

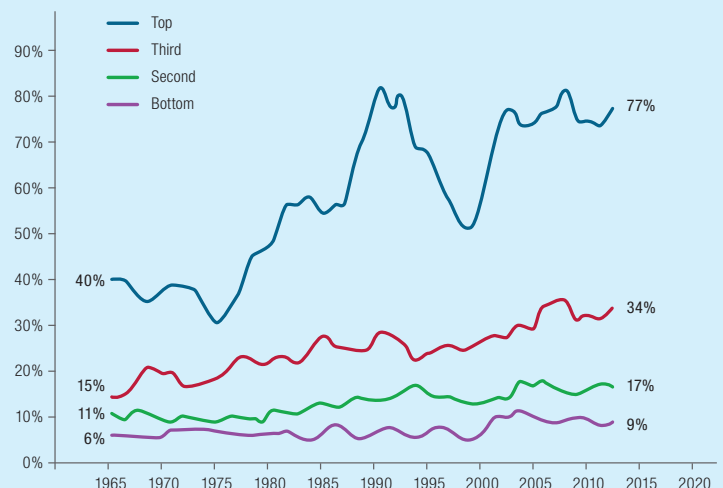
# INDICATORS

## OF HIGHER EDUCATION EQUITY IN THE UNITED STATES



**45 YEAR  
TREND REPORT  
2015**

**Bachelor's degree attainment by age 24  
for dependent family members by family  
income quartile: 1970-2013**



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

# **The Pell Institute for the Study of Opportunity in Higher Education**

conducts and disseminates research and policy analysis to encourage policymakers, educators and the public to improve educational opportunities and outcomes of low-income, first generation, and disabled college students. 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 promoting the public purposes of higher education in fostering open, equitable, and democratic societies. Located within the Graduate School of Education, PennAHEAD conducts original research and applies a multidisciplinary, research-based approach to addressing the most pressing issues regarding the societal contributions of higher education in the United States and the world. PennAHEAD also draws on research to improve institutional practice and public policy by offering technical assistance and professional development activities.

[www.ahead-penn.org](http://www.ahead-penn.org)

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# SPECIAL DEDICATION

## ARNOLD MITCHEM & TOM MORTENSON

This 2015 *Indicators of Higher Education Equity in the United States* 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 the cause of greater equity in educational opportunity in the United States. With this volume and by beginning the *Equity of Postsecondary Opportunity Shared Dialogues* on how to reduce this inequity, we honor the legacy of your work and the seeds you have sown for increased equity of opportunity in the United States.

# ACKNOWLEDGEMENTS

This report was co-authored by Margaret Cahalan and Laura Perna with support from Brittany Ross, Khadish Franklin, Mika Yamashita, and Roman Ruiz. Beth Hogan, Jodi Koehn-Pike, Maureen Hoyler, also provided support and feedback while the report was in process.

Many persons and organizations have contributed and made this work possible. This 2015 report owes much to the work of Colleen O'Brien, former Director of the Pell Institute, and author of the 2004 and 2005 Indicators reports and to Jennifer Engle, former Pell Research Analyst, who provided analytic support for the earlier reports. Much of the trend data presented in this 2015 Indicators Report was originally compiled by Tom Mortenson, Senior Scholar at the Pell Institute, for the inclusion in the *Postsecondary Education Opportunity Newsletter*. We also acknowledge the teams of US government and contractor statisticians, data collectors, and data processors that have painstakingly used their technical expertise over many years to produce the comparable estimates included in this 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 the past and present government and contractor staff from the National Postsecondary Student Aid Study (NPSAS), and Integrated Postsecondary Education Data Systems (IPEDS) of the National Center for Education Statistics (NCES).

We heartily acknowledge the efforts of these individuals and groups and recognize that they are not responsible for any errors of omission or interpretation contained in this report.



The Pell Institute and PennAHEAD would like to thank the Travelers Foundation for their financial support of the 2015 *Indicators of Higher Education Equity in the United States* report and the accompanying *Search for Solutions Shared Dialogues*. While we heartily acknowledge the support of Travelers, any errors of omission or interpretation and the opinions expressed in the report are the sole responsibility of the authors.

Given that today's students are tomorrow's workforce, education is a primary focus of Travelers' giving. Travelers supports initiatives that improve academic and career success for underrepresented youth, specifically targeted at public school children in grades five through 12, as well as those in transition to post-secondary education and in the post-secondary learning environment. Through these efforts, Travelers will better address community and corporate needs for a skilled workforce, sustained economies, and better quality of life.

# 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*. The current 2015 publication, *Indicators of Higher Education Equity in the United States*, directly follows on this earlier effort. This publication brings together in partnership, the Pell Institute with the Alliance for Higher Education and Democracy (AHEAD) of University of Pennsylvania. Both organizations have a core mission to promote a more open, equitable, and democratic higher education system within the United States. The Pell Institute has a special mission to promote more equitable opportunity for low-income, first generation, and students with disabilities.

**Purpose of the Indicators of Higher Education Equity report.** The purposes of this indicator 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 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 attainment.

**Focus on Income-Related Inequities.** The comparisons in *Indicators of Higher Education Equity* focus on differences based on measures of family income. Both the Pell Institute and AHEAD recognize the need to also address inequity based on other demographic characteristics, such as first-generation college status, race/ethnicity, and disabilities status. While for conceptual clarity, only family income is considered in this, the first edition of the 2015 Equity Indicators report, we hope to address these important concerns in future editions.

**The Shared Search for Solutions Dialogues.** This report is written to inform the conversation about high 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 Alliance for Higher Education and Democracy (AHEAD) have prepared reflection essays presented at the end of the report concerning the issues raised by the Equity Indicators report. It is the intent of the project that this will initiate yearly dialogues that will accompany the annual monitoring of our progress.

## Setting The Stage

In 1947 – the mid-point of the 20<sup>th</sup> Century – Harry S. Truman warned in a report of his Commission on Higher Education, “*If the ladder of educational opportunity rises high at the doors of some youth and scarcely rises at the doors of others, while at the same time formal education is made a prerequisite to occupational and social advance, then education may become the means, not of eliminating race and class distinctions, but of deepening and solidifying them.*”<sup>1</sup> Now over 60 years later – well into the 21<sup>st</sup> century – these words read as an eerie foreshadowing to the state of higher education in the United States today.

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

--- President Truman, in releasing a report of the President’s Commission on Higher Education, 1947

The U.S. has a core constitutional and founding commitment to equality of opportunity for all citizens. There is also a body of court decisions that guarantees equal access to education of all citizens within the United States. The first official mission of the U.S. Department of Education was simply stated as to “ensure equal access to education.” Although the Bush Administration revised this statement in 2005 to reflect increased emphasis on academic achievement and global competitiveness levels, the Department’s stated mission continues to emphasize equity.<sup>2</sup>

Whether viewed as an end in itself or a means to fostering increased national achievement and competitiveness, the 21<sup>st</sup> century United States conversation about equity reflects a national consensus about the many benefits of and necessity for postsecondary education for the well-being of individuals and society as a whole. Publications such as *Education Pays* by the College Board report the positive correlation between higher education attainment and such outcomes as earnings, social mobility, health factors and civic engagement.<sup>3</sup>

- 1 Harry S. Truman: “Statement by the President Making Public a Report of the Commission on Higher Education” December 15, 1947.
- 2 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.” It can be found at : <http://www2.ed.gov/about/overview/mission/mission.html>
- 3 CollegeBoard, 2013 Trends in College Pricing. <https://trends.collegeboard.org/sites/default/files/college-pricing-2013-full-report-140108.pdf>

Nonetheless, as illustrated by the indicators in this report, higher education outcomes are highly inequitable across family income groups. Moreover, on many of these indicators, gaps in outcomes are larger now than in the past. The disinvestment of state funds for public colleges and universities occurring since the 1980s and the declining value of federal student grant aid have all aided in the creation of a higher education system that is stained with inequality. Once known for wide accessibility to and excellence within its higher education system, the U.S. now has an educational system that serves to sort students in ways related to later life chances based on their demographic characteristics rather than provide all youth with 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.<sup>4</sup>

## **The Equity Indicators**

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

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

- a. How do cohort college continuation rates vary by family income?
- b. How do high school college continuation rates vary by family income?

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

- a. How does the level of institution attended vary by family income?
- b. How does the control of postsecondary education institutions vary by family income?
- c. How does the type of institution as measured by highest degree awarded) vary by family income?

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

- a. What is the maximum Pell Grant amount relative to average college costs?
- b. What is the net price of attendance by family income?
- c. What is the unmet need by family income?

### **4. How do students in the United States pay for college?**

- a. What share of higher education costs is paid by students and their families?
- b. What is the percent of family income needed to pay for college?
- c. What percent of students borrow and how much do they borrow?

### **5. How does bachelor's degree attainment vary by family income?**

- a. How does bachelor's degree attainment by age 24 vary by family income?
- b. How does bachelor's degree attainment by age 24 vary by family income among individuals who entered college?

### **6. How do educational attainment rates in the U.S. compare with rates in other nations?**

- a. What percent of 25 to 34 year olds has completed a type A tertiary degree?
- b. 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 the direction of equity, observed from the point of view of low-income students. The final section of the *Indicators* report contains two essays by the report's co-authors that discuss the policy implications of the equity trends and offers strategic recommendations for fostering greater equity in higher educational attainment in the United States.

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<sup>4</sup> As U.S. state and international comparisons show, it is not only the absolute level of income that creates a depression of life well-being indicators such as educational attainment, but also the degree of income inequity that is manifest in the country or state [http://www.unicef.org/socialpolicy/files/Insights\\_August2010\\_ENG%281%29.pdf](http://www.unicef.org/socialpolicy/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



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## Setting the Stage

**Overview of Institutions.** 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) and control (public, private non-profit and private for-profit). As reported to the Integrated Postsecondary Data System (IPEDS), the U.S. system of postsecondary education included 4,726 Title IV degree-granting institutions in the 2012-2013 academic year.<sup>5</sup> These institutions enrolled 20.6 million students, of whom 86 percent (17.8 million) were undergraduates.

**Type and Control of Institutions.** Of the 4,726 Title IV institutions,<sup>6</sup> 34 percent were public (14 percent 4-year and 20 percent 2-year), 35 percent were private not-for-profit (33 percent 4-year and 2 percent 2-year), and 31 percent were private for-profit (17 percent 4-year and 14 percent 2-year). Over the recent decade, the private for-profit sector of postsecondary education has grown considerably. In 2012-13, there were 1,451 private for-profit institutions in the United States, up from just 791 private for-profit institutions in 2002-2003.

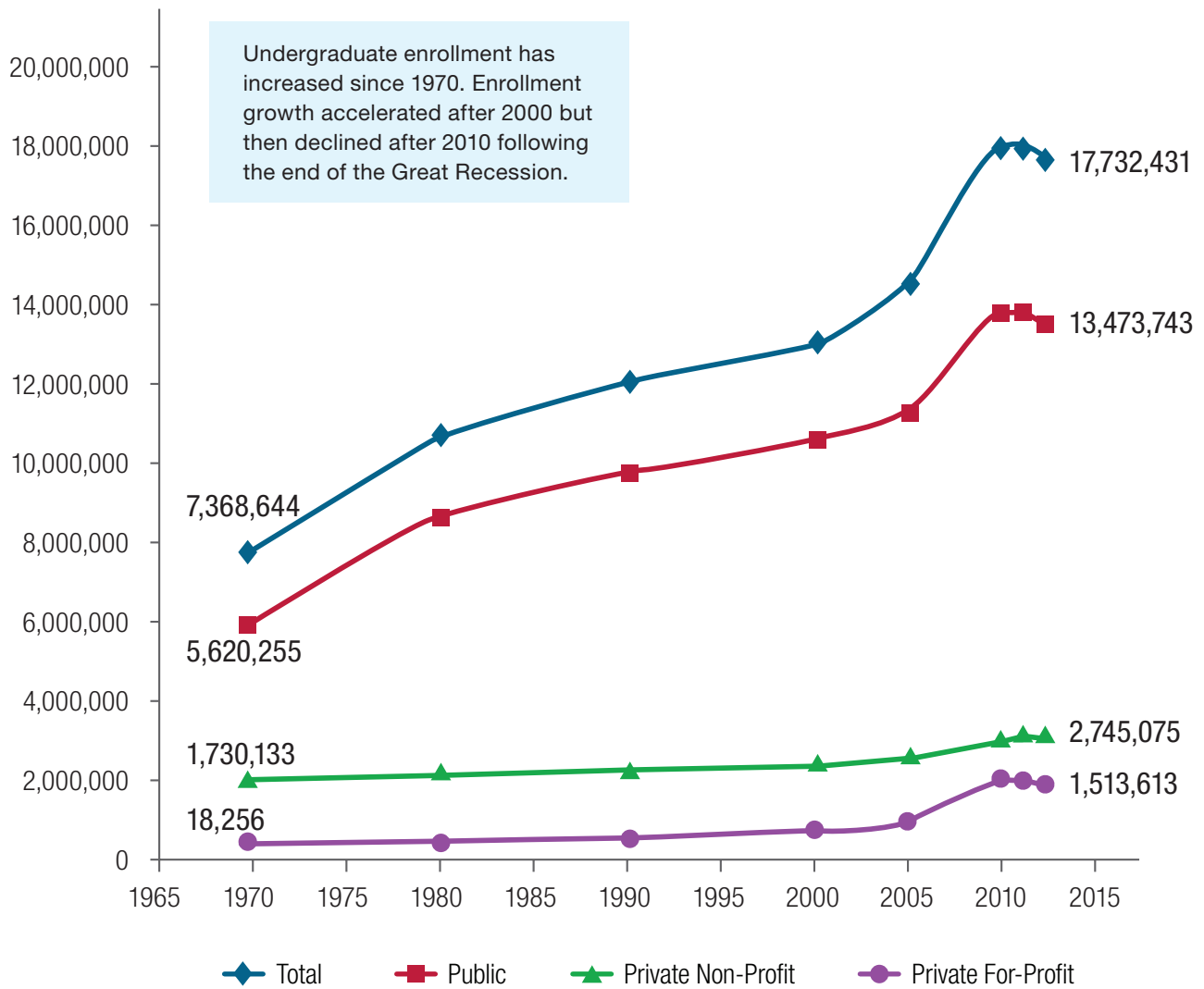
**Enrollment Trends.** Because of differences in the average number of students enrolled in institutions of different sectors, the distribution of enrollments does not mirror the current institutional division of approximately one-third in each of the public, private non-profit, and private for-profit sectors. In 2012 public 2-year and 4-year institutions enrolled 76 percent of all undergraduate students, about the same percentage as in 1970. In 1970 there were a total of about 7.4 million undergraduate students. By fall 2012, total undergraduate enrollment in degree-granting postsecondary institutions had risen to 17.8 million students. While public institutions maintained their share of undergraduate enrollment, the share of undergraduates enrolled in private non-profit institutions fell from 23 percent of the total in 1970 to 15 percent of the total in 2012. Over the same period, the share of undergraduates enrolled in private for-profit institutions grew from less than 1 percent of the total in 1970 to 9 percent of the total in 2012. Figures 1 and 2 show trends since 1970 in the numbers of undergraduates enrolled in different types of institutions.

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5 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. (This table was prepared August 2013.) –NCES 2013 [http://nces.ed.gov/programs/digest/d13/tables/dt13\\_317.10.asp](http://nces.ed.gov/programs/digest/d13/tables/dt13_317.10.asp).

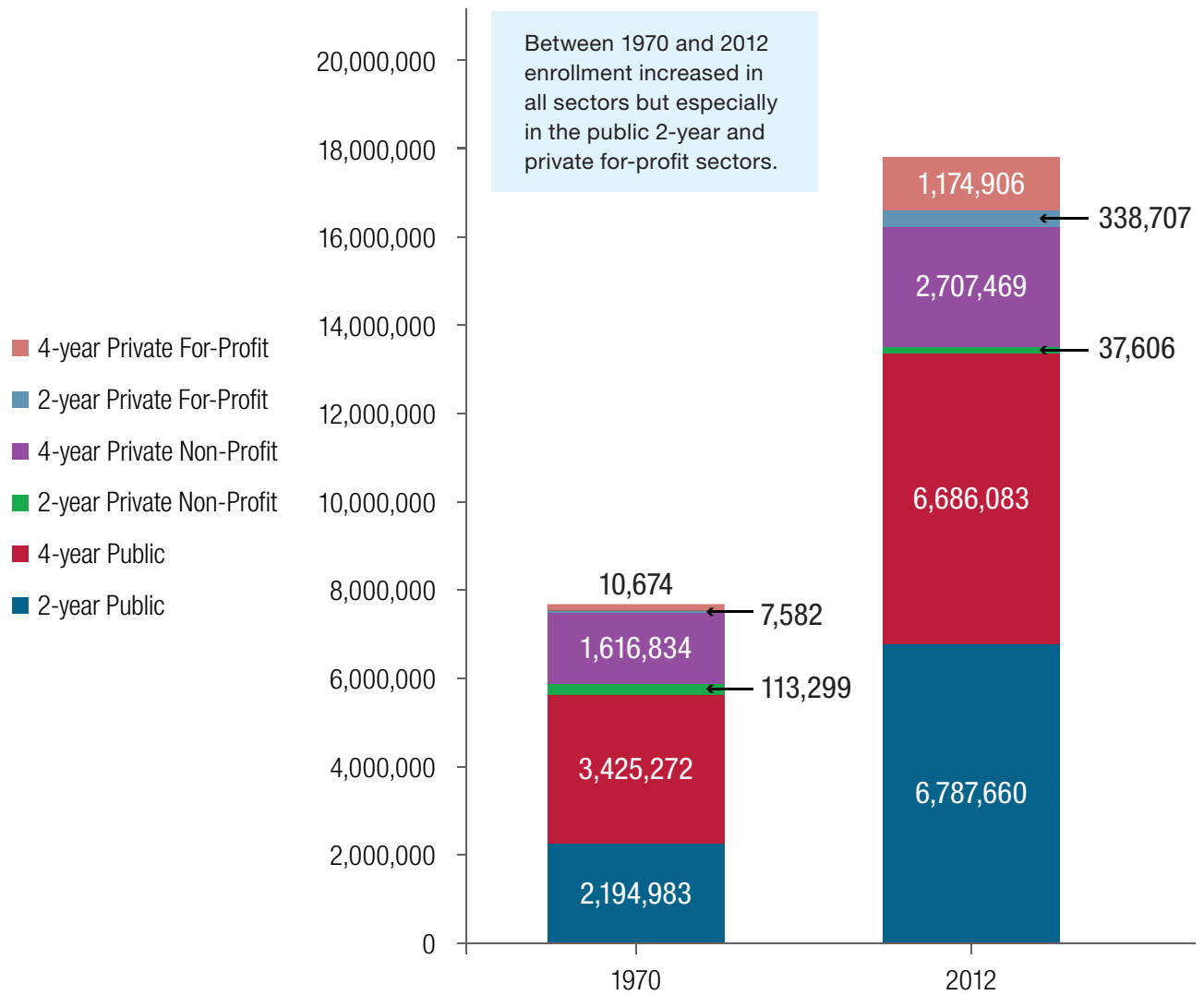
6 Title IV institutions have a written agreement with the U.S. Secretary of Education that allows the institution to participate in any of the Title IV federal student financial assistance programs.

**Figure 1: Undergraduate enrollment by institution control: 1970 to 2012**



**Source:** U.S. Department of Education, National Center for Education Statistics (NCES), Digest of Education Statistics, 2012, Table 303.70.

**Figure 2: Undergraduate enrollment by institution type and control: 1970 to 2012**



**Source:** U.S. Department of Education, National Center for Education Statistics (NCES), Digest of Education Statistics, 2012, Table 303.70.

# EQUITY INDICATOR 1:

## WHO ENROLLS IN POSTSECONDARY EDUCATION?

### Continuation Rates by Family Income

*Indicating a very high level of inequality, 81 percent of 18 to 24 year olds from the top family income quartile were enrolled in postsecondary education in 2012, compared with just 45 percent of those in the bottom quartile.<sup>7</sup> 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 42-year period.*

### Equity Indicator 1 (a-b): Definitions

Indicator 1 examines participation in postsecondary education by family income. The self-reported Census Bureau statistic includes enrollment in any type of postsecondary institution. The key definitions are given below:

- **Cohort College Continuation Rate (CCCR)**, defined as: *the percent of the 18 to 24 year old cohort continuing on to any type of postsecondary education;*
- **High School Graduates College Continuation Rate (HSGCCR)**, defined as: *the percent of 18 to 24 year old high school graduates continuing on to any type of postsecondary education.*
- **Income Quartiles:** Indicator 1 and some subsequent Indicators used Census data for family income quartiles. Using income quartiles facilitates comparisons of changes over time as they reflect a percentage distribution based on data for a given year. In 2012 the family income quartiles for dependent 18 to 24 year olds identified by the Census Bureau were:
  - *Bottom quartile:* Less than \$34,160
  - *Second quartile:* \$34,160 to \$63,600

<sup>7</sup> About 15 percent to 20 percent of students in the postsecondary system are not of the traditional college-going age. By focusing on the 18 to 24 year old group, we examine the most common age transition points into postsecondary education. According to data from IPEDS, most full-time undergraduates enrolled in public and private non-profit 4-year institutions in 2011 (88 percent and 86 percent, respectively) were young adults (i.e., under the age of 25). In contrast, just 29 percent of full-time undergraduate students at private for-profit 4-year institutions were young adults in 2011 (39 percent were between the ages of 25 and 34 and 32 percent were age 35 and older). In 2011, young adults accounted for 71 percent of enrollment at public 2-year institutions, 59 percent of enrollment at private non-profit 2-year institutions, and 47 percent of enrollment at private for-profit 2-year institutions. SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), Spring 2012, Enrollment component. See *Digest of Education Statistics 2013*, table 303.50

- *Third quartile:* \$63,600 to \$108,650
- *Top quartile:* \$108,650 and above.

In 2012 the maximum income for the lowest quartile was about one-third 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.<sup>8</sup>

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

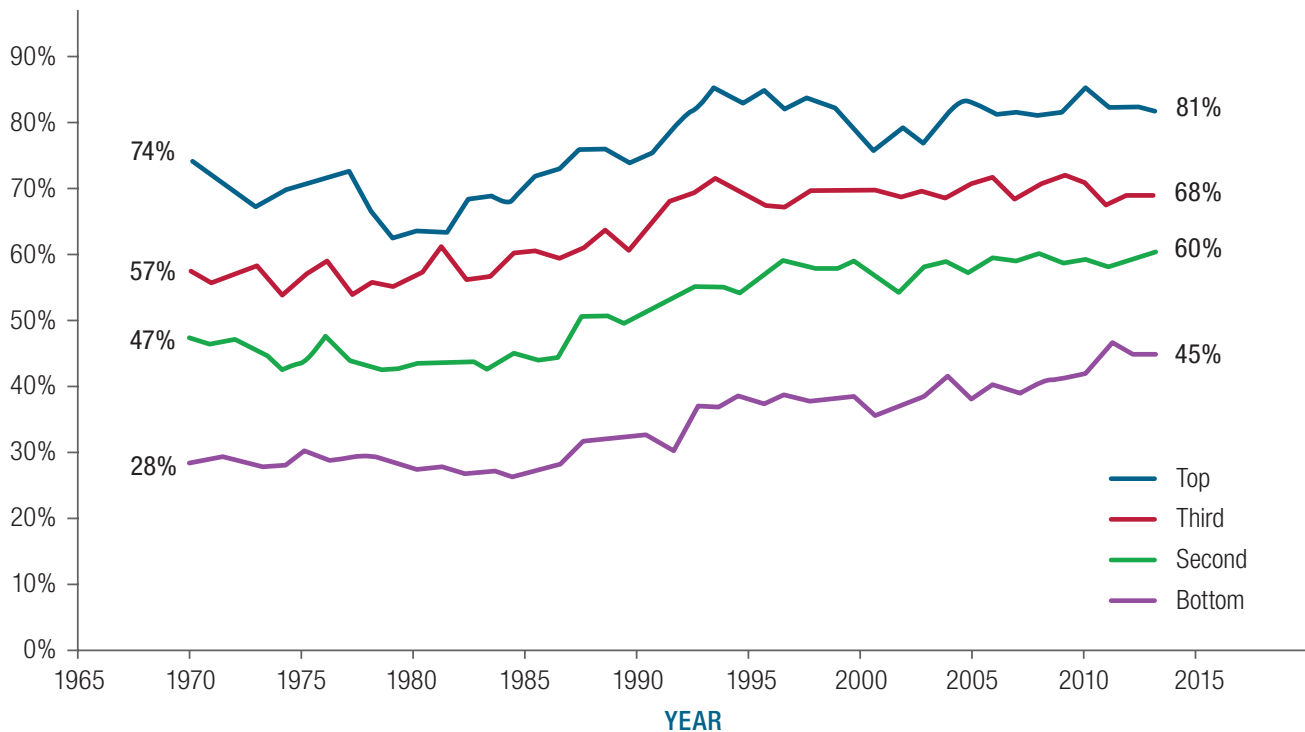
Indicator 1a shows the Cohort College Continuation (CCCR) by family income quartile for dependent 18 to 24 year olds from 1970 to 2012. For all income groups, the college continuation rate has generally increased since 1980, with a flatter rate of increase since 1990. Enrollment peaked in 2009 and 2010, in the wake of the Great Recession, and then declined by about 2 percent in 2012. In 2009, 84 percent of 18 to 24 years old in the top family income quartile participated in college, compared with 41 of those in the bottom quartile.

In 2012, 82 percent of 18 to 24 year olds from the top family income quartile participated in college, compared with just 45 percent of those in the bottom quartile. This 37 percentage-point gap in postsecondary education enrollment for those in the bottom and top family income quartiles is somewhat smaller than the gap in 1970. In 1970 the gap in college participation between the top and bottom quartiles was 46 percentage points (with a 76 percent college continuation rate for the top quartile compared to 28 percent for the bottom quartile).

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<sup>8</sup> Since 1967, U.S. household income inequality has grown 18 percent. Nearly half of that growth occurred during the 1980s. DeNavas-Walt, Carmen, Bernadette D. Proctor, and Jessica C. Smith. 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>

## Equity Indicator 1a: Cohort College Continuation Rate (CCCR) by family income quartile for dependent 18 to 24 year olds: 1970 to 2012



### How Are We Doing? High Inequity Despite Small Narrowing of Gap

37 percentage-point gap between top and bottom quartiles in 2012, compared with 46 percentage-point gap in 1970

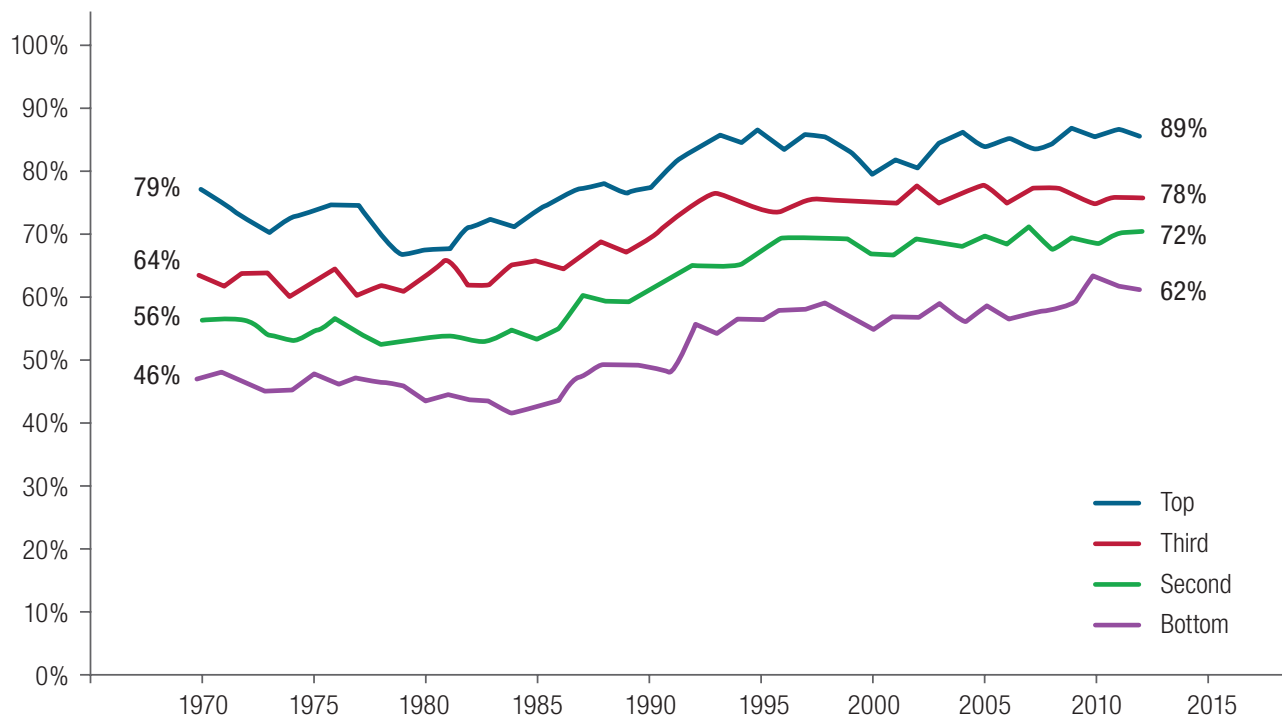
**Note:** Cohort College Continuation rate (CCCR) is tabulated based on the total number in the cohort year and includes those that have not completed high school in the denominator of the tabulation.

**Source:** U.S. Census Bureau; School Enrollment Data, Compiled by Tom Mortenson, graph by Pell Institute, July 2014

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

Indicator 1b shows trends in the High School Graduates College Continuation Rate (HSGCCR) by family income quartile. For the top family income quartile, the high school graduates college continuation rate was 89 percent in 2012, up from 79 percent in 1970. Among the bottom quartile, the rate was 62 percent in 2012, up from 46 percent in 1970. The gap in high school graduates college continuation rates for those in the highest and lowest quartile was 27 percentage points in 2012, down slightly from 33 percentage points in 1970.

**Equity Indicator 1b: High School Graduates College Continuation Rate (HSGCCR) by family income quartile for 18 to 24 year olds: 1970 to 2012**



### How Well Are We Doing? High Inequality Despite Small Narrowing of Gap

27 percentage point gap between top and bottom quartiles in 2012, compared with 33 percentage-point gap in 1970

**Note:** High School Graduates College Continuation Rate (HSGCCR) is the percent of the total number of 18 to 24 year old dependent high school graduates who have entered a college of any type.

**Source:** U.S. Census Bureau; Enrollment Data, Compiled by Tom Mortenson, graph prepared by Pell Institute, July 2014

# EQUITY INDICATOR 2:

## WHAT TYPE OF POSTSECONDARY EDUCATIONAL INSTITUTION DO STUDENTS ATTEND?

*In the United States, income is highly predictive of the type of college that students attend. Three-fourths (75 percent) of students who did not receive Pell Grants attended a four-year rather than a two-year institution, compared with only 55 percent of Pell Grant recipients.*

### Equity Indicator 2 (a-c): Definitions

The sources of data for Indicator 2 are the Integrated Postsecondary Data System (IPEDS), which has collected aggregate data on postsecondary institutions in the United States since 1981,<sup>9</sup> and the National Postsecondary Student Aid Study (NPSAS), which has collected data approximately every four years since 1990. IPEDS does not have data on student's family income levels but does have data on the numbers of Pell and non-Pell recipients attending each institution.<sup>10</sup> Because Federal Pell Grants are awarded based on financial need, Pell Grant receipt is an indicator of family income.

- **Federal Pell Grant Receipt.** Eligibility for dependent and independent Pell Grants 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 2012-13 award year, 61.2 percent of the more than 3.78 million Pell Grants awarded to dependent students were awarded to students with family incomes below \$30,000; 76.8 percent of grants were to those with family incomes below \$40,000; and 88.6 percent to those from families below \$50,000.<sup>11</sup> The maximum award was \$5,550 in 2012.
- **Level, control, and highest degree awarded of postsecondary institutions.** Indicator 2 reports differences in enrollment by Pell Grant receipt by institutional level (2-year versus 4-year college), institutional control (public, private non-profit, and private for-profit), and highest degree awarded by an institution.

<sup>9</sup> Prior to 1981 some of the data contained in the current IPEDS was collected under the Higher Education General Information System (HEGIS)

<sup>10</sup> IPEDS includes aggregated data for each Title IV institution on the percent of undergraduate students who received Pell recipients. The data are aggregated at the institution level. Because NPSAS is a nationally representative sample of individual students enrolled in Title IV institutions, it allows for more detailed comparisons between Pell recipients and non-Pell recipients

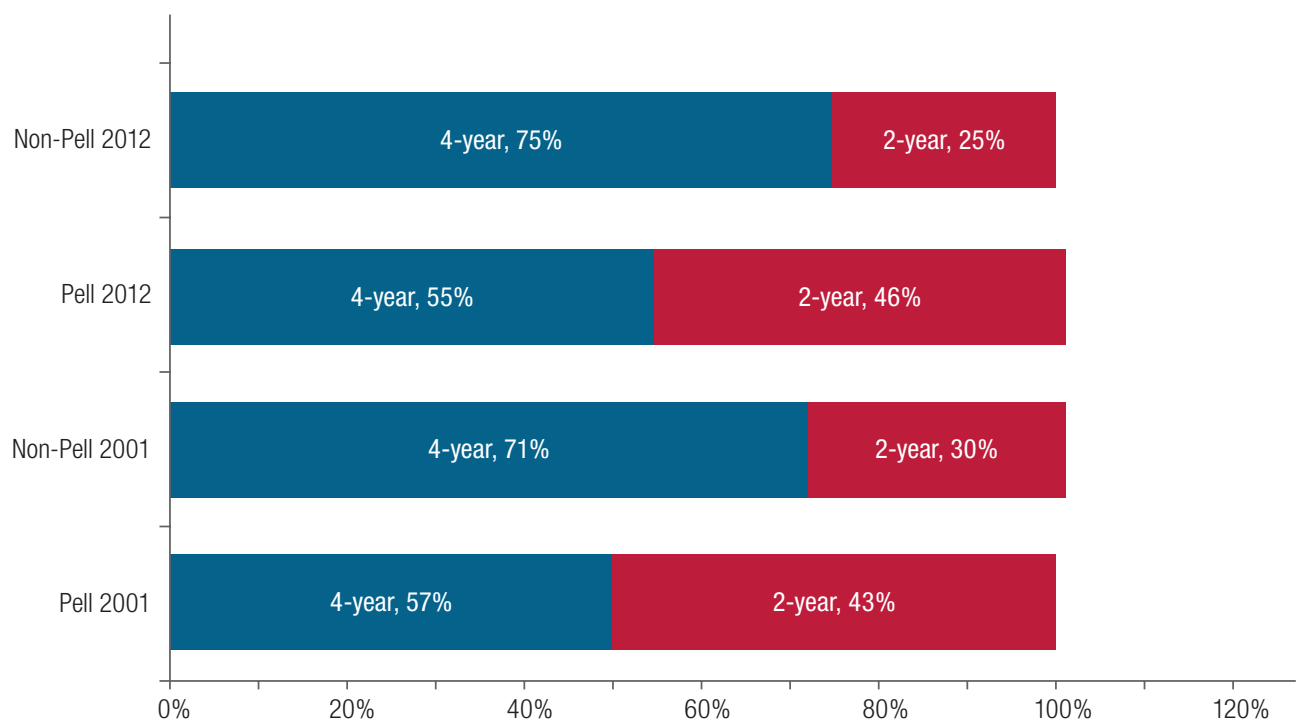
<sup>11</sup> Table 2A, 2013-14 *Pell Grant End-of-Year Report*.



## Equity Indicator 2a: How Does the Level of Institution Attended Vary by Family Income?

Pell Grant recipients were less likely than non-Pell Grant recipients to attend a 4-year rather than a 2-year institution in 2012. In the past decade, the share of Pell Grant recipients enrolling in a 4-year rather than a 2-year institution declined slightly (from 57 percent to 55 percent), while the share of non-Pell recipients enrolling in a 4-year rather than a 2-year institution increased (from 71 percent to 75 percent). As a result of these shifts, the equity gap in enrollment in a 4-year rather than a 2-year institution increased.

### Equity Indicator 2a: Distribution of Pell and Non-Pell Grant full-time, first-time<sup>12</sup> degree or certificate seeking students by level of institution attended: 2001 and 2012



#### How Well Are We Doing? High Inequity and Widening Gap

20 percentage point gap in enrollment at 4-year rather than 2-year institution in 2012, compared with a 14 percentage point gap in 2001

**Source:** U.S. Department of Education, Integrated Postsecondary Data System (IPEDS), Digest of Education Statistics, 2013, Table 331.20, graph prepared by Pell Institute, July 2014

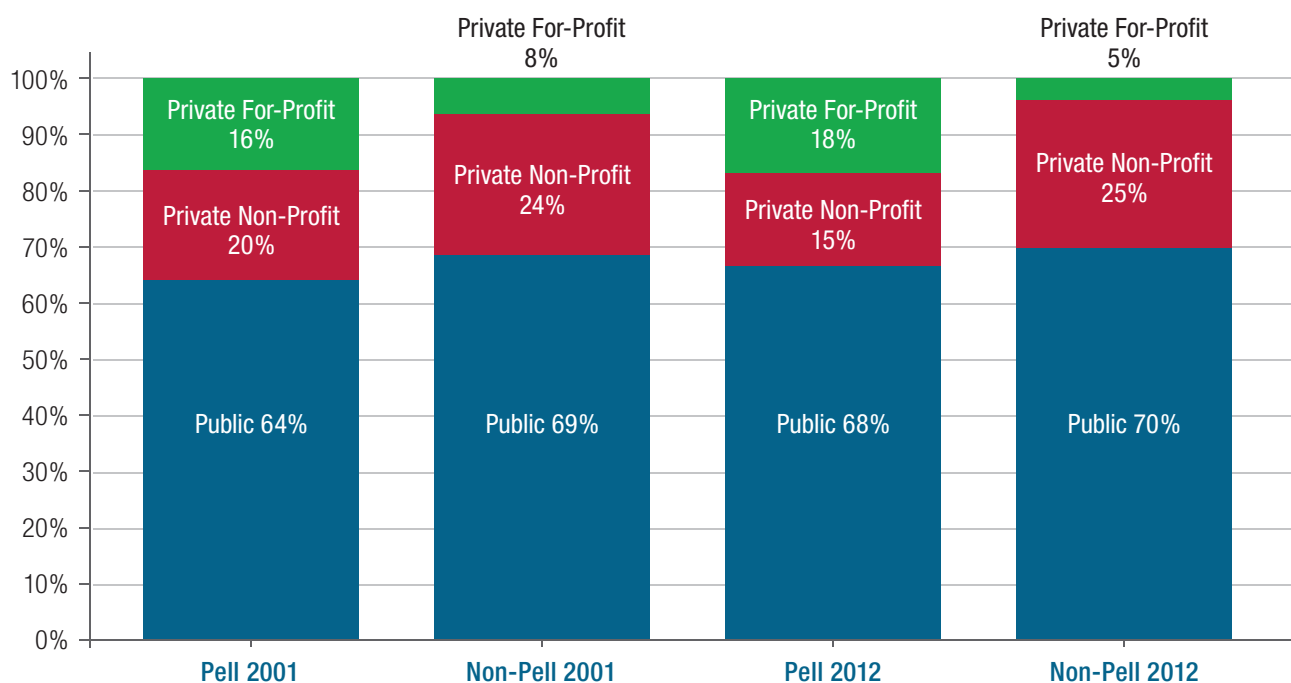
<sup>12</sup> This data, like much of the data reported to IPEDS, is based on full-time first-time students. A focus on this subset of undergraduates likely understates the magnitude of the equity gaps across the population.

## Equity Indicator 2b: How Does the Control of the Postsecondary Education Institution Attended Vary by Family Income?

**Equity Indicator 2b** describes differences in the control (public, private non-profit, and private for-profit) of the institution attended by first-time, full-time undergraduate students who did and did not receive Federal Pell Grants. In 2012 Pell recipients were roughly 3.5 times as likely as non-Pell Grant recipients to attend a private-for-profit college. The overrepresentation of Pell Grant recipients in the private for-profit sector increased over the decade. In 2001, Pell Grant recipients were 2 times more likely than non-Pell Grant recipients to be enrolled in a for-profit institution. Over the same period, the percent of Pell students enrolled in the private non-profit sector declined from 20 percent in 2001 to 15 percent in 2012.

**In 2012 students who received Pell Grants were roughly 3.5 times as likely to attend a private-for-profit college as students who did not receive Pell Grants, up from 2 times as likely in 2001.**

### Equity Indicator 2b: Distribution of first-time, full-time degree or certificate seeking undergraduate students who did and did not receive Federal Pell Grants by control of institution attended: 2001 and 2012



#### How Are We Doing? High Inequality and Widening Gap

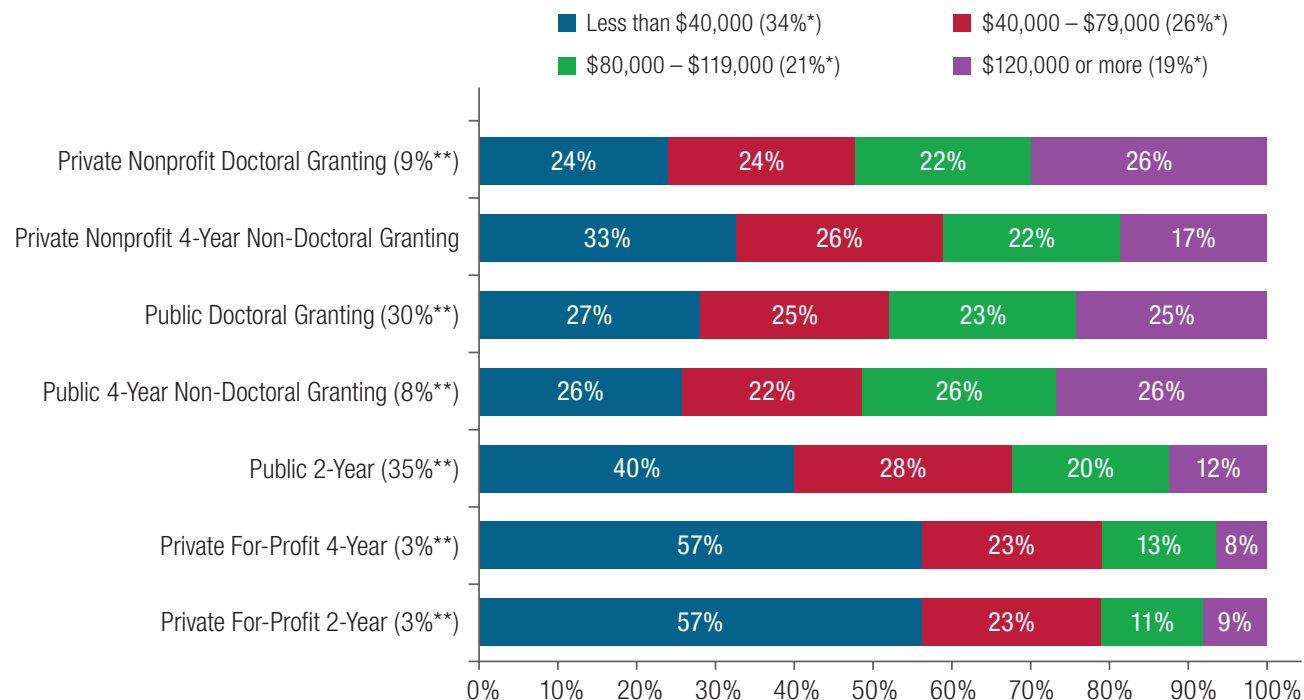
Pell recipients were 3.5 times as likely as non-Pell recipients to attend for-profit institutions in 2012, up from 2 times as likely in 2001

**Source:** U.S. Department of Education, Integrated Postsecondary Data System (IPEDS), Digest of Education Statistics, 2013, Table 331.20, graph prepared by Pell Institute, July 2014

## Equity Indicator 2c: How Does the Type of Institution Attended (as Measured by the Highest Degree Awarded) Vary by Family Income?

Using data from NPSAS: 2012, Figure 2c further illustrates the relationship between family income and type of college attended. Students from families in the highest-income quartile represent a considerably higher share of students attending private doctoral-granting institutions (26 percent), public doctoral-granting institutions (25%) and public 4-year non-doctoral-granting institutions (26 percent) than of students attending private for-profit 4-year (8 percent) and 2-year (9 percent) institutions. By comparison, students from the lowest-income quartile represent more than half (57 percent) of students attending private for-profit 4-year and 2-year institutions. Although 34 percent of NPSAS dependent students had family incomes under \$40,000 in 2012, these students made up only 24 percent of students in private non-profit doctoral-granting institutions.

**Equity Indicator 2c: Distribution by family income quartile of enrollment within institutions as classified by highest degree awarded: 2012**



### How Are We Doing? High Inequality

Lower-income students are overrepresented in for-profit and public two-year institutions; higher income students are overrepresented in doctoral granting institutions.

\* Represents the percentage of dependent students in each income category. For example, 34 percent of NPSAS:12 dependent students had family incomes of \$40,000 or under.

\*\*Represents the percentage of students enrolled by the type of institution. For example, 3 percent of all NPSAS:12 dependent students were enrolled in private for-profit 2-year institutions.

**Source:** U.S. Department of Education, National Postsecondary Student Aid Study (NPSAS), 2012. Tabulation and graph prepared by Pell Institute, August 2014

# EQUITY INDICATOR 3:

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

*Average tuition and fees at colleges and universities in the U.S. more than doubled in constant dollars since 1970, rising from \$9,625 in 1970 to \$20,234 to 2012-13. Relative to the average cost of attendance, the maximum Pell Grant peaked in 1975 when the maximum Pell grant covered two-thirds (67 percent) of average costs. The maximum Pell Grant covered only 27 percent of costs in 2012, the lowest percentage since 1970.*

### Equity Indicator 3 (a-c): Definitions

Indicator 3 tracks four statistics related to college cost and the amount of cost covered by student aid. We use the standard definitions developed by the federal government to administer federal student financial aid programs.

- **College Cost** is reported annually to IPEDS and includes tuition, fees, room and board.
- The **Maximum Pell Grant** is the highest Pell Grant award that is allowed by federal law. The average Pell grant award is substantially lower than the maximum.
- **Net Price** is the Cost of Attendance (COA) minus all grant aid.
- **Cost of Attendance (COA)** is the estimated average cost based on tuition, fees, room, board, and transportation for a full-time, full-year dependent student who attends only one institution.<sup>13</sup>
- **Unmet Need** is the financial need remaining after the Expected Family Contribution (EFC)<sup>14</sup> and all discounts, grants, and loans are subtracted from the Cost of Attendance. Unmet Need is the amount of cost left even after loans have been included.

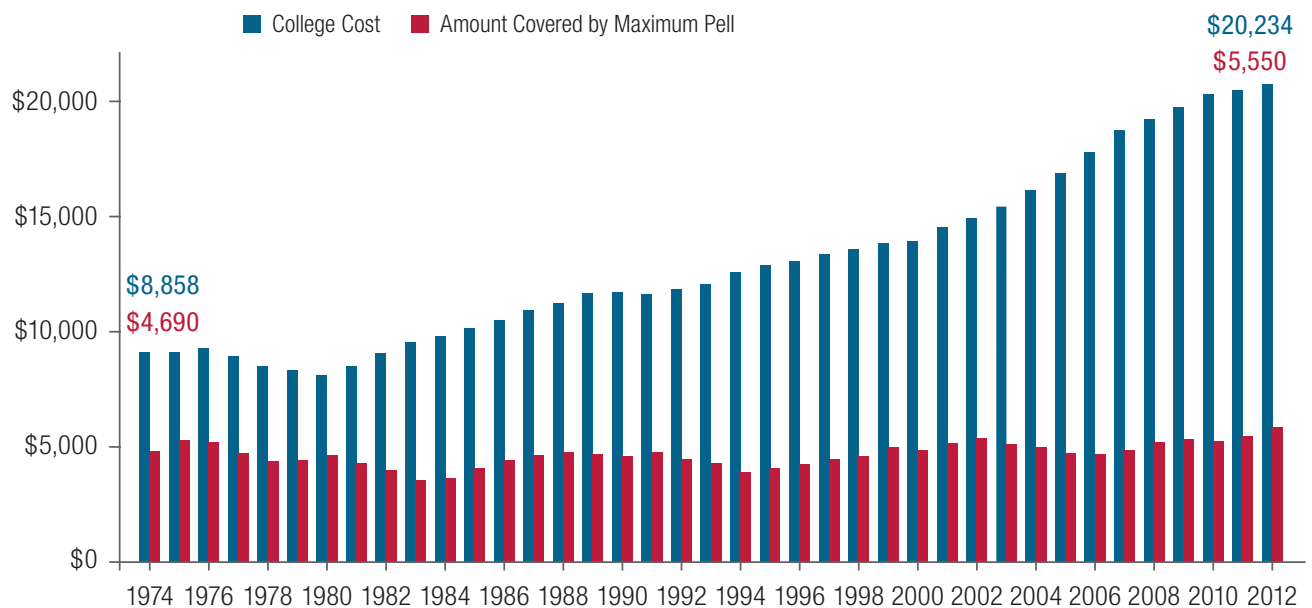
<sup>13</sup> In this report, the Cost of Attendance (COA) is based on NPSAS data and the College Cost is based on IPEDS data.

<sup>14</sup> 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.

## Equity Indicator 3a: What is the Maximum Pell Amount Relative to Average College Costs?

Indicator figure 3a (i) shows trends in average college costs and the maximum Pell grant in constant 2012 dollars from 1974 to 2012, while Indicator figure 3a (ii) shows trends in the maximum Pell Grant as a percent of average costs.<sup>15</sup> Average costs increased in constant 2012-13 dollars from \$8,858 in 1974 to \$20,234 in 2012-13. College costs were 2.3 times higher in 2012 than in 1975 at the start of the Pell Grant program.<sup>16</sup> The maximum Pell grant in 2012 was about 95 percent of the maximum in 1975. Because of these trends, the percent of average college costs covered by the maximum Pell Grant declined by 40 percentage points - from a high of 67 percent in 1975 to a low of 27 percent in 2012.

**Equity Indicator 3a (i): Average college cost and maximum Pell Grant award (in 2012 Constant Dollars): 1974-2012**



### How Are We doing? High Inequality and Widening Gap

In 2012 college costs were 2.3 times higher than in 1975 (in constant 2012 dollars) but the maximum Pell grant was only about 95 percent of what it was in 1975

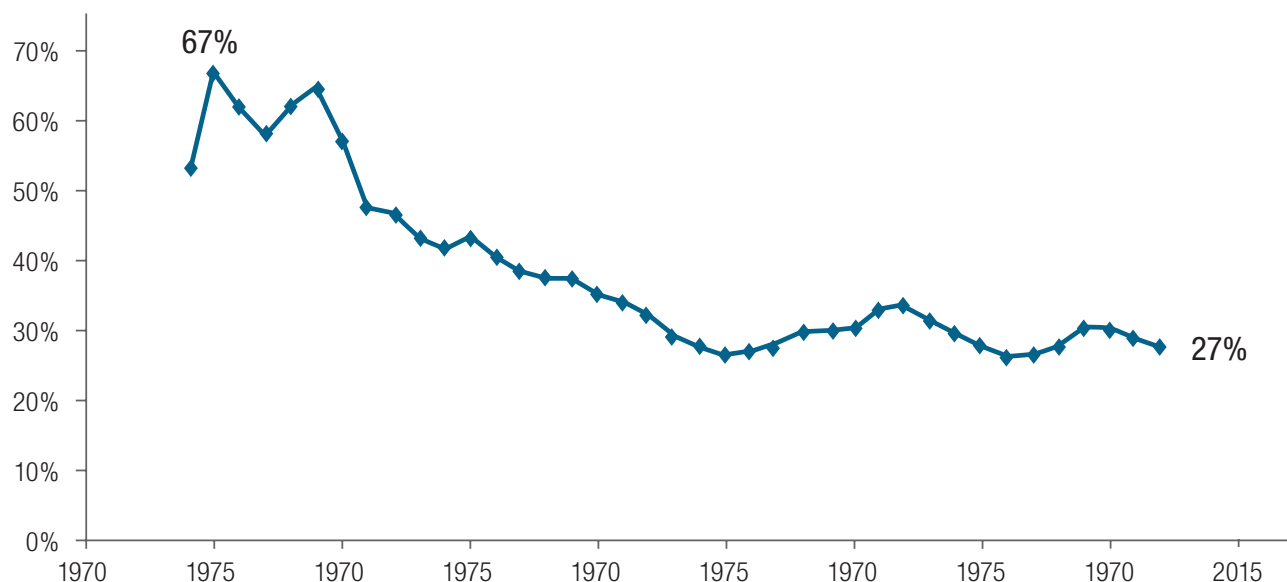
**Note:** College Cost includes tuition and fees, room and board. Maximum Pell is the highest amount allowed by law. The average Pell Award is substantially lower than the maximum.

**Source:** U.S. Department of Education, Summary Pell Grant Statistics for Cross-Year Comparison, Table 1, Pell End of Year Report, 2013; National Center for Education Statistics (2013). Digest of Education Statistics, 2012 (NCES 2014-015), Table 381.

<sup>15</sup> The figures are for the maximum Pell Grant. Average Pell grants are lower than the maximum. For example, in 1974 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 the average Pell grant was \$3,579 among the 8.9 million awards when the maximum was \$5,550.

<sup>16</sup> U.S. Department of Education, National Center for Education Statistics (2013). Digest of Education Statistics, 2012 (NCES 2014-015), Table 381.

### Equity Indicator 3a (ii): Percent of average cost covered by maximum Pell Grant: 1974-2012



#### How Are We doing? High Inequality and Widening Gap

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

**Note:** The figure shows the maximum Pell grant as a percent of average college cost. The maximum Pell is the highest amount allowed by law.

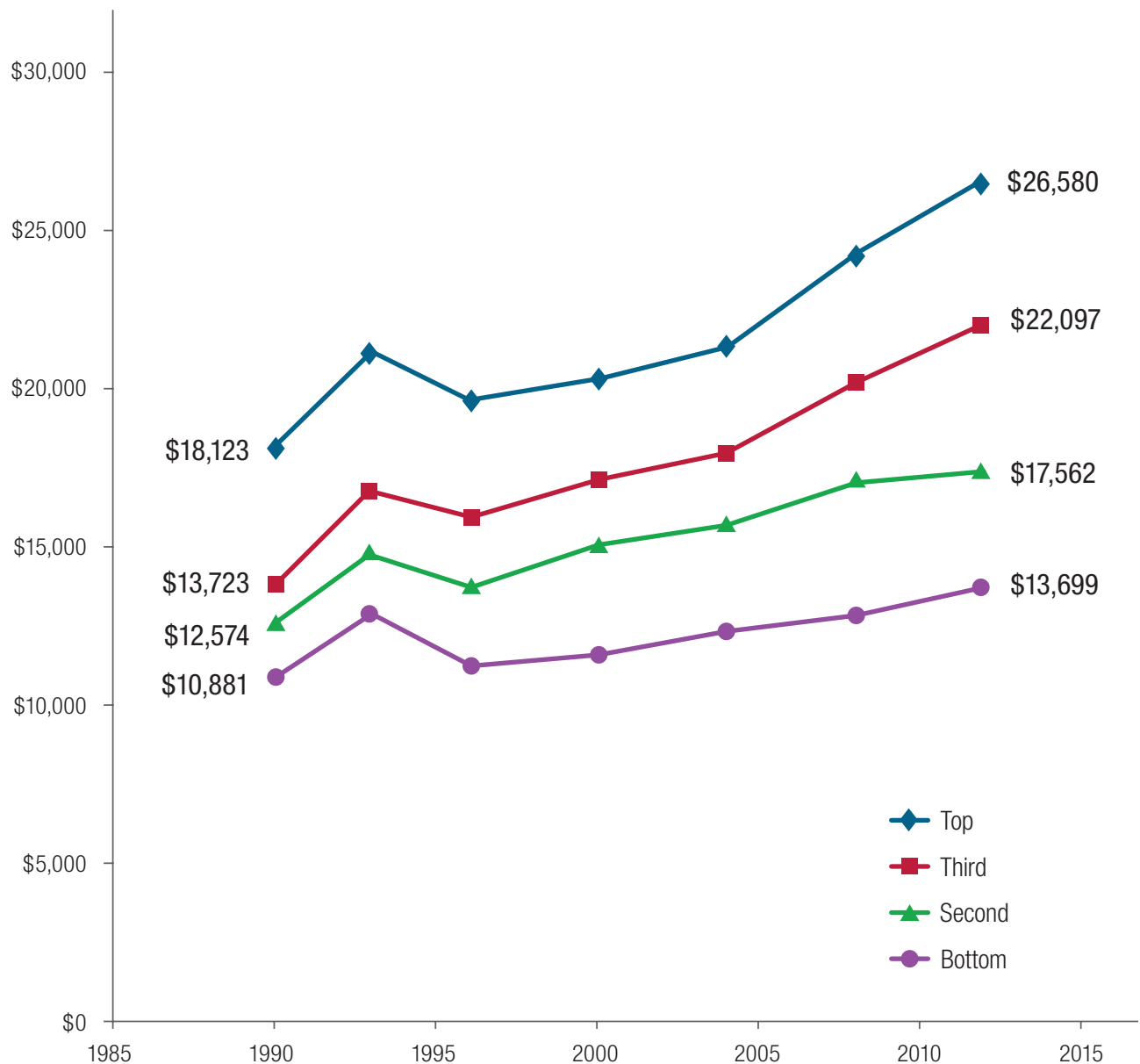
**Source:** U.S. Department of Education, Summary Pell Grant Statistics for Cross-Year Comparison, Table 1, Pell End of Year Report, 2013; National Center for Education Statistics (2013). Digest of Education Statistics, 2012 (NCES 2014-015), Table 381.

### Equity Indicator 3b: What is the Net Price of Attendance by Family Income?

Using NPSAS data from 1990 to 2012, Indicator 3b tracks “Net Price of Attendance.” The Net Price of Attendance is the Cost of Attendance (COA) minus all grant aid.<sup>17</sup> The Net Price does not include loan aid. As shown in Indicators 2 (a-c), lower-income students tend to attend schools with lower average costs. Reflecting the increasingly stratified higher education system, figure 3b shows that the difference in Net Price of attendance between students in the highest and lowest family income quartiles increased since 1970. Average net price of attendance in 2012 ranged from \$13,699 for those in the lowest family income quartile, to \$17,562 for those in the second family income quartile, to \$22,097 for those in the third 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 gaps between the Net Price for students in the upper and lower family income quartiles reflect growing inequity.

<sup>17</sup> 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, single institution dependent student. The Net Price includes grant aid but does not include loan aid.

**Equity Indicator 3b: Average net price of attendance by family income quartile for dependent full-time students: 1990 to 2012**



**How Are We Doing? High Inequality and Widening Gap**

Average net price was 94 percent lower for students in the lowest- than highest-family income quartile in 2012; in 1970, 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; Tom Mortenson, 2014, "Financial Barriers to Higher Education by Parental Income and Institutional Level/Control, 1990 to 2012," no. 263, *Postsecondary Educational Opportunity*, Pell Institute for the Study of Opportunity in Higher Education, Washington DC, May, Washington, DC. <http://www.postsecondary.org/>; 2014, "Deteriorating Abilities of Families to Pay Costs of College Attendance" no. 261, *Postsecondary Educational Opportunity*, Pell Institute for the Study of Opportunity in Higher Education, Washington DC, March, Washington, DC. <http://www.postsecondary.org/>

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## Indicator 3c: What is the Unmet Need by Family Income?

Indicator 3c displays trends in “Unmet Need” by family income quartile using NPSAS data. Unmet need is the financial need after Expected Family Contribution (EFC) and all discounts, grants, and loans are exhausted.<sup>18</sup>

In constant 2012 dollars, average unmet Financial Need was more than 2 times higher in 2012 than in 1990 for those in the lowest quartile. Although students with lower EFC amounts tend to attend community colleges and institutions with lower average tuitions, average unmet need per year in 2012 was \$8,221 and \$6,514 for students in the bottom and second lowest quartiles, respectively. By comparison, students in the highest-income quartile had a surplus in expected family contribution of \$13,950 per year. Rising college costs have meant that, in 2012, students in the third quartile also averaged unmet need of \$1,047.<sup>19</sup>

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**18** 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 Amendments of 1965, as amended. These formulas take into account such indicators of financial strength 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 award for students enrolled at low-tuition schools (although cost of education only affects the student’s award amount if the cost is less than \$5,550). 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.

**19** A related trend is the increase in the percent of students for whom the expected family contribution is zero. In 2012, 23 percent of dependent students had an expected family contribution of zero, up from 10 percent in 2000-01. 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 3c: Unmet financial need by family income quartile: 1990 to 2012



#### How Are We doing? High Inequality and Widening Gap

Unmet financial need was 2 times higher in 2012 than in 1990 for those in the lowest quartile (in constant 2012 dollars)

**Note:** Unmet Need is defined as financial need after Expected Family Contribution (EFC) and all discounts, grants, and loans are exhausted.

**Source:** U.S. Department of Education, National Postsecondary Student Aid Study (NPSAS), 1990, 1993, 1996, 2000, 2004, 2008, 2012. Tabulation prepared by Tom Mortenson; Graph prepared by Pell Institute, August 2014; U.S. Department of Education, Summary Pell Grant Statistics for Cross-Year Comparison, Table 1, Pell End of Year Report, 2013.

# 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-c): Definitions

Indicator 4 reports how students pay the costs of higher education in the U.S.

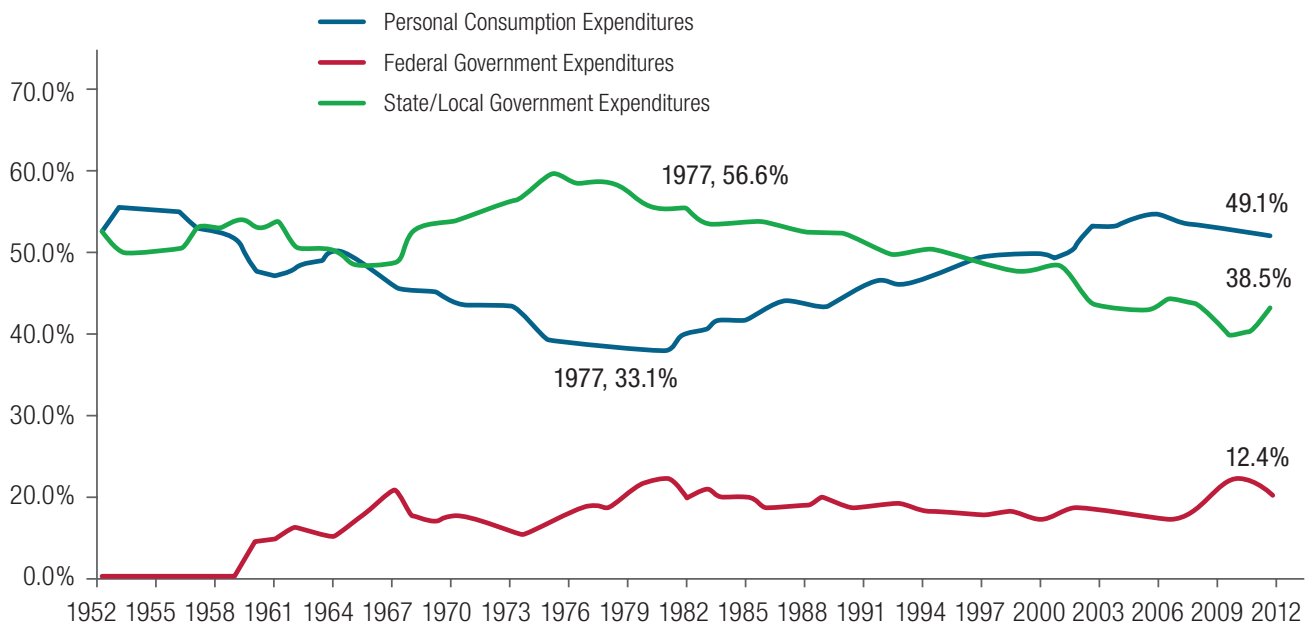
- **Revenue Sources for Financing Public and Private Higher Educations** are from the Bureau of Economic Affairs' National Income and Product Accounts (NIPA). This data identifies the percent of total funding coming from state and local governments, Federal Government expenditures, and Personal Consumption Expenditures (in this case, these costs are those born by students and their families). This information is available since 1952.
- **Net Price of Attendance as a Percent of Average Family Income** uses data on net price and family income from the various NPSAS 90-2012 surveys<sup>20</sup> for dependent students. **Net Price** is the Price of Attendance less grant aid. The average family income for a quartile reflects the actual distribution of the NPSAS sample in the study year. For 2012 the average family incomes for the quartiles were as follows: Bottom--\$16,311; Second, \$49,837; Third, \$89,119; Top, \$172,729.
- **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.

<sup>20</sup> Given the focus of the *Indicators* on family income, tabulations use NPSAS data describing dependent students.

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

Equity Indicator 4a describes the share of the costs of attending U.S. public and private higher education institutions that is paid by different stakeholders, as reported in the National Income and Product Accounts (NIPA) from 1952 to 2012. As Tom Mortenson and others have observed, since about 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 57 percent of higher education revenues in 1977, but just 39 percent in 2012. Conversely, students and parents contributed about 33 percent of the revenue in 1977, but 49 percent in 2012. The share of higher education revenues provided by the federal government was about the same in 2012 as in 1980 (12 percent). The shift in payment sources from state and local governments to students and parents has occurred at the same time that costs have risen dramatically and in a period where average wages have been static or declined in constant dollars.

**Equity Indicator 4a: Distribution of sources of higher education revenues: 1952 to 2012**



### How Are We Doing? High Inequality and Widening Gap

Share of higher education costs paid for by students and families increased from 33 percent in 1977 to 49 percent in 2012.

**Source:** Bureau of Economic Analysis, National Income and Product Accounts, 1952-2012; Mortenson, Thomas, "State Investment and Disinvestment in Higher Education, FY1961 to FY2014," no. 260, *Postsecondary Educational Opportunity*, Pell Institute for the Study of Opportunity in Higher Education, Washington DC, February, Washington, DC <http://www.postsecondary.org/>

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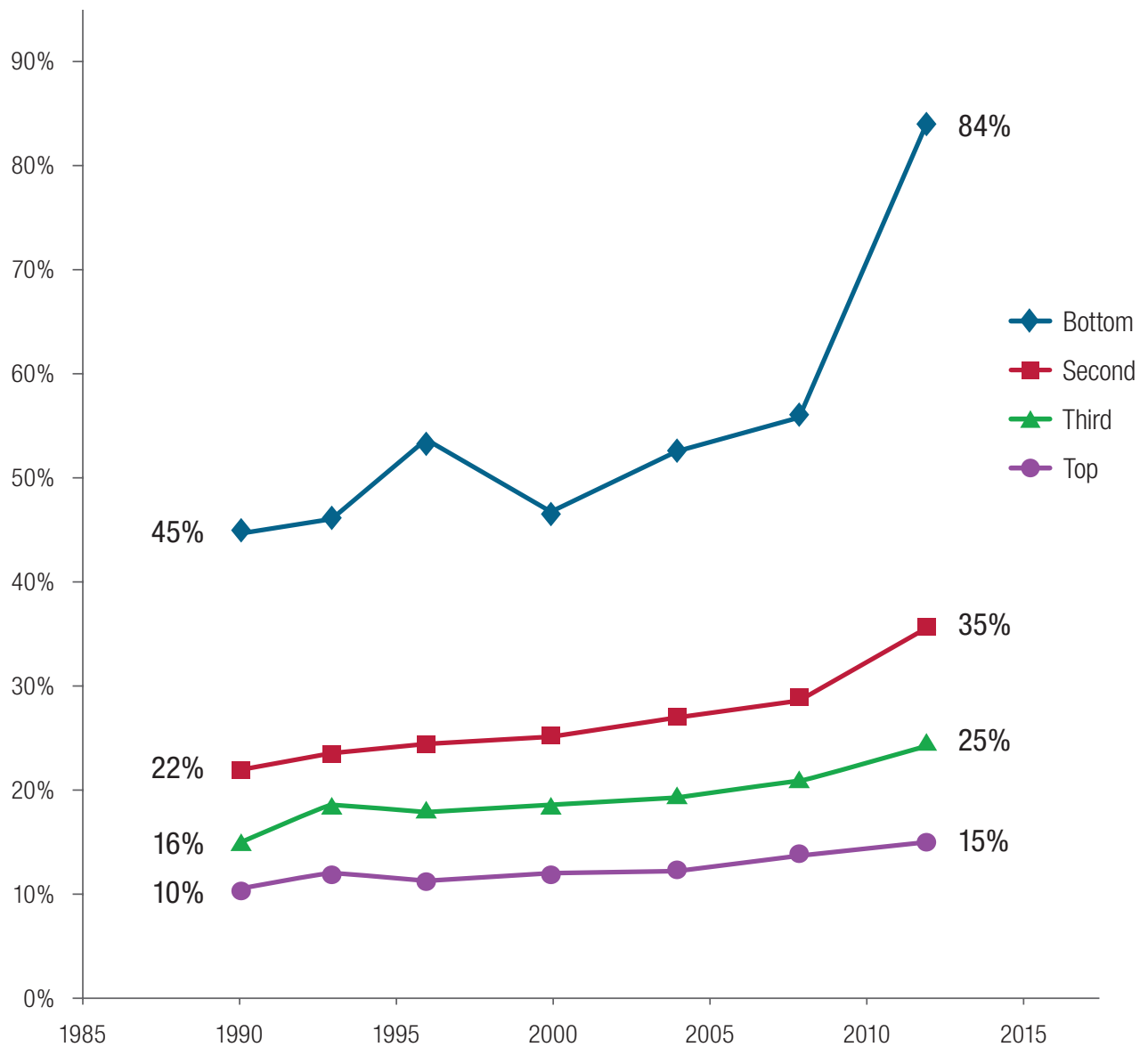
## Equity Indicator 4b: What Percent of Family Income Is Needed to Pay for College?

Indicator 4b tracks average Net Price as a percent of average family income by income quartile. Net Price is the cost of attendance less grant aid (but not less loans).<sup>21</sup> 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, this 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 dramatically, especially for students in the bottom quartile. For these students, this percentage increased from 56 percent in 2008 to 85 percent in 2012.

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<sup>21</sup> The Net Price is distinguished from what is known as the “Out of Pocket Price” which includes both grants and loans. See U.S. Department of Education, APRIL 2014 NCES 2014-902 *Out-of-Pocket Net Price for College*.

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



**How Are We Doing? 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 income for students in the top quartile, and up from 45 percent in 1990.

**Note:** Net Price is the Price of Attendance less grant aid. In 2012, average family income by quartiles was: 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. Thomas Mortenson, 2014, "Financial Barriers to Higher Education by Parental Income and Institutional Level/Control, 1990 to 2012," no. 263, Postsecondary Educational Opportunity, Pell Institute for the Study of Opportunity in Higher Education, Washington DC, May, Washington, DC. <http://www.postsecondary.org/>.

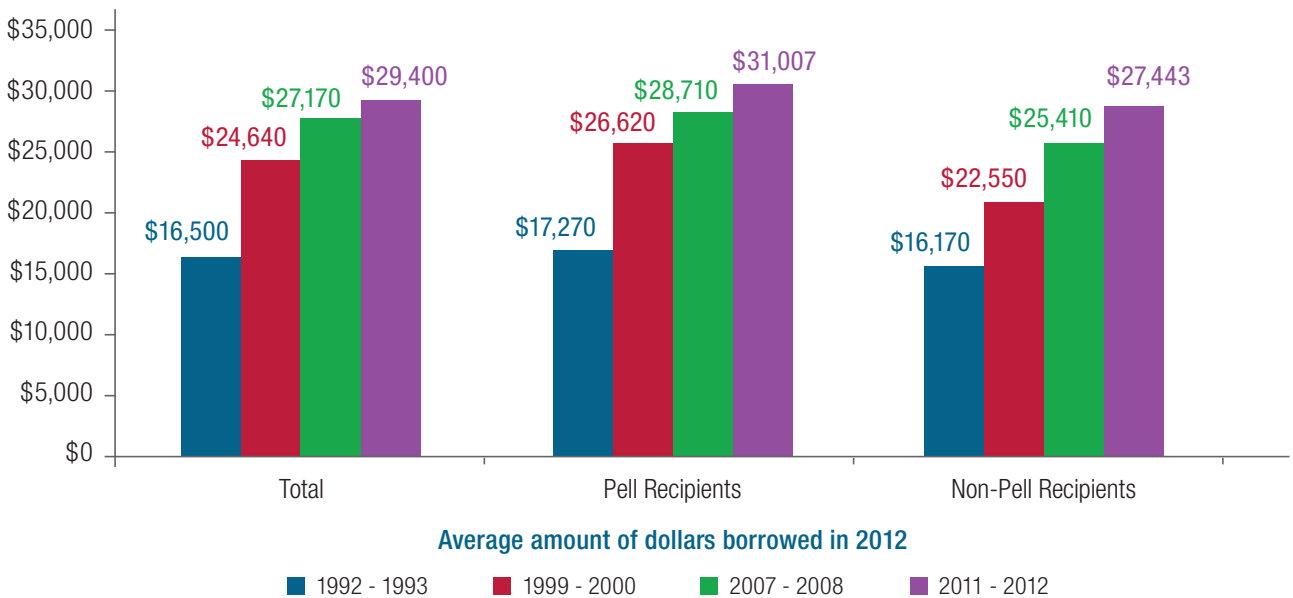
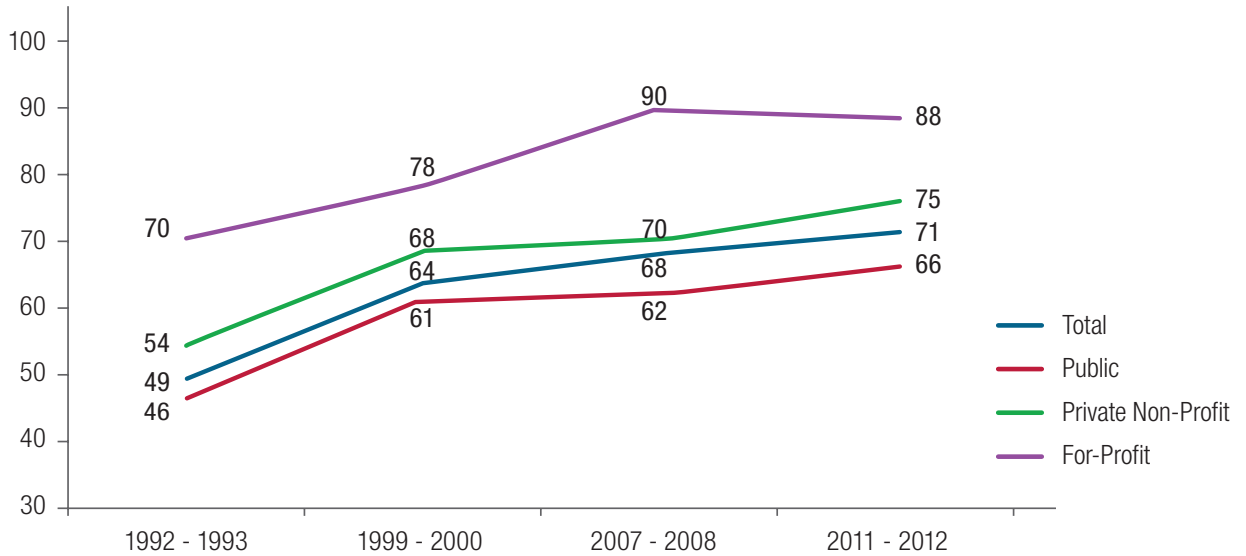
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## Equity Indicator 4c: What Percentage of Students Borrow and How Much Do They Borrow?

Indicator 4c describes the extent and amount of borrowing for graduating bachelor's degree seniors using data from the NPSAS. Both the percentage of students who borrow to pay college costs and the average amount borrowed have risen considerably since the 1990s. The percentage of all bachelor's degree graduates who borrowed rose from 49 percent in 1992-93 to 71 percent by 2012. In 2012 rates of borrowing were higher for the seniors who attended private non-profit 4-year institutions (75 percent) and private for-profit 4-year institutions (88 percent) than for those who attended public 4-year institutions (66 percent).

Among those who borrowed, the average amount borrowed has also increased substantially. In constant 2012 dollars, the average amount borrowed nearly doubled over the past two decades among students graduating with a bachelor's degree (from \$16,500 in 1992-93 to \$29,400 by 2011-2012). Although Pell recipients tend to attend less expensive colleges, borrowers who received Pell grants borrowed higher amounts, on average, than borrowers who did not receive Pell grants. Pell recipients averaged \$31,007 in 2012 whereas non-Pell recipients averaged \$27,443 in loans at graduation.

**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 2012**



**How Are We Doing? High Inequality and Widening Gap**

Despite more frequently attending lower-cost public colleges, Pell Grant recipients who borrow average higher amounts 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, Thomas, 2014, "Financial Barriers to Higher Education by Parental Income and Institutional Level/Control, 1990 to 2012," no. 263, Postsecondary Educational Opportunity, Pell Institute for the Study of Opportunity in Higher Education, Washington DC, May, Washington, DC. <http://www.postsecondary.org/>

# EQUITY INDICATOR 5:

## HOW DOES BACHELOR'S DEGREE ATTAINMENT VARY BY FAMILY INCOME?

*In 2013 individuals from the top family income quartile were over 8 times as likely to obtain a bachelor's degree by age 24 as those in the bottom family income quartile. Bachelor's degree attainment rates have nearly doubled since 1970 for those in the highest family income quartile --- rising from 40 percent to 77 percent – but, for those in the bottom family income quartile, bachelor's degree attainment rates have risen only slightly – rising from 6 percent in 1970 to 9 percent in 2013. Even when only those who enter college are considered, bachelor's degree attainment rates for those in the bottom quartile have remained low (at 21 percent) and remained virtually unchanged since 1970.*

### Equity Indicator 5 (a-b): Definitions

- **Bachelor's degree attainment by age 24 by family income quartile.** Using data from the Current Population Survey, this indicator traces the percent of dependent family members who obtain a bachelor's degree by age 24 by the Census family income quartiles for the year.<sup>22</sup>
- **Bachelor's degree attainment by age 24 among those who entered college.** This indicator calculates bachelor's degree attainment by age 24 for the population that entered any type of postsecondary educational institution. As the denominator is those who entered postsecondary and not the entire age cohort, the percentages reported for this indicator of bachelor's degree attainment are higher than for the entire age cohort.

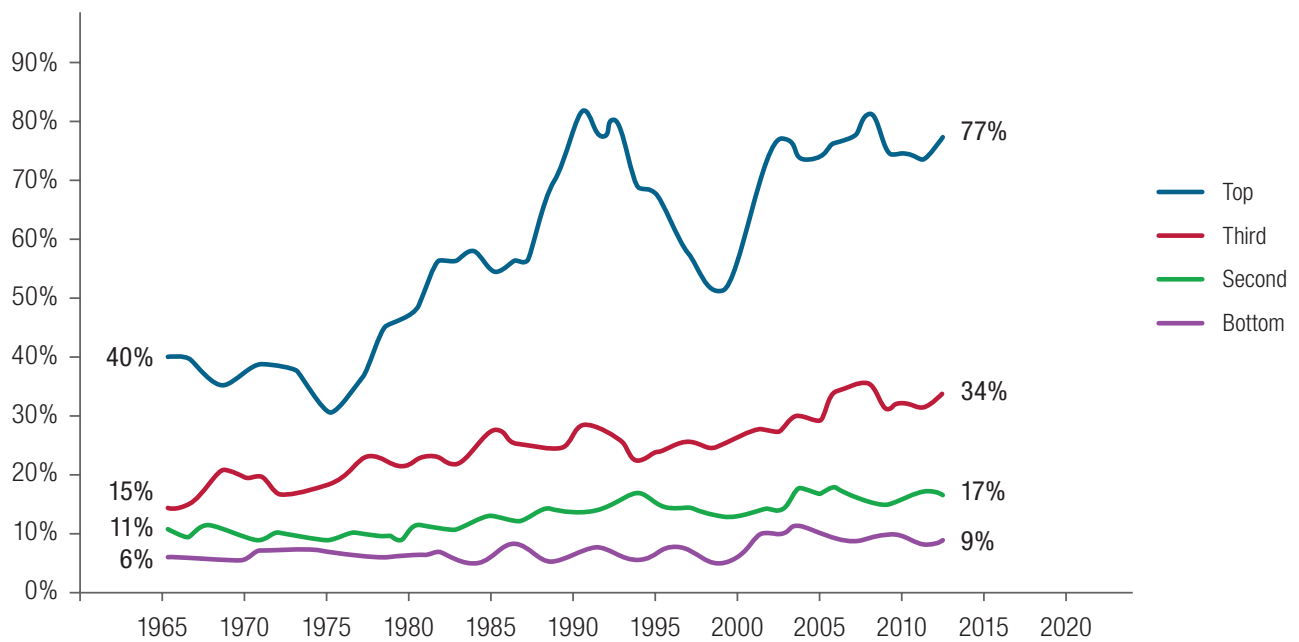
<sup>22</sup> Data from 1970 to 1986 consider unmarried 18 to 24 year olds and data from 1987 to 2013 are based on dependent 18 to 24 year olds. We used data in Table 14 in Census Bureau P20 report on School Enrollment. After 2006, the Census Bureau no longer published Table 14. We received unpublished data from Tom Mortenson, compiled from with assistance of Kurt Bauman, Chief, Education and Social Stratification Branch, Census Bureau.



## Equity Indicator 5a: How Does Bachelor's Degree Attainment by Age 24 Vary by Family Income?

In 2013 individuals from the highest-income families were 8 times more likely than individuals from low-income families to obtain a bachelor's degree by age 24 (77 percent vs. 9 percent). This income gap in bachelor's degree attainment is not only quite large (66 percentage points), but also greater than 43 years ago. In 1970, students from high-income families were 5 times more likely than students from low-income families to have earned a bachelor's degree by age 24 (40 percent vs. 6 percent).

**Equity Indicator 5a: Bachelor's degree attainment by age 24 for dependent family members by family income quartile: 1970-2013**



### How Are We Doing? High Inequality and Widening Gap

In 2013 those from high-income families were 8 times more likely to obtain a bachelors' degree by age 24 than those from low-income families. In 1970 individuals from high-income families were 5 times more likely to obtain a bachelor's degree than those from low-income families.

**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. We used data in Table 14 in Census Bureau P20 report on School Enrollment. After 2006, the Census Bureau no longer published Table 14. We received unpublished data. Mortenson, Thomas, 2014, "Unequal Family Income and Unequal Higher Education Opportunity, 1970 to 2013", Postsecondary Educational Opportunity, no. 267, Pell Institute for the Study of Opportunity in Higher Education, Washington DC, September. <http://www.postsecondary.org/>

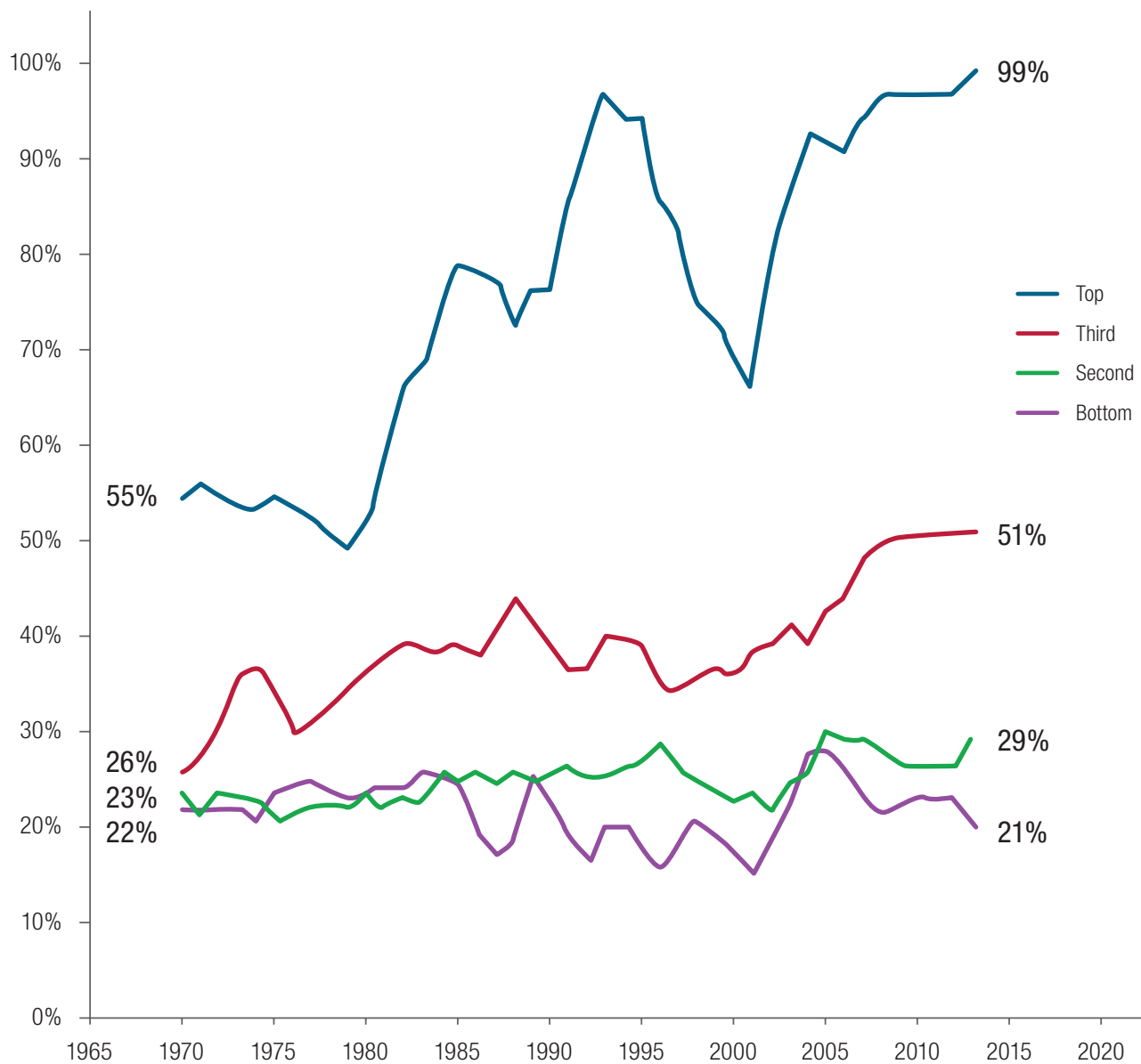
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## Equity Indicator 5b: How Does Bachelor's Degree Attainment by Age 24 Vary by Family Income among Individuals Who Entered College?

The family income gap in bachelor's degree attainment has grown over the past 43 years even when only those who entered college are considered. Since 1970, bachelor's degree attainment among those who entered college has remained virtually unchanged for those in the lower two family income quartiles. By comparison, over the past 43 years, bachelor's degree completion rates have increased considerably for those in the top family income quartile. In 2013 the top quartile approached universal completion of a bachelor's degree among those who entered college. As a result of these trends, the family income gap in bachelor's degree attainment rates by age 24 among those who entered college increased from 33 percentage points in 1970 to 78 percentage points in 2013.

The lack of change in bachelor's degree attainment rates since 1970 among those who enter college from the bottom family income quartile is especially notable. In 1970 there was little difference among the bottom three quartiles in bachelor's attainment rates for those who entered college. In 1970 between 22 percent and 26 percent of those who entered college from the bottom three family income quartiles attained a bachelor's degree by age 24. The bachelor's attainment rate for the top quartile was about double (55 percent) that of the bottom three quartiles. By 2013, bachelor's degree attainment for those who entered college from the third family income quartile had reached the level of the top quartile in 1970 (51 percent). However, the bottom two quartiles saw little change over this period. Bachelor's degree attainment for those who entered college from the second lowest family income quartile increased marginally from 23 percent to 29 percent. For those who entered college from the bottom family income quartile, bachelor's degree attainment rates were the same in 2014 (21 percent) as in 1970 (22 percent).

**Equity Indicator 5b: Bachelor's attainment rates by age 24 for dependent family members who entered college by income quartile: 1970 to 2013**



**How Are We Doing? High Inequality and Widening Gap**

Very large (78 percentage points) gap in bachelor's degree attainment rates by age 24 between those entering college from the bottom income quartile and those entering the top income quartile. In 1970 the gap was 33 percentage points.

**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. We used data in Table 14 in Census Bureau P20 report on School Enrollment. After 2006, the Census Bureau no longer published Table 14 and we used unpublished data from the Census Bureau. Mortenson, Thomas, 2014, "Unequal Family Income and Unequal Higher Education Opportunity, 1970 to 2013", Postsecondary Educational Opportunity, no. 267, Pell Institute for the Study of Opportunity in Higher Education, Washington DC, September. <http://www.postsecondary.org/>

# 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 12<sup>th</sup> in 2012.*

The final indicator looks at educational attainment in the United States as compared with other nations. In its current mission statement, the U.S. Department of Education emphasizes educating the nation for global competitiveness and recognizes that equal access to education is a necessary component of this education.<sup>23</sup> Since 1991 the Organization for Economic Cooperation and Development (OECD) has reported educational attainment data by nation in its annual report, *Education at a Glance*.<sup>24</sup>

### 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 type A tertiary degree attainment and Indicator 6b combines attainment of type A tertiary degrees and type B degrees. As defined in the Education at a Glance glossary:

- **Tertiary-type A programs** (ISCED 5A) 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

<sup>23</sup> Recent trends in global comparisons provide additional understanding of how the equity conditions observed in Indicators 1 through 5 may be influencing the U.S. postsecondary attainment rates in the 21<sup>st</sup> century. For a detailed comparison of widening participation policies in 6 countries (Australia, Ireland, Netherlands, Norway, South Africa, United States) see the links below. <http://www.hefce.ac.uk/pubs/rereports/year/2013/wpeffectiveness/>; [http://www.hefce.ac.uk/media/hefce/content/pubs/indirreports/2013/wpinternationalresearch/2013\\_WPeffectivenessUS.pdf](http://www.hefce.ac.uk/media/hefce/content/pubs/indirreports/2013/wpinternationalresearch/2013_WPeffectivenessUS.pdf)

<sup>24</sup> Due to differences in educational systems and classifications, international comparisons must be made with caution. For more information on the limitations of international comparisons see Education at a Glance, 2013 <http://www.oecd.org/education/eag.htm>

degree in the U.S. system. We present data for the population age 25 to 34 for the years 2000 and 2012.

- **Tertiary-type B programs** (ISCED 5B) 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.

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## **Indicator 6a: What Percent of 25 to 34 Year Olds Has Completed a Type A Tertiary Degree?**

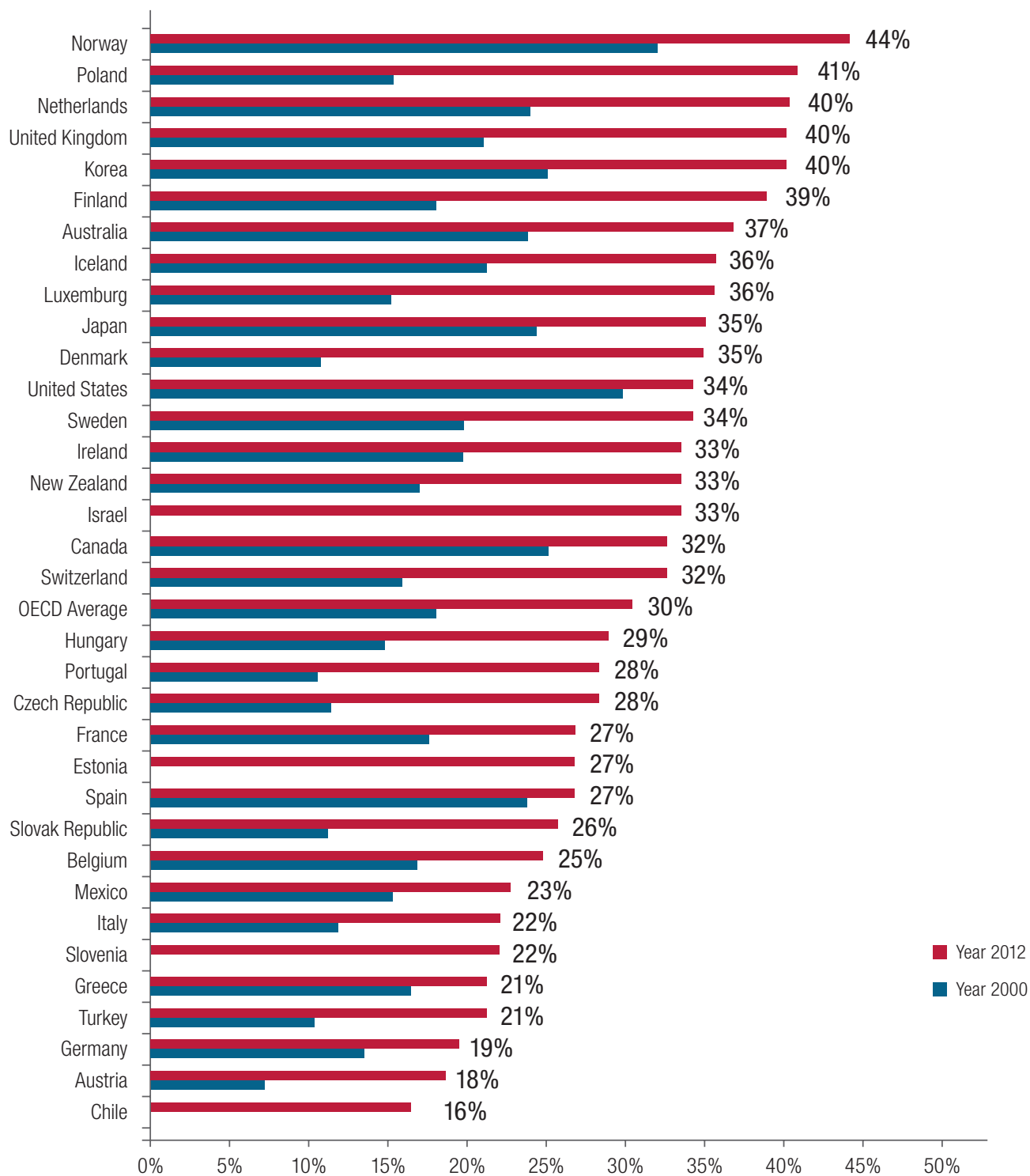
Norway (44 percent in 2012-- with 38 percent growth since 2000), Poland, (41 percent-- with 168 percent growth), Netherlands (40 percent), United Kingdom (40 percent), and Korea (40 percent) lead the way on Tertiary Type A attainment, with attainment rates of at least 40 percent. With the exception of Norway, the attainment rate in each of these countries was lower than the attainment rate in the United States in the year 2000. In 2000 the United States ranked second internationally with 30 percent tertiary type A attainment. By 2012, the United States ranked 12th, with a 34 percent tertiary type A attainment rate. Between 2000 and 2012, the U.S. experienced a 13 percent increase in tertiary type A attainment, a considerably lower rate of growth than the 30 percent average increase across OECD countries.

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## **Indicator 6b: What Percent of 25 to 34 Year Olds Has Completed a Type A or Type B Tertiary Degree?**

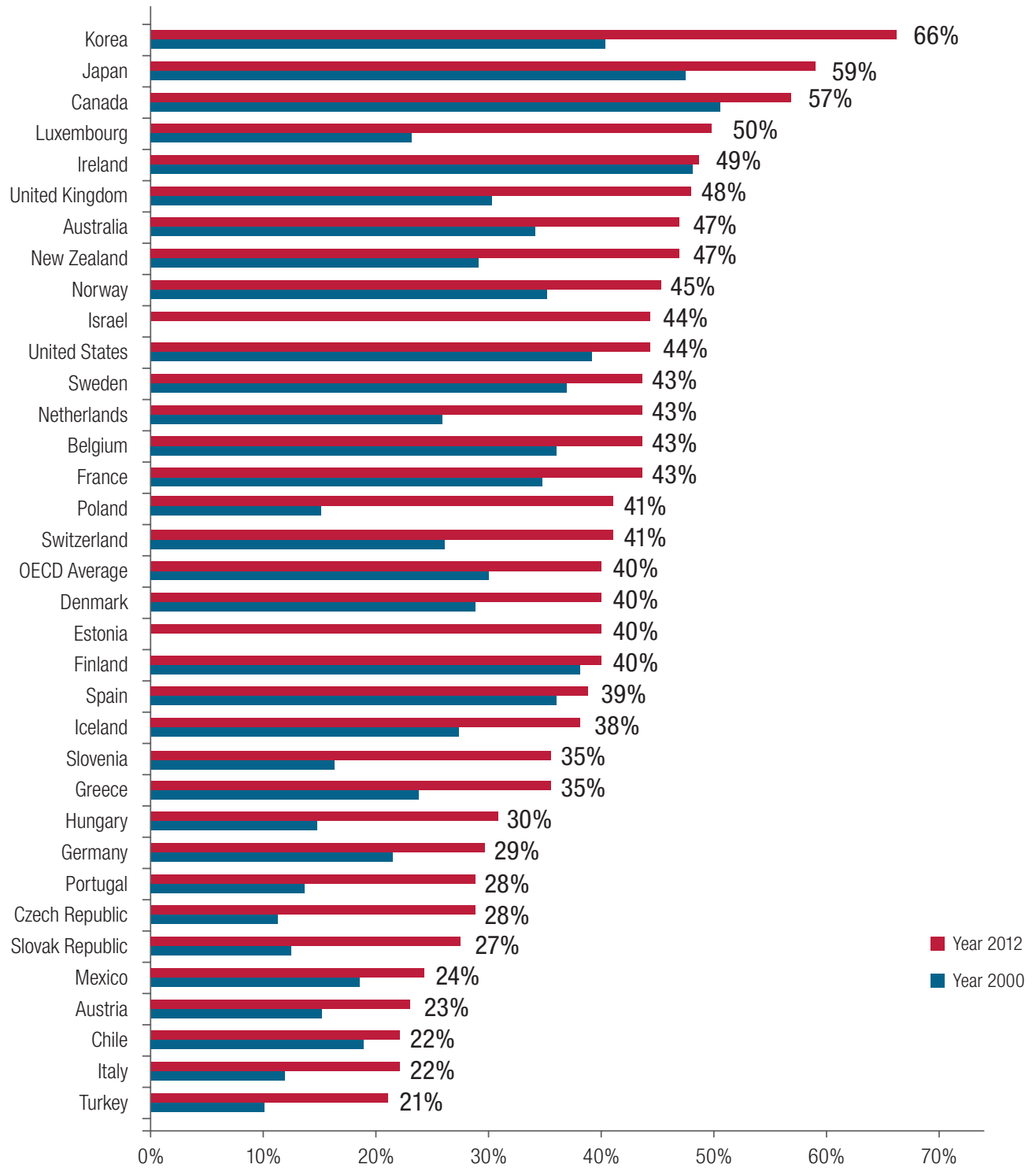
When tertiary type A and type B are combined, Korea (66 percent in 2012 with a 64 percent increase since 2000), Japan (59 percent with a 24 percent increase), Canada (57 percent with a 14 percent increase), Luxembourg (50 percent with a 116 percent increase), and Ireland (49 percent with a 3 percent increase) led the way in 2012. The United States ranked 11th on this indicator in 2012, with a 44 percent attainment rate, up from 39 percent in 2000. The U.S. rate of increase between 2000 and 2012 of 13 percent was considerably lower than the average rate of increase for OECD nations over the period (36 percent). The average rate of attainment for OECD was 40 percent in 2012, up from 30 percent in 2000.

## Equity Indicator 6a: Percent of 25 to 34 year olds with a Type A Tertiary Degree: 2000 and 2012



Source: Organization for Economic Cooperation and Development (OECD), Education at a Glance. [http://www.oecd.org/findDocument/0,3770,en\\_2649\\_39263294\\_1\\_119699\\_1\\_1\\_37455,00.htm](http://www.oecd.org/findDocument/0,3770,en_2649_39263294_1_119699_1_1_37455,00.htm)

**Equity Indicator 6b: Percent of 25 to 34 year olds with a Type A or Type B Tertiary Degree: 2000 and 2012**



Source: Organization for Economic Cooperation and Development (OECD). Education at a Glance. [http://www.oecd.org/findDocument/0,3770,en\\_2649\\_39263294\\_1\\_119699\\_1\\_1\\_37455,00.htm](http://www.oecd.org/findDocument/0,3770,en_2649_39263294_1_119699_1_1_37455,00.htm)

# What Does It Mean? The Search for Solutions Shared Dialogues Essays

*In this concluding section, two 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 high 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 Penn Alliance for Higher Education and Democracy (AHEAD) have prepared reflection essays concerning the issues raised by the Equity Indicators report. It is the intent of the project that this will initiate yearly dialogues that will accompany the annual monitoring of our progress. The first essay *Improving Equity in Higher Education Attainment: A National Imperative* summarizes and reflects on the key data in the report and discusses implications for our democratic nation moving forward. The essay was prepared by Laura W. Perna, Ph.D. the Executive Director of AHEAD and the James S. Riepe Professor, University of Pennsylvania. The second essay, *Sixteen Strategies for Widening Equity of Participation in Higher Education in the United States: Reflections from International Comparisons*, lists policies and practices that show promise from observational and experimental research from the international and US context. This essay was prepared by Margaret Cahalan, Ph.D, Vice President for Research at the Council for Opportunity in Education (COE) and Director of the Pell Institute.



# Improving Equity in Higher Education Attainment: A National Imperative

**Laura W. Perna, Ph.D.**

**Executive Director, Alliance for Higher Education and Democracy**

**James S. Riepe Professor, University of Pennsylvania**

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One of the greatest threats facing our nation is the growing divide between the “haves” and the “have nots.” Contributing to this problem is the fact that students from high-income families attain college degrees at far higher rates than students from low-income families. Not everyone needs a college degree, of course, but far too few people in the United States—and especially far too few people from groups that are historically underrepresented in college—are getting one.<sup>25</sup> Low levels of educational attainment have negative economic and social consequences for individuals and society as a whole.

The benefits of a college degree are well documented and numerous. People with college degrees tend to experience higher earnings, lower unemployment and poverty, better working conditions, longer lives, better health, and many other benefits.<sup>26</sup> Society as a whole also benefits when more individuals complete higher levels of education. When college attainment improves, the tax base increases, reliance on social welfare programs declines, and civic and political engagement increases.<sup>27</sup>

The *Indicators* in this report paint a powerful picture of the magnitude of progress needed to achieve equity in higher education outcomes and to maximize the countless benefits of higher education.<sup>28</sup>

## *Income-Based Inequities in Educational Attainment*

Bachelor’s degree attainment rates in 2013 were an incredible 66 percentage points lower for students from low-income families than for students from high-income families (Equity Indicator 5a). As the following findings illustrate, these differences in degree attainment are attributable in part to differences in the likelihood of enrolling in college and differences in the type of college attended:

- Compared with students from higher income families, students from lower income families are considerably less likely to participate in postsecondary education (Equity Indicator 1).

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<sup>25</sup> The share of adults age 25 to 34 that hold the equivalent of a bachelor’s degree (Type A Tertiary Degree) is now at least 6 percentage points lower in the United States than in Norway, Poland, the Netherlands, the United Kingdom, Korea, and Finland (Equity Indicator 6).

<sup>26</sup> Sandy Baum, Jennifer Ma, and Kathleen Payea, *Education pays: The benefits of higher education for individuals and society* (Washington, DC: The College Board, 2013).

<sup>27</sup> Baum, Ma, and Payea, *Education pays*.

<sup>28</sup> For a more complete discussion of the reasons why the U.S. must not only raise overall higher education attainment but also close gaps in attainment across groups see Laura W. Perna and Joni Finney, *The attainment agenda: State policy leadership for higher education* (Baltimore, MD: Johns Hopkins University Press, 2014).

- When they do enroll, students from low-income families disproportionately attend two-year rather than four-year institutions, and for-profit postsecondary institutions rather than private not-for-profit institutions (Equity Indicator 2).
- The average net price of attendance at the institutions attended by students from the highest income quartile is growing at a faster rate than at institutions attended by students in the lowest income quartile. This suggests increasing stratification across groups in the types of postsecondary education options that students from different groups can access (Equity Indicator 3b).
- Even when only those who enter college are considered, bachelor's degree attainment rates in 2013 were an astonishing 78 percentage points lower for students from lower income families than for students from higher income families.
- Although gaps in college participation have declined somewhat over time (Equity Indicator 1), gaps in bachelor's degree attainment (Equity Indicator 5) have grown.

These data illustrate the profound, persisting gaps in equity for one important group: students from low-income families. Most of the data also describe an even more specific subgroup: students of traditional college-going age (18 to 24) who are financially dependent on their parents.

Attention to the status of equity for this particular population is not meant to minimize or obscure inequities in higher education outcomes among many other groups. Higher education outcomes in the United States also vary dramatically based on other demographic characteristics. College outcomes are generally lower for Blacks and Hispanics than for Whites and Asians (as a group), lower for students who are the first in their families to attend college than for students whose parents attained a college degree, and lower for older students than for their younger counterparts. Higher education outcomes also vary based on place of residence, as attainment rates differ across and within states, based on the characteristics of the high school attended.<sup>29</sup>

Documenting the status of equity for low-income, traditional-age students has great value because so many of our existing public policies and institutional practices ostensibly focus on promoting higher education outcomes for this group. And yet the *Indicators* demonstrate that existing public policies and institutional practices are insufficient, particularly with regard to ensuring the affordability of college.

### *Inequities in Affordability*

College affordability is determined by policies and practices pertaining to state appropriations, tuition setting, and financial aid. These policies have shifted over time in ways that make students and families responsible for a growing share of college costs, as highlighted by the following findings:

- The share of costs covered by state and local governments has steadily declined (Equity Indicator 4a).
- The primary federal policy for reducing the financial barriers to college attendance for low-income students is the Federal Pell Grant. Yet the share of the average cost of attendance that is covered by the Federal Pell Grant has been steadily declining (Equity Indicator 3a).
- In 2012, the Federal Pell Grant covered only 27 percent of the average cost of attendance (Equity Indicator 3a).

<sup>29</sup> For more information, see, for example, Perna and Finney, *The attainment agenda*; and Laura W. Perna and Anthony Jones, eds., *The state of college access and completion: Improving college success for students from underrepresented groups* (New York, NY: Routledge, 2013).

- Average net price of attendance has increased regardless of family income (Equity Indicator 3b), and students from all but the highest-income quartile now must find a way to pay for some amount of financial need that is not covered by financial aid (Equity Indicator 3c).
- More and more students of all family income groups are covering these costs by borrowing larger amounts (Equity Indicator 4c).

State governments, the federal government, and colleges and universities share the responsibility for reducing the financial barriers to attending and completing college.<sup>30</sup> In our study of the relationship between public policy and higher education attainment in five states, Joni Finney and I learned that raising attainment—and closing gaps in attainment—requires a comprehensive approach. To improve college affordability, state governments should provide a reliable, sustained base of public resources for higher education and work with colleges and universities to limit increases in tuition and other costs of attendance. State governments, the federal government, and colleges and universities must provide adequate student financial aid. And this aid should be provided in the form of need-based grants, so as to address differences across groups in the availability of financial resources to pay college costs and reduce the reliance on student loans for students from low-income families.

State governments, the federal government, and institutions must also do more to ensure that students and their families have accurate and complete knowledge about college costs and financial aid early in the educational pipeline. Knowledge is critical, given the complexity of the nation’s student financial aid system and related application processes. But in most high schools—and especially the high schools that students from low-income families tend to attend—too few counselors are available to provide this information.

### **Other Factors Affecting Equity**

Although necessary, improving college affordability alone will be insufficient for achieving equity in higher education attainment across family income and other demographic groups. Higher education attainment is the result of a process that begins arguably at birth. Achieving equity in attainment will require eliminating gaps not only in college enrollment, choice, and completion, but also in other critical outcomes, including completion of a rigorous academic curricular program, graduation from high school, and seamless transfer from one college or university to another.

In order to enroll and succeed in college, all individuals must graduate from high school academically ready for college-level work. Too many students who enter postsecondary education are derailed by the need for developmental coursework. State governments, K-12 schools, and higher education institutions must ensure that academically rigorous courses are available in all schools (particularly schools with high shares of students from low-income families and racial/ethnic minority groups) and that the academic requirements for graduating from high school align with the academic expectations for succeeding in college. State governments and higher education institutions must also do more to ensure that students can transfer across higher education institutions without loss of academic credit.

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<sup>30</sup> For more information on the recommendations in this essay see Perna and Finney, *The Attainment Agenda*; and Perna and Jones, *The state of college access and completion*.

## *A Comprehensive Approach to Closing the Gaps*

Closing the considerable gaps in higher education attainment that are documented in this report will not be simple or easy. Improving equity in higher education attainment is a complex, multi-faceted challenge that cannot be “solved” by changing just one policy or practice. Instead, leadership is required at federal, state, and institutional levels.

Closing gaps in attainment requires a comprehensive approach that recognizes the roles and responsibilities of different stakeholders, the characteristics of the target population (e.g., low-income students), and the state and local context (including the characteristics of the higher education institutions that are available to students). This comprehensive approach must recognize the importance of improving college affordability, academic readiness, information, and support, as well as the interrelated roles of the federal government, state governments, and colleges and universities. A comprehensive approach must also recognize the role of data and research in informing understanding of the most appropriate policies and practices.

This *Indicators* report clearly shows that more work is required.

# Sixteen Strategies for Widening Equity of Participation in Higher Education in the United States: Reflections from International Comparisons

**Margaret Cahalan, Ph.D.**

**Vice President for Research Council for Opportunity in Education and**

**Director of the Pell Institute for the Study of Opportunity in Higher Education**

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As Dr. Perna indicated in the previous essay the statistics shown in this report reveal that we have a national imperative to improve postsecondary educational opportunity equity both from a social justice perspective and from a national competitiveness perspective. In this essay I share 16 interconnected strategies that I think would be helpful for the 21<sup>st</sup> century context. I base my reflections both on my experience as an education statistical and evaluation researcher; and also as a “long ago 20<sup>th</sup> century first-generation, low-income student.” This essay is informed by my participating in the project on *International Research on the Effectiveness of Widening Participation*.<sup>31</sup> The work, commissioned by the Higher Education Funding Council of England (HEFCE), was to prepare locally authored case studies on: Australia, Ireland, Netherlands, Norway, South Africa, and the United States to help inform the development of sound policy and practice for the English context. The Pell Institute was asked to prepare the U.S. case study following a standardized template and in the course of so-doing I reviewed a large body of literature on strategies for widening participation in the United States.<sup>32</sup>

Among the case study sites, Norway, Australia, Ireland, and the Netherlands have experienced greater levels of growth in postsecondary participation than in the U.S. in the last decade and Norway, Australia, and the Netherlands now have higher bachelor’s attainment among 25-35 year olds than the U.S. After a decade of rapid growth Ireland’s bachelor’s attainment rates are now similar to the United States and the combined tertiary type A and B rates for Ireland now exceed those of the United States. Statistics on South Africa’s bachelor’s attainment are not reported but South Africa’s gross (age-cohort) higher education participation rate was about 18 percent in 2010 with a target of 20 percent by 2014. College participation rates of secondary school graduates range from 38 percent for Africans to 63 percent for whites.

Before beginning, it should be noted that while selected examples are presented from each of the countries of strategies that I believe are positive, this does not imply a belief that one system or another is better or superior to the United States in terms of equity issues. A paramount conclusion from the summary of the independently prepared case studies was the fact that although the countries have very different education system histories and differing degrees of what might be called educational equity, they each struggled with similar postsecondary

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<sup>31</sup> Lindsey Bowes, Liz Thomas, Louise Peck, Tej Nathwani, *International Research on the Effectiveness of Widening Participation Report to HEFCE and OFFA* by CFE and Edge Hill University October 2013

<sup>32</sup> Margaret Cahalan, *Widening Participation in Higher Education in the United States of America Report submitted to HEFCE and OFFA*, October 2013, Pell Institute for the Study of Opportunity in Higher Education

access, completion, and funding challenges. The case study site synthesis report also found that the individual county reports had identified many similar strategies for improvement applied in very diverse contexts.<sup>33</sup>

## Sixteen Selected Strategies for Consideration

- 1. Setting Place Based Achievable Targets and Providing the Means to Attain the Goals (National, State, Local, and Individual Levels).** Among the case study sites the counties showing marked gains in attainment and equity over the past two decades have done so after setting clear formal targets and addressing pathways to achieve the goals. For example, the Australia government has formal aspirational goals of reaching 40 percent bachelor's attainment of 25 to 34 year olds by 2025 (By 2012 they were at 37 percent). Australia also has a formal "proportional representational equity goal" of having 20 percent of enrolled students come from the lowest income quartile by 2020. Since the mid-2000s, the Netherlands has had an objective that by 2020,<sup>34</sup> 50 percent of the workforce aged 25–34 should have a higher education degree. It is argued that based on the ambition to become "a top-five leading knowledge economy, the Netherlands should seriously invest to increase participation, particularly by non-traditional underrepresented student groups, such as mature students, part-time students, associate degree students, professional master's students and ethnic minority students."<sup>35</sup> In the United States, President Obama has expressed attainment goals in terms of every citizen committing to some postsecondary education and in terms of returning the U.S. to be first in the international rankings by 2020.<sup>36</sup> This has prompted some increased national, state and local goal setting and monitoring. An example of which is illustrated by the *55 Thousand Degrees* initiative in Louisville Kentucky—a community project that yearly tracks college going in the city and seeks to increase the number of Louisville residents who hold college degrees by 55,000.<sup>37</sup> The evidence from the U.S. high school longitudinal studies is that US students from all social groups now have high aspirations for postsecondary education. For example, by 2002, at the start of the 21<sup>st</sup> century over 80 percent of high school students aspired to attain a bachelor's degree or higher and fully two-thirds (66 percent) of those in the lowest SES quartile so aspire.<sup>38</sup> It is less clear that the means to attain the goals are in place.

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**33** While the traditional OECD countries studied may speak in terms of the "evolution" of their systems to be more open, equitable and universal, a country such as South Africa with a history of apartheid, with related institutionalized racism, marginalization and deprivation of a significant section of its society, has embraced the concept of "transformation" (involving both equity and redress) as its overarching policy imperative. Gerald Wangenge-Ouma, University of Pretoria, Widening Participation in South African Higher Education Report submitted to HEFCE and OFFA October 2013

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

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

**36** President Obama, Address to a Joint Session of Congress, February 24, 2009

**37** *Greater Louisville's Education Scorecard 2014 Update*, 55 Thousand Degrees, [http://www.55000degrees.org/wp-content/uploads/2014/12/55K\\_PR14\\_WhitePaper\\_Web.pdf](http://www.55000degrees.org/wp-content/uploads/2014/12/55K_PR14_WhitePaper_Web.pdf)

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

- 2. Increasing the Reach, Funding, and Capacity of College Access Programs.** 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 any type of pre-college program doubled the odds for enrolment in a 4-year college after controlling for other factors known to be related to college entrance.<sup>39</sup> There is also a growing considerable body of evidence from evaluation studies that these programs do 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. Despite this evidence, these programs have seen level funding and de facto decreases in level of resources over the past 15 years. With regard to the federal programs, estimates are that Talent Search and GEAR Up taken together reach about 7 to 10 percent of eligible students, and 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 programs sponsored by the federal government mentioned above, and private supported programs such as AVID, Project GRAD, and Talent Development have had evaluations that have provided evidence of their effectiveness, with the more intensive programs showing larger effect sizes.<sup>40</sup> For example, the random assignment evaluation of Upward Bound found participation in UB, the most intensive of the Federal pre-college programs, was found to result in a 50 percent higher BA attainment rate in 6 years among low income and first generation students who were randomly assigned in middle school or early high school to Upward Bound and who entered the program. A synthesis of work published by the Department of Education reported that the most effective strategies within these programs are: 1) encouraging and supporting strong academic course taking preparation for college; 2) using data to assist students in planning; 3) surrounding students with strong support mentors and peers supporting college attendance; 4) helping students engage in the practical steps to college (course completion, application for aid, college visits, applications); and 5) increased financial literacy and aid awareness<sup>41</sup>.
- 3. Focus on Retention and Completion and Increased Use of Student Support Services.** International comparisons from each of the six country sites indicate that whenever a higher educational system is expanding from elite to a more representational student population, the new students will be in greater need of academic support than students from the more socio-economically

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<sup>39</sup> 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.

<sup>40</sup> Constantine J.M, Seftor N.S., Martin E.S., Silva T and Myers D, *A Study of the Effect of Talent Search on Secondary and Postsecondary Outcomes in Florida, Indiana, and Texas*, US Department of Education, 2006; Cahalan, M., *The National Evaluation of Talent Search, The Implementation of the Federal Talent Search Program: Past and Present*, U.S. Department of Education, 2003 ; ;Olsen, R, Seftor N, Silva T, Myers D, DesRoches D, and Young J, *Upward Bound Math Science: Program Description and Interim Impact Estimates*, U.S. Department of Education, Washington D.C., Mathematica Policy Research, Inc., 2007; Berry T., Sloper S. and Langan S., (2012), *Project GRAD Evaluation*, Project GRAD website; <http://projectgrad.org/> ; Cahalan M, *Addressing Study Error in the Random Assignment National Evaluation of Upward Bound: Do the Conclusions Change?*; can be accessed [http://www.pellinstitute.org/publications-Do\\_the\\_Conclusions\\_Change\\_2009.shtml](http://www.pellinstitute.org/publications-Do_the_Conclusions_Change_2009.shtml) ;Standing K., Judkins D., Keller B., and Shimshak A., *Early Effects of the GEAR UP Program*, report submitted to U.S. Department of Education, Policy and Program Studies Service, 2008; Kemple J., Herlihy C., Smith T., (2005), *Making Progress Toward Graduation Evidence from the Talent Development High School Model*, MDRC Talent Development Program Description <http://www.mdrc.org/talent-development-high-school-model>; Aspire, <http://oregonstudentaid.gov/aspire.aspx> ; *AVID Senior Data Collection. Study of 33,204 AVID Seniors (2011-2012)*. U.S. Overall. AVID Program Description <http://www.avid.org/>

<sup>41</sup> Tierney, W.G., Bailey, T., Constantine, J., Finkelstein, N. & Hurd, N.F., (2009), *Helping Students Navigate the Path to College: What High Schools Can Do: A Practice Guide*, (NCEE #2009-4066), Washington D.C., National Center for Education Evaluation

advantaged families.<sup>42</sup> In the United States, participation in Student Support Services programs has been found to increase college completion rates significantly in national studies based on propensity matching of students with similar entering entrance characteristics.<sup>43</sup> A recent U.S. Department of Education publication identified specific strategies found to be effective in increasing college retention and completion. Services should be: 1) integrated — building and reinforcing each other; 2) sustained — one semester is not considered enough; and 3) systematic — having an overall plan and promoting a culture of success.<sup>44</sup> Specific strategies that have evidence of effectiveness from recent research in the U.S. context include: 1) direct efforts to reduce the need for remediation in the first year of college, including “upward placement” strategies with support and summer bridge programs for entering freshman especially those targeted to specific upcoming freshman courses or those designed to avoid remediation; 2) proactive or intrusive, advising of students that may be at risk and possibly involving college coaches calling or contacting students each week, working with students ahead of time before failure happens to plan strategies to deal with challenges, and specific contracts with students; 3) creating structured pathways to success for students that are clear and attainable and providing data and information to support the pathways; and 4) engaging faculty in creating a culture of fostering student success. In addition, correlational studies that use aggregate completion rates relative to the characteristic of entering students consistently find that colleges with a mission or particular historical focus (for example, Historically Black Colleges or Catholic Colleges) generally have higher than expected completion rates given the characteristics of entering students.<sup>45</sup>

- 4. Supporting Competency-Mastery Based Learning and Recognition of Prior Learning (RPL) for Admissions and for College Credit toward Program Completion.** The goal of universal postsecondary education, will mean that the face of postsecondary education itself may change with the growth of on-line programs, shorter certificate programs and competency based credentialing rather than credit-hour based credentialing. New structures to accommodate older students and students with diverse goals and learning styles hold promise.<sup>46</sup> For example, supported by Gates Foundation funding, the University of Southern New Hampshire has an experimental Associate’s degree program that moves away from the traditional time-based credit hours model and instead allows students to demonstrate competency in 120 areas for the degree. The on-line program was recently given approval from the Department of Education as eligible for Federal Aid funds. Universal participation will mean changes not just in student decisions but also in market-driven institutional program development to meet diverse workforce and student needs. As alternative methods of learning grow the formal means for “Recognized Prior Learning (RPL)” become more important. For example, the South Africa report notes that through this process, “people’s prior learning can be formally recognized in terms of registered qualifications and unit standards, regardless of where and

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<sup>42</sup> Lindsey Bowes, Liz Thomas, Louise Peck, Tej Nathwani, *International Research on the Effectiveness of Widening Participation Report to HEFCE and OFFA* by CFE and Edge Hill University October 2013

<sup>43</sup> Channey B., Muraskin L., Cahalan M. & Rak R., (1997), *National Study of Student Support Services: Third-Year Longitudinal Study of Results and Program Implementation Study Update*, Washington D.C., U.S. Department of Education; Channey, B., (2008), *National Study of Student Support Services: Six Year Longitudinal Study Results*, Washington D.C., U.S. Department of Education

<sup>44</sup> U.S. Department of Education, (2012), *Evidence Meets Practice: Institutional Strategies to Increase College Completion*, Available at <http://www.edpubs.gov/document/ed005371p.pdf>

<sup>45</sup> Mortenson, T, *Actual versus Predicted Institutional Graduation Rates, Access and Completion*, White House Initiative on Historically Black Colleges and Universities, Washington D.C., September 19, 2011

<sup>46</sup> Leonardo Carrizo for The Chronicle ([http://chronicle.com/article/The-Gates-Effect/140323/?cid=at&utm\\_source=at&utm\\_medium=en](http://chronicle.com/article/The-Gates-Effect/140323/?cid=at&utm_source=at&utm_medium=en)).



how the learning was attained. RPL acknowledges that people never stop learning, whether it takes place formally at an educational institution, or whether it happens informally.” It facilitates access and mobility and progression within education, training and career paths and accelerates redress of past unfair discrimination in education and training opportunities.”<sup>47</sup> Globally, Massive Open, Online Courses (MOOCs) also have the potential to radically change the access to bodies of knowledge.<sup>48</sup>

5. **Cohort Services and Special Focus on Key Transition Points for Students That May be Tipping Points; Listening to What Students Are Telling Us.** The recent “policy conversation” around college access has stressed the need to provide “whole school” services to all students and not only to those traditionally served who volunteer for the program and are already interested. There is also recognition of the importance of services keyed to transition points such as entrance from middle to high school with focus on 9th grade services and summer bridge programs between 8th and 9th grade. Another transition point is that of the 12th graders in the college application period; helping students make the right choices for them is deemed important. Similarly programs such as summer bridge programs for entering college freshman, especially those that will need special services, are deemed as very important. A summer bridge program can sometimes reduce the need for remedial courses and also give students a leg up on being successful in that first year of college which for many is a stumbling block. Students who experience early success in high school or college are more likely to persist and complete.
6. **Restoring Public Funding at the Federal, State, and Local levels to Earlier Levels Including Restoring Pell Grants to Their Former Buying Power.** All of the countries in the case studies reported debates and struggles with issues of continued funding of postsecondary education, but those country’s leading the world in increases in college completion have each made strong financial commitments to invest in higher education in ways that provide students with relatively high levels of the financial and student support services needed. For example public institutions attended by 85 percent of students in Norway do not charge tuition, and the government policy is that all students are provided with the means to attend including funds to live separately from their parents.<sup>49</sup>
7. **Universal Free Tuition for Community College and First Two Years of 4-Year College.** A number of proposals and plans have been made for variations of this option some of which include only community colleges and others of which would also include support for first two years regardless of

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<sup>47</sup> Gerald Wangenge-Ouma, University of Pretoria, *Widening Participation in South African Higher Education Report submitted to HEFCE and OFFA*, October 2013 [http://www.hefce.ac.uk/media/hefce/content/pubs/indirreports/2013/wpinternationalresearch/2013\\_WPeffectivenessSAfrica.pdf](http://www.hefce.ac.uk/media/hefce/content/pubs/indirreports/2013/wpinternationalresearch/2013_WPeffectivenessSAfrica.pdf)

<sup>48</sup> *Bill Gates Discusses MOOCs at Microsoft Research’s Faculty Summit, Chronicle of Higher Education Blog* [http://chronicle.com/blogs/wiredcampus/bill-gates-discusses-moocs-at-microsoft-researchs-faculty-summit/44809?cid=at&utm\\_source=at&utm\\_medium=en](http://chronicle.com/blogs/wiredcampus/bill-gates-discusses-moocs-at-microsoft-researchs-faculty-summit/44809?cid=at&utm_source=at&utm_medium=en)  
A blog entry from the *Chronicle of Higher Education* summarized remarks from Bill Gates, in a keynote address to the July 2013 Microsoft Research Faculty conference called these times a “golden era” of learning, thanks to MOOCs and easy access to information. In addressing the current discussion over the value of a college degree, he also predicted a “decoupling” of the degree from knowledge acquisition. Traditionally, a college degree was a badge indicating skills in certain areas that could be translated to employment. Mr. Gates said that may no longer be the case, largely because of online education. This will be “a global phenomenon,” he said. “We’re on the beginning of something very profound

<sup>49</sup> Elisabeth Hovdhaugen, Nordic Institute for Studies in Innovation, Research and Education (NIFU) *Widening Participation in Norwegian Higher Education Report submitted to HEFCE and OFFA*, October 2013, [http://www.hefce.ac.uk/media/hefce/content/pubs/indirreports/2013/wpinternationalresearch/2013\\_WPeffectivenessNorway.pdf](http://www.hefce.ac.uk/media/hefce/content/pubs/indirreports/2013/wpinternationalresearch/2013_WPeffectivenessNorway.pdf)

type of college attended (2-year or 4-year).<sup>50</sup> Some states such as California had free tuition in previous decades over 50 years ago. In the more recent context states such as Tennessee have developed a plan for free 2-year community college attendance and President Obama recently announced his national plan for free community college at Pellissippi State Community college in Tennessee.<sup>51</sup>

8. **Place Based Local Scholarship and Support Programs for All Students within a City with Partnerships with Local Colleges and Universities.** Projects such as the *Kalamazoo Promise* in Michigan and the *Denver Scholarship Foundation (DSF)* in Colorado provide model examples of projects that award full or sizable scholarships combined with support services to students who attend the local high schools for 4 years and attend colleges in the state or local region. Partnerships are in place with colleges in the local area to provide support services.<sup>52</sup>
9. **Incentivizing Completion through Conversion of Loans to Grants upon Completion of Course or Program of Study.** While countries varied in the extent to which loans were used to cover college costs depending on the funding structure and levels of grant awards available, all of the case study sites utilized some form of loans to students. In countries in which tuition and fees are covered in basic and means tested grants, loans might only be used for additional support expenses. However, often these loans are changed to grants upon successful course or program completion. For example, in South Africa, the responsible government agency, NSFAS, makes awards that are 100 percent loans; however, afterwards up to 40 percent of the loan is converted into a bursary (grant) depending on the student's academic results. To encourage students to complete their studies on time, beginning in 2011, all students registered at a public university in their final year of study and who qualified for funding from NSFAS would receive a loan equivalent to the full cost of study. The entire loan is converted into a bursary if the students passed all their courses and graduate in the year of offer. Failure to graduate meant that the award remains a loan to be repaid to NSFAS.<sup>53</sup> In the Netherlands model which has government paid full tuition, financial assistance consists of an allowance towards expenses such as living costs, books and study materials, tuition fees, and travel. Student financial assistance includes a basic grant, a supplementary grant and an interest-bearing loan. The basic grant and supplementary grant are now initially paid out in the form of a loan. If the student graduates within 10 years, the loan is converted into a non-repayable grant. Therefore these grant parts are called performance-related grants. Students receive performance-related grants for the nominal duration of their study program and may take up a loan until 36 months after the nominal duration of their program. Grants are intended as a means of keeping higher education broadly accessible and are paid monthly.<sup>54</sup>

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50 Sara Goldrick-Rab, Andrew Kelley, *Reinventing Student Aid for the 21<sup>st</sup> Century*, Harvard Education Press, forthcoming 2015

51 <http://www.theblaze.com/stories/2015/01/09/obama-two-years-of-college-would-be-as-free-and-universal-as-high-school/>; [http://host.madison.com/ct/news/local/writers/pat\\_schneider/community-college-education-should-be-free-to-students-says-uw/article\\_80322846-950a-11e3-806f-001a4bcf887a.html](http://host.madison.com/ct/news/local/writers/pat_schneider/community-college-education-should-be-free-to-students-says-uw/article_80322846-950a-11e3-806f-001a4bcf887a.html)

52 <http://www.denverscholarship.org/> and <https://www.kalamazoopromise.com/>

53 Gerald Wangenge-Ouma, University of Pretoria, *Widening Participation in South African Higher Education Report submitted to HEFCE and OFFA* October 2013 [http://www.hefce.ac.uk/media/hefce/content/pubs/indirreports/2013/wpinternationalresearch/2013\\_WPeffectivenessSAfrica.pdf](http://www.hefce.ac.uk/media/hefce/content/pubs/indirreports/2013/wpinternationalresearch/2013_WPeffectivenessSAfrica.pdf)

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

- 10. Addressing the Satisfactory Academic Progress (SAP) Issues through Prevention and Flexibility Rewarding Improvement.** Pell grants, as most college support grants in the case study sites, have long had performance related academic requirements. However, unlike the trend in some countries to have more flexible performance goals that recognize that underprepared, disadvantaged and working students may need more time, in recent years stricter regulations for completion time have been implemented in the United States. This has led to a complex hard to administer requirement that to continue the Pell grant students must demonstrate on a yearly basis that they are progressing to their program completion within 150 percent of the program time. Recent research indicates that these more stringent requirements as applied may be impacting as many as 20 percent of Pell recipients who early on in college lose their Pell grants and leave college.<sup>55</sup> Students whose prior academic record, heavy work load, and other risk factors indicate that the student may enter college with a high probability of SAP failure can be identified prior to Pell award so that prevention actions such as summer bridge, structured first year, intrusive advising and early warning programs can be initiated. It's also important that students have adequate information concerning the SAP requirements as applied to their program of study before and not after they have lost their Pell grant. Programs like "Binding Study Advice" (BSA) such as exist in Netherlands and similar programs in South Africa that initiate requirements such as limits to work hours, and tutoring requirements to help students get back on track may be a better approach than the US regulation of removal of the Pell Grant.
- 11. Increased Integration of Work and Learning.** International and U.S. research indicates that students who are more engaged and have career or learning goals for themselves tend to do better academically and are more likely to complete a program even controlling for entering academic characteristics. Studies also show that students who leave before completing often cite problems in juggling work and college.<sup>56</sup> The Netherlands case study reported the observation that programs that are more structured and contain a component of work experience in the field of study have lower dropout rates than less focused programs among students with similar academic backgrounds.<sup>57</sup> Within the U.S., the Travelers Edge, program sponsored by the Travelers Insurance Company Foundation is an example of a model program that combines financial and academic support plus concrete work experience for students interested in careers in insurance, including finance, claims, underwriting, information technology, and engineering.<sup>58</sup>
- 12. Increased Support for Full-Time College Attendance and Reduced Work-Loads for Students.** Research has repeatedly shown that part-time attendance is a risk factor in the U.S. in terms of college completion and as noted, studies of students leaving college cite the difficulty in juggling

<sup>55</sup> *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 Lauren Schudde Judith Scott-Clayton Community College Research Center Teachers College, Columbia University December 2014; Advisory Committee on Student Financial Assistance, (2010) *The Rising Price of Inequality*. Washington, DC. Retrieved on October 29, 2011 from <http://www2.ed.gov/about/bdscomm/list/acfsa/acsfarpjune2010.pdf>

<sup>56</sup> Perna, L.W., ed., (2010), *Understanding the Working College Student: New Research and Its Implications for Policy and Practice*, Sterling, Va., Stylus; *With Their Whole Lives Ahead of Them*; <http://www.publicagenda.org/pages/with-their-whole-lives-ahead-of-them-reality-1>

<sup>57</sup> J.J. (Hans) Vossensteyn, Centre for Higher Education Policy Studies, *Widening Participation in Higher Education in the Netherlands Report submitted to HEFCE and OFFA*, October 2013

<sup>58</sup> Pell Institute for Study of Opportunity in Education, *Travelers Edge A Model on the Cutting Edge of Corporate College Access and Support*, 2012 [http://www.pellinstitute.org/downloads/publications-Travelers\\_EDGE\\_2012.pdf](http://www.pellinstitute.org/downloads/publications-Travelers_EDGE_2012.pdf)

college and work and other responsibilities as the major factor leading to their decision to leave college. Often in the U.S. this leaving is mediated by poor performance. By comparison students in countries in which postsecondary support is relatively high such as Norway and Netherlands students typically have support to attend full-time and less frequently have heavy work schedules. For example, in the Netherlands over 90 percent of students attend full-time and spend on average about 10 hours per week on paid work. Students indicate that this hardly influences their study progress.<sup>59</sup>

- 13. Rewarding and Incentivizing Institutions for Serving and Graduating Low-income and Less Academically Prepared Students.** The linkage of college entrance tests and other measures of academic preparation with Socio-Economic-Status (SES) has meant that there has been a concentration of higher income students in 4-year selective private colleges and in the flagship public institutions and a very low and declining percentage of Pell recipients within these same institutions.<sup>60</sup> Those few Pell recipients meeting the competitive entrance requirements and admitted to the selective institutions are those that score significantly higher on entrance exams than their peers. Instead of focusing on incentivizing these high quality universities to have an educational output of higher numbers of Pell recipients, the focus of accountability has been a deficit based critique of the shortcomings of the institutions that serve large numbers of Pell recipients and have lower graduation rates on average. A more productive policy might be to encourage the high quality institutions to serve and graduate less well prepared students. In the Netherlands some private highly regarded IHE's are participating in an experiment in which they are provided with public funds to implement a more open system of admissions. U.S. selective institutions can experiment with more open admissions policies and observe how well they can graduate students who are underprepared.<sup>61</sup>
- 14. Taking an Integrated and Holistic Approach to Student Services and Institutional Access Plans.** Several of the case study countries reported that the country sought to have a holistic approach that involved formal institutional access and completion plans. For example the report from Ireland noted that "There is significant recognition of the need for a more coherent and integrated approach to inclusion and equality in education in Ireland, throughout the lifecycle of a particular individual."<sup>62</sup> There is a mandate for institutions to develop clear statements and plans about links between their access programs and the community and other education partners. In terms of targeting, institutions were to set clear targets, including timescales, for the admission and graduation of specific target groups, plans to meet these students' needs based on research, and to develop a systematic

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<sup>59</sup> Widening Participation in Norwegian Higher Education Report submitted to HEFCE and OFFA October 2013 Dr Elisabeth Hovdhaugen, Nordic Institute for Studies in Innovation, Research and Education (NIFU) [http://www.hefce.ac.uk/media/hefce/content/pubs/indirreports/2013/wpinternationalresearch/2013\\_WPeffectivenessNorway.pdf](http://www.hefce.ac.uk/media/hefce/content/pubs/indirreports/2013/wpinternationalresearch/2013_WPeffectivenessNorway.pdf)

<sup>60</sup> Gerald, D. and Haycock, K. (2006) Engines of Inequality, Diminishing Equity in the Nation's Premier Public Universities, The Education Trust, Washington DC, Mortenson, T, Actual versus Predicted Institutional Graduation Rates, Access and Completion, White House Initiative on Historically Black Colleges and Universities, Washington D.C., September 19, 2011; Wilkinson R.G. and Pickett K.E., (2007), The Problem of Relative Deprivation: Why Some Societies Do Better than Others. *Social Science and Medicine*, 65 (9) 2007; Wilkinson R.G. and Pickett K.E., (2009), *The Spirit Level*, Equality Trust, 2009 ; Carnevale A. and Strohl J., How Increasing College Access is Increasing Inequality and What to Do About it? In *Rewarding Strivers*, 2009

<sup>61</sup> Elisabeth Hovdhaugen, Nordic Institute for Studies in Innovation, Research and Education (NIFU) Widening Participation in Norwegian Higher Education Report submitted to HEFCE and OFFA , October 2013, [http://www.hefce.ac.uk/media/hefce/content/pubs/indirreports/2013/wpinternationalresearch/2013\\_WPeffectivenessNorway.pdf](http://www.hefce.ac.uk/media/hefce/content/pubs/indirreports/2013/wpinternationalresearch/2013_WPeffectivenessNorway.pdf)

<sup>62</sup> Elaine Keane, National University of Ireland, Galway, Higher Education in the Republic of Ireland Report submitted to HEFCE and OFFA, October 2013 [http://www.hefce.ac.uk/media/hefce/content/pubs/indirreports/2013/wpinternationalresearch/2013\\_WPeffectivenessIreland.pdf](http://www.hefce.ac.uk/media/hefce/content/pubs/indirreports/2013/wpinternationalresearch/2013_WPeffectivenessIreland.pdf)

approach to data collection to monitor activities. In the Netherlands, as in the United States, there is a focus on college and program match geared to personalized help in setting goals and pathways to achieve the goals. One stop shopping web sites have been developed to remove the informational barriers and confusion over college match. Strategies are developed and designed to increase connectivity of a student to a specific program of study. Many institutions also started implementing “soft selection”, which is also called “matching mechanisms”. These include online or physical information sessions, self-assessments, motivation letters, entrance tests and intake interviews. All of these instruments result in advice to the prospective students as to whether a particular program fits their interests, motivation and/or capability. Early application is fostered as there is a high correlation between late applications and the extent to which students feel connected to a study program and their own perceived likelihood of graduation.

- 15. Institutional and Student Equalization—Embedded Inclusivity and Increased Respect for Diversity of Assets.** Among the countries in the study, the complex US system is characterized as having a notable degree of institutional stratification and homogenization by socio-economic status (SES) of pupils and the related ACT and SAT scores measuring academic preparedness.<sup>63</sup> Correspondingly there is a high degree of focus on college rankings and unequal levels of resources among institutions. To the extent that students measure their own self-worth with the ranking of the institutions to which they gain admittance and attend, there is an increase in inequality. A contrasting system would be Norway.<sup>64</sup> Compared with many other higher education systems, the Norwegian system can be considered to have a relatively low degree of hierarchy, with institutions generally considered “equal in terms of prestige and quality.” The report for Ireland notes that the “embedding inclusivity in higher education represents a shift from a more deficit view of access and widening participation towards a more relativist perspective.”<sup>65</sup> Epidemiological researchers Kerry, Pickett and Wilkinson have observed the negative impacts of inequality pressures on biological health measures and on comparative international statistics that measure national well-being. They observed that level of inequality measures are strongly correlated with variations in the incidence of negative health and education indicators such as lower test scores and increased dropout rates.<sup>66</sup>
- 16. Recognizing the Need for Reform in Evaluation Research.** The summary report for the case studies, noted that all the reports recognized the need for more evaluation of strategies and policies.<sup>67</sup> The past two decades have been ones in which there has been considerable pressure in

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<sup>63</sup> In Australia, there is formal recognition that academic tests are more a measure of social economic class than of academic potential. In competitive admissions this recognition can result in the addition of points on the Australian Tertiary Admission Ranks (ATARs) for students from disadvantaged backgrounds.

<sup>64</sup> U.S. Department of Education, (2012), Evidence meets practice: institutional strategies to increase college completion, Available at <http://www.edpubs.gov/document/ed005371p.pdf>, Mortenson, T, Actual versus Predicted Institutional Graduation Rates, Access and Completion, White House Initiative on Historically Black Colleges and Universities, Washington D.C., September 19, 2011

<sup>65</sup> Elaine Keane, National University of Ireland, Galway, *Higher Education in the Republic of Ireland Report* submitted to HEFCE and OFFA, October 2013 [http://www.hefce.ac.uk/media/hefce/content/pubs/indirreports/2013/wpinternationalresearch/2013\\_WPeffectivenessIreland.pdf](http://www.hefce.ac.uk/media/hefce/content/pubs/indirreports/2013/wpinternationalresearch/2013_WPeffectivenessIreland.pdf)

<sup>66</sup> Carnevale, A., Smith, N. & Strohl, J., (2010), *Help Wanted: Projections of Jobs and Education Requirements Through 2018*, Washington, D.C., Georgetown University Center on Education and the Workforce; Carnevale A. and Strohl J., (2009), *How Increasing College Access is Increasing Inequality and What to Do About it?*, in *Rewarding Strivers*

<sup>67</sup> Lindsey Bowes, Liz Thomas, Louise Peck, Tej Nathwani, *International Research on the Effectiveness of Widening Participation Report to HEFCE and OFFA* by CFE and Edge Hill University October 2013

the United States for Federal and State, local or private foundation funded programs to demonstrate through external evaluations that they are “effective” in reaching their goals and also that they are “productive” and “cost-effective” in the use of funds. Thus far however, in the United States “education evaluation research” has not often been able to provide information considered of use to practitioners. Moreover, evaluation results have frequently been used by policy advocates interested in decreasing funding and criticizing or “reforming” the social welfare programs. This occurs even when positive impacts are found.<sup>68</sup> The result has been that social program practitioners and supporters have been in a position of defending the programs in which they are involved. A number of new programs not able to demonstrate impacts after questionable evaluations failed to show impacts have been eliminated before they even were fully implemented. It is also generally recognized that in the cases of competitive Federal programs that fund a diverse and ever changing group of grantees it is very difficult to measure impact without control group contamination. After two decades of attempting these “black box” overall national evaluations, there is currently an emphasis on smaller in-depth studies of individual strategies that may be attempted and used across programs by practitioners that show promise. There is a clear attempt to understand the link between the intervention and the impact being observed. To the extent possible these studies try to use mixed methods combining qualitative and quantitative experimental or quasi-experimental designs. However, even with studies of specific strategies experimental methods are not always possible, and these often have limited validity outside of a particular context. The other issue is that factors impacting postsecondary access and completion are systemic, dynamic and ever changing in time and context. There are new methods for evaluation (for example ----Participatory Action Research, Collaborative, and Empowerment Evaluation; Culturally Responsive Evaluation, Systems Dynamics Analysis) that hold promise. These approaches encourage internal on-going monitoring and involvement of all stakeholders including practitioners, clients, and external evaluators in providing feedback and impact assessment. The goal is to embed evaluation into program practice and to continually engage in self-study of the best methods to improve services and goal achievement.<sup>69</sup>

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**68** Margaret Cahalan and David Goodwin, *Setting the Record Straight: Strong Positive Impacts Found from the National Evaluation of Upward Bound, Re-Analysis Documents Significant Positive Impacts Masked by Errors in Flawed Contractor Reports*, The Pell Institute for the Study of Opportunity in Higher Education, The Council for Opportunity in Education, June 2014., [http://www.pellinstitute.org/downloads/publications-Setting\\_the\\_Record\\_Straight\\_June\\_2014.pdf](http://www.pellinstitute.org/downloads/publications-Setting_the_Record_Straight_June_2014.pdf)

**69** Information about these newer evaluation methods can be obtained at: (Action Research) [http://en.wikipedia.org/wiki/Participatory\\_action\\_research](http://en.wikipedia.org/wiki/Participatory_action_research); (Empowerment Evaluation) Evaluation methods Stevenson, J.F., Mitchell, R.E., and Florin, P. (1995) *Evaluation and Self-Direction in Community Prevention Coalitions*. In Fetterman, D.M., Kaftarian, S., and Wandersman, A. (1995). *Empowerment Evaluation: Knowledge and Tools for Self-assessment and Accountability*. Thousand Oaks, CA: Sage Fetterman D., Wandersman A., (2005), *Empowerment Evaluation, Principles in Practice*; (Systems Evaluation) Trochim W. *The Evaluation Facilitators Guide to: Systems Evaluation Protocol*, Cornell Office for Research on Evaluation, NSF grant 0535492 2009, <https://core.human.cornell.edu/research/systems/index.cfm> ; *Evaluation and Regional Assistance*, Institute of Education Sciences, U.S. Department of Education. Retrieved from <http://ies.ed.gov/ncee/wwc/publications/practiceguides> Cahalan M. (November 2011) AEA presentation, Anaheim California, Treating the US Educational System as a Complex Adaptive System and Investigating Computational Simulation of Federally-Funded Access Program Impacts <http://www.slideshare.net/cheardotorg/us-college-access-programs-complex-adaptives-system-nov2011>

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