The Postsecondary Undergraduate Population: Student Income and Demographics

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Since the 1950s and the creation of the first federal student aid programs, one aim of federal higher education policy has been to promote access to postsecondary education, particularly for students with financial need. In recent years, the federal government has annually made available more than $100 billion in federal grants, loans, and work-study funds to millions of students to help cover the cost of higher education. As Congress continues to focus on expanding access to postsecondary education through federal student aid policies, understanding various characteristics of the population enrolling in postsecondary education may be useful for policy deliberations.

This report focuses on the income of the undergraduate student population. It analyzes (1) how the income distribution of the undergraduate population has changed over time; (2) the relationship between student income and certain student demographics, such as race and dependency status; and (3) how the income distribution of the undergraduate population compares with that of the population of persons who do not have a postsecondary degree. Major findings presented in this report include the following:

- The number and proportion of low-income students has increased in more recent years, even as total enrollment has decreased.

- Low-income student enrollment has increased at a faster pace than the nation's population of low-income persons.

- The majority of students enrolling in postsecondary education have incomes below 200% of the poverty guidelines.

- Independent undergraduate students who have sometimes been labeled as "non-traditional" constitute a large portion of enrolled postsecondary students and tend to have lower income than more "traditional" students.

- Nonwhite students account for nearly 50% of the undergraduate student population, and they tend to have lower income than white students.

- The majority of low-income students attend community colleges and a disproportionately high share attend private for-profit institutions.

The changing composition of the student population could have implications for federal policies designed to promote access to postsecondary education. In particular, policymakers face consideration of whether federal policies could play a role in encouraging students at various income levels to enroll at the highest performing types of schools. Policymakers also face consideration of the extent to which Higher Education Act programs are designed to support the success of non-traditional and minority students.

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Introduction

Since the 1950s and the creation of the first federal student aid programs, one aim of federal higher education policy has been to promote access to postsecondary education, particularly for students with financial need. In recent years, the federal government has annually made available more than $100 billion in federal grants, loans, and work-study funds to millions of students to help cover the cost of higher education.[1] As Congress continues to focus on expanding access to postsecondary education through federal student aid policies, understanding various characteristics of the population enrolling in postsecondary education may be helpful in informing policy deliberations.

In academic year (AY) 2015-2016, there were approximately 19.3 million students enrolled as undergraduates in postsecondary education in the 50 states and the District of Columbia.[2] In AY2007-2008, around the time of the last reauthorization of the Higher Education Act (HEA), there were approximately 20.5 million undergraduate students enrolled in postsecondary education.[3] The composition of the current undergraduate population, how the composition has changed over time, and the types of institutions in which students enroll are issues that are likely to be of interest to Congress as it considers the reauthorization of the HEA.

This report focuses on the income of the undergraduate student population. The report will explore the relationship between student income and certain student demographics such as race and dependency status, and explore how the income distribution of the undergraduate population compares with that of the national population of persons who do not have a postsecondary degree.

Data Sources

The analysis presented in this report relies on two data sources: the National Postsecondary Student Aid Study (NPSAS) and the Current Population Survey Annual Social and Economic Supplement (CPS ASEC). This section describes each data source, along with some of the limitations of the data.

NPSAS

The data used in this report were primarily derived from NPSAS. NPSAS is a nationally representative study of students enrolled in postsecondary education that focuses on how students finance their education. NPSAS is conducted by the U.S. Department of Education's National Center for Education Statistics (NCES)[4] and is administered every four years. The most recent study available covers AY2015-2016, which ran from July 1, 2015, to June 30, 2016. To provide an illustration of how postsecondary student characteristics have changed over time, this report uses data from the last six administrations of NPSAS that are available—AY1995-1996, AY1999-

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[1] U.S. Department of Education, *Federal Student Aid 2018 Annual Report*, https://www2.ed.gov/about/reports/annual/2018report/fsa-report.pdf.

[2] CRS calculations using the National Postsecondary Student Aid Study. Students enrolled in postsecondary institutions in Puerto Rico were excluded from the calculation due to data limitations.

[3] Ibid.

[4] NCES is located within the Institute of Education Sciences at the U.S. Department of Education and is the primary federal entity for collecting and analyzing data related to education in the United States and other nations.

2000, AY2003-2004, AY2007-2008, AY2011-2012, and AY2015-2016—covering a period of 20 years.

The NPSAS data are used in this report to explore the income characteristics of the postsecondary population and the extent to which income is related to other student demographics, such as race and dependency status. The report also explores the relationship between income and type of institution(s) attended. To establish a student's income, the NPSAS variable for income as a percentage of the poverty guidelines is used.[5] The poverty guidelines are based on family size and total income (more discussion on the poverty guidelines is provided in the subsequent section of this report). One advantage of using the poverty guidelines is that they provide income relative to the level of poverty at a certain point in time. Therefore, when looking at trends in income over time, no adjustments need be made for inflation.

The individual(s) (i.e., a student, student's parents, or student's spouse) whose income is represented by the income as a percentage of the poverty level varies by the student's dependency status. For dependent students, the measure reflects the family size and income of the student's parents; for independent students, it reflects the family size and income of the student and, if applicable, the student's spouse. For simplicity, when this report refers to a student's income in the context of the NPSAS data, it is referring to the income of applicable family members.

There are several studies that have explored the income characteristics of the postsecondary population. For example, NCES publishes an annual report on the income characteristics of students who enroll in college immediately after completing high school.[6] Data from the most recent report suggest that for the past few years, low-income students have started to enroll in postsecondary education at a higher rate than middle-income students, but they also continue to enroll at a much lower rate than high-income students.[7] However, in looking only at recent high school completers, the data exclude a large portion of the postsecondary population who are not recent high school graduates. Thus, one advantage of using NPSAS is that the data provide a representative sample of all types of students across all types of Title IV schools.

One limitation of using NPSAS is that while much of the data are derived from information that students report on the Free Application for Federal Student Aid (FAFSA), the remaining data, for students who did not apply for aid, are collected through interview and/or are produced through stochastic imputation.[8] As such, the data for non-FAFSA filers are likely considerably less precise than the data for FAFSA filers. For context, in the AY2015-2016 NPSAS study 70% of student respondents completed the FAFSA.[9]

CPS ASEC

The CPS ASEC is sponsored jointly by the U.S. Census Bureau and the U.S. Bureau of Labor Statistics and is the official source of annual estimates of poverty in the United States. The CPS is

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[5] Income reported in NPSAS is for the tax year preceding the NPSAS academic year. For example, NPSAS: 2016 covers AY2015-2016 and the income reported for 2014.

[6] See the NCES website at https://nces.ed.gov/programs/coe/indicator_cpa.asp.

[7] Ibid.

[8] When non-filers have filed prior FAFSAs, information provided on those prior-year FAFSAs is used to estimate income. If no prior year FAFSA information is available, then independent students are asked to estimate their income within a specified range, and dependent students are asked to estimate their parent's income within a specified range. For more information, see NPSAS: 2016 Data Documentation.

[9] NPSAS: 2016 Data Documentation.

a monthly labor force survey that is used to compute monthly labor statistics, such as the unemployment rate. The ASEC, a supplementary set of questions asked after the basic CPS monthly questionnaire, is administered to about 100,000 addresses and asks the respondent to report information for the previous full calendar year. As a result, the income data obtained from the ASEC are annual measures. Respondents are asked about 18 types of income by a professional interviewer using a computerized questionnaire. The level of income detail is generally considered to be higher and more accurate than it is from surveys that rely on paper forms and are filled out by the respondents themselves. However, like all surveys based on a sample, the ASEC is subject to both sampling error and nonsampling error.[10] Despite these limitations, the CPS ASEC is a widely used survey for analyzing household income.

The CPS ASEC data are used in this report to explore the income of the national population relative to the postsecondary population. For consistency with the three most recent NPSAS studies, this report uses the CPS ASEC data from 2007, 2011, and 2015.[11] To draw valid comparisons between the national and the postsecondary population groups, CRS created an income variable in CPS ASEC that closely resembles the NPSAS variable for income as a percentage of the poverty guidelines. However, CPS ASEC uses household and family definitions that are different from NPSAS. To create units of analysis that were most similar to those in NPSAS, it was necessary to make some assumptions and intermediate calculations. Further, the definitions of income in CPS ASEC and NPSAS are not identical. Despite the limitations of CRS's approach, the derived family income variable allowed for some valuable comparisons. An outline of CRS's approach to creating the family income variable in CPS ASEC and the assumptions embedded in this approach is provided in the Appendix.

Income of Undergraduate Students

The amount of federal student aid that is made available to a student is largely determined by the student's income. Individuals who are interested in applying for federal student financial aid are required to complete the FAFSA. Information reported on the FAFSA is shared with state agencies and institutions of higher education to help determine federal and non-federal student aid.[12] Thus, an important characteristic of postsecondary students with regard to federal policy is their income. This section of the report explores changes in the income distribution of students enrolled in postsecondary education over time using the NPSAS variable for income as a percentage of the poverty guidelines.

The poverty guidelines are issued by the Department of Health and Human Services (HHS) every year, and many social programs such as the Supplemental Nutrition Assistance Program (SNAP), the Children's Health Insurance Program, the National School Lunch Program, and certain parts of Medicaid use poverty guidelines to determine participant eligibility for benefits.[13] The poverty

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[10] Sampling error is error that results from taking a sample of households instead of interviewing all households. Nonsampling error results from other sources, such as respondents misremembering information, reporting incorrect information, or refusing to report information, as well as from errors made during the processing of the data

[11] Income on the CPS ASEC is reported for the prior calendar year. For example, the 2015 CPS ASEC survey includes income reported for 2014. The 2015 CPS ASEC would thus correspond with NPSAS: 2016.

[12] For additional information on need analysis procedures for federal student aid, see CRS Report R44503, *Federal Student Aid: Need Analysis Formulas and Expected Family Contribution*.

[13] There are two official federal measures of poverty. The poverty thresholds are the original measure and are mainly used for calculating all official poverty population statistics. The poverty guidelines are a simplified version of the federal poverty thresholds and are used for administrative purposes such as determining financial eligibility for certain federal programs. For more information on the poverty measurements, see CRS Report R44780, *An Introduction to*

guidelines are also used to determine monthly payment amounts under the student loan income-driven repayment plans and in student loan rehabilitation agreements. **Table 1** provides the 2014 HHS poverty guidelines and multiples that were used in NPSAS: 2016. Using these guidelines, CRS created the following five poverty bands for its analysis: below 100%, 100% to 199.99%, 200% to 299.99%, 300% to 499.99%, and 500% and above. For purposes of this report, "low-income students" are considered to have income that falls within the first two poverty bands (below 200% of the poverty guidelines). This characterization of low-income status is consistent with standards used in some education and social service programs that use the poverty guidelines to determine eligibility for assistance.[14] It is used here primarily as a descriptor of lower-income categories in the populations being examined, and no suggestion is being made with regard to whether the first two poverty bands should be used as thresholds in "low-income" determinations for the receipt of means tested assistance.

Table 1. 2014 HHS Poverty Guidelines and Multiples

48 contiguous states and the District of Columbia, applicable to NPSAS: 2016

Family Size	Poverty Guideline	Poverty Guideline Multiples			
	100%	200%	300%	500%	1,000%
1	$11,670	$23,340	$35,010	$58,350	$116,700
2	$15,730	$31,460	$47,190	$78,650	$157,300
3	$19,790	$39,580	$59,370	$98,950	$197,900
4	$23,850	$47,700	$71,550	$119,250	$238,500
5	$27,910	$55,820	$83,730	$139,550	$279,100
6	$31,970	$63,940	$95,910	$159,850	$319,700
7	$36,030	$72,060	$108,090	$180,150	$360,300
8	$40,090	$80,180	$120,270	$200,450	$400,900

Source: 2014 HHS Poverty Guidelines, https://aspe.hhs.gov/2014-poverty-guidelines#guidelines

Notes: NPSAS uses the values for the 48 contiguous states and the District of Columbia regardless of the student's state of residence.

As previously mentioned, one advantage of using the poverty guidelines is that they are indexed for inflation, which is useful when looking at trends in income over time. Another advantage is that they account for families of different sizes. For example, 200% of the poverty threshold for a family of four is $47,700. This same income level represents more than 300% of the poverty threshold for a single individual and for a family of two.[15]

Poverty Measurement.

[14] Examples of programs that utilize 200% of the poverty guidelines to determine eligibility for certain program benefits include SNAP, certain programs authorized under the Public Health Service Act that provide health professions and nursing training to individuals from disadvantaged backgrounds, the Foster Grandparent program, and state Children's Health Insurance Programs.

[15] For context, in 2014 median household income was $53,657 and the average household size was 2.54 persons. One-person households had a median income of $27,377; two-person households, $60,406; three-person households, $70,979; and four-person households, $83,613. These estimates are in 2014 dollars, and are based on a definition of household that includes all persons living in the same housing unit, regardless of familial relationship or enrollment status. See U.S. Census Bureau, "Table H-11. Size of Household – All Races, by Median and Mean Income: 1975 to 2017," https://www2.census.gov/programs-surveys/cps/tables/time-series/historical-income-households/h11ar.xls.

Undergraduate Student Income Distribution

Table 2 provides the number of undergraduate students enrolled by poverty bands during the period covered by the last six administrations of NPSAS that are available. **Figure 1** provides a graphical illustration of the data presented in **Table 2**.

Table 2. Undergraduate Enrollment by Poverty Bands

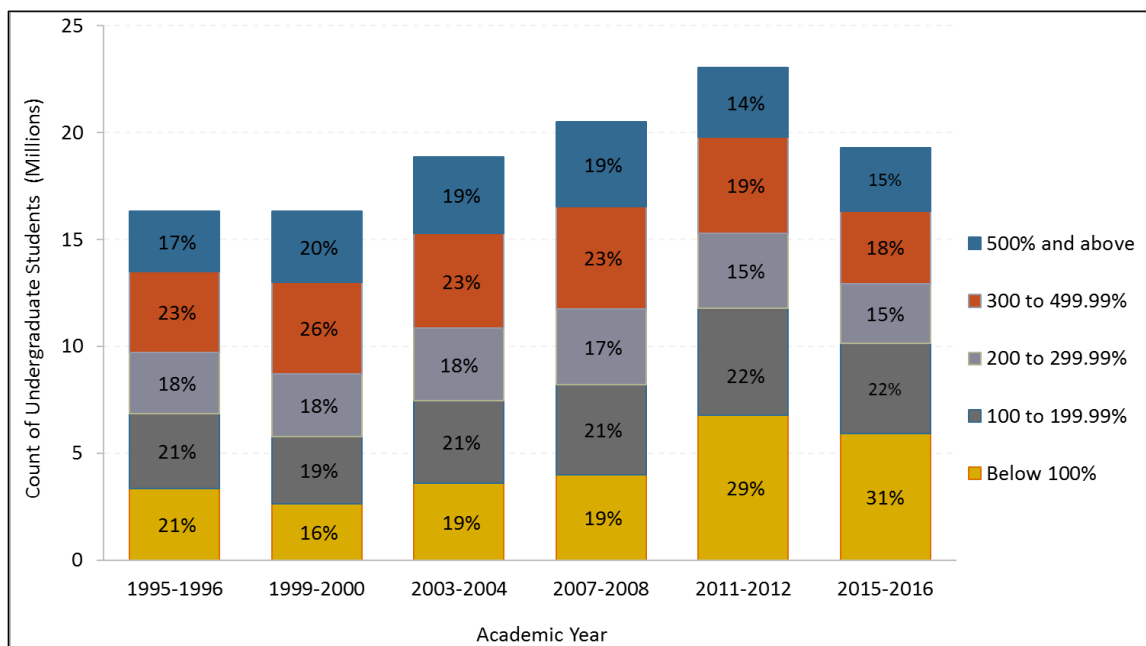AY1995-1996, AY1999-2000, AY2003-2004, AY2007-2008, AY2011-2012, and AY2015-2016

Academic Year	Poverty Bands					Total
	Below 100%	100% to 199.99%	200% to 299.99%	300% to 499.99%	500% and above	
1995-1996	3,348,060	3,496,309	2,855,237	3,803,859	2,811,882	16,315,347
1999-2000	2,631,930	3,159,836	2,913,031	4,291,766	3,334,160	16,330,724
2003-2004	3,595,367	3,874,283	3,372,212	4,432,213	3,593,965	18,868,041
2007-2008	3,982,939	4,223,694	3,539,657	4,790,508	3,973,850	20,510,648
2011-2012	6,762,792	5,014,810	3,524,610	4,471,993	3,281,242	23,055,447
2015-2016	5,935,713	4,194,099	2,813,131	3,397,154	2,967,868	19,307,966

Source: CRS calculations using the National Postsecondary Student Aid Study for the years noted and HHS Poverty guidelines for multiple years

Notes: Due to rounding, categories may not sum to 100%. Students with income above 1,000% are coded as 1,000% in NPSAS. Due to data limitations, undergraduate enrollment excludes students enrolled at postsecondary institutions in Puerto Rico.

Figure 1. Undergraduate Enrollment by Poverty Bands

AY1995-1996, AY1999-2000, AY2003-2004, AY2007-2008, AY2011-2012, and AY2015-2016

Source: CRS calculations using the National Postsecondary Student Aid Study for the years noted and HHS Poverty guidelines for multiple years

Notes: Due to rounding, categories may not sum to 100%. Students with income above 1,000% are coded as 1,000% in NPSAS. Due to data limitations, undergraduate enrollment excludes students enrolled at postsecondary institutions in Puerto Rico.

Postsecondary student enrollment has generally increased over the past two decades. In AY1995-1996 and AY1999-2000, there were about 16.3 million undergraduates. Enrollment increased to 18.9 million in AY2003-2004 and to 20.5 million in AY2007-2008, and reached a peak of 23.0 million in AY2011-2012. In AY2015-2016, enrollment dropped to 19.3 million undergraduates.

There were also changes in the income composition of the undergraduate population that appear to coincide with the 2008 recession.[16] Specifically, the number of students with income below 100% of the poverty guidelines grew from approximately 4 million in AY2007-2008 to 6.7 million in AY2011-2012, an increase of nearly 70%. Students with income below 100% of the poverty guidelines also constituted a larger portion of the undergraduate population (29%) in AY2011-2012 than in any prior study. While overall enrollment decreased in AY2015-2016, the proportion of students in the lowest poverty band increased to 31% of the undergraduate population. More than 50% of undergraduate students enrolled in AY2011-2012 and AY2015-2016 had incomes below 200% of the poverty guideline.

The trend in enrollment of students in the upper and middle income categories differs from that of low-income students. From AY2007-2008 to AY2011-2012, the number of students in the upper poverty band (500% of the poverty guidelines and above) dropped by 17% while overall enrollment increased by 12%. In AY2015-2016, enrollment of upper-income students was 25% below the AY2007-2008 level. Similarly, enrollment of students with income between 200% and 499% of the poverty guidelines dropped by 25% between AY2007-2008 and AY2015-2016.

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[16] The recession officially ran from December 2007 through June 2009. See https://www.nber.org/cycles.html.

Overall, the data suggest that low-income students are enrolling at higher levels than previously observed. Several conclusions could be drawn from this. For instance, it could suggest that institutions of higher education have become more effective at enrolling low-income students. It could also suggest a lack of opportunities in the labor market and that more low-income students are becoming convinced that they may realize economic benefits with higher educational credentials.

At the same time, enrollment of students in the middle and upper income categories has declined. It is possible that the trend in the income composition of undergraduate students could be a reflection of changes in income of the national population. As is explored in more depth in a later section of this report, these changes in the composition of the student population in the higher and lower poverty bands do not seem to map closely with broader income trends in the general population, although there is some alignment with income trends for those of ages similar to traditional college students during this period.

Student Demographics by Income

The data presented thus far suggest differences in the trends in enrollment of undergraduate students from different income groups. To further explore the current population of students, CRS examined certain demographic characteristics of the undergraduate student population and how those characteristics are related to income using the most recent NPSAS.

Race

Figure 2 illustrates the racial composition of students by poverty bands in AY2015-2016. The data suggest that minority students accounted for nearly 50% of the enrolled undergraduate population, and these students tended to have lower incomes than white students. More specifically, white students constituted about 53% of all enrolled undergraduate students, Hispanic students constituted 19%, black students constituted 16%, and Asian students and students from other racial groups constituted 12%. While white students made up the majority of students in any income category, they were overrepresented in the higher income bands. For example, white students constituted 73% of students with income of 500% and above of the poverty guidelines. Black and Hispanic students, on the other hand, were overrepresented in the lower income bands. For example, while black and Hispanic students combined accounted for 35% of the total undergraduate population, they accounted for 45% of students with income below 100% of the poverty guideline. The proportionate share of Asian and other students was relatively stable across the different poverty bands.

As **Figure 1** illustrates, the majority of the undergraduate population has income below 200% of the poverty guidelines. Using counts presented in **Figure 2**, it is possible to examine the concentration of these low-income students within racial groups in AY2015-2016. This reveals that 70% of black students, 64% of Hispanic students, 58% of "other" students, 55% of Asian students, and 42% of white students had income below 200% of the poverty guidelines.

Figure 2. Racial Composition of Undergraduate Students
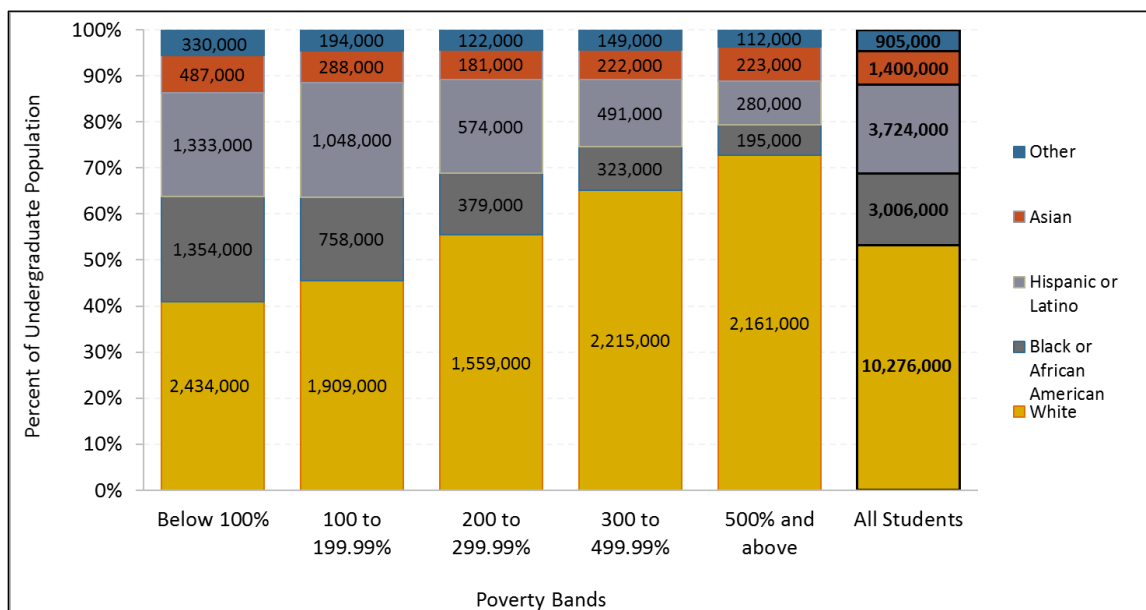
AY2015-2016

Source: CRS calculations using the AY2015-2016 National Postsecondary Student Aid Study.

Notes: Students with income above 1,000% are coded as 1,000%. Due to data limitations, undergraduate enrollment excludes students enrolled at postsecondary institutions in Puerto Rico. The "other" category includes American Indians or Alaska Natives, Native Hawaiians/Other Pacific Islanders, and students who are more than one race.

Traditional vs. Non-traditional Students

When considering the postsecondary population, there is typically a distinction made between traditional and non-traditional students. While there is no consensus on the characteristics that distinguish traditional from non-traditional students at the undergraduate level, students identified as "independent" are often considered to be non-traditional students. An independent student is defined in the HEA as one who meets any of the following criteria:[17]

- is 24 years of age or older by December 31 of the award year;[18]
- is an orphan, in foster care, or a ward of the court; or was an orphan, in foster care, or a ward of the court at any time when the individual was 13 years of age or older;
- is, or was immediately prior to attaining the age of majority, an emancipated minor or in legal guardianship as determined by a court of competent jurisdiction in the individual's state of legal residence;
- is a veteran of the Armed Forces of the United States or is currently serving on active duty in the Armed Forces for other than training purposes;
- is a graduate or professional student;[19]

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[17] For complete legislative language related to independent student criteria, see HEA §480(d).

[18] The award year runs from July 1 to June 30. The FAFSA for a given year presents this criterion in terms of a birthdate. For example, the AY2018-2019 FAFSA asks if a student was born prior to January 1, 1995.

[19] Graduate and professional students are not considered in this report's analyses.

- is a married individual;
- has legal dependents other than a spouse; or
- has been verified, by a qualified authority during the school year in which the application is submitted, as either an unaccompanied youth who is a homeless child or youth, or as unaccompanied, at risk of homelessness, and self-supporting.

Under the HEA, a student who does not meet the criteria for an independent student is treated as a dependent student. **Figure 3** illustrates dependency status of enrolled undergraduate students by poverty bands in AY2015-2016 and suggests that independent students constituted a large portion of this population. These "non-traditional students" also tended to be low income. More specifically, while independent students constituted 50% of the undergraduate population, they constituted nearly 70% of students in the lowest poverty band. Dependent students, on the other hand, were largely overrepresented in the upper income bands. For example, dependent students constituted 76% of students with income of 500% and above of the poverty guidelines and 33% of students with income below 100% of the poverty guidelines.

The counts presented in **Figure 3** can be used to examine the concentration of low-income students within each dependency group, showing that 44% of dependent students, 74% of independent students without dependents, and 80% of independent students with dependents had income below 200% of the poverty guidelines.

Figure 3. Dependency Status of Undergraduate Students
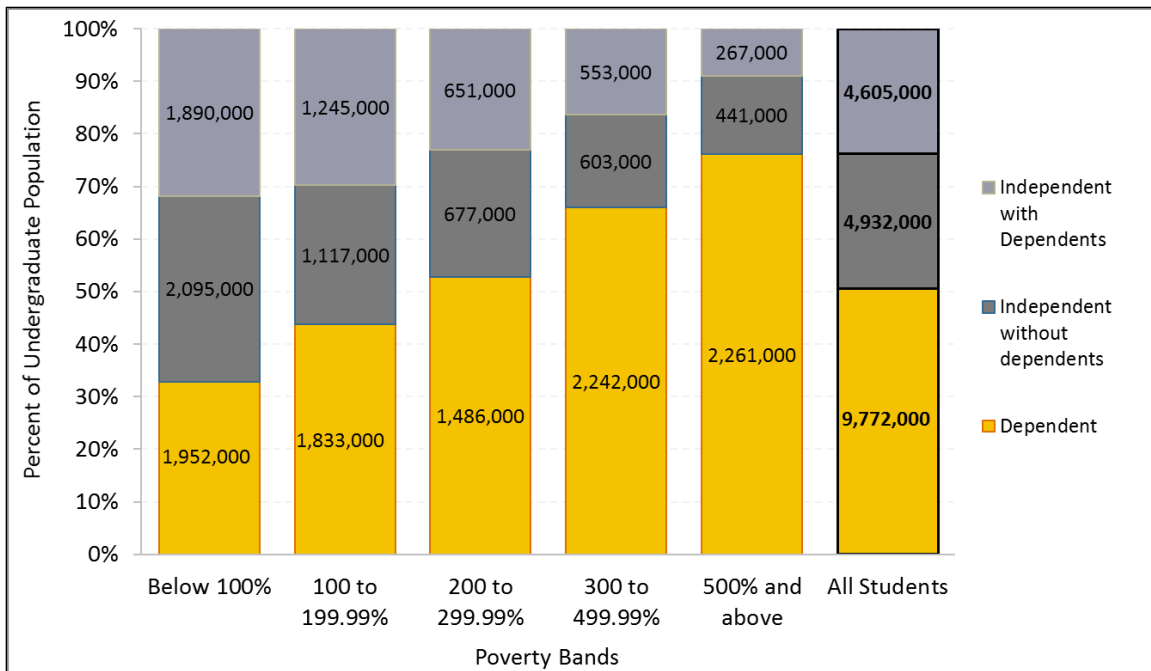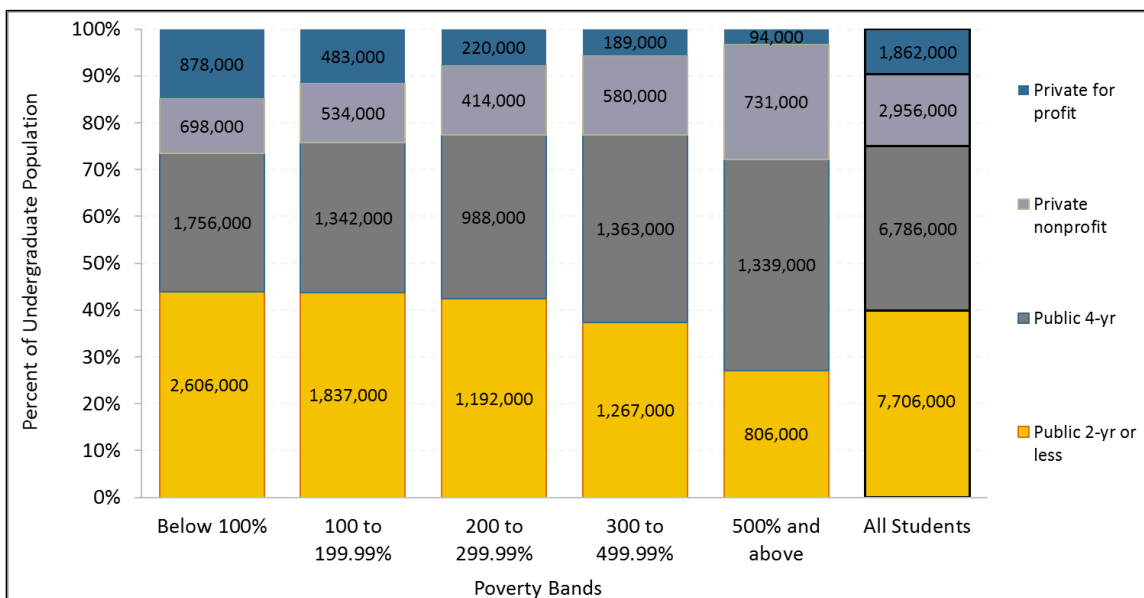
AY2015-2016

Source: CRS calculations using the AY2015-2016 National Postsecondary Student Aid Study.

Notes: Students with income above 1,000% are coded as 1,000%. Due to data limitations, undergraduate enrollment excludes students enrolled at postsecondary institutions in Puerto Rico.

Type of Institution Attended

In discourse about which students are enrolling in postsecondary education, questions often surface regarding where students are enrolling. **Figure 4** and **Figure 5** explore types of institutions attended by students in different income categories and suggest some variation in the type of institutions attended by students with different income levels.

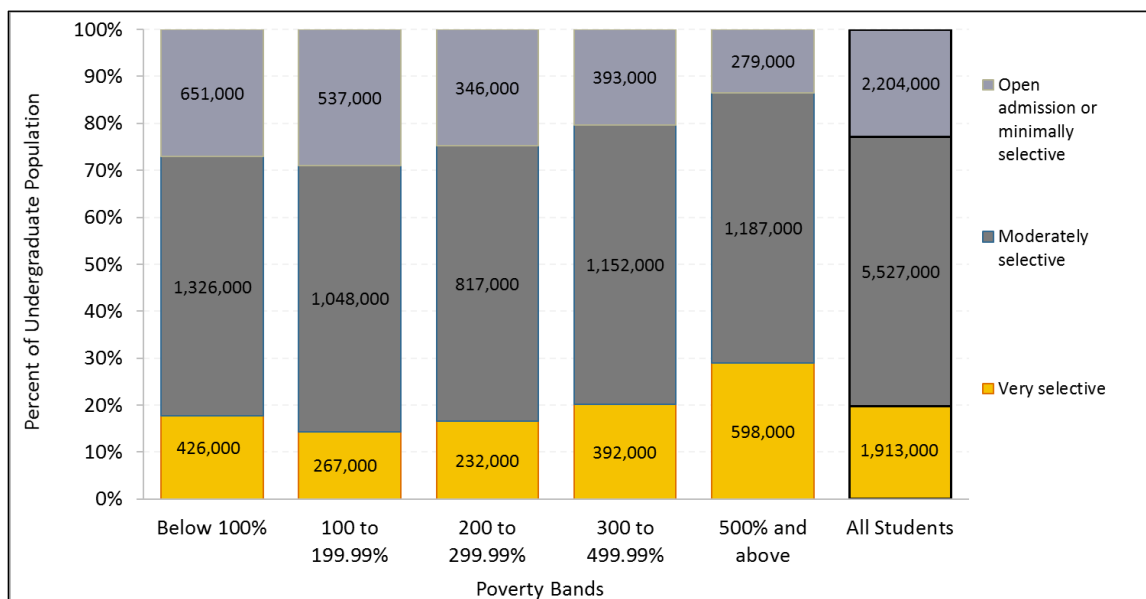**Figure 4. Types of Institutions Attended by Undergraduate Students**
AY2015-2016

Source: CRS calculations using the AY2015-2016 National Postsecondary Student Aid Study.

Notes: Students with income above 1,000% are coded as 1,000%. Due to data limitations, undergraduate enrollment excludes students enrolled at postsecondary institutions in Puerto Rico.

As shown in **Figure 4**, 40% of undergraduates attended public two-year institutions, 35% attended public four-year institutions, 15% attended private nonprofit institutions, and 10% attended private for-profit institutions in AY2015-2016. Low-income students are more likely to attend public two-year institutions (or community colleges). The likelihood of attending a private for-profit institution decreases as income increases.

The counts presented in **Figure 4** can be used to examine the concentration of low-income students within each type of institution, showing that 57% of students attending public two-year institutions, 46% of students attending public four-year institutions, 42% of students attending private nonprofit institutions, and 73% of students attending for-profit institutions had income below 200% of the poverty guidelines.

**Figure 5. Selectivity of the Four-Year Institutions Attended by
Undergraduate Students**

AY2015-2016

Source: CRS calculations using the AY2015-2016 National Postsecondary Student Aid Study.

Notes: Students with income above 1,000% are coded as 1,000%. Data represent students who attended a four-year public or nonprofit institution. Due to data limitations, undergraduate enrollment excludes students enrolled at postsecondary institutions in Puerto Rico.

Figure 5 illustrates the selectivity[20] of four-year institutions attended by undergraduate students across the poverty bands. Twenty percent of all four-year students attended very selective institutions, 57% attended moderately selective institutions, and 23% attended open admission or minimally selective institutions. Within the lowest poverty band, 18% of students attended a very selective institution. In the second lowest poverty band, 14% attended a very selective institution. Thus, there was a larger percentage of students in the lowest poverty band attending highly selective institutions than there was in the second lowest poverty band. Generally, the proportion of students that attend open admission or minimally selective institutions decreases as income increases.

The counts presented in **Figure 5** can be used to examine the concentration of low-income students within four-year institutions based on their selectivity, showing that 36% of students at very selective institutions, 43% at moderately selective institutions, and 54% at open admission or minimally selective institutions have income below 200% of the poverty guidelines.

Income Distribution of the National Population and the Undergraduate Population

The NPSAS data suggest that low-income students have enrolled in postsecondary education at higher levels in more recent years. To explore the extent to which the influx of students is related

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[20] The selectivity measure was developed using data from the NCES Integrated Postsecondary Education Data System and uses the following criteria: whether the institution was open admission (no minimal requirements), the ratio of admitted students to applicants (admission rate), and the 25th and 75th percentiles of ACT and/or SAT scores.

to changes in the income distribution of the national population, this section uses the CPS ASEC to compare the income distribution of the national population with that of the undergraduate population. Given that the data suggest noteworthy trends for low-income students, the discussion in this section generally focuses on persons with income below 200% of the poverty guideline.

Figure 6 provides a comparison of the income distribution of the national population aged 15 to 65 and the postsecondary population over three time periods. [21] The data suggest that while the low-income national population grew from 2007 to 2011, the population of low-income undergraduate students grew at a higher rate than the national population of low-income persons. Specifically, from 2007 to 2011 the number of persons with income below 200% of the poverty guidelines grew from 58.5 million to 71.0 million, an increase of 22%. During the same time, the number of low-income students enrolled as undergraduates grew from 8.2 million to 11.7 million, an increase of 44%. Between 2011 and 2015, there was a slight increase in the number of low-income persons (about 2 million) in the national population, while the number of low-income students dropped (by about 1 million). However, the drop in low-income students seems to be associated with the overall drop in postsecondary enrollment.

In terms of proportion, low-income persons constitute a much smaller portion of the national population than of the undergraduate postsecondary population. Specifically, low-income persons constituted 29% of the national population in 2007, and 34% of the national population in 2011 and 2015. Among the enrolled undergraduate population, low-income persons accounted for 40% in 2007 and more than 50% in 2011 and 2015.

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[21] To be consistent with the NPSAS population, the CPS ASEC analysis only includes persons in the national population aged 15-65—less than 1% of survey respondents in NPSAS are over age 65.

Figure 6. Count of Persons by Poverty Bands

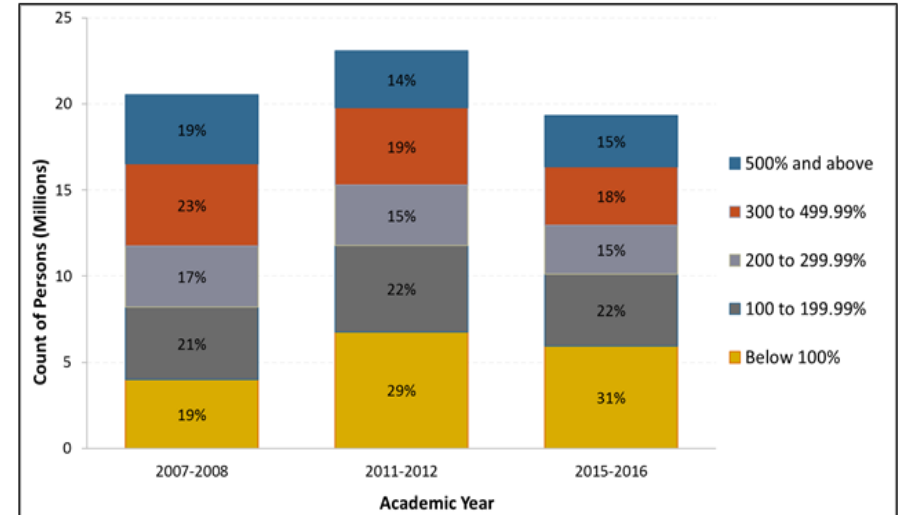Comparison of National Population and Undergraduate Postsecondary Population

National Population
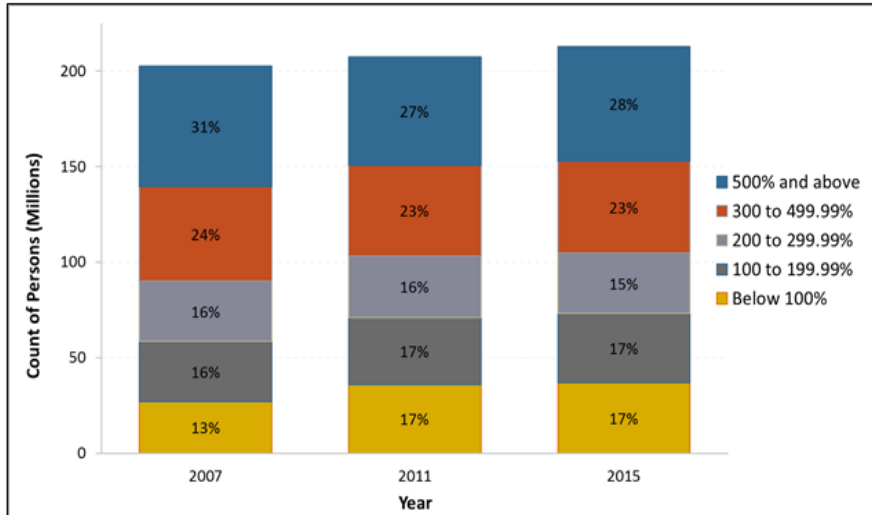
Source: CRS calculations using the Current Population Survey Annual Social and Economic Supplement.

Notes: Population is limited to individuals aged 15-65.

Undergraduate Postsecondary Population

Source: CRS calculations using the National Postsecondary Student Aid Study, multiple years.

Notes: Due to rounding, the categories do not sum to 100%. Students with income above 1,000% are coded as 1,000%. Due to data limitations, undergraduate enrollment excludes students enrolled at postsecondary institutions in Puerto Rico.

Figure 7 illustrates the income distribution of the population aged 15-23 who did not have a postsecondary degree and were not enrolled in postsecondary education. This population could have been considered "potential enrollees" and thus may have had characteristics similar to the enrolled population. Due to data limitations, "potential enrollees" who were aged 24 and older could not be considered.[22]

The data suggest that from 2007 to 2011, the number of low-income students aged 15-23 grew at a faster rate than the national population of persons in this age range. Specifically, from 2007 to 2011 the number of low-income potential enrollees grew from 10.8 million to 12.2 million, an increase of 13%, while the number of low-income enrolled students aged 15-23 grew from 4.0 million to 5.5 million, an increase of 37%. In 2015, the number of low-income persons aged 15-23 enrolled as undergraduates decreased by 6%, while the national population of the same age range decreased by 4%. Again, the drop in enrollment of low-income students appears to be related to the large decrease in total student enrollment.

In terms of proportion, low-income persons aged 15-23 constituted a smaller portion of the undergraduate population than of the national population in 2007. However, in 2011 and 2015 low-income persons in this age range constituted similar shares of the national and undergraduate populations.

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[22] In 2007 and 2011, the CPS ASEC survey question regarding college enrollment status was only asked among respondents aged 16-24. In order to be consistent with NPSAS's treatment of individuals aged 24 and older as independent, the analysis only includes the population of enrollees who were aged 15-23.
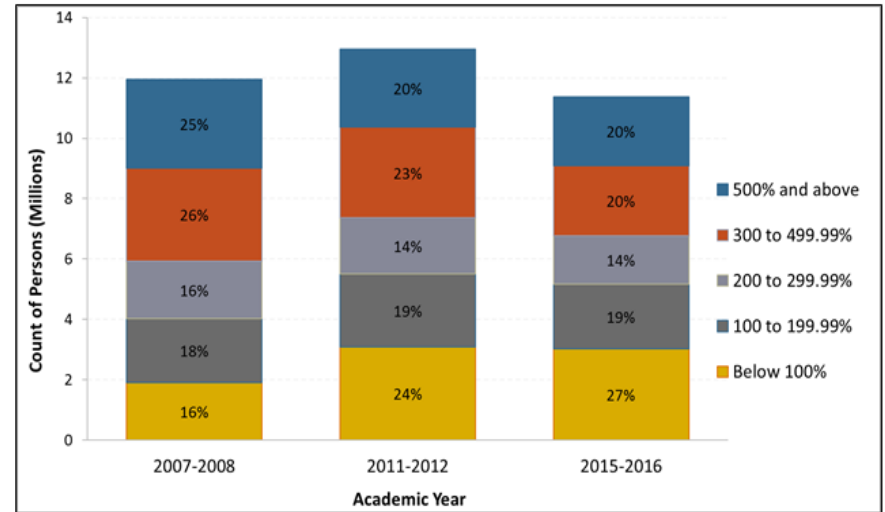
Figure 7. Count of Persons Aged 15-23 by Poverty Bands

Comparison of National Population and Undergraduate Postsecondary Population
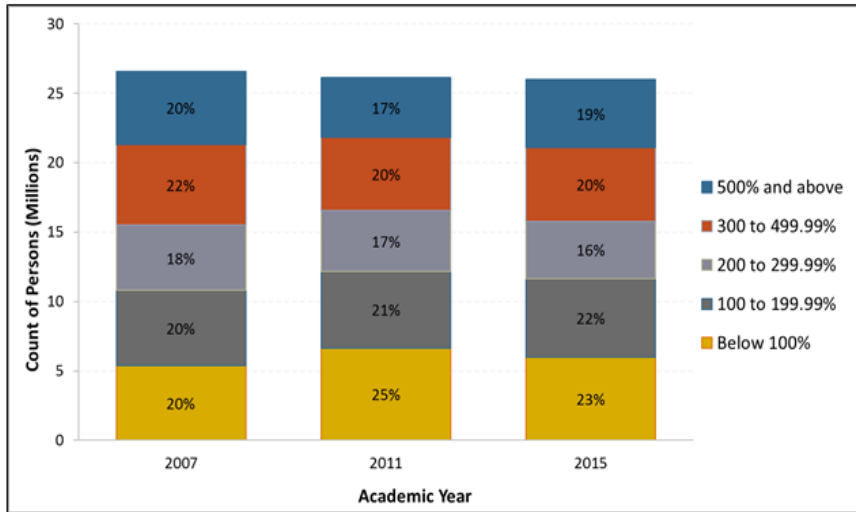
Source: CRS calculations using the Current Population Survey Annual Social and Economic Supplement.

Source: CRS calculations using the National Postsecondary Student Aid Study, multiple years.
Notes: Due to rounding, the categories may not sum to 100%. Students with income above 1,000% are coded as 1,000%. Due to data limitations, undergraduate enrollment excludes students enrolled at postsecondary institutions in Puerto Rico.

Summary of Selected Data Findings

Since the last reauthorization of the Higher Education Act, the number and proportion of low-income undergraduate students (defined in this report as students with income below 200% of the poverty guidelines) has increased, even as total enrollment has decreased in more recent years. Low-income students now constitute more than 50% of the postsecondary undergraduate population. This report's analysis also found the following:

- Certain student characteristics such as race, age, and dependency status show trends that tend to be associated with income.

- Independent undergraduate students who have historically been labeled as "non-traditional" constitute a large portion of enrolled postsecondary students. These "non-traditional" students generally tend to have lower incomes than more traditional students.

- Nonwhite students account for nearly 50% of the undergraduate population, and they tend to have lower income than white students.

- The majority of low-income students attend community colleges and a disproportionately high share attend private for-profit institutions.

- Low-income students were more likely to attend open admission or minimally selective institutions.

Considerations for Congress

The changing composition of the student population could have implications for policies designed to promote access to postsecondary education. One historical aim of student aid programs has been to increase postsecondary access for those students who demonstrate financial need. The findings in this report suggest that there has been an influx of low-income students enrolling in postsecondary education since the last HEA reauthorization. When compared with national income data, low-income individuals are overrepresented in the postsecondary population. This could suggest that federal policies have been effective at promoting access for low-income persons. Data also show that the number of students in the middle- and upper-income categories has declined somewhat in recent years. This finding could imply that there are challenges that these students face in enrolling in postsecondary education that may not be addressed in current federal policies.

Related to access, there is growing interest in the extent to which students who enroll are completing a postsecondary credential. Research suggests that private nonprofit and public four-year institutions tend to have higher completion rates than public two-year institutions and private for-profit institutions.[23] Data show that low-income students tend to be overrepresented at public two-year and for-profit institutions and less represented at public and private nonprofit four-year institutions. Policymakers face consideration of whether federal policies could play a role in

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[23] For example, see Bridget Terry Long, *The College Completion Landscape, Trends, Challenges, and Why it Matters*, American Enterprise Institute & Third Way , Elevating College Completion, May 30, 2018; National Student Clearinghouse Research Center, *Completing College: A National View of Student Completion Rates - Fall 2011 Cohort*, Signature Report, December 2017.

encouraging students at various income levels to enroll at the highest performing types of schools.

Data also show that undergraduate students historically labeled as "non-traditional" and minority students constitute about 50% of the undergraduate population. Some research suggests that non-traditional and minority students face a unique set of challenges when enrolling and completing postsecondary education.[24] Policymakers face consideration of the extent to which HEA programs are designed to support the success of non-traditional and minority students.

Another way in which the analyses presented here may be relevant to policy discussions is in identifying the distribution of students across poverty bands. When designing programs that provide assistance to lower-income individuals, poverty bands are often employed as a mechanism for targeting.[25]

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[24] For example, see Kris MacDonald, "A Review of the Literature: The Needs of Nontraditional Students in Postsecondary Education," *Strategic Enrollment Management Quarterly*, vol. 5, no. 4 (January 2018), pp. 159-164; Jin Chen and Don Hossler, "The Effects of Financial Aid on College Success of Two-Year Beginning Nontraditional Students," *Research in Higher Education*, vol. 58, no. 1 (February 2017), pp. 40-76; and Jovita M. Ross-Gordon, "Research on Adult Learners: Supporting the Needs of a Student Population that is No Longer Nontraditional," *Peer Review*, vol. 13, no. 1 (2011).

[25] As noted earlier, poverty guidelines are used to determine eligibility for benefits such as free and reduced-price lunch as well as TANF assistance, and to determine monthly payment amounts under income-driven student loan repayment plans. Proposals have also been forwarded to link Pell Grant awards to the poverty guidelines. See, for example, the Financial Aid Simplification Act of 2015 (S. 108) from the 114th Congress.

Appendix. Technical Considerations and Methodology

Family units in NPSAS correspond with HEA dependency definitions and reflect the individuals whose assets and income are considered in calculating an expected family contribution (EFC). These family units may differ from a family unit in CPS ASEC. To facilitate the analysis in this report, CRS used person-level data in the CPS ASEC data set to create new family units that are more comparable to the family units considered in calculating the EFC. This appendix briefly describes the methodology CRS used for dividing CPS ASEC larger "family household" units into smaller family units that resemble the family members and corresponding income reported on the FAFSA for the purposes of calculating a student's EFC.

Family Units: CPS ASEC and the EFC Formulas

A *family household* in CPS ASEC is a household maintained by a family and may include a related subfamily and unrelated subfamilies who live in the household. A *family* generally consists of "a group of two persons or more residing together and related by birth, marriage, or adoption." A *related subfamily* is "a married couple with or without children, or one parent with one or more of their own single (never married) children under 18 years old, living in a household and related to, but not including, the householder or spouse." An *unrelated subfamily* is "a family that does not include among its members the householder and relatives of the householder."[26]

Generally, when calculating a student's EFC, determining the relevant family members whose income would be included depends on the student's personal characteristics. The various aspects of the CPS make it possible to "separate" household members that would be a distinct family for the purposes of calculating a student's EFC. For example, a married person without children would be considered "independent" using the EFC formula, and the family would include the person and his or her spouse. An unrelated subfamily would also most likely be treated as a separate family by the EFC formula. As such, related subfamilies and unrelated subfamilies in CPS ASEC were treated as separate family units from the primary family for purposes of this report's analysis.

The EFC formula considers several criteria for identifying a person as "independent". To capture a large portion of potentially independent students in CPS ASEC who were not addressed through the separation of subfamilies from families, all unmarried persons age 24 and older who do not have children were treated as a separate family unit in this report's analysis. While students can qualify as independent on the basis of characteristics other than age, marital status, and having dependents, it was assumed that any remaining independent students not captured in the analysis would constitute a small portion of the population and thus would not have a substantial impact.[27]

Income: CPS ASEC and EFC Formula

Using the newly created EFC family unit described above, family income was calculated by taking the sum of each person's income in the unit. In some cases, this calculation of family income would likely include persons whose income would not be included under the EFC

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[26] CPS ASEC technical documentation for multiple years.

[27] See HEA §480(d) for definition of independent student that corresponds with the FAFSA application.

 formula (e.g., the income of a student who is a dependent, the income of a student's siblings who live in the household with the student's parents). To facilitate the analysis, it was assumed that the income of the additional persons would be a negligible amount and would not greatly affect the family income.

The definition of income for the purposes of the EFC formula is somewhat different from income reported in the CPS ASEC. Total income under the EFC formula considers adjusted gross income and several forms of untaxed income but excludes some forms of taxable income.[28] The CPS ASEC measure of income includes money income before taxes or tax credits and excludes capital gains or noncash benefits.[29] To facilitate the analysis, it was assumed that the two measures of income are comparable.

Author Information

Joselynn H. Fountain
Analyst in Education Policy

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Disclaimer

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[28] See HEA §480(d) for the definition of income for the purposes of the EFC formula.

[29] Money income refers to income in the form of cash, as opposed to in-kind resources such as the equity received from owning a home, the use of perquisites such as a company car, and various noncash benefits received as assistance, such as the value of food from SNAP or the value of housing subsidies or utility assistance. See Kayla Fontenot, Jessica Semega, and Melissa Lollar, *Income and Poverty in the United States: 2017*, U.S. Census Bureau, https://www.census.gov/content/dam/Census/library/publications/2018/demo/p60-263.pdf