coverage issues limit the validity of comparisons over time, the number of private for-profit institutions reporting to NCES increased by 565 percent between 1984-85 and 2013-14. Between 1995 and 2005, the number of private for-profit institutions more than doubled, rising from 345 in 1994-95 to 879 in 2004-05, and then increasing again to 1,424 institutions in 2013-14.[8]

7 Of the 7,310 Title IV institutions in the United States and other U.S. jurisdictions in 2014, 42 percent (3,099) were classified as 4-year degree-granting institutions, 23 percent (1,685) were 2-year degree-granting institutions, and the remaining 2586 (36 percent) were less-than-2-year institutions or specialized institutions that only awarded professional or graduate degrees. 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 2012, Institutional Characteristics component.—NCES 2013. http://nces.ed.gov/programs/digest/d13/tables/dt13_317.10.asp.

8 Some of this increase may be due to increased enumeration and reporting, as well as increased participation in Title IV. Title IV institutions have a written agreement with the U.S. Secretary of Education that allows the institution to participate in any of the Title IV federal student financial assistance programs.

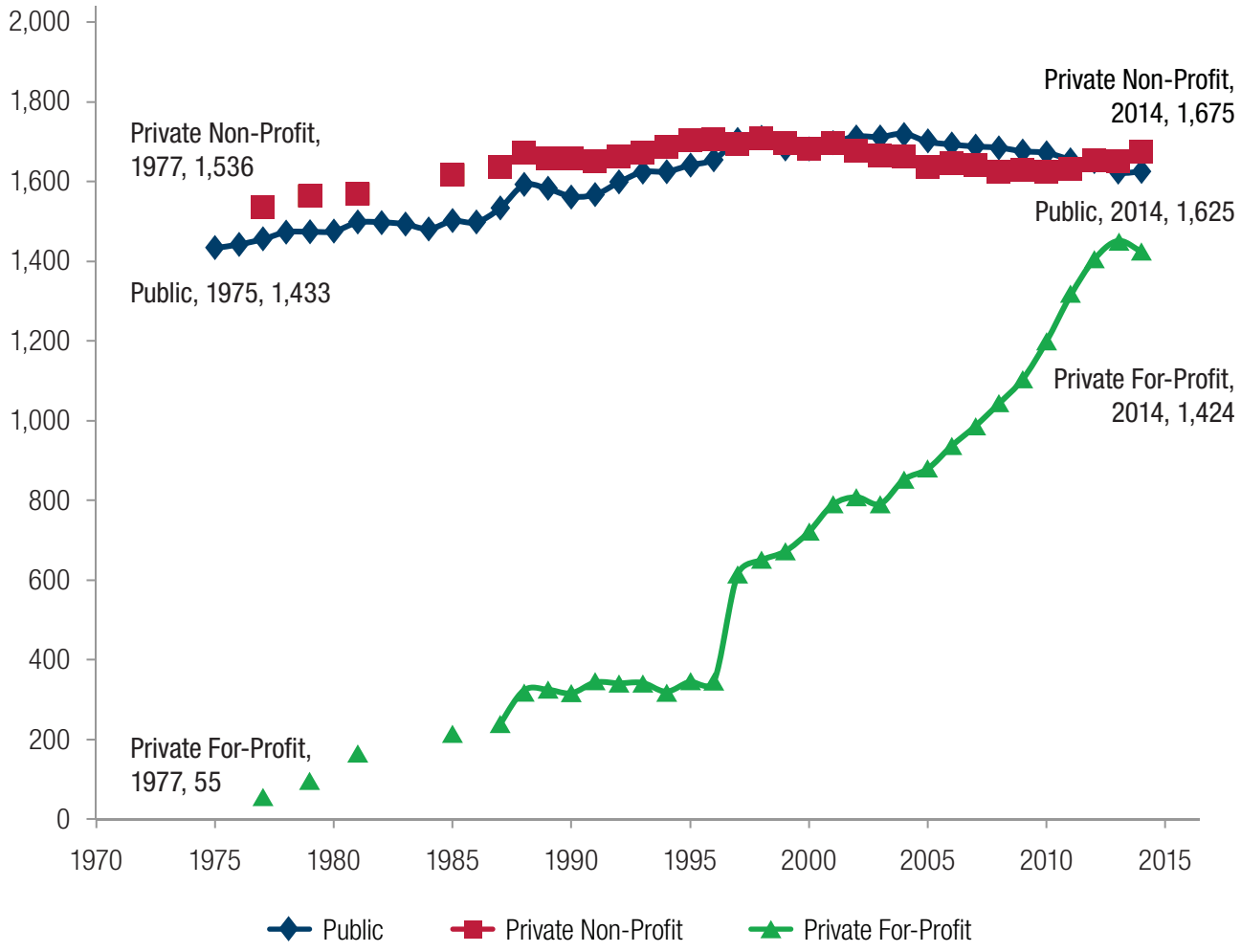
Figure 1: Number of 2-year and 4-year degree-granting Title IV Institutions in the United States: 1975 to 2014



NOTE: Figure begins with 1975 due to reporting consistency issues prior to 1975. Data through 1995-96 are for institutions of higher education, while later data are for degree-granting institutions. This accounts for the large increase in 2-year institutions between 1995-96 and 1996-97. 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 also partly affected by increasing or decreasing 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 2013, Institutional Characteristics component. *Digest of Education Statistics, 2014*, Table 317.10

Figure 2: Number of degree-granting Title IV institutions in the United States by control: 1975 to 2014



NOTE: Figure begins with 1975 due to reporting consistency issues prior to 1975. Data for private for-profit institutions were 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 accounts for the large increase in private for-profit institutions between 1995 and 1996. Changes in counts of institutions over time are also partly affected by increasing or decreasing 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 2013, Institutional Characteristics component. *Digest of Education Statistics, 2014*, Table 317.10.

Enrollment Trends. In fall 2013, nearly 17.5 million undergraduates were enrolled in degree-granting higher education institutions nationwide. Figure 3 shows an upward trend in enrollments over time, with some periods (e.g., the 1990s) of small declines or no growth.[9] Trends in enrollment in recent years are linked, at least in part, to the Great Recession (2007-2009), and its aftermath. Undergraduate enrollment increased sharply during the recession, rising from 15.6 million in fall 2007 to 18 million in fall 2010, and then declined by 2 percent between fall 2011 and fall 2012, and by 1 percent between fall 2012 and fall 2013.[10]

Undergraduate enrollment increased sharply during the recession, followed by small declines after 2011.

Enrollment by Institution Type and Control. Figures 3 and 4 show trends in undergraduate enrollment in different types of institutions. Because of large differences in the average number of students enrolled in institutions of different sectors, the distribution of enrollments by sector is different than the distribution of institutions by sector. Figure 2 shows that the numbers of public, private non-profit, and private for-profit degree-granting institutions by 2014 were approaching parity with about one-third of institutions in each sector. In contrast, considering enrollment, in fall 2013, public institutions accounted for 76 percent of enrollments; private non-profit institutions accounted for 16 percent; and private for-profit institutions accounted for 8 percent.

The private for-profit share of degree-seeking enrollment increased to 8 percent in 2013 from less than 1 percent of enrollment from 1975 through 1991.

As displayed in Figure 4, since 1975, public 4-year and 2-year institutions have consistently enrolled at least three-fourths of undergraduates. In 1975, 81 percent of undergraduates were enrolled in public institutions. The public share declined to 76 percent by fall 2010. The share of undergraduates enrolled in private non-profit institutions has fluctuated between 19 percent in 1975 and 14 percent in 2008. In 2013, 16 percent of undergraduates were in private non-profit colleges (16 percent in 4-year and less than 1 percent in 2-year private non-profits). During the 1990s, about 2 percent of undergraduates were enrolled in private for-profit 2-year and 4-year institutions. The private for-profit share of undergraduates increased during the 2000s, reaching a high of 10 percent in 2010 and declining to 8 percent in fall 2013.

Enrollment by Selectivity. Figure 5 presents the distribution of all undergraduates (enrolled both full-time and part-time) by the selectivity of the institution. Selectivity is defined using Barron's Admissions Competitiveness Index for 2004.

In fall of 2012, 60 percent of undergraduates were enrolled in institutions that were not ranked by Barron's because they were 2-year public or 2-year private non-profits (38 percent), were in the private for-profit sector (10 percent), or they were in a non-ranked 4-year public or 4-year private non-profit institutions (12 percent).

About a third of undergraduates were enrolled in colleges and universities with selective admissions processes, with 2 percent enrolled in institutions designated "Most Competitive," 3 percent in "Highly Competitive" institutions, 9 percent in "Very Competitive," and 19 percent in "Competitive" institutions. An additional 7 percent of undergraduates were attending institutions ranked by Barron's as "Less Competitive" 4-year institutions.

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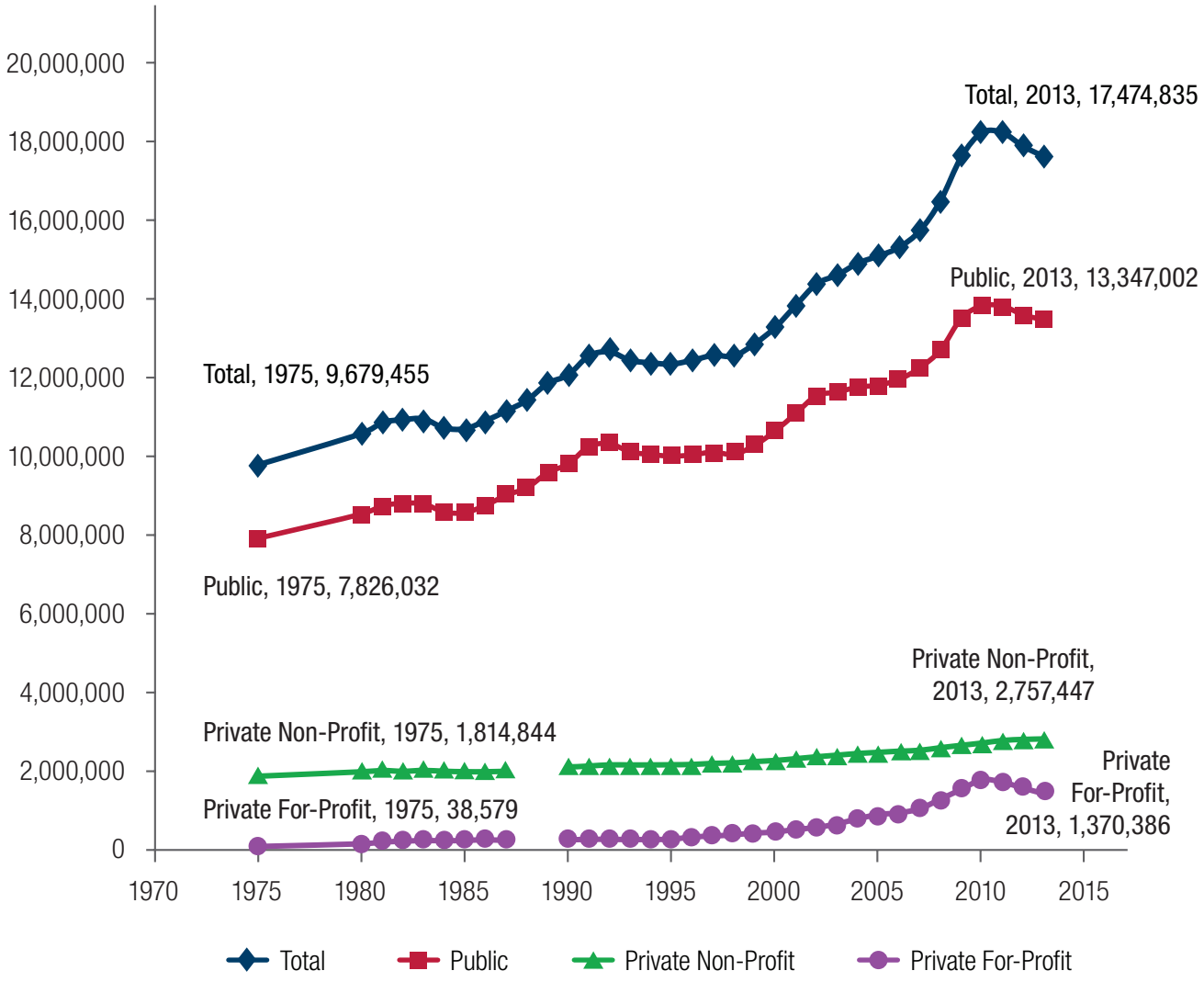
9 Before 1995-96, NCES counted "institutions of higher education." Beginning in 1995-96, the numbers reflect "degree-granting institutions," defined by NCES as "institutions that grant associate's or higher degrees and participate in Title IV federal financial aid programs" (NCES (2014). *Digest of Education Statistics, 2014*. Table 317.10).

10 NCES projected undergraduate enrollment for 2014 and 2015 was about 17.3 million in both years. NCES projects enrollment to reach the level of 2010 by 2018—Table 303.70 *Digest of Education Statistics, 2014*.

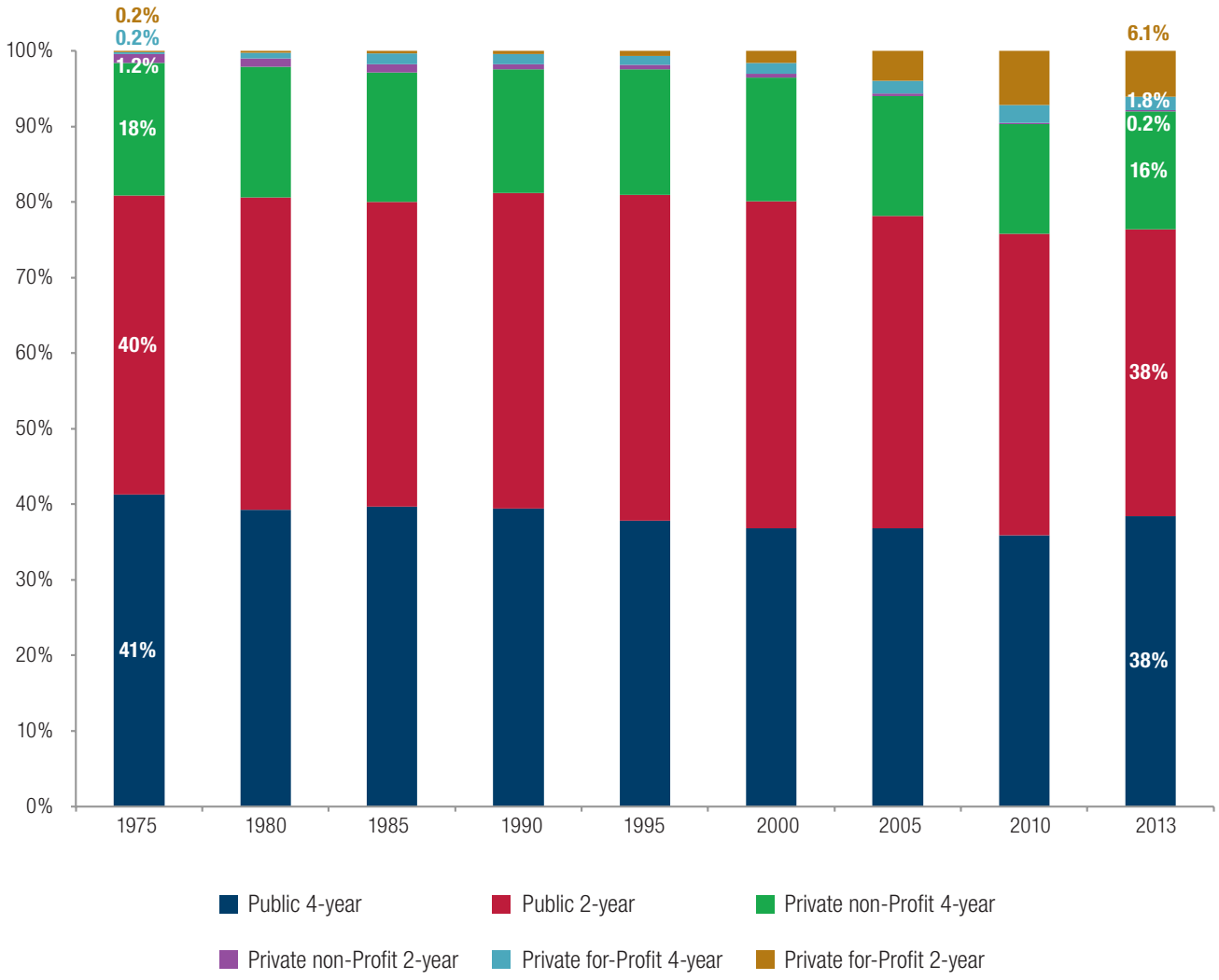
Figure 3: Total undergraduate fall enrollment in degree-granting institutions by institutional control: 1975 to 2013



NOTE: 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 by NCES from previously published figures.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics; 2014*, Table 303.70 —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 2014, Enrollment component; and Enrollment in Degree-Granting Institutions Projection Model, 1980 through 2024.

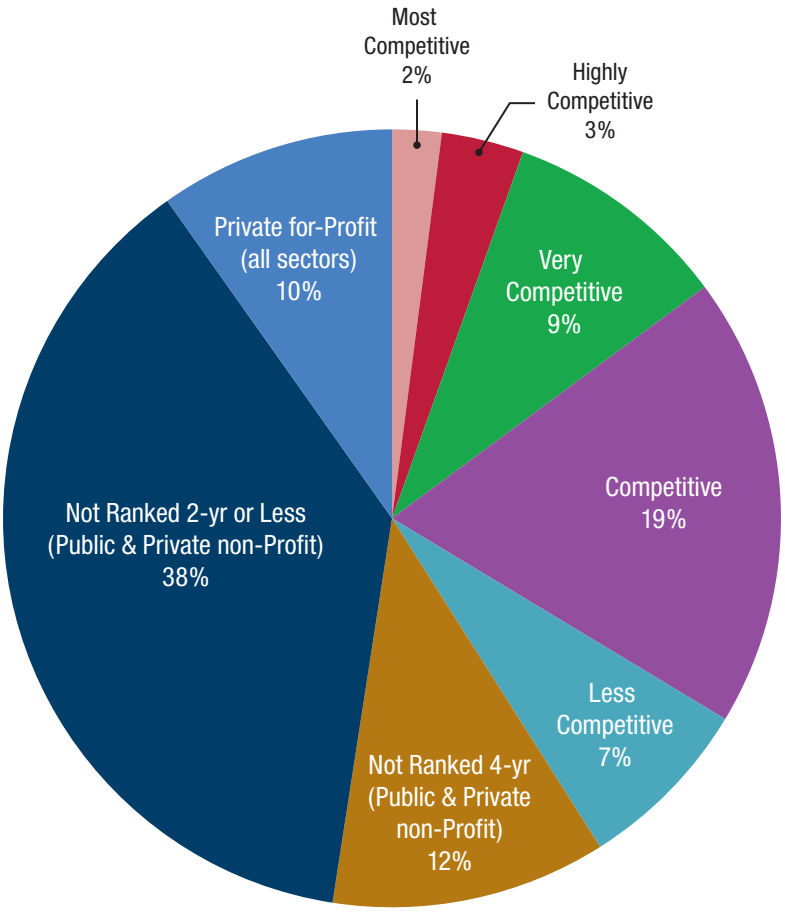
Figure 4: Distribution of total fall undergraduate enrollment by institutional control and level: 1975 to 2013



NOTE: See detailed notes for Figure 3.

SOURCE: U.S. Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Data System (IPEDS), *Digest of Education Statistics, 2014*, Table 303.70.

Figure 5: Distribution of total undergraduate enrollment by selectivity: 2012

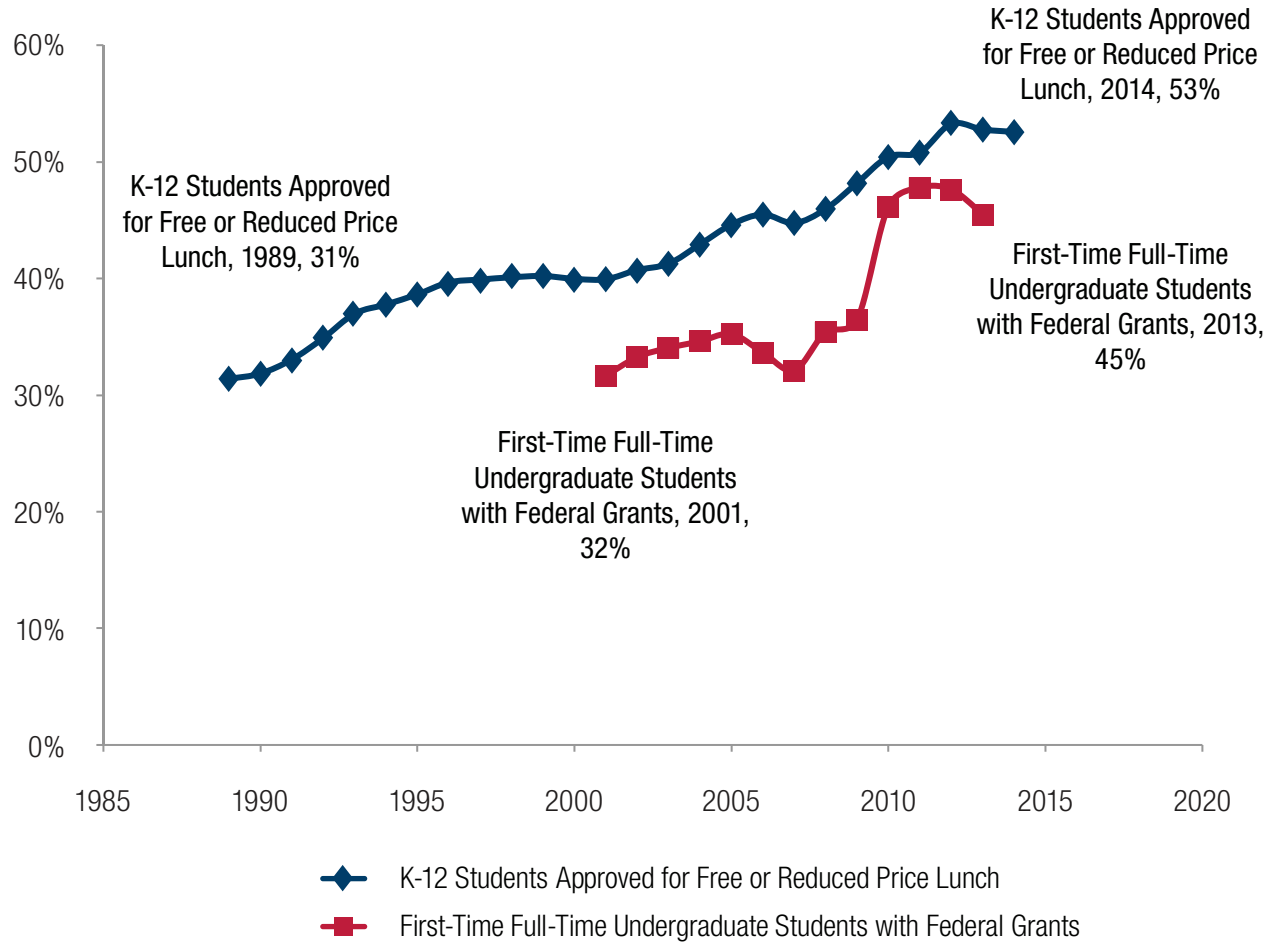


NOTE: This figure uses Barron's Selectivity Ratings and IPEDS fall 2012 enrollment data using the full- and part-time totals captured by the "EFTOTLT" variable. Those students attending colleges not ranked by Barron's are classified by institutional type and control.

SOURCE: U.S. Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Data System (IPEDS), and Barron's Admissions Competitiveness Index (2004).

Growth of Students Classified as Eligible for Free or Reduced Price Lunch, Growth of Federal Grants (Pell and Other Grants), and Widening of Income Gaps. Figure 6 shows trends in the percentage of the U.S. families with financial need as defined by two major federal programs (free or reduced price lunch and federal grant receipt eligibility). Figure 6 shows trends in the percent of youth who are eligible for free or reduced lunches from 1989 to 2014 and the percent of undergraduates at public and private non-profit colleges and universities who received Federal Grants over the period of 2001 to 2013.

Figure 6: Percentage of K-12 students approved for free or reduced price lunch and percent of first-time full-time undergraduates receiving Federal Grants (Pell and Other Grants): 1989-2014



NOTE: Federal Grants includes Pell Grants and other aid that does not have to be repaid.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 2014*; U.S. Department of Agriculture.

Both measures show a sizable increase in the share of students enrolled in our nation's educational system who are from low-income families. From 1989 to 2014 the percent of K-12 students eligible for free or reduced price lunches grew from 31 percent to 53 percent.

The percent of first-time full-time undergraduates at public and private non-profit institutions with Federal Grants was 32 percent in 2001, and fluctuated between 31 percent and 35 percent between 2001 and 2007. After 2007, and the Great Recession, there was a substantial increase to a peak of 48 percent in 2011 followed by a decline to 46 percent in 2013. Changes over time in eligibility for federal need-based aid programs reflect changes in the economic cycle and the stagnation of family incomes in the United States.[11]

11 For additional information see Appendix A for historical trend data on median family income and income distribution by quartiles.

EQUITY INDICATOR 1:

WHO ENROLLS IN POSTSECONDARY EDUCATION?

Indicating a very high level of inequality, 80 percent of 18- to 24-year-olds from the top family income quartile were enrolled in postsecondary education in 2014, compared with just 45 percent of those in the bottom quartile. Because participation rates increased among those in bottom quartile, the percentage point gap in participation between the top and bottom quartiles lessened somewhat over the 44-year period.

Equity Indicators 1 (a-f): Definitions

Indicator 1 examines participation in postsecondary education by family income, race/ethnicity, and parents' socioeconomic status. The data are from two sources: 1) the cross-sectional annual data from the U.S. Census Bureau's Current Population Survey (CPS) series, which provides household-based national estimates and includes data on enrollment in any type of postsecondary institution; and 2) longitudinal studies of high school students that have been conducted by the National Center for Education Statistics (NCES) at approximately 10-year intervals over the last 40 years. Data included in this section are from: the Education Longitudinal Study (ELS:2002) of students who were sophomores in 2002; the National Education Longitudinal Study of eighth graders in 1988 (NELS:88); and the High School and Beyond (HS&B:1980) study of 1980 high school sophomores.[12] We report data from the follow-ups 8 or 10 years after expected high school graduation (2012, 2000, and 1992, respectively).

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

- **Cohort College Continuation Rate (CCCR)** is defined as: the percent of the recent high school leavers continuing on to 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 (HSGCCR)** is defined as: the percent of high school graduates continuing on to any type of postsecondary education, as measured by the CPS and published by the BLS.

12 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 Indicator 1 figures.

- **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 quartiles are specific to the population covered in a given data source.** Using income quartiles facilitates comparisons of changes over time, as quartiles reflect a point in the distribution based on data for a given year. In 2014 the family income quartiles for dependent 18- to 24-year-olds identified by the distribution of family income data in the Current Population Survey were:
    - *Bottom quartile:* Less than $34,933
    - *Second quartile:* $34,933 to $65,496
    - *Third quartile:* $65,496 to $116,466
    - *Top quartile:* $116,466 and above.

  In 2014, the maximum income for the lowest quartile was less than one-third (29 percent) that of the minimum income level of the top quartile. Reflecting growing inequality of income in the United States, the difference between the top and bottom family income quartiles has increased since 1970.[13]
- **Race/Ethnicity:** We use the race and ethnicity categories reported at the time by each data source. The ELS race variables reflect new federal standards that require collecting race separately from ethnicity and allow respondents to mark more than one choice for race.
- **Socioeconomic Status (SES):** This report uses the parental/family socioeconomic status (SES) composite included in the NCES longitudinal studies. The SES composite is based on data from the parent questionnaires or imputed from the student questionnaires and, for the four NCES longitudinal studies, are based on five equally weighted, standardized components: 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.[14]

Equity Indicator 1a: How Do Cohort College Continuation Rates Vary by Family Income?

Indicator 1a shows the Cohort College Continuation Rate for recent school leavers (including those who did and did not complete high school) by family income quartile from 1970 to 2014. For all income groups, the college continuation rate has generally increased since 1980, with a slower rate of increase since 1990. The bottom quartile has the highest rate of increase after 1990.

13 Since 1967, U.S. household income inequality has grown 18 percent. Nearly half of that growth occurred during the 1980s. DeNavas-Walt, C., Proctor, B.D., & Smith, J.C. (2011). "Income, Poverty, and Health Insurance Coverage in the United States: 2010." Table A-3: *Selected Measures of Household Income Dispersion*, 1967 to 2010 http://www.census.gov/prod/2012pubs/acsbr10-18.pdf. See additional figures in Appendix A that include the upper limits of the bottom, second, and third quartiles based on the CPS data for 1970-2013 in constant 2013 dollars.

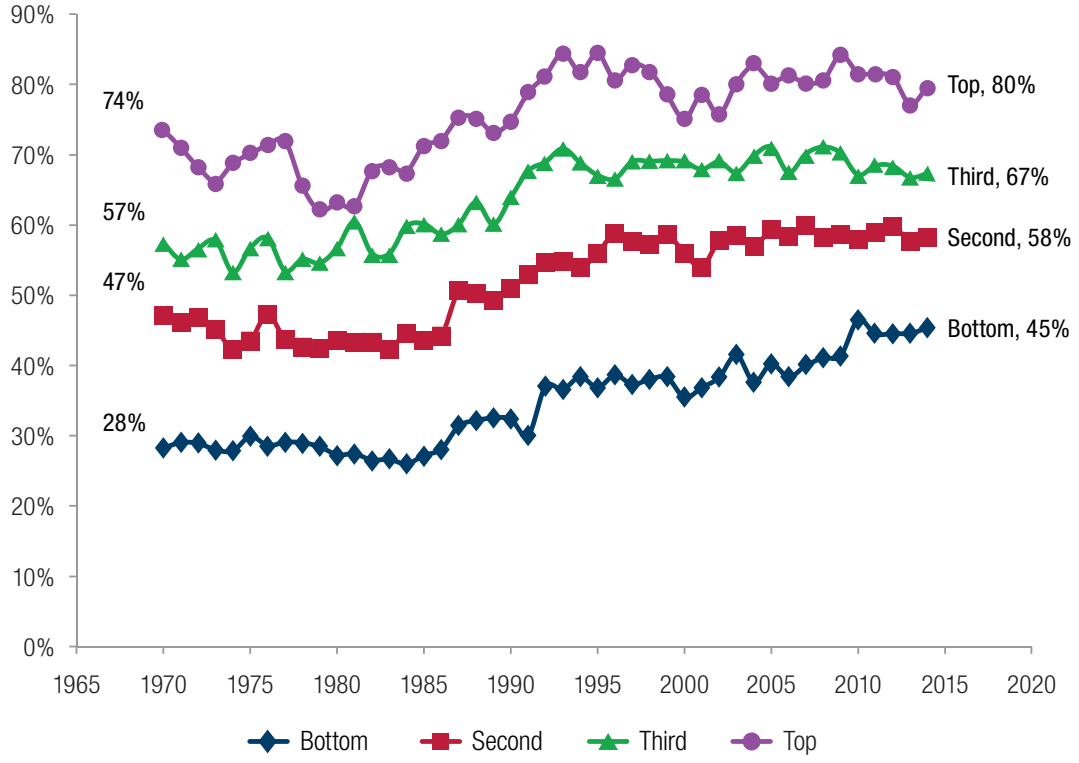
14 Cahalan, M., Ingles, S., Burns, L., & Planty, M. (2006). *United States High School Sophomores: A Twenty-Two Year Comparison, 1980-2002*, Statistical Analysis Report. Washington, DC: U.S. Department of Education, NCES 2006-327.

In 2014, 80 percent of high school leavers from the top family income quartile had enrolled in college, compared with just 45 percent of those in the bottom quartile. The percentage of high school leavers from the bottom quartile who enrolled in college increased from 28 percent in 1970 to 45 percent in 2014. Over the same period, the share of high school leavers from the highest income quartile who enrolled in college increased from 74 percent in 1970 to 80 percent in 2014.

College continuation rates have been generally flat since 1990, but students from the lowest income quartile showed the largest rate of increase.

Because of the differential rates of increase, the gap in postsecondary education enrollment between those in the bottom and top family income quartiles is smaller in 2014 (35 percentage points) than in 1970 (46 percentage points).

Equity Indicator 1a: Cohort College Continuation Rates by family income quartile for recent school leavers: 1970 to 2014



Indicator Status: High Inequality But Narrowing of Gap

There was a 35 percentage-point gap in college enrollment between high school leavers in the top and bottom income quartiles in 2014, compared with a 46 percentage-point gap in 1970.

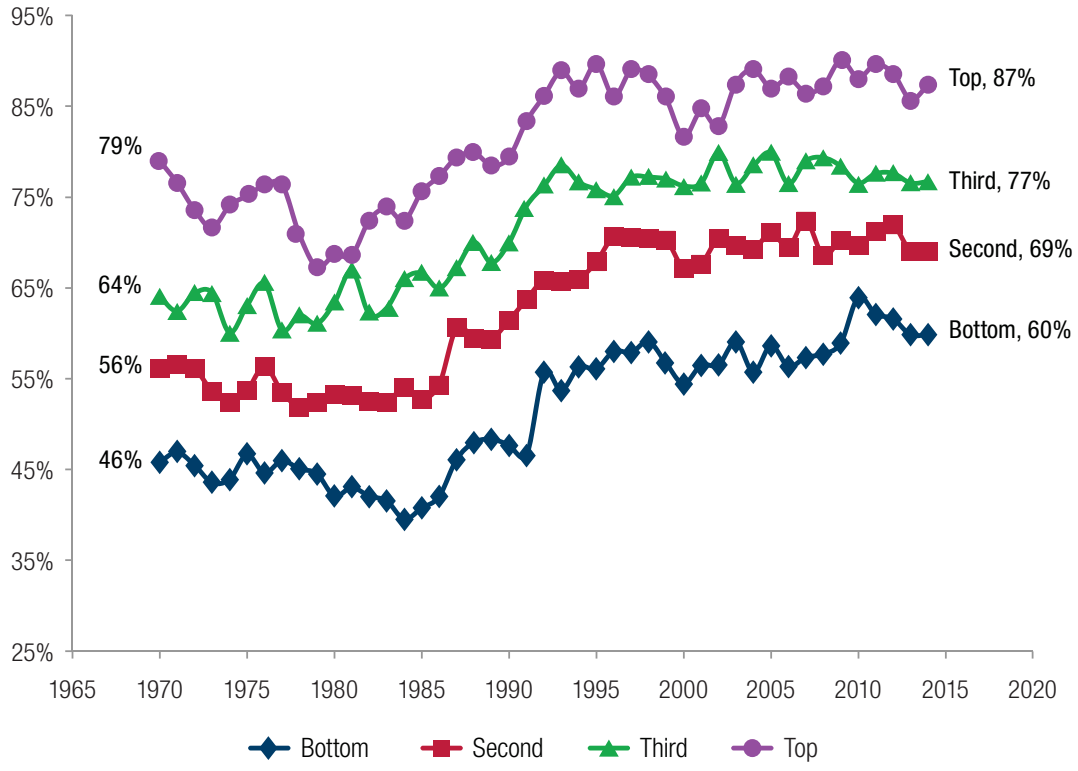
NOTE: Cohort College Continuation Rate is tabulated based on the total number in the cohort year and includes those who have not completed high school in the denominator of the tabulation. Information on school enrollment and work activity is collected monthly in the Current Population Survey (CPS),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

SOURCE: U.S. Census Bureau; School Enrollment Data, 1970-2014, compiled by Tom Mortenson. For recent releases, see http://stats.bls.gov/news.release/pdf/hsgec.pdf.

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

Indicator 1b shows trends in the High School Graduates College Continuation Rate by family income quartile. For high school graduates in the top family income quartile, the college continuation rate was 87 percent in 2014, up from 79 percent in 1970. For high school graduates in the bottom quartile, the college continuation rate was 60 percent in 2014, up from 46 percent in 1970. The gap in college continuation rates for high school graduates in the highest and lowest income quartiles was 27 percentage points in 2014, down from 33 percentage points in 1970.

Equity Indicator 1b: High School Graduates College Continuation Rates by family income quartile: 1970 to 2014



Indicator Status: High Inequality But Narrowing of Gap

There was a 27 percentage-point gap in college continuation rates for high school graduates in the top and bottom income quartiles in 2014, compared with a 33 percentage-point gap in 1970.

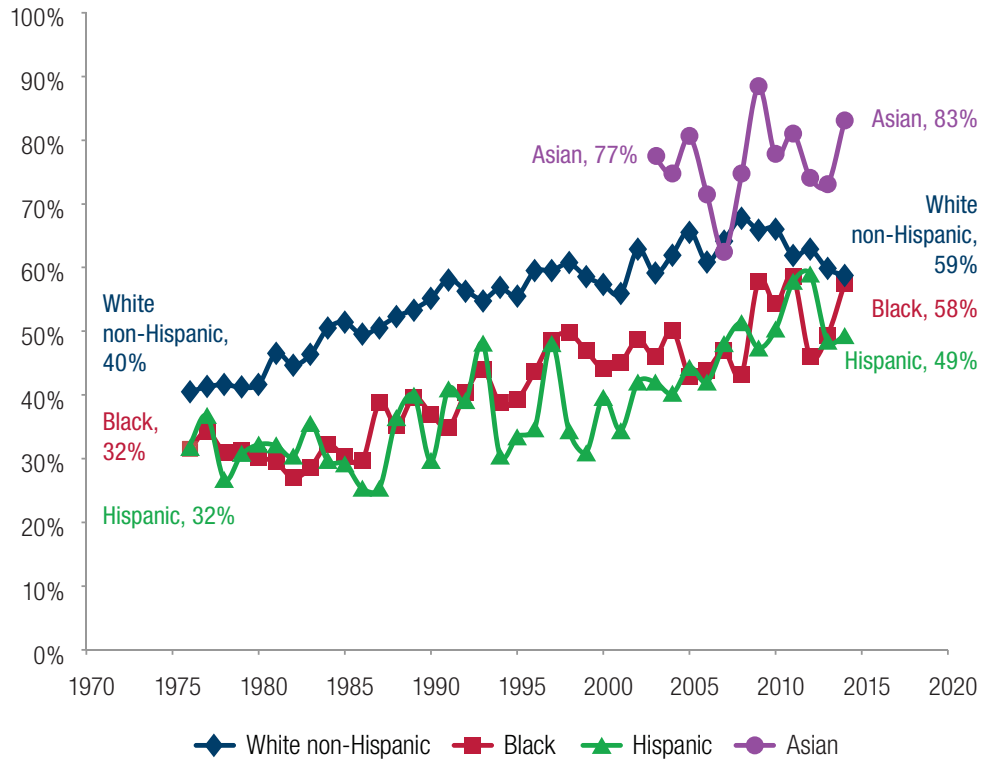
NOTE: The High School Graduates College Continuation Rate is the percent of 16- to 24-year-old high school graduates who entered a postsecondary educational institution of any type. In October 2014, overall 68.4 percent of 2014 high school graduates were enrolled in colleges or universities, as reported by the U.S. Bureau of Labor Statistics.(BLS).

SOURCE: Bureau of Labor Statistics and U.S. Census Bureau; Enrollment Data, 1970-2014. For recent data see http://stats.bls.gov/news.release/pdf/hsgec.pdf.

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

Indicator 1c uses the Current Population Survey (CPS) data to examine cohort college continuation rates for high school leavers by race/ethnicity from 1976 to 2014. College continuation rates for high school leavers continue to vary by race/ethnicity, but gaps across racial/ethnic groups have narrowed since the mid-1970s. In 2014, 83 percent of Asian high school leavers were enrolled in college, compared with 59 percent of White, non-Hispanics; 58 percent of Blacks; and 49 percent of Hispanics.

Equity Indicator 1c: Cohort College Continuation Rates of recent high school leavers by race/ethnicity: 1976 to 2014



Indicator Status: Equity among Whites and Blacks and Narrowing of Gaps

The gap in college continuation rates between Black and White non-Hispanic high school leavers was 1 percentage point in 2014, down from 8 percentage points in 1976.

NOTE: Cohort College Continuation Rate is defined as the percent of recent high school leavers (includes those not graduating high school in the denominator) continuing on to any type of postsecondary education. Asian data were reported separately only in 2000 or after. Information reported by BLS yearly is 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 more detailed information about school enrollment, such as full- and part-time enrollment status.

SOURCE: Bureau of Labor Statistics (BLS) and U.S. Census Bureau, 1976-2014, as adapted by Tom Mortenson, *Postsecondary Educational Opportunity (PEO) Newsletters* and data base, *College Entrance Rates by Race/Ethnicity for Recent High School Graduates 1960 to 2014*. See http://stats.bls.gov/news.release/pdf/hsgec.pdf for most recent data from BLS.

Since the mid-1970s, the greatest increases in college continuation rates have been among Black high school leavers, with college continuation rates increasing from 32 percent in 1970 to 58 percent in 2014. Over the same period, the college continuation rate for Hispanic high school leavers increased from 32 percent to 49 percent.

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

Indicator 1d shows college continuation rates for recent high school graduates by race/ethnicity. The pattern is much the same as for high school leavers (shown in Indicator 1c). In 2014, the college continuation rate for high school graduates was 86 percent for Asians; 71 percent for Blacks; 68 percent for White, non-Hispanics; and 65 percent for Hispanics. Between 1976 and 2014, college continuation rates of high school graduates increased by 26 percentage points for Blacks (rising from 45 percent to 71 percent); 19 percentage points for White, non-Hispanics (from 49 percent to 68 percent); and 12 percentage points for Hispanics (from 53 percent to 65 percent).

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

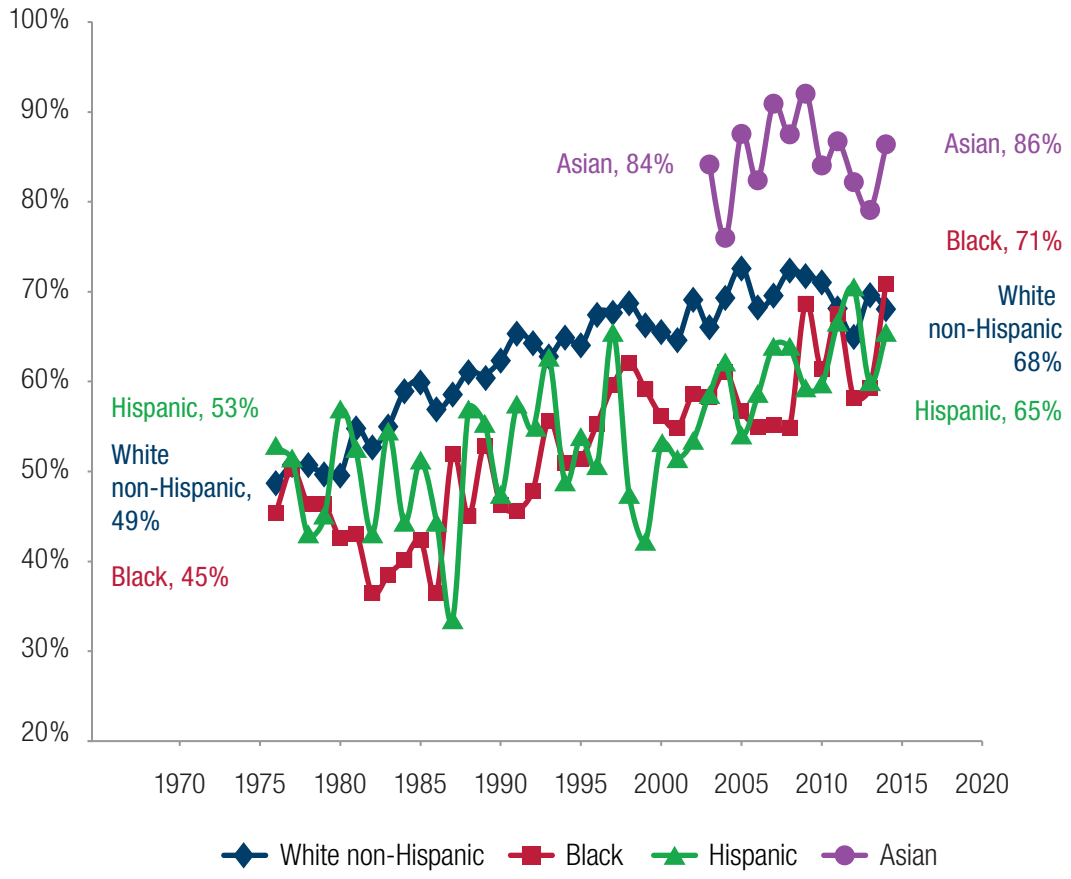
The high school longitudinal studies conducted by the National Center for Education Statistics (NCES) approximately every 10 years shed light on longitudinal trends in college enrollment within 8 or 10 years after expected high school graduation year, when most youth would have left their parents' households. By measuring college enrollment 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 three studies to observe trends over time. The High School and Beyond (HS&B:1980) and Educational Longitudinal Study (ELS:2002) sampled high school sophomores, while the National Educational Longitudinal Study (NELS:88) sampled eighth graders. Hence, unlike the NELS, the HS&B and ELS do not account for youth who left high school prior to the spring of sophomore year.[15]

Similar to the estimates using CPS/BLS data that are displayed in Indicators 1c and 1d, data from the national high school studies also illustrate a narrowing gap in college entrance by race/ethnicity. However, the national high school studies show a smaller narrowing of the gap than the CPS/BLS data. Among 1980 high school sophomores (HS&B:1980/1992), 61 percent of Black youth reported attending a postsecondary educational institution within 10 years, compared with 69 percent of White, non-Hispanic youth. Twenty-two years later, among 2002 high school sophomores (ELS:2002), 79 percent of Hispanic and 82 percent of Black youth entered postsecondary education within 8 years of expected high school graduation, compared with 87 percent of White youth.

15 Because the National Longitudinal Study (NLS) of the class of 1972 began with high school seniors, we do not include it in comparisons of trends presented in Indicator 1.

Equity Indicator 1d: High School Graduates College Continuation Rates by race/ethnicity: 1976 to 2014



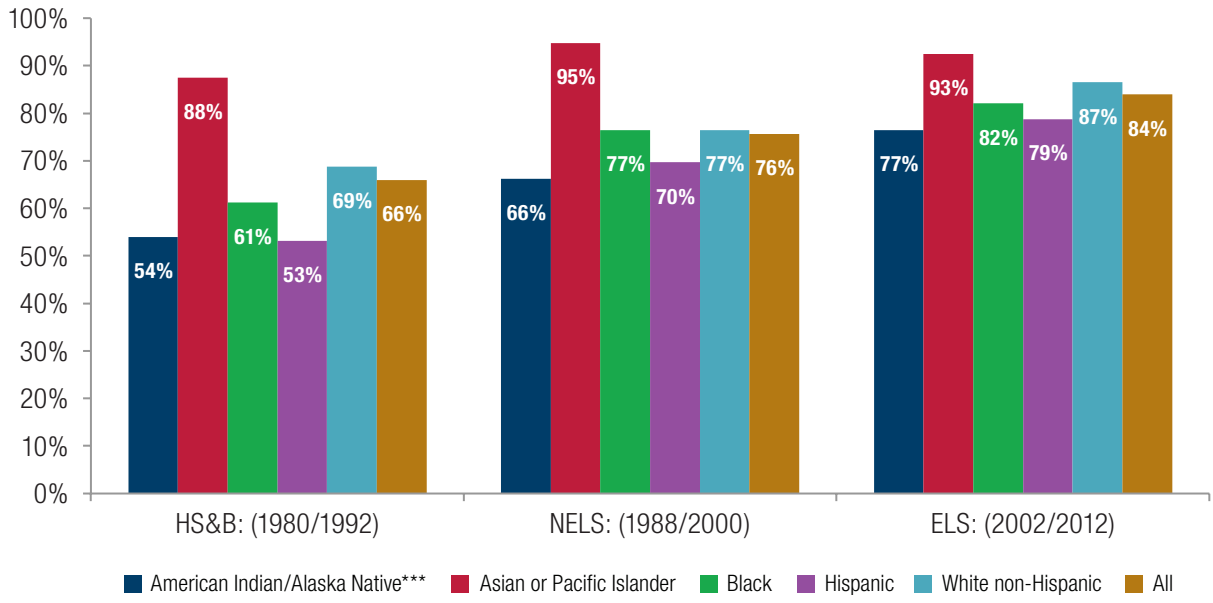
Indicator Status: Narrowing of Gaps between Blacks, Hispanics, and Whites

College continuation rates in 2014 were 3 percentage points higher for Black than for White non-Hispanic high school graduates, and 3 percentage points higher for White non-Hispanic than for Hispanic high school graduates.

NOTE: High School Graduates Continuation Rate is defined as the percent of recent high school graduates continuing on to any type of postsecondary education. Asian data were reported separately only in 2000 and after. Information reported by BLS yearly is 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, such as full- and part-time enrollment status.

SOURCE: Bureau of Labor Statistics (BLS) and U.S. Census Bureau; as compiled by Tom Mortenson, *Postsecondary Educational Opportunity (PEO) Newsletters*; and data workbooks, *College Entrance Rates by Race/Ethnicity for Recent High School Graduates 1960 to 2014*. See http://stats.bls.gov/news.release/pdf/hsgec.pdf for most recent data from BLS.

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:88/2000; ELS:2002/2012)



Indicator Status: Persisting but Narrowing Gap

Among 2002 high school sophomores (ELS:2002), 79 percent of Hispanic and 82 percent of Black youth compared with 87 percent of White youth entered postsecondary education within 8 years of expected high school graduation. Twenty-two years earlier, among HS&B 1980 high school sophomores surveyed 10 years after expected high school graduation, 53 percent of Hispanic and 61 percent of Black youth compared with 69 percent of White youth had enrolled in postsecondary education. The gap between Black and White youth narrowed from 8 to 5 percentage points and between Hispanic and White youth from 16 to 8 percentage points.

NOTE: ***American Indian/Alaska Native estimates were not reported separately for ELS due to small sample sizes; but are included in the "Other," category shown here under American Indian/Alaska Native. ELS and HS&B sampled students when they were sophomores in high school. NELS:88 sampled eighth graders. Some differences in results can be expected due to the longer time period for dropping out of high school for students sampled in eighth rather than tenth grade.

SOURCE: Lauff, E. and Ingels, S.J. (2014), *A First Look at 2002 High School Sophomores 10 Years Later*, Education Longitudinal Study of 2002 (ELS:2002), First Look, U.S. Department Of Education, NCES 2014-363; Steven J. 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*, Research Triangle Institute, Statistical Analysis Report, U.S. Department of Education Office of Educational Research and Improvement, NCES 2002—321; John Tuma, J. and Geis, S. (1995). *High School and Beyond 1992 Descriptive Summary of 1980 High School Sophomores 12 Years Later With an Essay on Educational Attainment of 1980 High School Sophomores: by 1992*. U.S. Department of Education, National Center for Education Statistics, Statistical Analysis Report.

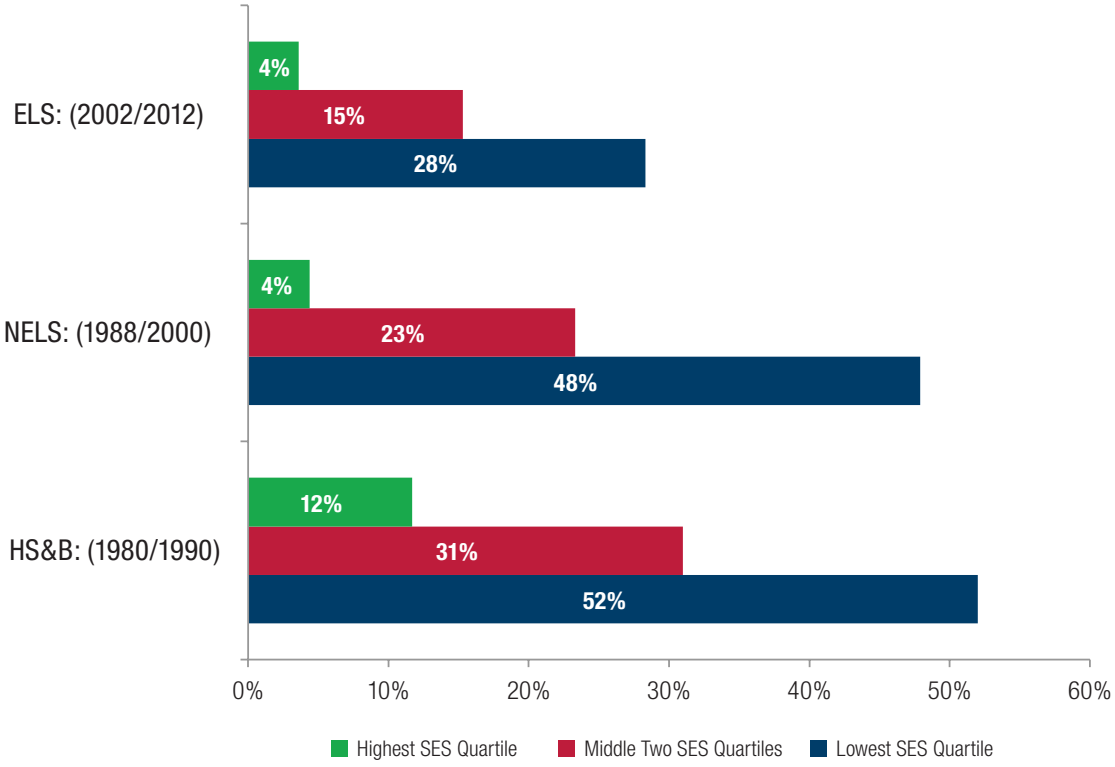
Equity Indicator 1f: How Do Rates of Not Enrolling in Postsecondary Education Within 8 or 10 Years of Expected High School Graduation Vary by Parents' Socioeconomic Status (SES)?

Indicator 1f documents the percentage 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 parental socioeconomic status (SES) in the three NCES-sponsored high school longitudinal studies. Parents' SES is a composite indicator that reflects mother and father's or guardian's level of education, mother and father's occupations, and parental income and is measured consistently across the three NCES longitudinal studies.[16]

Across the three longitudinal studies, the percent of high school leavers who reported no participation in postsecondary education declined across all levels of parents' SES. The percentage of high school leavers in the highest SES quartile reporting no postsecondary educational enrollment within 8 or 10 years of scheduled high school graduation declined from 12 percent of 1980 high school sophomores (HS&B), to 4 percent of 1988 eighth graders (NELS), to 4 percent of 2002 high school sophomores (ELS). The percentage of high school leavers 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 high school sophomores (HS&B), to 48 percent of 1988 eighth graders (NELS), to 28 percent of 2002 high school sophomores (ELS).

16 Due to a high percentage of missing data for parent income, we use SES quartiles. SES is a composite measure that NCES derived in a comparable manner for the three studies. NCES imputed SES for all sample members, including those with missing data for the parent income variable. We use the SES measure rather than income alone for this indicator, as SES is considered more reliable than a single measure of 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:88/2000; ELS:2002/2012)



Indicator Status: High Inequality But Narrowing of Gap

The gap in the youth in the highest and lowest quartiles of parents' SES quartile who reported no postsecondary enrollment within 8 or 10 years of scheduled high school graduation was 40 percentage points among 1980 high school sophomores and 44 percentage points among 1988 eighth graders, but declined to 24 percentage points among 2002 high school sophomores.

NOTE: ELS and HS&B sampled students when they were sophomores in high school. NELS:88 sampled eighth 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 eighth rather than tenth grade.

SOURCE: Lauff, E. and Ingels, S.J. (2014). A *First Look at 2002 High School Sophomores 10 Years Later*, Education Longitudinal Study of 2002 (ELS:2002), U.S. Department Of Education, NCES 2014-363; 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.* Research Triangle Institute, Statistical Analysis Report, U.S. Department of Education, Office of Educational Research and Improvement, NCES 2002—321; Tuma, J. and Geis, S. (1995). *High School and Beyond 1992 Descriptive Summary of 1980 High School Sophomores 12 Years Later With an Essay on Educational Attainment of 1980 High School Sophomores: by 1992*, National Center for Education Statistics, Statistical Analysis Report.

EQUITY INDICATOR 2:

WHAT TYPE OF POSTSECONDARY EDUCATIONAL INSTITUTION DO STUDENTS ATTEND?

In 2013, about half (56 percent) of full-time, first-time (FTFT) undergraduates who receive Pell or other Federal Grants attended 4-year rather than 2-year institutions, compared with 75 percent of undergraduates who did not receive Pell or other Federal Grants. Across the four high school longitudinal studies since the 1970s, less than 1 percent of students from the bottom SES quartile had an institutional destination of among the "most competitive" colleges and universities and among the "most competitive" colleges and universities, from 4 to 5 percent of students were from the bottom socioeconomic quartile.

Equity Indicator 2 (a-e): Definitions

The sources of data for Indicator 2 are: 1) the Integrated Postsecondary Education Data System (IPEDS), which has collected institutional-level data on U.S. postsecondary educational institutions since 1986; 2) the four NCES high school longitudinal studies, the National Longitudinal Study, representing the class of 1972 (NLS), the High School and Beyond Study, representing the class of 1982 (HS&B), the National Education Longitudinal Study, representing the class of 1992 (NELS), and the Education Longitudinal Study, representing the class of 2004 (ELS); and 3) the 2004 Barron's Admission Competitiveness Index.

- **IPEDS Federal Grant Aid.** IPEDS does not collect data on students' family income, but collects aggregate data on institutional characteristics that provide reasonable proxies.[17] In Indicator 2, we report on students receiving "Federal Grants." Federal Grant aid is comprised primarily of Pell Grants, but also includes Supplemental Educational Opportunity Grants (SEOG) and grants from federal agencies other than the U.S. Department of Education such as the Department of Veterans Affairs

17 Current IPEDS measures include the percent of undergraduate students receiving Federal 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.

and the Department of Labor.[18] Federal Grant aid is also referred to as "Pell or other Federal Grants" in this report.[19]

- **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. Pell Grants are targeted to students from low-income families and independent students with low incomes. In the 2013-14 award year, 61 percent of the more than 3.8 million Pell Grants awarded to dependent students were awarded to students with family incomes below $30,000; 87 percent were awarded to students with family incomes below $50,000. In 2013-14, the maximum Pell Grant award was $5,645.[20]
- **Federal Supplemental Educational Opportunity Grant Receipt.** The federally-funded FSEOG grants are administered by participating postsecondary institutions and are therefore considered "campus-based" aid. Eligibility is based on financial need, with priority given to Pell Grant recipients. Annual awards range from $100 to $4,000.[21]

- **Level and Control of Postsecondary Institutions.** Indicator 2 reports differences in enrollment by Federal Grant receipt by institutional level (2-year versus 4-year college or university), institutional control (public, private non-profit, and private for-profit), and institutional selectivity.
- **High School Longitudinal Studies Data by Family Socioeconomic Status and Institutional Selectivity.** A parental/family 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 four NCES longitudinal studies, are based on five equally weighted, standardized components: 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 from an analytic dataset constructed by merging the high school longitudinal data with the Barron's Admission Competitiveness Index.[22]

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18 National Center for Education Statistics, IPEDS Data Center https://nces.ed.gov/ipeds/datacenter/selectVariables.aspx.

19 Others also use Federal Grant aid as a proxy for receiving federal Pell Grants. See Giancola, J., & Kahlenberg, R. D., (2016). *True merit: Ensuring our brightest students have access to our best colleges and universities*. Jack Kent Cooke Foundation. Retrieved from http://www.jkcf.org/assets/1/7/JKCF_True_Merit_Report.pdf.
Pell Grants represented 66 percent of total federal aid in 2014-15, down from 75 percent in 2008-09. Over this period, the share of federal grant aid from veterans and military aid increased from 20 percent to 33 percent. College Board, *Trends in Student Aid 2015*, Figure 4 http://trends.collegeboard.org/sites/default/files/trends-student-aid-web-final-508-2.pdf.

20 *2013-2014 Federal Pell Grant Program End-of-Year Report*
http://www2.ed.gov/finaid/prof/resources/data/pell-2013-14/pell-eoy-2013-14.html.

21 Federal Student Aid, *FSEOG (Grants)* https://studentaid.ed.gov/sa/types/grants-scholarships/fseog.

22 Figures are adapted from Bastedo, M. N., & Jaquette, O. (2011). Appendix Table 6 of 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.

- **Institutional Selectivity:** Selectivity is measured using Barron's college admissions competitiveness ratings, which are based on such measures as percent of applicants admitted, students' high school class rank, and students' college entrance exam scores.[23] Selectivity rankings include "most competitive," "highly competitive," "very competitive," "competitive," and "less competitive." We coded institutions not ranked by Barron's selectivity index by level and control.[24] We use the 2004 Barron's ranking for all years in Indicator 2e because of the high level of consistency in Barron's rankings methodology across years; selectivity changes over time only for a small share of institutions.[25]

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

Students receiving Federal Grants (Pell or other Federal Grants) are less likely than non-recipients to attend a 4-year rather than a 2-year institution.[26] In 2013, about half (56 percent) of full-time, first-time (FTFT) undergraduates who receive Pell or other Federal Grants attended 4-year rather than 2-year institutions, compared with 75 percent of undergraduates who did not receive Pell or other Federal Grants. The proportion of Federal Grant recipients who attend 4-year rather than 2-year institutions has remained essentially unchanged from 2001 to 2013 (approximately 56 percent), but the share of non-Federal Grant recipients who attend 4-year institutions has been slowly increasing, rising from 70 percent in 2001, to 73 percent in 2007, to 75 percent in 2013.

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

While 80 to 90 percent of students (both those who receive and do not receive Federal Grants) enroll in public or private non-profit institutions, undergraduate students from low-income families (as measured by Federal Grant receipt) are substantially more likely than other undergraduates to attend a private for-profit college or university. In 2013, Federal Grant recipients were more than three times as likely as those who did not receive Federal Grants to attend a private for-profit college or university (16 percent compared to 5 percent, respectively). In 2001, Federal Grant recipients were twice as likely as non-recipients to attend a for-profit institution (16 percent compared to 8 percent, respectively). Over this same period, the percent of Federal Grant recipients enrolled in private non-profit institutions declined from 20 percent in 2001, to 16 percent in 2007, to 15 percent in 2013.

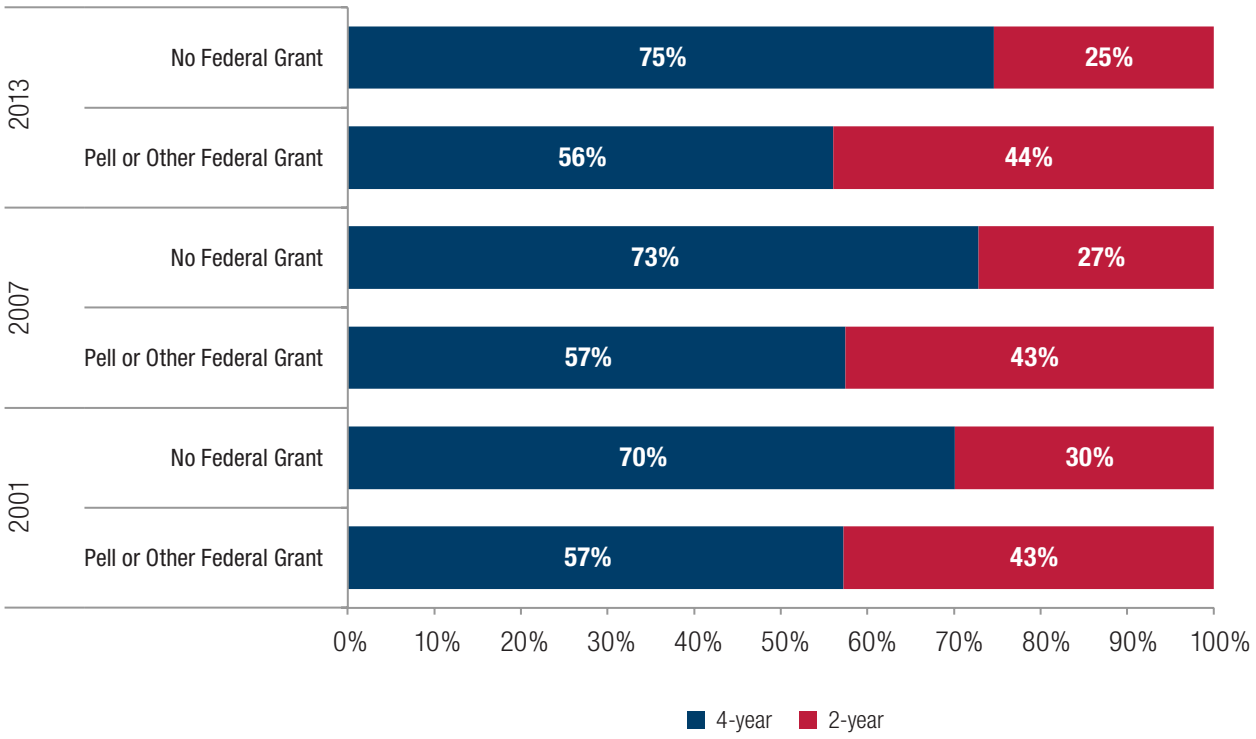
23 For more information on Barron's selectivity ratings as it pertains to Indicators 2d and 2e, see Bastedo and Jaquette (2011), including their online Appendix Table 2 http://www-personal.umich.edu/~bastedo/papers/EEPA-Appendix.pdf.

24 National Center for Education Statistics, Barron's Admissions Competitiveness Index http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2010331.

25 Bastedo and Jaquette (2011) also used one year of the Barron's selectivity index in their multi-year study. 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.

26 This analysis excludes enrollment at less-than-2-year institutions.

Equity Indicator 2a: Distribution of full-time, first-time degree-seeking undergraduate students who did and did not receive Federal Grants (Pell or other Federal Grants) by level of institutions attended: 2001, 2007, 2013



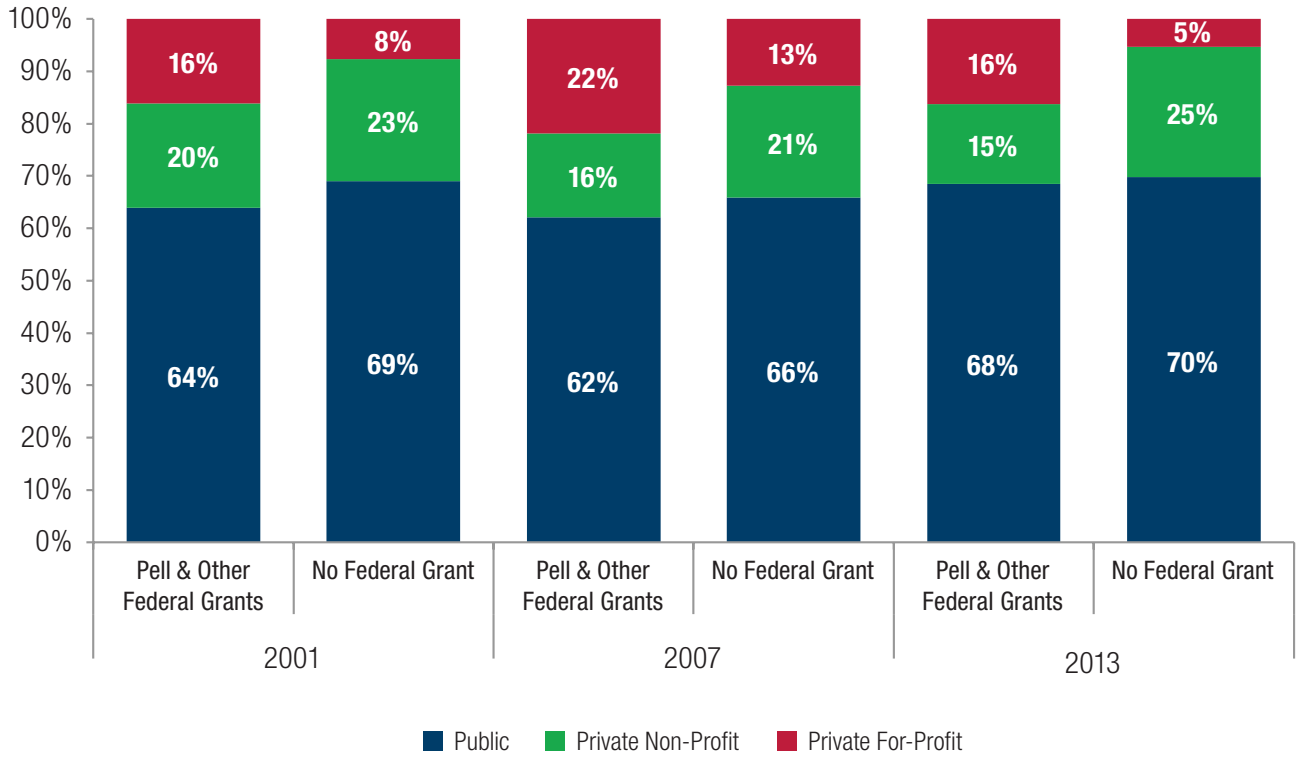
Indicator Status: High Inequality and Widening Gap

Since 2001, the difference in the percentages of federal grant recipients and non-recipients attending 4-year rather than 2-year colleges and universities widened from 13 percentage points in 2001 to 19 percentage points in 2013.

NOTE: Federal grant aid is comprised primarily of Pell Grants but also includes Supplemental Educational Opportunity Grants (SEOG) 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), *Digest of Education Statistics, 2015*. Table 331.20.

Equity Indicator 2b: Distribution of full-time, first-time degree-seeking undergraduate students who did and did not receive Federal Grants (Pell or Other Federal Grants) by control of institution attended: 2001, 2007, 2013



Indicator Status: High Inequality and Persisting Gaps

Federal Grant recipients were more than 3 times as likely as non-Federal Grant recipients to attend private for-profit institutions in 2013, up from 2 times as likely in 2001.

NOTE: Federal grant aid is comprised primarily of Pell Grants but also includes Supplemental Educational Opportunity Grants (SEOG) 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), *Digest of Education Statistics, 2015*. Table 331.20.

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

The share of full-time, first-time (FTFT) degree-seeking undergraduates who received Pell or other Federal Grants was higher in 2013 than in 2001 in all institutional sectors. The percent of students at private for-profit 4-year institutions who received Federal Grants increased from 36 percent in 2001 to 74 percent in 2013.[27] In 2013, more than two-thirds of FTFT undergraduate students attending private for-profit 4-year institutions (74 percent), private for-profit 2-year institutions (71 percent), and private non-profit 2-year institutions (67 percent) received Pell or other Federal Grants. By comparison, about 38 percent of students at public 4-year institutions, 33 percent of students at private non-profit 4-year institutions and 56 percent of students attending public 2-year institutions received Federal Grants.

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

Equity Indicator 2d presents the family socioeconomic status (SES) representation in each selectivity category of the postsecondary institutional destinations of the high school graduating classes of 1972, 1982, 1992, 2004.[28] As institutional selectivity increases, the share of students who come from the bottom SES quartiles declines substantially and this pattern shows a consistency over the period. For example, using data from the Educational Longitudinal Study (ELS) representing the class of 2004, of the approximately 2 percent of students overall (See Figure 5 and Appendix Table A-4) who had institutional destinations of the "most competitive" institutions, 69 percent were from the top SES quartile, 19 percent were from the third SES quartile, 8 percent were from the second SES quartile, and 4 percent were from the bottom SES quartile.[29] Comparing the distribution of the representation by family income quartile for the "most competitive" institutions for the 1972 and 2004 classes, there was an increase for the third SES quartile relative to the top quartile (from 10 percent in 1972 to 19 percent in 2004) but the data show little change for the bottom SES quartile (5 percent in 1972 and 4 percent in 2004) or second (7 percent in 1972 and 8 percent in 2004). In both 1972 and 2004, among the students whose institutional destination was the "most competitive" colleges and universities—88 percent came from the top two family income quartiles and 12 percent came from the bottom half of the family income distribution.

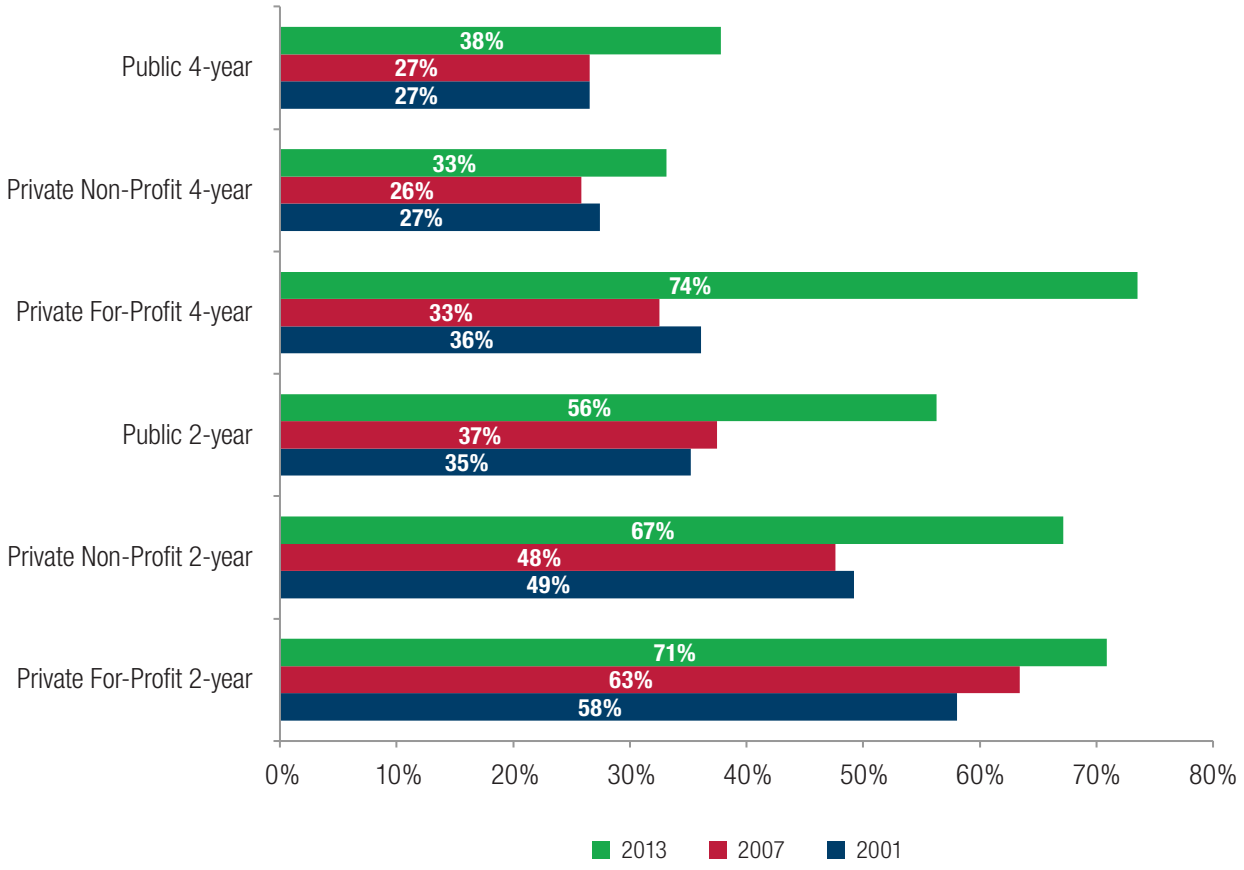
For the classes of 1972, 1982, 1992, and 2004, while the share of enrollment from the lowest-SES quartile at the most competitive institutions remained virtually unchanged (at 4 to 5 percent), the share of the bottom SES quartile increased at public 2-year and less-than-2-year institutions (from 21 percent in 1972 to 25 percent in 2004); at private 2-year and less-than-2-year institutions (from 23 percent to 31 percent); and among those with no postsecondary education (from 38 to 42 percent).

27 This analysis excludes enrollment at less-than-2-year institutions.

28 See Appendix A at the end of of this report (Tables A-3 and A-4) for the data upon which Indicator 2d is based. This data is adapted from the analysis of Bastedo, M. N., & Jaquette, O. (2011). Appendix Table 6 of 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.

29 Across the four high school longitudinal studies since the 1970s, less than 1 percent of students from the bottom SES quartile (.3 to .8 percent) had postsecondary institutional destinations among the "most competitive" colleges and universities. Across the four studies the overall percent of graduating high school students who enroll in the "most competitive" colleges was 1.9 percent in 1972, 2.0 percent in 1982, 3.6 percent in 1992, and 2.4 percent in 2004. See Methodological Appendix A of this report (*2016 Indicators Report*) for the distribution of enrollment by SES quartile as published by 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. Table 3. Retrieved from http://www-personal.umich.edu/~bastedo/papers/EEPA-Appendix.pdf.

Equity Indicator 2c: Percent of full-time, first-time degree/certificate seeking undergraduate students receiving Federal Grants (Pell or Other Federal Grant) by institutional type and control: 2001, 2007, 2013



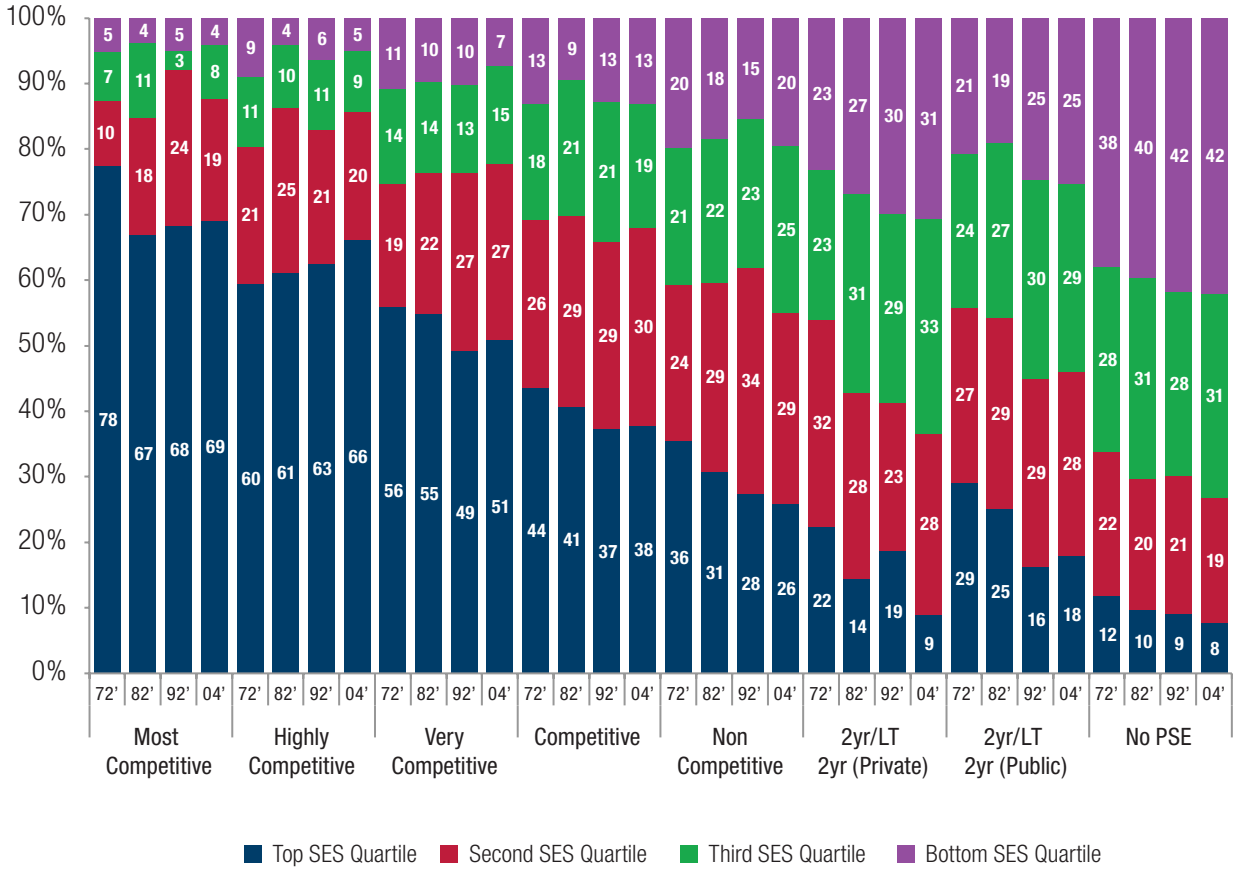
Indicator Status: High Inequality and Widening Gaps

The gap in the share of enrolled students at public 4-year institutions and private for-profit 4-year institutions receiving Federal Grants widened from 9 percentage points in 2001 (27 percent versus 36 percent) to 36 percentage points in 2013 (38 percent versus 74 percent).

NOTE: Federal Grant aid for undergraduates is comprised primarily of Pell Grants but also includes Supplemental Educational Opportunity Grants (SEOG) 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), *Digest of Education Statistics, 2015*. Table 331.20.

Equity Indicator 2d: Family socioeconomic status (SES) representation in each selectivity category of institutional destinations for high school class cohorts: 1972, 1982, 1992, 2004



Indicator Status: High Inequality and Persisting Gaps

Across the four high school longitudinal studies, among those enrolling in the "most competitive" institutions, 4 to 5 percent were from the bottom SES quartile and 67 to 78 percent were from the top SES quartile.

NOTE: Data based on high school longitudinal studies survey data of institutional destination of high school seniors. See Methodological Appendix A (Table A-3) at the end of this document for additional information about this figure. Figure reads, for example, among the students from the class of 2004 who reported enrolling in a "Most Competitive" institution, 4 percent were from the bottom SES quartile and 69 percent were from the top SES quartile.

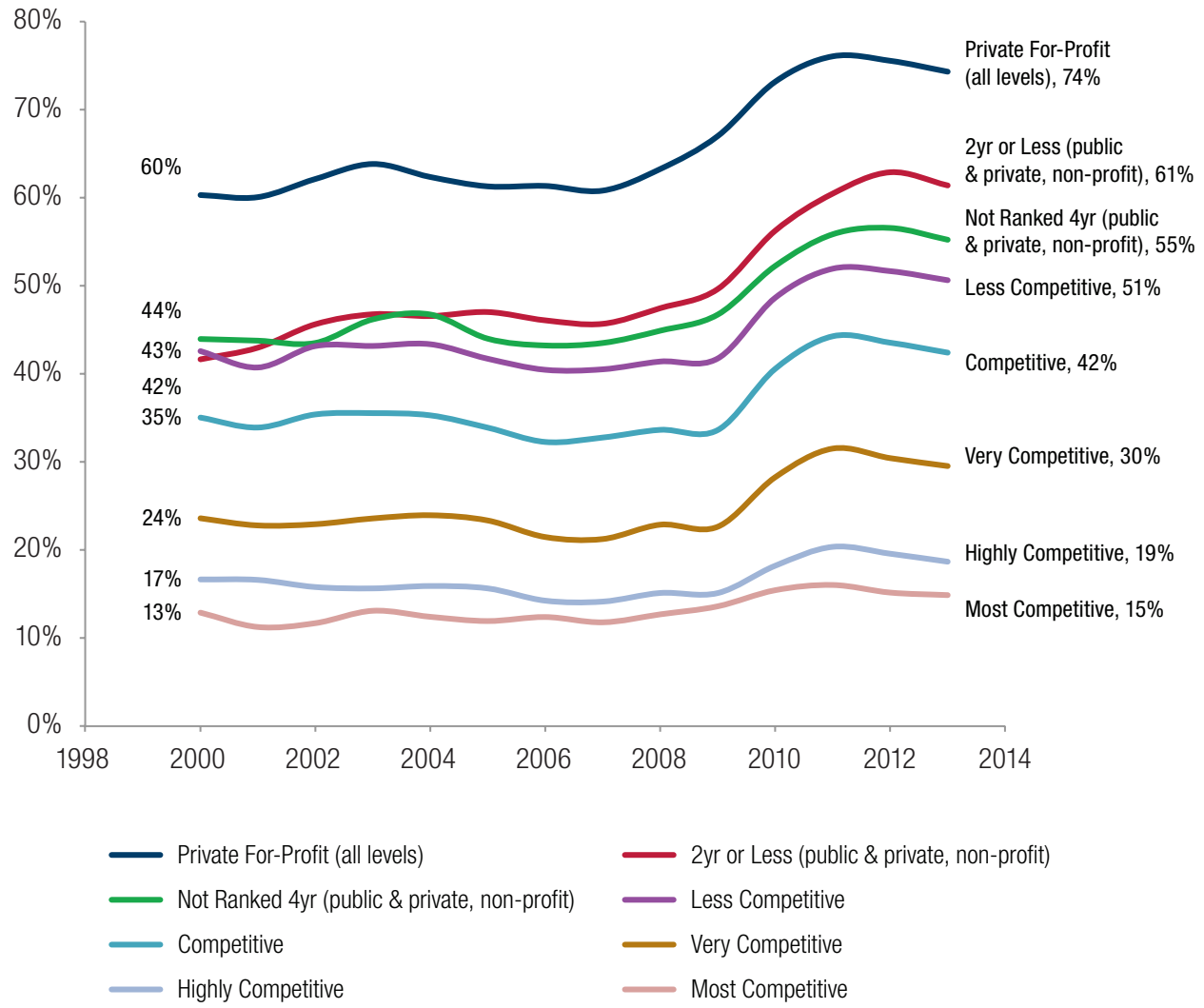
SOURCE: U.S. Department of Education, NCES, NLS; HS&B, NELS, and ELS; Adapted from Bastedo, M. N., & Jaquette, O. (2011). Appendix Table 6 of "Running in place: Low-income students and the dynamics of higher education stratification." *Educational Evaluation and Policy Analysis*, 33(3), 318-339. Retrieved from http://www-personal.umich.edu/~bastedo/papers/EEPA-Appendix.pdf.

Equity Indicator 2e: How Does the Representation of Students Receiving Federal Grants (Pell or Other Federal Grants) Vary by Institutional Selectivity?

Using IPEDS data, Indicator 2e presents the percent of full-time, first-time (FTFT) undergraduate students who received Federal Grants (Pell or other Federal Grants) from academic year 1999-2000 to 2012-2013 and shows that as institutional selectivity increases, the percent receiving Federal Grants decreases. In 2013, 15 percent of undergraduates attending the "most competitive" institutions were Federal Grant recipients. In comparison, over half of students at the following types of institutions received Federal Grants: 51 percent of undergraduates attending less competitive institutions, 55 percent at unranked 4-year institutions, 61 percent at 2-year or less-than-2-year institutions, and 74 percent at private for-profit institutions.

Although the percentage of students receiving Pell or other Federal Grants increased in all institutional categories between 2008 and 2011 (in the wake of the Great Recession), differences in representation of Federal Grant recipients by institutional selectivity have increased over time. Between 2000 and 2013, the share of undergraduates receiving Federal Grants increased by just 2 percentage points at the most competitive institutions (increasing from 13 percent to 15 percent) but by more than 10 percentage points at unranked 4-year institutions (from 44 percent to 55 percent), 2-year and less-than-2-year institutions (from 42 percent to 61 percent), and for-profit institutions (from 60 percent to 74 percent).

Equity Indicator 2e: Percent of full-time, first-time degree/certificate seeking undergraduate students receiving Pell or other Federal Grants by institutional selectivity: 2000 to 2013



Indicator Status: High Inequality and Widening Gaps

The representation of low-income students declines as institutional selectivity increases. The gap in the share of undergraduates receiving Federal Grants at the most competitive and less competitive institutions widened from 30 percentage points (13 percent versus 43 percent) in 2000 to 36 percentage points (15 percent versus 51 percent) in 2013.

NOTE: Federal Grant aid is comprised primarily of Pell Grants, but also includes Supplemental Educational Opportunity Grants (SEOG) 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), 2015, and Barron's Admissions Competitiveness Index, 2004.

EQUITY INDICATOR 3:

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

Since 1974-75 average costs for public 4-year postsecondary institutions have risen 2.4 times in constant dollars while average costs for public 2-year institutions have risen 1.5 times.

Equity Indicator 3 (a-d): Definitions

Indicator 3 tracks four statistics related to college cost and the amount of cost covered by student Federal Grant aid that does not have to be repaid. We use the standard definitions developed by researchers and the federal government to administer federal student financial aid programs.

- **College Cost** is reported annually by institutions to the Department of Education through IPEDS and includes tuition, fees, and room and board. The average costs reported in this report are weighted by enrollment and are for undergraduates attending full-time.
- **The Maximum Pell Grant** is the largest Pell Grant award that is allowed by federal law. The average Pell Grant award is substantially lower than the maximum.
- **Cost of Attendance (COA)** is used in determining financial aid and is the total amount it will 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, or costs for eligible study-abroad programs.
- **The Expected Family Contribution (EFC)** is tabulated by the federal government from information submitted on the *Free Application for Federal Student Aid* (FAFSA). As noted in the *Pell Grant End of Year Report*, financial need is determined using formulas mandated by Congress in the Higher Education Act of 1965, as amended. These formulas take into account indicators of financial strength such as income, assets, and family size. The EFC is combined with the cost of the student's education and the student's enrollment status (full-time, three-quarter-time, half-time, or less than half-time) to determine the amount of the Federal Pell Grant. Tuition may also be a factor in calculating the amount of the Pell Grant award for students enrolled at low-tuition schools (although

cost of tuition only affects the student's Pell Grant award amount if tuition is less than the current maximum). The lower the EFC, the greater a student's demonstrated financial need. The amount of the Federal Pell Grant increases as the EFC decreases, such that an applicant with the minimum EFC of zero may generally receive the maximum award equal to the applicant's education cost for the year (up to the maximum award). Proportionally smaller awards are made to part-time students.

- **Unmet Need** is the financial need remaining after the Expected Family Contribution (EFC)[30] and all grants and other discounts (but not loans) are subtracted from the Cost of Attendance.

Equity Indicator 3a: What Are the Trends in Average College Cost By Sector?

Average college costs, weighted by enrollment, in constant Consumer Price Index (CPI) dollars were 2.3 times higher in 2012-13 than in 1974-75, increasing from $8,858 in 1974-75 to $20,234 in 2012-13.[31] Rising college costs relative to family income levels limit college choices, especially for those in the bottom half of the income distribution given the increasing distance between the upper and lower family income quartiles.[32] These high costs contribute to the observed differences by family income in whether individuals enter college (Indicator 1) and where individuals attend college (Indicator 2).[33]

In constant dollars, private 4-year postsecondary costs were about two times higher than public 4-year costs in both 1974-75, and 2012-13 ($15,206 vs. $7,355 and $35,074 vs. $17,474, respectively) and private 2-year costs were 1.9 times higher than public 2-year costs in 1974-75 and 2.6 times higher in 2012-13 ($11,574 vs. $5,981 and $23,328 vs. $8,928, respectively).[34]

Since 1974-75, there has been a notable increase in the difference in costs between 2-year and 4-year public colleges. In constant 2012 dollars in 1974-75, public 4-year costs were 22 percent higher than public 2-year costs ($7,355 for public 4-year and $5,981 for public 2-year). By 2012-13, average costs were 96 percent higher for 4-year public institutions than for public 2-year colleges ($17,474 for public 4-year and $8,928 for a public 2-year). Since 1974-75, costs for public 4-year postsecondary institutions have risen 2.4 times in constant dollars while costs for public 2-year institutions have risen 1.5 times. Over the same period, private 4-year costs have risen 2.3 times and private 2-year costs have risen 2 times.

30 Expected Family Contribution (EFC) is tabulated by the Office of Student Financial Aid based on the FASFA, taking into account family income and other factors such as number of dependents.

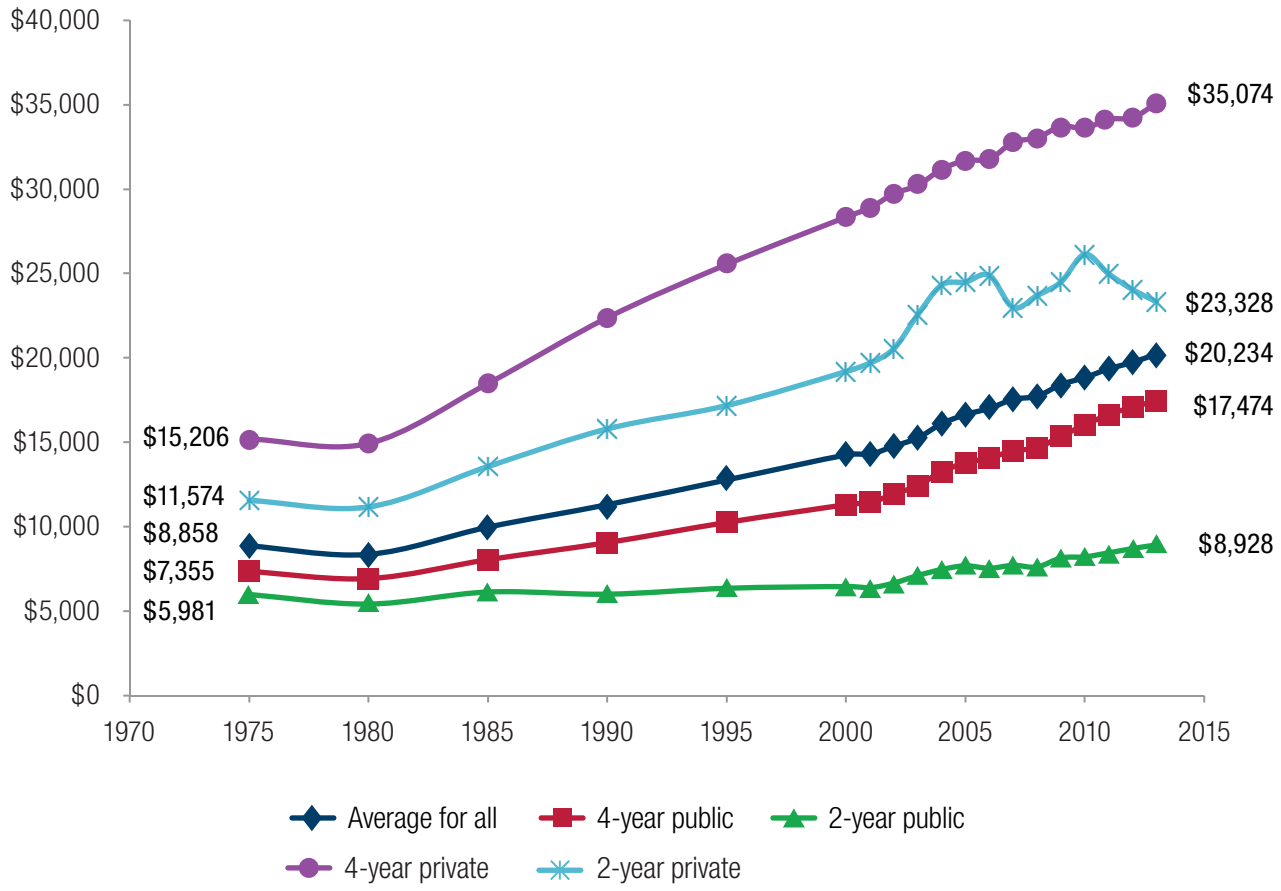
31 U.S. Department of Education, National Center for Education Statistics. (2014). *Digest of Education Statistics, 2013*, Table 330.10 (NCES 2014-015), https://nces.ed.gov/programs/digest/d13/tables/dt13_330.10.asp.

32 See Appendix A.

33 In contrast to college costs, the median income for families in the United States increased by only 18 percent between 1975 ($54,908) and 2014 ($66,632), and most of the increase occurred prior to 1999. In constant 2014 dollars, median family income remained relatively flat from 1999 to 2007 when it was $70,057 and then declined during the Great Recession to $64,179 in 2012, and as of 2014 had not yet reached the 2007 level. See http://www.census.gov/hhes/www/income/data/historical/families/.

34 U.S. Department of Education, National Center for Education Statistics. (2014). *Digest of Education Statistics, 2013*, Table 330.10 (NCES 2014-15), https://nces.ed.gov/programs/digest/d13/tables/dt13_330.10.asp. In this discussion we follow NCES categorization. The category "Private" includes private non-profit and private for-profit. Most of the 4-year private college enrollment is accounted for in the non-profit sector, and most of the 2-year private college enrollments are accounted for in the for-profit sector. Data are for the entire academic year and represent average total charges for full-time attendance. Tuition and fees are weighted by the number of full-time-equivalent undergraduates, but are not adjusted to reflect student residency status.

Equity Indicator 3a: Average undergraduate tuition and fees, and room and board rates charged for full-time students in degree-granting postsecondary institutions by level and control: 1974-75 to 2012-13 (in constant 2012 dollars)



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

Since 1974-75, costs for public 4-year postsecondary institutions have risen 2.4 times in constant dollars while costs for public 2-year institutions have risen 1.5 times.

NOTE: Averages are weighted by enrollment. "Private" includes private non-profit and private for-profit institutions. Most of the 4-year private college enrollment is accounted for by the non-profit sector and most of the 2-year private college enrollment is accounted for by the for-profit sector. Data are for the entire academic year and represent average total charges for full-time attendance. Tuition and fees are weighted by the number of full-time-equivalent undergraduates, but are not adjusted to reflect student residency status. Room and board are based on full-time students. 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. The degree-granting classification is very similar to the earlier higher education classification, but it includes more 2-year colleges and excludes higher education institutions that did not grant degrees.

SOURCE: U.S. Department of Education, National Center for Education Statistics (2014). *Digest of Education Statistics, 2013*, Table 330.10 (NCES 2014-015), https://nces.ed.gov/programs/digest/d13/tables/dt13_330.10.asp.

Equity Indicator 3b(i): What is the Maximum Pell Grant Award Relative to Average College Costs?

Indicator Figure 3b(i) shows trends in average college costs and the maximum Pell Grant in constant dollars from 1974-75 to 2012-13, and Indicator Figure 3b (ii) shows trends in the percent of average costs covered by the maximum Pell Grant.[35] The percent of average college costs covered by the maximum Pell Grant has declined over time, falling from a high of 67 percent in 1975-76 just after the program began, to a low of 27 percent by 2013. Indicator 3b (iii) shows (in constant dollars) the amount of the actual maximum Pell Grant compared with what the maximum would be if it were to cover two-thirds of the average Cost of Attendance. Early hopes expressed by Congressional committee supporters were that the Pell Grant would be funded at a level to cover close to three-fourths of the average yearly costs at public colleges.[36] This goal was never reached, but it came much closer to being attained in the early years of the Pell Grant Program than in recent years.

The maximum Pell Grant for 2015-16 is $5,775.[37] Institutional averages of the Cost of Attendance (COA) as published by the College Board for 2015-16 are:

- $16,833 at public 2-year institutions for commuter students within district;
- $24,061 at public 4-year institutions for in-state students living on campus;
- $38,544 at public institutions for out-of-state students living on campus; and
- $47,831 at private non-profit 4-year institutions for students living on campus.[38]

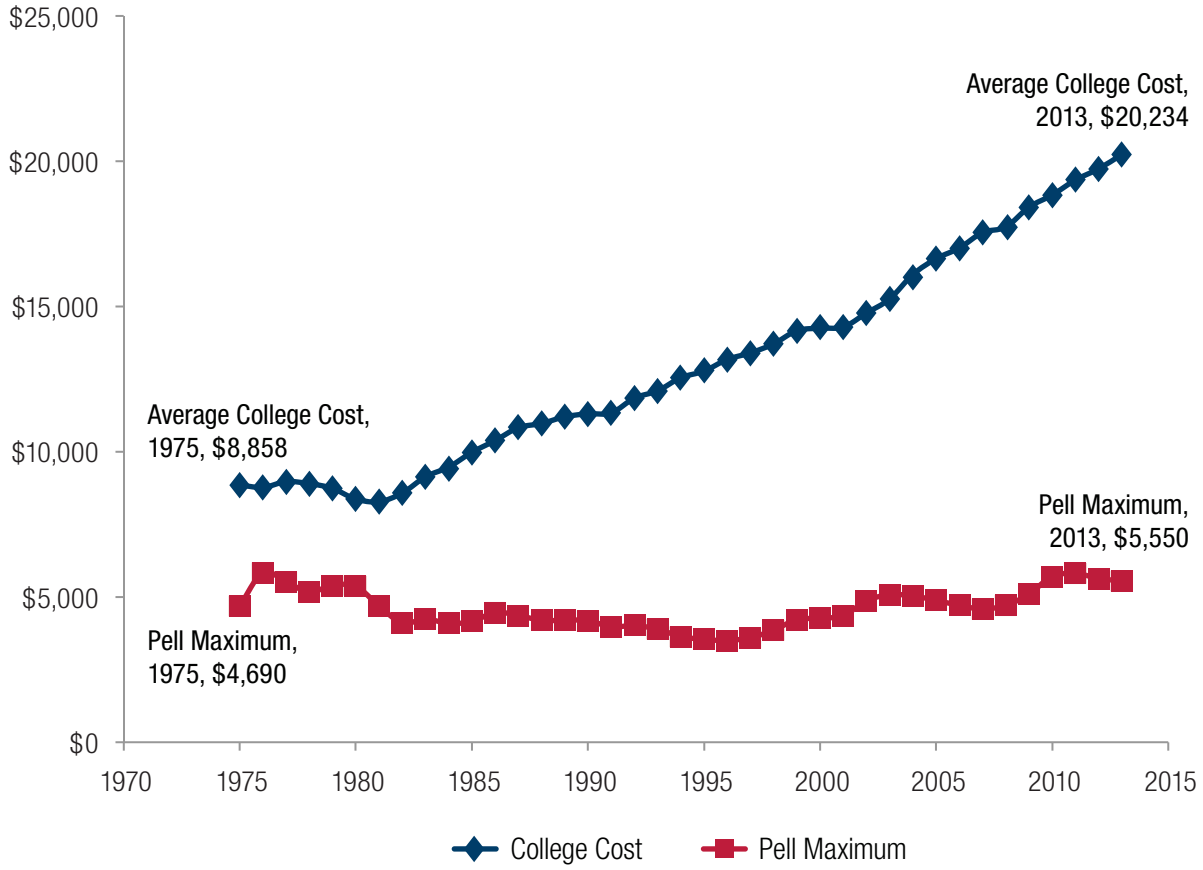
35 The figures are for the maximum Pell Grant. Average Pell Grants are lower than the maximum. In 1974-1975, the average award (in constant 2012 dollars) was $2,823 among the 567,000 Pell recipients, but the maximum (in 2012 dollars) was $4,690. In 2012-13 the average Pell Grant was $3,579 among the 8.9 million awards when the maximum was $5,550.

36 Mensel, F. (2013). "Birth of the Pell Grant: the Community College Role," *Reflection on Pell*, Council for Opportunity in Education, Pell Institute for the Study of Opportunity in Education. http://www.pellinstitute.org/downloads/publications-Reflections_on_Pell_June_2013.pdf.

37 The maximum Federal Pell Grant for 2016–17 (July 1, 2016, through June 30, 2017) will be $5,815. https://studentaid.ed.gov/sa/about/announcements/pell-2016-17. The Student Aid and Fiscal Responsibility Act (SAFRA), incorporated as part of Public Law 111-152, provides for an automatic annual increase, based on changes in the Consumer Price Index—through award year 2017-2018—to the appropriated Federal Pell Grant maximum award, resulting in a 2015-2016 maximum award of $5,775. The maximum Pell Grant award for the 2015-2016 Award Year is an increase of $45 from the $5,730 maximum Pell Grant award for the 2014-2015 Award Year. The corresponding maximum Pell Grant-eligible expected family contribution (EFC) for 2015-2016 will be $5,198.

38 College Board. (2015). *Trends in College Pricing, 2015* http://trends.collegeboard.org/sites/default/files/trends-college-pricing-web-final-508-2; http://trends.collegeboard.org/college-pricing/figures-tables/published-prices-national#Student%20Budgets,%202015-16. Expense categories are based on institutional budgets for students as reported by colleges and universities in the College Board's Annual Survey of Colleges. Other expense categories are the average amounts allotted in determining the total Cost of Attendance and do not necessarily reflect actual student expenditures (College Board (2015, October), *Annual Survey of Colleges*).

Equity Indicator 3b (i): Average undergraduate full-time college cost and maximum Pell Grant award (in 2012 constant dollars): 1974-75 to 2012-13



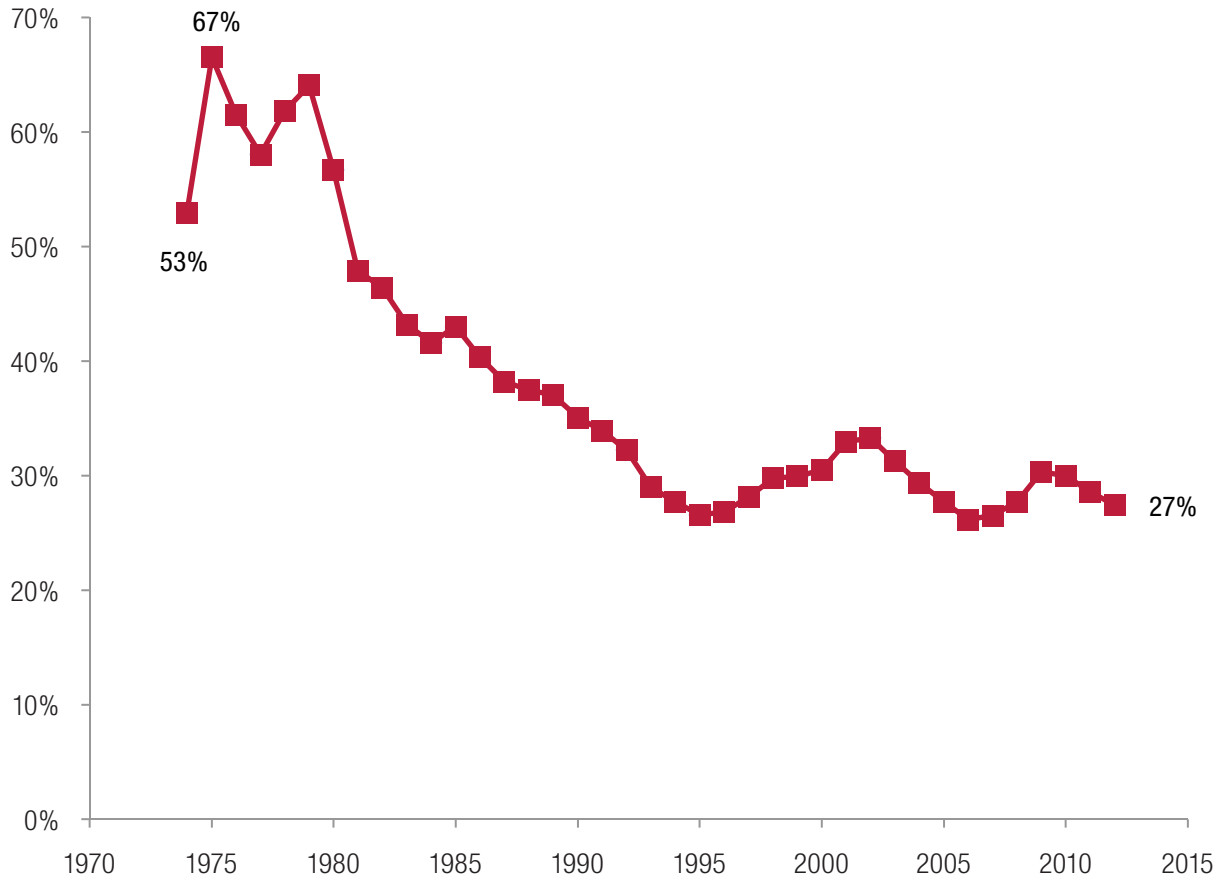
Indicator Status: High Inequality and Widening Gap

In constant 2012 dollars, average costs increased by 128 percent between 1975 and 2013, while over the same period, the maximum Pell Grant increased by 18 percent.

NOTE: College costs are weighted by undergraduate total full time enrollment at different types of institutions, as reported by NCES, https://nces.ed.gov/programs/digest/d13/tables/dt13_330.10.asp. See Indicator 3a for the average for the total. Costs include tuition and fees, room and board. The maximum Pell Grant is the highest amount allowed by law. The average Pell award is substantially lower than the maximum.

SOURCE: U.S. Department of Education. (2013). Summary Pell Grant Statistics for Cross-Year Comparison, *Pell End of Year Report*, Table 1. Washington, DC: National Center for Education Statistics (2015). *Digest of Education Statistics, 2013* (NCES 2015-001), Table 330.10.

Equity Indicator 3b (ii): Percent of average college cost covered by maximum Pell Grant: 1974-75 to 2012-13



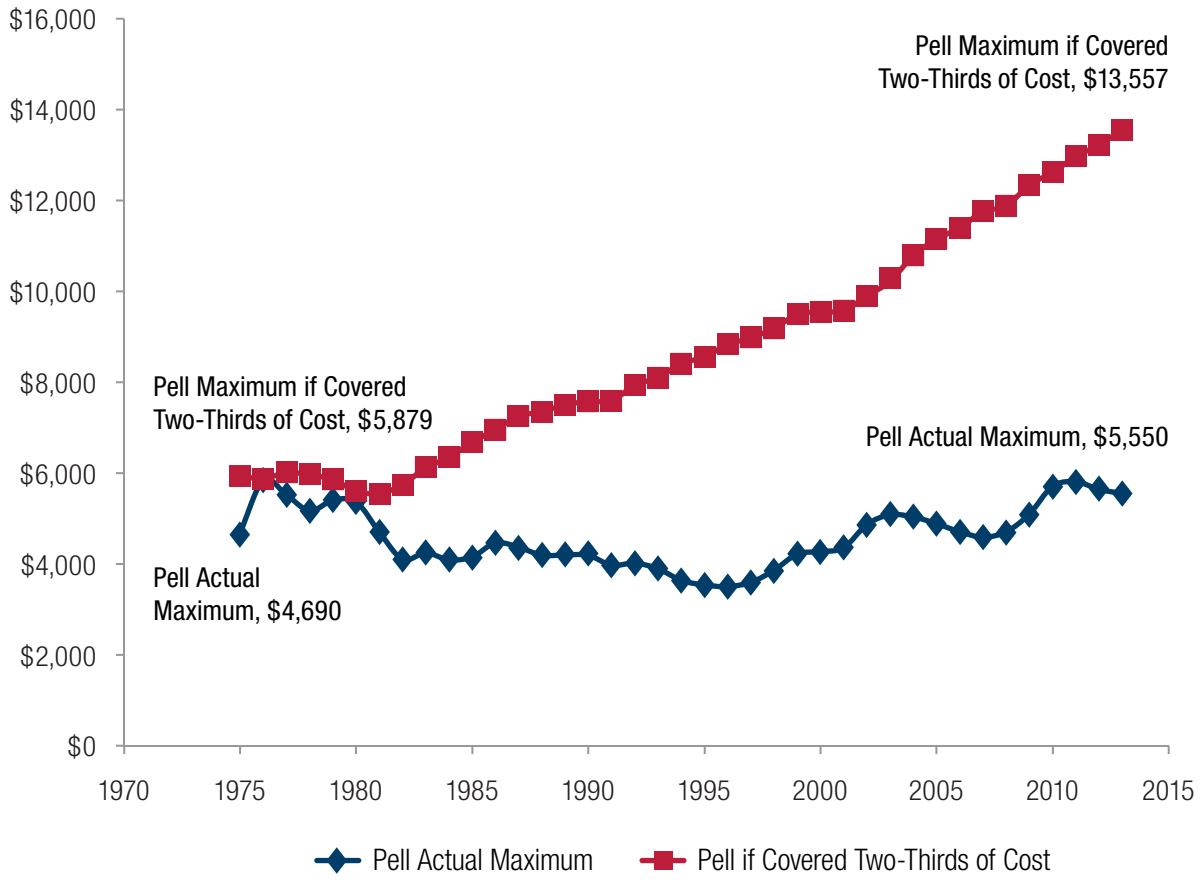
Indicator Status: Increasing Reduction of Opportunity

Percent of average college costs covered by the maximum Pell Grant declined from a high of 67 percent in 1975-76 to 27 percent in 2012-13—a 40 percentage-point decline.

NOTE: Figure 3b(ii) shows the maximum Pell Grant as a percent of average college cost weighted by enrollment, among all types of institutions as reported by NCES. https://nces.ed.gov/programs/digest/d13/tables/dt13_330.10.asp.

SOURCE: U.S. Department of Education. (2013). Summary Pell Grant Statistics for Cross-Year Comparison, *Pell End of Year Report, 2013*, Table 1; National Center for Education Statistics (2015). *Digest of Education Statistics, 2013* (NCES 2015-001), Table 330.10.

Equity Indicator 3b (iii): Maximum Pell Grant if the Pell maximum covered two-thirds of Average Cost of Attendance (COA): 1974-75 to 2012-13 (in constant 2012 dollars)



Indicator Status: Widening Inequality

In constant 2012 dollars, the maximum Pell Grant in 2012-13 would be $13,557 rather than $5,550 if it covered the same percent of college cost as in 1976.

NOTE: Figure 3b(iii) shows the maximum Pell Grant as a percent of average college cost among all institutions weighted by enrollment as published by NCES. https://nces.ed.gov/programs/digest/d13/tables/dt13_330.10.asp.

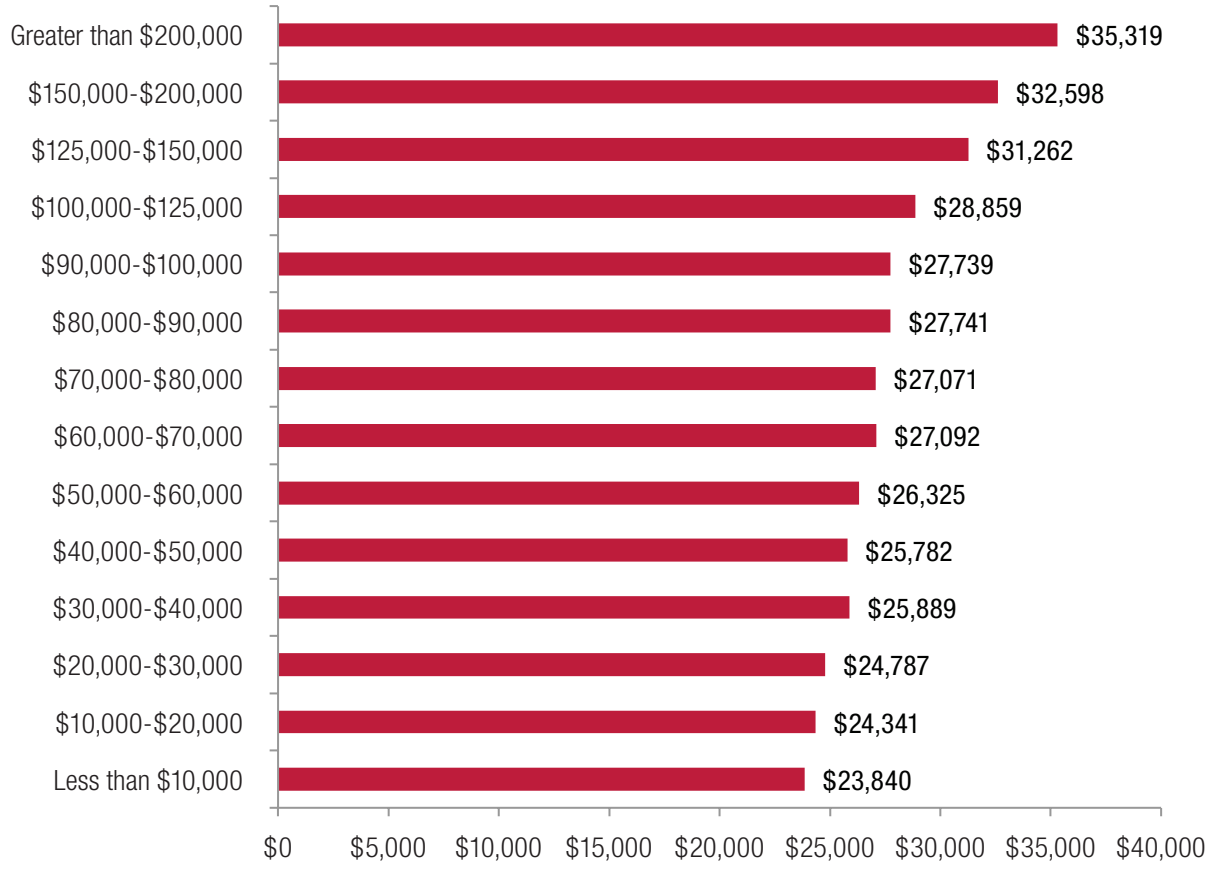
SOURCE: Tabulated from U.S. Department of Education, "Summary Pell Grant Statistics for Cross-Year Comparison," *Pell End of Year Report, 2013-14*, Table 1; National Center for Education Statistics (2015). *Digest of Education Statistics, 2013* (NCES 2015-001), Table 330.10.

Equity Indicator 3c (i) and (ii): What is the Average Cost of Attendance (COA) by Family Income and What Percent of Income is Needed to Cover Cost?

Using data from the most recently available NPSAS (2011-12), Indicator 3c(i) displays the Average Cost of Attendance (COA) for dependent students by family income category.[39] Average Cost of Attendance (COA) increases with family income, ranging from $23,840 for students with family incomes of less than $10,000 per year to $35,319 for students from families with incomes greater than $200,000. Indicator 3c(i) shows that students from lower family incomes, on average, choose institutions with lower prices (as measured by total Cost of Attendance). Indicator 3c(ii) shows the extreme differences in the ratio of family income (as measured by the mid-point of each family income category) to average college costs. The COA was 238 percent of family income for dependent students with family incomes of less than $10,000, and 74 percent of those with family incomes of $30,000 to $40,000, but 18 percent of family income for students with family incomes of $200,000. For families in the median income category for U.S. families ($60,000 to $70,000), the average Cost of Attendance for one year was 42 percent of yearly income.

39 NPSAS categorizes students based on dependency status as defined for federal financial aid purposes.

Equity Indicator 3c (i): Average Cost of Attendance (COA) for dependent students by family income: 2012



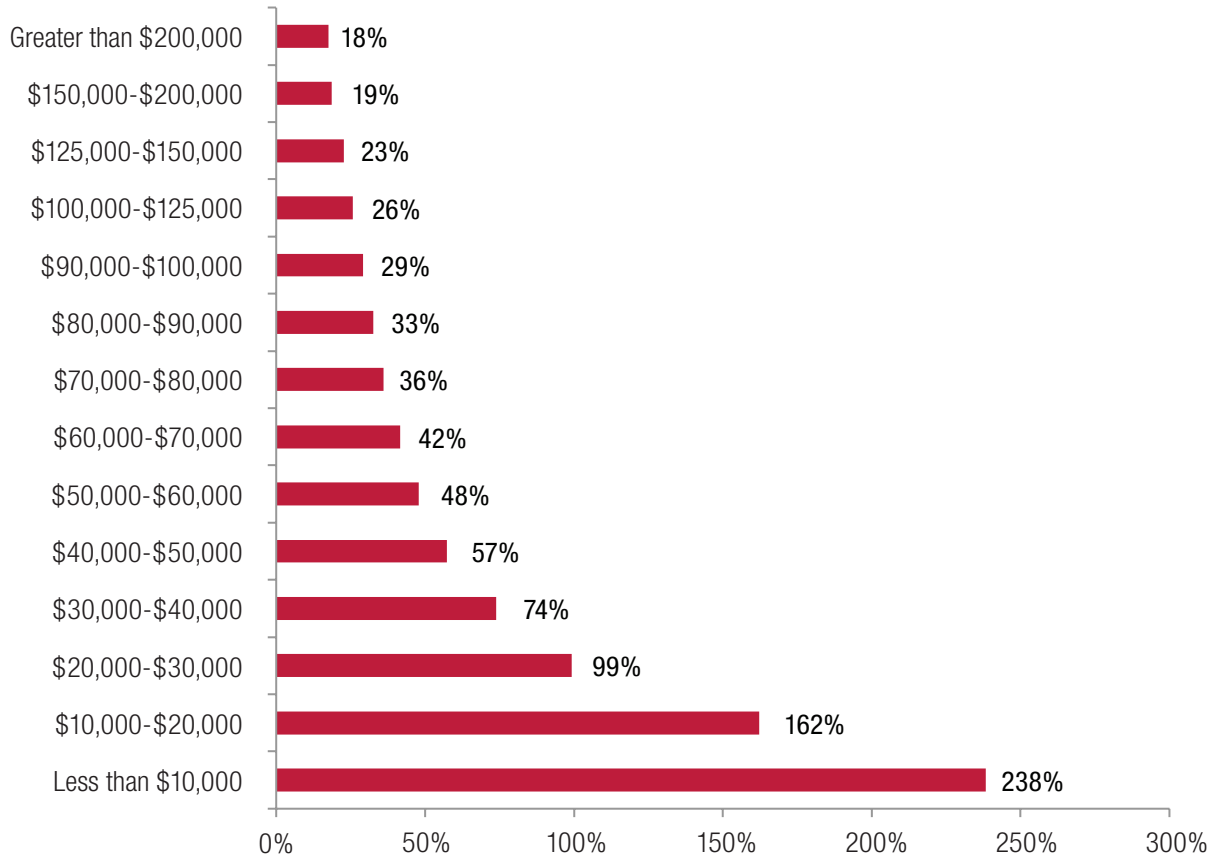
Indicator Status: Average COA Increases with Family Income

Students from lower-income families, on average, attend institutions with lower costs of attendance.

NOTE: The Cost of Attendance (COA) includes the estimated average cost based on tuition, fees, room and board, and transportation for a full-time, full-year, dependent student attending a single institution. COA represents college costs before any financial aid (grants or loans) is taken into account.

SOURCE: U.S. Department of Education, National Postsecondary Student Aid Study (NPSAS), 2012; Unpublished tabulations from Mortenson, T. (forthcoming PEO Newsletters, 2016).

Equity Indicator 3c (ii): Family income as percent of average Cost of Attendance (COA) at institutions attended by dependent students: NPSAS:2012



Indicator Status: Unequal Family Burden Relative to Income

In 2012 the Cost of Attendance (COA) was 238 percent of family income for dependent students with family incomes less than $10,000, but 18 percent of family income for students with family incomes of $200,000.

NOTE: The Cost of Attendance (COA) includes the estimated average cost based on tuition, fees, room and board, and transportation for a full-time, full-year, dependent student attending a single institution. To calculate the percentage of income, family income is measured as the midpoint of each family income category and as $200,000 for the category of "greater than $200,000."

SOURCE: U.S. Department of Education, National Postsecondary Student Aid Study (NPSAS), 2012; Unpublished tabulations from Mortenson, T. (forthcoming PEO Newsletters, 2016).

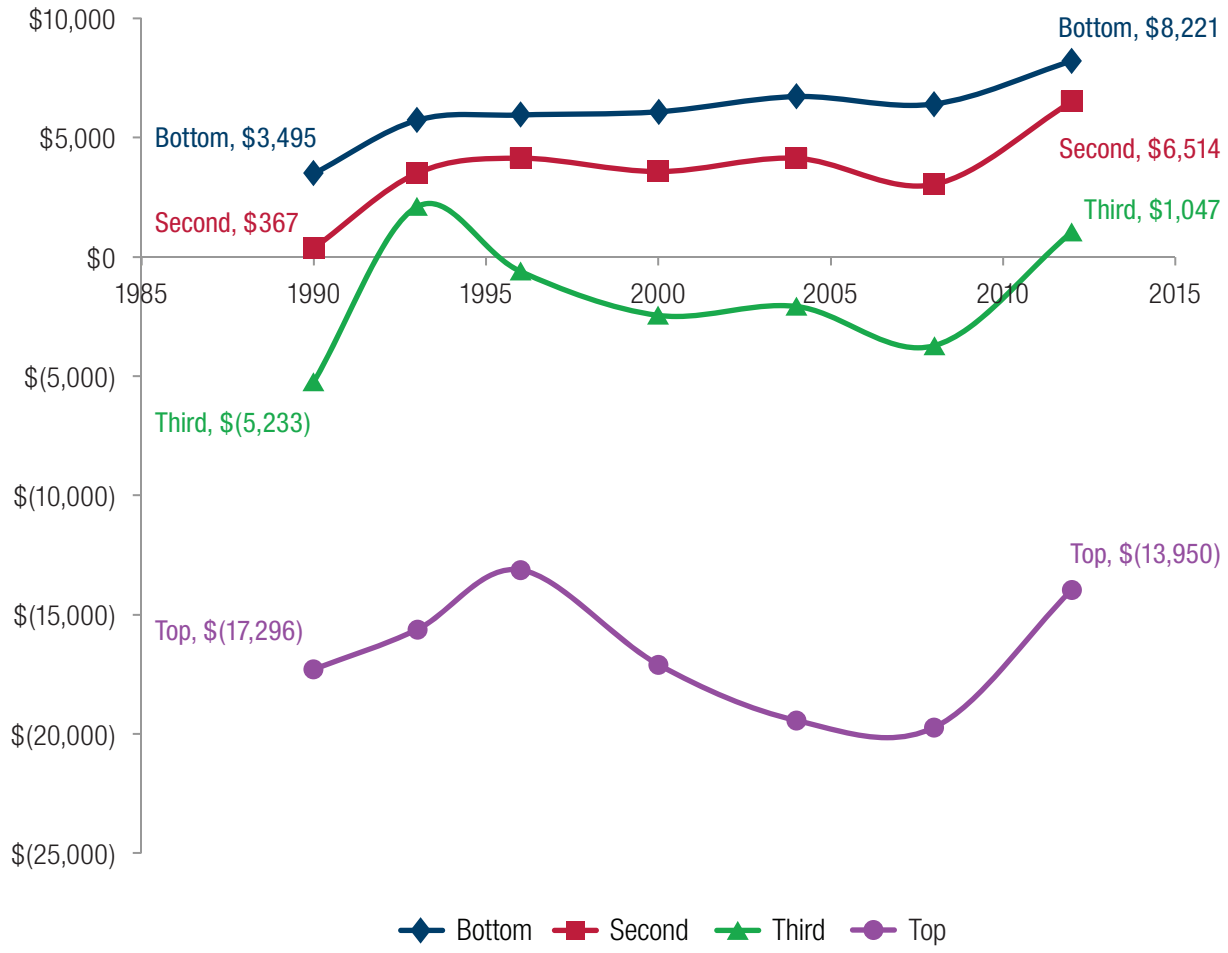
Indicator 3d: What is Unmet Financial Need by Family Income?

Indicator 3d displays trends in "unmet need" by family income quartile. Unmet need is defined as financial need after Expected Family Contribution (EFC) and all grants and other discounts that do not have to be paid back are exhausted. Unmet need used here does not include loans.

Although lower-income students tend to attend community colleges and other institutions with lower average Cost of Attendance, full-time dependent undergraduates in the lowest family income quartile averaged unmet need of $8,221 in 2012, and students in the second lowest family income quartile averaged $6,514 in unmet need. By comparison, students in the highest-income quartile averaged a surplus of $13,950 after expected family contribution and grants were deducted from average Cost of Attendance. Students in the third quartile averaged $1,047 in unmet need in 2012.[40] In constant 2012 dollars, average unmet financial need was more than twice as high in 2012 than in 1990 for full-time dependent undergraduates in the lowest family income quartile ($3,495 in 1990 vs. $8,221 in 2012).

40 A related trend is the increase in the percent of students for whom the Expected family contribution (EFC) is zero. In NPSAS:2012, 23 percent of dependent students had an expected family contribution of zero, up from 10 percent in 2000. Over the same period the percent of families with an expected family contribution greater than cost was 17 percent in 2012, down from 28 percent in 2000 (NCES, NPSAS:2000 and NPSAS:2012).

Equity Indicator 3d: Unmet financial need by family income quartile: 1990 to 2012



Indicator Status: High Inequality

Average unmet financial need more than doubled between 1990 and 2012 (in constant 2012 dollars) for dependent full-time undergraduates in the lowest family income quartile.

NOTE: Unmet Need is defined as financial need after Expected Family Contribution (EFC) and all discounts and grants that do not have to be repaid are exhausted. It does not include loans.

SOURCE: U.S. Department of Education, National Postsecondary Student Aid Study (NPSAS), 1990, 1993, 1996, 2000, 2004, 2008, 2012.

EQUITY INDICATOR 4:

HOW DO STUDENTS IN THE UNITED STATES PAY FOR COLLEGE?

College costs are not only rising but also borne increasingly by students and their families, as the percent of costs paid by state and local funds has declined. For those in the bottom income quartile, average costs after all grant aid represented 84 percent of the average family income. Given these trends it is not surprising that both the percent of students who borrow to pay college costs and the amount they borrow have risen considerably since the 1990s. Low-income bachelor's degree recipients (as measured by Federal Pell Grant receipt) average higher amounts borrowed than other bachelor's degree recipients.

Equity Indicator 4 (a-e): Definitions

Indicator 4 reports how we pay the costs of college. The major sources of data are the Bureau of Economic Analysis' (BEA) National Income and Product Accounts (NIPA) and NPSAS, 1990-2012.

- **Sources for Financing Public and Private Higher Education** are from the BEA's National Income and Product Accounts (NIPA). Available since 1952, these data identify the percent of total funding coming from State and Local Government Expenditures, Federal Government Expenditures, and Personal Consumption Expenditures. The Personal Consumption Expenditures represent costs that are borne by students and their families.
- **Net Price** is the 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 website 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 such 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 or scholarship aid but not loan aid is subtracted from the published Cost of Attendance.
- **Net Price of Attendance as a Percent of Average Family Income** uses data on Net Price and family income from the various NPSAS 1990-2012 surveys for dependent undergraduate students. The average family income for a quartile reflects the actual distribution of the NPSAS sample in the

study year. For example, in 2012, the NPSAS average family incomes for the quartiles were as follows: Bottom, $16,311; Second, $49,837; Third, $89,119; Top, $172,729.

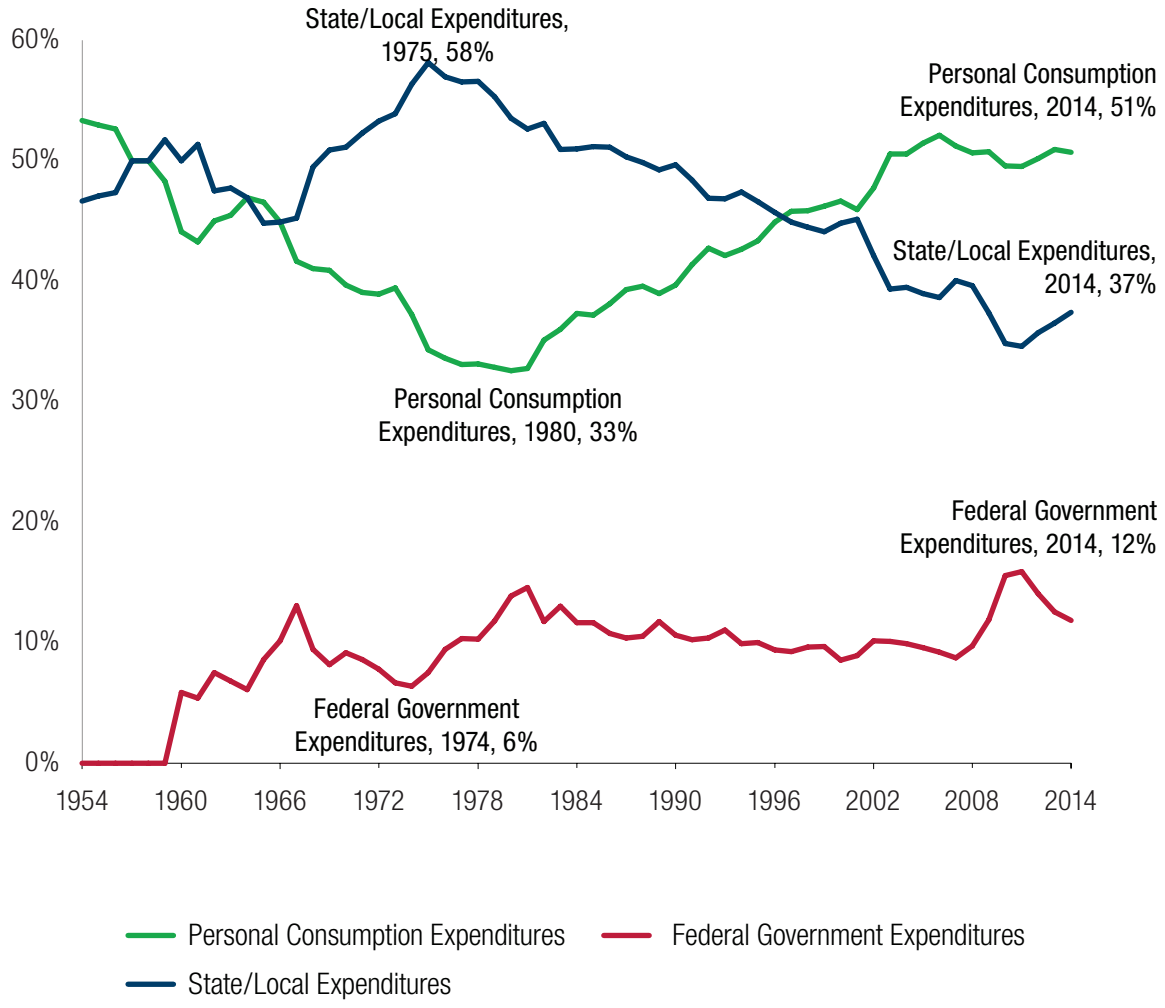
- **Dependent Student** status has a particular definition for financial aid eligibility and is defined as a student who is an undergraduate, unmarried, not a veteran, and younger than 24 years of age. For dependent students, the parents' income and assets are used to determine the Expected Family Contribution (EFC) even if the parents have no intention of helping to pay the student's 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.
- **Unmet Financial Need** is the difference between the costs of college attendance, the expected family contribution, and financial aid resources that do not have to be repaid (i.e., grants).
- **Debt Burden** is the average cumulative debt for those graduating with a bachelor's degree in a given year. The data are from the NPSAS surveys administered between 1990 and 2012.

Equity Indicator 4a: What Share of Higher Education Costs are Paid by Students and their Families?

Equity Indicator 4a describes the "funding responsibilities" for the costs of attending U.S. public and private higher education institutions, as reported in the National Income and Product Accounts (NIPA) from 1952 to 2014. Since 1980, the percent of higher education costs covered by state and local governments has declined, resulting in a shifting of the responsibility for paying for college costs to students and parents. State and local sources accounted for a high of 58 percent of higher education expenditures in 1975, but just 37 percent in 2014. The percent of the total costs borne by parents and students reached a low of 33 percent in 1980 and rose to 51 percent in 2014. The share of higher education costs provided by the federal government was about the same in 2014 as in 1980 (12 percent) and has fluctuated in relationship to economic conditions.[41] The shift in payment sources from state and local governments to students and parents is reflected in the rise of tuition and other college costs over the same period and occurred in a period when average wages were static or declined in constant dollars.

41 The impact of the Great Recession in increasing the federal share through ARRA and further dampening State and local shares of the total can be observed. Between 2008 and 2011, the share paid by federal costs rose from 9.7 percent in 2008 to 15.9 in 2011 and declined to 11.8 percent by 2014. The income and product accounts also document the increase in higher education as a percentage of the Gross Domestic Product—rising from 0.38 percent in 1952 to 1.01 percent in 1968, to 1.50 percent in 1991, to 2.01 percent in 2009 and 2.04 percent in 2014. U.S. Department of Commerce. Bureau of Economic Analysis. (2015). National Income and Product Accounts (NIPA). *Higher Education's Share of Gross Domestic Product and Distribution of Higher Education Funding Responsibilities: 1952 to 2014*. Retrieved from http://bea.gov/iTable/iTable.cfm?ReqID=9&step=1#reqid=9&step=1&isuri=1.

Equity Indicator 4a: Distribution of higher education funding responsibilities: 1954 to 2014



Indicator Status: Shift in Higher Education Costs Paid from State/Local to Parents/Students

Share of higher education costs paid by students and families increased from 33 percent in 1980 to 51 percent in 2014.

SOURCE: U.S. Department of Commerce. Bureau of Economic Analysis. (2015). National Income and Product Accounts (NIPA). *Higher Education's Share of Gross Domestic Product and Distribution of Higher Education Funding Responsibilities: 1952 to 2014.* http://bea.gov/iTable/iTable.cfm?ReqID=9&step=1#reqid=9&step=1&isuri=1.

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

Using NPSAS data from 1990 to 2012, Indicator 4b (i) tracks the Net Price of Attendance. The Net Price of Attendance is the Cost of Attendance (COA) minus all grant aid.[42] Net Price does not include loan aid. Indicator 4b (i) shows that, when all grant aid and discounts are included, average Net Price has increased for all quartiles, but has increased at a greater rate for those in the top two income quartiles.

Equity Indicator 4b (i) also shows that the difference in Net Price of attendance between dependent full-time students in the highest and lowest family income quartiles increased between 1990 and 2012. In 1990 average Net Price ranged from $10,881 for those in the lowest-income quartile to $18,123 for those in the highest-income quartile. In 2012 average Net Price ranged from $13,699 for those in the lowest family income quartile, to $26,580 for those in the highest family income quartile.

If Net Price reflects differences in education quality and greater market rewards for higher-priced education, then the increasing difference in average Net Price for students in the upper- and lower-family income quartiles reflects growing inequity.

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

Indicator 4b (ii) tracks average Net Price as a percent of average family income by NPSAS income quartiles for dependent students.[43] The figure displays the average for the income quartile among all students in the income quartile regardless of the type of college or university attended.

In 2012, average Net Price as a percent of average family income was 84 percent for students in the lowest family income quartile, compared with 35 percent for students in the second lowest family income quartile, 25 percent for students in the third income quartile, and 15 percent for students in the highest income quartile.

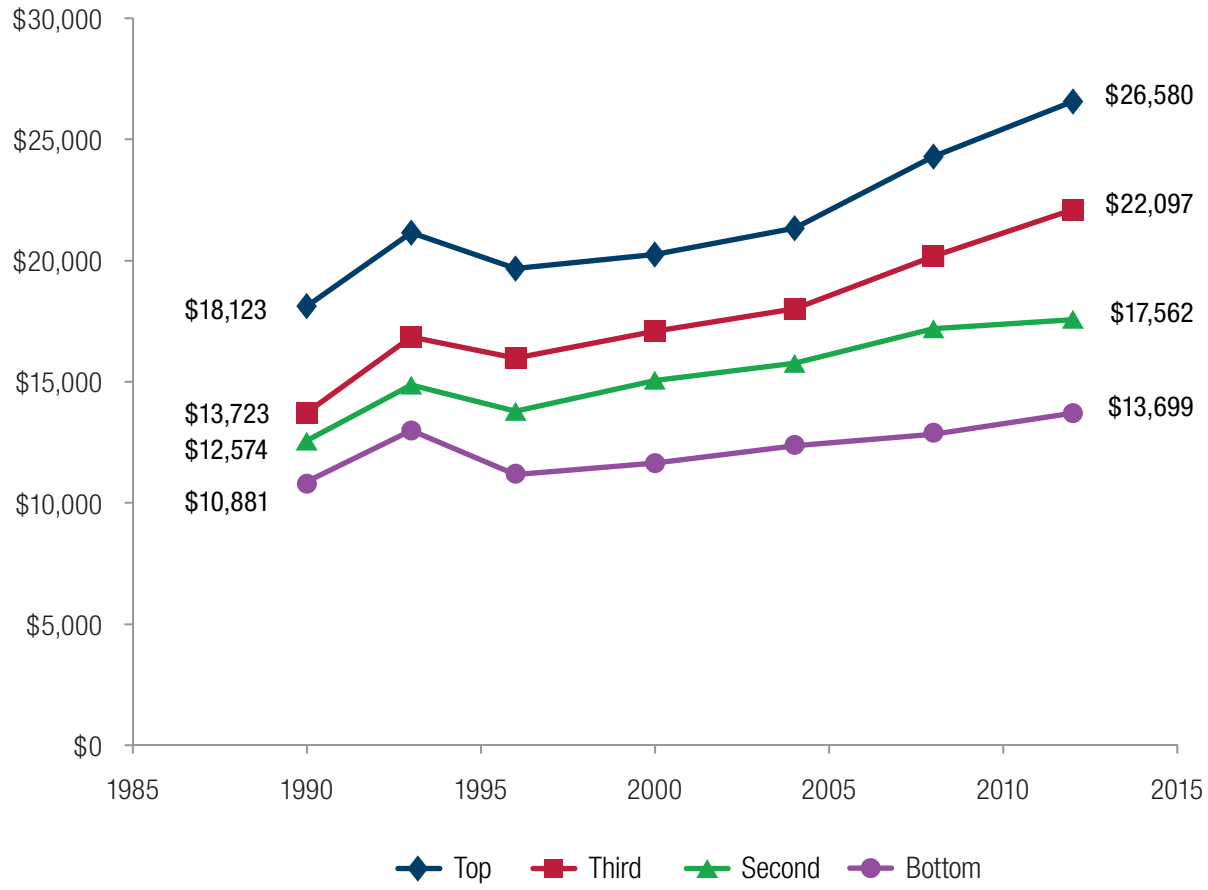
Between 1990 and 2008, average Net Price as a percentage of family income slowly increased for students in all four family income quartiles. For students in the bottom family income quartile, the percentage increased from 45 percent in 1990 to 56 percent in 2008. Between 2008 and 2012, in the wake of the Great Recession, average Net Price as a percentage of family income increased for all income quartiles, but more dramatically for students in the bottom 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.[44]

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

43 The Net Price is distinguished from what is known as the "Out–of-Pocket Price," which includes both grants and loans. See Horn, L. & Paslov, J. (2014). *Out-of-Pocket Net Price for College*. Washington, D.C.: U.S. Department of Education, National Center for Education Statistics, NCES 2014-902.

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

Equity Indicator 4b (i): Average Net Price of Attendance by family income quartile for dependent full-time students: 1990 to 2012 (in constant 2012 dollars)



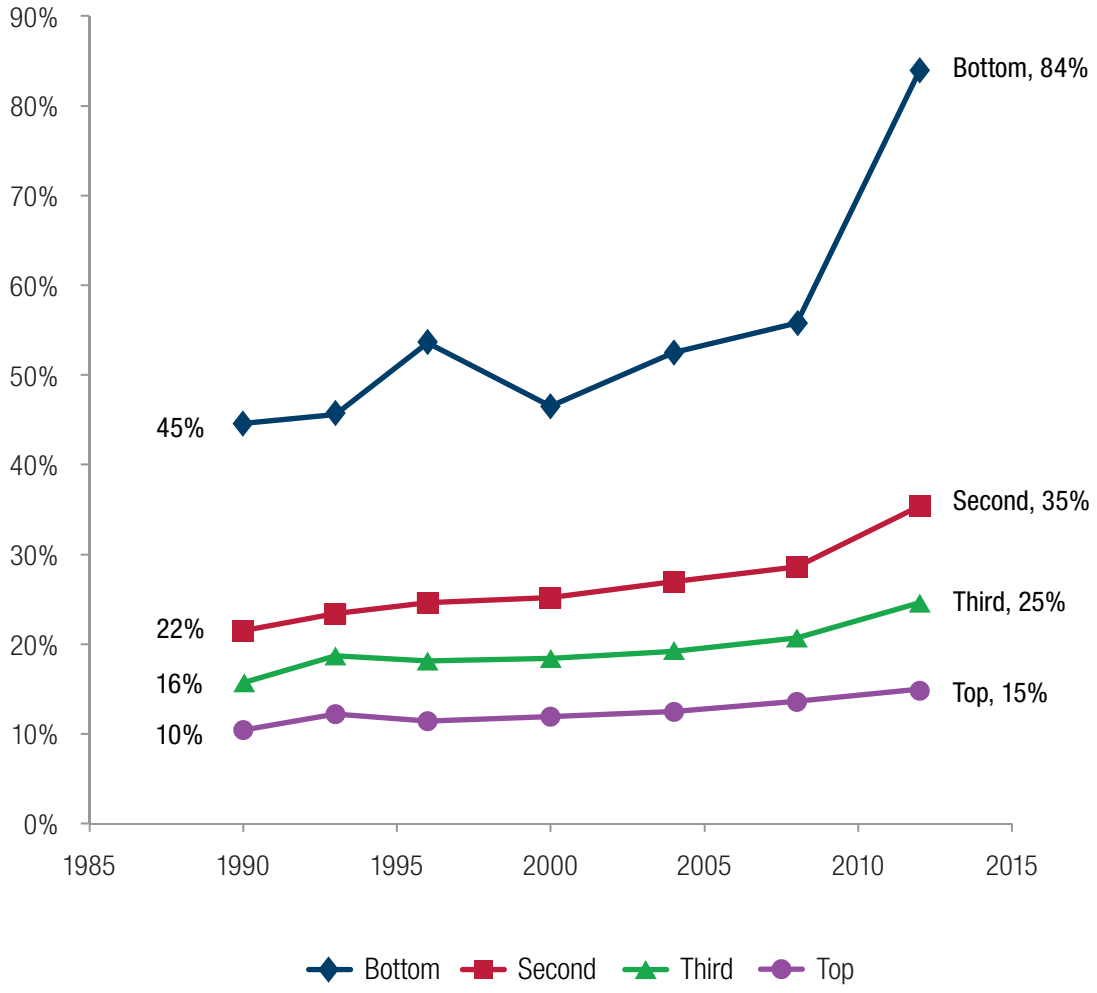
Indicator Status: Widening Gap

Average Net Price in 2012 was 94 percent lower for students in the lowest family income quartile than for students in the highest family income quartile. In 1990, the average Net Price was 67 percent lower.

NOTE: Net Price is defined as the Cost of Attendance (COA) minus all grant aid.

SOURCE: U.S. Department of Education, National Postsecondary Student Aid Study (NPSAS), 1990, 1993, 1996, 2000, 2004, 2008, 2012; Mortenson, T. (2014, May). Financial Barriers to Higher Education by Parental Income and Institutional Level/Control, 1990 to 2012. *Postsecondary Educational Opportunity, 263*, and Mortenson, T. (2014, March). "Deteriorating Abilities of Families to Pay Costs of College Attendance". *Postsecondary Educational Opportunity, 261*.

Equity Indicator 4b (ii): Average Net Price as a percent of average family income by income quartile: 1990 to 2012



Indicator Status: High Inequality and Widening Gap

Average Net Price represented 84 percent of average family income for students in the bottom quartile in 2012, compared with 15 percent of average family income for students in the top quartile, and up from 45 percent in 1990.

NOTE: Family income quartiles are based on the distribution of family income in each NPSAS survey. In 2012, average family incomes by quartile were: bottom, $16,311; second, $49,837; third, $89,119; top, $172,729.

SOURCE: U.S. Department of Education, National Postsecondary Student Aid Study (NPSAS), 1990, 1993, 1996, 2000, 2004, 2008, 2012. Mortenson, T. (2014, May). Financial Barriers to Higher Education by Parental Income and Institutional Level/Control, 1990 to 2012. *Postsecondary Educational Opportunity, 263*.

Equity Indicator 4c: What Percentage of Students Borrow and How Much Do They Borrow?

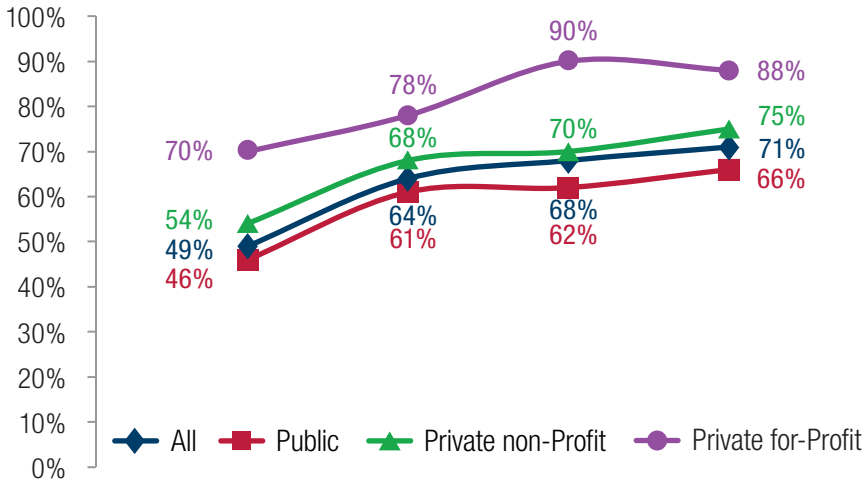
Indicator 4c describes the frequency and amount of borrowing for graduating bachelor's degree-seeking seniors, using data from the NPSAS. In 2012, 71 percent of all bachelor's degree graduating seniors had borrowed an average of $29,400. Borrowing rates were higher for seniors who attended private for-profit 4-year institutions (88 percent) and private non-profit 4-year institutions (75 percent) than for those who attended public 4-year institutions (66 percent).

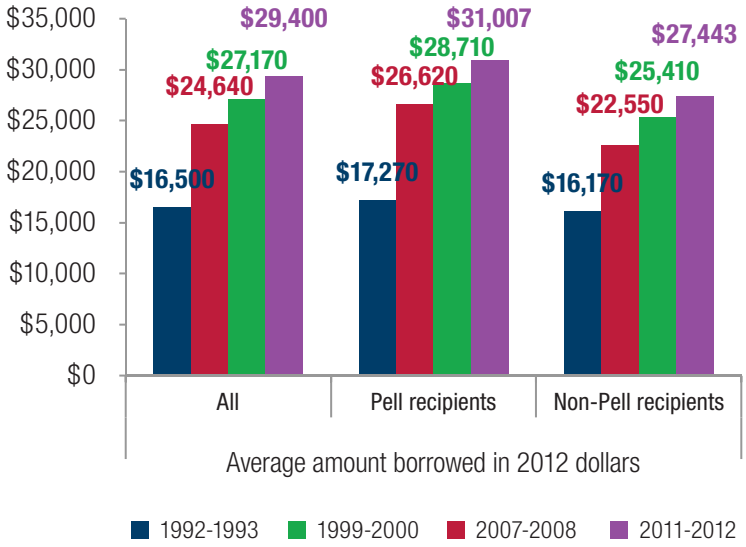
Both the percentage of students who borrow to pay college costs and the average amount borrowed have risen over time, although rates of growth were greater in the 1990s than since 2000. The share of graduating bachelor's degree-seeking seniors who borrowed increased by 10 percentage points between 1992-1993 and 1999-2000 (from 54 percent to 64 percent), and then increased at a slower rate to 68 percent in 2007-2008 and 71 percent in 2011-2012. In constant 2012 dollars, the average amount borrowed increased by 49 percent between 1993 and 2000 (from $16,500 to $24,640), and then by 10 percent between 1999-2000 and 2007-2008 (from $24,640 to $27,170), and 8 percent between 2007-2008 and 2011-2012 (from $27,170 to $29,400).

Pell Grant recipients typically attend less expensive colleges and universities, but borrowers who receive Pell Grants borrow somewhat higher amounts, on average, than borrowers who do not receive Pell Grants. In 2012, Pell Grant recipients averaged $31,007 in loans at graduation, while non-Pell Grant recipients averaged $27,443.[45] This 11 percent difference in the average amount borrowed among graduating bachelor's degree recipients who did and did not receive Pell Grants was comparable in magnitude to the 11 percent difference between these two groups in 2007-2008 ($28,710 versus $25,410), but smaller than the 15 percent difference in 1999-2000 ($26,620 versus $22,550) and larger than the 6 percent difference in 1992-1993 ($17,270 versus $16,170).

45 The Project on Student Debt at The Institute for College Access and Success (TICAS) reports that 69 percent of seniors who graduated from public and nonprofit colleges in 2014 had student loan debt, with an average of $28,950 per borrower. TICAS also reports that, from 2004 to 2014, the share of graduates with debt rose modestly (from 65 percent to 69 percent) while average debt at graduation rose at more than twice the rate of inflation. Debt at graduation varies by state and institution attended. See *Student Debt and the Class of 2014* at http://ticas.org/posd/home. A related issue of considerable concern is student loan default rates. In FY2012, about 5.1 million borrowers entered into repayment and of those, about 610,956 were counted as having defaulted on their loans. The 3-Year Official National Cohort Default Rates, based on about 6,000 postsecondary institutions, rose in the Great Recession to 13.4 percent for FY2009 and 14.7 percent for FY2010. The official rate for FY2011 was 13.7 and the official rate for FY2012, as reported in September of 2015, was 11.8 percent. U.S. Department of Education, Federal Student Aid Office. http://www.ifap.ed.gov/eannouncements/attachments/093015AttachOfficialFY20123YRCDRBriefing.pdf.

Equity Indicator 4c: Percentage of graduating bachelor's degree-seeking seniors who borrowed by institution control and average amount borrowed by Pell and non-Pell status: 1990 to 2012





Indicator Status: High Inequality and Widening Gap

Despite more frequently attending lower-cost colleges, Pell Grant recipients who borrow average higher amounts of borrowing than those who borrow and do not receive Pell Grants.

NOTE: Data on average amount represents the average among those who borrow.

SOURCE: U.S. Department of Education, National Postsecondary Student Aid Study (NPSAS), 1990, 1993, 1996, 2000, 2004, 2008, 2012. Mortenson T. 2014, "Financial Barriers to Higher Education by Parental Income and Institutional Level/Control," 1990 to 2012, no. 263, Postsecondary Education Opportunity, Pell Institute for the Study of Opportunity in Higher Education, Washington, DC.

EQUITY INDICATOR 5:

HOW DOES BACHELOR'S DEGREE ATTAINMENT VARY BY FAMILY CHARACTERISTICS?

Of those dependent primary family members reporting attaining a bachelor's degree by age 24 in 2014, 54 percent were in the top family-income quartile and 10 percent were in the bottom family-income quartile.

Equity Indicator 5 (a-d): Definitions

Equity Indicator 5 uses four sets of data to examine differences in bachelor's degree attainment and completion:[46] 1) Annual data from the Current Population Survey (CPS) to present trends from 1970 to 2014 in the distribution of dependent family members' bachelor's degree attainment by family income;[47] 2) Data at approximately 10-year intervals from the NCES high school longitudinal studies tracing high school students' bachelor's degree attainment 8 or 10 years after expected high school graduation year; 3) Data from the Beginning Postsecondary Studies (BPS) following first-time college entrants through 5 or 6 years after college entrance; and 4) Data from IPEDS on the distribution of bachelor's degrees awarded by race/ethnicity from 1976-1977 to 2012-2013. The following are applicable definitions used in this section.

- **Distribution by family income quartile of bachelor's degrees earned by dependent primary family members by age 24.** This Indicator gives the distribution by family income quartile of individual primary dependent family members who had attained a bachelor's degree by age 24 using

46 We use multiple measures of bachelor's degree attainment and completion given concerns about limitations of the annual CPS data for estimating degree attainment rates (especially with regard to changes in dependency patterns and income groupings particularly in recent years). Although the CPS data is the only available annual source of data, the data have important limitations and caution is needed in interpreting the results. The CPS includes only individuals who were considered "primary dependent family members" at the time of the CPS survey. For this reason, the *2016 Indicators Report* also presents estimates of bachelor's degree completion from the NCES longitudinal studies that include all members of a cohort.

47 For the reasons noted above, we are including CPS data on the "distribution" of bachelor's degrees from 1970-2014 rather than the attainment rates by age 24. We include CPS based attainment rates in Appendix A (updated from the 2015 Indicators report using data from the high school longitudinal studies). Because of the strong positive relationships among family income, dependency status, and degree attainment, CPS data published in previous reports likely over-estimated bachelor's degree attainment for the top income quartile. See Appendix A.

data from the October supplement to the Current Population Survey (CPS). The share of the total bachelor's degrees earned by members of each income quartile is reported from 1970 to 2014.

- **Percent of first-time beginning postsecondary dependent students earning bachelor's degrees within 5 or 6 years of initial enrollment by family income quartile and TRIO eligibility.** These measures use data from the Beginning Postsecondary Study (BPS). This study has tracked subsamples from the NPSAS of students who first enrolled in a postsecondary educational institution in academic years 1989-90, 1996-97, and 2003-04. Bachelor's degree attainment rates are shown by income quartile for dependent students and by TRIO eligibility criteria (i.e., low-income and first-generation college status).[48]
- **Distribution of bachelor's degrees conferred by race/ethnicity.** This measure uses the annual IPEDS Completion Surveys to report the distribution of bachelor's degrees conferred by race/ethnicity from 1977 to 2013.

Equity Indicator 5a: How are the Bachelor's Degrees Attained by Dependent Family Members by Age 24 Distributed by Family Income Quartile?

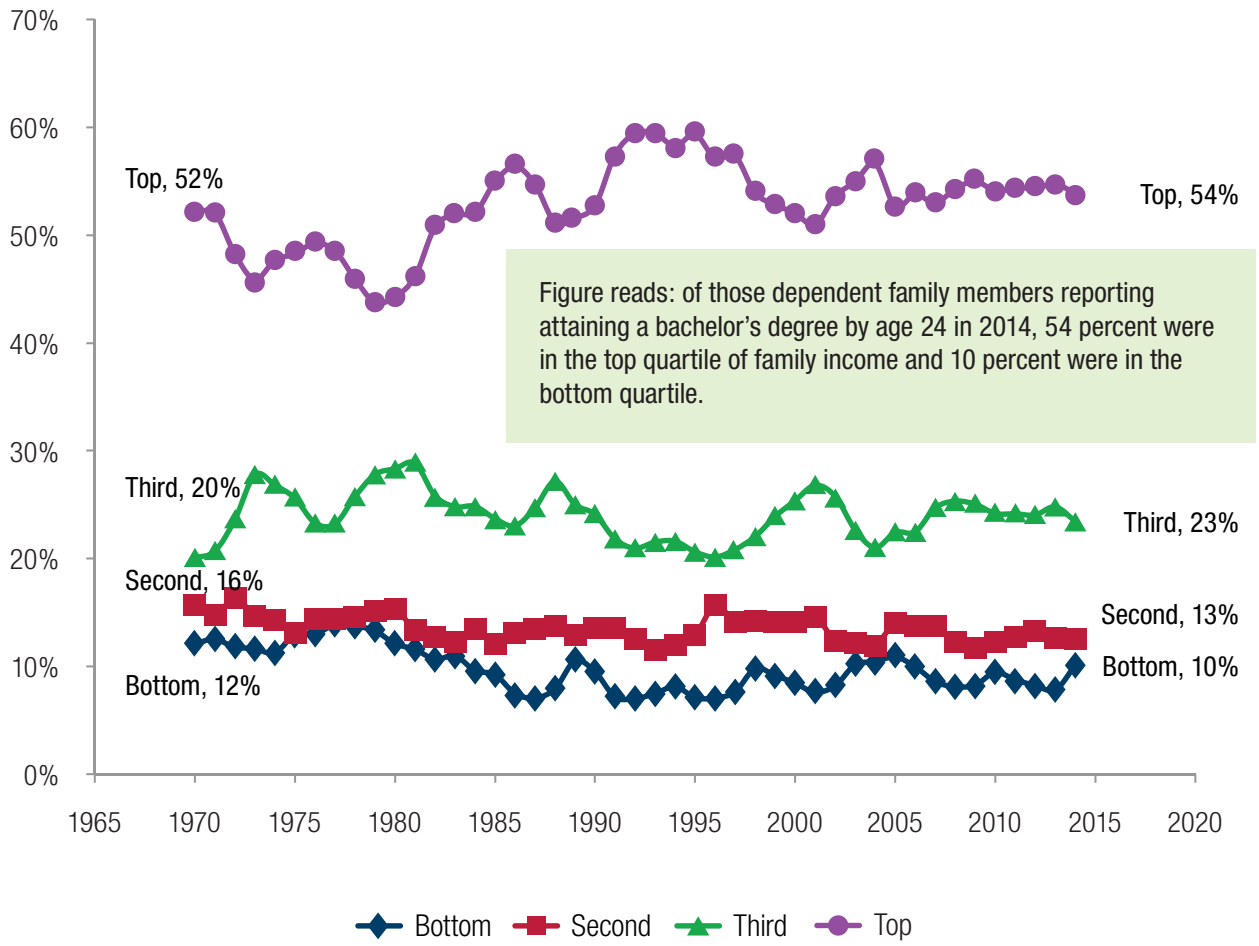
In 2014, the 25 percent of dependent family members in the highest-income family quartile accounted for 54 percent of those who had attained a bachelor's degree by age 24, while individuals from the bottom quartile accounted for 10 percent of the total.

Between 1970 and 2014, the representation of individuals in the lowest-income quartile among dependent family members age 24 who had attained a bachelor's degree fluctuated between a high of 14 percent in 1977 and a low of 7 percent in 1992. Over the same period, the representation of individuals from the highest-income quartile fluctuated between a low of 44 percent in 1979 and a high of 59 percent in 1993.

Together the top two quartiles accounted for 72 percent of the total bachelor's degrees attained in 1970 and 77 percent in 2014. The bottom two quartiles accounted for 28 percent in 1970 and 23 percent in 2014—a decline of 5 percentage points over this period.

48 TRIO is a set of federal competitive grant programs first authorized under the HEA of 1965, and 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 were started in 1964, 1965 and 1968, respectively. TRIO now consists of 8 programs that collectively provide services from middle school to graduate school. The 8 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), and Ronald McNair Post-Baccalaureate Program (McNair), and a training program for TRIO project staff. In 2014 there were about 2,800 TRIO Projects programs housed at colleges and universities and community organizations, with programs in all 50 states, Washington, D.C., and U.S. territories. Estimates are that TRIO services reach less than 5 percent of the eligible populations in any given year.

Equity Indicator 5a: Distribution by family income quartile of dependent family members age 18 to 24 who attained a bachelor's degree by age 24: 1970 to 2014



Indicator Status: High Persisting Inequality and Small Increase in the Gap

Between 1970 and 2014, the representation of individuals in the lowest income quartile among dependent family members age 24 who had attained a bachelor's degree fluctuated between a high of 14 percent in 1977 and a low of 7 percent in 1992.

Together the bottom two quartiles accounted for 28 percent in 1970 and 23 percent in 2014—a decline of 5 percentage points over the period.

NOTE: The numbers represent the 100 percent distribution of bachelor's degrees in a given year (e.g., in 2014, 54 percent were from the top quartile, 23 percent from the third quartile, 13 percent for second quartile, and 10 percent from the lowest quartile).

SOURCE: U.S. Census Bureau, Current Population Survey, October Education Supplement. Data from 1970 to 1986 consider unmarried 18- to 24-year-olds, and data from 1987 to 2013 are based on dependent 18- to 24-year-olds, Table 14 in Census Bureau P20 report on School Enrollment. After 2006, the Census Bureau no longer published Table 14. Data tabulated using Census table production tool (2006-2014). Mortenson, T. (2014, September). Unequal Family Income and Unequal Higher Education Opportunity, 1970 to 2013, *Postsecondary Educational Opportunity, 267.*

Equity Indicator 5b: What Percent of Youth Attain a Bachelor's Degree or Higher Within 8 or 10 Years of Expected High School Graduation by Family Socioeconomic Status (SES)?

Equity Indicator 5b uses data from the three most recently released NCES high school longitudinal studies to report bachelor's degree attainment rates for students 8 or 10 years after their expected high school graduation.[49] In this comparison we use family socioeconomic status (SES), a composite indicator based on parental income, education, and occupation, rather than a single measure of self-reported income.[50]

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 parent socioeconomic status (SES). For the ELS high school class of 2004, 15 percent of high school sophomores from the lowest SES quartile attained a bachelor's degree within 8 years, compared with 22 percent of youth from the second SES quartile, 37 percent from the third quartile, and 60 percent from the highest SES quartile.

As noted in the discussions of previous indicators in this report, comparisons of bachelor's degree attainment across the three studies are limited somewhat by differences in the surveys. HS&B surveyed 1980 sophomores and followed the cohort 10 years after expected high school graduation (1992). NELS surveyed 1988 eighth graders and followed students 8 years after their 1992 expected high school graduation date in 2000. ELS surveyed 2002 high school sophomores and followed them to 8 years after their 2004 expected high school graduation (2012). The NELS:88 data is expected to report a higher percentage of students who did not complete high school than the HS&B and ELS sophomore studies, as the latter two studies started two years later in school (when some early dropouts may have already left high school and thus would not be in the sample). 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; differential willingness to participate may have altered the composition of schools and students in the three samples.[51]

With these cautions in mind, Indicator 5b shows that the percentage of individuals from the lowest SES quartile who attained at least a bachelor's degree within 8 or 10 years of expected high school graduation was virtually the same for 1980 high school sophomores (at 7 percent) and 1988 eighth graders (at 8 percent), but nearly doubled to 15 percent for 2002 high school sophomores. As noted above, some of the increase between 1988 eighth graders and 2002 tenth graders may be related to the fact that NELS:88 began when students were in the

49 In 2009, NCES began its most recent nationally representative survey of high school students entitled *High School Longitudinal Study of 2009*. Bachelor's degree attainment within 8 or 10 years of expected high school graduation is not yet available from this source, as this study sampled ninth graders who expected to graduate high school in 2012.

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

51 See methodological appendices of 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; 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*. Research Triangle Institute, Statistical Analysis Report, March 2002, U.S. Department of Education Office of Educational Research and Improvement, NCES 2002–321; Tuma, J. & Geis, S. (1995, January). *High School and Beyond 1992 Descriptive Summary of 1980 High School Sophomores 12 Years Later With an Essay on Educational Attainment of 1980 High School Sophomores: by 1992*, National Center for Education Statistics, Statistical Analysis Report.

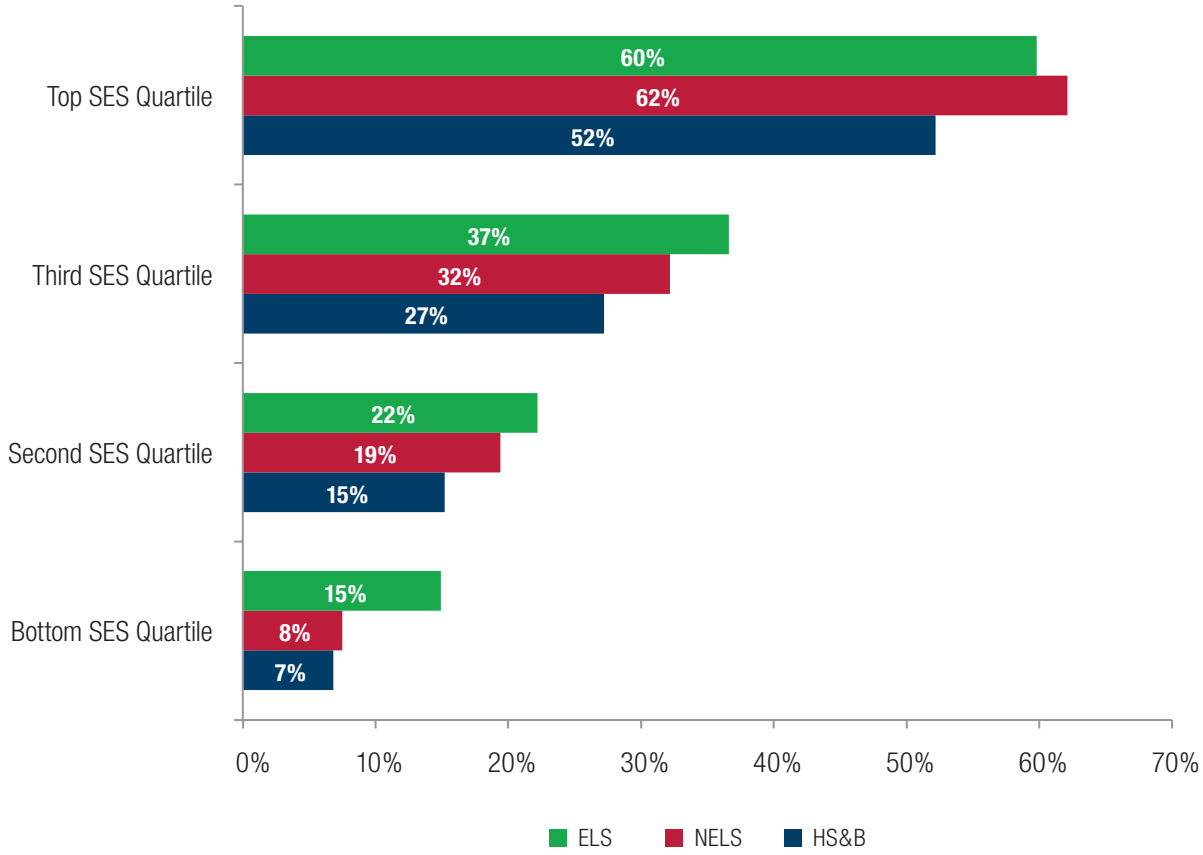
eighth grade, while ELS sampled tenth graders (after some students may have already dropped out of school). Given that Census Bureau data show that high school non-completion rates are higher for those in the bottom income quartile than for those with higher incomes (see Appendix A), this caution may be more applicable to the bottom than the top quartile. Over the period the top SES quartile has shown less change in high school dropout rates and less gain in high school completion rates than the bottom quartile.

Bachelor's degree attainment rates also increased across the three cohorts for youth in the second and third SES quartiles. For instance, the attainment rates for youth in the second SES quartile increased from 15 percent for 1980 tenth graders, to 19 percent for 1988 eighth graders, to 22 percent for 2002 tenth graders.

For youth in the highest SES quartile, the percent attaining at least a bachelor's degree within 8 or 10 years of scheduled high school graduation was similar for 2002 tenth graders (60 percent) and 1988 eighth graders (62 percent) but higher than for 1980 tenth graders (52 percent).

The gap in bachelor's degree attainment rates between the top and bottom SES quartiles was smaller for 2002 tenth graders (45 percentage points) than for 1988 eighth graders (54 percentage points) but the same as 1980 tenth graders (45 percentage points).

Indicator 5b: Percent of youth attaining a bachelor's degree or higher within 8 or 10 years of expected high school graduation by socioeconomic status (SES) quartile: HS&B 1980 tenth graders, NELS 1988 eighth graders, and ELS 2002 tenth graders



Indicator Status: High Inequality, Persisting Gap

The percent of students in the lowest SES quartile who attained at least a bachelor's degree within 8 or 10 years after expected high school completion doubled, rising from 7 percent for HS&B 1980 high school sophomores and 8 percent NELS 1988 eighth graders to 15 percent for ELS 2002 high school sophomores. The gap between the top SES quartile and the bottom quartile remained unchanged (45 percentage points for HS&B 1980 high school sophomores and 45 percent for ELS 2002 high school sophomores).

NOTE: Comparisons are limited due to differences in survey methods. See text discussion.

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): What Percent of Beginning First-Time Postsecondary Students Obtains a Bachelor's Degree by Family Income Quartile?

Whether first enrolling in a 2-year or 4-year higher education institution, most students report aspiring to obtain a bachelor's degree.[52] Indicator 5c(i) describes the percent of dependent students who first enrolled in any type of postsecondary education institution who earned a bachelor's degree within 5 or 6 years of initial enrollment. Data for this Indicator come from three waves of NCES's longitudinal Beginning Postsecondary Students (BPS) studies. These three waves track students who first enrolled in academic years 1989-90, 1995-96 and 2003-04 through the follow-up studies conducted in 1994, 2001, and 2009, respectively.

The share of dependent students who earned a bachelor's degree within 5 or 6 years of initial enrollment increases with family income quartile. Among dependent students who first enrolled in the 2003-04 academic year, the rate of obtaining a bachelor's degree rose from 26 percent for those in the bottom income quartile, to 36 percent for those in the second quartile, to 46 percent for those in the third quartile, to 59 percent for those in the top quartile.

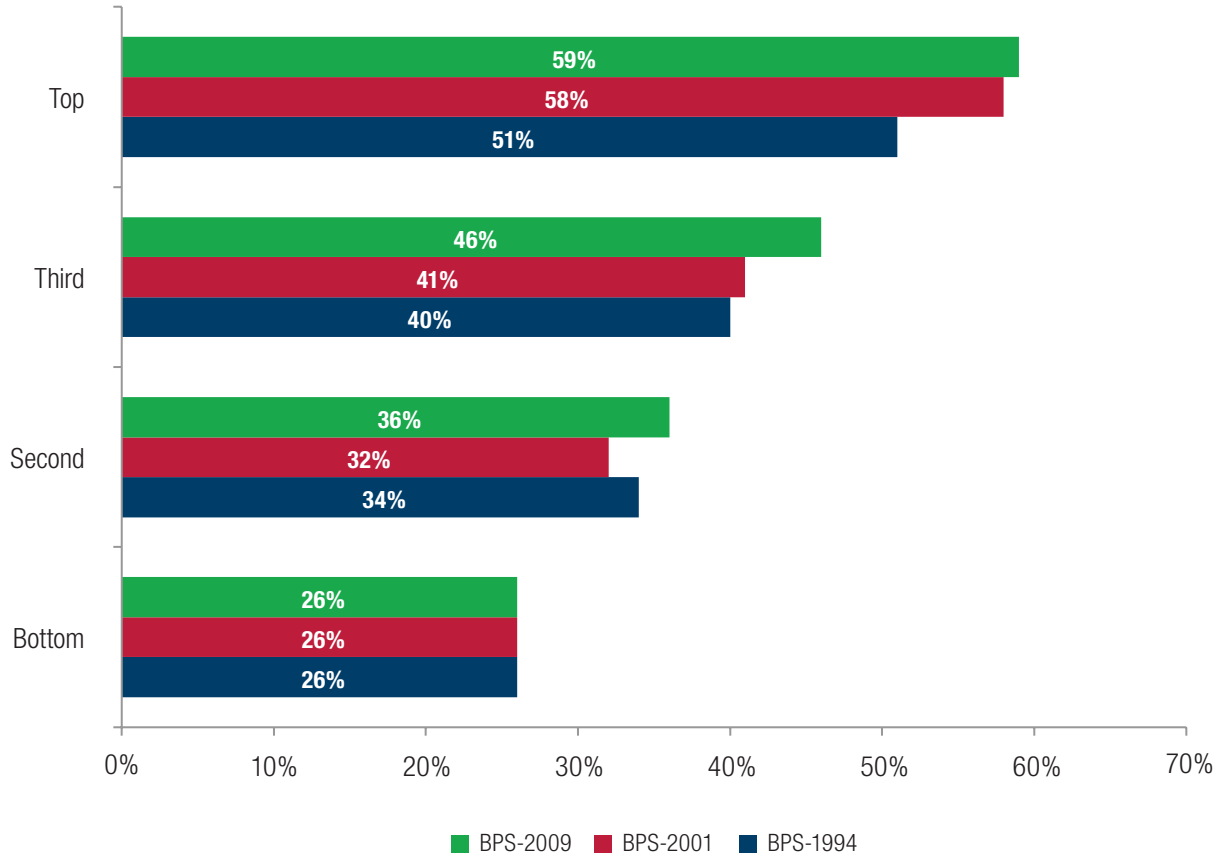
The percent of dependent students from the bottom income quartile who obtained at least a bachelor's degree within 5 or 6 years of initial enrollment remained unchanged at 26 percent for all three cohorts. For those in the top income quartile, the percent of obtaining a bachelor's degree increased from 51 percent for those who entered in 1989-90 to 58 percent for those who entered in 1995-96, but remained unchanged for those who entered in 2003-04 (59 percent).

The bachelor's degree attainment rate also showed little change for those in the second quartile (34 percent for those who enrolled in 1989-90, 32 percent for those who enrolled in 1995-96, and 36 percent for those who enrolled in 2003-04). For dependent students in the third income quartile, the percentages obtaining a bachelor's degree were 40 percent for BPS:1994, 41 percent for BPS:2001, and 46 percent for BPS:2009.

Reflecting the stability in the percent of beginning students who obtain a bachelor's degree in each quartile, the gap for those in the highest and lowest family income quartiles remained virtually unchanged for the two most recent BPS cohorts (at 33 percentage points).

52 For example, data from the ELS: 2002 show that 80 percent of high school students hoped to obtain a bachelor's degree or higher, including 60 percent of those in the lowest socioeconomic quartile. Similarly, data from the *Condition of College and Career Readiness 2014* ACT Survey data indicate that 80 percent of first-generation college students expect to obtain a bachelor's degree or higher.

Equity Indicator 5c(i): Percent of Beginning Postsecondary Study (BPS) dependent first-time students who first enrolled in a postsecondary education institution in the academic years 1989-90 (1994 follow-up), 1995-96 (2001 follow-up) and 2003-04 (2009 follow-up) who obtained a bachelor's degree or higher within 5 or 6 years, by family income quartile



Indicator Status: High and Persistent Inequality

Among beginning postsecondary students, the percent in the bottom family income quartile who obtained a bachelor's degree remained unchanged over the BPS survey waves at 26 percent. There was a gap between the bottom and top quartiles of 33 percentage points in both 2009 and 2001, up from a gap of 25 percentage points in 1994.

NOTE: Income quartiles are based on applicable BPS sample family income at the start of the study. For example, dependent BPS:2004 family income levels by quartile were as follows: Bottom, less than $32,000; Second, $32,000- 59,999; Third, $60,000-$91,999; Top, $92,000 or more. The BPS:2004 quartiles reflect 2002 family incomes for the first-time, college-going population entering in 2003-04, whereas the CPS reflects the income distribution of families of 18- to 24-year-olds for the entire nation for the year specified. Direct comparisons between the CPS and BPS are not possible due to differences in populations.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Beginning Postsecondary Studies (BPS) Longitudinal Surveys (BPS:89-90/1996; BPS:96/2001; BPS:2003-2004/2009). Data tabulated using NCES Data Analysis System (DAS). See also A Radford, A., Berkner, L., Wheeless, S. & Shepherd, B. (2010). *Persistence and Attainment of 2003-04 Beginning Postsecondary Students: After 6 Years*. U.S. Department of Education, National Center for Education Statistics, 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09).

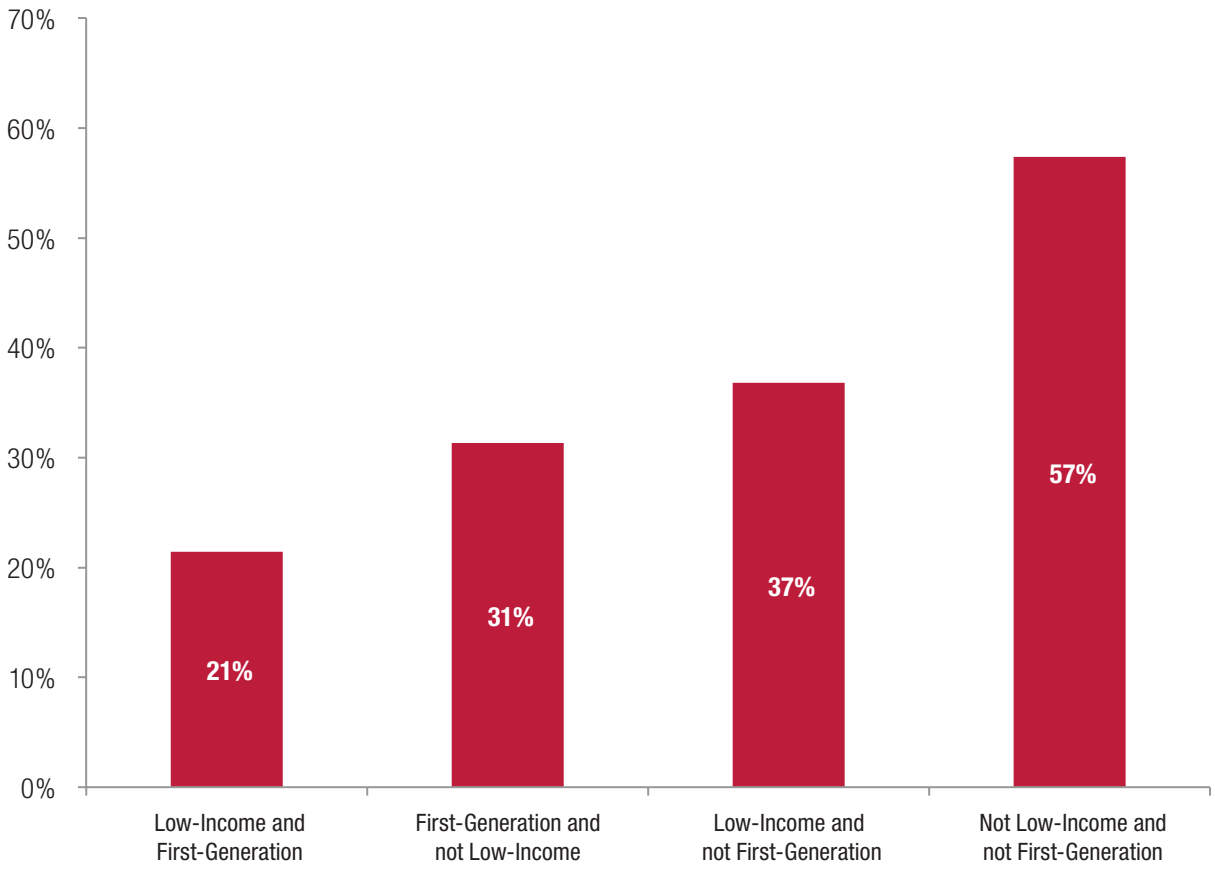
Equity Indicator 5c (ii): What percent of TRIO-eligible Students Obtain a Bachelor's Degree within 6 Years of First Enrolling?

Using data from the 2009 follow-up of the 2003-04 beginning students (BPS:2009), Indicator 5c (ii) shows the percent of beginning postsecondary students who obtained a bachelor's degree by 6 years after enrolling, for students who qualify for the Federal TRIO programs, based on their family income and first-generation college status. Family income thresholds for TRIO eligibility are established by law and reflect an adjusted income that is at or below 150 percent of poverty. 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 and the other one-third must be either low-income or first-generation.

As displayed in Indicator 5c(ii), the percent who obtained a bachelor's degree ranged from 21 percent for beginning postsecondary students who are both low-income and first-generation to 57 percent among students who are neither low-income or first-generation. Students who are first-generation but not low-income had a bachelor's degree attainment rate of 31 percent and students who are low-income and not first-generation had a bachelor's degree attainment rate of 37 percent.

The gap in bachelor's degree attainment rates between those who were both low-income and first-generation and those who were neither low-income nor first-generation was 36 percentage points for the BPS:2009 cohort.

Equity Indicator 5c (ii): Percent of dependent students who first enrolled in a postsecondary education institution in academic year 2003-04 who obtained a bachelor's degree or higher by 2009 (within 6 years), by TRIO eligibility criteria



Indicator Status: High and Persisting Inequality

The gap in bachelor's degree attainment rates between students who were low-income and first-generation and students who were neither low-income nor first-generation was 36 percentage points for the BPS:2003-04/2009 cohort.

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 poverty. First-generation is defined as neither parent nor guardian has attained a bachelor's degree.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Beginning Postsecondary Studies (BPS) Longitudinal Surveys (BPS:89-90/1996; BPS:96/2001; BPS:2003-2004/2009). Data tabulated using NCES Power Stats Data Analysis System (DAS).

Equity Indicator 5d: What is the Distribution of All Bachelor's Degrees Awarded to U.S. Citizens By Race and Ethnicity?

Utilizing data from the Integrated Postsecondary Education Data System (IPEDS) on degrees conferred by race/ethnicity to U.S. citizens, and data from the Census Bureau on civilian population, Indicator 5d compares data points in 1980-81 and 2012-13. Race and ethnicity are dynamic classifications and changes over the period in the classifications used both for the population and for degrees conferred warrant caution in using these data, especially for small groupings such as American Indian and Alaska Natives and Asian and Pacific Islanders.

Bearing these cautions in mind, the comparisons in Figure 5d suggest some progress in reducing gaps between racial/ethnic groups in the distribution of bachelor's degrees earned in the United States over this period.[53]

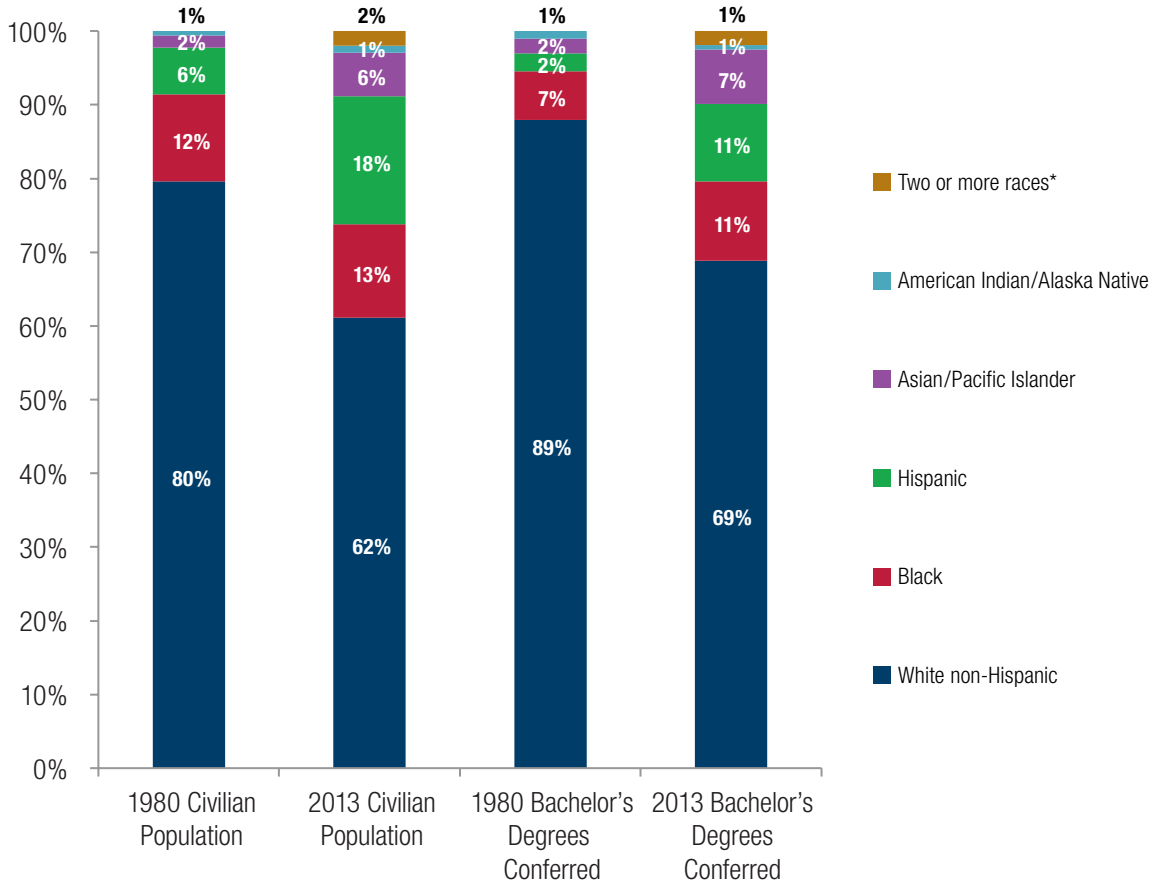
In 1980 Blacks were about 12 percent of the U.S. population and attained 7 percent of the bachelor's degrees conferred. Thus, Blacks were just over half (58 percent) as likely to be represented among bachelor's degree recipients as in the U.S. population. By 2013, Blacks were 13 percent of the population and received 11 percent of the bachelor's degrees conferred, indicating that Blacks were about 85 percent as likely to be represented among bachelor's degree recipients as in the population.

In 1980, those of Hispanic origin represented 6 percent of the population and were awarded 2 percent of the bachelor's degrees conferred. By 2013, Hispanics were about 18 percent of the population and were awarded 11 percent of the bachelor's degrees. Hispanics have thus gone from being about 1/3 as likely to be represented among bachelor's degree recipients as in the population to being 61 percent as likely to be represented.

Since 1980, White non-Hispanics as a share of the population have declined from 80 percent to 62 percent. In the same period the share of bachelor's degrees awarded to White, non-Hispanics declined from 89 percent to 69 percent. Whites thus continue to be represented at a rate that is higher than their percentage in the population, being 62 percent of the population in 2013 and 69 percent of the bachelor's degrees awarded. In 1980, Asian/Pacific Islanders were 2 percent of the population and 2 percent of the bachelor's degrees conferred and thus were about as likely to be awarded bachelor's degrees as to be found in the population. In 2013, Asian/Pacific Islanders were 6 percent of the population and 7 percent of degrees conferred.

53 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 "more than one race" category. NCES has data on degrees conferred dates from to 1976; however, data identifying those of Hispanic origin was not available until 1980. The category "more than one race" was not used until 2010 following new OMB regulations. More precise comparisons would look at the distribution by age of both the population and bachelor's degrees awarded by race/ethnicity not possible with available data.

Indicator 5d: Percentage distributions by race/ethnicity of bachelor's degrees conferred by postsecondary institutions and of the civilian population: 1980 and 2013



Indicator Status: Gains in Equity Over the Period Since 1980.

In 1980, Blacks were 12 percent of the population and earned 7 percent of the bachelor's degrees conferred; in 2013, Blacks were 13 percent of the population and earned 11 percent of the bachelor's degrees.

In 1980, Hispanics were 6 percent of the population and earned 2 percent of the bachelor's degrees; in 2013, Hispanics were 18 percent of the population and earned 11 percent of the bachelor's degrees.

NOTE: Terms and inclusiveness of categories used for race and ethnicity classifications have changed over time. The category "Two or More Races" was not included in 1980. In 2013, the U.S. Census Bureau used the term "Hispanic or Latino" to refer to the "Hispanic" category and used "Black or African American" to refer to the "Black" category. In 2013, in the Population figures by the Census Bureau, Native Hawaiian and Other Pacific Islanders were classified separately from Asians and were 0.2 percent.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 2014*, Table 322.20; U.S. Census Bureau, http://quickfacts.census.gov/qfd/states/00000.html.

EQUITY INDICATOR 6:

HOW DO EDUCATIONAL ATTAINMENT RATES IN THE U.S. COMPARE WITH RATES IN OTHER NATIONS?

Attainment Rates by Country

International comparisons show that the U.S. has fallen from second in tertiary type A (bachelor's) degree attainment in 2000 to 19th in 2014.

The final indicator looks at educational attainment in the United States as compared with other nations. Reflecting concern with international comparison, the current stated mission of the U.S. Department of Education is "to promote student achievement and preparation for global competitiveness by fostering educational excellence and ensuring equal access."[54] Indicator 6 uses data from the Organisation for Economic Cooperation and Development (OECD) to compare educational attainment in the United States with other nations. Since 1991, OECD has reported educational attainment by nation in its annual report, *Education at a Glance*. Differences across nations in educational systems and degree classifications limit the ability to make international comparisons.[55] Nonetheless, OECD strives to apply common definitions across nations, and collect and report data in a consistent manner over time.

Equity Indicator 6 (a-b): Definitions

Indicator 6 tracks the percentage of the population that has attained tertiary degrees in different nations. Indicator 6a reports tertiary-type A degree attainment and Indicator 6b combines attainment of tertiary-type A and tertiary-type B degrees. For both Indicators, we present attainment for the population age 25 to 34 in the years 2000 and 2014.

54 For a detailed comparison of widening participation policies in 6 countries (Australia, Ireland, Netherlands, Norway, South Africa, United States), see http://www.hefce.ac.uk/pubs/rereports/year/2013/wpeffectiveness/.

55 For more information on the methods used and limitations of international comparisons, see http://www.oecd-ilibrary.org/education/education-at-a-glance-2015_eag-2015-en.

As defined in the glossary of OECD's (2015) *Education at a Glance*:

- **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 (at tertiary level) of three years' full-time equivalent, although they typically last four or more years. These programs are not exclusively offered at universities. This degree is comparable to the BA or BS degree in the U.S. system.
- **Tertiary-type B programs or Short-Cycle 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 two years' full-time equivalent at the tertiary level.

Equity Indicator 6a: What Percent of 25- to 34-Year-Olds Has Completed a Type A (Bachelor's or above) Tertiary Degree?

Using the common OCED definitions for classification described above, the Russian Federation (58 percent), Lithuania (52 percent), Switzerland (46 percent), and Korea (45 percent), have rates at 45 percent or above for percent of population aged 25 to 34 who have completed a bachelor's degree or above. The percentage for the U.S. was 30 percent in 2000 (ranking 2nd out of 30 countries) and 35 percent in 2014 (ranking 19th out of 43 countries).[56]

The information displayed in Equity Indicator 6a shows that all of the countries (for which data is reported in both 2000 and 2014) that are now above the U.S. in 2014 were well below the United States in 2000 (Korea, Belgium, Luxembourg, Poland, Netherlands, United Kingdom, Finland, Ireland, Australia, Denmark, Iceland, Greece, New Zealand, and Sweden). Between 2000 and 2014, the United States had an increase of 18 percent, while those countries ranked ahead of the U.S. in 2014 had an average rate of increase of 127 percent.

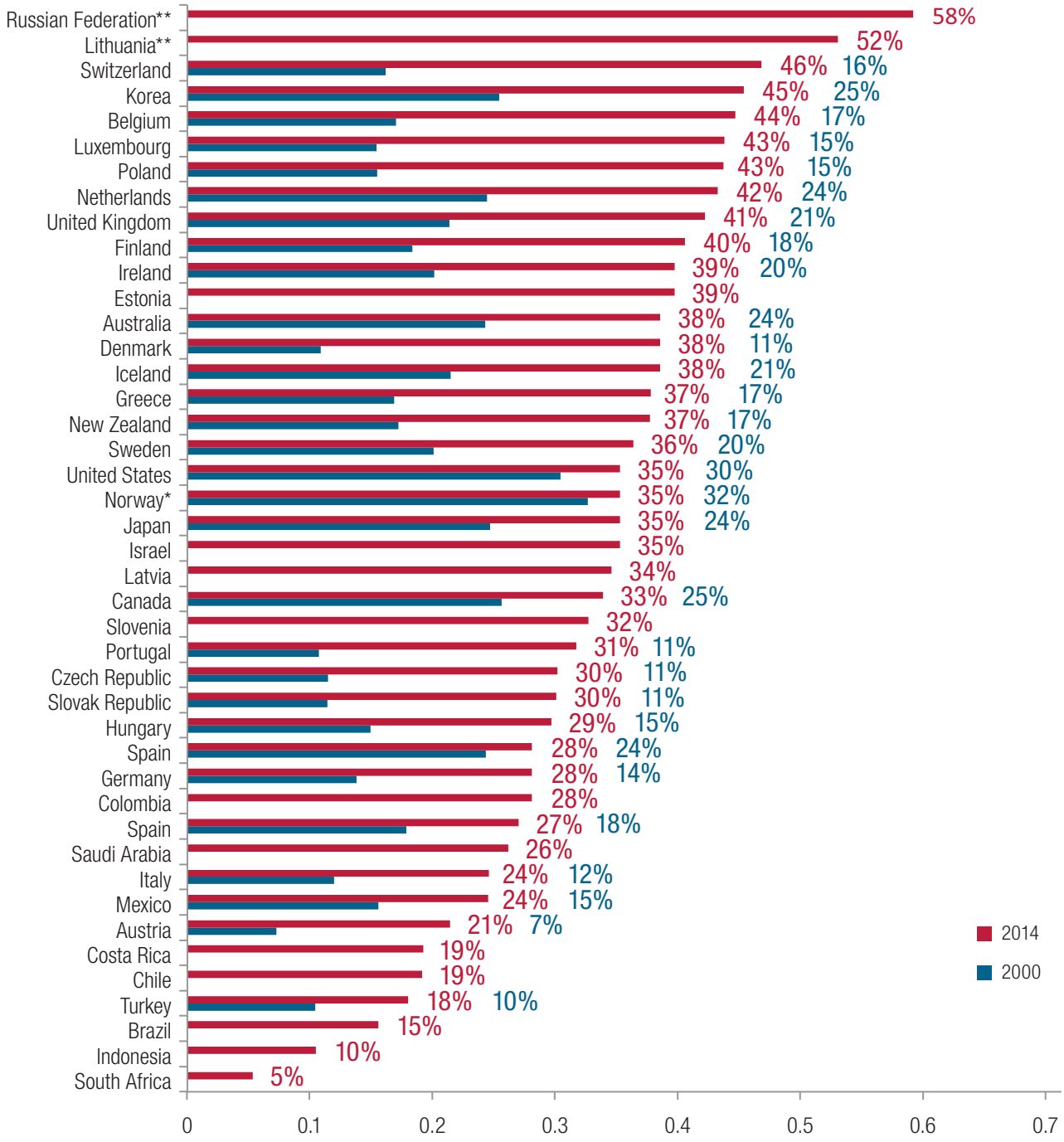
Equity Indicator 6b: What Percent of 25- to 34-Year-Olds Has Completed a Tertiary-type A or Tertiary-type B Degree?

In 2014, 46 percent of adults age 25 to 34 in the United States had attained the equivalent of a least a 2-year or 4-year degree. The United States ranked 13th out of the 42 counties on this indicator. In 6 countries by 2014, over half of the 25- to 34-year-old population had attained at least a tertiary-type A degree (analogous to bachelor's degree) or tertiary-type B degree (analogous to an associate's degree): Korea (68 percent), Russian Federation (58 percent), Canada (58 percent), Luxembourg (53 percent), Lithuania (53 percent), and Ireland (51 percent).

Between 2000 and 2014, the share of the U.S. population age 25 to 34 that had attained a tertiary-type A or B degree increased by 20 percent, a considerably lower rate of growth than the OECD average growth rate of 58 percent.

56 Note that in 2000 data is not reported for the Russian Federation, Lithuania, or Estonia, which in 2014, ranked above the United States.

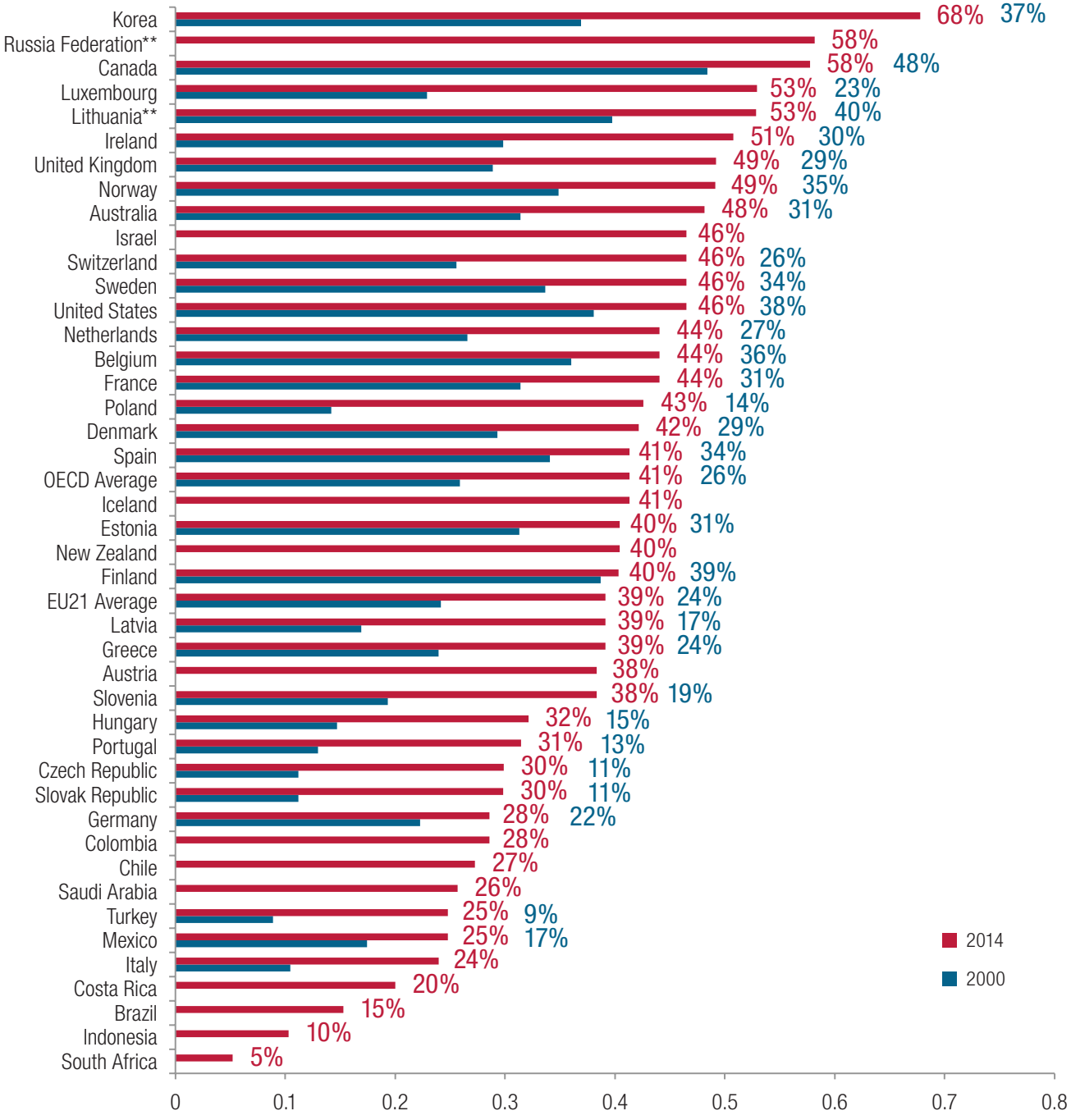
Equity Indicator 6a: Percent of 25- to 34-year-olds with a Type A (bachelor's or equivalent or above) tertiary degree: 2000 and 2014



NOTE: Caution is needed in making international comparisons given differences in educational degree classifications among countries and across years. For example, some type A degrees for Norway were re-classified as short-cycle degrees for 2014 and thus Norway's type A degrees were reduced from 44 percent in 2012 to 35 percent in 2014.
**All degrees reported by the Russian Federation and Lithuania are bachelor's degree or higher. Hence the attainment rates for type A (Indicator 6a) and type A and B combined (Indicator 6b) are the same for these two countries.

SOURCE: Organisation for Economic Cooperation and Development (OECD). (2015). *Education at a Glance 2015*. http://www.oecd.org/edu/education-at-a-glance-19991487.html.

Equity Indicator 6b: Percent of 25- to 34-year olds with a Type A (bachelor's or equivalent) or Type B (Short Cycle) tertiary degree: 2000 and 2014



NOTE: Caution is needed in making international comparisons given differences in educational degree classifications among countries and across years.
**All degrees reported by the Russian Federation and Lithuania are bachelor's degree or higher. Hence the attainment rates for Type A (Indicator 6a) and Type A and B combined (Indicator 6b) are the same for these two countries.

SOURCE: Organisation for Economic Cooperation and Development (OECD, 2015).
Education at a Glance 2015. http://www.oecd.org/edu/education-at-a-glance-19991487.html.

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

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

This report is written to inform the conversation about higher education equity issues and to foster the mandate to both monitor our progress and to search for and support policy and practices leading to greater equity in educational opportunity. To this end, the Pell Institute for the Study of Opportunity in Higher Education (Pell Institute) and the Alliance for Higher Education and Democracy at the University of Pennsylvania (PennAHEAD) have prepared reflection essays concerning the issues raised by the *2016 Equity Indicators Report*. 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.

Reducing the Stratification of College "Choice"

By Laura W. Perna and Roman Ruiz[57]

University of Pennsylvania

Among the distinguishing characteristics of the U.S. higher education system are its size and institutional diversity.[58] In 2014, the United States was home to nearly 4,700 degree-granting institutions and several thousand more non-degree-granting institutions (Figure 1).[59] The nation's postsecondary educational institutions vary in level (4-year, 2-year, less-than-2-year), control (public, private not-for-profit, and for-profit), selectivity of admissions, credentials awarded, curricular and extracurricular programs offered, number of students enrolled, location, mission, and many other dimensions.

This impressive array of options ostensibly ensures that all students have the opportunity to enter the postsecondary educational institution that best suits their individual needs, goals, and priorities. Yet, despite the great number and diversity of postsecondary educational institutions in the U.S., the *2016 Indicators Report* shows that, on average, students from lower-income families are enrolling in institutions with different characteristics than students from higher-income families. Students from low-income families (as measured by receipt of Pell Grants or other Federal Grants) represent considerably smaller shares of first-time, full-time degree- or certificate-seeking undergraduate students at private not-for-profit four-year institutions (33 percent) and public four-year institutions (38 percent) than at public two-year (56 percent), for-profit four-year (74 percent), and for-profit two-year (71 percent) institutions (Indicator 2c). Low-income students represent less than one-in-five first-time, full-time degree- or certificate-seeking undergraduates attending the nation's most competitive (15 percent in fall 2012) and highly competitive (19 percent) institutions, about a third (30 percent) of students attending very competitive institutions, and 42 percent of students attending competitive institutions, but represent more than half of students attending less competitive (51 percent), non-ranked four-year institutions (55 percent), two-year or less-than-two year institutions (61 percent), and for-profit institutions (74 percent, Indicator 2e).

Although characterized as differences in college "choice," "choice" is a misnomer for describing the college destinations of many low-income students. Differences in enrollment patterns by family income reflect the stratification of the financial, academic, and other resources that are required to enroll in different colleges and universities. Students from higher-income families have the resources that enable meaningful choice from

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57 All views expressed in this essay are the sole responsibility of the authors, and do not represent the position of the Pell Institute for the Study of Opportunity in Higher Education or the Alliance for Higher Education and Democracy of the University of Pennsylvania (PennAHEAD).

58 Brubacher, J. S., & Rudy, W. (1997). *Higher education in transition: A history of American colleges and universities* (4th ed.). New Brunswick, NJ: Transaction Publishers.

59 U.S. Department of Education, National Center for Education Statistics. (2015). *Digest of Education Statistics* (Table 317.10). Retrieved from http://1.usa.gov/1TLIH4C.

among the array of available options nationwide. But, resource constraints and structural failures often limit the "choices" of students from lower-income families to the local or online, non-selective or for-profit postsecondary educational institution.

No college choice is possible if students choose not to enroll in postsecondary education. Among high school graduates, rates of continuing on to postsecondary education are substantially lower for those from the lowest-income quartile than for those from the top quartile (60 percent versus 87 percent in 2014, Indicator 1b). This 27 percentage-point difference in enrollment rates means that substantially fewer students from lower- than higher-income families are "choosing" a path that tends to yield considerable economic and non-economic benefits in the short- and long-term. Higher education is associated with countless benefits for individuals, including higher earnings, better working conditions, higher rates of employment, lower rates of unemployment and poverty, better health, and longer life expectancies. Our society also benefits, as with higher educational attainment comes greater economic productivity, less reliance on social welfare programs, greater civic engagement and charitable giving, and higher rates of voting.[60]

Why does it matter that college "choices" are stratified based on family income?

The benefits of higher education are greater for those who complete a college degree than for those who do not. But, completion rates are lower at the institutions in which low-income students are relatively concentrated: two-year and for-profit institutions rather than four-year public and private not-for-profit institutions and institutions that are less rather than more selective. Among degree-seeking students who first enrolled in fall 2009, the share who had no credential and were no longer enrolled 6 years later was higher for those who first entered four-year for-profit institutions (56 percent), two-year public institutions (45 percent), two-year not-for-profit institutions (40 percent) and two-year for-profit institutions (35 percent) than for those who first entered four-year public (25 percent) and four-year private not-for-profit institutions (19 percent).[61] At public four-year institutions, six-year bachelor's degree completion rates for first-time, full-time students who first enrolled in 2007 range from a low of 33 percent at open-admissions institutions to a high of 85 percent at institutions that accept no more than 25 percent of applicants. 6-year completion rates at private non-profit four-year institutions also increase with selectivity, ranging from 38 percent at open-admissions institutions to 91 percent at institutions that accept fewer than 25 percent of applicants.[62]

Where a student attends college is also associated with differences in other outcomes. Institutional selectivity, as measured by Barron's, is a strong positive predictor of enrolling in graduate school, as well as the Carnegie Classification of the graduate institution attended.[63] As measured by average SAT scores, the selectivity of the undergraduate institution attended is also positively related to annual earnings for Black and Hispanic

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60 Baum, S., Ma, J., & Payea, K. (2013). *Education pays: The benefits of higher education for individuals and society.* Washington, DC: The College Board.

61 Shapiro, D., Dundar, A., Wakhungu, P.K., Yuan, X., Nathan, A., & Hwang, Y. (2015). *Completing college: A national view of student attainment rates, Fall 2009 cohort* (Signature Report No. 10). Herndon, VA: National Student Clearinghouse Research Center. https://nscresearchcenter.org/wp-content/uploads/SignatureReport10.pdf (Figure 12).

62 National Center for Education Statistics (2015). *Digest of Education Statistics 2015* (Table 326.10). Washington, DC: Author. Retrieved from http://1.usa.gov/1jvmZkp.

63 Zhang, L. (2005). Advance to graduate education: The effect of college quality and undergraduate majors. *Review of Higher Education*, 28(3), 313-338.

students and for students whose parents are not four-year college graduates.[64] Institutional sector is one of the strongest predictors of student loan default even after controlling for students' demographic, academic, and socioeconomic characteristics. Borrowers who attend for-profit 2-year and 4-year institutions, as well as private not-for-profit 2-year institutions have significantly greater likelihood of loan default than borrowers who attend public four-year colleges.[65]

How can we reduce the stratification of college choice?

Although framed as differences in "choice," differences in the distribution of students from low- and high-income families across different types of postsecondary educational institutions reflect differences in the structures in which low- and high-income students are embedded.[66] Students (perhaps with their families) decide to enroll in college, and select a particular college to attend, based on their assessment of the benefits relative to the costs. But, these cost-benefit calculations are not made in a vacuum; they are informed by the views, understandings, and resources of their families, as well as the characteristics and resources of the high schools they attend and the neighborhoods and states in which they live.

To reduce the stratification of college choice, we need a comprehensive approach[67] that ensures that students from low-income families have the:

1. **Financial resources required to pay college costs**. The costs of attending college include not only tuition and fees, but also the costs of room and board, books, and other supplies, the costs required to participate in campus life, and the opportunity cost of foregone earnings. For many students, the sticker price is reduced by some amount of financial aid. But, over time, the purchasing power of the Pell Grant has declined (Indicator 3b(ii)) and the costs of paying for higher education have been shifted to students and their families (Indicator 4a). Research suggests that robust need-based financial aid programs can increase the economic diversity of elite institutions by encouraging more high-achieving, low-income applicants who otherwise would not apply.[68]
2. **Academic preparation required for college-level work**. Both the availability of academically-rigorous coursework and participation in academically-rigorous coursework vary across schools. About 23 percent of 2009 graduates of public and private high schools in which no more than 25 percent of students were eligible for free or reduced-price lunch took calculus, compared with no more than 12 percent of graduates attending high schools with higher shares of low-income students.[69] Showing the same pattern, about half (49 percent) of 2009 graduates of public high schools in which no more than 25 percent of students were eligible for free or reduced-price lunch earned credits in dual enrollment, Advanced Placement, or International Baccalaureate courses,

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64 Dale, S., & Krueger, A. B. (2011). *Estimating the return to college selectivity over the career using administrative earnings data* (Working Paper No. 17159). Cambridge, MA: National Bureau of Economic Research. Retrieved from http://bit.ly/1M3tjga.

65 Hillman, N. W. (2014). College on credit: A multilevel analysis of student loan default. *Review of Higher Education*, 37, 169-195.

66 Perna, L. W. (2006). Studying college choice: A proposed conceptual model. In J. C. Smart (Ed.), *Higher Education: Handbook of theory and research, Vol. XXI* (pp. 99-157). Springer.

67 Perna, L. W., & Jones, A. (Eds., 2013). *The state of college access and completion: Improving college success for students from underrepresented groups*. New York, NY: Routledge.

68 Avery, C., Hoxby, C., Jackson, C., Burek, K., Poppe, G., & Raman, M. (2006). *Cost should be no barrier: An evaluation of the first year of Harvard's financial aid initiative* (Working Paper No. 12029). Cambridge, MA: National Bureau of Economic Research. Retrieved from http://bit.ly/1nJTb5i.

69 National Center for Education Statistics (2014). *Digest of Education Statistics 2013* (Table 225.40). Washington, DC: Author.

compared with only about a third of graduates of public high schools with higher shares of low-income students.[70] In recent years, upper-middle and upper-income families have been increasing their investments in their children's academic readiness, a pattern that will only further widen the gap in higher education opportunity and outcomes across demographic groups.[71]

3. **Knowledge of college choices, financial aid, and other aspects of the college-going process.** Research shows the positive relationship between the availability of high school counselors and four-year college enrollment rates.[72] But, at most high schools, and especially at high schools serving large shares of low-income students, counselors are not available to provide the needed assistance. The number of students per counselor **averaged** 553 at public elementary schools and 421 at public high schools nationwide in 2010-11.[73]

We must also do more to improve outcomes for students who enroll in college, especially those who enroll in less-selective four-year institutions, community colleges, and for-profit institutions. Students who enter these institutions must have effective:

1. **Opportunities to become ready for college-level work.** Although more students are taking the ACT and SAT, college-aspiring high school seniors are largely underprepared for college-level work as measured by the companies' college readiness standards.[74] Among recent high school graduates, only 42 percent met SAT's college- and career-readiness standards; only 28 percent of ACT test takers met college-readiness benchmarks on all four subject tests.

   Students who enter postsecondary institutions with weak academic skills often require developmental education. Among students who enter community colleges, approximately 60 percent enroll in at least one remedial course, and many more are assigned to remedial education but never enroll.[75] For students who are prescribed developmental education, the chance of successfully completing the assigned remediation sequence is low. In a national longitudinal study of 57 community colleges, only 46 percent of those assigned to reading remediation and 33 percent of those assigned to mathematics remediation completed their assigned sequence.[76]

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70 National Center for Education Statistics (2014). *Digest of Education Statistics 2013* (Table 225.60). Washington, DC: Author.

71 Reardon, S. F. (2011). The widening academic achievement gap between the rich and the poor: New evidence and possible explanations. In R. Murnane & G. Duncan (eds.) *Whither opportunity? Rising inequality and the uncertain life chances of low-income children*. New York, NY: Russell Sage Foundation Press; Weis, L., Cipollone, K., & Jenkins, H. (2014). Class warfare: *Class, race and college admissions in top-tier secondary schools*. Chicago, IL: University of Chicago Press.

72 Hurwitz, M., & Howell, J. (2013, February). *Measuring the impact of high school counselors on college enrollment* (Research Brief). Washington, DC: College Board Advocacy & Policy Center. Retrieved from http://bit.ly/1JmJjH9.

73 Clinedinst, M. E., Hurley, S. F., & Hawkins, D. A. (2013). *State of college admission 2013*. Washington, DC: National Association for College Admission Counselors.

74 Adams, C. J. (2015, September 9). ACT-SAT performance for 2015 graduates called 'disappointing'. *Education Week*, p. 4.

75 Bailey, T. (2009). Challenge and opportunity: Rethinking the role and function of developmental education in community college. New Directions for Community Colleges, 145, 11-30.

76 Bailey, T., Jeong, D. W., & Cho, S-W. (2010). Referral, enrollment, and completion in developmental education sequences in community college. Economic of Education Review, 29, 255-270.

Although research shows conflicting effects of remedial education on college outcomes,[77] institutions are exploring innovative practices to ensure student success for those assigned to developmental coursework. Mainstreaming students who place into remedial-level mathematics courses into credit-bearing mathematics courses with supplemental academic supports may improve course completion rates and allow "remedial" students to earn college credit.[78] Learning communities may also improve student outcomes. Under this model, a cohort of low-academic performing students is co-enrolled in a developmental course and additional courses such as a major-specific course or first-year experience course.[79] More comprehensive learning community models may incorporate integrated curricula, tutoring, and enhanced academic advising.

2. **Pathways that enable students to transfer** from one postsecondary educational institution to another without loss of credit. On average, low-income students are less likely than higher-income students to transfer from 2-year to 4-year institutions, and those who do transfer are less likely to attain a bachelor's degree.[80] Many states have legislated state- or system-level articulation agreements between 2-year and 4-year sectors, but a number of states continue to permit institutions to define their own transfer policies.[81] Some, but not all, states guarantee transfer of general education credits taken at 2-year intuitions within the same state.[82]

3. **Structures and programs that support students** as they navigate the academic, social, and other challenges that may limit college access, persistence, and completion. Even with the availability of sufficient financial aid and academic preparation, some students from low-income families may encounter difficulties. Research demonstrates the positive effects of TRIO programs on students' college-related outcomes.[83] Methodologically rigorous research studies conducted by Westat and Mathematica Policy Research show that: Student Support Services promotes persistence in college, college credit accrual, and college grades; Talent Search increases applications for financial aid and postsecondary enrollment; and Upward Bound Math-Science has positive effects on enrollment in selective four-year institutions and completion of a bachelor's degree in a math or science discipline.[84]

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77 Long, B. T., & Boatman, A. (2013). The role of remedial and developmental courses in access and persistence. In L. W. Perna & A. P. Jones (Eds.), *The state of college access and completion: Improving college success for students from underrepresented groups* (pp. 77-95). New York, NY: Routledge.

78 Logue, A. W., Watanabe-Rose, M., & Douglas, D. (2015). *Should students assessed as needing remedial mathematics take college-level quantitative courses instead? A randomized control tria*l. Paper presented at the annual fall conference of the Association for Public Policy Analysis & Management.

79 Bailey, T., & Cho, S-W. (2010). *Developmental education in community colleges* (Issue Brief). New York, NY: Community College Research Center. Retrieved from http://bit.ly/1RIMn6q.

80 Jenkins, D., & Fink, J. (2016). *Tracking transfer: New measures of institutional and state effectiveness in helping community college students attain bachelor's degrees*. New York, NY: Community College Research Center. Retrieved from http://bit.ly/1KnJTkX.

81 Roksa, J., & Keith, B. (2008). Credits, time, and attainment: Articulation policies and success after transfer. *Educational Evaluation and Policy Analysis*, 30(3), 236-254.

82 Education Commission of the States. (2014). *Transfer and articulation: All state profiles*. Retrieved from http://bit.ly/1pql7gq.

83 Maynard, R. A., Orosz, K., Andreason, S., Castillo, W., Harvill, E., Nguyen, H., Robertson-Kraft, C., & Tognatta, N. (2014, November). *A systematic review of the effects of college access programs on college readiness and enrollment*. Paper presented at the annual fall conference of the Association for Public Policy Analysis & Management.

84 The Pell Institute. (2009). *National studies find TRIO programs effective at increasing enrollment and graduation rates*. Washington, DC: Author. Retrieved from http://bit.ly/1KefKp4.

Ensuring that meaningful college choice is not merely a privilege of the most advantaged students requires commitment and action from multiple players and stakeholders. The federal government plays a role via the student financial aid, student support programs, and other initiatives created by the Higher Education Act of 1965, as amended over time and soon to be reauthorized again. State governments can promote college affordability (via policies pertaining to appropriations to institutions, financial aid to students, and tuition-setting policies), ensure that students can transition between K-12 and higher education institutions and between higher education institutions without loss of academic credit, and encourage the availability of high-quality postsecondary educational options.[85] Colleges and universities can promote outcomes for low-income students by controlling costs, awarding student financial aid based on financial need, and providing academic and other support services. K-12 schools play a role by ensuring the availability of and enrollment in academically-rigorous courses and providing information about and assistance with college-going processes throughout the educational pipeline.

The stratification of college choice illustrated in this *2016 Indicators Report* is the product of a complex, cumulative and longitudinal process that begins at an early age—arguably at (or even) before birth. To reduce this stratification and create meaningful college choice for low-income students, we need commitment from multiple stakeholders and a comprehensive approach that addresses the many systemic and structural forces that limit opportunity and outcomes for low-income students.

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

Eight Proposals to Help Inform Reauthorization of the Higher Education Act with a Focus on Financial Aid

By Tom Mortenson[86]

Pell Institute for the Study of Opportunity in Higher Education

The Higher Education Act is the federal law governing federal programs related to higher education. This includes financial aid programs that assist most college students to pay their college attendance costs and support services programs such as the federal TRIO and GEAR UP programs supporting increased higher education opportunity. This law was passed in 1965 and was subsequently reauthorized in 1968, 1972, 1976, 1980, 1986, 1992, 1998, and 2008 with new initiatives, changes, and adjustments in each reauthorization. Currently the Higher Education Act is due for reauthorization and issues are being reviewed by Congressional Committees. The reauthorization process presents an opportunity and an obligation to address the issues brought to our attention in this Indicators report concerning the barriers that continue to be faced by a growing share of college students. Specifically of major concern is that as family incomes decline, college costs continue to increase. Changes to the nation's economy and demography require a broad review of the purposes and effectiveness of federal student financial aid programs.

- *Since 1973 income has been redistributed according to educational attainment*. Those with the most education have prospered, while those with the least education have suffered.
- This is the Human Capital Economy. And in this environment higher education has become a key engine dividing Americans into those who have more and others who have less.
- *Increasingly in the 21st century this human capital economy has gone global*. The economic engine that has driven growth in the United States since 1973 is now driving economic growth and development worldwide. Economic development now hinges on human capital productivity and development.
- *Since 2000 family incomes have declined*. Median family incomes peaked in 2000 then declined slowly until the Great Recession in 2008 when they dropped sharply. Family income has not recovered from this drop.
- *Since 1980 states have been defunding public higher education*. The current state investment efforts are, on average, 55 percent of what they were in 1980. This has led public colleges and universities to raise tuitions to replace lost state operating support. The costs of higher education have been shifted by states from taxpayers to students and their families.

86 All views expressed in this essay are the sole responsibility of the author, and do not represent the position of the Pell Institute for the Study of Opportunity in Higher Education or the Alliance for Higher Education and Democracy of the University of Pennsylvania (PennAHEAD). This essay is adapted from the Postsecondary Education Opportunity Newsletter, "Thoughts on What the Data Tells Us that Can Help Inform Reauthorization of the Higher Education Act," 2016-1

- *Since the mid-1980s the federal government has shifted its financial aid focus away from need-based grants*. The shift has increasingly emphasized less needy and higher income students and families first through education loans and more recently through tax credits.
- *Since the early 2000s the United States has not kept pace* compared to other counties in the production of college graduates to drive their human capital economies. Other countries have learned from and implemented what we have forgotten and abandoned.
- *Educational debt has grown* to interfere with marriage, child bearing, and family housing production—life itself. We have reversed course: Instead of a country that invests in its future, we have become a country that takes from the future to support current wants.

Proposals for Reauthorization

We have been studying and reporting on college affordability since 1970—for the last 46 years. Our studies and reports have focused on the financial barriers faced by needy students including: unmet financial need, student work-loan burden, net price to families, the net price tax on family incomes, and the substitutability of loans for grants. We think we know what Congress and the President should do to address college affordability in this Reauthorization of the Higher Education Act. Here is what we propose:

1. $13,000 Pell Grant maximum Award
2. $2,000 Super Pell grant for students whose calculated family contribution is far less than zero
3. Joint federal-state partnership for financing Pell Grant Program
4. College work-study for all students
5. Income-contingent education loan repayment for all students with time limits
6. Lottery for admission at class exclusive colleges and universities requirement for continued eligibility for Title IV program participation and tax exempt status
7. Expansion of the TRIO/GEAR UP support services for low-income, first-generation students and students with disabilities to cover at least 20 percent of the eligible students per year
8. Rigorous program evaluation of all federal student financial aid programs, beginning with federal education tax credits

1. $13,000 Pell Grant Maximum Award

If today's Pell Grant maximum Award of $5,775 bought as much higher education today as it did in the late 1970s after it was created and when it was fully implemented, it would be about $13,000.[87] That is, it would cover about the same share of 4-year institutional charges as it did in the late 1970s. Increasing the Pell Grant maximum award to $13,000 would address the most serious financial barriers faced by students from the bottom half of family income, up to about $65,000 per year.

87 The Pell Grant maximum award would be $13,986 at a public 4-year institution, $9,173 at a public 2-year institution, and $13,159 at a private 4-year institution in 2014 to equal 1980 purchasing power. Purchasing power is measured by institutional charges for tuition and fees, and room and board.

2. *$2,000 Super Pell Grant*

When students apply for financial aid, they begin by filling out the Free Application for Federal Student Aid (FAFSA). The family income, assets, age, size, number in college and other information are used in a federal formula to calculate an Expected Family Contribution (EFC). If this EFC is calculated to be less than zero, it is reset to zero by policy choice and the negative EFC is ignored in further federal, state and institutional need analysis. When this calculated EFC falls below zero, this means that the family lacks resources to maintain itself at the low living standard used to protect family income from assignment to the EFC to help pay the student's costs of college attendance. In reality this also means that the student was often contributing to family support through earnings from employment prior to college. This responsibility to provide for one's family does not disappear when the student goes on to college. In one current study (Wisconsin) 40 percent of Pell Grant recipients reportedly sent money home to their families during the school year when they were away at college. On an anecdotal basis, this behavior is common knowledge among financial aid administrators.

Zeroing out a negative EFC is a policy choice that denies the reality of survival in families with very low incomes. It's a bad choice and should be repealed. The negative EFC calculated from FAFSA data should be retained and used to fund a Super Pell Grant that would be used by students at their discretion to send to their families or reduce their education loans. The amount of the Super Pell Grant should be equal to the negative EFC calculated from FAFSA data, or about $2000.

3. *Joint Federal-State Partnership for Financing Pell Grant Program*

Since the late 1970s the maximum Pell Grant has lost over half of its purchasing power due substantially to the pervasive and relentless defunding of public higher education by the states. Since about 1980 states have ratcheted downward their annual investment effort in higher education. By 2015 state appropriations for higher education as a share of state personal income averaged about 55 percent of what it had been 35 years earlier. If states had invested in public higher education in 2015 at the same rate they had in 1980 they would have appropriated $65.2 billion more than they did.

As states have reduced their funding for public higher education, state colleges and universities have raised their tuition and fee charges to students to offset their lost state funding support. Very few states have made any effort to alleviate the consequences on educational opportunity of this cost-shift on students from low, lower-middle, and now upper-middle income families with state funded need-based grants of their own. So the price of higher education goes up while family incomes are going down.

States have turned away from investing in higher education because the growth in federal student financial aid has allowed them to do so. This proposal seeks to re-engage the states in making their colleges and universities affordable for their own needy citizens. Beyond a certain basic federally funded Pell Grant, states should match the federal award on a dollar-for-dollar basis. While the details of this matching effort remain to be determined, we suggest that all increases in the Pell Grant maximum award beyond the current $5775 be funded on the matching grant basis of 50:50.

4. *College Work-Study for All Students*

Many decades of research on college-work-study programs have consistently demonstrated positive financial, employment and academic outcomes from college work-study programs. In moderation, college

work-study experiences encourage students to organize their time, introduce students to employer performance expectations, and helps integrate the student into the academic and social life of the institutional community. Work-study also produces paychecks that help students pay college attendance costs.

But there is a newer need for college work-study. Since the beginning of the Great Recession in 2008, the unemployment rate for first year college students has jumped substantially. According to data collected and reported by the Bureau of Labor Statistics,[88] between 1985 and 2007 the unemployment rate for college freshmen ranged between 6.0 percent (2000) and 14.4 percent (1992). Then in 2008 this rate reached 14.9 percent, then rose to a record high of 23.6 percent in 2009. By 2014 this had dropped back to 14.5 percent. The share of college freshmen who were employed that had ranged between 40 percent and 45 percent until 2006 thereafter declined to a low of 27.2 percent in 2013. Since 2006, college freshmen have encountered great difficulty finding jobs while enrolled in college. The employment problems of college freshmen also apply to recent high school dropouts and graduates who have not pursued college following high school departure. The job market for young adults has deteriorated sharply in the last decade and college graduates will need work experience to enter the adult labor market following college—if only to repay their education loan debts.

5. *Income-Contingent Education Loans in Repayment*

According to The Institute for College Access and Success (TICAS), in 2014 69 percent of college graduates had accumulated educational debt during their college years and their average debt was $28,950. A decade earlier in 2004 this share was 65 percent and their average debt was $18,550. Between 2004 and 2014 the share of graduates with educational debt rose by 4 percent and their average debt rose by $10,400. Student loan default rates are higher now than they have been in the past, although they have declined slightly since 2013. Since about 1980, the idea has proliferated that taking from the future to pay for the goods and services we consume today is somehow good public policy. While many previous generations of Americans did not require their children to borrow against their future incomes to finance their higher educations, the most recent generations have imposed that obligation on their children.

6. *Lottery for Admission to Class-Selective Colleges*

Many well-known and wealthy colleges and universities openly practice class-based college recruiting and admissions to enhance their revenues, wealth and ranking in U.S. News' annual college guide. At the same time they enjoy a wide and deep array of public financial benefits that support their private interests. We believe that these institutions are entitled to continue to pursue such private interests if they meet legal requirements. But we do not believe they should continue to receive public financial benefits for these activities.

When these tax benefits were enacted, higher education was one of several paths to economic advancement. Jobs in manufacturing paid well without higher education. In 1945 40.3 percent of all jobs in the United States were in goods-producing industries, such as manufacturing, agriculture, and natural resources. By 2010 this share had shrunk to 13.7 percent of all jobs. These jobs have been replaced with

88 http://www.bls.gov/schedule/archives/all_nr.htm#HSGEC

employment in service industries, which have grown from 59.7 percent of employment in 1945 to 86.3 percent by 2010. These industries include education and health care, professional and business services, financial activities, leisure and hospitality and other services. In these service industries the economy calls for more and higher levels of education and training. So higher education has transitioned from one of several portals to the middle class, increasingly, to the sole gatekeeper.

The metrics of the class-selective institutions stand in opposition to the aims and purposes of Title IV student financial aid programs specifically, and the tax-exemption benefits accorded social institutions that provide important social benefits. Title IV student financial aid program eligibility should be reserved for those institutions seriously engaged in recruiting, admitting, supporting, educating and graduating students who are at a disadvantage in their pursuit of opportunity for higher education. And tax exempt status should be restricted to those educational institutions pursuing broadened social inclusion in their recruiting, admission, retention and graduation programs.

For discussion purposes, we offer this proposal. Class-exclusive colleges would be defined as those with undergraduate enrollments of less than 25% Pell Grant recipients. To continue their eligibility for Title IV federal student financial aid programs these institutions would be required to admit a substantial portion of their entering freshmen on a lottery basis from a pool of open admission applicants. Continued eligibility for Title IV programs would be determined by their rates of success graduating these students compared to the graduation rates of the class-selective admissions process of the institution.

7. Setting Funding Targets for TRIO and GEAR UP of Serving at Least 20 Percent of Eligible Students

When Congress first authorized the TRIO programs under the HEA and established the first of the programs in 1965, they acknowledged that financial aid alone would not be enough to ensure college success for low-income, first generation, and students with disabilities, but that additional support services were also critical. Despite studies that have shown that participation in pre-college and college support services substantially increases low-income and first generation students' chances for success, funding levels have only ever been sufficient to serve a very small percentage of the eligible students in any given year. Estimates are that the less intensive pre-college programs (Talent Search and GEAR UP), reach about 4 to 9 percent of eligible students in any given year. The more intensive programs such as Upward Bound (UB) and Upward Bound Math Science (UBMS) reach about 2 percent of eligible low-income, first generation students. The college support programs, Student Support Services (SSS) and McNair programs, combined, serve about 4 percent of the number of students who receive Pell Grants each year. Moreover, the numbers of students served and funding in constant dollars have actually declined over the last decade—even as the numbers of low-income and first generation students have increased. A recent increase, in 2015 (the first of the 21st century) will not even restore the number of students served to the previous levels at the start of the decade.

This pattern of level or funding cuts, with very low percent of eligible low-income and first generation students served has led to missed opportunities for substantial numbers of students to help increase their chances for college access and success. As Indicator 5c has shown the bachelor's degree attainment rates for beginning postsecondary students who are low-income and first generation are about half (21 percent compared to 57 percent) the rates of those who are neither- low-income or first generation. There is a considerable body of evidence from evaluation studies that these programs

make a significant difference, and are often the deciding factor in college access and success for low-income, first-generation students and students with disabilities. Using data from the National Educational Longitudinal Study (NELS), a nationally representative sample of U.S. high school students in the 1990s, Horn and Chen found in correlational analysis that participation in pre-college programs doubled the odds for enrollment in a 4-year college after controlling for other factors known to be related to college entrance.[89] Similarly, studies of both Talent Search and Upward Bound have shown effectiveness.[90] The random assignment evaluation of Upward Bound (UB) found that participation in UB, the most intensive of the Federal pre-college programs, resulted in a 50 percent higher bachelor's 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. Comparisons of Student Support Services retention and completion rates likewise shows that substantially more SSS students are retained and complete college compared to the national averages. For example, among 2-year institutions 86 percent of SSS students were retained to second year compared with 65 percent of students from a national sample and 94 percent of SSS students beginning at 4-year institutions were retained compared with 79 percent for the national sample.[91]

8. *Rigorous Evaluation of All Financial Aid Programs*

The management of public monies and programs requires oversight. That oversight involves regular assessment of program performance relative to the purposes for which policies, programs and funding were created and provided. This requirement applies to financial aid programs—*all* financial aid programs and not just those that serve financially needy students.

In our experience the principle of program evaluation is applied only to government programs that serve poor people. These programs receive regular scrutiny by federal contractors such as MDRC and others that use random assignment and other credible methods to assess the effectiveness of programs.

But programs that serve affluent populations never receive such objective assessment. This omission is important because higher education largely serves affluent populations, and the amount of money the federal government provides to higher education goes largely to wealthy institutions and wealthy families—not to poor families and poor institutions. This federal largesse is provided in the form of tax breaks: charitable contributions, deductions, income tax credits, etc.

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89 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.

90 Cahalan M, (2009), *Addressing Study Error in the Random Assignment National Evaluation of Upward Bound: Do the Conclusions Change?*; can be accessed at http://www.pellinstitute.org/publications-Do_the_Conclusions_ Change_2009.shtml; Constantine J.M, Seftor N.S., Martin E.S., Silva T and Myers D, (2006), *A Study of the Effect of Talent Search on Secondary and Postsecondary Outcomes in Florida, Indiana, and Texas*, U.S. Department of Education; Cahalan, M.,(2003), *The National Evaluation of Talent Search*, *The Implementation of the Federal Talent Search Program: Past and Present*, U.S. Department of Education; Olsen, R, Seftor N, Silva T, Myers D, DesRoches D, and Young J,(2007) *Upward Bound Math Science: Program Description and Interim Impact Estimates*, U.S. Department of Education, Washington D.C., Mathematica Policy Research, Inc.

91 Zeiser, Kristina, Chan, Tsze, Heuer Ruth, Cominole, Melissa, (2015), *Persistence and Completion in Postsecondary Education of Participants in the TRIO Student Support Services Program*, U.S. Department of Education, August.

In the same spirit that federal programs that serve poor students are rigorously evaluated for effectiveness, federal programs that serve wealthy institutions and families should be rigorously evaluated for effectiveness. Anything less reveals a class-biased agenda in the guise of objective program evaluation.

Conclusions

The current reauthorization of the Higher Education Act and its financial aid programs provides a long overdue opportunity and imperative to address the extraordinary financial barriers faced by a majority of college students today. These barriers include unmet financial need, student work-loan burden, net price to family, net price tax on family income, and educational debt. These barriers have grown in depth and breadth to adversely affect student access, choice, persistence and completion. During 35 years of neglect, these financial barriers have been allowed to grow far beyond the resources of those children born into the lowest income families. These barriers are now adversely impacting a broad swath of middle income families, and even some from families that many people would consider almost affluent.

Financial barriers exist because not everyone has the family resources to pay college attendance costs. Not until family incomes reach about $95,000 does the Expected Family Contribution exceed Costs of Attendance at an average cost public 4-year college or university. Below this income level, students need financial aid to pay the remaining costs of college. And median family income for families with dependent members aged 18 to 24 years is now about $65,000.

The consequences of allowing these financial barriers to grow for decades are clearly apparent. In a global economy increasingly driven by college-educated workers, the United States is in free-fall in international comparisons of the production of college graduates. Between 2002 and 2012 the United States dropped from second to twelfth among the 35 industrial democracies of the world. At the current rate of decline the United States will rank about 19th by 2020.

The realities surrounding opportunity for higher education are clear, and compel a substantial revision to the financial aid programs authorized under Title IV of the Higher Education Act.

Congress schedules periodic reviews of the Higher Education Act to address the issues, problems and needs of targeted populations. Our proposals for this reauthorization address many of the most apparent and serious financial barriers students face in paying for college. Others, too, are making bold proposals for this reauthorization.

Congress will be judged by how effectively it addresses these challenges. The lives of today's children will either benefit or be damaged by the Congressional response.

Is Higher Education a Human Right or a Competitive Investment Commodity?

By Margaret Cahalan, Khadish Franklin, and Mika Yamashita[92]

Pell Institute for the Study of Opportunity in Higher Education

Introduction

As the Introduction to the *2016 Indicators Report* notes, in this period of recovery from the Great Recession and the upcoming 2016 Presidential elections, the concept of higher education as a basic human right has re-entered the national conversation.[93] This essay presents a discussion of the differences in policy stemming from views as to whether higher education is a civil or human right with associated public and private rights and responsibilities, or, in contrast, is a competitive investment consumer commodity with other associated rights and responsibilities. In the first part of the essay, we present an historical review of the development of the education as a human right perspective in the international context of the post-World War II period. We then review the more recent decades which have seen the rise of the new "knowledge-based human capital economy" in which higher education is more predominantly seen as a commodity subject to consumer protection rights. The second part of the essay focuses the identification of certain recent strains in the commodity investment perspective that have led to the recent re-emergence of human rights-based proposals calling for universal free higher education.

I. Historical Growth of Views that Higher Education is a Human Right in the United States and International Law in the Post World War II Period

While the "equality" of all citizens who possess "certain inalienable rights" forms the founding principle and purpose of the U.S. government as expressed in the Declaration of Independence,[94] education is not one of the rights specified in the U.S. Constitution or the Bill of Rights. Internationally, it was the growth of socialist thought in the 19th century that held that it was the task of the state to ensure the economic and social well-being of the community, and therefore individuals had claims to basic welfare services against the state. Education was viewed as one of these entitlements. Socialist ideals were included in the 1936 Soviet Constitution, which was the first constitution to specifically recognize the" right to education" with

92 All views expressed in this essay are the sole responsibility of the authors, and do not represent the position of the Pell Institute for the Study of Opportunity in Higher Education or the Alliance for Higher Education and Democracy of the University of Pennsylvania (PennAHEAD).

93 While not typically drawing the same policy conclusions, as Professor Diane Ravitch has noted, reformers and advocates from both the right and the left have identified issues around education as: "the civil rights issue of our times" http://dianeravitch.net/2015/06/01/the-civil-rights-issue-of-our-time-2/ Recently the conversation has come to include higher education with such questions being included in the presidential debates. For example, when asked about the topic in a Democratic primary debate, Presidential candidate B. Sanders stated, "I think what we need to do is say is yes, higher education should be a right."

94 *"We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the pursuit of Happiness.--That to secure these rights, Governments are instituted among Men, deriving their just powers from the consent of the governed,"* IN CONGRESS, July 4, 1776. The unanimous Declaration of the thirteen united States of America.

a corresponding obligation of the state to provide it. The constitution guaranteed free and compulsory education at all levels, a system of state scholarships and vocational training. Subsequently the right to education featured strongly in the constitutions of other socialist states. As Indicator 6 shows, today according to OECD statistics, the Russian Federation is among the leaders of the world in the education level of its citizens.[95]

In the United States, the origins of free public and eventually compulsory elementary and high school schooling stem from the "common school" idea of the 19th century, when the U.S. was primarily an agrarian immigrant nation. This concept was initiated as a practical policy promoting "all-inclusive schooling" to integrate children into the American way of life-- and as a promising means of promoting economic self-sufficiency, work opportunities in an increasingly urbanizing society, and the ability to fully participate in a democracy. However, as the U.N. Rapporteur noted in her 2002 report on the status of education as a human right in the United States, these "common schools" were not "all-inclusive" but had major exclusions based on race, gender, and economic status.[96]

The Proposed Second Bill of Rights of Franklin Roosevelt. In the 1940s, at a time when according to the U.S. decennial Census, only about 26 percent of Whites and 8 percent of Blacks over the age of 25 had attained a high school diploma and about 5 percent of Whites and 1 percent of Blacks had attained a bachelor's degree,[97] President Franklin Delano Roosevelt put forth his proposal for a "Second Bill of Rights" that included the right to "Education." This proposal grew out of the experience of the Great Depression and World War II, and was articulated in President Roosevelt's State of the Union Address on January 11, 1944.[98] The President argued that the "political rights" guaranteed by the U.S. Constitution and the Bill of Rights had "proved inadequate to assure us "equality" in the "pursuit of happiness." Roosevelt's remedy was to declare an "economic bill of rights" which would guarantee eight specific rights. Among these rights was the right to "a Good Education."

The eight interrelated rights were:

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

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95 Beiter, K.D. (2005). *The Protection of the Right to Education by International Law*. Martinus Nijhoff Publishers. ISBN 9789004147041.

96 Report submitted by Katarina Tomaševski, (2002), *Special Rapporteur Report on the Right to Education Mission to the United States of America.* 24 September-10 October 2001 E/CN.4/2002/60/Add.1, 17 January 2002. Retrieved from https://www.nesri.org/sites/default/files/Special_Rapporteur_Education_USA.pdf.

97 Separate data by race is available in 1940 only for the categories of Whites and Blacks. U.S. Census Population Division Census 2000 PHC-T-41. *A Half-Century of Learning: Historical Statistics on Educational Attainment in the United States, 1940 to 2000*.

98 This Second Bill of Rights speech of FDR is available at: https://www.youtube.com/watch?v=3EZ5bx9AyI4.

Post World War II International Declarations. President Roosevelt died in office in April 1945, before this proposal was considered in the U.S.; however, some of the ideas contained in his "Second Bill of Rights" were manifest in the United Nation's Universal Declaration of Human Rights (UDHR).[99] The UN Committee to draft the UDHR was chaired by Eleanor Roosevelt, who represented the U.S. She was the only woman of the group of nine committee members representing Lebanon, Russia, China, France, England, Canada, United States, Australia, and Chile. The UDHR was adopted in the UN General Assembly in 1948 and was followed by a number of related Covenants and Declarations that included the human right to education and that constitute the basis for protections affirmed today in international law:

- Article 26 of the Universal Declaration of Human Rights
- Articles 13 & 14 of the International Covenant on Economic Social and Cultural Rights
- Articles 28,29 & 40 of the Convention on the Rights of the Child
- Article 5 of Convention on the Elimination of All Forms of Racial Discrimination
- Articles 10 & 14 of Convention on the Elimination of All Forms of Discrimination Against Women
- Article 12 of American Declaration on the Rights and Duties of Man

The Civil Rights Movement in the United States of the 1950s and 1960s. In the civil rights movement of the post-World War II period, a major focus was on racial inequalities in education. The U.S. Supreme Court by its historic *Brown v. Board of Education of Topeka* judgment in 1954, ruled against the overt system of racially segregated public education and triggered the formal pursuit of integrated schooling in schools and colleges across the nation, but refrained from addressing the role of segregation based on parental socioeconomic status and poverty.

The Higher Education Act of 1965 (reauthorized in 1968, 1972, 1976, 1980, 1986, 1992, 1998, and 2008). Growing out of the civil rights movement and the "War on Poverty," the Higher Education Act of 1965 and subsequent re-authorizations have defined the structure of the federal student aid system and of the role of the federal government in supporting the extension of higher education to those who were regarded as "disadvantaged" by measures of family income, parent education, disability status, English Language Learner status, migrant status, homelessness, and, for certain programs, minority status. With regard to the student financial aid system that developed over the period, family income was to be the sole determining factor.

The HEA did not refer to higher education as a right, but the law did recognize that certain individuals who were underrepresented were at a "disadvantage" and did not have an equal opportunity for higher education. This legislation mandated that equal opportunity be fostered and that funding for what were called "disadvantaged" students be set in place at the federal levels. Higher education for those who had the interest and ability was regarded as a key part of the "War on Poverty." The extended opportunities for a college education were anticipated to be a major key to ending poverty and promoting full participation in the "Great Society" of President Johnson. The law affirmed the positive role of higher education for the well-being of individuals to fully participate in a democratic society, and to benefit the country. In this way the HEA recognized, as Amartya Sen has stated, "Poverty is not just a lack of money; it is not having the capability to

99 See http://www.un.org/en/universal-declaration-human-rights/.

realize one's full potential as a human being."[100] The HEA was also consistent with the social justice theory of thinkers such as John Rawls in its provision of benefits for those in the "original position" of unequal resources and opportunity in society.[101] It also allowed institutional choice for students, as federal aid was portable between institutions. The Federal Grants were to be awarded through higher education institutions based on individual students' free choice of the institutions they attended. As noted in the 2016 Indicators Report, the original intent of what came to be known as the "Pell Grants" was that the aid would be able to cover about 2/3 to 3/4 of the costs at public colleges and that low- income students could work a modest amount through programs such as "Work Study" to cover the remaining costs.[102] In the 1960s and 1970s, it was still possible to earn a good part of the needed college costs through summer jobs and a modest amount of work during the academic year.[103]

The U.S. Department of Education and the Search for Excellence—A Nation at Risk. The history of the U.S. Department of Education's (ED) initial and two subsequent mission statement revisions provides a good summary of the development of differing emphases by the various administrations since the late 1970s. Reflecting the civil right concerns with equal access to education of the 1960s and early 1970s, the first official mission of the newly recreated U.S. Department of Education in 1979 was simply stated as to *"ensure equal access to education."*[104] The first modification to the U.S. Department of Education's mission came after the publication during the Reagan Administration of the *Nation at Risk* in 1983. Authored by the National Commission on Excellence in Education, this report depicted a strong need for educational reform at all levels, with a special focus on preparation for college. Increases in educational achievement were to be accomplished by testing, rewarding success and penalizing failure. While provision of equality of opportunity was still espoused in the document, the educational performance of individual students, schools and school districts was not linked to parental education and income. The official mission of the U.S. Department of Education was subsequently changed to be *"to ensure equal access and foster excellence in education."*

Katarina Tomaševski, Special UN Rapporteur, critically summarizes the result of this focus on excellence in her report on the status of the right to education in the United States.

> Schools *(in the U.S.)* might have been enabled to tackle rather than merely reflect problems, were it not for the switch of attention from equality to excellence in the 1980s. Excellence has remained prioritized ever since... The previous common school ideal — free, public and all-inclusive education — was replaced by an emphasis on improving the performance of individual

100 Amartya Sen, retrieved from http://www.azquotes.com/author/13314-Amartya_Sen.

101 Rawls, J. (1971). *A Theory of Justice*. Cambridge, MA: Harvard University Press. https://www.uta.edu/philosophy/faculty/burgess jackson/A%20Theory%20of%20Justice%20%28Excerpts%29.pdf.

102 Mensel, F. (2013). "Birth of the Pell Grant: the Community College Role," *Reflections on Pell*. Washington, D.C.: Pell Institute for the Study of Opportunity in Education. http://www.pellinstitute.org/downloads/publications-Reflections_on_Pell_June_2013.pdf.

103 Eskow, R. Free Higher Education Is a Human Right, retrieved from https://www.facebook.com/sharer/sharer.php?u=http%3A%2F%2Fwww.huffingtonpost.com%2Frj-eskow%2Ffree-higher-education.

104 The first federal Department of Education was created in 1867, but in 1868 became the "Office of Education" without cabinet representation. The Department of Education as currently organized was created by the Department of Education Organization Act (Public Law 96-88) and signed into law by President Jimmy Carter on October 17, 1979, and it began operating on May 4, 1980.

schools and students, on finding alternatives to public schools rather than improving them. The goal of inclusiveness was displaced by selection and segregation.[105]

Focus on Achievement for Global Competitiveness. In the 1990s, Congress passed the *GOALS 2000: Educate America Act* under President Bill Clinton. The act set eight specific goals to be reached by the year 2000, including global preeminence in math and science, and the legislation provided "resources" to states and communities to ensure that all students "reach their full potential."[106] It was based on the premise of "outcomes-based education" that students will reach higher levels of achievement when more is expected of them.

As the 21st century began, the U.S. continued the focus on "excellence," now spoken of in terms of reducing the "academic achievement gaps" between various groups of students. These gaps were to be measured and reported annually as part of new accountability measures enacted in the 2002 reauthorization of the Elementary and Secondary Act known as *No Child Left Behind*. Districts and schools were required to develop plans for overall improvement in test scores and for reducing gaps among eight sub-groups (i.e., the five race/ethnicity groupings, disadvantaged economic status, disability status, and English Language Learner status).[107] These gaps were viewed as manifestations of inequity and as putting the U.S. at a disadvantage in the new knowledge economy. In 2005, during the Bush Administration, the ED mission statement was revised again to reflect an increased emphasis on academic achievement and global competitiveness levels. The current U.S. Department of Education's mission statement is to *"promote student achievement and preparation for global competitiveness by fostering educational excellence and ensuring equal access."*[108] The equal access mission considered so critical to individual and social well-being in the period of the 1960s and 1970s had been relegated to being a means to ensure global competitiveness.

Development of International Thinking on the Right to Education. While the U.S. has held back from the international binding Covenants affirming rights to education, within the international law community and the UN Councils the meaning of education as a human right continues to be articulated and discussed. While the meaning of these rights has been variously articulated, it is generally thought to imply that:

- The right to education is guaranteed legally for all without any discrimination
- States have the obligation to protect, respect and fulfil the right to education
- There are ways to hold States accountable for violations or deprivations of the right to education

While not a formal set of criteria, the fulfilment of the right to education has also been discussed by the UN Human Rights Council using what is known as the "4 As" framework, which asserts that for education

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105 Report submitted by Katarina Tomaševski, 2002, Special Rapporteur on the right to education Mission to the United States of America 24 September-10 October 2001 E/CN.4/2002/60/Add.1, 17 January 2002. Retrieved from https://www.nesri.org/sites/default/files/Special_Rapporteur_Education_USA.pdf.

106 A copy of this act is available on line at http://www2.ed.gov/legislation/GOALS2000/TheAct/index.html.

107 No Child Left Behind mandated that schools and districts reduce the test score gaps among these eight groupings and attain proficiency levels by 2014.

108 The current mission statement can be accessed at http://www2.ed.gov/about/overview/ mission/mission.html.

to be a meaningful right it must be *available, accessible, acceptable and adaptable.*[109]

In countries such as Britain, a binding party to the Covenants, the international legal rights to free higher education are emerging as a basis for challenging proposals by the government to raise tuition fees. As noted by Professor Gerladine van Bueren, an international law professor at the University of London, "International law regards a university education as a universal human right" and this could form the basis for a serious legal challenge to raising education fees.[110]

The European Student Union's basic position is that "the understanding of education as a public good and a public responsibility is a pre-requisite for equal access to education. Public responsibility in financing of HE and social services for students is a means of ensuring that access does not depend on the socioeconomic background of learners or their families."[111]

Growth of the Global Commodification of Higher Education

Concomitant with the growing perspective that education is a human right with associated rights and responsibilities, in recent decades, with the growth of the "knowledge economy" there has been the growth of the perspective that higher education is a consumer good in which individuals and societies invest for their futures. Commodification has been defined as the process by which "social domains and institutions, whose concern is not producing commodities in the narrower economic sense of goods for sale, come nevertheless to be organized and conceptualized in terms of commodity production, distribution and consumption."[112] In the commodification of higher education, institutions and their faculty members become defined in terms of their productive capacity.

In 2005, the European Student Union published a policy paper on the "Commodification of Education" in which the ESU both describes the process of commodification and re-affirms its contrasting view that education should continue to be addressed as a human right. It states:

> ESIB *(ESU)* believes that open access to all levels of education is the cornerstone of a socially, culturally and democratically inclusive society and a pre-requisite for individual development and well-being. However in the economic debate, which emphasizes the importance of the knowledge based economy, this definition of education is evermore contested and education has come to be understood solely as an economic factor rather than a tool for social development. In this context, Higher Education (HE) is perceived as a knowledge industry and Higher Education Institutions (HEIS) as service providers. Students are looked upon primarily as consumers

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109 http://www.right-to-education.org/node/226. Human Rights Council's panel discussion during the Universal Periodic Review. See more at: http://www.right-to-education.org/node/226#sthash.uFK4q4sx.dpuf. The 4 As framework was developed by the former UN Special Rapporteur on the Right to Education, Katarina Tomasevski, but is not necessarily the standard used in every international human rights instrument and hence not a generic guide to how the right to education is treated under national law.

110 Geraldine Van Bueren. (2013).If university education is a human right, high fees may be legally wrong. *The Times Higher Education*. Retrieved from https://www.timeshighereducation.com/if-university-education-is-a-human-right-high-fees-may-be-legally-wrong-argues-geraldine-van-bueren/2003391.article. Geraldine Van Bueren is a leading international human rights lawyer and one of the original drafters of the United Nations Convention on the Rights of the Child.

111 European Student Union, "Executive Committee Document BM64/Part7, Policy paper on public responsibility, governance and financing of higher education, " March 2013.

112 Fairclough, N. (1992). *Discourse and Social Change*. Cambridge, UK: Billings & Sons, as quoted in David F. Noble, 2002. "Technology and the Commodification of Higher Education". *Monthly Review*, Volume 53, Issue 10 (March).

> of education and human capital for the labor market. Students tend to focus less on active participation in higher education institutions. Many are choosing to focus only on preparation for the labor market and possibilities for maximizing personal financial returns upon graduation... This has also led to a decrease in cooperation and solidarity between individual students and an increase in unhealthy competition for the purpose of the fulfilment of personal aims. It is thus the increasingly commercialized way in which higher education is being dealt with that is referred to as 'commodification' of education.[113]

Growth in the U.S. of the Right to Know Accountability Regulations: HEA Consumer Information. Reflecting a commodification approach, the accountability provisions enacted by law and regulation since the 1990s have centered on "consumer right to know" information that is increasingly considered necessary for students to make informed choices about where to enroll in postsecondary education. These laws and regulations most resemble a consumer protection approach.[114]

The consumers are both the individual students making so called "informed choices" and the federal government representing the public taxpayers' "right to know." All institutions participating in Title IV programs must comply with the requirements. These requirements stem from the 1990 *Student Right to Know Act*, which covered postsecondary institutions' reporting obligations to the federal government and also specified information that must be made publicly available by all institutions to all prospective and enrolled students. Subsequently, the specific information required has been renewed and more requirements added. Currently, institutions are required to report consumer information on: the cost of attendance, net price of attendance, financial assistance available, requirements for grants and loans, academic programs, special facilities for students with disabilities, privacy safeguards, campus crime and drug use rates, accreditation information, completion and graduation rates, transfer rates, standards for satisfactory progress, and if applicable, follow an equity in athletics disclosure act requirement.[115]

The new College Score Card, mandated by Congress and developed by the Department of Education and released by the Obama Administration in 2015, focuses on identifying colleges that are considered the "best buys" or investments based upon available "outcome" data. The Score Card has carried the provision of consumer choice information for college to a new level of technological efficiency, but the validity of the comparisons has been questioned.[116]

II. Strains in the Current U.S. System and Implications of the Reemergence of Education as a Human Right for the Future

In this final section, we briefly identify some of the strains in the recent experiences in the United States that have led many to question the sustainability and fairness of applying the commodity investment

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113 http://www.esu-online.org/news/article/6064/90 2005 Policy Paper "Commodification of Education" Published: 24 Mar 2011 10:26, Last updated: 28 Mar 2011 14:14 s.

114 http://counsel.cua.edu/fedlaw/studentknow.cfm provides a good summary of student right to know laws and regulations.

115 National Postsecondary Education Cooperative (NPEC) 2009, Information Required to be Disclosed Under the Higher Education Act of 1965: Suggestions for Dissemination. This includes a summary of disclosure requirements in the HEA (as amended by the Higher Education Opportunity Act of 2008).

116 http://www.sfchronicle.com/opinion/editorials/article/Obama-s-new-college-rankings-are-a-good-start-6504306.php. The website, https://collegescorecard.ed.gov, offers the public a quick, easy way to learn about institutions' annual costs, graduation rates and median earnings after graduation.

model to higher education. These strains have led to a re-introduction of consideration of higher education as a human right entitlement to which all citizens have equal access. More reflection is needed on what changes would be needed to realize a system where each citizen regardless of family income or academic merit was entitled to a higher education designed to fully develop their capacity to participate in gainful employment, civic responsibilities, and the "pursuit of happiness" for their own well-being and that of the common good.

Among the "strains in the system" and areas of current concern are:

- **The student debt-crisis.** As the *2016 Indicators Report* shows, using NPSAS:12 data, about 70 percent of those graduating with a bachelor's degree had student loan debt and the average debt was about $30,000. Those receiving Pell Grants, despite choosing to attend lower cost colleges on average, had more debt than those not receiving Federal Grants. This debt totaled about 1.3 trillion in 2014. Given the state disinvestment in public higher education, this troubling trend is likely to continue.
- **Lack of control of availability of employment in specific areas of study; the vulnerability of different generations to the economic downturn cycles that may impact their whole lives.**[117]
    - **The high levels of unemployment and underemployment of youth who have attained bachelor's degrees while saddled with large debts.** When higher education is viewed as an investment commodity and as a consumer choice for students and for society, the expectations are that it will consistently yield personal and societal benefits that justify the expenditures, both private and public. Within the U.S. context, college students are told that they will get good jobs upon completion and thus be able to pay off student loans. The experiences of the past decade with the Great Recession and unrelenting increases in college costs at the same time that incomes have been stagnating has led to a rethinking of the current financial aid models.
    - **The unemployment rate that remains high, particularly among recent college graduates.** The Economic Policy Institute (EPI) reported that among college graduates who are between 21 and 24 years old, the unemployment rate between April 2014 and March 2015 was 7.2 percent.[118]
    - **Wages for college graduates that continue to stagnate.** According to EPI's data, the real (inflation-adjusted) wages of young college graduates who are between 21 and 24 years old with a college degree declined 2.5 percent from 2000 to 2015, from $18.41 to $17.94.
    - **Uncertain long-term outlook for jobs.** A 2014 study by the Federal Reserve Bank of New York concluded that over the past two decades, 33 percent of college graduates are underemployed, meaning they hold a job that does not require a college degree. However, among those underemployed college graduates, good paying jobs have been in decline over the decade. The researchers conclude: "the job prospects for recent college graduates have worsened, even though the high rate of underemployment over the past few years is comparable to the level seen in the early 1990s. Among those recent college graduates who

117 Morgan, J.M. and Hoshijima, T. (2011). *Including More Student Voices in Higher Education Policymaking: Rising Tuitions and Student Debts Mean Rising Stakes for College Students*. Washington, D.C: Center for American Progress.

118 Davis, A. , Kimball, W. & Gould, E. (2015). The Class of 2015: Despite an improving economy, youth grads still face an uphill climb." *Economic Policy Institute Briefing Paper* # 401. Retrieved from http://www.epi.org/publication/the-class-of-2015/.

are underemployed, more are working part time or in low wage jobs since 2000, while fewer are working in good non-college jobs. **It is likely that close to half of the college degree completers will not find a job that requires college degree and more students will end up with low-paying jobs despite the high amount of student loan they had to repay."**[119]

- **The concerns of the non-completers.** As the *2016 Indicators Report* shows, low-income and first-generation students are much less likely to attain a bachelor's degree than students who are more advantaged. These students have a higher probability of defaulting on their loans. The economic downturns hit lower income students the hardest.

- **Higher rates of growth by other countries in educational attainment over the recent decades.** Countries that have taken different approaches than the U.S. have had markedly greater rates of increase in higher education attainment over the past few decades and have now surpassed the United States in college attainment levels of their citizens[120]
- **Lower social mobility in the United States than similarly developed countries.** A recent OECD study comparing educational attainment among more than 25 highly developed countries found that the United States was characterized by both "high inequality" and "low intergenerational mobility."[121]
- **Negative health impacts of over-competitiveness becoming apparent.** Competition among students once thought to increase overall achievement has many negative health consequences for students from all social sectors and this has led to a reaction among middle class parents manifest in movements such as the Race to No Where.[122] The competitive creation of winners and losers at all levels of education, but especially with regard to college (entrance into college and in grading system once enrolled) creates unhealthful conditions for learning.
- **The overly complex "College Choice" and financial aid system.** There is a recognition that there is a need for a much simpler financial aid system and not just a simplification of the FASFA form.[123]
- **Decline in levels of public support.** This decline is reflected in the erosion of state funding and the erosion of percent of college costs that can be covered by Federal Grants from about covering 2/3 of the cost to about one-quarter of the costs.
- **Excessive work hours needed to meet costs increasingly recognized as a barrier to completion and student success.** The rising cost of college, combined with the decline in grant aid coverage, has created increased levels of work hours which students cite as the major reason for leaving without completion.[124]

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119 Abel, J. R & Deitz, R., Su, Y. (2014). Are recent college graduates finding good jobs? *Current Issues in Economics and Finance.* 20 (1). Federal Reserve Bank of New York.

120 OECD (2013 and 2014) *Education at a Glance*; Strehl, F., S. Reisinger and M. Kalatschan (2007). Funding Systems and their Effects on Higher Education Systems, *OECD Education Working Papers*, No. 6, OECD. Publishing. http://dx.doi.org/10.1787/220244801417.

121 Ibid.

122 Race to Nowhere,(2010). *Beyond Measure*, 2015. http://www.racetonowhere.com/; Wilkinson, R. and Pickett, K. (2007)."The Problem of Relative Deprivation: Why Some Societies Do Better than Others," in *Social Science and Medicine*, 65 :(9); Wilkinson, R. and Pickett, K. (2009). *The Spirit Level*. New York: Bloomsbury Press.

123 Gale, T. and Parker, S., (2014). "Widening Participation in Australian Higher Education," Report submitted to HEFCE and OFFA October 2013. Young Invincibles, IHEP, NASFAA, HCM Strategists, New America Foundation, *Automatic for the Borrower: How Repayment Based on Income Can Reduce Loan Defaults*, https://www.ced.org/pdf/Automatic_for_the_Borrower.pdf.

124 Carnevale, A.P. et al.(2014). *Learning While Earning: The New Normal*. Georgetown Center on Education and the Workforce. Retrieved from https://cew.georgetown.edu/wp-content/uploads/Working-Learners_10_5_15.pdf I; Laura W. Perna,., ed., Understanding the Working College Student: New Research and Its Implications for Policy and Practice. Sterling, Va.: Stylus Publishing. With Their Whole Lives Ahead of Them. Retrieved from http://www.publicagenda.org/pages/with-their-whole-lives-ahead-of-them-reality-1.

- **The growth of performance-based measures in Pell** such as the 2010 Satisfactory Academic Progress (SAP) regulations that result in students unable to make quick progress losing their Pell Grants.[125]
- **Questioning the legitimacy of the merit-based admission system.** Increasing stratification of resources based on the system with market-driven costs has resulted in a tiered system overtly based on "merit," which serves as a proxy for social class.[126] Universities were once held out as a fulfillment of America's promise of equal opportunity, serving as drivers of social mobility and democratic ideals. Some argue that instead, these institutions "are functioning to select and privilege elite individuals rather than create learning communities geared to advance democratic societies."

All of these factors have led to a resurgence of the perspective that higher education should be considered an equally accessible human right rather than a consumer investment commodity. It remains to be seen whether any of the proposals for universal free public higher education will be enacted. As Richard Eskow has noted in his essay arguing that the time has come for free universal college:

> But the American educational tradition has never been strictly utilitarian. Public institutions of higher learning shouldn't exist merely to provide free employee training for the private sector. Colleges and universities must also produce the musicians, writers, philosophers, scientists, and visionaries of tomorrow. We must stay true to the vision of educational philosophers like John Dewey, who recognized that the primary purpose of education at all levels is to produce fully-realized citizens in a democratic society. The ability to participate fully in all aspects of democratic life has always been the American dream. Free higher education is essential to realizing that dream, and it's an idea whose time has come.[127]

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125 Schudde, L. and 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, A CAPSEE Working Paper. New York: Community College Research Center Teachers College, Columbia University; Advisory Committee on Student Financial Assistance, "The Rising Price of Inequality"(Washington, DC: 2010). Retrieved on October 29, 2011 from http://www2.ed.gov/about/bdscomm/list/acsfa/acsfarpijune2010.pdf.

126 Guinier, L. (2015). *The Tyranny of the Meritocracy: Democratizing Higher Education in America*. Boston: Beacon Press. Botstein, L. (2003). The Merit Myth. *The New York Times*. Retrieved from http://www.nytimes.com/2003/01/14/opinion/the-merit-myth.html.

127 Eskow, R.J. op. cit.

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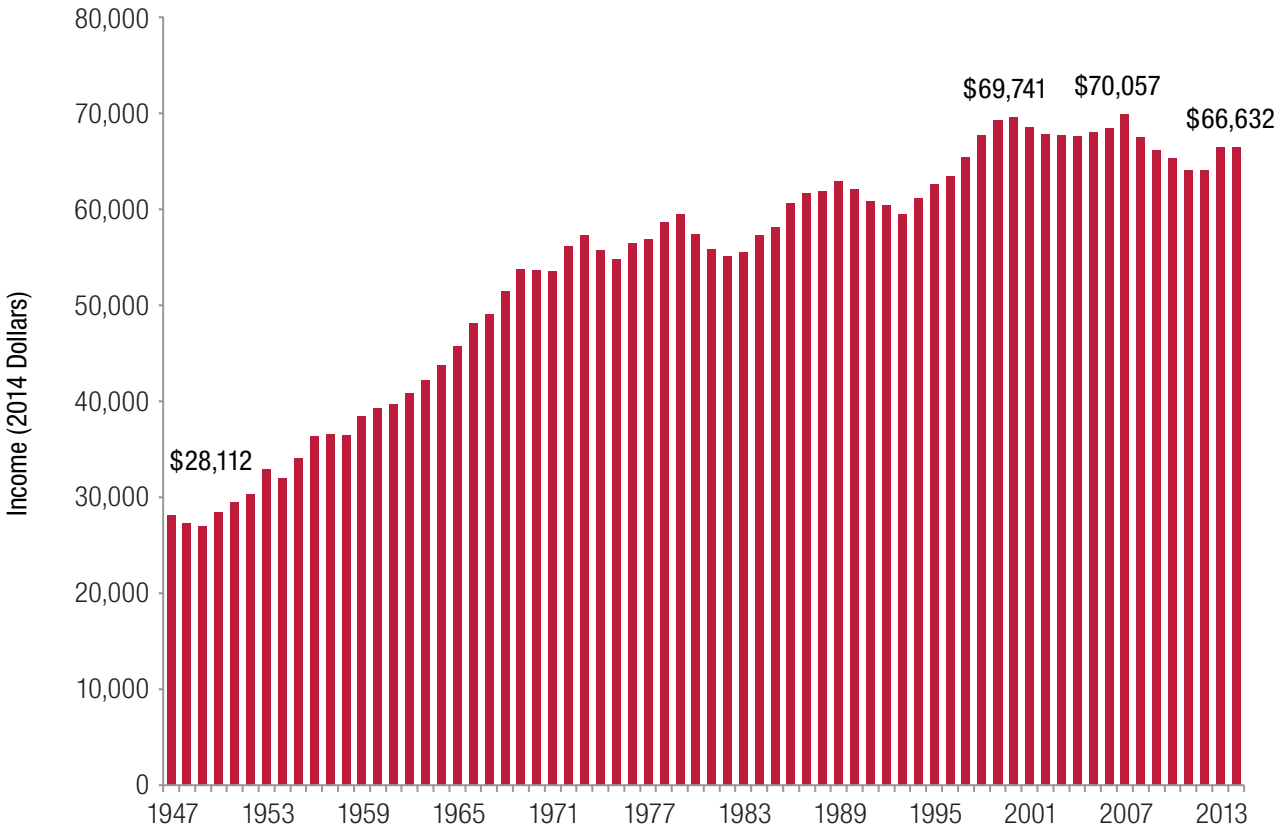
Appendix A: Additional Methodological Notes and Tables

This Appendix includes additional methodological notes and tables not included in the report body. Notes and tables are ordered under the headings of the sections in which the notes and tables are first referenced.

Introduction and Setting the Stage

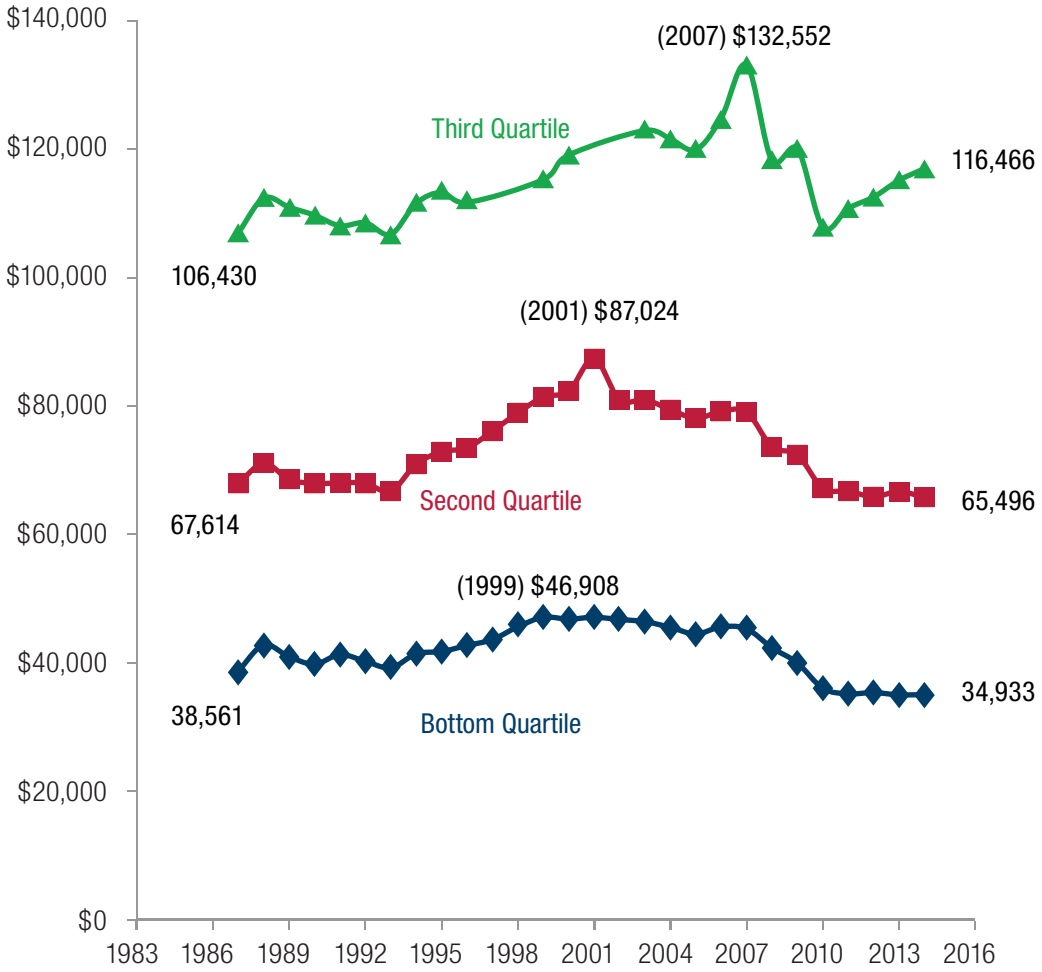
- **Figure 5:** The Integrated Postsecondary Education Data System (IPEDS) is the primary data source used to create Figure 5. We used two IPEDS survey components to construct the figure: Institutional Characteristics (IC) and Fall Enrollment (EF) (https://nces.ed.gov/ipeds/resource/survey_components.asp). The enrollment variable represents all enrolled undergraduate students, including those at the baccalaureate level and below (e.g., associate's and short-term certificate programs) and part-time and non-degree-seeking students from all postsecondary institutions reporting to IPEDS. We merged the IPEDS data with the Barron's Admissions Competitive Index dataset (http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2010331). "Selectivity" measures reflect Barron's 2004 rankings. We augmented Barron's classification system by adding categories for 4-year institutions that are not ranked by Barron's, 2-year or less degree-granting institutions (both public and private not-for-profit control), and for-profit institutions in all sectors. We used the same "selectivity" classification system for Indicator 2e.
- **Additional Referenced Tables:** Table A-1 shows the median family income from 1947 to 2014, in 2014 dollars, and Table A-2 shows the upper limits of each family income quartile in constant 2013 dollars from 1987 to 2013.

Appendix Table A-1: Median family income in 2014 dollars: 1947 to 2014



SOURCE: U.S. Census Bureau, Current Population Survey.
Retrieved from http://www.census.gov/hhes/www/income/data/historical/families/ Compiled by Tom Mortenson.

Appendix Table A-2: Upper limits for the bottom, second, and third family income quartiles: 1987 to 2014



NOTE: Upper family income limits of the quartiles in constant 2013 dollars using CPI-U-RS. The upper limit of the third quartile is the minimum for the top quartile.

SOURCE: U.S. Census Bureau, CPS data http://www.census.gov/hhes/www/income/data/historical/families/ compiled by Tom Mortenson.

Equity Indicator 2: What Type of Postsecondary Education 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: the National Longitudinal Study of 1972 (NLS), the High School and Beyond Study of 1980 (HS&B), the National Education Longitudinal Study of 1988 (NELS), and the Education Longitudinal Study of 2002 (ELS). In their analyses of all four surveys, the authors examined only students who were seniors in the specified year and graduated within 1.5 years of their expected high school graduation year. For more detailed explanation of dataset construction and analytic methodology, see Bastedo and Jaquette (2011). Table A-3 shows Table 6 from the article's online appendix: SES representation in each category of institutional destinations (row percentages). We used these data to construct Indicator 2d. Table A-4 shows Table 3 from the body of the article: distribution of students in each SES quartile across different categories of institutions (column percentages).

Appendix Table A-3: SES representation in each institutional destination (row percentages) by cohort

Appendix Table 6. SES representation of each institutional destination (row percentages), by cohort

	1972				1982			
SES Quartile	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% **
	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 test

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 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. Reprinted by permission from Sage Publishing Copyright Clearance Center.

Appendix Table A-4: Distribution of students in each SES quartile across institutional destinations by cohort (column percentages)

TABLE 3

Institutional Destination by Cohort (Column Percentages), by SES Quartile, "Weighted SES" Sample

	SES Quartile 1				SES Quartile 2			
	1972 (%)	1982 (%)	1992 (%)	2004 (%)	1972 (%)	1982 (%)	1992 (%)	2004 (%)
No PSE	63.2	57.6***	48.2***	37.6***	52.3	41.9***	31.8***	25.8***
2yr/LT 2yr (pub)	14.2	19.9***	25.8***	31.5***	18.1	26.2***	31.5***	33.1
2yr/LT 2yr (priv)	4.7	6.2**	3.8***	3.9	5.2	6.7**	3.7***	3.8
Noncompetitive	6.9	6.8	6.9	11.2***	8.1	7.7	10.1***	13.5***
Competitive	6.5	5.5	9.0***	11.1**	9.8	11.3*	15.0***	15.2
Very competitive	3.1	3.1	4.3**	3.3*	4.6	4.1	5.6**	6.3
Highly competitive	0.9	0.5	1.1**	1.0	1.3	1.2	1.9*	1.7
Most competitive	0.4	0.3	0.8**	0.5	0.6	0.9	0.4*	0.8
	SES Quartile 3				SES Quartile 4			
	1972 (%)	1982 (%)	1992 (%)	2004 (%)	1972 (%)	1982 (%)	1992 (%)	2004 (%)
No PSE	40.3	27.6***	21.8***	14.7***	18.6	12.9***	9.5***	5.7***
2yr/LT 2yr (pub)	20.3	28.9***	26.9	30.3**	18.8	23.7***	15.3***	18.5***
2yr/LT 2yr (priv)	7.2	6.2	2.6***	3.0	4.3	3.0**	2.2*	0.9***
Noncompetitive	9.2	10.2	13.8***	14.4	11.7	10.4	11.1	12.3
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. Reprinted by permission from Sage Publishing Copyright Clearance Center.

- **Indicator 2e:** The Integrated Postsecondary Education Data System (IPEDS) is the primary data source for this Indicator. This Indicator is constructed by merging the Institutional Characteristics (IC) and Student Financial Aid (SFA) IPEDS survey components (https://nces.ed.gov/ipeds/resource/survey_components.asp). This Indicator tracks the percent of undergraduate students who receive any Federal Grant by institution each academic year from 1999-2000 to 2012-2013, the most current year of SFA data. The values reported in Indicator 2e represent the average percent of undergraduates who receive Federal Grants by institutional selectivity.

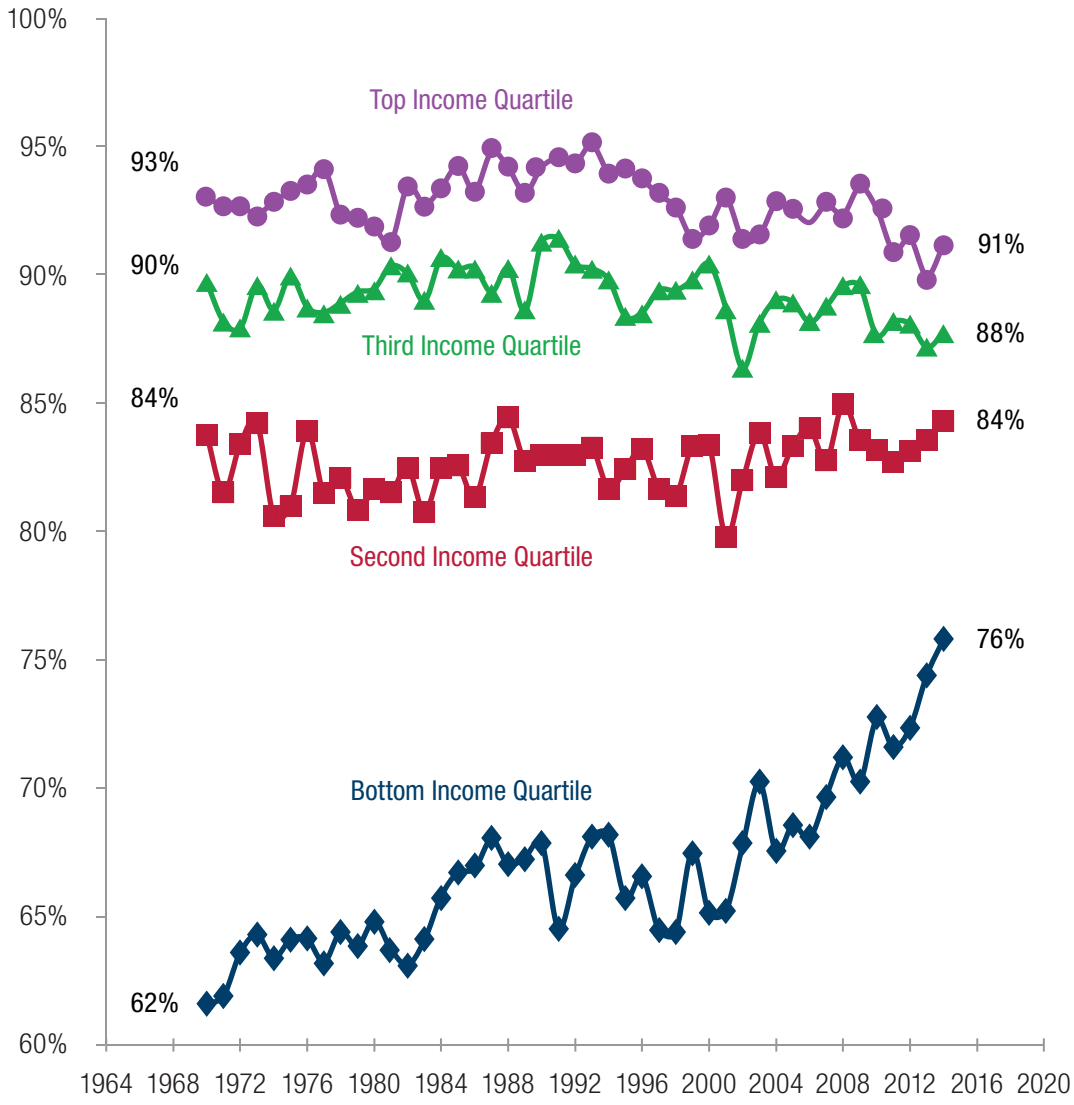
Equity Indicator 4: How Do Students in the United States Pay for College?

- **Indicator 4a:** Data for this Indicator come from the Bureau of Economic Analysis, National Income and Product Accounts (NIPA) data tables. (http://bea.gov/iTable/iTable.cfm?ReqID=9&step=1#reqid=9&step=1&isuri=1). NIPA data are continually updated and revised; Figure 4a reflects data reported in December 2015.

Equity Indicator 5: How Does Bachelor's Degree Attainment Vary by Family Characteristics?

- Bachelor's degree attainment is only possible for those who graduate from high school. Table A-5 shows that, despite the rise in high school graduation rates for those in the bottom income quartile especially over the past decade, high school graduation continue to vary by family income. Appendix Table A-5 is based on Current Population Survey (CPS) as published yearly by BLS. We include this data here because high school graduation is necessary for college degree attainment

Appendix Table A-5: High school graduation rates by family income quartile for dependent 18- to 24-year-olds: 1970 to 2014



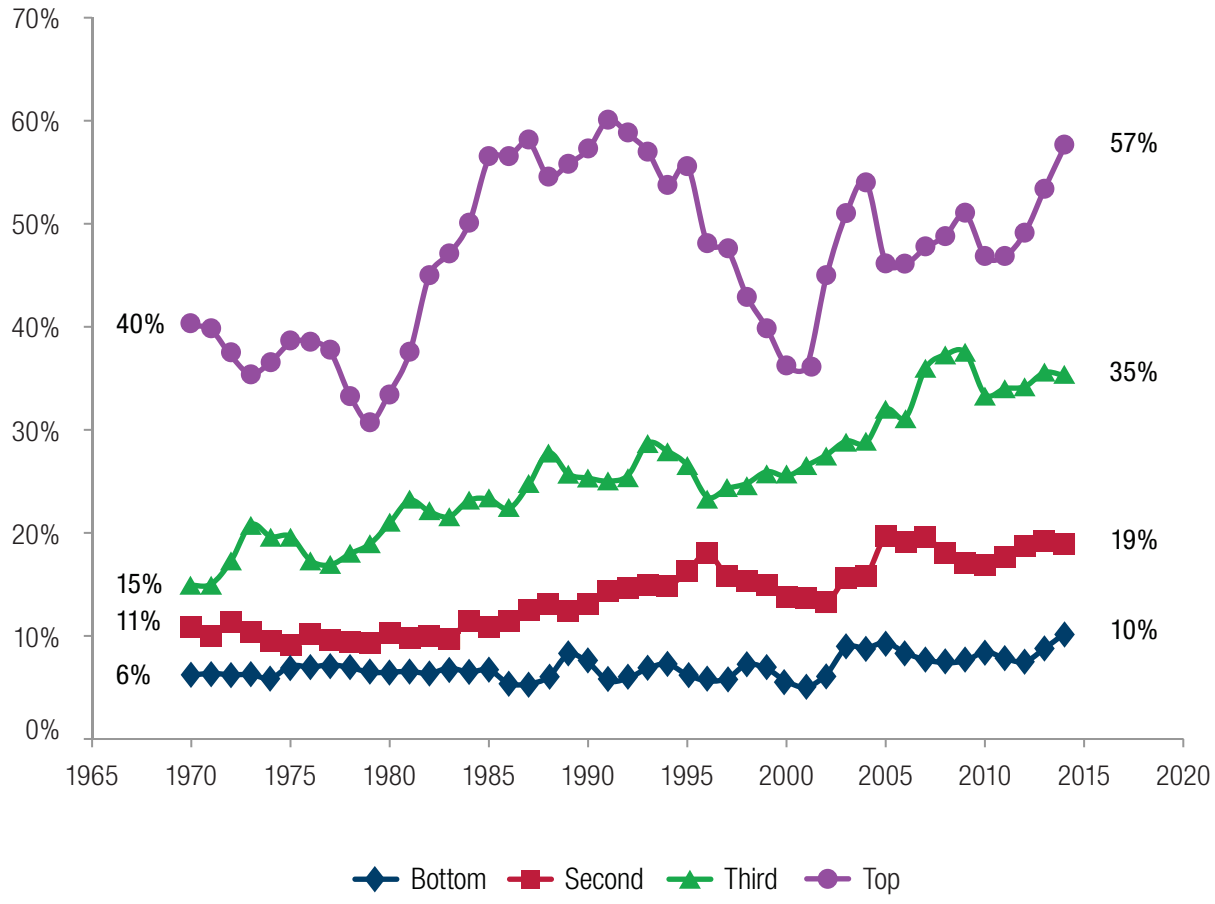
SOURCE: U.S. Census Bureau, CPS data as reported by BLS. Compiled by Tom Mortenson.

- **Equity Indicator 5a-5d.** We report multiple measures for Indicator 5, given concerns about the limitations of relying on the annual CPS data for estimating degree attainment rates. Although the CPS data is the only available annual source of data, the data have important limitations and caution is needed in interpreting the results. The CPS data are cross-sectional and include only individuals who were considered "primary dependent family members" 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. For this reason, the *2016 Indicators Report* also presents estimates of bachelor's degree attainment from the NCES high school and beginning postsecondary longitudinal studies that include all members of a cohort. We also use IPEDS completions data on the distribution of bachelor's degrees by race/ethnicity.

  For the reasons noted above, we use CPS data to report the "distribution" of bachelor's degrees by family income quartile from 1970 to 2014 in Indicator 5a rather than attainment rates by family income by age 24 (as in Indicator 5a in the 2015 report). Because of the strong positive relationships among family income, dependency status, and degree attainment, CPS data published in the *2015 Indicator Report* likely over-estimated bachelor's degree attainment for the top income quartile

  Table A-6 shows revised estimates of CPS-based attainment rates that attempt to account for these issues. In addition to using the HS&B (1980 high school sophomores), we adjusted data from CPS using estimates of bachelor's degree attainment rates by SES quartile from the more recently completed high school longitudinal studies NELS (1988 eighth graders) and ELS (2002 sophomores). Using data from these additional longitudinal surveys resulted in little change in the our 2015 CPS based estimates for the bottom, second, and third income quartiles but reduced the CPS based estimates of bachelor's degree attainment for the top quartile. Caution is needed in using these adjusted CPS estimates given the many underlying assumptions.

Appendix Table A-6: Revised estimates of bachelor's degree attainment by age 24 for dependent family members by family income quartile: 1970 to 2014



NOTE: Based on three-year average using constant factors derived from HS&B, NELS, and ELS combined with the CPS data. These estimates represent a revision of the estimates published in the *2015 Indicators Report*.

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

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