

# 2007–08 National Postsecondary Student Aid Study (NPSAS:08)

Student Financial Aid Estimates for 2007–08

First Look

**APRIL 2009**

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## Foreword

This is the First Look at the results of the 2007–08 National Postsecondary Student Aid Study (NPSAS:08), the most comprehensive, nationally representative survey of student financing of postsecondary education in the United States. Since 1987, NPSAS has been conducted every 3 to 4 years by the National Center for Education Statistics (NCES) of the Institute of Education Sciences, U.S. Department of Education. Previous NPSAS surveys were administered during the academic years 1986–87, 1989–90, 1992–93, 1995–96, 1999–2000, and 2003–04. Undergraduate and graduate students enrolled at all types of postsecondary institutions are represented. These include public, private not-for-profit, and private for-profit sector institutions at every level: less-than-2-year, 2-year, 4-year, and graduate-only institutions. Programs offered by these schools range from certificates to advanced degrees.

The tables in this report were produced using a web-based table-generating application, the Data Analysis System (DAS), which NCES provides to the public free of charge. This web-based application also provides design-adjusted standard errors so that users can test for the statistical significance of observed differences. It can be accessed at <http://nces.ed.gov/DAS>.

# Acknowledgments

The authors would like to acknowledge the many individuals who participated in the 2007–08 National Postsecondary Student Aid Study (NPSAS:08). Thanks to all of the institutions that participated, and especially, the students who were interviewed by phone and via the web. This study would not have been possible without their invaluable contributions.

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# Introduction

For the 2007–08 National Postsecondary Student Aid Study (NPSAS:08), about 114,000 undergraduate students and 14,000 graduate students were selected randomly from more than 1,600 postsecondary institutions. These students represent approximately 21 million undergraduate students and 3 million graduate students who were enrolled in postsecondary education some time between July 1, 2007 and June 30, 2008. To be included in the study, students must have been enrolled at an institution that was eligible to participate in Title IV federal student aid programs, and was located in a state, the District of Columbia, or Puerto Rico. More information about the sample design can be found in the technical notes (appendix B).

The primary focus of NPSAS is postsecondary student financial aid. Most federal grant and loan aid to undergraduate students is provided through federal student aid programs authorized under Title IV of the Higher Education Act. Title IV programs include Pell grants; Academic Competitiveness Grants (ACG) and National Science and Mathematics Access to Retain Talent (SMART) Grants; Stafford loans (both subsidized and unsubsidized); campus-based aid; and Parent PLUS loans—loans available to parents of dependent students. Campus-based aid includes Supplemental Educational Opportunity Grants, Perkins loans, and federal work-study. Veterans’ benefits, another type of federal aid, is shown separately in the tables.

This report classifies financial aid by the *type* of aid and the *source* of aid received. It includes the three major types of financial support for undergraduate students: grants, student loans, and work-study jobs. Grants include scholarships, tuition waivers, and employer tuition reimbursements. In addition to federal grants, states, postsecondary institutions, and private entities also provide grants and scholarships to students. Student loans include both federally subsidized and unsubsidized Stafford loans, Perkins loans, private (or “alternative”) loans, and state and institutional loans. Subsidized Stafford loans and Perkins loans are available to students with documented financial need, while unsubsidized Stafford loans are available without consideration of need. Parents of undergraduate dependent students also may take out a Parent PLUS loan. Parent PLUS loans are included in the calculation of total aid, but are not included in the category of student loans because they are loans that are taken out by parents. “Work-study” jobs are available to students with financial need. Employers of work-study recipients receive matching funds (usually through the federal work-study program) to pay student salaries.

Graduate and professional students receive grants (including fellowships) from a variety of sources, as well as teaching and research assistantships. Graduate students may obtain federal student

loans through the Stafford loan program, and also take out a Graduate PLUS loan—an unsubsidized federal loan available to those who are creditworthy or have a cosigner.

Eligibility for federal need-based financial aid is based primarily on a student's family income. The student's dependency status determines whose income is taken into consideration during need analysis. If a student is dependent upon his or her parents for financial support, it is the parents' income that is considered. If a student is financially independent, only the student's income (and, if the student is married, the spouse's income) is considered. All graduate students and undergraduate students age 24 or older are classified as independent. About one-half of all undergraduate students are financially independent. Most undergraduates under the age of 24 are considered to be dependent, but there are exceptions: those who are married or have dependents of their own, are veterans or in active military service, or have been wards of the court are considered to be financially independent, and a small number qualify for independent status based upon special circumstances. Because income and financial aid eligibility vary widely by dependency status, the tables in this report show dependent and independent students separately.

Another important factor in determining financial aid eligibility is the attendance status of the student. Part-time students and students enrolled for only part of an academic year are not eligible to receive as much aid as full-time students enrolled for a full academic year. Students must be enrolled at least half time to receive a federal Stafford loan, and the Pell grant covers living expenses only for undergraduates who are enrolled half time or more. Undergraduates who are enrolled less than half time are only eligible to receive a Pell grant that covers tuition and fees, books and supplies, and transportation expenses. Full-time, full-year undergraduates (i.e., those enrolled full time for 9 or more months) are shown separately in the tables according to their dependency status and income levels.

The glossary (appendix A) includes information about the variables used in each table. More detailed descriptions of the federal Title IV programs can be found in the *2007–08 Federal Student Aid Handbook*, available at <http://ifap.ed.gov/ifap/index.jsp>.

# Selected Findings

## ***Types of financial aid received by undergraduates in 2007–08 (tables 1 and 2):***

- Sixty-six percent of all undergraduates received some type of financial aid. For those who received any aid, the total average amount received was \$9,100. Fifty-two percent received grants averaging \$4,900, and 38 percent took out an average of \$7,100 in student loans. Seven percent received aid through work-study jobs averaging \$2,400 in wages, 2 percent received an average of \$5,400 in veterans' benefits, and 4 percent of students had parents who took out an average of \$10,800 in Parent PLUS loans. Parent PLUS loans are included in total aid but are not included in student loans because they are loans for parents of dependent students.

## ***Sources of aid received by undergraduates in 2007–08 (tables 3 and 4):***

- Forty-seven percent of all undergraduates received federal student aid, the average amount of which was \$6,600. Sixteen percent received an average of \$2,500 in state-funded grants and 20 percent received an average of \$5,000 in grants funded by the postsecondary institution they attended.

## ***Federal Title IV program aid for undergraduates in 2007–08 (tables 5 and 6):***

- Federal Pell Grants were awarded to 27 percent of all undergraduates at an average of \$2,600, and 34 percent of all undergraduates took out federal Stafford loans averaging a total of \$5,000. Subsidized Stafford loans were received by 30 percent of undergraduates and averaged \$3,400, while 22 percent received an average of \$3,200 in unsubsidized Stafford loans.

## ***Income distribution of undergraduates (tables 7 and 8):***

- Among all dependent undergraduates, 28 percent came from families with incomes under \$40,000 while another 28 percent had family incomes of \$100,000 or more. Among all independent undergraduates, 40 percent had incomes under \$20,000.

## ***Aid received by graduate students in 2007–08 (tables 9 and 10):***

- Seventy-four percent of graduate students received some type of financial aid. The average amount of total aid received was \$17,600. Fifteen percent received an average of \$12,100 in assistantships. Forty-three percent took out an average of \$18,500 in total student loans. This included 39 percent with an average of \$15,600 in Stafford loans and 5 percent with an average of \$15,500 in Graduate PLUS loans.



**Table 1. Percentage of undergraduates receiving selected types of financial aid, by type of institution, attendance pattern, dependency status, and income level: 2007–08**

| Institution and student characteristics   | Any aid     | Any grants  | Any student loans | Work-study | Veterans benefits | Parent PLUS loans <sup>1</sup> |
|---|-------------|-------------|-------------------|------------|-------------------|--------------------------------|
| <b>Total</b>                              | <b>65.6</b> | <b>51.7</b> | <b>38.5</b>       | <b>7.4</b> | <b>2.1</b>        | <b>3.8</b>                     |
| <b>All undergraduates</b>                 |             |             |                   |            |                   |                                |
| Type of institution                       |             |             |                   |            |                   |                                |
| Public                                    |             |             |                   |            |                   |                                |
| Less-than-2-year                          | 54.1        | 44.5        | 17.8              | #          | 1.0               | 0.5                            |
| 2-year                                    | 47.6        | 39.6        | 13.2              | 3.3        | 2.0               | 0.2                            |
| 4-year non-doctorate-granting             | 70.2        | 52.5        | 43.4              | 7.3        | 2.4               | 3.9                            |
| 4-year doctorate-granting                 | 71.9        | 53.1        | 47.8              | 8.0        | 2.0               | 6.9                            |
| Private not-for-profit                    |             |             |                   |            |                   |                                |
| Less-than-4-year                          | 79.6        | 59.8        | 43.9              | 2.8        | 1.2               | 4.8                            |
| 4-year non-doctorate-granting             | 87.3        | 76.2        | 61.2              | 23.2       | 2.5               | 8.4                            |
| 4-year doctorate-granting                 | 81.7        | 70.7        | 56.5              | 23.2       | 1.3               | 8.7                            |
| Private for-profit                        |             |             |                   |            |                   |                                |
| Less-than-2-year                          | 90.6        | 68.8        | 77.3              | 0.3        | 0.9               | 6.7                            |
| 2-year or more                            | 98.0        | 70.9        | 95.8              | 2.5        | 3.0               | 4.7                            |
| More than one institution                 | 68.9        | 51.3        | 44.7              | 7.7        | 2.8               | 5.0                            |
| Attendance pattern                        |             |             |                   |            |                   |                                |
| Full-time/full-year                       | 79.5        | 64.4        | 52.9              | 13.5       | 2.0               | 7.2                            |
| Part-time or part-year                    | 56.6        | 43.5        | 29.2              | 3.5        | 2.2               | 1.5                            |
| <b>Full-time/full-year undergraduates</b> |             |             |                   |            |                   |                                |
| Dependency status                         |             |             |                   |            |                   |                                |
| Dependent                                 | 77.1        | 62.1        | 49.4              | 15.3       | 0.7               | 9.6                            |
| Independent                               | 86.9        | 71.7        | 63.8              | 7.6        | 6.1               | †                              |
| Dependency and income in 2006             |             |             |                   |            |                   |                                |
| Dependent students                        |             |             |                   |            |                   |                                |
| Less than \$20,000                        | 91.0        | 88.4        | 51.1              | 18.0       | 0.7               | 4.2                            |
| \$20,000–39,999                           | 91.6        | 86.4        | 57.4              | 21.9       | 0.9               | 6.9                            |
| \$40,000–59,999                           | 82.0        | 69.2        | 55.4              | 19.2       | 1.0               | 8.9                            |
| \$60,000–79,999                           | 76.9        | 55.9        | 54.3              | 15.3       | 0.8               | 11.2                           |
| \$80,000–99,999                           | 73.7        | 52.8        | 50.1              | 13.6       | 0.5               | 12.5                           |
| \$100,000 or more                         | 64.9        | 45.2        | 39.7              | 10.2       | 0.4               | 10.8                           |
| Independent students                      |             |             |                   |            |                   |                                |
| Less than \$10,000                        | 87.1        | 81.6        | 60.1              | 12.8       | 4.7               | †                              |
| \$10,000–19,999                           | 89.9        | 80.3        | 66.3              | 6.4        | 6.3               | †                              |
| \$20,000–29,999                           | 88.4        | 68.4        | 66.7              | 5.8        | 7.0               | †                              |
| \$30,000–49,999                           | 87.8        | 68.6        | 69.2              | 3.6        | 5.7               | †                              |
| \$50,000 or more                          | 78.8        | 38.0        | 59.4              | 2.4        | 8.9               | †                              |

† Not applicable.

# Rounds to zero.

<sup>1</sup> Not included in “Any student loans” because these are loans that are taken out by the parents of undergraduate students.

NOTE: “Any aid” includes all types of financial aid from any source except parents, friends, or relatives. Parent Loans for Undergraduate Students (PLUS) are also included in “Any aid” but are excluded from “Any student loans.” “Any grants” include grants, scholarships, or tuition waivers from federal, state, institutional, or private sources, including employers. “Any student loans” include federal, state, institutional, and private (alternative) loans. Veterans benefits include benefits to dependents. Students may receive more than one type of aid. Full-time/full-year students were enrolled full time for 9 or more months from July 1, 2007 to June 30, 2008. Independent students are age 24 or over and students under age 24 who are married, have dependents, are veterans, are orphans or wards of the court, or were determined to be independent by a financial aid officer using professional judgment. Other undergraduates under age 24 are considered to be dependent. For dependent students, income is the income of their parents. Independent student income includes the income of a spouse if the student is married. Prior-year (2006) income is used in federal need analysis. Stafford loan participation rates are not fully comparable to those of NPSAS:04. In NPSAS:04 weights were adjusted to sum to the total of loan commitments. In NPSAS:08 weights were adjusted to sum to the total of loan disbursements. To ensure that loan estimates produced for NPSAS:08 and all prior NPSAS cycles are comparable, revised weights will be included in the DAS.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2007–08 National Postsecondary Student Aid Study (NPSAS:08).

**Table 2. Average amounts of selected types of financial aid received by undergraduates, by type of institution, attendance pattern, dependency status, and income level: 2007–08**

| Institution and student characteristics   | Total aid      | Total grants   | Total student loans | Work-study     | Veterans benefits | Parent PLUS loans <sup>1</sup> |
|---|----------------|----------------|---------------------|----------------|-------------------|--------------------------------|
| <b>Total</b>                              | <b>\$9,100</b> | <b>\$4,900</b> | <b>\$7,100</b>      | <b>\$2,400</b> | <b>\$5,400</b>    | <b>\$10,800</b>                |
| <b>All undergraduates</b>                 |                |                |                     |                |                   |                                |
| Type of institution                       |                |                |                     |                |                   |                                |
| Public                                    |                |                |                     |                |                   |                                |
| Less-than-2-year                          | 4,700          | 2,700          | 5,700               | ‡              | ‡                 | ‡                              |
| 2-year                                    | 3,400          | 2,200          | 4,100               | 3,000          | 4,500             | 4,800                          |
| 4-year non-doctorate-granting             | 8,000          | 4,300          | 6,300               | 2,500          | 5,200             | 8,000                          |
| 4-year doctorate-granting                 | 10,100         | 5,600          | 6,800               | 2,500          | 5,600             | 10,000                         |
| Private not-for-profit                    |                |                |                     |                |                   |                                |
| Less-than-4-year                          | 7,800          | 4,000          | 7,000               | 2,000          | ‡                 | 8,200                          |
| 4-year non-doctorate-granting             | 16,000         | 9,300          | 8,400               | 1,900          | 5,600             | 12,700                         |
| 4-year doctorate-granting                 | 19,000         | 11,100         | 9,900               | 2,200          | 5,600             | 15,600                         |
| Private for-profit                        |                |                |                     |                |                   |                                |
| Less-than-2-year                          | 8,500          | 3,100          | 6,500               | ‡              | 4,700             | 6,800                          |
| 2-year or more                            | 11,400         | 3,200          | 8,500               | 3,500          | 7,600             | 9,900                          |
| More than one institution                 | 9,000          | 4,400          | 6,800               | 2,200          | 6,100             | 9,900                          |
| Attendance pattern                        |                |                |                     |                |                   |                                |
| Full-time/full-year                       | 12,700         | 7,100          | 8,000               | 2,300          | 6,600             | 11,400                         |
| Part-time or part-year                    | 5,800          | 2,700          | 6,100               | 2,700          | 4,600             | 8,700                          |
| <b>Full-time/full-year undergraduates</b> |                |                |                     |                |                   |                                |
| Dependency status                         |                |                |                     |                |                   |                                |
| Dependent                                 | 13,100         | 7,800          | 7,600               | 2,200          | 4,700             | 11,400                         |
| Independent                               | 11,700         | 5,200          | 8,900               | 2,500          | 7,300             | †                              |
| Dependency and income in 2006             |                |                |                     |                |                   |                                |
| Dependent students                        |                |                |                     |                |                   |                                |
| Less than \$20,000                        | 12,800         | 8,600          | 6,400               | 2,200          | 5,800             | 7,900                          |
| \$20,000–39,999                           | 13,700         | 8,600          | 7,000               | 2,200          | 5,300             | 8,900                          |
| \$40,000–59,999                           | 13,200         | 7,500          | 7,600               | 2,300          | 4,000             | 9,800                          |
| \$60,000–79,999                           | 12,600         | 7,100          | 7,800               | 2,300          | 4,600             | 10,200                         |
| \$80,000–99,999                           | 13,300         | 7,600          | 7,900               | 2,200          | ‡                 | 11,200                         |
| \$100,000 or more                         | 13,000         | 7,400          | 8,200               | 2,300          | 4,200             | 14,000                         |
| Independent students                      |                |                |                     |                |                   |                                |
| Less than \$10,000                        | 12,400         | 6,200          | 8,500               | 2,400          | 6,900             | †                              |
| \$10,000–19,999                           | 11,500         | 4,900          | 8,600               | 2,700          | 7,100             | †                              |
| \$20,000–29,999                           | 11,600         | 5,100          | 9,100               | 2,500          | 7,300             | †                              |
| \$30,000–49,999                           | 11,000         | 3,800          | 9,200               | 2,300          | 8,300             | †                              |
| \$50,000 or more                          | 11,000         | 4,600          | 10,300              | 2,200          | 7,200             | †                              |

† Not applicable.

‡ Reporting standards not met. (Too few cases for a reliable estimate.)

<sup>1</sup> Not included in "Total student loans" because these are loans that are taken out by the parents of undergraduate students.

NOTE: Amounts are averages for those who received the specified type of aid. "Total aid" includes all types of financial aid from any source except parents, friends, or relatives. Parent Loans for Undergraduate Students (PLUS) are also included in "Total aid" but are excluded from "Total student loans." "Total grants" include grants, scholarships, or tuition waivers from federal, state, institutional, or private sources, including employers. "Total student loans" include federal, state, institutional, and private (alternative) loans. Veterans benefits include benefits to dependents. Students may receive more than one type of aid. Full-time/full-year students were enrolled full time for 9 or more months from July 1, 2007 to June 30, 2008. Independent students are age 24 or over and students under age 24 who are married, have dependents, are veterans, are orphans or wards of the court, or were determined to be independent by a financial aid officer using professional judgment. Other undergraduates under age 24 are considered to be dependent. For dependent students, income is the income of their parents. Independent student income includes the income of a spouse if the student is married. Prior-year (2006) income is used in federal need analysis. Stafford loan participation rates are not fully comparable to those of NPSAS:04. In NPSAS:04 weights were adjusted to sum to the total of loan commitments. In NPSAS:08 weights were adjusted to sum to the total of loan disbursements. To ensure that loan estimates produced for NPSAS:08 and all prior NPSAS cycles are comparable, revised weights will be included in the DAS.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2007–08 National Postsecondary Student Aid Study (NPSAS:08).

**Table 3. Percentage of undergraduates receiving selected types of financial aid from federal, state, or institutional sources, by type of institution, attendance pattern, dependency status, and income level: 2007–08**

| Institution and student characteristics   | Federal aid |             |               |            | State aid   |             | Institutional aid |             |
|---|-------------|-------------|---------------|------------|-------------|-------------|-------------------|-------------|
|   | Any aid     | Any grants  | Student loans | Work-study | Any aid     | Any grants  | Any aid           | Any grants  |
| <b>Total</b>                              | <b>47.0</b> | <b>27.6</b> | <b>34.7</b>   | <b>5.6</b> | <b>17.5</b> | <b>16.4</b> | <b>20.8</b>       | <b>19.9</b> |
| <b>All undergraduates</b>                 |             |             |               |            |             |             |                   |             |
| Type of institution                       |             |             |               |            |             |             |                   |             |
| Public                                    |             |             |               |            |             |             |                   |             |
| Less-than-2-year                          | 38.5        | 33.9        | 14.6          | #          | 12.0        | 2.8         | 3.9               | 3.9         |
| 2-year                                    | 27.4        | 21.1        | 10.2          | 2.6        | 12.8        | 11.6        | 11.1              | 10.7        |
| 4-year non-doctorate-granting             | 52.2        | 29.8        | 39.1          | 5.4        | 23.0        | 22.2        | 16.6              | 15.4        |
| 4-year doctorate-granting                 | 50.6        | 23.4        | 42.9          | 5.9        | 24.8        | 23.7        | 27.4              | 26.0        |
| Private not-for-profit                    |             |             |               |            |             |             |                   |             |
| Less-than-4-year                          | 72.0        | 49.6        | 40.2          | 2.4        | 24.5        | 20.4        | 10.2              | 9.9         |
| 4-year non-doctorate-granting             | 65.8        | 29.9        | 57.4          | 17.3       | 28.2        | 26.7        | 52.4              | 51.9        |
| 4-year doctorate-granting                 | 58.8        | 22.1        | 51.0          | 18.3       | 22.0        | 21.1        | 53.8              | 52.5        |
| Private for-profit                        |             |             |               |            |             |             |                   |             |
| Less-than-2-year                          | 83.4        | 65.6        | 66.9          | 0.3        | 7.2         | 5.2         | 7.4               | 6.7         |
| 2-year or more                            | 95.8        | 62.0        | 94.2          | 2.1        | 8.3         | 7.6         | 8.9               | 7.2         |
| More than one institution                 | 51.9        | 28.0        | 40.5          | 5.9        | 15.3        | 14.5        | 21.5              | 20.5        |
| Attendance pattern                        |             |             |               |            |             |             |                   |             |
| Full-time/full-year                       | 62.2        | 33.0        | 49.1          | 10.3       | 27.7        | 26.4        | 34.0              | 32.7        |
| Part-time or part-year                    | 37.1        | 24.0        | 25.3          | 2.7        | 10.9        | 10.0        | 12.2              | 11.6        |
| <b>Full-time/full-year undergraduates</b> |             |             |               |            |             |             |                   |             |
| Dependency status                         |             |             |               |            |             |             |                   |             |
| Dependent                                 | 57.5        | 25.1        | 45.5          | 11.6       | 28.8        | 27.6        | 38.5              | 37.2        |
| Independent                               | 76.9        | 57.9        | 60.3          | 6.1        | 24.4        | 22.5        | 19.8              | 18.7        |
| Dependency and income in 2006             |             |             |               |            |             |             |                   |             |
| Dependent students                        |             |             |               |            |             |             |                   |             |
| Less than \$20,000                        | 85.0        | 82.1        | 48.3          | 15.4       | 45.7        | 44.8        | 38.3              | 37.2        |
| \$20,000–39,999                           | 83.5        | 74.4        | 54.6          | 18.2       | 48.8        | 47.4        | 42.7              | 41.6        |
| \$40,000–59,999                           | 63.3        | 31.0        | 51.3          | 15.5       | 38.4        | 37.2        | 42.5              | 41.3        |
| \$60,000–79,999                           | 53.2        | 2.3         | 49.8          | 11.6       | 26.4        | 24.8        | 39.5              | 38.1        |
| \$80,000–99,999                           | 48.9        | 0.8         | 45.3          | 9.8        | 20.2        | 18.8        | 38.3              | 37.0        |
| \$100,000 or more                         | 39.0        | 0.8         | 35.5          | 6.1        | 13.9        | 12.9        | 34.3              | 32.9        |
| Independent students                      |             |             |               |            |             |             |                   |             |
| Less than \$10,000                        | 79.7        | 75.2        | 55.6          | 10.5       | 29.9        | 28.4        | 25.5              | 24.1        |
| \$10,000–19,999                           | 82.5        | 70.8        | 63.4          | 5.0        | 25.9        | 23.8        | 21.6              | 20.4        |
| \$20,000–29,999                           | 79.3        | 54.3        | 64.1          | 4.4        | 24.1        | 22.0        | 18.2              | 17.3        |
| \$30,000–49,999                           | 77.2        | 50.8        | 66.5          | 3.1        | 20.3        | 18.2        | 14.8              | 14.1        |
| \$50,000 or more                          | 56.8        | 1.8         | 55.8          | 1.5        | 12.1        | 9.7         | 9.1               | 8.2         |

# Rounds to zero.

NOTE: Federal aid includes all Title IV aid in addition to aid awarded through other programs (e.g., fellowships and traineeships) also funded by the federal government. Veterans benefits and Department of Defense programs are not included. Federal grants are Pell grants, Academic Competitiveness Grants (ACG), National Science and Mathematics Access to Retain Talent Grants (SMART), Federal Supplemental Educational Opportunity Grants (FSEOG), and a small number of other federal grants. Federal student loans are Stafford and Perkins loans and a small number of federal Public Health Service loans. Student loans exclude federal Parent Loans for Undergraduate Students (PLUS). Students may receive more than one type of aid and aid from more than one source. Full-time/full-year students were enrolled full time for 9 or more months from July 1, 2007 to June 30, 2008. Independent students are age 24 or over and students under age 24 who are married, have dependents, are veterans, are orphans or wards of the court, or were determined to be independent by a financial aid officer using professional judgment. Other undergraduates under age 24 are considered to be dependent. For dependent students, income is the income of their parents. Independent student income includes the income of a spouse if the student is married. Prior-year (2006) income is used in federal need analysis. Stafford loan participation rates are not fully comparable to those of NPSAS:04. In NPSAS:04 weights were adjusted to sum to the total of loan commitments. In NPSAS:08 weights were adjusted to sum to the total of loan disbursements. To ensure that loan estimates produced for NPSAS:08 and all prior NPSAS cycles are comparable, revised weights will be included in the DAS.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2007–08 National Postsecondary Student Aid Study (NPSAS:08).

**Table 4. Average amounts of selected types of financial aid from federal, state, or institutional sources received by undergraduates, by type of institution, attendance pattern, dependency status, and income level: 2007–08**

| Institution and student characteristics   | Federal aid    |                |                |                | State aid      |                | Institutional aid |                |
|---|----------------|----------------|----------------|----------------|----------------|----------------|-------------------|----------------|
|   | Total aid      | Total grants   | Student loans  | Work-study     | Total aid      | Total grants   | Total aid         | Total grants   |
| <b>Total</b>                              | <b>\$6,600</b> | <b>\$2,800</b> | <b>\$5,100</b> | <b>\$2,300</b> | <b>\$2,600</b> | <b>\$2,500</b> | <b>\$5,000</b>    | <b>\$5,000</b> |
| <b>All undergraduates</b>                 |                |                |                |                |                |                |                   |                |
| Type of institution                       |                |                |                |                |                |                |                   |                |
| Public                                    |                |                |                |                |                |                |                   |                |
| Less-than-2-year                          | 4,200          | 2,600          | 4,900          | ‡              | 2,300          | ‡              | 700               | 700            |
| 2-year                                    | 3,500          | 2,300          | 3,700          | 3,200          | 1,300          | 1,300          | 800               | 700            |
| 4-year non-doctorate-granting             | 6,400          | 3,100          | 5,100          | 2,300          | 2,800          | 2,600          | 3,200             | 3,100          |
| 4-year doctorate-granting                 | 7,500          | 3,300          | 5,100          | 2,400          | 3,300          | 3,200          | 3,900             | 3,900          |
| Private not-for-profit                    |                |                |                |                |                |                |                   |                |
| Less-than-4-year                          | 5,400          | 3,100          | 4,600          | 2,100          | 2,900          | 1,900          | 2,100             | 2,100          |
| 4-year non-doctorate-granting             | 8,300          | 3,300          | 5,300          | 1,800          | 3,200          | 3,000          | 8,900             | 8,700          |
| 4-year doctorate-granting                 | 9,200          | 3,700          | 5,600          | 2,100          | 3,800          | 3,600          | 10,400            | 10,400         |
| Private for-profit                        |                |                |                |                |                |                |                   |                |
| Less-than-2-year                          | 6,700          | 2,700          | 5,000          | ‡              | 2,100          | 1,500          | 2,600             | 2,700          |
| 2-year or more                            | 7,700          | 2,600          | 5,600          | 3,500          | 2,800          | 2,600          | 2,000             | 1,400          |
| More than one institution                 | 6,600          | 2,700          | 5,000          | 2,100          | 2,700          | 2,500          | 3,900             | 3,800          |
| Attendance pattern                        |                |                |                |                |                |                |                   |                |
| Full-time/full-year                       | 7,900          | 3,700          | 5,400          | 2,200          | 3,200          | 3,000          | 6,500             | 6,400          |
| Part-time or part-year                    | 5,100          | 2,100          | 4,700          | 2,800          | 1,700          | 1,600          | 2,400             | 2,300          |
| <b>Full-time/full-year undergraduates</b> |                |                |                |                |                |                |                   |                |
| Dependency status                         |                |                |                |                |                |                |                   |                |
| Dependent                                 | 7,700          | 3,700          | 4,800          | 2,100          | 3,300          | 3,100          | 7,000             | 6,900          |
| Independent                               | 8,400          | 3,600          | 7,000          | 2,400          | 2,700          | 2,500          | 3,600             | 3,500          |
| Dependency and income in 2006             |                |                |                |                |                |                |                   |                |
| Dependent students                        |                |                |                |                |                |                |                   |                |
| Less than \$20,000                        | 8,000          | 4,600          | 5,000          | 2,100          | 3,400          | 3,300          | 5,400             | 5,400          |
| \$20,000–39,999                           | 7,900          | 3,700          | 5,100          | 2,000          | 3,500          | 3,400          | 6,200             | 6,200          |
| \$40,000–59,999                           | 7,000          | 2,400          | 4,900          | 2,100          | 3,400          | 3,200          | 6,700             | 6,600          |
| \$60,000–79,999                           | 7,100          | 1,700          | 4,700          | 2,200          | 3,100          | 2,800          | 7,100             | 7,100          |
| \$80,000–99,999                           | 7,600          | ‡              | 4,600          | 2,200          | 2,900          | 2,600          | 7,900             | 7,900          |
| \$100,000 or more                         | 8,400          | 2,900          | 4,500          | 2,200          | 3,300          | 3,000          | 7,500             | 7,500          |
| Independent students                      |                |                |                |                |                |                |                   |                |
| Less than \$10,000                        | 9,000          | 4,100          | 6,900          | 2,300          | 2,800          | 2,600          | 4,000             | 3,800          |
| \$10,000–19,999                           | 8,300          | 3,300          | 7,000          | 2,700          | 2,600          | 2,500          | 3,500             | 3,300          |
| \$20,000–29,999                           | 8,100          | 3,700          | 6,800          | 2,500          | 2,800          | 2,500          | 3,000             | 2,900          |
| \$30,000–49,999                           | 7,900          | 2,500          | 7,200          | 2,300          | 2,600          | 2,400          | 3,200             | 2,900          |
| \$50,000 or more                          | 7,100          | ‡              | 7,200          | ‡              | 2,800          | 2,500          | 4,000             | 4,200          |

‡ Reporting standards not met. (Too few cases for a reliable estimate.)

NOTE: Amounts are averages for those who received the specified type of aid. Federal aid includes all Title IV aid in addition to aid awarded through other programs (e.g., fellowships and traineeships) also funded by the federal government. Veterans benefits and Department of Defense programs are not included. Federal grants are Pell grants, Academic Competitiveness Grants (ACG), National Science and Mathematics Access to Retain Talent Grants (SMART), Federal Supplemental Educational Opportunity Grants (FSEOG), and a small number of other federal grants. Federal student loans are Stafford and Perkins loans and a small number of Public Health Service loans. Student loans exclude federal Parent Loans for Undergraduate Students (PLUS). Students may receive more than one type of aid and aid from more than one source. Full-time/full-year students were enrolled full time for 9 or more months from July 1, 2007 to June 30, 2008. Independent students are age 24 or over and students under age 24 who are married, have dependents, are veterans, are orphans or wards of the courts, or were determined to be independent by a financial aid officer using professional judgment. Other undergraduates under age 24 are considered to be dependent. For dependent students, income is the income of their parents. Independent student income includes the income of a spouse if the student is married. Prior-year (2006) income is used in federal need analysis. Stafford loan participation rates are not fully comparable to those of NPSAS:04. In NPSAS:04 weights were adjusted to sum to the total of loan commitments. In NPSAS:08 weights were adjusted to sum to the total of loan disbursements. To ensure that loan estimates produced for NPSAS:08 and all prior NPSAS cycles are comparable, revised weights will be included in the DAS. SOURCE: U.S. Department of Education, National Center for Education Statistics, 2007–08 National Postsecondary Student Aid Study (NPSAS:08).



**Table 5. Percentage of undergraduates receiving federal Title IV aid from selected programs, by type of institution, attendance pattern, dependency status, and income level: 2007–08**

| Institution and student characteristics   | Any federal Title IV aid | Federal Pell grants | Federal ACG <sup>1</sup> grants | Federal SMART <sup>2</sup> grants | Federal campus-based aid | Federal Stafford loans |             |              |
|---|--------------------------|---------------------|---------------------------------|-----------------------------------|--------------------------|------------------------|-------------|--------------|
|   |                          |                     |                                 |                                   |                          | Any Stafford           | Subsidized  | Unsubsidized |
| <b>Total</b>                              | <b>46.9</b>              | <b>27.3</b>         | <b>1.9</b>                      | <b>0.3</b>                        | <b>11.7</b>              | <b>34.5</b>            | <b>29.7</b> | <b>22.0</b>  |
| <b>All undergraduates</b>                 |                          |                     |                                 |                                   |                          |                        |             |              |
| Type of institution                       |                          |                     |                                 |                                   |                          |                        |             |              |
| Public                                    |                          |                     |                                 |                                   |                          |                        |             |              |
| Less-than-2-year                          | 38.4                     | 33.8                | †                               | †                                 | 4.8                      | 14.6                   | 13.6        | 11.3         |
| 2-year                                    | 27.3                     | 21.0                | 0.7                             | †                                 | 5.1                      | 10.2                   | 8.3         | 5.8          |
| 4-year non-doctorate-granting             | 52.1                     | 29.6                | 3.1                             | 0.5                               | 10.8                     | 38.9                   | 31.7        | 23.3         |
| 4-year doctorate-granting                 | 50.4                     | 23.0                | 3.6                             | 0.8                               | 12.0                     | 42.5                   | 34.1        | 23.4         |
| Private not-for-profit                    |                          |                     |                                 |                                   |                          |                        |             |              |
| Less-than-4-year                          | 71.0                     | 48.0                | 0.5                             | †                                 | 17.4                     | 40.2                   | 37.8        | 29.5         |
| 4-year non-doctorate-granting             | 65.7                     | 29.7                | 3.5                             | 0.5                               | 25.4                     | 56.8                   | 48.1        | 31.4         |
| 4-year doctorate-granting                 | 58.4                     | 21.1                | 3.6                             | 0.7                               | 27.2                     | 50.4                   | 43.2        | 24.1         |
| Private for-profit                        |                          |                     |                                 |                                   |                          |                        |             |              |
| Less-than-2-year                          | 83.4                     | 65.5                | †                               | †                                 | 20.5                     | 66.9                   | 64.1        | 55.5         |
| 2-year or more                            | 95.8                     | 61.9                | 0.4                             | 0.3                               | 21.1                     | 94.2                   | 93.0        | 84.8         |
| More than one institution                 | 51.8                     | 27.8                | 2.0                             | 0.3                               | 11.0                     | 40.3                   | 34.1        | 25.0         |
| Attendance pattern                        |                          |                     |                                 |                                   |                          |                        |             |              |
| Full-time/full-year                       | 62.0                     | 32.6                | 4.1                             | 0.7                               | 18.7                     | 48.7                   | 40.8        | 27.9         |
| Part-time or part-year                    | 37.1                     | 23.9                | 0.5                             | 0.1                               | 7.1                      | 25.3                   | 22.5        | 18.1         |
| <b>Full-time/full-year undergraduates</b> |                          |                     |                                 |                                   |                          |                        |             |              |
| Dependency status                         |                          |                     |                                 |                                   |                          |                        |             |              |
| Dependent                                 | 57.3                     | 24.5                | 5.3                             | 0.6                               | 18.4                     | 45.1                   | 35.2        | 21.0         |
| Independent                               | 76.9                     | 57.8                | 0.7                             | 1.0                               | 19.8                     | 60.1                   | 58.3        | 49.7         |
| Dependency and income in 2006             |                          |                     |                                 |                                   |                          |                        |             |              |
| Dependent students                        |                          |                     |                                 |                                   |                          |                        |             |              |
| Less than \$20,000                        | 84.9                     | 82.0                | 13.1                            | 1.8                               | 37.0                     | 47.2                   | 46.2        | 13.0         |
| \$20,000–39,999                           | 83.5                     | 74.3                | 16.1                            | 1.8                               | 33.6                     | 53.9                   | 52.6        | 16.5         |
| \$40,000–59,999                           | 63.2                     | 30.6                | 9.4                             | 1.0                               | 23.0                     | 50.8                   | 48.2        | 15.0         |
| \$60,000–79,999                           | 52.8                     | 1.5                 | 0.4                             | #                                 | 14.8                     | 49.5                   | 42.2        | 21.2         |
| \$80,000–99,999                           | 48.7                     | #                   | #                               | #                                 | 12.0                     | 45.1                   | 30.9        | 26.3         |
| \$100,000 or more                         | 38.5                     | #                   | #                               | #                                 | 7.2                      | 35.4                   | 15.6        | 26.1         |
| Independent students                      |                          |                     |                                 |                                   |                          |                        |             |              |
| Less than \$10,000                        | 79.6                     | 75.1                | 1.5                             | 1.5                               | 30.8                     | 55.2                   | 54.6        | 43.1         |
| \$10,000–19,999                           | 82.5                     | 70.8                | 0.7                             | 1.2                               | 21.2                     | 63.2                   | 62.2        | 50.5         |
| \$20,000–29,999                           | 79.2                     | 54.1                | 0.1                             | 0.6                               | 17.7                     | 63.9                   | 62.8        | 53.8         |
| \$30,000–49,999                           | 77.2                     | 50.7                | #                               | 1.0                               | 9.7                      | 66.5                   | 65.1        | 57.1         |
| \$50,000 or more                          | 56.7                     | 1.7                 | #                               | #                                 | 2.2                      | 55.8                   | 48.0        | 52.3         |

† Not applicable.

# Rounds to zero.

<sup>1</sup> Academic Competitiveness Grants (ACG).<sup>2</sup> National Science and Mathematics Access to Retain Talent Grants (SMART).

NOTE: "Any federal Title IV aid" consists of Pell, ACG, and SMART grants, the federal campus-based aid programs, Stafford loans, and Parent Loans for Undergraduate Students (PLUS). The federal campus-based programs are Federal Supplemental Educational Opportunity Grants (FSEOG), federal work-study, and Perkins loans. Stafford loans include those administered through the Federal Family Education Loan program (FFELP) and the William D. Ford Federal Direct Loan program. Students may receive both subsidized and unsubsidized Stafford loans. Subsidized loans are need-based and students are not charged interest while they are enrolled. Students may receive more than one type of aid. Full-time/full-year students were enrolled full time for 9 or more months from July 1, 2007 to June 30, 2008. Independent students are age 24 or over and students under age 24 who are married, have dependents, are veterans, are orphans or wards of the courts, or were determined to be independent by a financial aid officer using professional judgment. Other undergraduates under age 24 are considered to be dependent. For dependent students, income is the income of their parents. Independent student income includes the income of a spouse if the student is married. Prior-year (2006) income is used in federal need analysis. Federal PLUS loans are only available to parents of dependent students. Stafford loan participation rates are not fully comparable to those of NPSAS:04. In NPSAS:04 weights were adjusted to sum to the total of loan commitments. In NPSAS:08 weights were adjusted to sum to the total of loan disbursements. To ensure that loan estimates produced for NPSAS:08 and all prior NPSAS cycles are comparable, revised weights will be included in the DAS.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2007–08 National Postsecondary Student Aid Study (NPSAS:08).

**Table 6. Average amounts of federal Title IV aid received by undergraduates from selected programs, by type of institution, attendance pattern, dependency status, and income level: 2007–08**

| Institution and student characteristics   | Total federal Title IV aid | Federal Pell grants | Federal ACG <sup>1</sup> grants | Federal SMART <sup>2</sup> grants | Federal campus-based aid | Federal Stafford loans |                |                |
|---|----------------------------|---------------------|---------------------------------|-----------------------------------|--------------------------|------------------------|----------------|----------------|
|   |                            |                     |                                 |                                   |                          | Total Stafford         | Subsidized     | Unsubsidized   |
| <b>Total</b>                              | <b>\$6,600</b>             | <b>\$2,600</b>      | <b>\$800</b>                    | <b>\$3,000</b>                    | <b>\$2,000</b>           | <b>\$5,000</b>         | <b>\$3,400</b> | <b>\$3,200</b> |
| <b>All undergraduates</b>                 |                            |                     |                                 |                                   |                          |                        |                |                |
| Type of institution                       |                            |                     |                                 |                                   |                          |                        |                |                |
| Public                                    |                            |                     |                                 |                                   |                          |                        |                |                |
| Less-than-2-year                          | 4,200                      | 2,500               | †                               | †                                 | 200                      | 4,900                  | 2,600          | 3,100          |
| 2-year                                    | 3,500                      | 2,300               | 700                             | †                                 | 1,900                    | 3,700                  | 2,700          | 2,700          |
| 4-year non-doctorate-granting             | 6,400                      | 2,800               | 800                             | 3,000                             | 2,100                    | 4,900                  | 3,600          | 3,400          |
| 4-year doctorate-granting                 | 7,500                      | 2,900               | 800                             | 2,900                             | 2,300                    | 5,000                  | 3,700          | 3,600          |
| Private not-for-profit                    |                            |                     |                                 |                                   |                          |                        |                |                |
| Less-than-4-year                          | 5,100                      | 2,600               | ‡                               | †                                 | 600                      | 4,600                  | 2,800          | 2,700          |
| 4-year non-doctorate-granting             | 8,300                      | 2,800               | 900                             | 3,200                             | 2,200                    | 5,100                  | 3,800          | 3,500          |
| 4-year doctorate-granting                 | 9,300                      | 2,900               | 900                             | 3,400                             | 2,800                    | 5,200                  | 4,000          | 3,700          |
| Private for-profit                        |                            |                     |                                 |                                   |                          |                        |                |                |
| Less-than-2-year                          | 6,700                      | 2,600               | †                               | †                                 | 400                      | 5,000                  | 2,700          | 2,900          |
| 2-year or more                            | 7,700                      | 2,400               | 600                             | 3,200                             | 800                      | 5,600                  | 3,000          | 3,000          |
| More than one institution                 | 6,600                      | 2,600               | 700                             | 2,800                             | 1,900                    | 4,900                  | 3,400          | 3,300          |
| Attendance pattern                        |                            |                     |                                 |                                   |                          |                        |                |                |
| Full-time/full-year                       | 7,900                      | 3,300               | 800                             | 3,100                             | 2,200                    | 5,200                  | 3,800          | 3,600          |
| Part-time or part-year                    | 5,100                      | 1,900               | 600                             | 2,600                             | 1,600                    | 4,600                  | 2,900          | 2,900          |
| <b>Full-time/full-year undergraduates</b> |                            |                     |                                 |                                   |                          |                        |                |                |
| Dependency status                         |                            |                     |                                 |                                   |                          |                        |                |                |
| Dependent                                 | 7,700                      | 3,200               | 800                             | 3,200                             | 2,400                    | 4,500                  | 3,700          | 3,500          |
| Independent                               | 8,400                      | 3,400               | 800                             | 2,800                             | 1,700                    | 6,800                  | 3,900          | 3,700          |
| Dependency and income in 2006             |                            |                     |                                 |                                   |                          |                        |                |                |
| Dependent students                        |                            |                     |                                 |                                   |                          |                        |                |                |
| Less than \$20,000                        | 8,000                      | 4,000               | 800                             | 3,200                             | 2,100                    | 4,600                  | 3,800          | 3,300          |
| \$20,000–39,999                           | 7,800                      | 3,200               | 800                             | 3,200                             | 2,500                    | 4,700                  | 3,900          | 3,000          |
| \$40,000–59,999                           | 7,000                      | 1,800               | 800                             | 3,200                             | 2,600                    | 4,500                  | 3,900          | 2,900          |
| \$60,000–79,999                           | 7,100                      | 600                 | 800                             | 2,900                             | 2,600                    | 4,500                  | 3,700          | 3,200          |
| \$80,000–99,999                           | 7,600                      | ‡                   | ‡                               | ‡                                 | 2,400                    | 4,500                  | 3,500          | 3,600          |
| \$100,000 or more                         | 8,500                      | ‡                   | ‡                               | ‡                                 | 2,400                    | 4,400                  | 3,400          | 3,900          |
| Independent students                      |                            |                     |                                 |                                   |                          |                        |                |                |
| Less than \$10,000                        | 9,000                      | 3,800               | 800                             | 2,900                             | 1,800                    | 6,700                  | 3,900          | 3,600          |
| \$10,000–19,999                           | 8,300                      | 3,100               | ‡                               | 2,600                             | 1,500                    | 6,900                  | 4,000          | 3,700          |
| \$20,000–29,999                           | 8,100                      | 3,500               | ‡                               | 2,900                             | 1,300                    | 6,700                  | 3,800          | 3,600          |
| \$30,000–49,999                           | 7,900                      | 2,400               | ‡                               | 3,100                             | 1,600                    | 7,100                  | 3,900          | 3,800          |
| \$50,000 or more                          | 7,100                      | ‡                   | ‡                               | ‡                                 | 2,600                    | 7,100                  | 3,600          | 4,300          |

† Not applicable.

‡ Reporting standards not met. (Too few cases for a reliable estimate.)

<sup>1</sup> Academic Competitiveness Grants (ACG).<sup>2</sup> National Science and Mathematics Access to Retain Talent Grants (SMART).

NOTE: Amounts are averages for those who received the specified type of aid. "Total federal Title IV aid" consists of Pell, ACG, and SMART grants, the federal campus-based aid programs, Stafford loans, and Parent Loans for Undergraduate Students (PLUS). The federal campus-based programs are Federal Supplemental Educational Opportunity Grants (FSEOG), federal work-study, and Perkins loans. Stafford loans include those administered through the Federal Family Education Loan program (FFELP) and the William D. Ford Federal Direct Loan program. Students may receive both subsidized and unsubsidized loans. Subsidized loans are need-based and students are not charged interest while they are enrolled. Students may receive more than one type of aid. Full-time/full-year students were enrolled full time for 9 or more months from July 1, 2007 to June 30, 2008. Independent students are age 24 or over and students under age 24 who are married, have dependents, are veterans, are orphans or wards of the court, or were determined to be independent by a financial aid officer using professional judgment. Other undergraduates under age 24 are considered to be dependent. For dependent students, income is the income of their parents. Independent student income includes the income of a spouse if the student is married. Prior-year (2006) income is used in federal need analysis. Federal PLUS loans are only available to parents of dependent students. Stafford loan participation rates are not fully comparable to those of NPSAS:04. In NPSAS:04 weights were adjusted to sum to the total of loan commitments. In NPSAS:08 weights were adjusted to sum to the total of loan disbursements. To ensure that loan estimates produced for NPSAS:08 and all prior NPSAS cycles are comparable, revised weights will be included in the DAS.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2007–08 National Postsecondary Student Aid Study (NPSAS:08).

**Table 7. Percentage distribution of dependent undergraduates at specified parental income levels, by type of institution, attendance pattern, and receipt of specified types of financial aid: 2007–08**

| Institution and student characteristics        | Dependent students' parental income |                     |                     |                     |                     |                      |
|--|-------------------------------------|---------------------|---------------------|---------------------|---------------------|----------------------|
|  | Less than<br>\$20,000               | \$20,000–<br>39,999 | \$40,000–<br>59,999 | \$60,000–<br>79,999 | \$80,000–<br>99,999 | \$100,000<br>or more |
| <b>Total</b>                                   | <b>11.4</b>                         | <b>16.7</b>         | <b>16.7</b>         | <b>14.9</b>         | <b>12.6</b>         | <b>27.7</b>          |
| <b>Type of institution</b>                     |                                     |                     |                     |                     |                     |                      |
| Public   |                                     |                     |                     |                     |                     |                      |
| Less-than-2-year                               | 16.5                                | 32.2                | 15.7                | 18.5                | 10.8                | 6.3                  |
| 2-year   | 14.3                                | 20.4                | 20.8                | 15.7                | 11.3                | 17.4                 |
| 4-year non-doctorate-granting                  | 11.9                                | 16.4                | 16.8                | 17.1                | 12.9                | 25.0                 |
| 4-year doctorate-granting                      | 8.0                                 | 13.4                | 13.9                | 14.2                | 14.5                | 36.1                 |
| Private not-for-profit                         |                                     |                     |                     |                     |                     |                      |
| Less-than-4-year                               | 27.2                                | 19.1                | 15.1                | 14.9                | 8.3                 | 15.4                 |
| 4-year non-doctorate-granting                  | 9.4                                 | 13.7                | 15.0                | 13.4                | 13.6                | 34.9                 |
| 4-year doctorate-granting                      | 6.5                                 | 10.9                | 12.1                | 12.6                | 14.6                | 43.3                 |
| Private for-profit                             |                                     |                     |                     |                     |                     |                      |
| Less-than-2-year                               | 29.6                                | 26.4                | 15.6                | 10.1                | 5.8                 | 12.5                 |
| 2-year or more                                 | 21.7                                | 30.9                | 17.9                | 12.8                | 7.3                 | 9.4                  |
| More than one institution                      | 10.2                                | 15.7                | 15.9                | 15.3                | 11.4                | 31.4                 |
| <b>Attendance pattern</b>                      |                                     |                     |                     |                     |                     |                      |
| Full-time/full-year                            | 10.4                                | 15.1                | 15.1                | 14.5                | 13.6                | 31.5                 |
| Part-time or part-year                         | 12.7                                | 18.8                | 18.8                | 15.4                | 11.4                | 22.9                 |
| <b>Any aid</b>                                 |                                     |                     |                     |                     |                     |                      |
| Did not receive any financial aid              | 6.6                                 | 10.7                | 16.5                | 16.3                | 13.9                | 36.0                 |
| Received financial aid                         | 13.8                                | 19.7                | 16.8                | 14.1                | 12.0                | 23.5                 |
| <b>Federal Title IV aid program recipients</b> |                                     |                     |                     |                     |                     |                      |
| Any federal Title IV aid                       | 17.0                                | 23.9                | 17.1                | 12.7                | 10.5                | 18.7                 |
| Pell grant                                     | 35.7                                | 45.5                | 18.0                | 0.8                 | #                   | #                    |
| ACG grant <sup>1</sup>                         | 25.6                                | 47.0                | 26.3                | 1.0                 | #                   | #                    |
| SMART grant <sup>2</sup>                       | 29.8                                | 44.5                | 24.8                | 0.9                 | #                   | #                    |
| Federal campus-based aid                       | 21.7                                | 28.3                | 19.0                | 11.1                | 8.2                 | 11.7                 |
| Any Stafford loan                              | 11.5                                | 19.2                | 18.0                | 15.7                | 12.9                | 22.7                 |
| Stafford subsidized loan                       | 14.3                                | 23.8                | 21.6                | 16.8                | 11.1                | 12.5                 |
| Stafford unsubsidized loan                     | 7.7                                 | 13.5                | 12.4                | 15.3                | 16.1                | 35.0                 |
| Parent PLUS loans                              | 5.1                                 | 12.4                | 14.7                | 17.5                | 16.7                | 33.6                 |

# Rounds to zero.

<sup>1</sup> Academic Competitiveness Grants (ACG).<sup>2</sup> National Science and Mathematics Access to Retain Talent Grants (SMART).

NOTE: Dependent students are undergraduates under age 24 who are not married, have no dependents, are not veterans, and are not orphans or wards of the court. For dependent students, income is the income of their parents. Prior-year (2006) income is used in federal need analysis. "Any federal Title IV aid" consists of Pell, ACG, and SMART grants, the federal campus-based aid programs, Stafford loans, and Parent Loans for Undergraduate Students (PLUS). The federal campus-based programs are Federal Supplemental Educational Opportunity Grants (FSEOG), federal work-study, and Perkins loans. Stafford loans include those administered through the Federal Family Education Loan program (FFELP) and the William D. Ford Federal Direct Loan program. Students may receive both subsidized and unsubsidized loans. Subsidized loans are need-based and students are not charged interest while they are enrolled. Full-time/full-year students were enrolled full time for 9 or more months from July 1, 2007 to June 30, 2008. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2007–08 National Postsecondary Student Aid Study (NPSAS:08).

**Table 8. Percentage distribution of independent undergraduates at specified student income levels, by type of institution, attendance pattern, and receipt of specified types of financial aid: 2007–08**

| Institution and student characteristics        | Independent student income |                     |                     |                     |                     |
|--|----------------------------|---------------------|---------------------|---------------------|---------------------|
|  | Less than<br>\$10,000      | \$10,000–<br>19,999 | \$20,000–<br>29,999 | \$30,000–<br>49,999 | \$50,000<br>or more |
| <b>Total</b>                                   | <b>23.0</b>                | <b>17.4</b>         | <b>15.3</b>         | <b>20.3</b>         | <b>24.0</b>         |
| <b>Type of institution</b>                     |                            |                     |                     |                     |                     |
| Public   |                            |                     |                     |                     |                     |
| Less-than-2-year                               | 25.7                       | 18.4                | 18.1                | 21.7                | 16.1                |
| 2-year   | 19.3                       | 16.0                | 15.3                | 21.6                | 27.8                |
| 4-year non-doctorate-granting                  | 24.9                       | 18.8                | 16.1                | 18.7                | 21.5                |
| 4-year doctorate-granting                      | 30.0                       | 19.8                | 13.3                | 16.9                | 20.0                |
| Private not-for-profit                         |                            |                     |                     |                     |                     |
| Less-than-4-year                               | 31.1                       | 16.6                | 14.8                | 20.7                | 16.7                |
| 4-year non-doctorate-granting                  | 19.9                       | 14.7                | 14.9                | 20.9                | 29.6                |
| 4-year doctorate-granting                      | 23.8                       | 12.8                | 12.8                | 19.2                | 31.3                |
| Private for-profit                             |                            |                     |                     |                     |                     |
| Less-than-2-year                               | 41.1                       | 23.2                | 15.2                | 12.9                | 7.8                 |
| 2-year or more                                 | 26.6                       | 20.8                | 17.4                | 21.3                | 13.9                |
| More than one institution                      | 23.9                       | 18.2                | 14.4                | 19.9                | 23.6                |
| <b>Attendance pattern</b>                      |                            |                     |                     |                     |                     |
| Full-time/full-year                            | 35.4                       | 20.4                | 15.0                | 16.6                | 12.6                |
| Part-time or part-year                         | 19.9                       | 16.7                | 15.3                | 21.2                | 26.9                |
| <b>Any aid</b>                                 |                            |                     |                     |                     |                     |
| Did not receive any financial aid              | 17.0                       | 14.0                | 13.5                | 21.3                | 34.2                |
| Received financial aid                         | 26.4                       | 19.2                | 16.2                | 19.8                | 18.4                |
| <b>Federal Title IV aid program recipients</b> |                            |                     |                     |                     |                     |
| Any federal Title IV aid                       | 31.1                       | 23.1                | 17.3                | 18.6                | 9.9                 |
| Pell grant                                     | 39.9                       | 27.1                | 15.8                | 17.0                | 0.2                 |
| ACG grant <sup>1</sup>                         | 67.8                       | 25.3                | 3.0                 | 3.9                 | #                   |
| SMART grant <sup>2</sup>                       | 49.8                       | 26.5                | 9.5                 | 14.3                | #                   |
| Federal campus-based aid                       | 45.7                       | 25.7                | 14.6                | 11.5                | 2.4                 |
| Any Stafford loan                              | 28.1                       | 22.1                | 17.0                | 19.5                | 13.4                |
| Stafford subsidized loan                       | 29.0                       | 22.7                | 17.4                | 19.7                | 11.3                |
| Stafford unsubsidized loan                     | 27.0                       | 21.5                | 17.1                | 19.7                | 14.7                |

# Rounds to zero.

<sup>1</sup> Academic Competitiveness Grants (ACG)<sup>2</sup> National Science and Mathematics Access to Retain Talent Grants (SMART)

NOTE: Independent students are age 24 or over and students under age 24 who are married, have dependents, are veterans, are orphans or wards of the courts, or were determined to be independent by a financial aid officer using professional judgment. Independent student income includes the income of a spouse if the student is married. Prior-year (2006) income is used in federal need analysis. "Any federal Title IV aid" consists of Pell, ACG, and SMART grants, the federal campus-based aid programs, and Stafford loans. The federal campus-based programs are Federal Supplemental Educational Opportunity Grants (FSEOG), federal work-study, and Perkins loans. Stafford loans include those administered through the Federal Family Education Loan program (FFELP) and the William D. Ford Federal Direct Loan program. Students may receive both subsidized and unsubsidized loans. Subsidized loans are need-based and students are not charged interest while they are enrolled. Full-time/full-year students were enrolled full time for 9 or more months from July 1, 2007 to June 30, 2008. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2007–08 National Postsecondary Student Aid Study (NPSAS:08).

**Table 9. Percentage of graduate and first-professional students receiving selected types of financial aid, by type of institution, graduate program, attendance pattern, and income level: 2007–08**

| Institution and student characteristics | Grants      |             |              |                       | Student loans |                |                     |
|---|-------------|-------------|--------------|-----------------------|---------------|----------------|---------------------|
|   | Any aid     | Any grants  | Employer aid | Total assistant-ships | Any loans     | Stafford loans | Graduate PLUS loans |
| <b>Total</b>                            | <b>73.7</b> | <b>41.1</b> | <b>21.9</b>  | <b>15.2</b>           | <b>42.7</b>   | <b>38.9</b>    | <b>4.9</b>          |
| <b>Type of institution</b>              |             |             |              |                       |               |                |                     |
| Public 4-year                           |             |             |              |                       |               |                |                     |
| Non-doctorate-granting                  | 56.4        | 26.5        | 19.2         | 6.9                   | 33.4          | 27.5           | 0.1                 |
| Doctorate-granting                      | 73.3        | 45.6        | 20.9         | 24.7                  | 35.5          | 32.0           | 3.2                 |
| Private not-for-profit 4-year           |             |             |              |                       |               |                |                     |
| Non-doctorate-granting                  | 69.5        | 34.5        | 24.4         | 3.4                   | 44.6          | 41.9           | 2.7                 |
| Doctorate-granting                      | 76.3        | 43.9        | 21.9         | 12.5                  | 44.9          | 41.5           | 9.3                 |
| Private for-profit 4-year               | 91.2        | 32.3        | 28.3         | 1.0                   | 79.0          | 73.5           | 2.4                 |
| More than one institution               | 73.0        | 35.5        | 20.3         | 10.0                  | 49.7          | 45.4           | 5.0                 |
| <b>Graduate program</b>                 |             |             |              |                       |               |                |                     |
| Master's degree                         | 73.5        | 40.3        | 25.9         | 10.8                  | 43.6          | 39.4           | 3.1                 |
| Doctoral degree                         | 85.9        | 53.8        | 13.2         | 47.0                  | 31.7          | 29.3           | 3.5                 |
| First-professional degree               | 87.6        | 41.0        | 6.9          | 8.3                   | 78.7          | 76.4           | 25.4                |
| Other and nondegree                     | 46.8        | 28.6        | 21.6         | 2.9                   | 23.6          | 19.3           | 0.7                 |
| <b>Attendance pattern</b>               |             |             |              |                       |               |                |                     |
| Full-time/full-year                     | 87.0        | 45.5        | 11.5         | 25.4                  | 58.2          | 55.2           | 11.1                |
| Part-time or part-year                  | 66.9        | 38.9        | 27.2         | 10.0                  | 34.6          | 30.5           | 1.7                 |
| <b>Income level in 2006</b>             |             |             |              |                       |               |                |                     |
| Less than \$10,000                      | 77.8        | 35.9        | 5.3          | 20.7                  | 56.5          | 50.3           | 10.2                |
| \$10,000–19,999                         | 83.7        | 42.2        | 8.8          | 35.7                  | 49.6          | 48.3           | 6.9                 |
| \$20,000–29,999                         | 82.7        | 38.9        | 13.3         | 24.3                  | 52.5          | 49.0           | 4.8                 |
| \$30,000–49,999                         | 72.1        | 38.8        | 23.9         | 9.9                   | 45.9          | 42.0           | 3.4                 |
| \$50,000 or more                        | 67.1        | 45.2        | 35.7         | 6.5                   | 29.5          | 26.3           | 2.1                 |

NOTE: "Any aid" includes all types of financial aid from any source (federal, state, institutional, or private) except parents, friends, or relatives. Grants may come from any source and include fellowships, tuition waivers, and aid from employers. Employer aid excludes tuition waivers to students holding assistantships. Teaching assistantships are funded by institutions, but research assistantship funds may come from any source. "Any loans" include federal, state, institutional, and private (alternative) loans. Stafford loans include those administered through the Federal Family Education Loan program (FFELP) and the William D. Ford Federal Direct Loan program. Students may receive Stafford loans that are subsidized, unsubsidized, or both. Federal Graduate PLUS loans are unsubsidized loans to students (unlike undergraduate PLUS loans, which are made to parents) available in addition to Stafford loans. Students may receive more than one type of aid. Income is the total income of the student and spouse (if married) for calendar year 2006. Prior-year (2006) income is used in federal need analysis. Full-time/full-year students were enrolled full time for 9 or more months from July 1, 2007 to June 30, 2008. Stafford loan participation rates are not fully comparable to those of NPSAS:04. In NPSAS:04 weights were adjusted to sum to the total of loan commitments. In NPSAS:08 weights were adjusted to sum to the total of loan disbursements. To ensure that loan estimates produced for NPSAS:08 and all prior NPSAS cycles are comparable, revised weights will be included in the DAS. SOURCE: U.S. Department of Education, National Center for Education Statistics, 2007–08 National Postsecondary Student Aid Study (NPSAS:08).

**Table 10. Average amounts of selected types of financial aid received by graduate and first-professional students, by type of institution, graduate program, attendance pattern, and income level: 2007–08**

| Institution and student characteristics | Grants          |                |                |                       | Student loans   |                 |                     |
|---|-----------------|----------------|----------------|-----------------------|-----------------|-----------------|---------------------|
|   | Total aid       | Total grants   | Employer aid   | Total assistant-ships | Total loans     | Stafford loans  | Graduate PLUS loans |
| <b>Total</b>                            | <b>\$17,600</b> | <b>\$7,500</b> | <b>\$5,100</b> | <b>\$12,100</b>       | <b>\$18,500</b> | <b>\$15,600</b> | <b>\$15,500</b>     |
| <b>Type of institution</b>              |                 |                |                |                       |                 |                 |                     |
| Public 4-year                           |                 |                |                |                       |                 |                 |                     |
| Non-doctorate-granting                  | 8,500           | 3,000          | 2,900          | 6,000                 | 10,700          | 11,300          | ‡                   |
| Doctorate-granting                      | 17,100          | 7,500          | 4,700          | 12,900                | 16,500          | 15,400          | 11,700              |
| Private not-for-profit 4-year           |                 |                |                |                       |                 |                 |                     |
| Non-doctorate-granting                  | 12,300          | 4,800          | 4,300          | 6,300                 | 14,700          | 13,300          | 13,200              |
| Doctorate-granting                      | 21,400          | 9,300          | 6,100          | 11,700                | 23,500          | 17,800          | 17,600              |
| Private for-profit 4-year               | 17,800          | 6,100          | 6,600          | ‡                     | 17,700          | 14,700          | ‡                   |
| More than one institution               | 16,200          | 5,600          | 4,200          | 11,000                | 17,300          | 13,900          | 11,400              |
| <b>Graduate program</b>                 |                 |                |                |                       |                 |                 |                     |
| Master's degree                         | 14,400          | 6,500          | 5,200          | 9,700                 | 15,600          | 13,700          | 13,300              |
| Doctoral degree                         | 23,800          | 12,200         | 7,400          | 15,400                | 20,300          | 17,800          | 12,300              |
| First-professional degree               | 33,200          | 8,500          | 5,000          | 6,500                 | 31,400          | 22,700          | 18,400              |
| Other and nondegree                     | 8,700           | 3,100          | 2,500          | 7,600                 | 12,300          | 12,400          | ‡                   |
| <b>Attendance pattern</b>               |                 |                |                |                       |                 |                 |                     |
| Full-time/full-year                     | 26,300          | 11,400         | 8,200          | 13,000                | 24,300          | 18,600          | 16,800              |
| Part-time or part-year                  | 11,700          | 5,200          | 4,500          | 10,900                | 13,500          | 12,800          | 11,000              |
| <b>Income level in 2006</b>             |                 |                |                |                       |                 |                 |                     |
| Less than \$10,000                      | 23,300          | 8,600          | 5,700          | 9,500                 | 22,700          | 18,400          | 15,900              |
| \$10,000–19,999                         | 22,800          | 10,900         | 6,900          | 13,300                | 19,300          | 15,800          | 15,400              |
| \$20,000–29,999                         | 20,200          | 9,800          | 5,700          | 14,900                | 17,300          | 14,400          | 16,100              |
| \$30,000–49,999                         | 16,000          | 7,100          | 4,800          | 12,300                | 16,200          | 14,500          | 14,900              |
| \$50,000 or more                        | 12,200          | 5,800          | 5,000          | 12,100                | 15,900          | 14,000          | 14,500              |

‡ Reporting standards not met. (Too few cases for a reliable estimate.)

NOTE: Amounts are averages for those who received the specified type of aid. "Total aid" includes all types of financial aid from any source (federal, state, institutional, or private) except parents, friends, or relatives. Grants may come from any source and include fellowships, tuition waivers, and aid from employers. Employer aid excludes tuition waivers to students holding assistantships. Teaching assistantships are funded by institutions, but research assistantship funds may come from any source. "Total loans" include federal, state, institutional, and private (alternative) loans. Stafford loans include those administered through the Federal Family Education Loan program (FFELP) and the William D. Ford Federal Direct Loan program. Stafford loans include both subsidized and unsubsidized loan amounts. Federal Graduate PLUS loans are unsubsidized loans to students (unlike undergraduate PLUS loans, which are made to parents) available in addition to Stafford loans. Students may receive more than one type of aid. Income is the total income of the student and spouse (if married) for calendar year 2006. Prior-year (2006) income is used in federal need analysis. Full-time/full-year students were enrolled full time for 9 or more months from July 1, 2007 to June 30, 2008. Stafford loan participation rates are not fully comparable to those of NPSAS:04. In NPSAS:04 weights were adjusted to sum to the total of loan commitments. In NPSAS:08 weights were adjusted to sum to the total of loan disbursements. To ensure that loan estimates produced for NPSAS:08 and all prior NPSAS cycles are comparable, revised weights will be included in the DAS.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2007–08 National Postsecondary Student Aid Study (NPSAS:08).

# Appendix A—Glossary

This glossary includes descriptions of the variables used in the tables of this report, all of which are found in the National Postsecondary Student Aid Study (NPSAS:08) database, and are generated by the Data Analysis System, available to the public online at <http://nces.ed.gov/DAS>. Variables are listed in the glossary index below by general topic area and in the order in which they appear in the tables. The glossary that follows is organized alphabetically by variable name (displayed in capital letters to the right of the variable label).

## Glossary Index

### **Institution and Student Characteristics**

|                                     |          |
|-------------------------------------|----------|
| Type of institution .....           | AIDSECT  |
| Attendance pattern .....            | ATTNSTAT |
| Dependency status .....             | DEPEND   |
| Dependency and income in 2006 ..... | INCOME   |

### **Types of Aid to Undergraduates**

|                         |         |
|-------------------------|---------|
| Total aid .....         | TOTAID  |
| Total grants .....      | TOTGRT  |
| Student loans .....     | TOTLOAN |
| Work-study .....        | TOTWKST |
| Veterans benefits ..... | VETBEN  |
| Parent PLUS loans ..... | PLUSAMT |

### **Sources of Aid to Undergraduates**

|                               |          |
|-------------------------------|----------|
| Federal aid total .....       | TFEDAID  |
| Federal grants .....          | TFEDGRT  |
| Federal student loans .....   | TFEDLN   |
| Federal work-study .....      | TFEDWRK  |
| State aid total .....         | STATEAMT |
| State grants .....            | STGTAMT  |
| Institutional aid total ..... | INSTAMT  |
| Institutional grants .....    | INGRTAMT |

### **Federal Title IV Aid to Undergraduates**

|                                   |          |
|-----------------------------------|----------|
| Federal Title IV aid .....        | TITIVAMT |
| Pell grants .....                 | PELLAMT  |
| ACG grants .....                  | ACGAMT   |
| SMART grants .....                | SMARTAMT |
| Federal campus-based aid .....    | CAMPAMT  |
| Stafford loans .....              | STAFFAMT |
| Stafford subsidized loans .....   | STAFSUB  |
| Stafford unsubsidized loans ..... | STAFUNSB |

**Graduate Students**

|                               |          |
|-------------------------------|----------|
| Type of institution .....     | AIDSECTG |
| Graduate program .....        | GRADDEG  |
| Attendance pattern .....      | ATTNSTAT |
| Income level in 2006 .....    | INCOMEG  |
| Total aid .....               | TOTAID   |
| Total grants .....            | TOTGRT   |
| Employer aid .....            | EMPLYAMT |
| Graduate assistantships ..... | GRASTAMT |
| Student loans .....           | TOTLOAN  |
| Stafford loans .....          | STAFFAMT |
| Graduate PLUS loans .....     | GPLUSAMT |



**ACG grants**

Total amount received from the Academic Competitiveness Grant (ACG) program. In 2007–08, first- and second-year students who were Pell Grant recipients and U.S. citizens were eligible for an ACG grant if they also completed a rigorous high school curriculum and were enrolled full time in a degree program. Depending upon their financial need, first-year students were eligible to receive up to \$750, and second-year students, who also must have a cumulative GPA of 3.0 or higher, were eligible to receive up to \$1,300.

**ACGAMT****Type of institution**

Control and level of the NPSAS sample institution attended by the student in 2007–08, based on the classification in the 2007 IPEDS Institutional Characteristics file. Control concerns the source of revenue and control of operations (public, private not-for-profit, private for-profit) and level concerns the highest degree or award offered by the institution in any program. Doctorate-granting institutions award a doctoral or first-professional degree in one or more programs; 4-year non-doctorate-granting institutions award at least a bachelor's degree; 2-year institutions award at least an associate's degree; less-than-2-year institutions award certificates or other credentials in vocational programs. It should be noted that some community colleges have begun offering bachelor's degrees in a few programs and have been reclassified as 4-year institutions in IPEDS.

**AIDSECT  
AIDSECTG**

The nine categories of types of institutions were used as the sampling frame for the national NPSAS sample. Sample students determined to have attended more than one institution during the NPSAS study year have been reclassified into a separate category, since all or part of their financial aid may not have been received at the NPSAS sample institution.

**Attendance pattern**

Number of months enrolled full time or part time at all institutions attended during the 2007–08 academic year. Full-year is defined as enrollment for 9 or more months during the NPSAS year. Months did not have to be contiguous or at the same institution, and students did not have to be enrolled for a full month in order to be considered enrolled for that month. Full-time is usually defined as 12 or more credit-hours. The categories are:

**ATTNSTAT**

|                     |   |
|---------------------|---|
| Full-time/full-year | Enrolled full time for 9 or more months.                              |
| Full-time/part-year | Enrolled full time, but for less than 9 months.                       |
| Part-time/full-year | Enrolled for 9 or more months, but less than 9 months were full time. |
| Part-time/part-year | Enrolled for less than 9 months, and these were not all full time.    |

**Federal campus-based aid**

Total amount of federal campus-based aid received during the 2007–08 academic year. The federal campus-based aid programs are the Supplemental Educational Opportunity Grants (FSEOG), federal work-study, and Perkins loans. The federal campus-based program funds are allocated to institutions and the financial aid officers at the institutions determine the allocation of awards to students within federal guidelines. All of the federal campus-based aid is awarded on the basis of need. Pell grant recipients are given priority for FSEOG awards and Perkins loans.

**CAMPAMT**

|   |                 |
|---|-----------------|
| <b>Dependency status</b>  | <b>DEPEND</b>   |
| Student's dependency status for federal financial aid purposes during the 2007–08 academic year. Students were considered to be financially independent of their parents for federal financial aid purposes in 2007–08 if they were age 24 or older on 12/31/07, or if they met any of the following criteria: were married; had legal dependents; were veterans of the U.S. armed forces or on active duty; were orphans or wards of the court; or were enrolled in a graduate or first-professional degree program (beyond the bachelor's degree) in 2007–08. All other students under 24 were considered to be dependent unless they could document that they were receiving no parental support and were determined to be independent by a financial aid officer using professional judgment. |                 |
| <b>Employer aid</b>   | <b>EMPLYAMT</b> |
| Total amount of aid received from employers during the 2007–08 academic year. Employer aid consists of grants to students from their employers or their parents' employers, including employer-paid tuition reimbursements. It includes tuition waivers from postsecondary institutions for faculty or staff and their dependents, but does not include tuition waivers for graduate students holding assistantships.   |                 |
| <b>Graduate PLUS loans</b>  | <b>GPLUSAMT</b> |
| Total amount of federal Graduate PLUS loans received in 2007–08. The Graduate PLUS loan is available to graduate level students in addition to any federal Stafford loans for which they are eligible. Graduate PLUS loans are not based on need, and there is no fixed limit to the amount of a Graduate PLUS loan, except that it may not exceed the total price of attendance minus any other financial aid.   |                 |
| <b>Graduate program</b>   | <b>GRADDEG</b>  |
| General type of graduate program in which the student was enrolled in 2007–08. Specific categories include master's degree, doctoral degree, and first-professional degree. NCES defines first-professional programs to include one of the following: Chiropractic (D.C. or D.C.M.), Pharmacy (D.Pharm.), Dentistry (D.D.S. or D.M.D.), Podiatry (Pod.D. or D.P.), Medicine (M.D.), Veterinary Medicine (D.V.M.), Optometry (O.D.), Law (L.L.B. or J.D.), Osteopathic Medicine (D.O.), or Theology (M.Div., M.H.L., or B.D.). Students in postbaccalaureate certificate programs and those not enrolled in a formal degree program are classified as "other and no degree."   |                 |
| <b>Graduate assistantships</b>  | <b>GRASTAMT</b> |
| Total amount of all graduate student assistantships received during the 2007–08 academic year, including all research assistantships, teaching assistantships, and any other type of graduate assistantships. Assistantships are classified as institutional aid, but include research assistantships funded from federal or other sources.   |                 |
| <b>Dependency and income in 2006</b>  | <b>INCOME</b>   |
| For dependent undergraduates, this is the total income of the student's parents. For independent undergraduates, this is the total income of the student and spouse, if married. Prior calendar year income is reported in the financial aid application and used in determining the expected family contribution (EFC) in need analysis. That is, 2006 income was used to determine financial aid eligibility for the 2007–08 academic year.   |                 |
| <b>Income level in 2006</b>   | <b>INCOMEG</b>  |
| For graduate students, this is the total income of the student and spouse, if married. Prior calendar year income is reported in the financial aid application and used in determining the expected family contribution (EFC) in need analysis. That is, 2006 income was used to determine financial aid eligibility for the 2007–08 academic year.   |                 |

**Institutional grants** **INGRTAMT**

Total amount of grant aid received during the 2007–08 academic year that was funded by the postsecondary institution attended. This includes all grants, scholarships, tuition waivers, and graduate fellowships from institutional funds. It includes both need- and merit-based grants.

**Institutional aid total** **INSTAMT**

Total amount of institutional aid received during 2007–08. This includes all types of institutional grants and scholarships from institutional funds, tuition waivers, institutional loans, institutional work-study (outside of the federal work-study program), and graduate student assistantships.

**Pell grants** **PELLAMT**

Total amount of federal Pell grants received at all institutions attended during the 2007–08 academic year. Pell grants are need-based grants awarded to undergraduates who have not yet received a bachelor's degree and students in teaching certificate programs. They are intended as a financial base, to which other financial aid awards can be added. For the 2007–08 academic year, the maximum Pell grant amount was \$4,310 for students who had a federal expected family contribution (EFC) of zero and were enrolled full time for a full academic year. The actual amount of a Pell grant received by the student depends on the EFC and the actual attendance pattern (full-time or part-time, full-year or part-year).

**Parent PLUS loans** **PLUSAMT**

Total amount of federal Parent Loans for Undergraduate Students (PLUS) received in 2007–08. Federal PLUS loans are available to the parents of dependent undergraduates in addition to any federal Stafford loans for which students are eligible. PLUS loans are not based on need. There is no fixed limit to the amount of a PLUS loan, but the PLUS loan may not exceed the total price of attendance minus any other financial aid.

**SMART grants** **SMARTAMT**

Total amount received from the National Science and Mathematics Access to Retain Talent (SMART) grant program. In 2007–08, third- and fourth-year students who were Pell Grant recipients and U.S. citizens were eligible for a SMART grant if they were enrolled in a degree program full time, had a cumulative GPA of 3.0 or higher, and were majoring in one of the following fields of study: mathematics, science (life, physical, or computer), engineering and technology, or certain foreign languages. SMART grant recipients could receive up to \$4,000 depending upon financial need.

**Stafford loans** **STAFFAMT**

Total amount of federal Stafford loans (subsidized and unsubsidized) received at all institutions attended during the 2007–08 academic year including loans borrowed to attend schools other than the NPSAS sample school. Annual loan limits for Stafford loans vary by class level and dependency status. This includes Stafford loans delivered through either the William Ford Direct Loan program or the Federal Family Education Loan Program (FFELP).

NOTE: There are two types of Federal Stafford Loans: 1) Subsidized Stafford loans are awarded on the basis of financial need. If a student qualifies for a subsidized loan, the federal government pays the interest on the loan until the student begins repayment, and during authorized periods of deferment thereafter; 2) Unsubsidized Stafford loans are not awarded on the basis of need. Students who qualify for an unsubsidized loan are charged interest from the time the loan is disbursed until it is paid in full. Students can choose to pay the interest or allow it to accumulate. If the student allows the interest to accumulate, it will be capitalized (added to the principal amount of the loan).

Both subsidized and unsubsidized Stafford loans are available through two different programs: the William Ford Direct Loan program and the Federal Family Education Loan Program (FFELP).

**Stafford loans—continued****STAFFAMT**

Although the source of funds is different, both programs offer the same types of Stafford loans: 1) Under the William Ford Direct Loan program, the federal government makes loans directly to students and parents through postsecondary institutions. Participating institutions process the applications and disburse the loans directly to students; 2) Under the Federal Family Education Loan Program (FFELP), private lenders such as banks, credit unions, and savings and loan associations process the applications and make the loans to students. The federal government guarantees these loans.

**Stafford subsidized loans****STAFSUB**

Total amount of federal subsidized Stafford loans received in 2007–08. Subsidized Stafford loans are awarded on the basis of financial need to students enrolled at least half time (usually taking at least two courses). If a student qualifies for a subsidized loan, the federal government pays the interest on the loan until the student begins repayment (generally 6 months after leaving postsecondary education), and during authorized periods of deferment thereafter. This includes subsidized Stafford loans delivered through either the William Ford Direct Loan program or the Federal Family Education Loan Program (FFELP). See STAFFAMT for more information.

**Stafford unsubsidized loans****STAFUNSB**

Total amount of federal unsubsidized Stafford loans received in 2007–08. Unsubsidized Stafford loans are available to students enrolled at least half time (usually taking at least two courses) without demonstrating need. Students are charged interest on the loan from the time the loan is disbursed until it is paid in full. Students can choose to pay the interest while they are enrolled or allow it to accumulate. If the student allows the interest to accumulate, it will be capitalized (added to the original loan principal). This includes unsubsidized Stafford loans delivered through either the William Ford Direct Loan program or the Federal Family Education Loan Program (FFELP). See STAFFAMT for more information.

**State aid total****STATEAMT**

Total amount of state-funded financial aid received by the student during the 2007–08 academic year. This includes state grants, state loans, state-sponsored work-study, and vocational rehabilitation and job training grants, including any federal Workforce Investment Act (WIA) funds.

**State grants****STGTAMT**

Total amount of state-funded grants, scholarships, and fellowships received during the 2007–08 academic year. These include the federal matching funds to states through the Leveraging Education Assistance Partnership (LEAP) program. These include need- and merit-based grant programs.

**Federal aid total****TFEDAID**

Total amount of federal financial aid received in 2007–08. This includes federal grants, federal student loans, federal work-study, and federal PLUS loans to parents. It does not include federal tax benefits, federal veterans' benefits, or Department of Defense programs.

**Federal grants****TFEDGRT**

Total amount of federal grants received by a student during the 2007–08 academic year. These are primarily Pell grants and Federal Supplemental Educational Opportunity Grants (FSEOG), but also include several smaller federal grant programs as well as any federal graduate fellowships or traineeships received during the 2007–08 academic year. This variable does not include federal tax benefits, federal veterans' benefits, or Department of Defense programs.

**Federal student loans** **TFEDLN**

Total amount of federal loans to students received during the 2007–08 academic year. These include Perkins loans, all types of Stafford loans, and federal loans through the Public Health Service. They exclude federal PLUS loans to parents.

**Federal work-study** **TFEDWRK**

Total amount awarded through the federal work-study program in 2007–08. It includes the institutional matching funds as well as the federal funds. Federal work-study is one of the three federal Title IV campus-based aid programs and is awarded on the basis of need.

**Federal Title IV aid** **TITIVAMT**

Total amount received from federal financial aid programs in Title IV of the Higher Education Act during the 2007–08 academic year. The Title IV programs include Pell grants, the Academic Competitiveness Grants (ACG), the National Science and Mathematics Access to Retain Talent grants (SMART), Stafford loans, parent PLUS loans, and the federal campus-based programs (Perkins loans, Supplemental Educational Opportunity Grants, and federal work-study).

**Total aid** **TOTAID**

Total amount of financial aid received by a student in 2007–08 from any source except parents, relatives, or friends. It includes any grants, student loans, work-study, PLUS loans to parents, job training funds, veterans' benefits and Department of Defense programs, and graduate assistantships. It does not include federal tax benefits.

**Total grants** **TOTGRT**

Total amount of all grants and scholarships received by a student in 2007–08. Grants are a type of student financial aid that do not require repayment or employment. This variable is equal to the sum of all federal grants, state grants, institutional grants, and grants from employers or private sources. All need-based grants, merit scholarships, tuition waivers, and employer tuition reimbursements are included.

**Student loans** **TOTLOAN**

Total amount of all student loans received during the 2007–08 academic year. This variable includes all student loans received through federal, state, institutional, or private programs. A student loan is defined as a type of financial aid that advances funds to a student and is evidenced by a promissory note requiring the recipient to repay the specified amounts under prescribed conditions. It excludes federal PLUS loans to parents and any loans from family or friends.

**Work-study** **TOTWKST**

Total amount of work-study aid received during the 2007–08 academic year. This variable includes all federal work-study, state work-study, and institutional work-study aid, including undergraduates who had assistantships, tutoring, dormitory, or advising jobs. Graduate research, teaching, or other assistantships are classified separately.

**Veterans benefits** **VETBEN**

Total amount of all federal veterans' benefits for education received during the 2007–08 academic year. Includes benefits to dependents of veterans.



# Appendix B— NPSAS:08 Technical Notes and Methodology

## Overview

The U.S. Department of Education's (ED's) National Center for Education Statistics (NCES) first implemented the National Postsecondary Student Aid Study (NPSAS) during the 1986–87 academic year to meet the need for national-level data about significant financial aid issues. Since then, NCES has conducted NPSAS every 3 to 4 years, with the most recent implementation during the 2007–08 academic year.

The fundamental purpose of NPSAS is to create a dataset that brings together information about a variety of aid programs for a large, representative sample of undergraduate, graduate, and first-professional students. NPSAS provides the data for comprehensive descriptions of these student populations in terms of their demographic characteristics, academic programs, the types of institutions attended, attendance patterns, employment, and participation in civic and volunteer activities. It also includes data on tuition and price of attendance; the various types of financial aid received; and the net price of attendance after aid.

NPSAS provides research and policy analysts with data to address basic issues about the affordability of postsecondary education and the extent to which existing financial aid programs meet students' needs. NPSAS:08 included a new set of instrument items to obtain baseline measures of the awareness of two new federal grants introduced in 2006: the Academic Competitiveness Grant (ACG) and the National Science and Mathematics Access to Retain Talent (SMART) grant.

Another purpose of NPSAS is gathering base-year data on a subset of students who become the sample for a longitudinal study. NPSAS:08 serves as the base year for a Baccalaureate and Beyond Longitudinal Study (B&B), which focuses on students who completed the requirements for the bachelor's degree during the 2007–08 academic year. The longitudinal study will contact the B&B:08 cohort for a follow-up survey in 2008-09 (B&B:08/09) and then again in 2012 (B&B:08/12). A section of the NPSAS student interview focuses on describing the future plans of these students in terms of teaching, employment, and continuing education.

## Data Sources for NPSAS:08

The data collected for NPSAS:08 were obtained from multiple sources, including the following:

- **Student records:** Data from institutional financial aid and registrar records at the institutions currently attended. These data were entered at the institution by institutional personnel or field data collectors in 2008 using a computer-assisted data-entry program (web-CADE) or were directly downloaded to a data file.
- **Student interviews:** Data collected directly from sampled students via self-administered or interviewer-administered web-based interviews.
- **Central Processing System (CPS):** ED database of federal financial aid applications for the 2007–08 and 2008–09 academic years.
- **National Student Loan Data System (NSLDS):** ED database of Title IV federal loans, Pell Grants, ACGs, and SMART grants for records dated prior to September 2008.
- **National Student Clearinghouse (NSC):** A central repository for the collection of postsecondary enrollment, degree, and certificate records on behalf of participating postsecondary institutions for the 2007–2008 academic year.
- **SAT File:** Student SAT test and questionnaire data from the College Board for calendar years 2002–07.
- **ACT File:** Student ACT scores and survey data from the latest test record (for each matched student) from ACT for the 2001–02 through 2006–07 academic years.
- **Integrated Postsecondary Education Data System (IPEDS):** ED’s NCES 2005–06 database of descriptive information about individual postsecondary institutions.

## Sample Design

NPSAS:08 used a two-stage sampling design. The first stage involved the selection of institutions to be included in the sample. Once the institutions were selected, the second stage—the selection of the student sample—took place. The NPSAS:08 target population consisted of all eligible students enrolled at any time between July 1, 2007, and June 30, 2008, in eligible postsecondary institutions in the United States or Puerto Rico. To be eligible, institutions must have signed Title IV participation agreements with ED, thus making them eligible for federal student aid programs (Title IV institutions). To be eligible for NPSAS, students had to be enrolled in an academic program; taking at least one course for credit that could be



applied toward fulfilling the requirements for an academic degree; or enrolled in an occupational or vocational program that requires at least 3 months or 300 clock hours of instruction to receive a degree, certificate, or other formal award. Eligible students could not be concurrently enrolled in high school and could not be enrolled solely in a General Educational Development (GED) or another high school completion program.

NPSAS:08 constructed its institution sampling frame from the IPEDS:2004–05 Institutional Characteristics, Fall Enrollment, and Completions files. The institutions on the sampling frame were partitioned into 46 institutional strata based on institutional level and control, highest level of offering, and proportion of bachelor’s degrees awarded in education.<sup>1</sup> NPSAS:08 also includes state-representative undergraduate student samples for four degree-granting institutional sectors (public 4-year; public 2-year; private not-for-profit 4-year; and private for-profit 4-year) in six states. Interested readers can refer to the NCES’ NPSAS website for more information regarding the sample designs of past NPSAS studies at <http://nces.ed.gov/surveys/npsas>.

Institutions were selected using Chromy’s sequential probability minimum replacement (PMR) sampling algorithm (Chromy 1979), which is similar to systematic sampling. This algorithm led to the selection of institutions with probabilities proportional to a composite measure of size based on expected enrollment. Initially, a sample of about 1,630 institutions was selected in fall 2006 so that these institutions could be notified of their selection early and to allow a separate field test sample to be selected from the remaining institutions on the sampling frame. In summer 2007, the sample was freshened using the IPEDS:2005–06 Institutional Characteristics, Fall Enrollment, and Completions files to include any newly eligible institutions within the sampling frame to ensure that the sample was representative of the current population. This process added about 10 institutions to the sample. In fall 2007, the decision was made to include state-representative undergraduate student samples for four degree-granting institutional sectors (public 4-year; public 2-year; private not-for-profit 4-year; and private for-profit 4-year) in six states: California, Georgia, Illinois, Minnesota, New York, and Texas.<sup>2</sup> To

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<sup>1</sup> The proportion of bachelor’s degrees awarded in education is used to ensure sufficient numbers of sample students receiving a bachelor’s degree in education. Such students are an important analysis domain for B&B.

<sup>2</sup> These six states were selected based on (1) the size of undergraduate enrollment in the four sectors; (2) prior inclusion in the NPSAS:04 12-state sample with high levels of cooperation and participation in that survey; and (3) states with unique or recently changed tuition and state grant policies that provide opportunities for comparative research and analysis.

accomplish this, a supplemental sample was drawn and added to the existing sample. The final NPSAS:08 sample included 1,960 institutions.

The next step of the institution sampling process involved determining the eligibility of the sample institutions. Of the total institution sample ( $n = 1,960$ ),<sup>3</sup> about 1,940 (99 percent) were found to be eligible to participate in NPSAS:08. Approximately 1,730 institutions (a weighted response rate of 90 percent among the eligible sample<sup>4</sup>) provided student enrollment lists for use in the second stage of sampling (e.g., selecting the student sample). Table B-1 shows the number of institutions that were sampled, the number of eligible institutions, and the count and unweighted and weighted percentages of institutions providing enrollment lists, by institutional characteristics.

Sample institutions provided lists of their eligible students enrolled during the 2007–08 academic year, and these lists served as the frame for selecting the student sample. Student enrollment lists were sampled on a flow basis, as they were received, using equal probability stratified systematic sampling.

Institutions were asked to identify students on the enrollment list who had received or were expected to receive a baccalaureate degree between July 1, 2007, and June 30, 2008. NPSAS:08 oversampled potential baccalaureate recipients to allow for sufficient numbers to be included in the 2009 follow-up study, B&B:08/09, and thus stratified them separately from other undergraduate students. Potential baccalaureate recipients and other undergraduate students were each divided into in-state and out-of-state strata because undergraduate in-state students were oversampled in the six states with state-representative samples. Within the set of potential baccalaureate recipients, business majors were undersampled to ensure that the baccalaureate sample did not consist primarily of business majors. Additionally, science, technology, engineering, or mathematics majors; SMART grant recipients; and ACG recipients were oversampled to allow for sufficient numbers for analysis. Further, institutions that awarded proportionally higher amounts of education majors were oversampled to ensure sufficient numbers for analysis. Detailed information regarding the design of past NPSAS samples can be found at NCES' NPSAS website at <http://nces.ed.gov/surveys/npsas>.

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<sup>3</sup> Reported numbers have been rounded to ensure the confidentiality of data. As a result, reported percentages (based on unrounded numbers) may differ somewhat from those that would result from these rounded numbers.

<sup>4</sup> The weight described here is a base weight.

**Table B-1. Counts of sampled and eligible institutions and enrollment list participation rates, by institutional characteristics: 2007–08**

| Institutional characteristics <sup>1</sup>           | Sampled institutions | Eligible institutions | Institutions providing lists |                    |                               |
|--|----------------------|-----------------------|------------------------------|--------------------|-------------------------------|
|  |                      |                       | Number                       | Unweighted percent | Weighted percent <sup>2</sup> |
| All institutions                                     | 1,960                | 1,940                 | 1,730                        | 89.0               | 90.1                          |
| Institutional level                                  |                      |                       |                              |                    |                               |
| Less-than-2-year                                     | 130                  | 120                   | 100                          | 82.6               | 83.2                          |
| 2-year   | 570                  | 560                   | 510                          | 89.7               | 90.7                          |
| 4-year non-doctorate-granting                        | 700                  | 700                   | 630                          | 89.7               | 91.9                          |
| 4-year doctorate-granting                            | 560                  | 560                   | 500                          | 88.8               | 88.6                          |
| Institutional control                                |                      |                       |                              |                    |                               |
| Public   | 960                  | 960                   | 880                          | 91.9               | 91.2                          |
| Private not-for-profit                               | 650                  | 640                   | 560                          | 87.4               | 86.7                          |
| Private for-profit                                   | 350                  | 340                   | 290                          | 83.6               | 88.2                          |
| Type of institution                                  |                      |                       |                              |                    |                               |
| Public less-than-2-year                              | 20                   | 20                    | 20                           | 90.9               | 93.2                          |
| Public 2-year  | 450                  | 450                   | 410                          | 91.7               | 91.2                          |
| Public 4-year non-doctorate granting                 | 200                  | 200                   | 190                          | 94.4               | 95.4                          |
| Public 4-year doctorate granting                     | 290                  | 290                   | 260                          | 90.7               | 89.2                          |
| Private not-for-profit less-than-4-year              | 20                   | 20                    | 20                           | 84.2               | 84.7                          |
| Private not-for-profit 4-year non-doctorate granting | 370                  | 370                   | 320                          | 88.2               | 87.9                          |
| Private not-for-profit 4-year doctorate granting     | 260                  | 260                   | 230                          | 86.5               | 85.9                          |
| Private for-profit less-than-2-year                  | 100                  | 90                    | 70                           | 80.4               | 81.0                          |
| Private for-profit 2-year or more                    | 260                  | 250                   | 210                          | 84.8               | 90.2                          |

<sup>1</sup> Institutional characteristics are based on data from the sampling frame which was formed from the 2004–05 IPEDS and refreshed from the 2005–06 IPEDS.

<sup>2</sup> The weight described in this column is a base weight.

NOTE: Percentages are based on the unrounded count of eligible institutions within the row under consideration. Detail may not sum to totals because of rounding. IPEDS = Integrated Postsecondary Education Data System.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2007–08 National Postsecondary Student Aid Study (NPSAS:08).

For each student sampling stratum, the enrollment list was sampled at a rate designed to provide approximately equal student-level probabilities. To more accurately estimate the overall sample yield, student sampling rates were revised after sufficient lists had been received. The final sample included 137,800 students. Approximately 96 percent of the final sample ( $n = 132,800$ ) was determined to be eligible for NPSAS. On the completion of data collection, 96 percent of the eligible sample ( $n = 127,700$ ) was determined to have sufficient key data to meet the definition of a study respondent. A study respondent was defined as any sample member who was determined to be eligible for the study and, minimally, had valid data from any data source for the following:

- student type (undergraduate or graduate/first professional);
- date of birth or age;

- gender; and
- at least 8 of the following 15 variables:
  - dependency status;
  - marital status;
  - any dependents;
  - income;
  - expected family contribution (EFC);
  - degree program;
  - class level;
  - baccalaureate status;
  - months enrolled;
  - tuition;
  - received federal aid;
  - received non-federal aid;
  - student budget;
  - race; and
  - parent education.

Table B-2 shows the number of students sampled, the number of eligible students, and the unweighted and weighted percentages of study respondents, by institutional characteristics. The forthcoming NPSAS:08 Methodology Report will provide further details on study respondents.

## Perturbation

To protect the confidentiality of information about specific individuals, NPSAS:08 data were subject to perturbation procedures to minimize disclosure risk.

Perturbation procedures, which have been approved by the NCES Disclosure Review Board, preserve the central tendency estimates but may result in slight increases in nonsampling errors.

## Imputation

All variables with missing data used in this report, as well as those included in the related Data Analysis System (DAS) release, have been imputed. The imputation procedures employed a three-step process. In the first step, missing variables were logically imputed. In the second step, the criteria used to match variables into imputation classes to stratify the dataset were identified so that all imputations were

processed independently within each class. In the third step, the weighted sequential hot deck process was implemented,<sup>5</sup> whereby missing data were replaced with valid data from donor records that match the recipients with respect to the matching criteria.

**Table B-2. Counts of sampled and eligible students and response rates, by institutional characteristics: 2007–08**

| Institutional characteristics <sup>2</sup>           | Sampled students | Eligible students <sup>3</sup> | Study respondents <sup>1</sup> |                               |
|--|------------------|--------------------------------|--------------------------------|-------------------------------|
|  |                  |                                | Unweighted percent             | Weighted percent <sup>4</sup> |
| All students   | 137,800          | 132,800                        | 96.2                           | 95.7                          |
| Institutional level                                  |                  |                                |                                |                               |
| Less-than-2-year                                     | 8,820            | 7,950                          | 95.0                           | 96.7                          |
| 2-year   | 43,460           | 40,770                         | 93.3                           | 92.5                          |
| 4-year non-doctorate-granting                        | 37,930           | 37,140                         | 97.8                           | 97.6                          |
| 4-year doctorate-granting                            | 47,590           | 46,940                         | 97.6                           | 97.6                          |
| Institutional control                                |                  |                                |                                |                               |
| Public   | 87,470           | 84,240                         | 95.3                           | 94.9                          |
| Private not-for-profit                               | 32,760           | 31,950                         | 97.7                           | 97.3                          |
| Private for-profit                                   | 17,570           | 16,610                         | 97.6                           | 98.5                          |
| Type of institution                                  |                  |                                |                                |                               |
| Public less-than-2-year                              | 1,730            | 1,480                          | 90.0                           | 88.9                          |
| Public 2-year  | 39,340           | 37,010                         | 92.8                           | 92.2                          |
| Public 4-year non-doctorate granting                 | 16,120           | 15,850                         | 98.0                           | 98.1                          |
| Public 4-year doctorate granting                     | 30,280           | 29,910                         | 97.3                           | 97.4                          |
| Private not-for-profit less-than-4-year              | 2,080            | 1,790                          | 97.0                           | 97.7                          |
| Private not-for-profit 4-year non-doctorate granting | 14,200           | 13,930                         | 97.3                           | 96.8                          |
| Private not-for-profit 4-year doctorate granting     | 16,480           | 16,230                         | 98.0                           | 97.8                          |
| Private for-profit less-than-2-year                  | 6,610            | 6,050                          | 96.1                           | 97.6                          |
| Private for-profit 2-year or more                    | 10,960           | 10,560                         | 98.5                           | 98.7                          |

<sup>1</sup> A study respondent is defined as any eligible sample member for whom sufficient key data were obtained from one or more sources, including student interview, institutional records, and the U.S. Department of Education's Central Processing System (CPS).

<sup>2</sup> Institutional characteristics are based on data from the sampling frame formed from IPEDS:2004–05 and freshened from IPEDS:2005–06.

<sup>3</sup> Sample member eligibility was determined during the student interview or from institutional records in the absence of a student interview.

<sup>4</sup> The weight described in this column is a base weight.

NOTE: Percentages are based on the unrounded count of eligible students within the row under consideration.

Details may not sum to totals because of rounding. IPEDS = Integrated Postsecondary Education Data System

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2007–08 National Postsecondary Student Aid Study (NPSAS:08).

<sup>5</sup> The term *hot deck* refers to the fact that the set of potential donors changes for each recipient. In contrast, *cold deck* imputation defines one static set of donors for all recipients. In all such imputation schemes the selection of the donor from the entire deck is a random process.

Depending on the patterns of missing data, some variables requiring imputation were imputed simultaneously, but the majority of the variables were imputed sequentially. Basic demographic variables were imputed first using variables with nonmissing data. Then, variables with increasing levels of missing data were imputed using previously imputed variables in the determination of optimal matching criteria. The order in which variables were imputed was also determined to some extent by the substantive nature of the variables. Basic demographic variables (such as age) were imputed first and were used to impute education variables (such as attendance status and enrollment intensity). These variables were used to impute financial aid variables (such as aid and loan amounts).

For some variables, logical imputation was used to ensure data consistency. That is, if a consistency relationship specified that the value of a known variable required a specific value of an imputed variable, the imputed variable was assigned the appropriate imputed value, based on the value of the known variable.

For all variables, the matching criteria were determined by using subject-matter expertise and a process called Classification and Regression Trees (CART), which identifies the matching variables that are most closely related to the variable that is being imputed (Breiman et al. 1984). This step produced a number of imputation classes that contain sets of donor variables that were used to impute missing variables belonging to that class.

Next, the imputation classes were used as input to a SAS macro that implemented the weighted sequential hot deck procedure. Additionally, data were sorted within each imputation class to increase the chance of obtaining a close match between donor and recipient. The hot deck process is sequential in that the search for donors occurs sequentially, starting with the recipient and progressing up and down the sorted file to find the set of eligible donors from which a random selection of one was made. The process is weighted since it incorporates the sample weight of each record in the search and selection routine.<sup>6</sup>

In some cases, further intervention was needed to ensure accuracy and consistency of imputation, as determined by preexisting edit rules. For example, to impute the family size for a dependent student when it is known that the parents' marital status is married, the potential pool of donors was limited to those with married parents, so as to prevent imputing family size as a size of two.

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<sup>6</sup> For further details, we suggest Cox (1980) and Iannacchione (1982).

## Weighting

All estimates in this report were weighted to represent the target population described in the “Sample Design” section. The weights compensate for the unequal probability of selection of institutions and students in the NPSAS:08 sample. The weights also adjust for multiplicity at the institutional and student levels, unknown student eligibility, nonresponse, and poststratification. The institution weight was computed and then used as a component of the student weight. All of the weight components, including the probabilities of selection and adjustments, are summarized in table B-3. There is one student analysis weight: *STUDYWT*, which is the product of the weight components below.

**Table B-3. Summary of components of the student analysis weight: 2007–08**

| Weight component                          | Purpose   |
|---|---|
| Institution sampling weight               | To account for the institution’s probability of selection   |
| Institution multiplicity adjustment       | To adjust the weights for institutions that had multiple chances of selection                                   |
| Institution poststratification adjustment | To adjust the institution weights to match population enrollment totals to ensure population coverage           |
| Institution nonresponse adjustment        | To adjust the institution weights to compensate for nonresponding institutions                                  |
| Student sampling weight                   | To account for the student’s probability of selection   |
| Student multiplicity adjustment           | To adjust the weights for students who attended more than one institution                                       |
| Student unknown eligibility adjustment    | To adjust the weights of nonresponding students with unknown eligibility  |
| Student nonresponse adjustment            | To adjust the weights to compensate for nonresponding students  |
| Student poststratification adjustment     | To adjust the student weights to match known population enrollment and aid totals to ensure population coverage |

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2007–08 National Postsecondary Student Aid Study (NPSAS:08).

## Quality of Estimates

### *Bias Analysis: General Description*

NCES Statistical Standard 4-4-1 states that: “Any survey stage of data collection with a unit or item response rate less than 85 percent must be evaluated for the potential magnitude of nonresponse bias before the data or any analysis using the data may be released. Estimates of survey characteristics for nonrespondents and respondents are required to assess the potential nonresponse bias. The level of effort required is guided by the magnitude of the nonresponse” (U.S. Department of Education [ED] 2003). Response rates are discussed below for institutions, students, and items. When response rates were less than 85 percent, a nonresponse bias analysis was conducted. The bias in an estimated mean based on respondents,  $\bar{y}_R$ , is the difference between this mean and the target parameter,  $\pi$ , that is, the mean that

would be estimated if a complete census of the target population was conducted and everyone responded. This bias can be expressed as follows:

$$B(\bar{y}_R) = \bar{y}_R - \pi.$$

The estimated mean based on nonrespondents,  $\bar{y}_{NR}$ , can be computed if data for the particular variable are available for most of the nonrespondents. The true target parameter,  $\pi$ , can be estimated for these variables as follows:

$$\hat{\pi} = (1 - \eta)\bar{y}_R + \eta\bar{y}_{NR}$$

where  $\eta$  is the weighted unit (or item) nonresponse rate. For the variables that are from the frame rather than from the sample,  $\pi$  can be estimated without sampling error. The bias can then be estimated as follows:

$$\hat{B}(\bar{y}_R) = \bar{y}_R - \hat{\pi}$$

or, equivalently,

$$\hat{B}(\bar{y}_R) = \eta(\bar{y}_R - \bar{y}_{NR}).$$

This formula shows that the estimate of the nonresponse bias is the difference between the mean for respondents and nonrespondents, multiplied by the weighted nonresponse rate.

### ***Bias Analysis: Institution-Level***

An institution respondent is defined as any sample institution for which a student list was received that was sufficient for selecting a sample.

As shown in table B-1, 1,730 of the 1,960 eligible sample institutions were respondents (89 percent unweighted and 90 percent weighted). The institution weighted response rate is below 85 percent for two of the nine types of institutions (private not-for-profit less-than 4-year and private for-profit less-than-2-year institutions). The weighted response rates, by type of institution, range from 81 percent for private for-profit less-than-2-year institutions to 95 percent for public 4-year non-doctoral institutions.

A nonresponse bias analysis was conducted for the two types of institutions with a weighted response rate below 85 percent. The nonresponse bias was estimated for variables known, that is, nonmissing, for most respondents and nonrespondents.



There are extensive data available for all institutions from IPEDS, and the following variables were used:<sup>7</sup>

- Carnegie classification;
- degree of urbanization;
- Office of Business Economics (OBE) region;
- Historically Black College or University (HBCU) indicator;
- Hispanic Serving Institution (HSI) indicator;
- percent of students receiving federal grant aid;
- percent of students receiving state/local grant aid;
- percent of students receiving institutional grant aid;
- percent of students receiving student loan aid;
- percent of students enrolled: Hispanic;
- percent of students enrolled: Asian or Pacific Islander;
- percent of students enrolled: Black, non-Hispanic;
- total undergraduate enrollment;
- male undergraduate enrollment; and
- female undergraduate enrollment.

First, for the institution-level variables listed above, the nonresponse bias was estimated and tested to determine if the bias is significant at the 5 percent level. Second, nonresponse adjustments were computed, and the variables listed above were included in the nonresponse models. The nonresponse adjustments (see the weighting section of this appendix) were designed to significantly reduce or eliminate nonresponse bias for variables included in the models. Third, after the weights were computed, any remaining bias was estimated for the variables listed above and statistical tests were performed to check the remaining significant nonresponse bias.

As shown in table B-4, the institution weighting adjustments eliminated some, but not all, significant bias. For private not-for-profit less-than-4-year institutions and private for-profit less-than-2-year institutions, before weighting 15.5 percent and 6.3 percent, respectively, of the variable categories were significantly biased. After weighting, no significant bias remains for the variables analyzed for private not-for-profit less-than-4-year institutions, and 1.6 percent significant bias remained for the variables analyzed for private for-profit less-than-2-year institutions. Significant bias was reduced for the variables known for study respondents, which are considered to be some of the more analytically important variables and are correlated with many of the other variables.

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<sup>7</sup> For the continuous variables, categories were formed based on quartiles.

**Table B-4. Summary of institution nonresponse bias analysis for all institutions, by type of institution: 2007–08**

| Nonresponse bias statistics                         | Private not-for-profit<br>less-than-4-year | Private for-profit<br>less-than-2-year |
|---|--|--|
| Before weight adjustments                           |  |  |
| Mean estimated relative bias                        | 0.10                                       | 0.07                                   |
| Median estimated relative bias                      | 0.06                                       | 0.05                                   |
| Percent of variable categories significantly biased | 15.52                                      | 6.25                                   |
| After weight adjustments                            |  |  |
| Mean estimated relative bias                        | 0.17                                       | 0.13                                   |
| Median estimated relative bias                      | 0.16                                       | 0.09                                   |
| Percent of variable categories significantly biased | #  | 1.56                                   |

# Rounds to zero.

NOTE: Nonresponse bias analysis for selected variables was conducted for the two types of institutions with a weighted response rate less than 85 percent.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2007–08 National Postsecondary Student Aid Study (NPSAS:08).

### ***Bias Analysis: Student-Level***

As mentioned in the “Sample Design” section above, a study respondent is defined as any student sample member who is determined to be eligible for the study and has valid data from any source for a selected set of key analytical variables. While these were the minimal data requirements, the vast majority of study respondents had considerably more complete data.

As shown in table B-2, of the 132,800 eligible students, the unweighted and weighted response rate was 96 percent. The weighted study response rate for students is above 85 percent overall, and for all institution types. The weighted study response rates by type of institution range from 89 percent for students in public less-than-2-year institutions to 99 percent for students in private for-profit 2-year-or-more institutions. Therefore, a student-level nonresponse bias analysis was not necessary for any type of institution.

### ***Bias Analysis: Item-Level***

NCES Statistical Standard 4-4-3C states: “If the overall response rate is acceptable, nonresponse bias analysis may be conducted using data from survey respondents only. Unit level respondents who answered the low response rate item can be compared to unit level respondents who did not answer the item. Final weights and unimputed variables should be used in such an analysis. The comparison items should have very high item response rates. This approach may be limited because it does not directly analyze nonresponse bias that may originate because of unit level nonresponse.”

Moreover, NCES Statistical Standard 1-3-5 states that: “Item response rates (RRI) are calculated as the ratio of the number of respondents for whom an in-scope response was obtained ( $I^x$  for item  $x$ ) to the number of respondents who are asked to answer that item. The number asked to answer an item is the number of unit level respondents ( $I$ ) minus the number of respondents with a valid skip item for item  $x$  ( $V^x$ ). When an abbreviated questionnaire is used to convert refusals, the eliminated questions are treated as item nonresponse” (ED 2003). The item response rate is calculated as:

$$RRI^x = I^x / (I - V^x)$$

A student is defined to be an item respondent for an analytic variable if that student has data for that variable from any source, including logical imputation. Item nonrespondents for analytic variables are study respondents who do not have data for that variable from any source. As shown in table B-5, for the 127,700 responding students, the weighted item response rates for items used in this First Look Report for all students ranged from 60 percent to 100 percent. The weighted item response rates by type of institution ranged from 33 percent to 100 percent.

The primary sources for the components of the composite variables for total grant amount (TOTGRT) and total student loan amount (TOTLOAN) are federal data bases and data obtained from institutional student records. However, there are some types of aid that are often disbursed directly to students and not through the institutional financial offices. These include employer tuition reimbursements (EMPLYAMT), a component of total grants, and private loans (PRIVLOAN), a component of total loans. The primary source for these two components is the student interview. If the student did not complete an interview and the institutional records for that student did not contain any employer aid or private loans for the student, these two variables were set to missing and statistically or logically imputed, and the imputed values were used to construct the composites TOTGRT and TOTLOAN, which are the major components of the total aid variable TOTAID.

Per NCES standard 1-3-5, response rates for composite variables must account for missing inputs prior to imputation. Therefore, some of the NPSAS:08 financial aid variables have lower response rates than in earlier rounds of NPSAS. Most of the components of the constructed variables had response rates greater than 95 percent.

**Table B-5. Weighted item response rates for all students and by type of institution: 2007–08**

| Variable | Variable label                 | All students | Public less-than-2-year | Public 2-year | Public 4-year non-doctorate | Public 4-year doctorate | Private not-for-profit less-than-4-year | Private not-for-profit 4-year non-doctorate | Private not-for-profit 4-year doctorate | Private for-profit less-than-2-year | Private for-profit 2-year or more |
|----------|--------------------------------|--------------|-------------------------|---------------|-----------------------------|-------------------------|---|---|---|-------------------------------------|-----------------------------------|
| ACGAMT   | ACG grants                     | 100.0        | 100.0                   | 100.0         | 100.0                       | 100.0                   | 100.0                                   | 100.0                                       | 100.0                                   | 100.0                               | 100.0                             |
| AIDSECT  | Type of institution            | 100.0        | 100.0                   | 100.0         | 100.0                       | 100.0                   | 100.0                                   | 100.0                                       | 100.0                                   | 100.0                               | 100.0                             |
| AIDSECTG | Type of [graduate] institution | 100.0        | †                       | †             | 100.0                       | 100.0                   | †                                       | 100.0                                       | 100.0                                   | †                                   | 100.0                             |
| ATTNSTAT | Attendance pattern             | 99.8         | 99.2                    | 99.9          | 99.9                        | 100.0                   | 99.5                                    | 99.9  | 99.9                                    | 98.6                                | 98.5                              |
| CAMPAMT  | Federal campus-based aid       | 98.9         | 97.6                    | 98.8          | 99.4                        | 99.3                    | 96.7                                    | 98.1  | 99.0                                    | 94.5                                | 99.3                              |
| DEPEND   | Dependency status              | 91.8         | 90.9                    | 87.7          | 92.4                        | 92.2                    | 96.2                                    | 95.6  | 95.0                                    | 97.2                                | 99.6                              |
| EMPLYAMT | Employer aid                   | 61.1         | 49.1                    | 56.5          | 63.0                        | 68.9                    | 39.6                                    | 63.0  | 68.3                                    | 35.8                                | 53.0                              |
| GPLUSAMT | Graduate PLUS loans            | 100.0        | †                       | †             | 100.0                       | 100.0                   | †                                       | 100.0                                       | 100.0                                   | †                                   | 100.0                             |
| GRADDEG  | Graduate program               | 100.0        | †                       | †             | 100.0                       | 100.0                   | †                                       | 100.0                                       | 100.0                                   | †                                   | 100.0                             |
| GRASTAMT | Graduate assistantships        | 85.5         | †                       | †             | 85.4                        | 87.2                    | †                                       | 83.5  | 85.2                                    | †                                   | 80.1                              |
| INCOME   | Dependency and income in 2006  | 79.0         | 68.3                    | 71.1          | 80.9                        | 82.4                    | 84.8                                    | 85.2  | 83.1                                    | 88.0                                | 90.9                              |
| INGRTAMT | Institutional grants           | 100.0        | 100.0                   | 100.0         | 100.0                       | 100.0                   | 100.0                                   | 100.0                                       | 100.0                                   | 100.0                               | 100.0                             |
| INSTAMT  | Institutional aid total        | 100.0        | 100.0                   | 100.0         | 100.0                       | 100.0                   | 100.0                                   | 100.0                                       | 100.0                                   | 100.0                               | 100.0                             |
| PELLAMT  | Pell Grants                    | 100.0        | 100.0                   | 100.0         | 100.0                       | 100.0                   | 100.0                                   | 100.0                                       | 100.0                                   | 100.0                               | 100.0                             |
| PLUSAMT  | Parent PLUS loans              | 100.0        | 100.0                   | 100.0         | 100.0                       | 100.0                   | 100.0                                   | 100.0                                       | 100.0                                   | 100.0                               | 100.0                             |
| SMARTAMT | SMART grants                   | 100.0        | 100.0                   | 100.0         | 100.0                       | 100.0                   | 100.0                                   | 100.0                                       | 100.0                                   | 100.0                               | 100.0                             |
| STAFFAMT | Stafford loans                 | 100.0        | 100.0                   | 100.0         | 100.0                       | 100.0                   | 100.0                                   | 100.0                                       | 100.0                                   | 100.0                               | 100.0                             |
| STAFSUB  | Stafford subsidized loans      | 100.0        | 100.0                   | 100.0         | 100.0                       | 100.0                   | 100.0                                   | 100.0                                       | 100.0                                   | 100.0                               | 100.0                             |
| STAFUNSB | Stafford unsubsidized loans    | 100.0        | 100.0                   | 100.0         | 100.0                       | 100.0                   | 100.0                                   | 100.0                                       | 100.0                                   | 100.0                               | 100.0                             |
| STATEAMT | State aid total                | 100.0        | 100.0                   | 100.0         | 100.0                       | 100.0                   | 100.0                                   | 100.0                                       | 100.0                                   | 100.0                               | 100.0                             |
| STGTAMT  | State grants                   | 100.0        | 100.0                   | 100.0         | 100.0                       | 100.0                   | 100.0                                   | 100.0                                       | 100.0                                   | 100.0                               | 100.0                             |
| TFEDAID  | Federal aid total              | 98.9         | 97.6                    | 98.8          | 99.4                        | 99.3                    | 96.7                                    | 98.1  | 99.0                                    | 94.5                                | 99.3                              |
| TFEDGRT  | Federal grants                 | 99.0         | 97.7                    | 98.9          | 99.5                        | 99.3                    | 98.5                                    | 98.7  | 99.3                                    | 95.2                                | 99.4                              |
| TFEDLN   | Federal student loans          | 100.0        | 100.0                   | 100.0         | 100.0                       | 100.0                   | 100.0                                   | 100.0                                       | 100.0                                   | 100.0                               | 100.0                             |
| TFEDWRK  | Federal work-study             | 99.5         | 99.3                    | 99.5          | 99.8                        | 99.8                    | 97.6                                    | 98.8  | 99.5                                    | 97.8                                | 99.5                              |
| TITIVAMT | Federal Title IV aid           | 98.9         | 97.6                    | 98.8          | 99.4                        | 99.3                    | 96.7                                    | 98.1  | 99.0                                    | 94.5                                | 99.3                              |
| TOTAID   | Total aid                      | 59.7         | 46.9                    | 55.2          | 62.2                        | 67.6                    | 38.5                                    | 61.3  | 66.6                                    | 33.0                                | 51.0                              |
| TOTGRT   | Total grants                   | 60.6         | 47.8                    | 55.8          | 62.7                        | 68.4                    | 38.7                                    | 62.2  | 67.8                                    | 33.4                                | 52.8                              |
| TOTLOAN  | Student loans                  | 66.8         | 52.3                    | 59.1          | 69.4                        | 76.0                    | 47.0                                    | 70.8  | 75.9                                    | 47.0                                | 61.9                              |
| TOTWKST  | Work-study                     | 99.5         | 99.3                    | 99.5          | 99.8                        | 99.8                    | 97.6                                    | 98.8  | 99.5                                    | 97.8                                | 99.5                              |
| VETBEN   | Veterans benefits              | 99.6         | 99.7                    | 99.5          | 99.5                        | 99.9                    | 99.9                                    | 99.2  | 99.9                                    | 99.9                                | 99.6                              |

† Not applicable.

NOTE: Weighted item response rates are calculated per NCES Statistical Standard 1-3-5 as the ratio of the number of respondents for whom an in-scope response was obtained to the number of respondents who are asked to answer that item.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2007–08 National Postsecondary Student Aid Study (NPSAS:08).

Six of the items (INCOME, GRASTAMT, TOTLOAN, EMPLYAMT, TOTGRT, and TOTAID)<sup>8</sup> had a weighted response rate below 85 percent. As shown in table B-5, the response rates for five of these six items were below 85 percent for all students and for most of the nine institution types, with six exceptions. A nonresponse bias analysis was conducted for these six items. The nonresponse bias was estimated for variables known, that is, nonmissing, for study respondents. These variables are important to the study and will be related to many of the items being analyzed for low item response rates. Two of the variables were known only for federally aided students. The following variables were used:<sup>9</sup>

For all sample members:

- institution type;<sup>10</sup>
- student type;
- OBE region;
- total institution enrollment;
- gender;
- age group;
- CPS match (yes/no);
- federal aid recipient (yes/no);
- Pell Grant recipient (yes/no); and
- Stafford loan recipient (yes/no).

For federally aided students:

- Pell Grant amount; and
- Stafford loan amount.

For these items, the nonresponse bias was estimated as described in the above section for each of the variables known for study respondents and tested to determine if the bias is significant at the 5 percent level.

Table B-6 lists the six items having significant bias prior to imputation. A by-product of the imputation (described in the imputation section of this appendix) is the reduction or elimination of item-level nonresponse bias.

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<sup>8</sup> See appendix A for descriptions of these items.

<sup>9</sup> For the continuous variables, categories were formed based on quartiles.

<sup>10</sup> Institution type was only used in the nonresponse bias analysis for all students.

While item-level bias before imputation is measurable, such bias after imputation is not, so how well the imputation worked in reducing bias cannot be directly evaluated. Therefore, the item estimates before and after imputations were compared to determine whether the imputation changed the biased estimate, thus suggesting a reduction in bias.

For continuous variables, the difference between the mean before imputation and the mean after imputation was estimated. For categorical variables, the estimated difference was computed for each of the categories as the percentage of students in that category before imputation minus the percentage of students in that category after imputation. The estimated change in means before and after imputation was then tested to determine if the difference was significant at the 5 percent level.

The relative item nonresponse bias in estimates before imputation is not comparable to the percent difference in means after imputation due to the difference in how the measures are calculated. Because imputation procedures are designed specifically to identify donors with similar characteristics to those with missing data, the imputation is assumed to reduce bias within imputation classes.

A significant difference in the item means after imputation implies a reduction in bias due to imputation. Likewise, a nonsignificant difference suggests that imputation may not have reduced bias, the sample size was too small to detect a significant difference, or there was little bias to be reduced.

As shown in table B-6, there are significant differences between estimates computed before and after imputation for five of the six variables analyzed, indicating a likely reduction in bias. No significant differences were found for GRASTAMT because there was a small amount of bias prior to imputation and the sample sizes were small as this variable is applicable only to graduate students. The other five items all have significant differences for the public 2-year, public 4-year, and private not-for-profit 4-year institution types, and some of these five items have significant differences for the remaining institution types.

**Table B-6. Summary of item nonresponse bias analysis for all students and by type of institution: 2007–08**

| Variable          | Variable label   | All students | Public less-than-2-year | Public 2-year | Public 4-year non-doctorate | Public 4-year doctorate | Private not-for-profit less-than-4-year | Private not-for-profit 4-year non-doctoral | Private not-for-profit 4-year doctoral | Private for-profit less-than-2-year | Private for-profit 2-year or more |
|-------------------|--|--------------|-------------------------|---------------|-----------------------------|-------------------------|---|--|--|-------------------------------------|-----------------------------------|
| EMPLYAMT          | Employer aid   |              |                         |               |                             |                         |   |  |  |                                     |                                   |
| Before imputation |  |              |                         |               |                             |                         |   |  |  |                                     |                                   |
|                   | Mean estimated relative bias   | 0.12         | 0.09                    | 0.07          | 0.07                        | 0.06                    | 0.15                                    | 0.11                                       | 0.08                                   | 0.18                                | 0.11                              |
|                   | Median estimated relative bias   | 0.05         | 0.04                    | 0.03          | 0.03                        | 0.02                    | 0.13                                    | 0.03                                       | 0.02                                   | 0.06                                | 0.05                              |
|                   | Significant bias   | 0.69         | 0.03                    | 0.55          | 0.51                        | 0.44                    | 0.31                                    | 0.53                                       | 0.38                                   | 0.30                                | 0.34                              |
| After imputation  |  |              |                         |               |                             |                         |   |  |  |                                     |                                   |
|                   | Percent difference in pre-imputation and post-imputation means                     | 0.14*        | 0.23                    | 0.09*         | 0.12*                       | 0.10*                   | 0.51*                                   | 0.10*                                      | 0.08*                                  | #                                   | 0.08                              |
| GRASTAMT          | Graduate assistantships  |              |                         |               |                             |                         |   |  |  |                                     |                                   |
| Before imputation |  |              |                         |               |                             |                         |   |  |  |                                     |                                   |
|                   | Mean estimated relative bias   | 0.09         | †                       | †             | †                           | †                       | †                                       | 0.12                                       | †                                      | †                                   | 0.09                              |
|                   | Median estimated relative bias   | 0.03         | †                       | †             | †                           | †                       | †                                       | 0.03                                       | †                                      | †                                   | 0.06                              |
|                   | Significant bias   | 0.27         | †                       | †             | †                           | †                       | †                                       | 0.14                                       | †                                      | †                                   | 0.16                              |
| After imputation  |  |              |                         |               |                             |                         |   |  |  |                                     |                                   |
|                   | Percent difference in pre-imputation and post-imputation means                     | #            | †                       | †             | †                           | †                       | †                                       | 0.23                                       | †                                      | †                                   | 1.00                              |
| INCOME            | Dependency and income in 2006  |              |                         |               |                             |                         |   |  |  |                                     |                                   |
| Before imputation |  |              |                         |               |                             |                         |   |  |  |                                     |                                   |
|                   | Mean estimated relative bias   | 0.10         | 0.19                    | 0.12          | 0.10                        | 0.08                    | 0.08                                    | †  | 0.11                                   | †                                   | †                                 |
|                   | Median estimated relative bias   | 0.04         | 0.19                    | 0.05          | 0.04                        | 0.03                    | 0.06                                    | †  | 0.05                                   | †                                   | †                                 |
|                   | Significant bias   | 0.86         | 0.47                    | 0.66          | 0.62                        | 0.56                    | 0.47                                    | †  | 0.65                                   | †                                   | †                                 |
| After imputation  |  |              |                         |               |                             |                         |   |  |  |                                     |                                   |
|                   | Percent difference in pre-imputation and post-imputation distribution <sup>†</sup> | 0.06*        | 0.14*                   | 0.09*         | 0.06*                       | 0.06*                   | 0.10*                                   | †  | 0.06*                                  | †                                   | †                                 |

See notes at end of table.

**Table B-6. Summary of item nonresponse bias analysis for all students and by type of institution: 2007–08—Continued**

| Variable   | Variable label       | All students | Public less-than-2-year | Public 2-year | Public 4-year non-doctorate | Public 4-year doctorate | Private not-for-profit less-than-4-year | Private not-for-profit 4-year non-doctoral | Private not-for-profit 4-year doctoral | Private for-profit less-than-2-year | Private for-profit 2-year or more |
|--|----------------------|--------------|-------------------------|---------------|-----------------------------|-------------------------|---|--|--|-------------------------------------|-----------------------------------|
| <b>TOTAID</b>  | <b>Total aid</b>     |              |                         |               |                             |                         |   |  |  |                                     |                                   |
| Before imputation  |                      |              |                         |               |                             |                         |   |  |  |                                     |                                   |
| Mean estimated relative bias                                   |                      | 0.12         | 0.10                    | 0.09          | 0.08                        | 0.06                    | 0.15                                    | 0.12                                       | 0.08                                   | 0.16                                | 0.12                              |
| Median estimated relative bias                                 |                      | 0.05         | 0.04                    | 0.02          | 0.03                        | 0.02                    | 0.09                                    | 0.04                                       | 0.02                                   | 0.10                                | 0.05                              |
| Significant bias   |                      | 0.73         | #                       | 0.50          | 0.51                        | 0.49                    | 0.28                                    | 0.53                                       | 0.35                                   | 0.24                                | 0.32                              |
| After imputation   |                      |              |                         |               |                             |                         |   |  |  |                                     |                                   |
| Percent difference in pre-imputation and post-imputation means |                      | 0.12*        | 0.16                    | 0.15*         | 0.09*                       | 0.07*                   | 0.13                                    | 0.10*                                      | 0.08*                                  | 0.08*                               | 0.06*                             |
| <b>TOTGRT</b>  | <b>Total grants</b>  |              |                         |               |                             |                         |   |  |  |                                     |                                   |
| Before imputation  |                      |              |                         |               |                             |                         |   |  |  |                                     |                                   |
| Mean estimated relative bias                                   |                      | 0.12         | 0.10                    | 0.09          | 0.08                        | 0.06                    | 0.15                                    | 0.11                                       | 0.08                                   | 0.16                                | 0.12                              |
| Median estimated relative bias                                 |                      | 0.05         | 0.04                    | 0.02          | 0.03                        | 0.03                    | 0.09                                    | 0.03                                       | 0.02                                   | 0.09                                | 0.05                              |
| Significant bias   |                      | 0.73         | #                       | 0.50          | 0.51                        | 0.46                    | 0.28                                    | 0.53                                       | 0.40                                   | 0.27                                | 0.34                              |
| After imputation   |                      |              |                         |               |                             |                         |   |  |  |                                     |                                   |
| Percent difference in pre-imputation and post-imputation means |                      | 0.15*        | 0.18                    | 0.09*         | 0.10*                       | 0.09*                   | 0.11                                    | 0.12*                                      | 0.10*                                  | 0.05                                | 0.07                              |
| <b>TOTLOAN</b>   | <b>Student loans</b> |              |                         |               |                             |                         |   |  |  |                                     |                                   |
| Before imputation  |                      |              |                         |               |                             |                         |   |  |  |                                     |                                   |
| Mean estimated relative bias                                   |                      | 0.12         | 0.11                    | 0.08          | 0.08                        | 0.06                    | 0.14                                    | 0.11                                       | 0.08                                   | 0.14                                | 0.10                              |
| Median estimated relative bias                                 |                      | 0.05         | 0.06                    | 0.04          | 0.04                        | 0.02                    | 0.11                                    | 0.04                                       | 0.03                                   | 0.07                                | 0.04                              |
| Significant bias   |                      | 0.80         | 0.03                    | 0.50          | 0.62                        | 0.51                    | 0.28                                    | 0.40                                       | 0.45                                   | 0.38                                | 0.37                              |
| After imputation   |                      |              |                         |               |                             |                         |   |  |  |                                     |                                   |
| Percent difference in pre-imputation and post-imputation means |                      | 0.18*        | 0.23                    | 0.21*         | 0.16*                       | 0.12*                   | 0.30                                    | 0.12*                                      | 0.13*                                  | 0.12*                               | 0.09*                             |

† Not applicable.

# Rounds to zero.

\* Bias is significant at the 0.05 level.

<sup>1</sup> The percent difference for INCOME is the mean of the percent differences across the 16 categories of INCOME.

NOTE: All numbers are expressed as a proportion. The relative bias estimated before imputation and percent difference in pre- and post-imputation means are expressed in terms of the absolute value of the relative bias. The relative bias is not comparable to the percent difference due to the difference in how the measures are calculated. Because imputation procedures are designed specifically to identify donors with similar characteristics to those with missing data, the imputation is assumed to reduce bias within imputation classes. A significant difference in the item means after imputation implies a reduction in bias due to imputation. Similarly, a nonsignificant difference suggests that imputation may not have reduced bias, the sample size was too small to detect a significant difference, or there was little bias to be reduced.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2007–08 National Postsecondary Student Aid Study (NPSAS:08).



## Standard Errors

To facilitate computation of standard errors for both linear and nonlinear statistics, a vector of bootstrap sample weights has been added to the analysis file. These weights are zero for units not selected in a particular bootstrap sample; weights for other units are inflated for the bootstrap subsampling. The initial analytic weights for the complete sample are also included for the purpose of computing the desired estimates. The vector of replicate weights allows for computing additional estimates for the sole purpose of estimating a variance. Assuming  $B$  sets of replicate weights, the variance of any estimate can be estimated by replicating the estimation procedure for each replicate and computing a simple variance of the replicate estimates; that is,

$$\text{Var}(\hat{\theta}) = \frac{\sum_{b=1}^B (\hat{\theta}_b^* - \hat{\theta})^2}{B}$$

where  $\hat{\theta}_b^*$  is the estimate based on the  $b$ th replicate weight (where  $b = 1$  to the number of replicates) and  $B$  is the total number of sets of replicate weights. Once the replicate weights are provided, this estimate can be produced by most survey software packages (e.g., *SUDAAN* [RTI International 2008]).

The replicate weights were produced using a methodology combining approaches developed by Flyer (1987) and Kott (1988). The NPSAS application of the method incorporated the finite population correction factor at the first stage only following the methodology proposed by Chromy (1979).

## Cautions for Analysts

The NPSAS study is a recurring cross-sectional study that was first conducted during the 1986–87 school year. Since 1987, six subsequent studies have been carried out. Over time, the NPSAS study design has changed. The following sections describe some of the design modifications that analysts should consider when using NPSAS:08 data.

**Multiple institutions.** Students who attended more than one institution during the 2007–08 academic year (about 8 percent of undergraduates and 4 percent of graduate and first-professional students) were coded in a separate category (“more than one institution”) for institution type and attendance pattern. The institution types represent the type of institution (e.g., public, private; for-profit, not-for-profit) in which students were sampled for the study. If students attended more than one

institution during the year, they may have received their financial aid at several different types of institutions, and their attendance pattern may have varied at each institution. Although included in the “totals” in this report, students who attended multiple institutions were excluded in the estimates by institution type and attendance pattern.

**Twelve-month enrollments.** The NPSAS:08 sample included students who were enrolled at any time over the course of 12 months, from July 1, 2007, through June 30, 2008, so the weighted enrollment estimates will be higher than the enrollments reported in IPEDS for fall 2007. Major differences exist between fall and 12-month enrollments in less-than-4-year institutions (especially private for-profit institutions) that have nontraditional calendars with students starting enrollment at any time of year and in public 2-year institutions where a large proportion of students are enrolled for only one term. Analysts can limit the analysis to fall enrollments by filtering on the attendance intensity in the fall variable (ATTEND).

**Inclusion of Puerto Rico.** All of the NPSAS surveys (with the exception of NPSAS:87) included institutions in Puerto Rico, which often are not included in other national surveys. Postsecondary institutions in Puerto Rico represent only 1 percent of national undergraduate enrollments, but they represent about 10 percent of the Hispanic students in NPSAS:08. Furthermore, Puerto Rico does not have a public 2-year community college system. Analysts interested in national studies of Hispanic students can exclude Puerto Rico by filtering on the institution state variable (INSTSTAT).

**Comparisons to prior NPSAS studies.** In general, all of the NPSAS studies beginning with NPSAS:90 have comparable data. The major differences among the surveys are the following:

- **NPSAS:87:** The first NPSAS survey only included a sample of students who were enrolled in fall 1986, while subsequent NPSAS samples included students who were enrolled over a 12-month enrollment period. The aid estimates reflect full-year amounts of aid but only for students who were enrolled in fall 1986. In addition, the NPSAS:87 sample excluded Puerto Rico. The comparability variable COMPTO87 can be used as a filter in later surveys to make comparisons with NPSAS:87, but it does not include all of the variables available in the later surveys.
- **State-level representation:** The NPSAS study is a nationally representative sample of all students in postsecondary institutions. In addition, both NPSAS:04 and NPSAS:08 included state-level representative samples for a select number of states and institution types. NPSAS:04 has representative

samples of undergraduates in three types of institutions (public 2-year, public 4-year, private not-for-profit 4-year) in 12 states (California, Connecticut, Delaware, Georgia, Illinois, Indiana, Minnesota, Nebraska, New York, Oregon, Tennessee, and Texas). These students can be identified by using the representative sample state identifier variable (INSTSAST). The NPSAS:08 and NPSAS:04 studies are not representative at the state level for undergraduates in other types of institutions or in other states not listed. Previous NPSAS studies are only representative at the national level and not at the state level for any students. None of the NPSAS studies are representative at the state level for graduate and first-professional students.

- **Title IV federal aid eligibility:** For NPSAS:2000 and later studies, the survey was restricted to institutions participating in Title IV federal student aid programs. In NPSAS:96 and earlier surveys, about 1 percent of the sampled undergraduates were attending an institution not eligible to participate in Title IV federal aid programs. The ineligible institutions were primarily less-than-2-year private for-profit institutions, and they may be excluded using the Title IV federal aid eligibility variable (T4ELIG) as a filter in the earlier surveys.

**Sources of error.** The estimates in this report are subject to sampling and nonsampling errors. Nonsampling errors are due to a number of sources, including (but not limited to) nonresponse, coding and data entry errors, misspecification of composite variables, and inaccurate imputations. In a study like NPSAS, there are multiple sources of data for some variables (CPS, CADE, student interview, etc.), and reporting differences can occur in each. Data swapping and other forms of perturbation were implemented to protect respondent confidentiality.

Sampling errors exist in all sample-based datasets, including NPSAS. Estimates calculated from a sample will differ from estimates calculated from other samples, even if all the samples used the same sample design and methods. For similar reasons, estimates of average aid amounts based on the NPSAS sample will probably differ from specific program amounts reported by a department's program offices.

The standard error is a measure of the precision of the estimate. In this tabulation, each estimate's standard error was calculated using bootstrap replication procedures and can be produced using NPSAS:08 online DAS software described in the next section. Standard errors for table 1 are presented in table B-7.

**Table B-7. Standard errors for table 1. Percentage of undergraduates receiving selected types of financial aid, by type of institution, attendance pattern, dependency status, and income level: 2007–08**

| Institution and student characteristics | Any aid | Any grants | Student loans | Work-study | Veterans' benefits | Parent PLUS loans |
|---|---------|------------|---------------|------------|--------------------|-------------------|
| Total                                   | 1.20    | 0.96       | 0.23          | 0.20       | 0.11               | 0.09              |
| All undergraduates                      |         |            |               |            |                    |                   |
| Type of institution                     |         |            |               |            |                    |                   |
| Public                                  |         |            |               |            |                    |                   |
| Less-than-2-year                        | 3.11    | 2.19       | 1.49          | #          | 0.28               | 0.41              |
| 2-year                                  | 2.42    | 1.99       | 0.41          | 0.27       | 0.21               | 0.03              |
| 4-year non-doctorate-granting           | 0.76    | 0.87       | 0.78          | 0.50       | 0.14               | 0.27              |
| 4-year doctorate-granting               | 0.86    | 0.58       | 0.59          | 0.33       | 0.18               | 0.31              |
| Private not-for-profit                  |         |            |               |            |                    |                   |
| Less-than-4-year                        | 2.99    | 2.55       | 1.28          | 0.59       | 0.44               | 2.12              |
| 4-year non-doctorate-granting           | 1.06    | 1.13       | 1.04          | 1.28       | 0.20               | 0.63              |
| 4-year doctorate-granting               | 1.21    | 1.18       | 1.01          | 0.87       | 0.19               | 0.51              |
| Private for-profit                      |         |            |               |            |                    |                   |
| Less-than-2-year                        | 1.13    | 1.12       | 0.84          | 0.10       | 0.20               | 0.53              |
| 2-year or more                          | 0.18    | 1.05       | 0.18          | 0.37       | 0.48               | 0.49              |
| More than one institution               | 2.05    | 1.66       | 2.73          | 0.44       | 0.20               | 0.33              |
| Attendance pattern                      |         |            |               |            |                    |                   |
| Full-time/full-year                     | 0.37    | 0.38       | 0.42          | 0.29       | 0.11               | 0.18              |
| Part-time or part-year                  | 1.86    | 1.50       | 0.62          | 0.23       | 0.13               | 0.08              |
| Full-time/full-year undergraduates      |         |            |               |            |                    |                   |
| Dependency status                       |         |            |               |            |                    |                   |
| Dependent                               | 0.47    | 0.51       | 0.37          | 0.33       | 0.06               | 0.23              |
| Independent                             | 0.43    | 0.67       | 1.04          | 0.36       | 0.41               | †                 |
| Dependency and income in 2006           |         |            |               |            |                    |                   |
| Dependent students                      |         |            |               |            |                    |                   |
| Less than \$20,000                      | 0.85    | 0.95       | 1.07          | 0.98       | 0.16               | 0.37              |
| \$20,000–39,999                         | 0.49    | 0.65       | 1.05          | 0.78       | 0.17               | 0.50              |
| \$40,000–59,999                         | 0.84    | 0.97       | 0.97          | 0.72       | 0.16               | 0.47              |
| \$60,000–79,999                         | 0.87    | 1.03       | 0.89          | 0.86       | 0.16               | 0.60              |
| \$80,000–99,999                         | 0.87    | 1.07       | 1.03          | 0.86       | 0.13               | 0.65              |
| \$100,000 or more                       | 0.76    | 0.91       | 0.59          | 0.42       | 0.09               | 0.41              |
| Independent students                    |         |            |               |            |                    |                   |
| Less than \$10,000                      | 0.74    | 1.05       | 1.47          | 0.71       | 0.41               | †                 |
| \$10,000–19,999                         | 0.75    | 1.09       | 1.35          | 0.62       | 0.68               | †                 |
| \$20,000–29,999                         | 1.24    | 1.81       | 1.57          | 0.71       | 0.82               | †                 |
| \$30,000–49,999                         | 1.18    | 1.58       | 1.83          | 0.58       | 0.89               | †                 |
| \$50,000 or more                        | 1.83    | 2.52       | 2.71          | 0.81       | 1.31               | †                 |

# Rounds to zero.

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2007–08 National Postsecondary Student Aid Study (NPSAS:08).

## Data Analysis System (DAS)

The estimates presented in the report were produced using NPSAS:08 DAS, a web-based software application that enables users to generate tables for most of the postsecondary surveys conducted by NCES. DAS produces the design-adjusted standard errors necessary for testing the statistical significance of differences in the estimates. DAS also contains a detailed description of how each variable was created and includes the wording of questions for items coming directly from the interview.

With DAS, users can replicate or expand on the tables presented in this report. The output from DAS includes the table estimates (e.g., percentages or means), the proper standard errors,<sup>11</sup> and weighted sample sizes for the estimates. If the number of valid cases is too small (i.e., fewer than 30 cases) to produce a reliable estimate, DAS prints the message “low-*N*” instead of the estimate.

In addition to tables, DAS users may conduct covariance analyses, either with weighted least squares regression or logistic regression. Many options are available for output with the regression results. For example, a Winsor filter can be used to eliminate cases with extreme values by deleting a certain percentage of cases from the top and bottom of the range. For a description of all the options available, users should access the DAS website indicated below. If users are new to DAS, the DAS User Help Center provides online tutorials offering step-by-step instructions in how to use all the functions of DAS.

DAS can be accessed electronically at <http://nces.ed.gov/DAS>. For more information, contact:

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<sup>11</sup> NPSAS samples are not simple random samples; therefore, simple random sample techniques for estimating sampling errors cannot be applied to these data. DAS takes into account the complexity of the sampling procedures and calculates standard errors appropriate for such samples. The method for computing sampling errors used by DAS involves approximating the estimator by replication of the sampled population. The procedure used is a bootstrap technique.

## Appendix B References

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