STATS IN BRIEF

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Federal Student Loan Debt Burden of Noncompleters

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Statistics in Brief publications present descriptive data in tabular formats to provide useful information to a broad audience, including members of the general public. They address simple and topical issues and questions. They do not investigate more complex hypotheses, account for inter-relationships among variables, or support causal inferences. We encourage readers who are interested in more complex questions and in-depth analysis to explore other NCES resources, including publications, online data tools, and public- and restricted-use datasets. See nces.ed.gov and references noted in the body of this document for more information.

Nearly half of all undergraduates

take out student loans over the course of their enrollment to help them pay for their postsecondary education; this includes nearly two-thirds of students who attend private nonprofit 4-year colleges and about 90 percent of students enrolled in for-profit institutions (Wei and Skomsvold 2011, table 1). In the decade between 2000–01 and 2010–11, total borrowing per full-time-equivalent (FTE) undergraduate student increased by 56 percent (Baum and Payea 2011). While student loans improve access to postsecondary education, repaying them has become increasingly difficult for students who are unemployed, underemployed, or who earn a limited income; furthermore, these circumstances are more common among students who do not complete a degree than among those who do (Gladieux and Perna 2005; Nguyen 2012). Several studies and government reports have highlighted the problems of heavy borrowing, high default rates, and unmanageable debt among students who graduate from postsecondary education with a degree or credential (Choy and Li 2006; GAO 2009; Rothstein and Rouse 2011).

This Statistics in Brief focuses on students who do not complete a postsecondary credential and the substantial federal

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education debt they accrue.[1] Specifically, the analysis compares the cumulative debt from Stafford and Perkins loan programs of students who did not complete a degree within 6 years of first enrolling (*noncompleters*) with that of their counterparts who did complete (*completers*). Students still enrolled in postsecondary education after 6 years are not included because many of these students have not yet entered repayment or formally entered the labor force and lack sufficient income data for a key measure used in the analysis (the total-federal-debt-to-annual-income ratio, explained below). These students constitute 15 percent of beginning postsecondary students in 2009 and 14 percent in 2001 (Berkner, He, and Cataldi 2002; Skomsvold, Radford, and Berkner 2011, table 2.0A).

The study is based on data from the two most recent cohorts of first-time beginning postsecondary students surveyed by the National Center for Education Statistics (NCES): students who began postsecondary education in 1995–96 and those who began in 2003–04. Each cohort was followed for 6 years, with final data collection for each cohort occurring in 2001 and 2009, respectively. The sampled students were identified in the 1995–96 and 2003–04 National Postsecondary Student Aid Studies (NPSAS), respectively, and followed up in the corresponding Beginning Postsecondary Students (BPS) Longitudinal Studies (BPS:95/01 and BPS:04/09).

Measures of borrowing and debt analyzed in the study include the following: the percentage of students who borrowed from federal loan programs (Stafford and Perkins), the average cumulative amount borrowed through those programs, and the average federal amount borrowed per credit earned. Throughout this report, cumulative or total debt refers to debt from federal Stafford and Perkins loan programs accrued throughout students' enrollment over the 6-year study period regardless of whether they were enrolled continuously.

A key measure analyzed in the study is debt burden, defined as the ratio of borrowers' cumulative federal debt to their annual income, or *total-federal-debt-to-annual-income ratio,* 6 years after they first enrolled. The concept of debt-to-income ratio, referring to monthly loan repayments relative to monthly earnings, has been widely used in past research (Baum and Saunders 1998; Choy and Li 2006; Gladieux and Perna 2005). In contrast, the current study uses *total* federal student loan debt relative to *annual* income in order to capture debt burden for all borrowers.

Although the total-federal-debt-to-annual-income ratio used in this study has not, to our knowledge, been used in prior scholarship, we prefer it to other commonly used metrics for two reasons. Foremost, monthly loan payments can be zero under many circumstances, even when borrowers still owe. For example, borrowers may be in the 6-month grace period, have obtained a hardship deferment, be in forbearance, have defaulted, or now increasingly, be participating in the Income-Based Repayment program. In each of these cases, the monthly payment is zero, but the total loan remains to be repaid and usually continues to accrue interest.

Second, the total-federal-debt-to-annual-income ratio allows for the inclusion of unemployed borrowers. This is important both for analyzing changes over time and because noncompleters, the focus of this study, tend to have relatively high unemployment rates. When analyzing changes over time, it is important to take into account circumstances that might affect the metric's numerator, denominator, and the underlying population. For example, if the unemployment rate changes between cohorts, the underlying population of students in repayment changes as well. This change cannot be accounted for by using the monthly repayment metric, which excludes unemployed borrowers. Therefore, the current study, which includes employed and unemployed borrowers and analyzes changes between two cohorts, uses the total-federal-debt-to-annual-income ratio. By definition, unemployed borrowers have zero earnings. In order to be able to estimate a ratio and include them in

[1] The analysis is limited to federal student loan debt because data on private borrowing are available only for the 2003–04 cohort and were provided by respondents. In contrast, administrative data on federal borrowing, which are more reliable than student-provided data, are available from the National Student Loan Data System for both cohorts.

the analyses, their total-federal-debt-to-annual-income ratio was set to 100. A limitation to this approach is the inability to distinguish between unemployed borrowers with zero income and employed borrowers with a total debt equal to or exceeding 100 percent of their income. Therefore, the report includes data on the percentage of borrowers with a debt burden of 100 percent who were unemployed (bottom of figure 8 on page 12).

In addition, the specific total-federal-debt-to-annual-income ratio variable used here is also of value because one component—total federal debt—is derived from the National Student Loan Data System (NSLDS) and may therefore be more reliable than ratios created entirely from student-reported data, the typical source of monthly loan repayment information (Porter 2011).

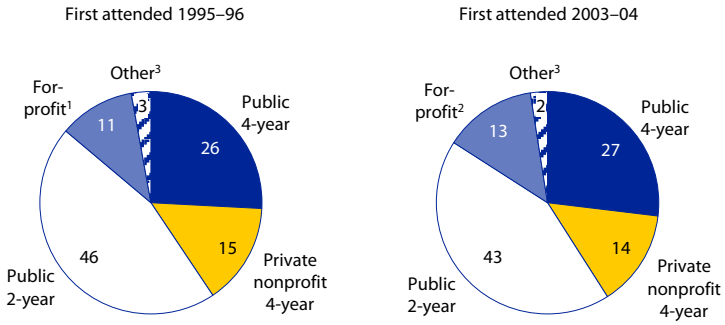
Students included in the analysis are those who began postsecondary education in one of the four major institution sectors: public 4-year, public 2-year, private nonprofit 4-year, and for-profit institutions (at all levels). These students constitute all but 2–3 percent of beginning postsecondary students in the two cohorts (figure 1).[2] The four subgroups are analyzed separately because the price to attend different institutions and the income levels of students who attend them vary substantially across the four sectors (Wei 2010, figure 1; Staklis 2010, table 3.5-C).

This approach does not take into account transfers, whose debt may be affected by transferring to a more or less expensive institution. Transfer primarily occurs between public 2-year and 4-year institutions; about one-quarter of students who start in a public 2-year college transfer to a 4-year institution and among these transfers, about 44 percent complete a degree (Horn and Skomsvold 2011, tables 3-B and 5-B). The inclusion of transfers among students who start in public 2-year institutions will result in a slight underestimation of their cumulative debt. However, as this report shows, the percentage who borrow and the cumulative debt of public 2-year students is very low relative to their counterparts in the three other institution sectors analyzed.

Comparisons within sectors are made for the borrowing and debt variables previously discussed, completion status, and employment status. Small sample sizes precluded breaking out results for each sector by student characteristics. Similarly, small sample sizes precluded breaking out for-profit institutions into three levels, less-than-2-year, 2-year, and 4-year, which represent 6 percent, 4 percent, and 3 percent of BPS students, respectively

FIGURE 1.

INSTITUTION FIRST ATTENDED
Percentage distribution of beginning postsecondary students, by type of first institution attended: 1995–96 and 2003–04



[1] Includes less-than-2-year (7 percent), 2-year (4 percent), and 4-year institutions (1 percent).
[2] Includes less-than-2-year (6 percent), 2-year (4 percent), and 4-year institutions (3 percent).
[3] Includes private nonprofit 2-year, public less-than-2-year, and private nonprofit less-than-2-year institutions.
NOTE: Estimates include students enrolled in Title IV eligible postsecondary institutions in the 50 states, the District of Columbia, and Puerto Rico. Detail may not sum to totals because of rounding. Standard error tables are available at http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2013155.
SOURCE: Berkner, L., Horn, L., and Clune, M. (2000). *Descriptive Summary of 1995–96 Beginning Postsecondary Students: Three Years Later*, Table 6.3-A (NCES 2000-154). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC; and Skomsvold, P., Radford, A.W., and Berkner, L. (2011). *Six-Year Attainment, Persistence, Transfer, Retention, and Withdrawal Rates of Students Who Began Postsecondary Education in 2003–04*, Tables 1.0 and 1.1-A (NCES 2011-152). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

[2] Excluded students are those who start in public less-than-2-year institutions and private nonprofit less-than-4-year institutions; they constituted about 2.4 percent of 2003–04 beginning postsecondary students (Skomsvold, Radford, and Berkner 2011, table 1).

(Berkner, He, and Cataldi 2002; Skomsvold, Radford, and Berkner 2011, table 1).

A student's degree program may also affect the amount of debt accrued. For example, a certificate program may be substantially shorter than an associate's degree program (Horn and Li 2009). Table 1 provides additional detail about the most recent BPS cohort, showing how noncompleters and completers are distributed by their first degree program within each of the four institution sectors. Most notably, two-thirds of completers in the for-profit sector began in certificate programs, compared with 46 percent of noncompleters. Otherwise, the table demonstrates that 4-year colleges are comprised mainly of students who started in bachelor's degree programs and 2-year colleges are comprised mainly of students who started in associate's degree programs. In both public and private nonprofit 4-year colleges, proportionately more noncompleters than completers started in associate's degree programs.

All comparisons of estimates were tested for statistical significance using the Student's *t*-statistic, and all differences cited are statistically significant at the $p < .05$ level.[3]

TABLE 1. DEGREE PROGRAM OF NONCOMPLETERS AND COMPLETERS
Percentage distribution of beginning postsecondary students, by their degree program when first enrolled at their first institution attended: 2009

	Bachelor's	Associate's	Certificate	No degree program
Noncompleters				
Total	23.1	54.0	11.3	11.7
Public 4-year	84.6	7.8	2.1 !	5.5
Private nonprofit 4-year	86.2	7.7	‡	‡
Public 2-year	#	79.4	3.0	17.5
All for-profit	13.3	38.6	45.5	2.5
Completers				
Total	53.0	29.2	12.5	5.3
Public 4-year	94.2	2.8	0.2 !	2.8
Private nonprofit 4-year	95.0	3.6	0.4 !	1.0 !
Public 2-year	#	79.4	7.4	13.2
All for-profit	7.9	25.3	65.9	‡

Rounds to zero.
! Interpret data with caution. Estimate is unstable because the standard error represents more than 30 percent of the estimate.
‡ Reporting standards not met. Too few cases for a reliable estimate.
NOTE: "Completers" includes all who completed any degree or certificate by 2009; "Noncompleters" includes those who were not enrolled in 2009 and had not completed any degree or certificate by 2009. Excludes those who had not completed a degree or certificate and were still enrolled and those who first enrolled at public less-than-2-year or private nonprofit less-than-4-year institutions. Estimates include students enrolled in Title IV eligible postsecondary institutions in the 50 states, the District of Columbia, and Puerto Rico. Detail may not sum to totals because of rounding. Standard error tables are available at http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2013155.
SOURCE: U.S. Department of Education, National Center for Education Statistics, 2003/04 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:04/09).

[3] No adjustments for multiple comparisons were made. The standard errors for the estimates can be found at http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2013155.

STUDY QUESTIONS

1 How prevalent is noncompletion, and how did it change over the study time period between 2001 and 2009? At what rate did noncompleters borrow from federal student loan programs, and how did this rate and their cumulative federal education debt change over the same time period?

2 How did noncompleters' rate of borrowing, the accumulated amount borrowed, and the amount borrowed per credit earned differ from those of completers? How did noncompleters' employment rate after leaving postsecondary education differ from that of completers?

3 What was noncompleters' median cumulative federal debt relative to their annual income in 2009? What percentage of noncompleters had a cumulative federal debt burden that equaled or exceeded 100 percent of their annual income, and how did it change over time?

KEY FINDINGS

- In 2009, the percentage of beginning postsecondary students who did not complete a degree or certificate and were not enrolled 6 years after starting their postsecondary education ranged from 19 percent at private nonprofit 4-year colleges and universities to 46 percent at both public 2-year and all for-profit institutions (figure 2). For students who began in for-profit institutions, noncompletion was higher in 2009 than in 2001 (46 percent vs. 35 percent). The same was not observed in the other three institution sectors analyzed.
- In 2009, federal student loan borrowing rates among noncompleters ranged from 25 percent for those who started in public 2-year colleges to 86 percent for those in for-profit institutions. Borrowing was higher among noncompleters at for-profit institutions in 2009 than in 2001, both in the percentage who borrowed (86 percent vs. 57 percent) and the cumulative amount borrowed among borrowers ($7,500 in 2009 vs. $5,300 in 2001) (figure 3).
- In 2009, noncompleters and completers borrowed at rates that were not statistically different except among students who started in public 2-year colleges; noncompleters in these institutions borrowed at a lower rate than did completers (25 percent vs. 46 percent) (figure 4). Conversely, the cumulative amount borrowed per credit earned was higher for noncompleters than for completers in all sectors except at public 2-year institutions, where the amount borrowed per credit did not differ statistically between completers and noncompleters (figure 5).
- Borrowers' employment after leaving postsecondary education will affect their ability to repay student loans. In all four sectors analyzed, completers were more likely to be employed in 2009 than were noncompleters (figure 6).
- In 2009, the median total-federal-debt-to-annual-income ratio of noncompleters ranged from 26 percent for those who started in public 2-year colleges to 51 percent for those who started in private nonprofit 4-year institutions (figure 7). Among noncompleters who started at for-profit institutions, nearly one-third (31 percent) had accumulated federal loans totaling 100 percent or more of their 2009 annual income, compared with 21 percent or lower in the other three sectors (figure 8).
- The percentage of noncompleters whose cumulative federal debt equaled or exceeded 100 percent of their annual income was greater in 2009 than in 2001 for students who began in a for-profit institution (31 percent vs. 13 percent) (figure 8). Though comparatively lower, the percentage of noncompleters with such a high debt burden was greater among public 2-year students in 2009 than in 2001 (7 percent vs. 3 percent). The same was not observed for those who started at public or private nonprofit 4-year institutions.

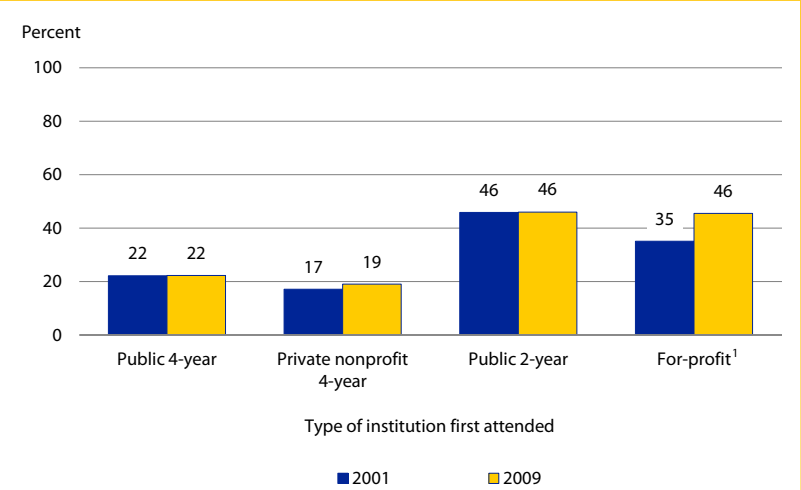
1 How prevalent is noncompletion, and how did it change over the study time period between 2001 and 2009? At what rate did noncompleters borrow from federal student loan programs, and how did this rate and their cumulative federal education debt change over the same time period?

In 2009, some 36 percent of beginning students had not completed a degree or certificate within 6 years of enrolling and were no longer enrolled in postsecondary education (Skomsvold, Radford, and Berkner 2011, table 2.0A). Among the four institution sectors analyzed in this study, noncompletion ranged from 19 percent of students in 2009 who began in private nonprofit 4-year institutions to 46 percent of those who started in public 2-year colleges or for-profit institutions (figure 2). Compared with 2001, noncompletion was statistically higher in 2009 only for students who began in for-profit institutions (35 percent vs. 46 percent).

The extent to which beginning postsecondary students accumulated federal student loans (i.e., Stafford and Perkins loans) during their enrollment varied with the type of institution they first attended. Variation in borrowing behavior reflects both the different levels of tuition charged by institutions and differences across institutions in students' average living expenses.

FIGURE 2.

NONCOMPLETERS BY TYPE OF INSTITUTION FIRST ATTENDED
Of 1995–96 and 2003–04 beginning postsecondary students, percentage of noncompleters, by type of institution first attended: 2001 and 2009



[1] Includes less-than-2-year, 2-year, and 4-year institutions.
NOTE: "Noncompleters" includes those who were not enrolled 6 years after first enrollment and had not completed any degree or certificate. Excludes those who first enrolled at public less-than-2-year or private nonprofit less-than-4-year institutions. Estimates include students enrolled in Title IV eligible postsecondary institutions in the 50 states, the District of Columbia, and Puerto Rico. Standard error tables are available at http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2013155.
SOURCE: U.S. Department of Education, National Center for Education Statistics, 1995/96 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:96/01) and 2003/04 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:04/09).

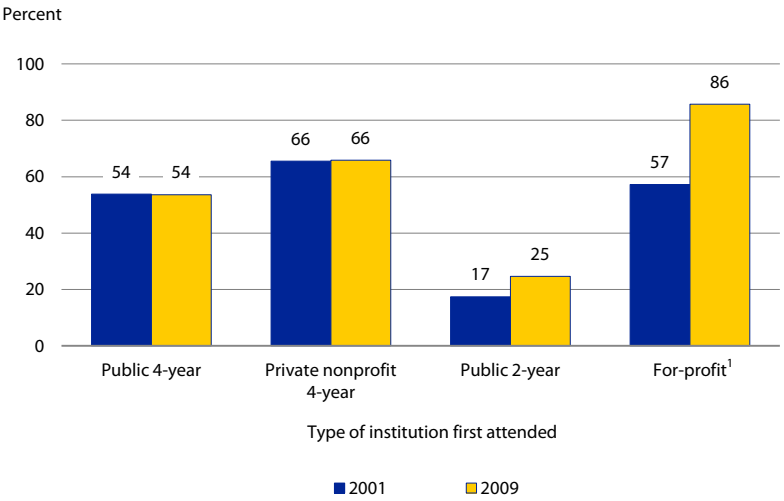
Students with higher living expenses, such as those who support families, might need to borrow more. For example, private nonprofit 4-year institutions charge higher tuition than public 2-year and public 4-year institutions, while for-profit institutions enroll relatively more students who are parents than do other types of institutions (Wei 2010, tables 2.2-A and 5.1-A).

In 2009, noncompleters' federal student loan borrowing rates (i.e., percentage who ever borrowed over 6 years) ranged from 25 percent of those who started in public 2-year colleges to 86 percent of those in for-profit institutions (figure 3). The 2009 borrowing rate was greater than in 2001 both for students who started in public 2-year colleges (25 percent vs. 17 percent) and those who started in for-profit institutions (86 percent vs. 57 percent). No change was observed for students in either 4-year sector: in both 2001 and 2009, some 54 percent of noncompleters who started in public 4-year institutions and 66 percent of noncompleters who started in private nonprofit 4-year institutions had borrowed.

Among noncompleters who borrowed, the cumulative federal loan amount borrowed was greater in 2009 than in 2001 only for those who started at for-profit institutions ($7,500 vs. $5,300 in constant 2009 dollars). Differences over time in loan amounts for noncompleters who started in the other three sectors were not statistically significant. Cumulative federal student loan debt in the 4-year sectors totaled $9,900 in 2001 and $9,300 in 2009 in public institutions, and $10,900 in 2001 and $10,400 in 2009 in private nonprofit institutions. For those who started in public 2-year colleges, the apparent difference in loan amounts between 2001 and 2009 ($7,300 and $5,700) is not statistically significant.

FIGURE 3.

BORROWING AMONG NONCOMPLETERS
Percentage of noncompleters who accumulated Stafford or Perkins loans and average cumulative amount borrowed among noncompleters, in constant 2009 dollars, by type of institution first attended: 2001 and 2009



	Average cumulative amount borrowed			
	Public 4-year	Private nonprofit 4-year	Public 2-year	For-profit[1]
2001	$9,900	$10,900	$7,300	$5,300
2009	$9,300	$10,400	$5,700	$7,500

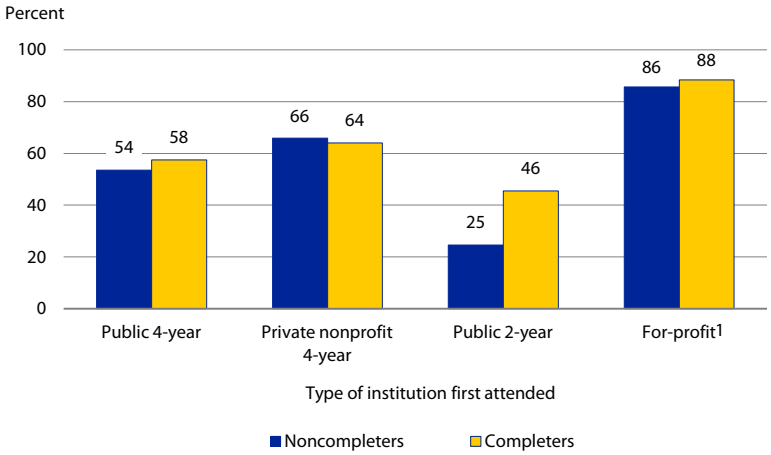
[1] Includes less-than-2-year, 2-year, and 4-year institutions.
NOTE: "Noncompleters" includes those who were not enrolled 6 years after first enrollment and had not completed any degree or certificate. Excludes those who had not completed a degree or certificate and were still enrolled and those who first enrolled at public less-than-2-year or private nonprofit less-than-4-year institutions. Estimates include students enrolled in Title IV eligible postsecondary institutions in the 50 states, the District of Columbia, and Puerto Rico. Standard error tables are available at http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2013155.
SOURCE: U.S. Department of Education, National Center for Education Statistics, 1995/96 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:96/01) and 2003/04 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:04/09).

2 How did noncompleters' rate of borrowing, the accumulated amount borrowed, and the amount borrowed per credit earned differ from those of completers? How did noncompleters' employment rate after leaving postsecondary education differ from that of completers?

In 2009, the proportion of noncompleters and completers who accumulated federal education debt while they were enrolled was not statistically different except within public 2-year colleges, where noncompleters borrowed at a lower rate than did completers (25 percent vs. 46 percent) (figure 4). Both completers and noncompleters who started at for-profit institutions borrowed at higher rates than did their counterparts at the other three institution sectors analyzed. Some 86 percent of noncompleters and 88 percent of completers at for-profit institutions had borrowed, compared with 25 percent to 66 percent of noncompleters and 46 percent to 64 percent of completers in the other three sectors.[4]

FIGURE 4.

STAFFORD AND PERKINS BORROWING
Percentage of 2003–04 beginning postsecondary students who took out Stafford or Perkins loans and average amount borrowed, in constant 2009 dollars, by type of institution first attended and completion status: 2009



	Average amount borrowed			
	Public 4-year	Private nonprofit 4-year	Public 2-year	For-profit[1]
Noncompleters	$9,300	$10,400	$5,700	$7,500
Completers	$15,100	$17,100	$12,500	$10,000

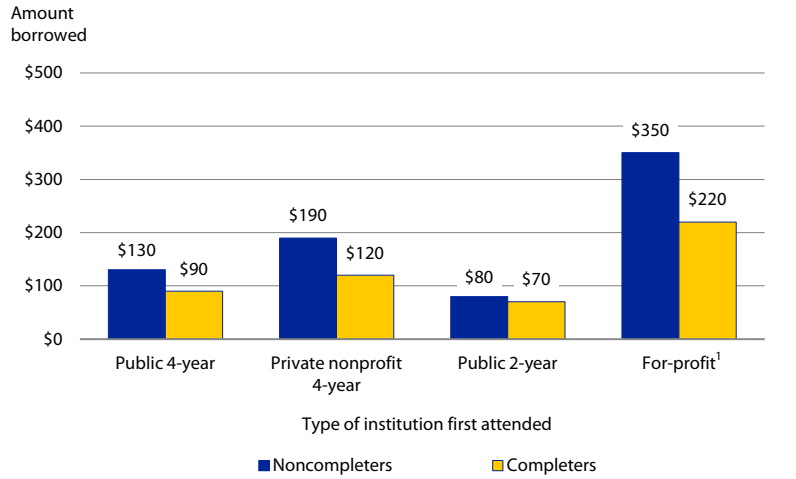
[1] Includes less-than-2-year, 2-year, and 4-year institutions.
NOTE: "Completers" includes all who completed any degree or certificate by 2009; "Noncompleters" includes those who were not enrolled in 2009 and had not completed any degree or certificate by 2009. Excludes those who had not completed a degree or certificate and were still enrolled and those who first enrolled at public less-than-2-year or private nonprofit less-than-4-year institutions. Estimates include students enrolled in Title IV eligible postsecondary institutions in the 50 states, the District of Columbia, and Puerto Rico. Standard error tables are available at http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2013155.
SOURCE: U.S. Department of Education, National Center for Education Statistics, 2003/04 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:04/09).

[4] The average amount borrowed displayed in the table in figure 4 is presented for informational purposes only.

While the cumulative debt of noncompleters and completers is not directly comparable because they were enrolled for different amounts of time, the amount borrowed per credit is comparable. On a per-credit basis, noncompleters had borrowed more on average than did completers as of 2009 (figure 5).[5] For students who started in for-profit institutions, noncompleters had borrowed an average of $350 per credit earned, compared with $220 per credit earned by completers. Comparable figures for those who began at 4-year colleges and universities were $190 versus $120 per credit earned in private nonprofit institutions and $130 versus $90 per credit in public institutions. The exception was at public 2-year institutions, where the small apparent difference between noncompleters and completers—$80 per credit and $70 per credit, respectively—was not statistically significant.

FIGURE 5.

AMOUNT BORROWED PER CREDIT EARNED
Cumulative average amount 2003–04 beginning postsecondary students borrowed in Stafford or Perkins loans per credit earned, in constant 2009 dollars, by type of institution first attended and completion status: 2009



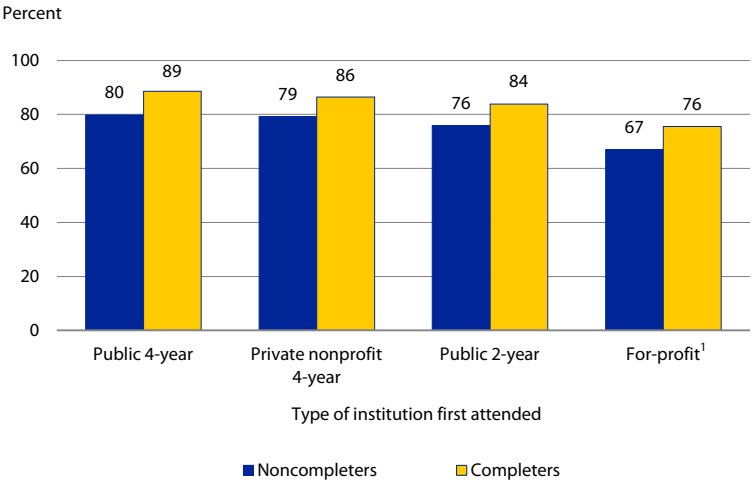
[1] Includes less-than-2-year, 2-year, and 4-year institutions.
NOTE: "Completers" includes all who completed any degree or certificate by 2009; "Noncompleters" includes those who were not enrolled in 2009 and had not completed any degree or certificate by 2009. Excludes those who had not completed a degree or certificate and were still enrolled and those who first enrolled at public less-than-2-year or private nonprofit less-than-4-year institutions. Estimates include students enrolled in Title IV eligible postsecondary institutions in the 50 states, the District of Columbia, and Puerto Rico. Standard error tables are available at http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2013155.
SOURCE: U.S. Department of Education, National Center for Education Statistics, 2003/04 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:04/09).

[5] About 11 percent of 2003—04 beginning postsecondary students did not have information on their cumulative federal student loans per credit. The total amount borrowed was larger for students with missing data on credits earned than those without missing data, and such difference was more apparent among completers than among noncompleters. Therefore, the difference between completers and noncompleters in the amount borrowed per credit may be overestimated.

Students' ability to repay student loans is dependent in large part on their employment status after leaving postsecondary education. Noncompleters in 2009 had lower rates of employment when they left postsecondary education than did completers at all four institution sectors analyzed in the study (figure 6). While the median incomes are also shown in the table below the figure, they are not necessarily comparable because the time students spend enrolled and subsequently in the labor market differs depending on the type of institution and the degree program.

FIGURE 6.

EMPLOYMENT BY COMPLETION STATUS
Percentage of 2003–04 beginning postsecondary students who were employed and median annual income, in constant 2009 dollars, by type of institution first attended and completion status: 2009



	Median annual income			
	Public 4-year	Private nonprofit 4-year	Public 2-year	For-profit[1]
Noncompleters	$27,000	$25,000	$25,900	$24,400
Completers	$32,800	$33,900	$30,500	$24,000

[1] Includes less-than-2-year, 2-year, and 4-year institutions.
NOTE: "Completers" includes all who completed any degree or certificate by 2009; "Noncompleters" includes those who were not enrolled in 2009 and had not completed any degree or certificate by 2009. Excludes those who had not completed a degree or certificate and were still enrolled and those who first enrolled at public less-than-2-year or private nonprofit less-than-4-year institutions. Estimates include students enrolled in Title IV eligible postsecondary institutions in the 50 states, the District of Columbia, and Puerto Rico. Standard error tables are available at http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2013155.
SOURCE: U.S. Department of Education, National Center for Education Statistics, 2003/04 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:04/09).

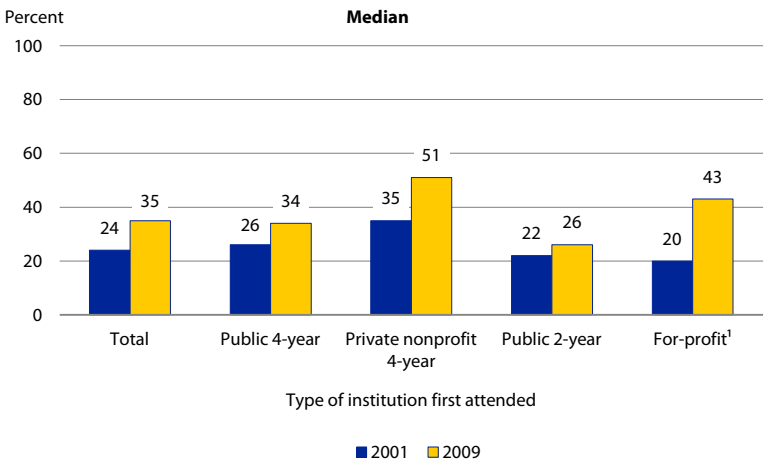
3 What was noncompleters' median cumulative federal debt relative to their annual income in 2009? What percentage of noncompleters had a cumulative federal debt burden that equaled or exceeded 100 percent of their annual income, and how did it change over time?

The ratio of borrowers' cumulative federal debt relative to their annual-income ratio was calculated for noncompleters 6 years after they first enrolled in postsecondary education (e.g., as of 2009 for students who first enrolled in 2003–04). Noncompleters who had accumulated federal student loans but who were unemployed (i.e., had no employment income) during the last follow-up survey year are included; as explained in the introduction, their total-federal-debt-to-annual-income ratio was set at 100 percent. Figure 7 displays the median ratio and the table just below the bar graph displays the ratio at the 25th and 75th percentiles for 2001 and 2009.

In 2009, the median ratio of cumulative federal student debt to annual income was 35 percent for all noncompleters, and ranged from 26 percent for those who started in public 2-year colleges to 51 percent for those who started in private nonprofit 4-year institutions (figure 7). The median debt burden of noncompleters in for-profit institutions in 2009 (43 percent) was about double that in 2001 (20 percent). The apparent difference in median debt burden for private nonprofit 4-year institutions between 2001 and 2009 is not statistically significant.

FIGURE 7.

TOTAL-FEDERAL-DEBT-TO-ANNUAL-INCOME-RATIO AMONG NONCOMPLETERS
Cumulative federal loan debt as a percentage of annual income at the 50th percentile (bars) and at the 25th and 75th percentiles (table below), by type of first institution attended: 2001 and 2009



	25th percentile		75th percentile	
	2001	2009	2001	2009
Total	11	14	77	99
Public 4-year	12	14	69	99
Private nonprofit 4-year	16	20	98	99
Public 2-year	11!	11	59	98
For-profit[1]	9	17	74	99

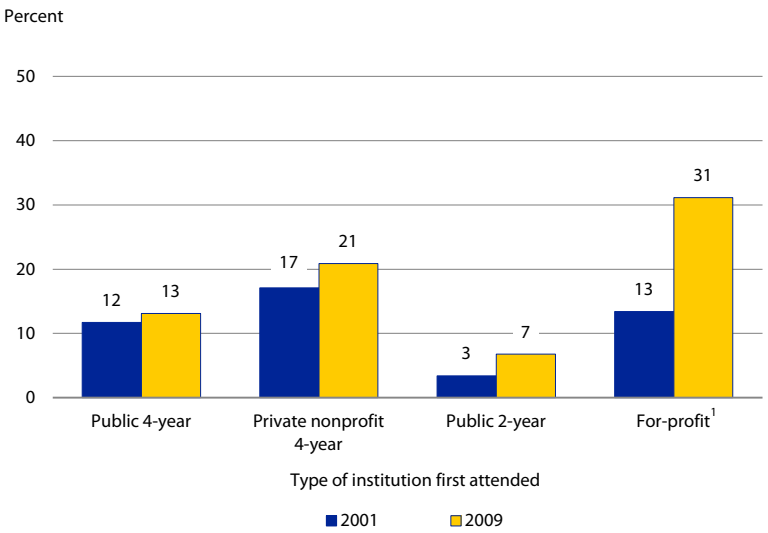
! Interpret data with caution. Estimate is unstable because the standard error represents more than 30 percent of the estimate.
[1] Includes less-than-2-year, 2-year, and 4-year institutions.
NOTE: "Noncompleters" are 2003–04 beginning postsecondary students who, as of 2009, had not completed a degree or certificate and were not enrolled. Federal student loans include Stafford and Perkins loans and do not include Parent PLUS loans. Annual income is the 2009 income of the student, not including any income from a spouse. Includes those who were unemployed in 2009, and their debt-to-income ratio was set to 100. Excludes those who first enrolled at public less-than-2-year or private nonprofit less-than-4-year institutions. Estimates include students enrolled in Title IV eligible postsecondary institutions in the 50 states, the District of Columbia, and Puerto Rico. Detail may not sum to totals because of rounding. Standard error tables are available at http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2013155.
SOURCE: U.S. Department of Education, National Center for Education Statistics, 1995/96 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:96/01) and 2003/04 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:04/09).

Figure 8 displays the percentage of noncompleters with a debt burden equal to or exceeding 100 percent of their annual income. Among noncompleters who started in for-profit institutions, nearly one-third (31 percent) carried such a high debt burden in 2009, compared with 7 percent to 21 percent among those who first attended other types of institutions. Moreover, the percentage of noncompleters with a debt burden of at least 100 percent of annual income was greater in 2009 than in 2001 for those who started in for-profit institutions (31 percent vs. 13 percent). These findings are consistent with prior research showing high debt burdens among for-profit students relative to their peers in public and nonprofit institutions (Deming, Goldin, and Katz 2012). Though the percentage with a high debt burden was lower among noncompleters who started in public 2-year colleges compared with those in other sectors, their share was also greater in 2009 than in 2001 (7 percent vs. 3 percent). Analogous differences for those who started in public or private nonprofit 4-year institutions were not statistically significant.

FIGURE 8.

NONCOMPLETERS WHOSE STUDENT LOAN DEBT WAS 100 PERCENT OR MORE OF ANNUAL INCOME

Percentage of noncompleters whose cumulative federal student loans were 100 percent or more of annual income and average cumulative amount borrowed, in constant 2009 dollars, by type of first institution attended: 2001 and 2009



	Percent with loan debt of 100 percent or more of annual income who were unemployed	
	2001	2009
Public 4-year	72.4	74.4
Private nonprofit 4-year	68.6	70.3
Public 2-year	‡	89.7
For-profit[1]	94.7	88.1

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

[1] Includes less-than-2-year, 2-year, and 4-year institutions.

NOTE: Federal student loans include Stafford and Perkins loans and do not include Parent PLUS loans. Annual income is the 2001 or 2009 income of the student, not including any income from a spouse. Includes those who were unemployed in 2001 or 2009, and their debt-to-income ratio was set to 100. "Noncompleters" includes those who were not enrolled 6 years after first enrollment and had not completed any degree or certificate. Excludes those who had not completed a degree or certificate and were still enrolled and those who first enrolled at public less-than-2-year or private nonprofit less-than-4-year institutions. Estimates include students enrolled in Title IV eligible postsecondary institutions in the 50 states, the District of Columbia, and Puerto Rico. Standard error tables are available at http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2013155.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1995/96 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:96/01) and 2003/04 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:04/09).

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http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2013155

More detailed information on the debt burden of undergraduate students, noncompletion among undergraduates, and undergraduate financing can be found in the following publications produced by the National Center for Education Statistics (NCES) using Baccalaureate and Beyond (B&B) and Beginning Postsecondary Students (BPS) Longitudinal Studies data:

Dealing With Debt: 1992–93 Bachelor's Degree Recipients 10 Years Later (NCES 2006-156). http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2006156

Debt Burden: A Comparison of 1992–93 and 1999–2000 Bachelor's Degree Recipients a Year After Graduating (NCES 2005-170). http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2005170

Debt Burden Four Years After College (NCES 2000-188). http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2000188

Descriptive Summary of 1995–96 Beginning Postsecondary Students: Six Years Later (NCES 2003-151). http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2003151

Descriptive Summary of 2003–04 Beginning Postsecondary Students: Three Years Later (NCES 2008-174). http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2008174

Web Tables—Six-Year Attainment, Persistence, Transfer, Retention, and Withdrawal Rates of Students Who Began Postsecondary Education in 2003–04 (NCES 2011-152). http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2011152

TECHNICAL NOTES

Survey Methodology

The estimates provided in this Statistics in Brief are based on data collected through the 1996/2001 and 2004/09 Beginning Postsecondary Students Longitudinal Studies (BPS:96/01 and BPS:04/09), as well as transcript data collected on students who participated in BPS:04/09. Each BPS follows a cohort of students who enroll in postsecondary education for the first time and covers broad topics concerning student persistence in and completion of postsecondary education and transitions to employment. In BPS:96/01, students provided data through instruments administered by telephone and in-person interviews, and in BPS:04/09, students provided the same data through instruments administered via the Internet or telephone. In addition to student responses, data were collected from the first institutions attended by the sampled students, and the U.S. Department of Education supplied respondent-level data on student loan and grant programs (i.e., the National Student Loan Data System) and federal student financial aid applications (i.e., the Central Processing System), matching student records using a common identifier. In BPS:04/09, students' transcripts through the 2008–09 academic year were also collected as part of the Postsecondary Education Transcript Study (PETS), creating a 6-year record of academic enrollment including coursetaking, credit accumulation, academic performance, and degree receipt.

The BPS:96/01 and BPS:04/09 target populations were based on the subset of first-time beginning (FTB) respondents from the 1995–96 and 2003–04 National Postsecondary Student Aid Studies (NPSAS:96 and NPSAS:04), which include students enrolled in postsecondary institutions in the United States and Puerto Rico at any time between July 1 and June 30 of the survey year.[6] In BPS:04/09, the population also was limited to students enrolled in Title IV institutions.[7] The target populations included 3 million FTBs in 1995–96 and 4 million in 2003–04 (table A-1).

For each NPSAS/BPS, the sampling design consisted of first selecting eligible institutions from the sampling frame. Institutions were selected with probabilities proportional to a composite measure of size based on expected enrollment during the survey year. Table A-1 lists the institution sampling frames for BPS:96/01 and BPS:04/09, which were constructed from data files of the Integrated Postsecondary Education Data System (IPEDS), which includes all U.S. postsecondary institutions that are eligible to participate in federal financial aid programs under Title IV of the Higher Education Act. Table A-1 also provides the numbers of sampled and participating institutions for each study and each study's weighted institution response rate, that is, the weighted percentage of institutions that provided student enrollment lists.

Once institutions were selected, students were sampled from the enrollment lists provided by sampled institutions. Table A-1 indicates the numbers of students who were sampled and determined eligible to participate in each of the two studies and provides weighted response rates for the two BPS cohorts. For BPS:96/01, 84 percent of eligible sample members completed either a full or a partial interview and were defined as interview respondents. In BPS:04/09, eligible sampled students were defined as study respondents if they completed the interview or had enrollment data from either the National Student Clearinghouse or from transcripts: 89 percent of eligible sample members were study respondents. Approximately 80 percent of eligible sample members completed interviews. Estimates were weighted to adjust for the unequal probability of selection into the sample and for nonresponse.

[6] The target population of NPSAS was limited to those enrolled in an academic program, at least one course for credit that could be applied toward an academic degree, or an occupational or vocational program requiring at least 3 months or 300 clock hours of instruction to receive a degree, certificate, or other formal award. The target population excluded students who were also enrolled in high school or a high school completion (e.g., GED preparation) program.

[7] "Title IV institutions" refers to institutions eligible to participate in federal financial aid programs under Title IV of the Higher Education Act.

TABLE A-1. Selected statistics on BPS:96/01 and BPS:04/09 data collections

Statistic	BPS:96/01	BPS:04/09
Target population	FTBs[1] in 1995–96	FTBs[1] in 2003–04
Target population size	3 million	4 million
IPEDS[2] datafile(s) used as NPSAS sampling frame	1993–94 Institutional Characteristics	2000–01 and 2001–02 Institutional Characteristics and Header; 2000 and 2001 Fall Enrollment
Number of sampled institutions (unweighted)	973	1,670
Number of participating institutions (unweighted)	788	1,360
Institution response rate[3] (weighted)	91.1	80.0
Number of sampled students	12,400	23,100
Number of eligible students	12,100	18,600
Study response rate[4] (weighted)	†	89.2
Interview response rate (weighted)	83.6	80.2

† Not applicable.
[1] First-time beginning students (FTBs).
[2] Integrated Postsecondary Education Data System, Institutional Characteristics file.
[3] Percentage of institutions that provided student enrollment lists.
[4] Percentage of BPS:04/09 eligible sampled students who completed a 2009 interview or for whom enrollment data were obtained from either the National Student Clearinghouse or transcripts.
SOURCE: Riccobono, J.A., Whitmore, R.W., Gabel, T.J., Traccarella, M.A., Pratt, D.J., and Berkner, L.K. (1997). *National Postsecondary Student Aid Study, 1995–96 (NPSAS:96) Methodology Report* (NCES 98-073). National Center for Education Statistics, U.S. Department of Education. Washington, DC. Wine, J.S., Heuer, R.E., Wheeless, S.C., Francis, T.L., Franklin, J.W., and Dudley, K.M. (2002). *Beginning Postsecondary Students Longitudinal Study 1996–2001 (BPS:1996/2001) Methodology Report* (NCES 2002-171). National Center for Education Statistics, U.S. Department of Education. Washington, DC. Radford, A.W., Berkner, L., Wheeless, S.C., and Shepherd, B. (2010). *Persistence and Attainment of 2003–04 Beginning Postsecondary Students: After 6 Years: First Look* (NCES 2011-151). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC. Wine, J., Janson, N., and Wheeless, S. (2011). *2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) Methodology Report* (NCES 2012-246). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Two broad categories of error occur in estimates generated from surveys: sampling and nonsampling errors. Sampling errors occur when observations are based on samples rather than on entire populations. The standard error of a sample statistic is a measure of the variation due to sampling and indicates the precision of the statistic. The complex sampling designs used in NPSAS:96 for BPS:96/01 and in NPSAS:04 for BPS:04/09 must be taken into account when calculating variance estimates such as standard errors. NCES's online analysis tool PowerStats, which generated the estimates in this report, uses the balanced repeated replication (BRR) and Jackknife II (JK2) methods to adjust variance estimation for the complex sample designs (Kaufman 2004; Wolter 1985).

Nonsampling errors can be attributed to several sources: incomplete information about all respondents (e.g., some students or institutions refused to participate, or students participated but answered only certain items); differences among respondents in question interpretation; inability or unwillingness to give correct information; mistakes in recording or coding data; and other errors of collecting, processing, sampling, and imputing missing data.

For more information on the BPS methodology, see the following reports:

Beginning Postsecondary Students Longitudinal Study: 1996–2001 (BPS:1996/2001) (http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2002171)

Persistence and Attainment of 2003–04 Beginning Postsecondary Students: After Six Years: First Look (http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2011151)

Item Response Rates

NCES Statistical Standard 4-4-1 states that "[a]ny 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" (U.S. Department of Education 2002). In the case of BPS:04/09, this means that nonresponse bias analysis could be required at any of three levels: institutions, study respondents, or items.

For BPS:04/09, the weighted institution response rate for all institutions was 80 percent. The response rate varied by institution sector, ranging from 70 percent for public 4-year non-doctorate-granting institutions to 93 percent for private nonprofit 4-year non-doctorate-granting institutions. The following characteristics were used to perform institution nonresponse bias analysis: institution sector;[8] Carnegie classification; degree of urbanization; Office of Business Economics (OBE) region; historically Black college or university indicator; percentage of students receiving federal grant aid, state/local grant aid, institutional grant aid, and student loan aid; percentage of students enrolled by race; and enrollment for undergraduate and graduate/first-professional students, total and by sex. Before weight adjustments, 6 percent of the variable categories were significantly biased for all institutions. After weight adjustments, the percentage of categories with significant bias rounded to zero.

As shown in table A-1, the study respondent response rate was 89 percent. Consequently, nonresponse bias analysis was not needed at the respondent level. The student interview response rate, however, was 80 percent, and therefore nonresponse bias analysis was required for those variables based in whole or in part on student interviews. In this report, three variables required nonresponse bias analysis: INCRES09 (respondents' annual income), INCTOT08 (annual household income), and JOBST09 (employment status). For each of these variables, nonresponse bias analyses were conducted to determine whether respondents and nonrespondents differed on the following characteristics: institution sector, region, and total enrollment; student type, sex, and age group; whether the student had submitted the Free Application for Federal Student Aid (FAFSA), was a federal aid recipient, was a Pell Grant recipient, or took out a Stafford Loan; and the amount, if any, of a student's Pell Grant or Stafford Loan. Differences between respondents and nonrespondents on these variables were tested for statistical significance at the .05 level. A

[8] Institution sector was used only for nonresponse bias analysis of all institutions.

VARIABLES USED

All estimates in this Statistics in Brief were produced using PowerStats, a web-based software application that allows users to generate tables for many of the postsecondary surveys conducted by NCES. See "Run Your Own Analysis With DataLab" below for more information on PowerStats. The variables used in this Statistics in Brief are listed below. Visit the NCES DataLab website http://nces.ed.gov/datalab to view detailed information on how these variables were constructed and their sources. Under *Codebooks* select *BPS: 2009* or *BPS: 2001*, under *view by subject* or *view by variable name*. The program files that generated the statistics presented in this Statistics in Brief can be found at http://nces.ed.gov/pubsearch/20pubsinfo.asp?pubid=2013155.

Label	BPS:96/01 Variable	BPS:04/09 Variable
Annual household income	—	INCTOT08
Completion status	PROUTYX6	PROUT6
Cumulative federal student loans	T4TOXCUM	T4XCUM09
Cumulative federal student loans per credit earned	—	FDLNCR09
Employment status	—	JOBST09
Federal student loan repayment status	—	LOANST09
First institution type	ITNPSAS	FSECTOR
Ratio of cumulative federal student loans to annual income	DEBTRT01	DEBTRT09
Respondent's annual income	—	INCRES09

—Not available in BPS:96/01.

summary of nonresponse bias analyses for the variables specified above appears in table A-2 below. Despite the fact that "Region, other jurisdictions-PR" was the characteristic with the greatest significant bias for INCRES09 and INCTOT08, this category constitutes 1 percent of all first-time postsecondary students. Thus, the large bias exhibited between respondents and nonrespondents for this category is likely to have minimal impact when all first-time postsecondary students are considered.

Any bias due to nonresponse, however, is based upon responses prior to stochastic imputation in which missing data were replaced with valid data from the records of donor cases that matched the recipients on selected demographic, enrollment, institution, and financial aid related variables (Krotki, Black, and Creel 2005). Potential bias may have been reduced due to imputation. Because imputation procedures are designed specifically to identify donor cases with characteristics similar to those with missing data, the imputation procedure is assumed to reduce bias. While the level of item-level bias before imputation is measurable, the same measurement cannot be made after imputation. Although the magnitude of any change in item-level bias cannot be determined, the item estimates before and after imputation were compared to determine whether the imputation changed the biased estimate as an indication of a possible reduction in bias.

For continuous variables, the difference between the mean before imputation and 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. These differences, none of which was significant, are reported in table A-2. Therefore, to the degree that there was bias in the pre-imputed estimates, imputation does not appear to have reduced that bias.

For detailed information on nonresponse bias analysis and an overview of the survey methodology for BPS:04/09, see appendix M of the report *2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) Full-Scale Methodology Report* (http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2012246). For BPS:96/01, see chapter 6 of the report *Beginning Postsecondary Students Longitudinal Study 1996–2001 (BPS:1996/2001) Methodology Report* (http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2002171).

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TABLE A-2. Summary of item-level nonresponse bias for all students at all institution types: 2004–09

Variable name	Pre-imputation: Median percent relative bias across characteristics	Pre-imputation: Percentage of characteristics with significant bias	Pre-imputation: Characteristic with greatest significant bias	Percent difference in means or average percent difference across all categories pre- and post-imputation
INCRES09 Annual salary at current job	5.11	47.44	Region, other jurisdiction - PR	0.10
INCTOT08 Annual household income	3.05	42.11	Region, other jurisdiction - PR	557.50
JOBST09 Employment status	0.45	26.83	Whether received a Pell Grant	0.02

NOTE: Relative bias is computed by dividing a variable's estimated bias for a given characteristic by the variable's mean. Relative bias is defined as significant if its difference from zero is statistically significant at $p < 0.05$.
SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09).

Statistical Procedures

Comparisons of means and proportions were tested using Student's *t* statistic. Differences between estimates were tested against the probability of a Type I error[9] or significance level. The statistical significance of each comparison was determined by calculating the Student's *t* value for the difference between each pair of means or proportions and comparing the *t* value with published tables of significance levels for two-tailed hypothesis testing. Student's *t* values were computed to test differences between independent estimates using the following formula:

$$t = \frac{E_1 - E_2}{\sqrt{se_1^2 + se_2^2}}$$

where E_1 and E_2 are the estimates to be compared and se_1 and se_2 are their corresponding standard errors.

There are hazards in reporting statistical tests for each comparison. First, comparisons based on large *t* statistics may appear to merit special attention. This can be misleading because the magnitude of the *t* statistic is related not only to the observed differences in means or percentages, but also to the number of respondents in the specific categories used for comparison. Hence, a small difference compared across a large number of respondents would produce a large (and thus possibly statistically significant) *t* statistic.

A second hazard in reporting statistical tests is the possibility of a "false positive" or Type I error. Statistical tests are designed to limit the risk of this type of error using a value denoted by alpha. The alpha level of .05 was selected for findings in this report and ensures that a difference of a certain magnitude or larger would be produced when there was no actual difference between the quantities in the underlying population no more than 1 time out of 20 (no adjustments were made for multiple comparisons). When analysts test hypotheses that show alpha values at the .05 level or smaller, they reject the null hypothesis that there is no difference between the two quantities. Failing to reject a null hypothesis (i.e., detect a difference), however, does not imply the values are the same or equivalent.

[9] A Type I error occurs when one concludes that a difference observed in a sample reflects a true difference in the population from which the sample was drawn when no such difference is present.

REFERENCES

Baum, S., and Payea, K. (2011). *Trends in Student Aid*. New York: The College Board.

Baum, S., and Saunders, D. (1998). Life After Debt: Results of the National Student Loan Survey. *Journal of Student Financial Aid*, *28*(3): 7–23.

Berkner, L., He, S., and Cataldi, E.F. (2002). *Descriptive Summary of 1995–96 Beginning Postsecondary Students: Six Years Later* (NCES 2003–151). National Center for Education Statistics, U.S. Department of Education. Washington, DC.

Choy, S.P., and Li, X. (2006). *Dealing With Debt: 1992–93 Bachelor's Degree Recipients 10 Years Later* (NCES 2006-156). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Deming, D.J., Goldin, C., and Katz, L.F. (2012). The For-Profit Postsecondary School Sector: Nimble Critters or Agile Predators? *Journal of Economic Perspectives, 26*(1): 139–164.

Gladieux, L., and Perna, L. (2005). *Borrowers Who Drop Out: A Neglected Aspect of the College Student Loan Trend*. The National Center for Public Policy and Higher Education. Retrieved May 7, 2012, from http://www.highereducation.org/reports/reports_center_2005.shtml.

Government Accountability Office (GAO). (2009). *Proprietary Schools: Stronger Department of Education Oversight Needed to Help Ensure Only Eligible Students Receive Federal Student Aid* (GAO-09-600). Washington, DC: U.S. Government Printing Office.

Horn, L., and Li, X. (2009). *Changes in Postsecondary Awards Below the Bachelor's Degree: 1997 to 2007* (NCES 2010-167). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington DC.

Horn, L., and Skomsvold, P. (2011). *Community College Student Outcomes: 1994–2009* (NCES 2012-253). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Kaufman, S. (2004). Using the Bootstrap in a Two-Stage Design When Some Second-Stage Strata Have Only One Unit Allocated. *Proceedings of the American Statistical Association, Section on Survey Research Methods*.

Krotki, K., Black, S., and Creel, D. (2005). Mass Imputation. In *Proceedings of the Section on Survey Research Methods, American Statistical Association* [CD-ROM]. Alexandria, VA: American Statistical Association.

Nguyen, M. (2012). *Degreeless in Debt: What Happens to Borrowers Who Drop Out*. Education Sector. Retrieved June 1, 2012, from http://www.educationsector.org/sites/default/files/publications/DegreelessDebt_CYCT_RELEASE.pdf.

Porter, S.R. (2011, Fall). Do College Student Surveys Have Any Validity? *Review of Higher Education, 35*(1): 45–76. Retrieved February 8, 2013, from http://muse.jhu.edu/login?auth=0&type=summary&url=/journals/review_of_higher_education/v035/35.1.porter.html.

Rothstein, J., and Rouse, C.E. (2011). Constrained After College: Student Loans and Early-Career Occupational Choices. *Journal of Public Economics, 95*(1–2): 149–163.

Skomsvold, P., Radford, A., and Berkner, L. (2011). *Web Tables—Six-Year Completion, Persistence, Transfer, Retention, and Withdrawal Rates of Students Who Began Postsecondary Education in 2003–04* (NCES 2011-152). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Staklis, S. (2010). *Web Tables—Profile of Undergraduate Students: 2007–08* (NCES 2010-205). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

U.S. Department of Education. (2002). *NCES Statistical Standards* (NCES 2003-601). Washington, DC: National Center for Education Statistics. Retrieved November 19, 2010, from http://nces.ed.gov/pubsearch.

Wei, C. (2010). *Web Tables—Student Financing of Undergraduate Education: 2007–08* (NCES 2010-162). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Wei, C., and Skomsvold, P. (2011). *Borrowing at the Maximum: Undergraduate Stafford Loan Borrowers in 2007–08* (NCES 2012-161). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Wolter, K. (1985). *Introduction to Variance Estimation*. New York: Springer-Verlag.

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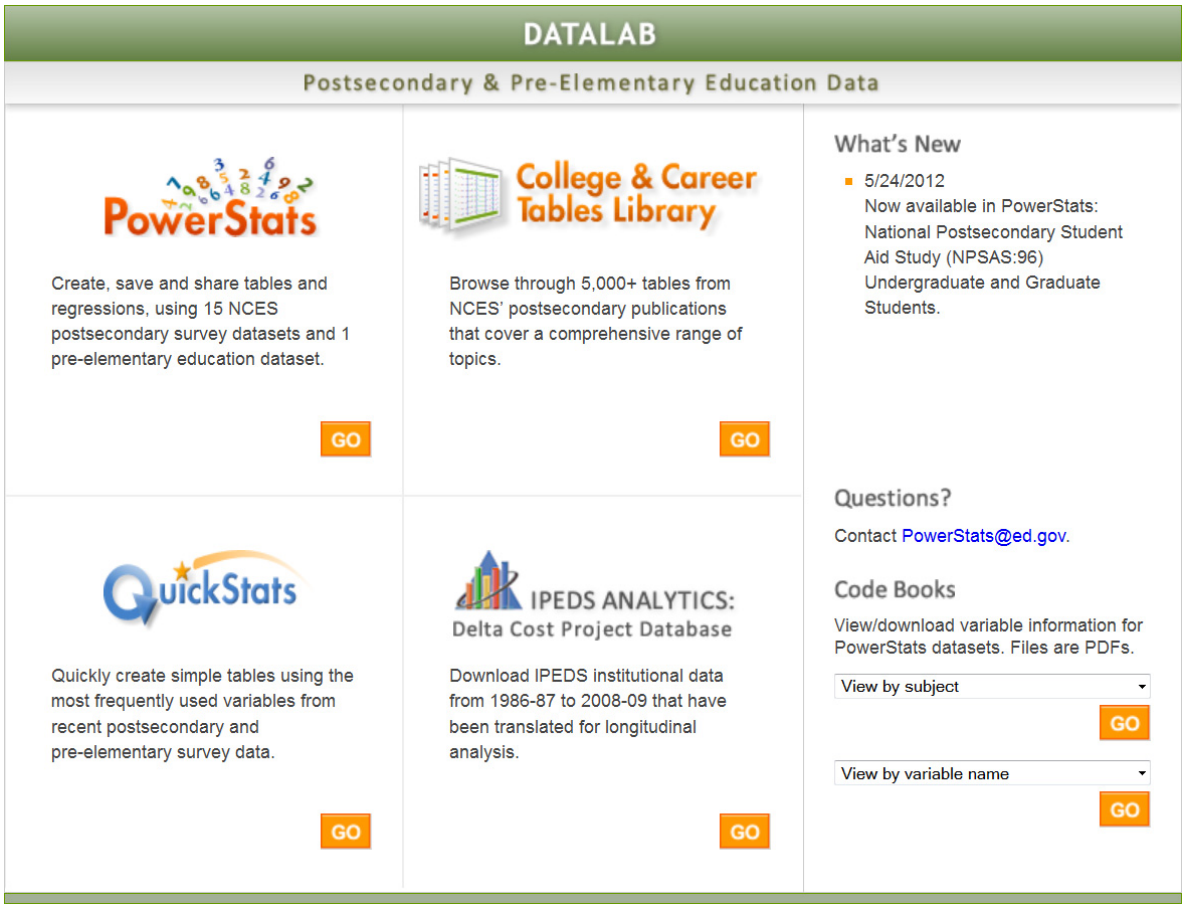

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