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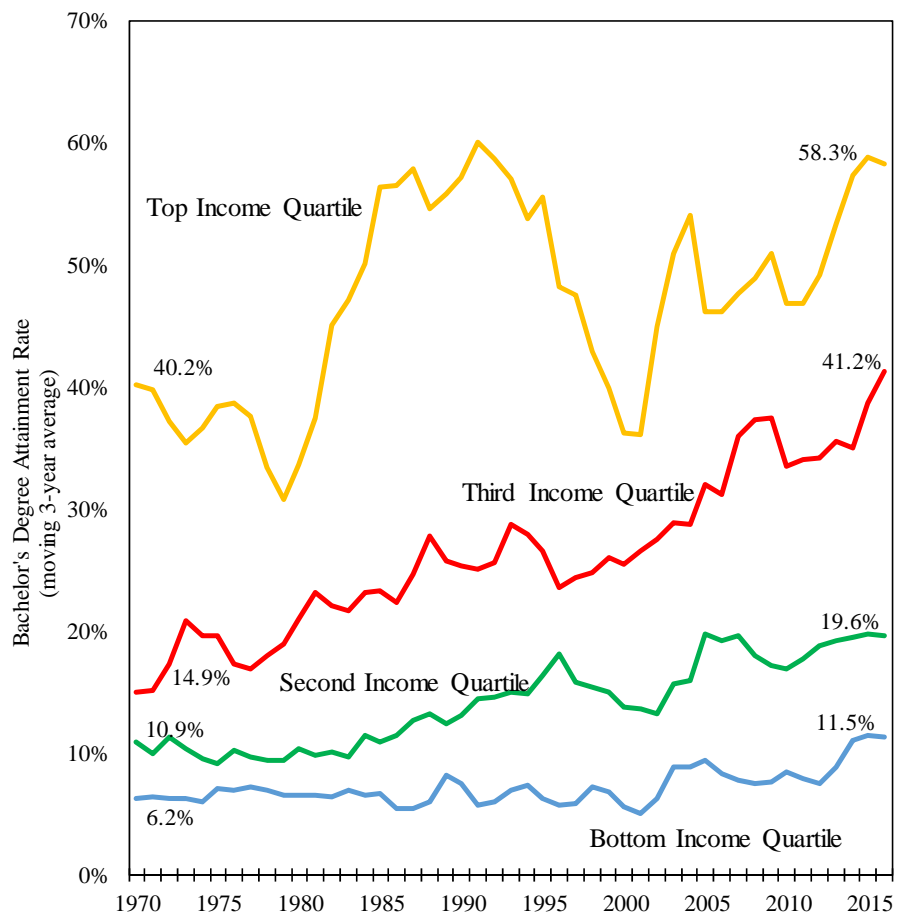
Estimated Baccalaureate Degree Attainment By Age 24 by Family Income Quartiles: 1970 to 2016 By Tom Mortenson

Young people launch their adult lives onto quite different paths based on their educational choices and attainment. One of the most obvious outcomes from education is worklife earnings from employment. Median lifetime earnings by highest educational attainment (2011\$) were:

- \$936,000 with an 8th grade education or less
- \$1,099,000 9th to 12th grade, no diploma
- \$1,371,000 with a high school diploma
- \$1,632,000 with some college, no degree
- \$1,813,000 with an associate's degree
- \$2,422,000 with a bachelor's degree
- \$2,834,000 with a master's degree
- \$3,525,000 with a doctoral degree
- \$4,159,000 with a professional degree

These progressive results are similar for men, women, Whites,

**Estimated Baccalaureate Degree Attainment
by Age 24 by Family Income Quartile
1970 to 2016**



Source: Calculated from October Current Population Survey File
(Formerly Table 14 in Census Bureau's School Enrollment Report)

Blacks, Asians, and Hispanics—more education leads to more income.

At the same time, the probabilities that young people will complete a bachelor's degree that provides access to those much higher earnings are strongly related to their family's income. Those from families with the most income are most likely to graduate from college with at least a bachelor's degree and enter a high earnings stream and continue to live an affluent lifestyle. Other young people from families with the least income are least likely to graduate from college and enter that high earnings stream and are least likely to live an affluent lifestyle. In 2016:

- **58.3%** of 24-year olds from the top family income quartile—above \$127,278—had earned a bachelor's degree
- **41.2%** of 24-year olds from the third quartile of family income—between \$74,085 and \$127,278—had earned a bachelor's degree
- **19.6%** of 24-year olds from the second quartile of family income—between \$39,298 and \$74,085—had earned a bachelor's degree
- **11.3%** of 24-year olds from the bottom quartile of family income—below \$39,298—had earned a bachelor's degree

In short, education generally preserves and strengthens the social and economic class structures of the United States. Higher education in particular functions to en-

rich those born affluent and impoverish others born poor.

Of course there are important exceptions to this dismal finding.

- A few individuals manage to overcome the odds against them and succeed where most fail. Their success stands in stunning contrast to the bleakness of their origins.
- This report documents significant progress in the foundation of the education pipeline—high school graduation—for students from the lowest family incomes. However this progress has not continued into and through college to graduation.
- One group of students—Asians—appears to be largely immune to the debilitating consequences of low family income. Low family income Asian students are nearly as likely to graduate from high school as are high family income Asians. And low income Asian high school graduates are just as likely to enroll in college as are Asian high school graduates from high income families. Asian college students are more likely to be enrolled in a 4-year college and enrolled full-time than are men, women, whites, blacks or Hispanics.

Perhaps the most important benefit of education is life itself. Life expectancy is strongly positively related to educational attainment. For men age 25, the remaining years of life are:

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Mission Statement

This research letter is founded on two beliefs. First, sound public social policy requires accurate, current, independent, and focused information on the human condition. Second, education is essential to the development of human potential and resources for both private and public benefit. Therefore, the purpose of this research letter is to inform those who formulate, fund, and administer public policy and programs about the condition of and influences that affect postsecondary education opportunity for all Americans.

- 44.2 years for males with less than a high school education
- 50.9 years for high school graduates
- 52.5 years for those with some college
- 57.3 years for male college graduates
- 59.8 years for males with graduate degrees

The story is similar for women. For women at age 25, life expectancy is:

- 49.9 years for females with less than a high school education
- 56.2 years for high school graduates
- 58.3 years for those with some college
- 61.5 years for female college graduates
- 61.6 years with advanced degrees

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4435622/>

The Data Analysis

In this analysis we calculate the chance that a 24-year old will have completed a bachelor’s degree by age 24 by family income quartiles. This probability is the product of three measures of student progression through the education pipeline:

$$\begin{aligned}
 &\text{High school graduation rate} \\
 &\times \text{College continuation rate (for those who graduate from high school)} \\
 &\times \text{College completion rate (for those who enter college)} \\
 &= \text{Bachelor’s degree attainment rate}
 \end{aligned}$$

The *high school graduation rate* is the share of the population of 18 to 24-year old dependent family members that have graduated from high school or earned equivalent certification such as a GED.

The *college continuation rate* is the share of 18 to 24-year old dependent family members who are currently enrolled in college or have been enrolled in college but are no longer enrolled, divided by the population of 18 to 24-year old high school graduates.

The *bachelor’s degree completion rate* is the share of 18 to 24-year old dependent family members who have completed a bachelor’s degree by age 24 divided by the number of those who entered college.

The *bachelor’s degree attainment rate* is the product of the high school graduation rate, the college continuation rate, and the bachelor’s degree completion rate. This rate is also the share of 24-year old family members with a bachelor’s degree.

We use data collected by the Census Bureau from the Current Population Survey as the basis

for this analysis. These data have been collected since 1970 in the October supplement to the monthly CPS. Over the last 47 years these data have been published in reports, but these reports were dropped after 2010, redefinitions of collected data have occurred (1988), samples have been re-weighted, new categories have been added (Hispanics, Asians)—all of which makes maintenance of this time series a challenge.

However, the Census Bureau continues to collect the data. With their assistance, we continue to retrieve and organize the data to tell a story that must be told: family income plays a powerful role in the distribution of educational opportunity in America. Always has, and probably always will. The more money a family has, the more educational opportunities their children have. Public policy addresses these inequities of circumstance only weakly, very sporadically, and ultimately ineffectively. That is why we report these data and have done so every year since 1990.

Population

This analysis employs data on dependent family members ages 18 to 24 years. This definition is used because our analysis depends on family income, mainly that of the parents in the family, and because eligibility for need-based federal and most state student financial aid requires submission of family financial information to determine financial aid eligibility up to age

24. After age 24, parental income information is no longer required or collected for financial aid determination.

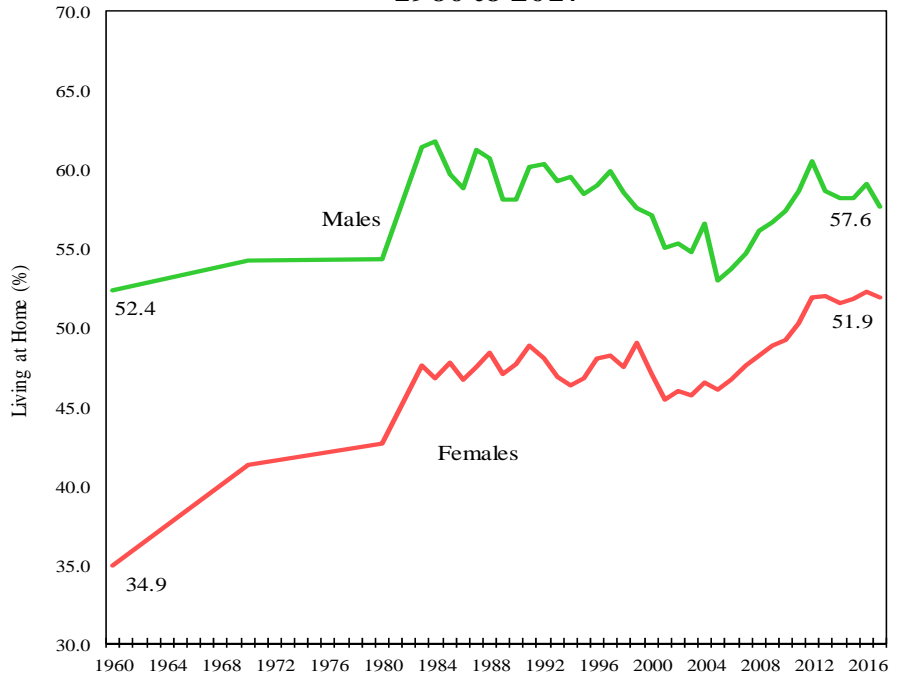
However, not all 18 to 24-year olds remain with their families as dependent family members. The years between 18 and 24 are emancipation years of transition as many (but not all) young adults move out of their parents' households and set up their own. At age 18 most are dependent, but by age 24 most have set up their own households.

Failure to Launch. Not all young adults leave their parental households by age 24. The Census Bureau reports data on the shares of young adults living at home with their parents. The two age groups are 18 to 24-year olds, and 25 to 34-year olds. The data are reported by gender.

- In 2017, among 18 to 24-year olds 57.6% of sons and 51.9% of daughters were living at home with their parents.
- Among 25 to 34-year olds 19.6% of sons and 12.5% of daughters were still living at home.

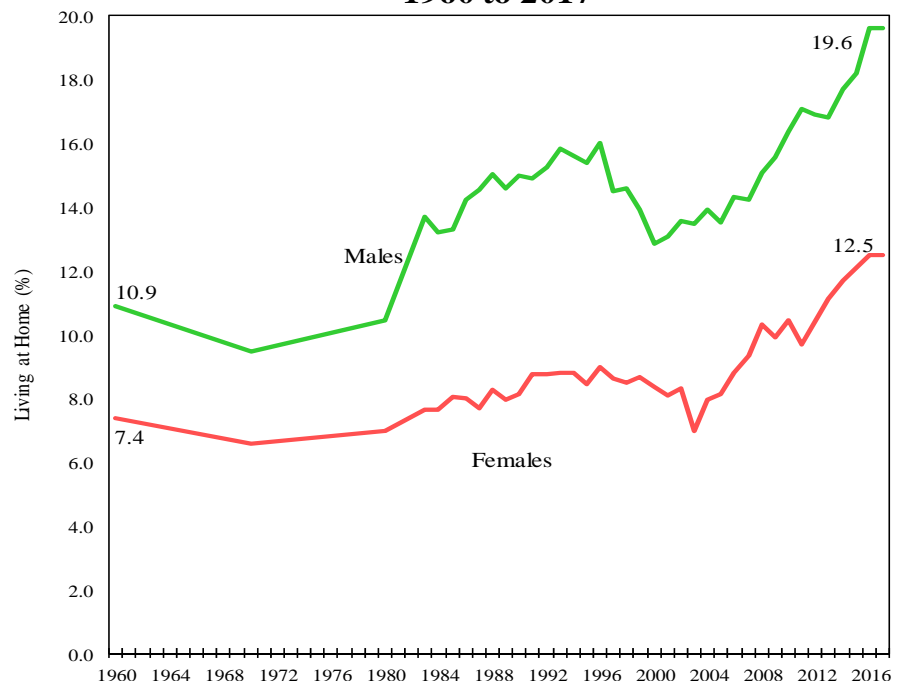
A movie was made of this phenomenon. A *Failure to Launch* was a 2006 movie starring Matthew McConaughey and Sarah Jessica Parker that told the story of parents trying to get their adult son out of their house. The parents employed Parker to stop their son's childish behaviors, get a job, and leave home.

**Young Adults Age 18 to 24 Years
Living at Home by Gender
1960 to 2017**



Source: Census Bureau/CPS

**Young Adults Age 25 to 34 Years
Living at Home by Gender
1960 to 2017**



Source: Census Bureau/CPS
www2.census.gov/programs-surveys/demo/tables/families/time-series/adults/ad1.xls

Census data on population of 18 to 24-year olds. We have also compared the data on dependent family members ages 18 to 24 years with Census Bureau reported data on the national population of 18 to 24-year olds.

In 2016, the Census Bureau reported that there were 30.8 million 18 to 24-year olds in the U.S. population on July 1. The Current Population Survey file used for this analysis includes 18.2 million dependent family members ages 18 to 24 years. Thus, the CPS file includes 58.9% of the nation’s 18 to 24-year old population. This share is down slightly from the peak of 60.6% in 2013.

Between 1987 and 2009, the CPS file of dependent family members ages 18 to 24 years coverage of the nation’s 18 to 24-year old population ranged between 43.3% (2003) and 50.9% (1992). Between 1970 and 1986, when the CPS report was based on unmarried 18 to 24-year olds, the CPS file covered between 43.0% (1970) and 54.6% (1983) of the nation’s population of 18 to 24-year olds.

Understanding these limitations of the CPS file definition of dependent family members ages 18 to 24 years is important to understanding the coverage of the total 18- to 24-year old population. The CPS file captures dependent family members ages 18 to 24 years, but not all 18- to 24-year olds. The capture is greater among 18-year olds than 24-year olds as young adults move out of their parents’ households and set up their own.

This limitation produces an estimate of bachelor’s degree completion and attainment rates that are adjusted every decade with other longitudinal follow-up data produced by the National Center for Education Statistics.

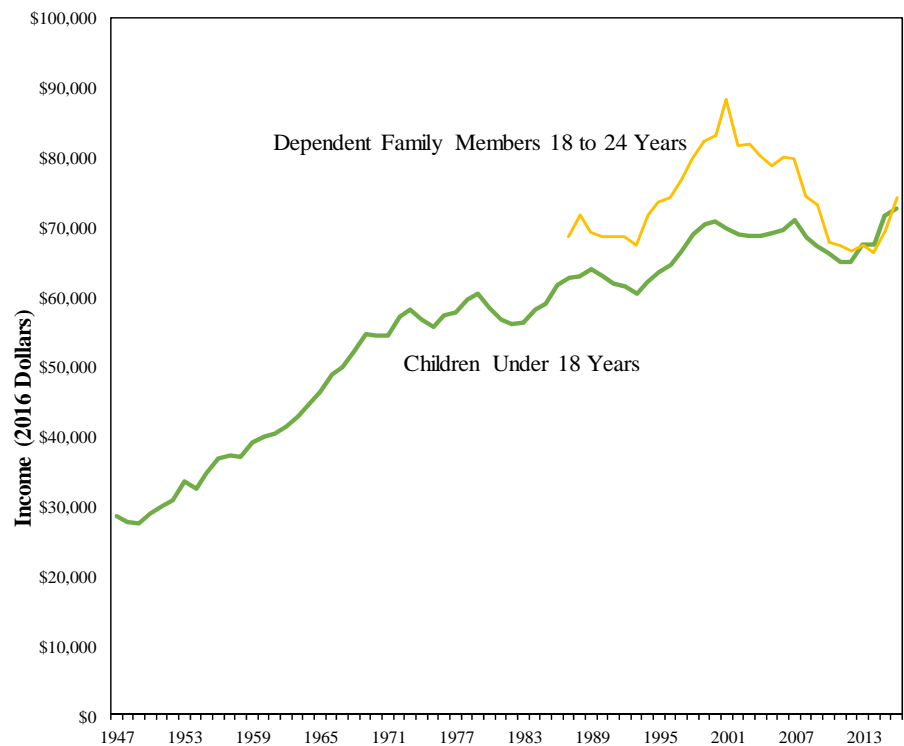
Family Income

Educational metrics presented through the lens of family income is central to this analysis. The Census Bureau employs a definition of income that includes 42 income components. This list begins with: earnings (wages, salaries, and self-employment income), interest income, dividend income, rents/royalties/estate/trust income, non-

government retirement pensions and annuities, non-government survivor pensions and annuities, non-government disability pensions and annuities, realized capital gains (losses), Social Security, unemployment compensation, etc. The complete list is available at: <https://www.census.gov/cps/data/incdef.html>.

Median family income. The Census Bureau has reported median family income for families with children under 18 years since 1947 through 2016. This analysis uses family income for families with dependent family members ages 18 to 24 years—or older families with college-age children since 1987. The medians show similar

**Median Family Income for Families with Children
1947 to 2016**



Source: US Census Bureau/CPS

striking findings. Medians for both increased to about 2000, then flat-lined or declined slightly until the Great Recession hit in 2008. Median thereafter declined sharply and have only recently resumed growth. From 2013 through 2015 median family incomes for families with older children fell below the medians for families with younger children.

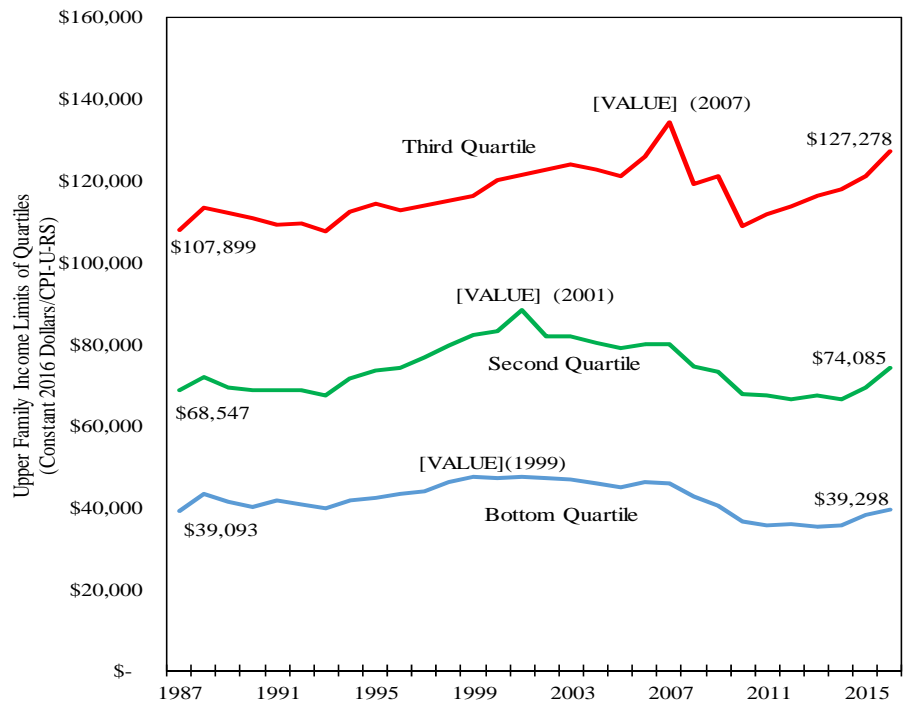
By 2016, the median family income for families with children under 18 years was at a record high of \$72,707. However, median incomes for families with children 18 to 24 years were 16% below the peak of \$88,225 reached in 2001 (2016\$). In 2016 they were at \$74,085.

Family income quartiles. In this analysis we construct quartiles of family income. We divide the population of families with 18- to 24-year old high school graduates into 4 exactly equal groups. In 2016 these family income quartiles were:

- Bottom quartile: \$0 to \$39,298
- Second quartile: \$39,298 to \$74,085
- Third quartile: \$74,085 to \$127,278
- Top quartile: above \$127,278

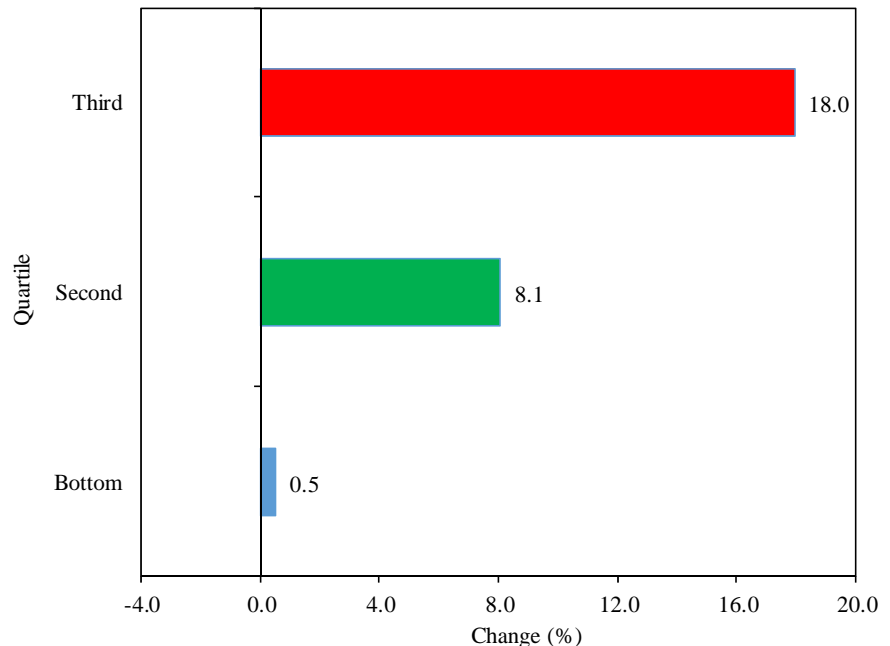
Since 1987, when the current definition of families and incomes was last adopted, these income ranges have fluctuated largely with the expansion and contraction phases of the business cycle. Incomes have grown during the growth phase and declined during the recession phase.

Upper Family Income Limits for First, Second and Third Family Income Quartiles 1987 to 2016



Source: Calculated from October Current Population Survey File (Formerly Table 14 in Census Bureau's School Enrollment Report)

Change in Upper Limits for First, Second and Third Family Income Quartiles Between 1987 and 2016



Source: Calculated from October Current Population Survey File

But these family incomes have also diverged over the last three decades: the rich have grown relatively richer, and the poor relatively poorer.

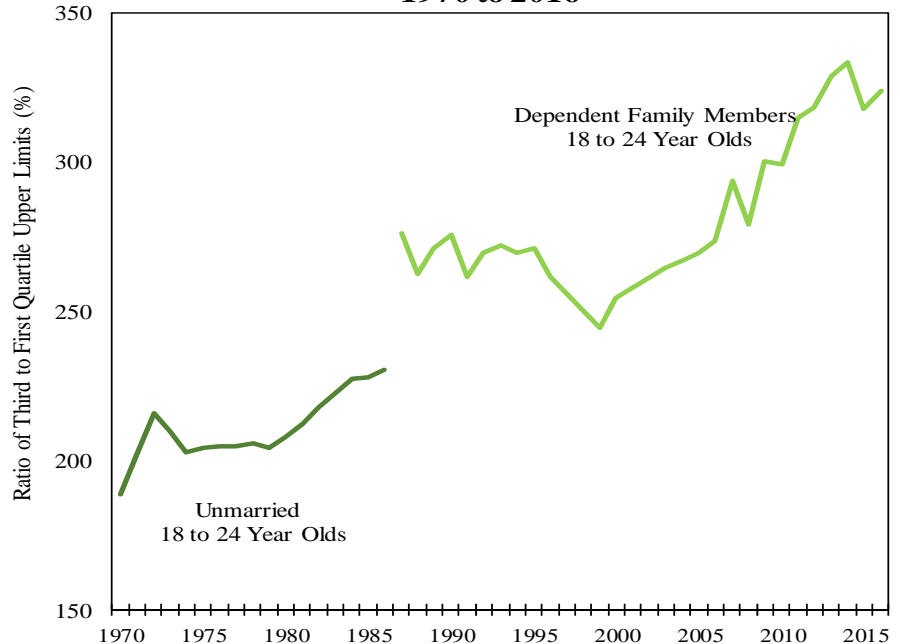
- The upper limit for the bottom quartile of family income increased by 0.5 percentage points between 1987 and 2016.
- The upper limit for the second quartile—the median—increased by 8.1 percentage points between 1987 and 2016.
- The upper limit for the third quartile increased by 18.0 percentage points between 1987 and 2016.

Or, expressed another way, the ratio of the upper limit of the third quartile to the upper limit of the first quartile increased from 276% in 1987 to 324% by 2016.

High School Graduation

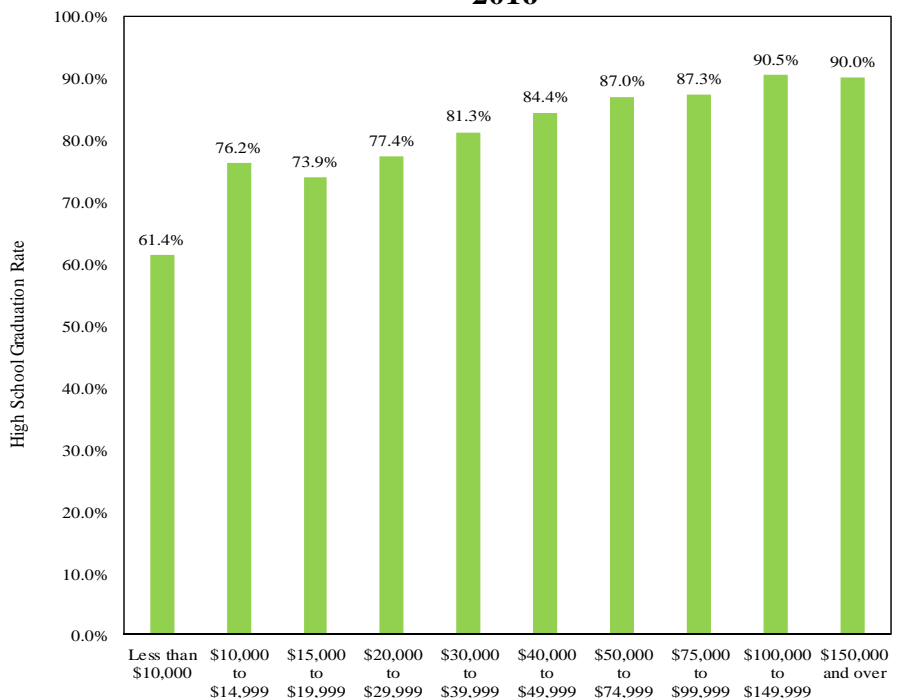
In 2016, the high school graduation rate was 84.8%. Out of a population of 18.2 million dependent 18- to 24-year old family members, 15.4 million were high school graduates. While the number of 18- to 24-year olds had dropped by nearly 1 million between 2013 and 2016, the number of high school graduates had dropped by half that. As a result, the high school graduation rate rose from 83.4% in 2013 to 84.8% by 2015 and 2016. This is the highest high school graduation rate recorded in these Census Bureau data since they were first reported in 1970.

**Quartile Ratios:
Third to First Quartile Upper Limits of Family
Incomes for 18 to 24 Year Olds
1970 to 2016**



Source: Calculated from October Current Population Survey File (Formerly Table 14 in Census Bureau's School Enrollment Report)

**High School Graduation Rates by Family Income Intervals
for Dependent 18 to 24 Year Olds
2016**



Source: Calculated from October Current Population Survey File (Formerly Table 14 in Census Bureau's School Enrollment Report)

Patterns. For the major population groups, the high school graduation rates in 2016 were:

- **88.6%** for Asians
- **87.4%** for females
- **86.8%** for White non-Hispanics
- **83.5%** for Hispanics
- **82.5%** for males
- **80.1%** for Blacks

Across these six groups, the range from lowest to highest was 8.5 percentage points.

By quartiles of family income, the high school graduation rates for dependent 18 to 24-year old family members in 2016 were:

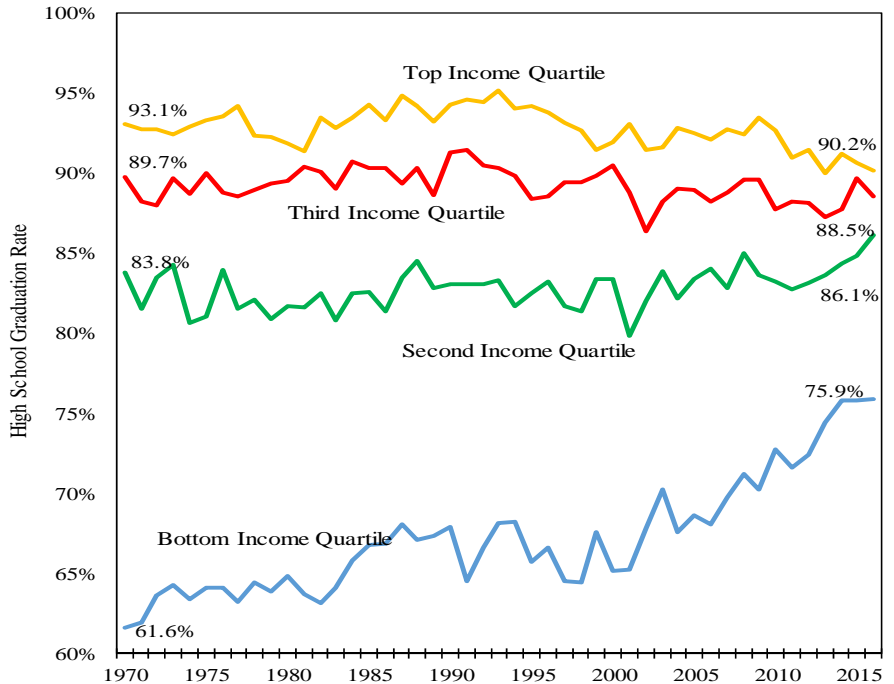
- **75.9%** for those from the bottom quartile, below \$39,298
- **86.1%** in the second quartile, between \$39,298 and \$74,085
- **88.5%** in the third quartile, between \$74,085 and \$127,278
- **90.2%** in the top quartile, above \$127,278

Across these four groups, the range from lowest to highest was 14.3 percentage points.

In 2016, by these same quartiles of family income, high school graduation rates rose as family incomes increased for each of the major population groups.

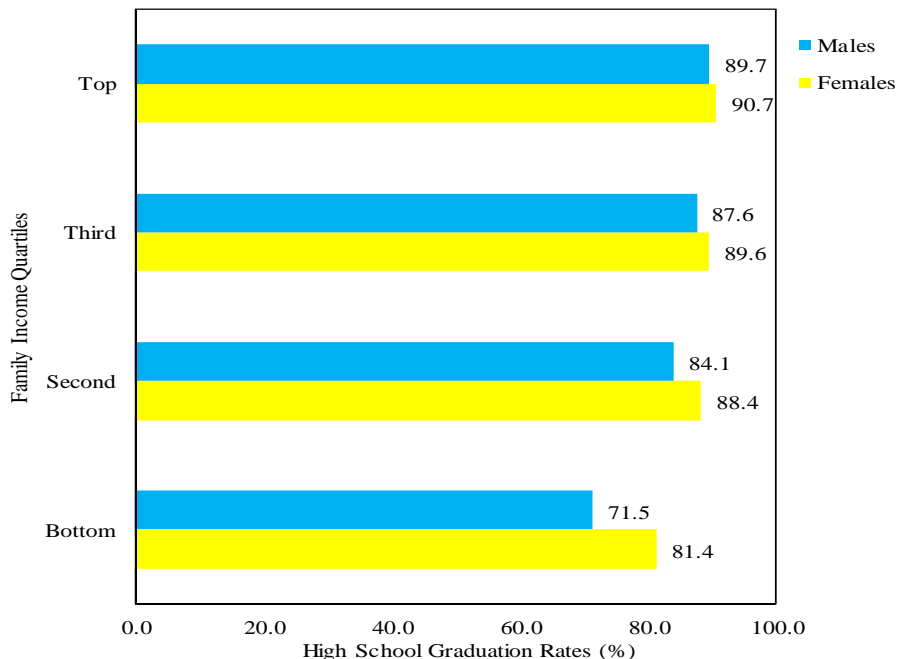
- For men, the high school graduation rate rose from 71.5% in the bottom quartile, to 89.7% in the top quartile of family income. This was a range of 18.2 percentage points.

High School Graduation Rates by Family Income Quartiles for Dependent 18 to 24 Year Olds 1970 to 2016



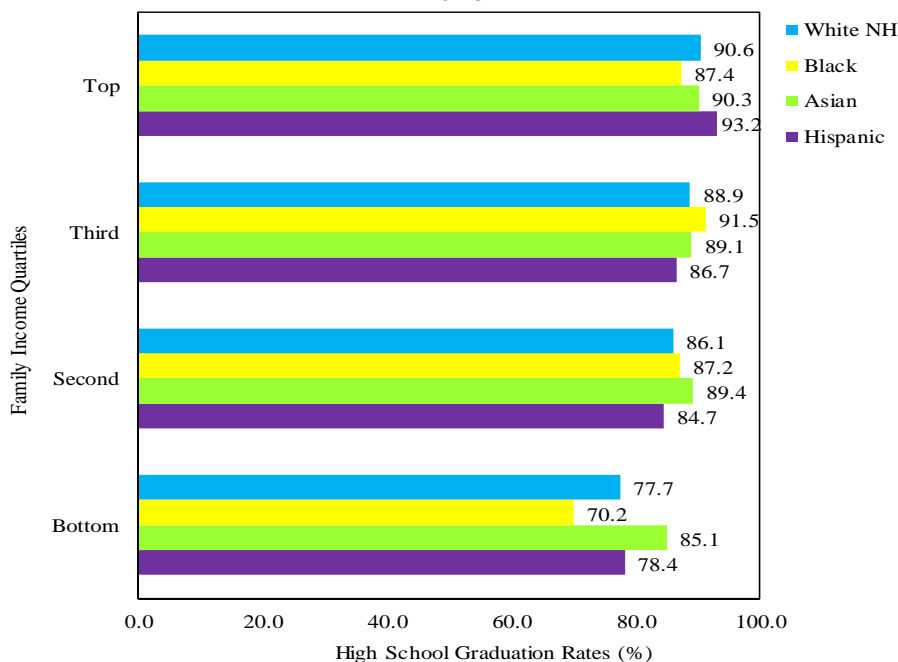
Source: Calculated from October Current Population Survey File (Formerly Table 14 in Census Bureau's School Enrollment Report)

High School Graduation Rates for Dependent 18 to 24 Year Olds by Family Income Quartiles and Gender 2016



Source: Calculated from October Current Population Survey File (Formerly Table 14 in Census Bureau's School Enrollment Report)

High School Graduation Rates for Dependent 18 to 24 Year Olds by Family Income Quartiles and Race/Ethnicity 2016



Source: Calculated from October Current Population Survey File (Formerly Table 14 in Census Bureau's School Enrollment Report)

- For women, the high school graduation rate rose from 81.4% in the bottom quartile, to 90.7% in the top quartile. This was a range of 9.3 percentage points.
- For White non-Hispanics, the high school graduation rate rose from 77.7% in the bottom quartile of family income to 90.6% in the top quartile. This was a range of 12.9 percentage points.
- For Blacks, the high school graduation rate rose from 70.2% in the bottom quartile to 87.4% in the top quartile of family income. This was a range of 17.2 percentage points.

- For Asians, the high school graduation rate rose from 85.1% in the bottom quartile to 90.3% in the top quartile of family income. The range was 5.2 percentage points.
- For Hispanics, the high school graduation rate rose from 78.4% in the bottom quartile to 93.2% in the top quartile of family income. The range was 14.8 percentage points.

The difference between ranges in high school graduation rates between the lowest and highest quartiles of family income indicates that some groups are more affected by income disparity than

are others. Ranked by these differences from least to most in 2016 are:

- **5.2%** for Asians
- **9.3%** for females
- **12.9%** for White non-Hispanics
- **14.8%** for Hispanics
- **17.2%** for Blacks
- **18.2%** for males

This is a pattern we will see again in later data on college continuation rates. The persistence and pervasiveness of this pattern suggests which population groups may be encountering other barriers to opportunity for higher education beyond limited family resources which still affect all groups.

Trends. Trends in these data over the available time period from 1970 through 2016 reveals where, when and for which population groups progress is being made in strengthening the education pipeline on the path to a bachelor's degree by age 24.

Between 1970 and 2016, the high school graduation rate among dependent family members ages 18 to 24 years rose by 4.9 percentage points, from 79.9% to 84.8%. This rate rose slowly between decades until the current decade, when it increased at a greater rate.

This growth in the high school graduation rate has not been evenly shared across family income quartiles. Between 1970 and 2016, high school graduation rates went:

- **+14.3** percentage points for students in the bottom quartile of family income
- **+2.3** percentage points in the second quartile
- **-1.2** percentage points in the third quartile
- **-2.9** percentage points in the top quartile of family income

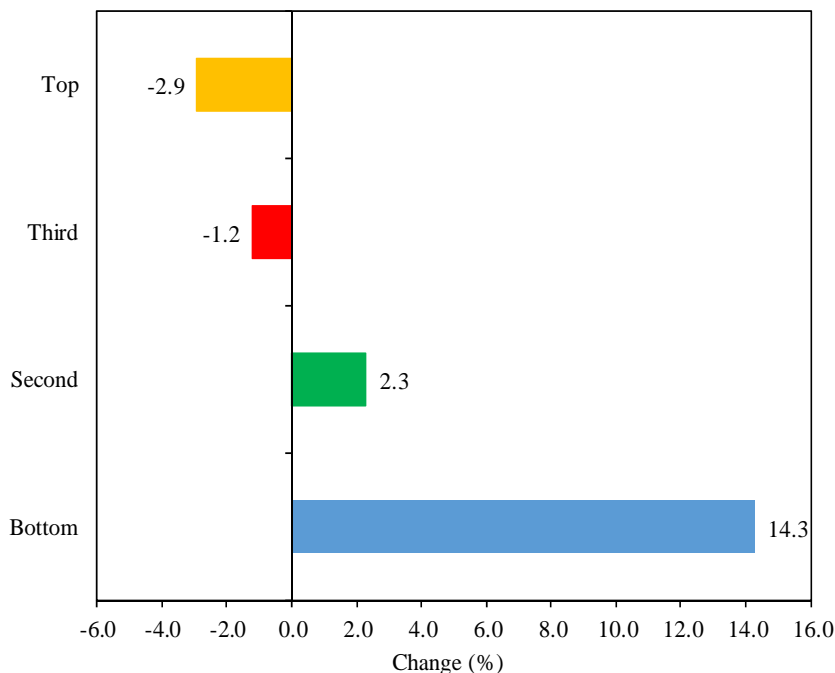
Progress in high school graduation rates has been made overall, but when disaggregated by family income quartiles, all progress has been limited to students from the bottom half of the family income distribution. High school graduation rates for students from the top half have declined, and the decline has been greatest in the top quartile of family income. In the top quartile, the decline has been 4.7 percentage points since 1987, although the decline may have bottomed out around 2013.

College Continuation

After high school comes college. In 2016, the college continuation rate was 73.7% among dependent family members ages 18 to 24 years who were high school graduates. From a population of 15.4 million high school graduates, 11.4 million were currently or had been enrolled in college.

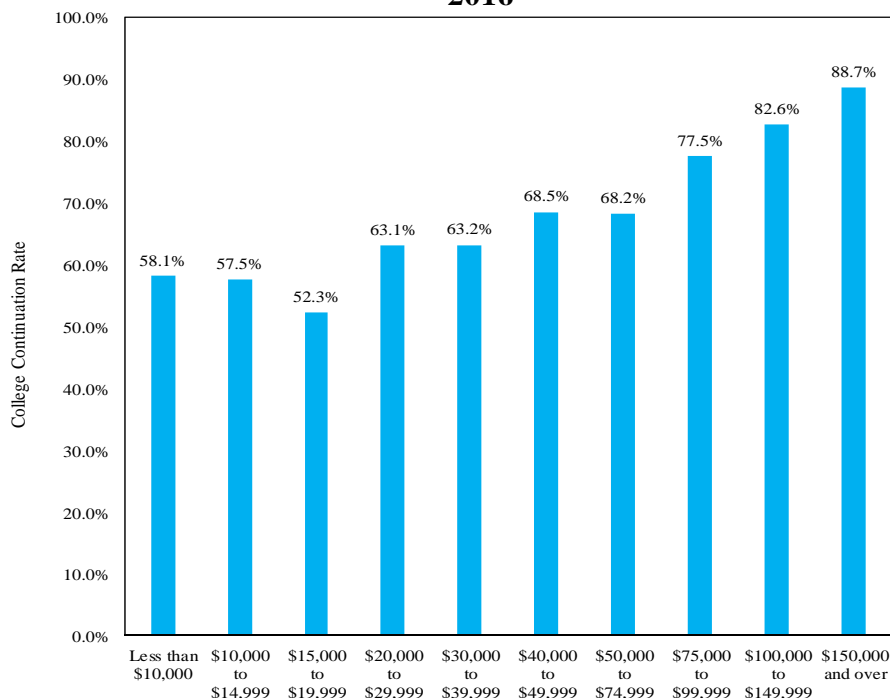
Since 1970, this rate has risen from 61.3% in 1970, then declined to 56.9% by 1980, then rose again to 64.6% by 1990, to 69.9% by 2000, to 74.6% by 2010, and has most recently declined slightly to 73.7% by 2016. The 2016 rate is below the peak of 75.2% reached in 2011. This rate tends to fluctuate

Change in High School Graduation Rate by Income Quartile 1970 to 2016



Source: Calculated from October Current Population Survey File (Formerly Table 14 in Census Bureau's School Enrollment Report)

College Continuation Rates by Family Income Intervals for Dependent 18 to 24 Year Old High School Graduates 2016



Source: Calculated from October Current Population Survey File (Formerly Table 14 in Census Bureau's School Enrollment Report)

ate with the business cycle: when job opportunities are weak high school graduates are more likely to choose college, and when job opportunities are strong fewer high school graduates choose college.

Patterns. For the major population groups, the 2016 college continuation rates for those having graduated from high school were:

- **88.6%** for Asians
- **80.3%** for females
- **76.3%** for White non-Hispanics
- **70.7%** for Hispanics
- **67.7%** for males
- **64.2%** for Blacks

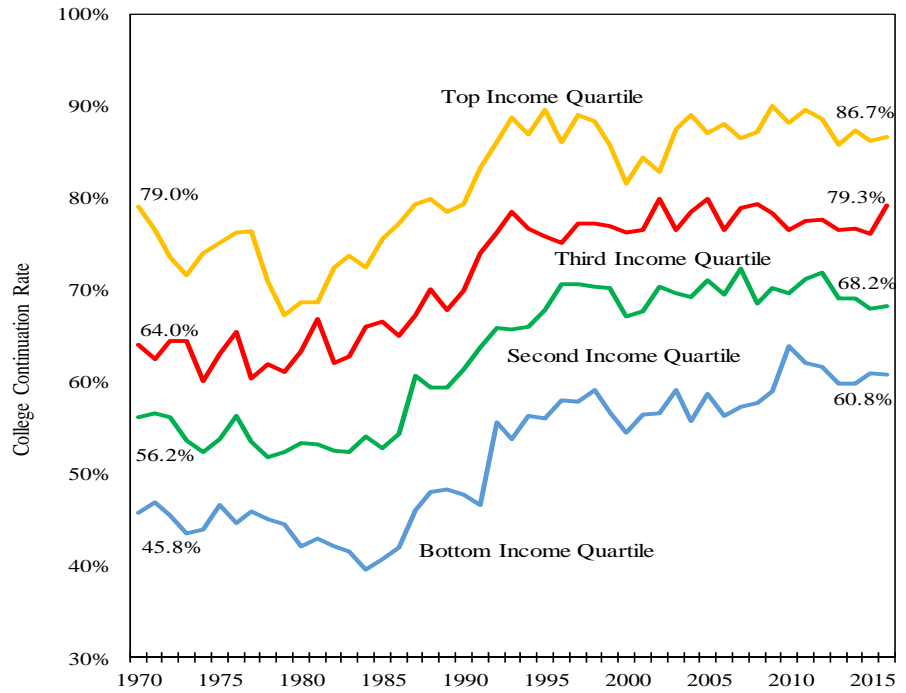
Across these six groups, the range was 24.4 percentage points. This distribution has persisted for many years with women and Asians ranking at the top of this list, and males and blacks ranking at the bottom. The ranking is similar for high school graduation rates as well.

By family income quartiles, college continuation rates in 2016 were:

- **60.8%** for those from the bottom quartile, below \$39,298
- **68.2%** in the second quartile, between \$39,298 and \$74,085
- **79.3%** in the third quartile, between \$74,085 and \$127,278
- **86.7%** in the top quartile, above \$127,278

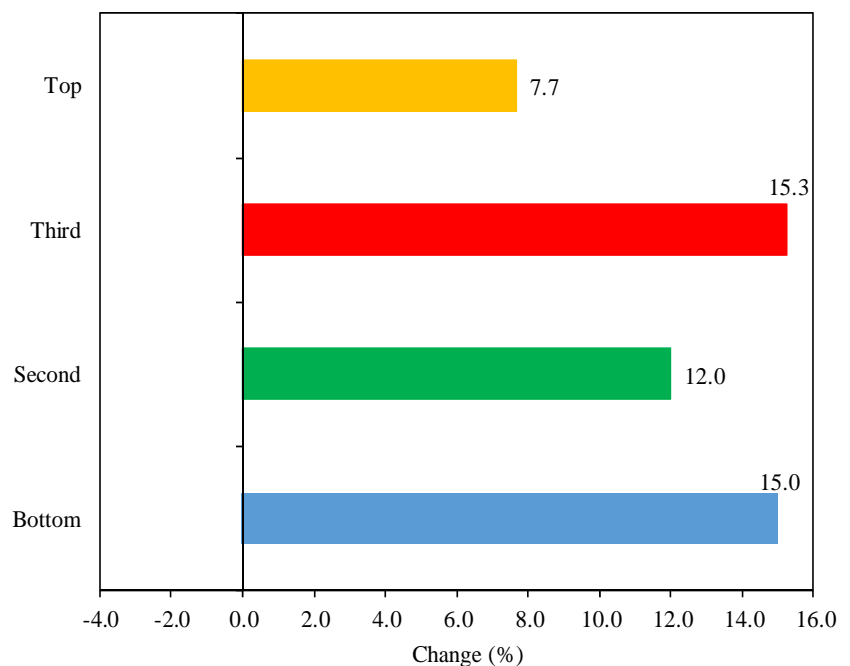
Across these four groups the range was 25.9 percentage points. Here

College Continuation Rates by Family Income Quartiles for Dependent 18 to 24 Year Old High School Graduates 1970 to 2016



Source: Calculated from October Current Population Survey File (Formerly Table 14 in Census Bureau's School Enrollment Report)

Change in College Continuation Rate by Income Quartile 1970 to 2016



Source: Calculated from October Current Population Survey File (Formerly Table 14 in Census Bureau's School Enrollment Report)

too the distribution has held this ranking every year for the 47 years of available data.

In 2016, by these same quartiles of family income, college continuation rates rose as family incomes increased for each of the major population groups.

- For men, the college continuation rate rose from 55.1% in the bottom quartile, to 82.5% in the top quartile of family income. This was a range of 27.4 percentage points.
- For women, the college continuation rate rose from 67.1% in the bottom quartile, to 91.1% in the top quartile. This was a range of 24.0 percentage points.
- For White non-Hispanics, the college continuation rate rose from 59.2% in the bottom quartile of family income to 87.5% in the top quartile. This was a range of 28.3 percentage points.
- For Blacks, the college continuation rate rose from 54.2% in the bottom quartile to 85.0% in the top quartile of family income. This was a range of 30.8 percentage points.
- For Asians, the college continuation rate was 91.7% in both the bottom quartile and the top quartile of family income. The range was 0.0 percentage points.
- For Hispanics, the college continuation rate rose from 62.8% in the bottom quartile to 82.4% in the top quartile of family income. The range was 19.6 percentage points.

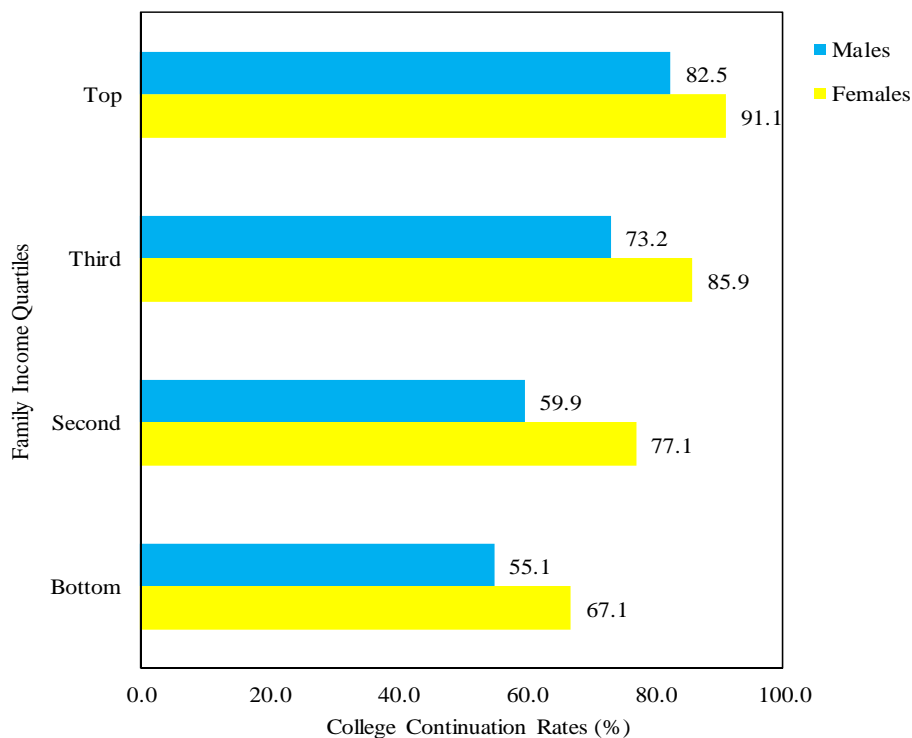
The difference between ranges in college continuation rates between the lowest and highest quartiles of family income indicates that some groups are more affected by income disparity than are others. Ranked by these differences from least to most in 2016 are:

- **0.0%** for Asians
- **19.6%** for Hispanics
- **24.0%** for females
- **27.4%** for males
- **28.3%** for White non-Hispanics
- **30.8%** for Blacks

College Participation

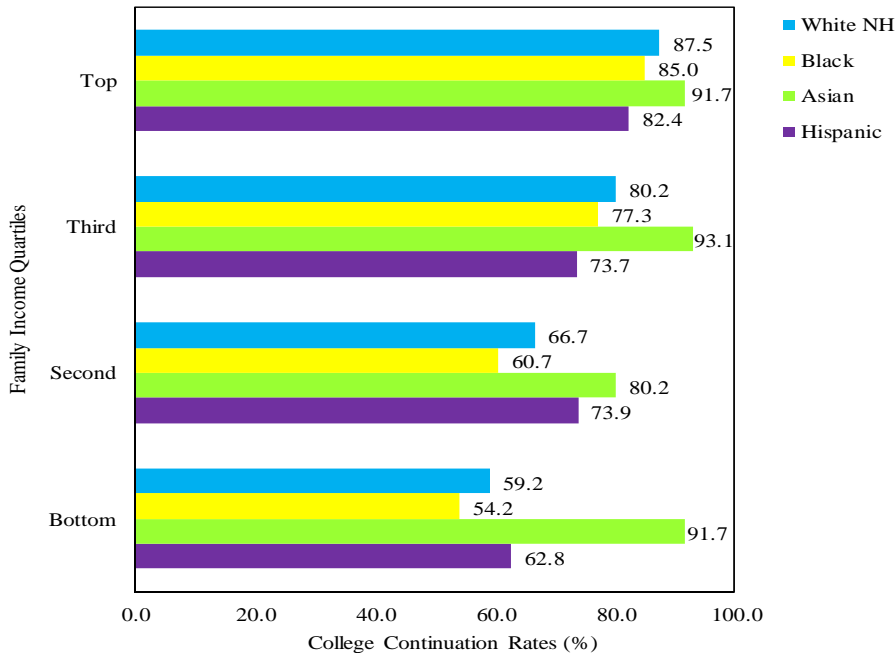
College participation includes all dependent family members ages 18 to 24 years who enrolled in college. To achieve this status, students must have both graduated from high school and then enrolled in college sometime between the ages of 18 and 24 years. In 2016, the college participation rate was 62.5%. Out of a population of 18.2 million, dependent family members ages 18 to 24 years, 11.4 million were or had been enrolled in college by 2016. This rate is also the product of the high school

College Continuation Rates for Dependent 18 to 24 Year Old High School Graduates by Family Income Quartiles and Gender 2016



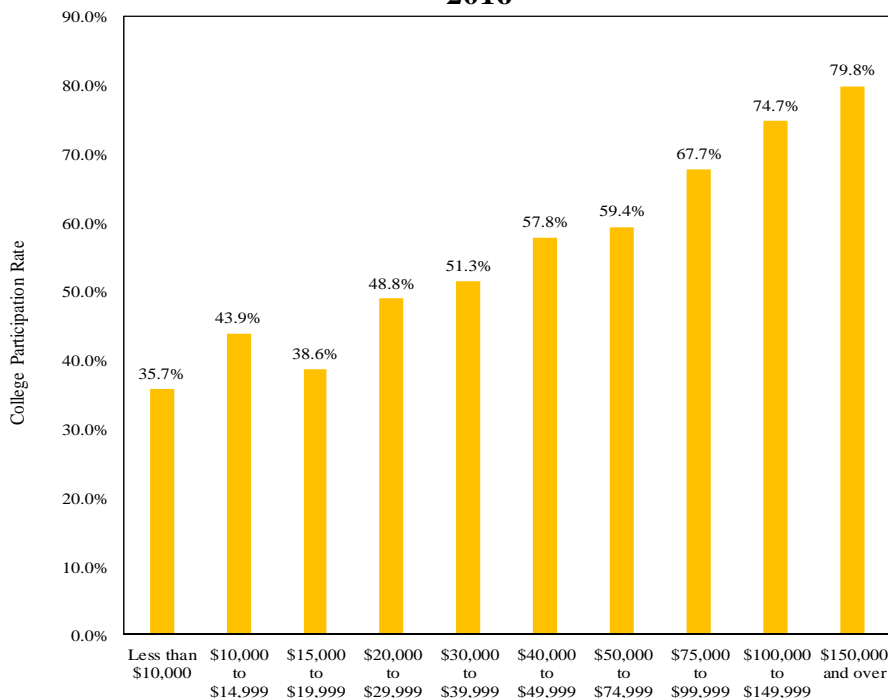
Source: Calculated from October Current Population Survey File (Formerly Table 14 in Census Bureau's School Enrollment Report)

College Continuation Rates for Dependent 18 to 24 Year Old High School Graduates by Family Income Quartiles and Race/Ethnicity 2016



Source: Calculated from October Current Population Survey File (Formerly Table 14 in Census Bureau's School Enrollment Report)

College Participation Rates by Family Income Intervals for Dependent 18 to 24 Year Olds 2016



Source: Calculated from October Current Population Survey File (Formerly Table 14 in Census Bureau's School Enrollment Report)

graduation rate and the college continuation rate:

$$84.78\% \times 73.73\% = 62.51\%$$

Patterns. For the major population groups, the 2016 college participation rates were:

- **78.4%** for Asians
- **70.2%** for females
- **66.3%** for White non-Hispanics
- **59.1%** for Hispanics
- **55.9%** for males
- **51.4%** for Blacks

Across these six groups, the range was 27.0 percentage points.

By family income quartiles, college participation rates in 2016 were:

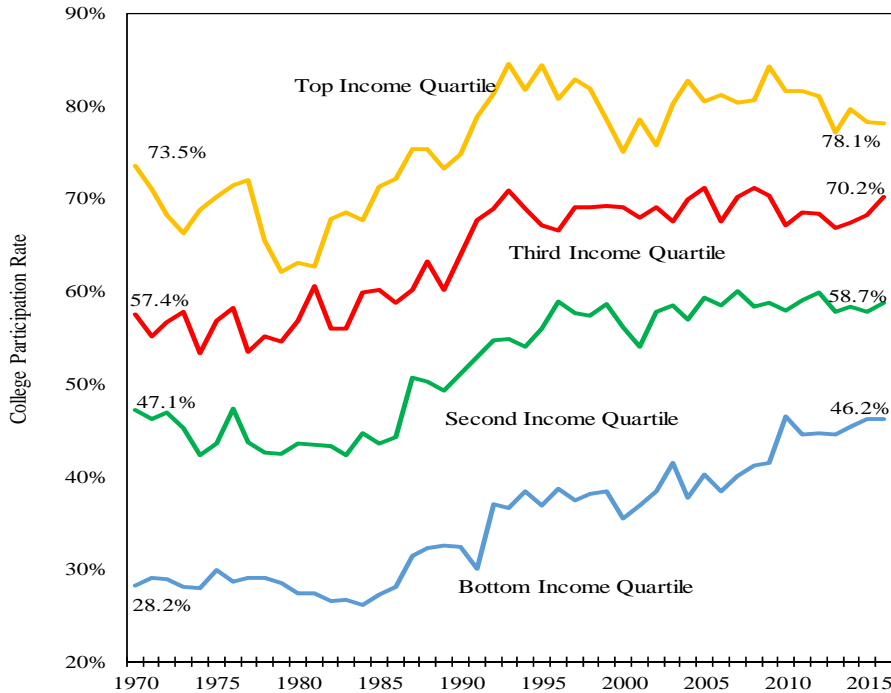
- **46.2%** for those from the bottom quartile, below \$39,298
- **58.7%** in the second quartile, between \$39,298 and \$74,085
- **70.2%** in the third quartile, between \$74,085 and \$127,278
- **78.1%** in the top quartile, above \$127,278

Across these four groups the range was 32.0 percentage points. Here too the distribution has held this ranking every year for the 47 years of available data.

In 2016 by these same quartiles of family income, college participation rates rose as family incomes increased for each of the major population groups.

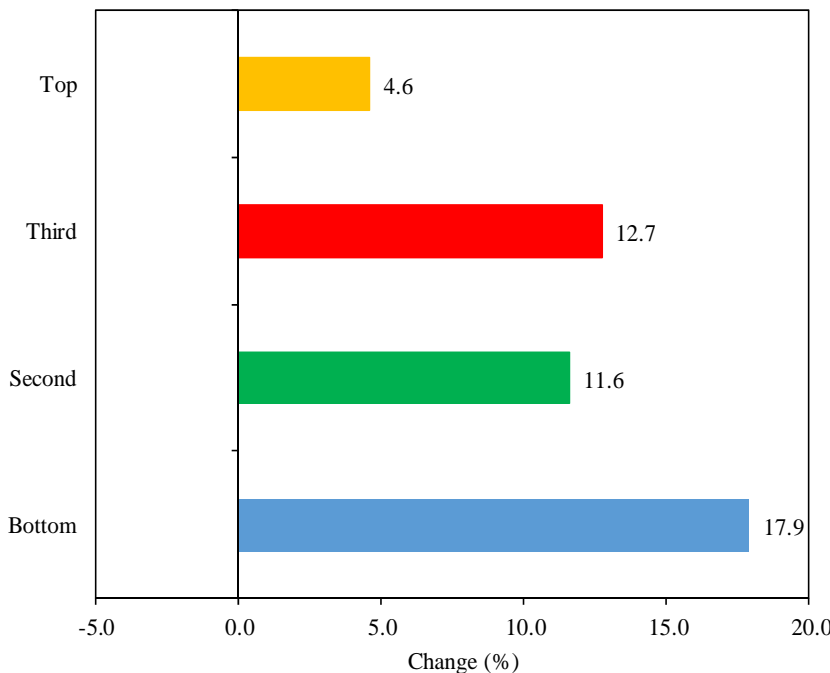
- For men, the college participation rate rose from 39.4% in

College Participation Rates by Family Income Quartiles for Dependent 18 to 24 Year Olds 1970 to 2016



Source: Calculated from October Current Population Survey File (Formerly Table 14 in Census Bureau's School Enrollment Report)

Change in College Participation Rate by Income Quartile 1970 to 2016



Source: Calculated from October Current Population Survey File (Formerly Table 14 in Census Bureau's School Enrollment Report)

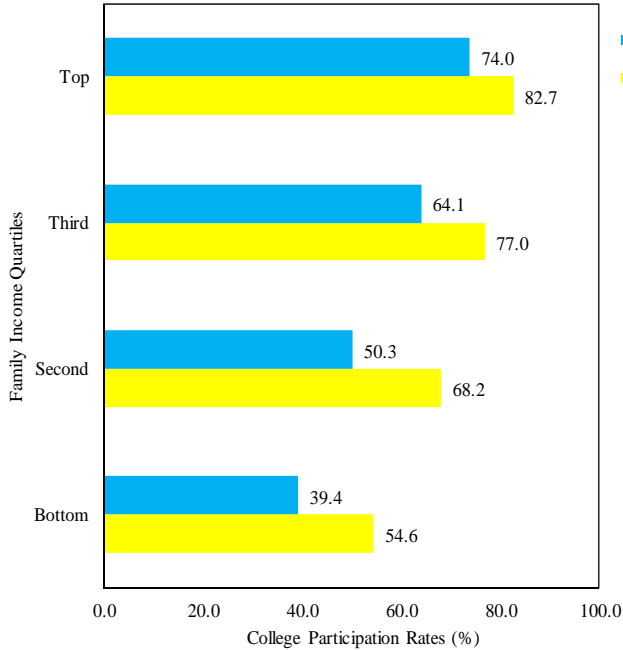
the bottom quartile, to 74.0% in the top quartile of family income. This was a range of **34.6** percentage points.

- For women, the college continuation rate rose from 54.6% in the bottom quartile, to 82.7% in the top quartile. This was a range of **28.1** percentage points.
- For White non-Hispanics, the college continuation rate rose from 46.0% in the bottom quartile of family income to 79.2% in the top quartile. This was a range of **33.2** percentage points.
- For Blacks, the college continuation rate rose from 38.1% in the bottom quartile to 74.3% in the top quartile of family income. This was a range of **36.3** percentage points.
- For Asians, the college continuation rate was 78.0% in the bottom quartile and 82.8% in the top quartile of family income. The range was **4.8** percentage points.
- For Hispanics, the college continuation rate rose from 49.2% in the bottom quartile to 76.8% in the top quartile of family income. The range was **27.6** percentage points.

The difference between ranges in college participation rates between the lowest and highest quartiles of family income indicates that some groups are more affected by income disparity than are others. Ranked by these differences from least to most in 2016 are:

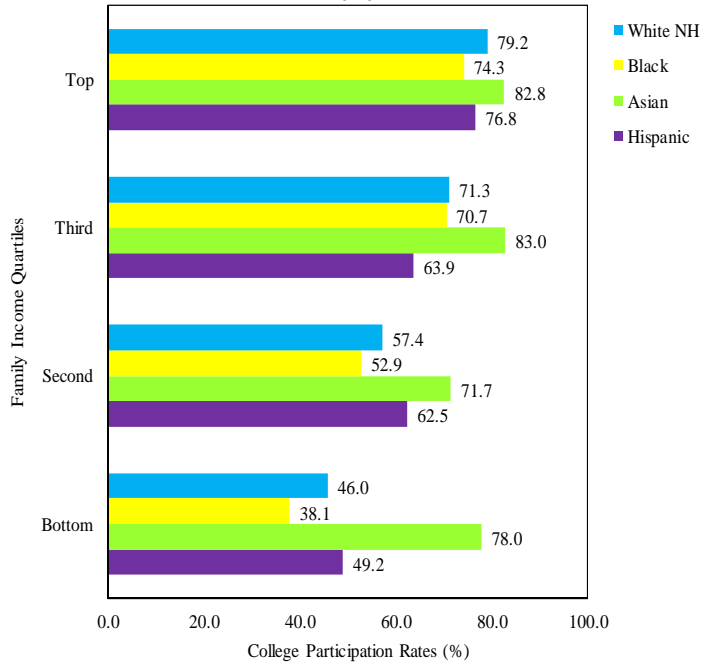
- **4.8%** for Asians
- **27.6%** for Hispanics

College Participation Rates for Dependent 18 to 24 Year Olds by Family Income Quartiles and Gender 2016



Source: Calculated from October Current Population Survey File (Formerly Table 14 in Census Bureau's School Enrollment Report)

College Participation Rates for Dependent 18 to 24 Year Olds by Family Income Quartiles and Race/Ethnicity 2016



Source: Calculated from October Current Population Survey File (Formerly Table 14 in Census Bureau's School Enrollment Report)

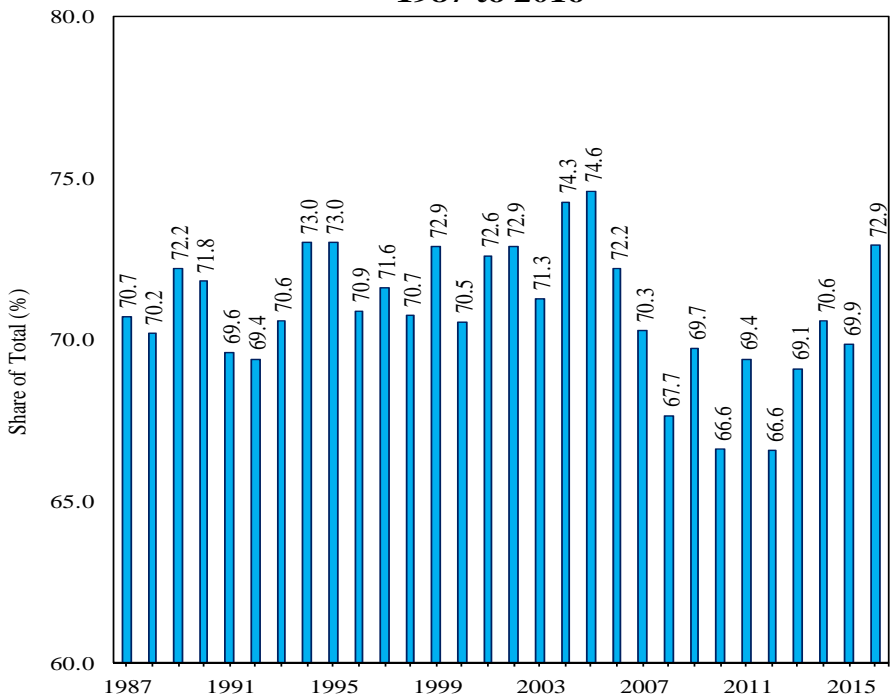
Share of Dependent 18 to 24-Year Old Enrollment in 4-Year Institutions 1987 to 2016

- 28.1% for females
- 33.2% for White non-Hispanics
- 34.6% for males
- 36.3% for Blacks

College Enrollment

Enrollment in college has different meanings to different people. Every student has a unique experience. Here our data permit two descriptions: 4-year compared to 2-year enrollment, and full-time compared to part-time enrollment. We examine these differences for our main population groups by quartiles of family income.

2-year/4-year. In 2016, 72.9% of all dependent family members 18



Source: Calculated from October Current Population Survey File (Formerly Table 14 in Census Bureau's School Enrollment Report)

to 24 years that were enrolled in college were in 4-year colleges and universities. 27.1 percent were enrolled in 2-year institutions.

Since 1987, the share of college students enrolled in 4-year institutions has ranged between 66.6% (2010, 2012) and 74.6% (2005). Generally the 4-year share stayed above 70% through 2007, then dropped into the 60s in the year following the Great Recession in 2008. By 2016, the share has grown back to within the range experienced over the two decades between 1987 and 2007.

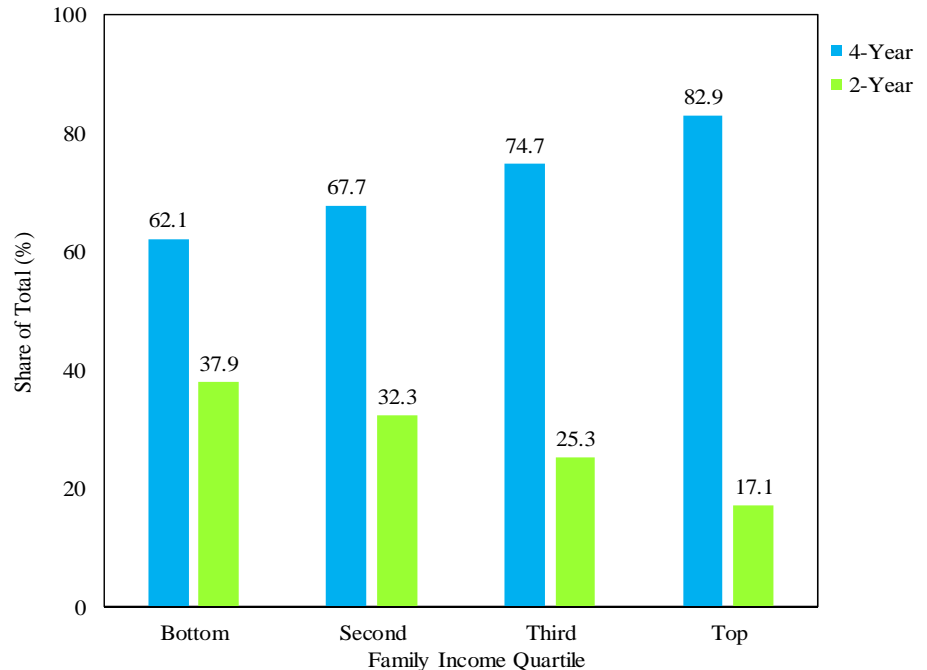
By gender and racial/ethnic groups, the shares of college students enrolled in 4-year institutions varied. In 2016, these shares were:

- **86.1%** for Asians
- **75.6%** for females
- **75.6%** for White non-Hispanics
- **70.0%** for males
- **68.1%** for Blacks
- **64.2%** for Hispanics

The 4-year share of college enrollments varies across quartiles of family income. In 2016, the 4-year shares of college enrollments of dependent family members ages 18 to 24 were:

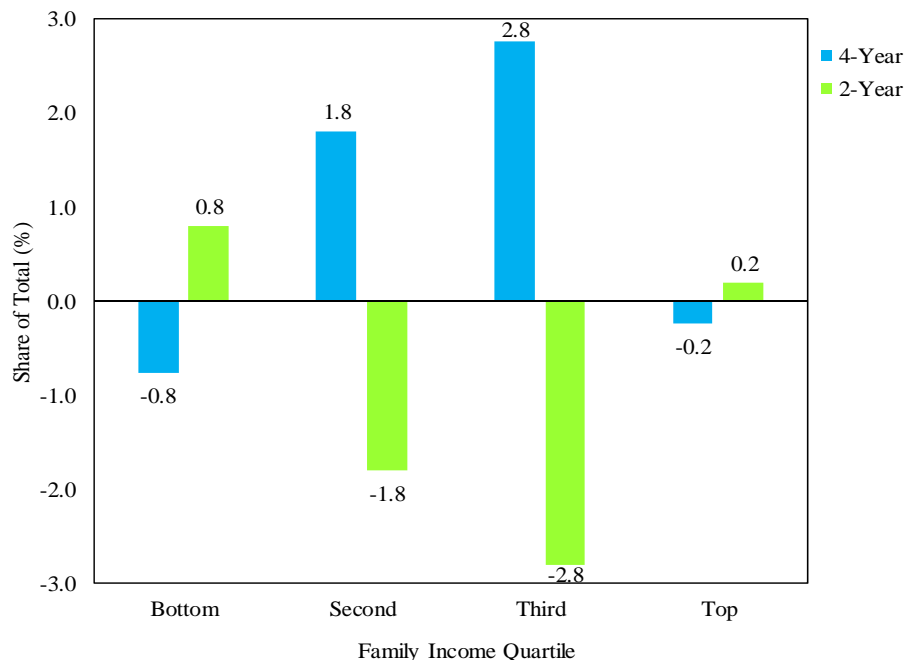
- **62.1%** for those from the bottom quartile, below \$39,298
- **67.7%** in the second quartile, between \$39,298 and \$74,085
- **74.7%** in the third quartile, between \$74,085 and \$127,278
- **82.9%** in the top quartile, above \$127,278

Distribution of Dependent 18 to 24 Year Old Enrollment by Institutional Level and Family Income 2016



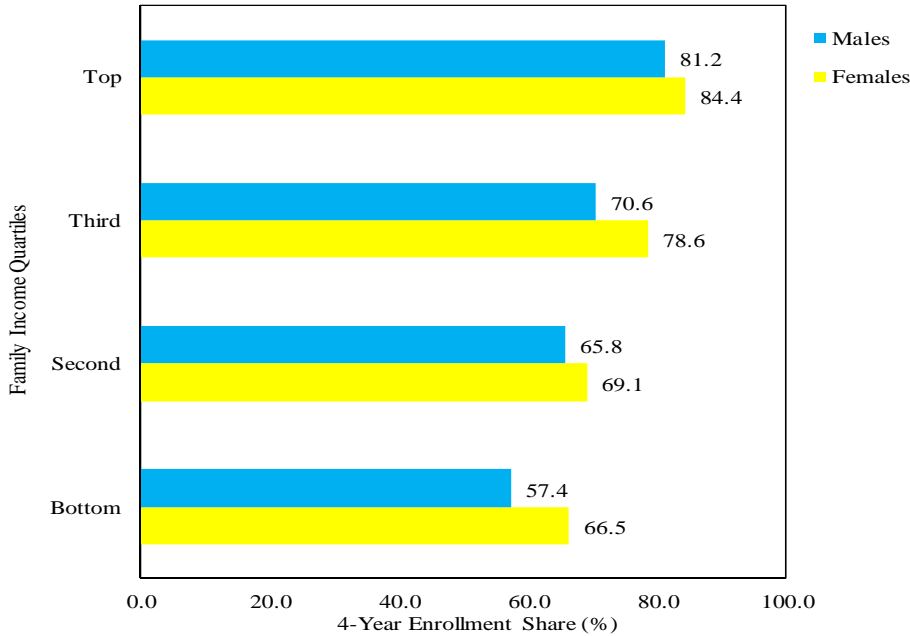
Source: Calculated from October Current Population Survey File (Formerly Table 14 in Census Bureau's School Enrollment Report)

Change in Share of Dependent 18 to 24 Year Old Enrollment by Institutional Level and Family Income 2006 to 2016



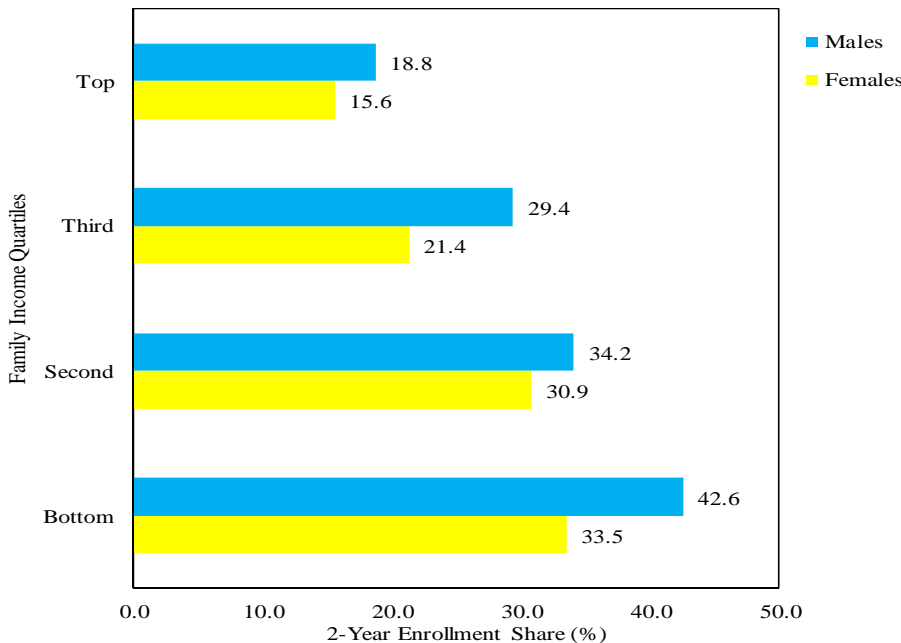
Source: Calculated from October Current Population Survey File (Formerly Table 14 in Census Bureau's School Enrollment Report)

Share of Dependent 18 to 24 Year Old Enrollment Enrolled in 4-Year Institutions by Family Income Quartiles and Gender: 2016



Source: Calculated from October Current Population Survey File (Formerly Table 14 in Census Bureau's School Enrollment Report)

Share of Dependent 18 to 24 Year Old Enrollment Enrolled in 2-Year Institutions by Family Income Quartiles and Gender 2016



Source: Calculated from October Current Population Survey File (Formerly Table 14 in Census Bureau's School Enrollment Report)

Over the last decade, from 2006 to 2016, the shares of college enrollments in 4-year institutions:

- Decreased by 0.8 percentage points in the bottom quartile
- Increased by 1.8 percentage points in the second quartile
- Increased by 2.8 percentage points in the third quartile
- Decreased by 0.2 percentage points in the top quartile

By gender, the shares of both male and female college students enrolled in 4-year institutions rose with family income quartiles. And the share of college students enrolled in 4-year institutions were always higher for females than for males at every family income quartile:

- +9.1 percentage points for females over males in the bottom quartile of family income
- +3.3 percentage points in the second quartile
- +8.0 percentage points in the third quartile
- +3.2 percentage points in the top quartile of family income

For all racial/ethnic groups, the shares of college students enrolled in 4-year institutions rose as family income rose too. In 2016, the shares of White non-Hispanics enrolled in 4-year colleges and universities were:

- 61.8% in the bottom quartile
- 70.3% in the second quartile
- 74.2% in the third quartile
- 83.7% in the top quartile

The range from the bottom to the top quartiles was 21.9 percentage points.

For Blacks, the 2016 shares were:

- **64.9%** in the bottom quartile
- **64.8%** in the second quartile
- **72.6%** in the third quartile
- **74.9%** in the top quartile

The range from the bottom to the top quartiles was 10.0 percentage points.

For Asians, the 2016 shares were:

- **82.8%** in the bottom quartile
- **83.8%** in the second quartile
- **89.3%** in the third quartile
- **88.5%** in the top quartile

The range from the bottom to the top family income quartiles was 5.7 percentage points.

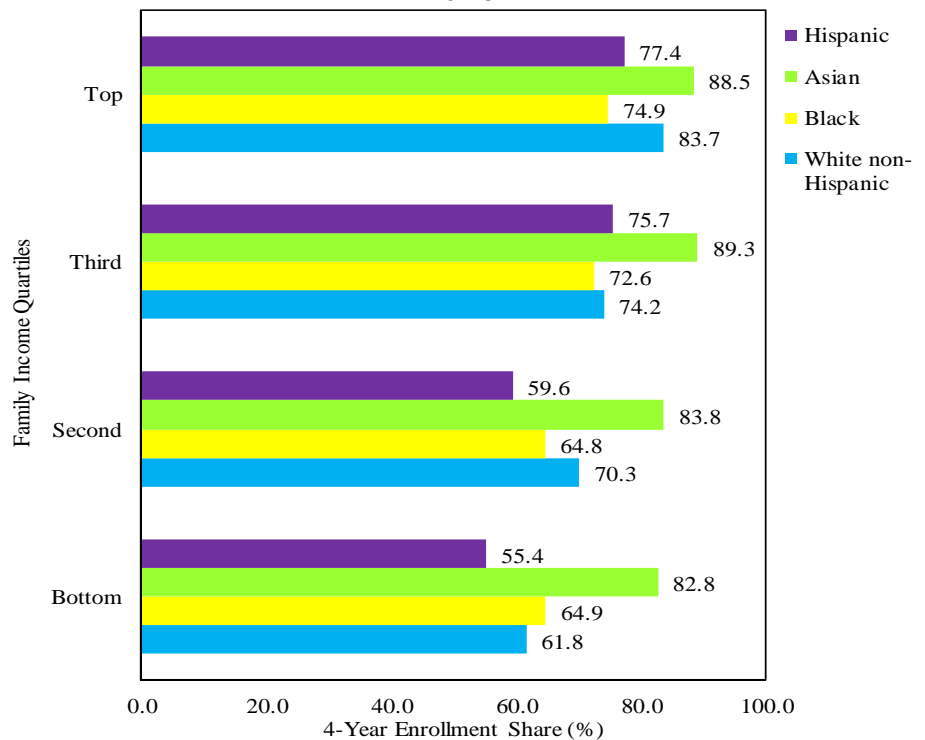
For Hispanics, the 2016 shares were:

- **55.4%** in the bottom quartile
- **59.6%** in the second quartile
- **75.7%** in the third quartile
- **77.4%** in the top quartile

The range from the bottom to the top quartiles was 22.0 percentage points.

Full-time/part-time. In 2016, 87.7% of college students were enrolled on a full-time basis. Out of 8.4 million college students, 7.4 million were enrolled full-time. In data reported since 1998, the full-time share has ranged between 85.8% in 2013 to 89.3% in 2004.

Share of Dependent 18 to 24 Year Old Enrollment Enrolled in 4-Year Institutions by Family Income Quartiles and Race/Ethnicity 2016



Source: Calculated from October Current Population Survey File (Formerly Table 14 in Census Bureau's School Enrollment Report)

For the major population groups, the full-time share of college enrollments in 2016 was:

- **93.3%** for Asians
- **89.4%** for females
- **89.2%** for White non-Hispanics
- **88.3%** for Blacks
- **85.8%** for males
- **81.4%** for Hispanics

Across the quartiles of family income, in 2016 the shares of college students enrolled full-time were:

- **83.3%** for those from the bottom quartile, below \$39,298
- **87.2%** in the second quartile, between \$39,298 and \$74,085
- **87.3%** in the third quartile, between \$74,085 and \$127,278
- **91.7%** in the top quartile, above \$127,278

This pattern of lower full-time enrollment shares at lower levels of family income, and higher shares at higher levels of family income holds for each of the major population groups except Blacks in 2016. For males, the full-time enrollment shares were:

- **82.0%** in the bottom quartile
- **83.3%** in the second quartile
- **85.0%** in the third quartile
- **91.1%** in the top quartile

For females, the full-time enrollment shares in 2016 were:

- **84.5%** in the bottom quartile
- **90.3%** in the second quartile
- **89.4%** in the third quartile
- **92.3%** in the top quartile

For White non-Hispanics, the full-time shares were:

- **84.1%** in the bottom quartile
- **88.2%** in the second quartile
- **87.8%** in the third quartile
- **92.5%** in the top quartile

For Blacks, the full-time enrollment shares were:

- **88.7%** in the bottom quartile
- **87.3%** in the second quartile
- **92.2%** in the third quartile
- **82.4%** in the top quartile

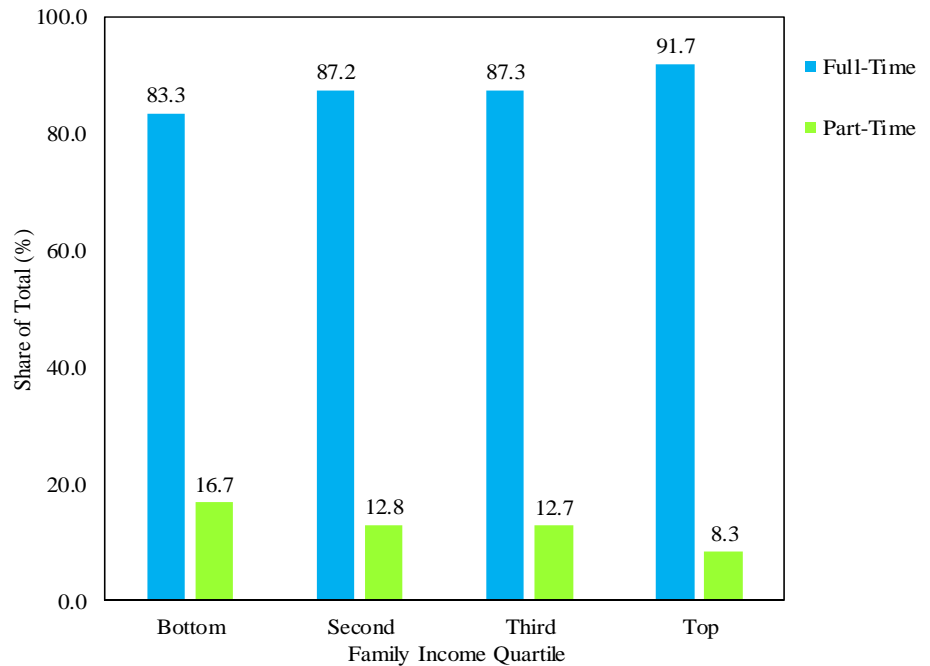
For Asians, the full-time enrollment shares were:

- **87.4%** in the bottom quartile
- **94.7%** in the second quartile
- **94.6%** in the third quartile
- **95.7%** in the top quartile

For Hispanics, the full-time enrollment shares were:

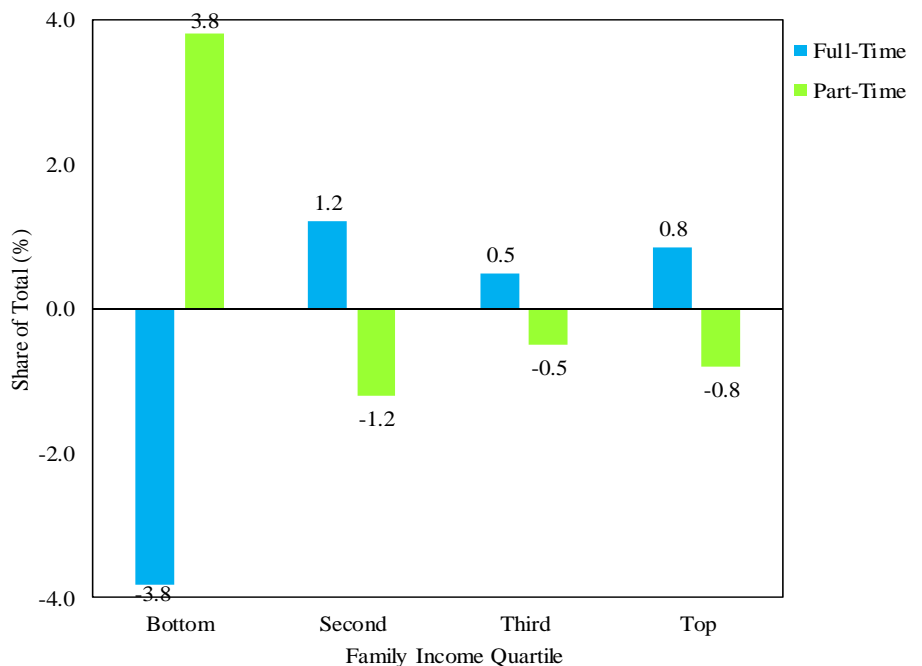
- **78.1%** in the bottom quartile
- **82.6%** in the second quartile
- **79.3%** in the third quartile
- **89.0%** in the top quartile

Distribution of Dependent 18 to 24 Year Old Enrollment by Enrollment Status and Family Income 2016



Source: Calculated from October Current Population Survey File (Formerly Table 14 in Census Bureau's School Enrollment Report)

Change in Distribution of Dependent 18 to 24 Year Old Enrollment by Enrollment Status and Family Income 2006 to 2016



Source: Calculated from October Current Population Survey File (Formerly Table 14 in Census Bureau's School Enrollment Report)

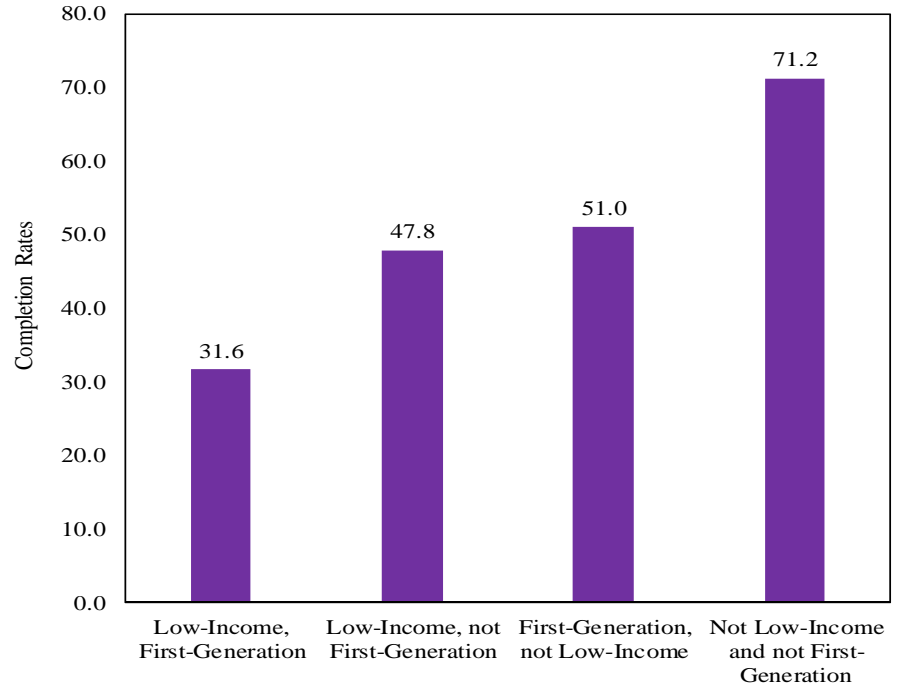
Bachelor's Degree Completion

The third step on the path to a bachelor's degree by age 24 is to graduate with a bachelor's degree after beginning college enrollment. In 2016, the estimated bachelor's degree completion by age 24 was 51.9%. Out of a population of 11.4 million dependent family members age 18 to 24 years that had enrolled in college, an estimated 5.9 million would complete a bachelor's degree by age 24. The 2016 bachelor's degree completion rate equaled the 2015 rate, and together they were the highest rates recorded in data extending back to 1970.

The bachelor's degree completion rate by age 24 for dependent family members is estimated due to data limitations. The CPS data set used from the Census Bureau includes dependent family members from ages 18 through 24 years. This includes 18-year olds fresh out of high school as well as family members at 24. During these years young adults are enrolled in college, some have graduated, many are moving out of their parents' households to set up their own households, and a few remain in their parents' households (the "Failure to Launch" population).

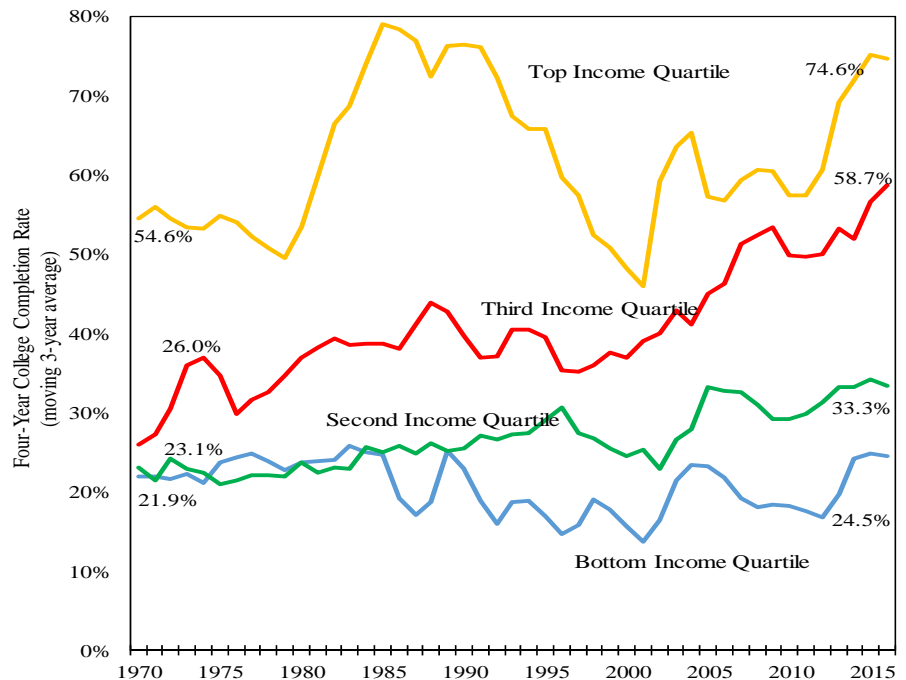
To estimate the bachelor's degree completion rate we first calculate the share of the 18 to 24-year old dependent family member population that has completed a bachelor's degree. For 2016 this was 6.58%. This number is then multiplied by a factor derived from another data set—the most recent longitudinal study file by NCES—

6-Year Bachelor's Degree Completion Rates for Dependent Students Initially Enrolled in a 4-Year Institution by Low-Income/First Generation Status 2009



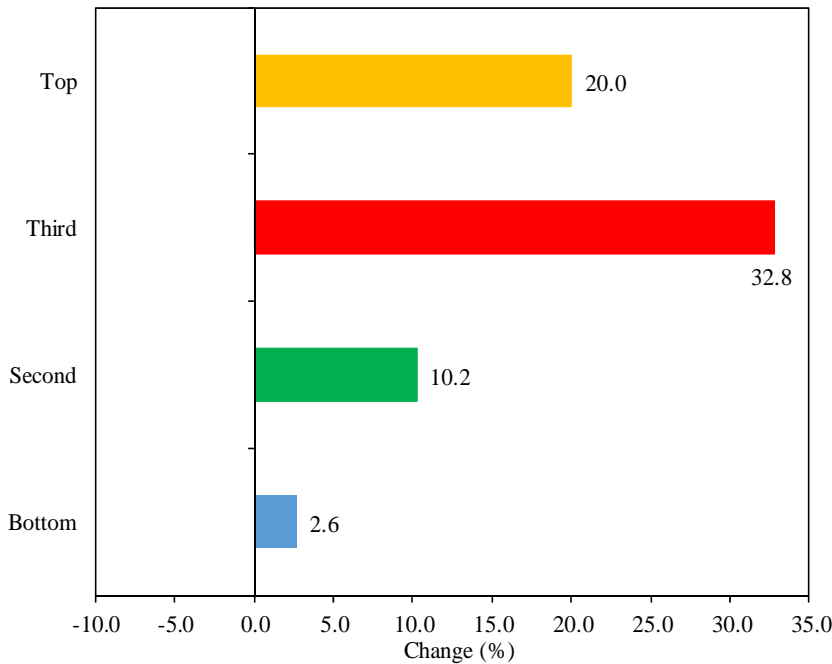
Source: NCES/BPS

Estimated Bachelor's Degree Completion Rates by Age 24 by Family Income Quartiles for Dependent College Students Who Began College, 1970 to 2016



Source: Calculated from October Current Population Survey File (Formerly Table 14 in Census Bureau's School Enrollment Report)

Change in Estimated Completion Rate by Income Quartile 1970 to 2016



Source: Calculated from October Current Population Survey File (Formerly Table 14 in Census Bureau's School Enrollment Report)

tion rates increased at each family income quartile:

- **+2.6 percentage points** for students from the bottom quartile
- **+10.2 percentage points** for students from the second quartile
- **+32.8 percentage points** for students from the third quartile
- **+20.0 percentage points** for students from the top quartile

Bachelor's Degree Attainment

At the end of this education pipeline is the bachelor's degree by age 24. To attain this achievement, students must first graduate from high school, then enroll in college, and finally complete a bachelor's degree by age 24. In 2016 32.5% of the initial cohort managed to pass all three hurdles to graduate. This was the highest bachelor's degree attainment rate in our data back to 1970.

In 2016, the progress (or lack thereof) of the population looked like this:

to inflate this share to the 24 year olds with a bachelor's degree. For 2016 this factor was 8.17. This produces a 2016 estimated bachelor's degree completion rate by age 24 of 53.8%. Finally, we average the two most recent years to smooth statistically noisy fluctuations. The result is 51.9%.

between \$74,085 and \$127,278

- **74.6%** in the top quartile, above \$127,278

Between 1970 and 2016, the estimated bachelor's degree comple-

This method is used at each of the family income quartiles as well. The result produces estimated bachelor's degree completion rates for dependent family members in 2016:

- **24.5%** for those from the bottom quartile, below \$39,298
- **33.3%** in the second quartile, between \$39,298 and \$74,085
- **58.7%** in the third quartile,

18,169,470	population of dependent family members ages 18 to 24 years
- 2,766,120	did not complete high school
<hr/>	
= 15,403,350	high school graduates
- 4,045,900	did not enroll in college
<hr/>	
= 11,357,450	enrolled in college
- 5,624,920	did not complete bachelor's degree by age 24
<hr/>	
= 5,732,530	received bachelor's degrees by age 24

Trends. The bachelor's degree attainment rate among 24 year olds has doubled since 1970 when these data were first compiled. Most of this progress has occurred since 2000. By decade these rates have been:

- **16.5%** in 1970
- **16.6%** by 1980
- **21.7%** by 1990
- **21.1%** by 2000
- **26.0%** by 2010
- **32.5%** in 2016

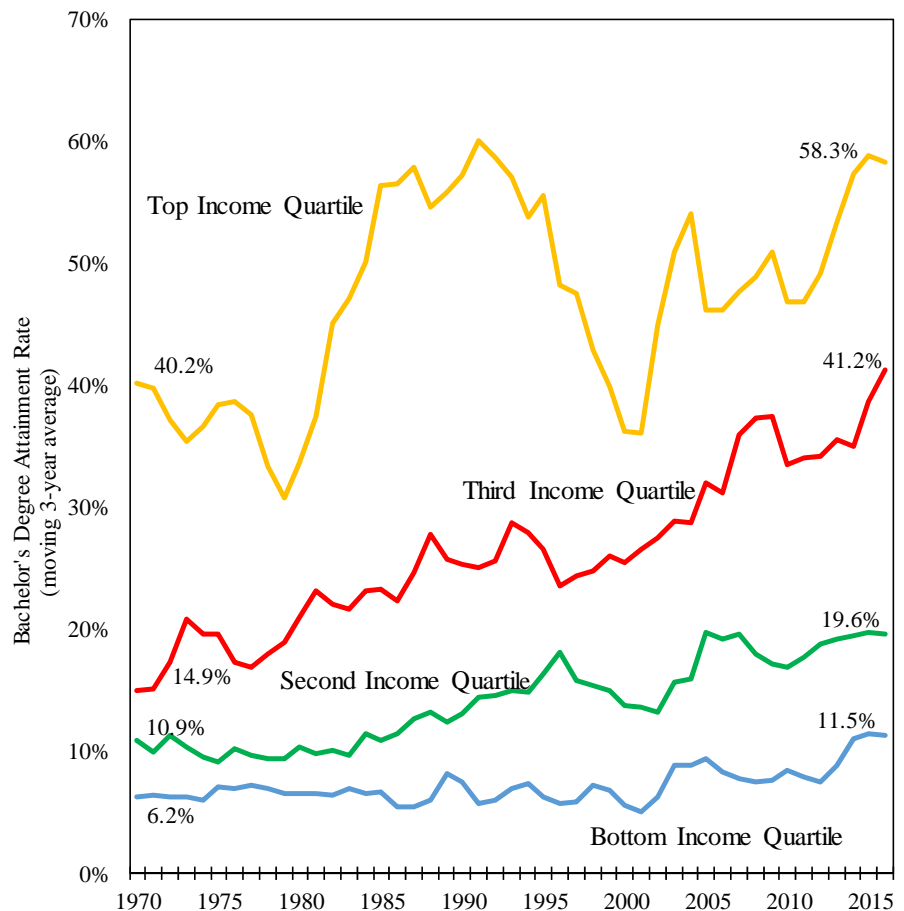
Patterns. Key to this analysis is measurement by family income quartiles. In 2016 bachelor's degree attainment rates by age 24 for dependent family members were:

- **11.3%** for those from the bottom quartile, below \$39,298
- **19.6%** in the second quartile, between \$39,298 and \$74,085
- **41.2%** in the third quartile, between \$74,085 and \$127,278
- **58.3%** in the top quartile, above \$127,278

The differences across family income quartiles at each transition stage in the education pipeline—high school graduation, college continuation, and bachelor's degree completion—are multiplied and magnified by the end. So a student *born* into the top quartile of family income has a more than five times greater probability of completing the bachelor's degree by age 24 than does another student *born* into the bottom quartile.

Between 1970 and 2016, the estimated bachelor's attainment rate by age 24 has increased at each

Estimated Baccalaureate Degree Attainment by Age 24 by Family Income Quartile 1970 to 2016



Source: Calculated from October Current Population Survey File
(Formerly Table 14 in Census Bureau's School Enrollment Report)

family income quartile, but far more so for students from the top half of the family income distribution than the bottom half. The changes have been:

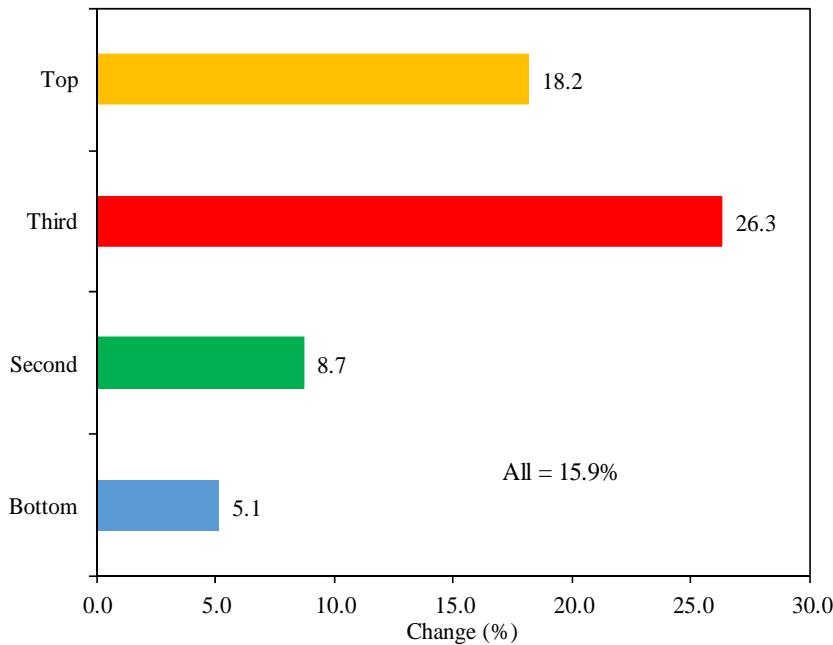
- **+5.1 percentage points** for students from the bottom quartile
- **+8.7 percentage points** for students from the second quartile

- **+26.3 percentage points** for students from the third quartile
- **+18.2 percentage points** for students from the top quartile

Summary

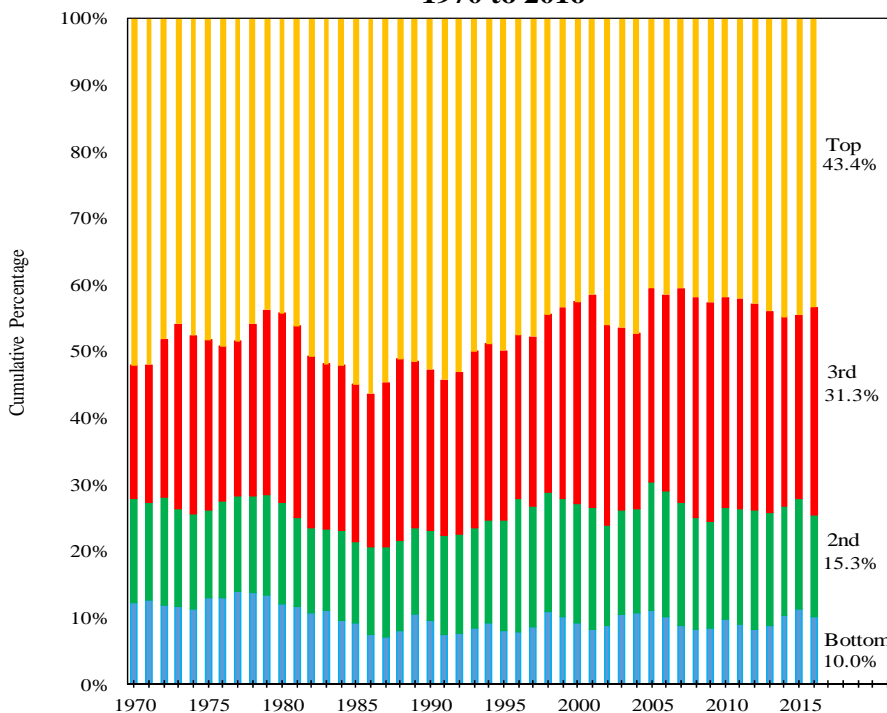
This report summarizes our annual analysis of Census Bureau data to explore the role of family income on educational opportunity. This

Change in Estimated Bachelor's Degree Attainment Rate by Age 24 by Family Income Quartile 1970 to 2016



Source: Calculated from October Current Population Survey File (Formerly Table 14 in Census Bureau's School Enrollment Report)

Distribution of Bachelor's Degrees Awarded by Age 24 by Family Income Quartiles 1970 to 2016



Source: Calculated from October Current Population Survey File (Formerly Table 14 in Census Bureau's School Enrollment Report)

report finds consistent, persistent and pervasive effects of family income at every step in the education pipeline beginning at high school graduation, then college continuation, college participation, bachelor's degree completion, and finally bachelor's degree attainment. These effects are found in every one of the 47 years' worth of data between 1970 and 2016. These effects are found within each population group: men, women, Whites, Blacks, Asians, and Hispanics. These effects are found in 2-year/4-year enrollment levels. These effects are found in full-time/part-time enrollment status.

The findings point resoundingly to the conclusion that students from the highest family income backgrounds are most successful navigating the challenges in the education pipeline on the path to a bachelor's degree by age 24. The same findings point resoundingly to the conclusion that students from the lowest family income backgrounds are the least successful navigating their challenges in the education pipeline along the path to a bachelor's degree by age 24. These findings have held every year for the last 47 years, for every population group, by every educational metric available.

Family income has multiple meanings that require some disentanglement to be effectively understood and addressed. Its first meaning is that some students have more money to address financial barriers in the education pipeline. These financial barriers become most apparent in college access, choice,

persistence, intensity and completion measures. There are direct, indirect, and opportunity costs involved in collegiate study. College costs money, and some students have more family resources to pay these costs than do others.

Family income is also closely associated with parental educational attainment. Children in high income families have parents with the most education and successful experiences navigating the requirements and complexities of education themselves. These experiential parental resources are available daily to guide students through education toward and through college. Children in poor families have parents with the least formal education and experiences to guide their children through education.

Family income is also closely associated with segregated residen-

tial patterns that differentiate communities and schools. Neighborhoods and the schools serving families in those neighborhoods tend to reflect a homogeneity of incomes. Some neighborhoods are relatively wealthy while others are relatively poor. The educational cultures and resources of these neighborhoods are differentiated by family income in ways that foster or impede collegiate opportunity.

Family income is also associated with adverse childhood experiences (ACEs) that affect child development in ways shown to influence educational performance and higher education opportunities. These ACEs include abuse (emotional, physical, sexual), neglect (emotional, physical), and household dysfunction (intimate partner violence, substance abuse in household, men-

tal illness in household, parental separation/divorce, incarcerated household member). The more of these ACEs that a child incurs before college the less likely the child will ever graduate from college.

Disparities in higher educational opportunity across family income levels require informed, effective, and targeted intervention. The persistence of these disparities suggests the magnitude of the challenges has yet to be addressed in the United States. And with the divergence of family income so closely tied to the divergence in educational opportunity, the destructive role of the disparities should not continue to be ignored.

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