# STATS IN BRIEF

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# Four Years Later

## 2007–08 College Graduates' Employment, Debt, and Enrollment in 2012

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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.

## This Statistics in Brief describes

the employment, debt-related, and enrollment experiences as of 2012 among students who completed their bachelor's degrees during the 2007–08 academic year. These findings are based on data from the second follow-up of the 2008 Baccalaureate and Beyond Longitudinal Study (B&B:08/12), a nationally representative longitudinal survey of students who completed the requirements for a bachelor's degree during the 2007–08 academic year. The first follow-up study, conducted 1 year after these students had graduated, explored their undergraduate education experiences, early postbaccalaureate employment, education debt, and additional enrollment in postsecondary education. The second follow-up, conducted in 2012, continued to examine this cohort's employment experiences, in addition to their debt burden and repayment and postbaccalaureate enrollment through the fourth year after graduation.

All comparisons of estimates were tested for statistical significance using Student's *t* statistic, and all differences cited are statistically significant at the $p < .05$ level.[1] Tabular versions of each figure are available in appendix A, and the standard errors for each table and figure are available in appendix B.

[1] No adjustments for multiple comparisons were made.

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## STUDY QUESTIONS

1. How have 2007–08 college graduates participated in the labor market and in postsecondary education during the first 4 years after completing their bachelor's degrees?
2. How many graduates were repaying education loans, and what was their debt burden in 2012?
3. In what types of degree programs did graduates enroll after receiving their 2007–08 bachelor's degrees? What additional degrees or certificates did they earn within 4 years of completing their bachelor's degrees?

## KEY FINDINGS

- The majority (69 percent) of those who earned a bachelor's degree in 2007–08 were employed and not enrolled in 2012 (figure 1).
- Choices of occupation among graduates varied by sex in 2012.[2] The largest proportions of both male and female graduates were employed in business or management (24 percent of males and 19 percent of females) (table 1). Although science, technology, engineering, and mathematics (STEM)[3] occupations were the second most frequently chosen among males (20 percent), there was no clear second choice of occupation among female graduates: 13–15 percent reported working in each of four groups of occupations (PK–12 education, health care, business support or administrative assistance, and other occupations).
- Among 2007–08 bachelor's degree recipients, 40 percent had been unemployed[4] for 1 month or more at least once during the 4 years since earning their degree (figure 3).
- Among employed 2007–08 graduates who were repaying their undergraduate or graduate loans, monthly loan payments accounted for about 12 percent, on average, of their monthly salary in 2012 (figure 5).
- Within 4 years of earning their 2007–08 bachelor's degrees, 44 percent of graduates had enrolled in at least one other degree program (Cataldi, Woo, and Staklis 2017). For the majority (62 percent) of graduates who had pursued an additional degree, a master's degree program was the highest degree program in which they had enrolled (figure 7).

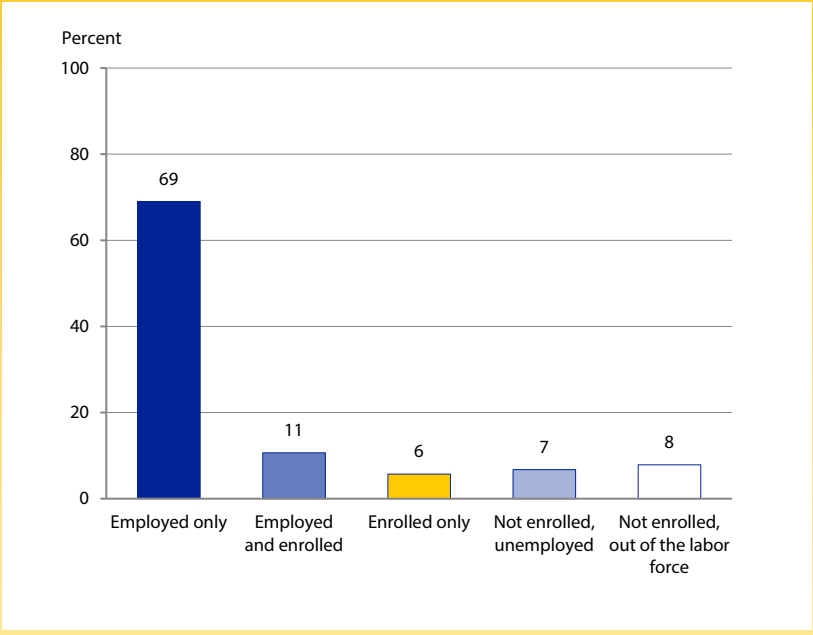
[2] During the second follow-up interview, 2007–08 graduates were asked about the job in which they were currently or most recently employed for more than 3 months. The data presented in this section on occupation and salary refer to this "primary" job.
[3] STEM occupations include computer/information systems occupations, engineers, life scientists, math-related occupations, and physical scientists.
[4] Those who were not working but looking for work are defined as unemployed.

# 1 How have 2007–08 college graduates participated in the labor market and in postsecondary education during the first 4 years after completing their bachelor's degrees?

A majority (69 percent) of those who earned a bachelor's degree in 2007–08 were employed and not enrolled in 2012 (figure 1). Eleven percent were combining employment and further enrollment, and 6 percent were enrolled and not employed. Another 7 percent were unemployed and not enrolled, and 8 percent were not enrolled and out of the labor force in 2012.

## FIGURE 1.

**EMPLOYMENT AND ENROLLMENT STATUS**
**Percentage distribution of 2007–08 bachelor's degree recipients, by employment and enrollment status: 2012**




NOTE: Detail may not sum to totals because of rounding. Estimates include graduates from Title IV eligible postsecondary institutions in the 50 states, the District of Columbia, and Puerto Rico. To recreate the table(s) used to produce these estimates within PowerStats (https://nces.ed.gov/datalab), use the following QuickRetrieve code once logged into the application: bkdbkne6.
SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12).

Four years after receipt of their bachelor's degrees, the largest proportion (21 percent) of 2007–08 graduates were employed in a business or management occupation (table 1).[5] The smallest proportions (5 percent each) worked as social services professionals or in sales occupations. Between 9 and 12 percent were employed in PK–12 education, health care, trades and technical occupations, STEM, or business support or administrative assistance.

Graduates' choices of occupation varied by sex and race/ethnicity. The largest proportions of both male and female graduates were employed in business or management (24 percent of males and 19 percent of females), although males selected these occupations at higher rates than females did.

Whereas STEM occupations were the second most frequently chosen occupation among males (20 percent), there was no clear second choice of occupation among female graduates: 13–15 percent worked in each of four groups of occupations (PK–12 education, health care, business support or administrative assistance, and other occupations). Five percent of female graduates worked in STEM occupations.

## TABLE 1.

**OCCUPATION BY SEX AND RACE/ETHNICITY**
**Among 2007–08 bachelor's degree recipients who had a current or most recent primary job, percentage distribution of occupational category of primary job, by sex and race/ethnicity: 2012**

| Student characteristics | Business or management | Business support or administrative assistance | STEM[1] | Trades and technical[2] | Health care[3] | PK–12 education | Social services | Sales | Other occupations[4] |
|---|---|---|---|---|---|---|---|---|---|
| **Total** | **21.0** | **12.5** | **11.1** | **10.7** | **10.4** | **9.1** | **5.4** | **5.2** | **14.7** |
| Sex | | | | | | | | | |
| Male | 23.9 | 9.2 | 20.0 | 15.1 | 4.7 | 4.2 | 3.0 | 6.2 | 13.8 |
| Female | 18.9 | 14.9 | 4.6 | 7.4 | 14.6 | 12.7 | 7.2 | 4.4 | 15.4 |
| Race/ethnicity[5] | | | | | | | | | |
| White | 21.5 | 11.7 | 11.4 | 10.8 | 10.2 | 9.6 | 4.8 | 5.1 | 14.8 |
| Black | 17.9 | 17.0 | 8.0 | 12.6 | 11.9 | 6.7 | 8.0 | 6.4 | 11.5 |
| Hispanic | 19.2 | 14.4 | 7.8 | 10.2 | 9.0 | 9.6 | 8.9 | 4.8 | 16.1 |
| Asian | 24.3 | 12.2 | 18.4 | 6.9 | 12.6 | 2.5 | 3.9 ! | 3.7 ! | 15.5 |
| Other | 18.4 | 13.2 | 10.1 | 10.6 | 10.8 | 10.6 | 5.3 | 6.5 ! | 14.7 |

! Interpret data with caution. Estimate is unstable because the standard error is between 30 and 50 percent of the estimate.
[1] Science, technology, engineering, and mathematics (STEM) occupations include computer/information systems occupations, engineers, life scientists, math-related occupations, and physical scientists.
[2] Includes agricultural occupations; construction and mining occupations; engineering technicians; fitters, tradesmen, and mechanics; food service occupations; military-specific occupations; personal care occupations; protective service occupations; sports occupations; and transport support occupations.
[3] Includes nurses.
[4] Includes air transportation professionals, artists and designers, communication professionals, information professionals, legal professionals, other educators, postsecondary educators, and social scientists.
[5] Black includes African American; Hispanic includes Latino; Other includes American Indian, Alaska Native, Pacific Islander, and Native Hawaiian; and Two or more races includes graduates having origins in more than one race. Race categories exclude Hispanic origin.
NOTE: The respondent's primary job is defined as the respondent's current or most recent job that lasted more than 3 months. Detail may not sum to totals because of rounding. Estimates include graduates from Title IV eligible postsecondary institutions in the 50 states, the District of Columbia, and Puerto Rico. To recreate the table(s) used to produce these estimates within PowerStats (https://nces.ed.gov/datalab), use the following QuickRetrieve code once logged into the application: bkdbknfc.
SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12).

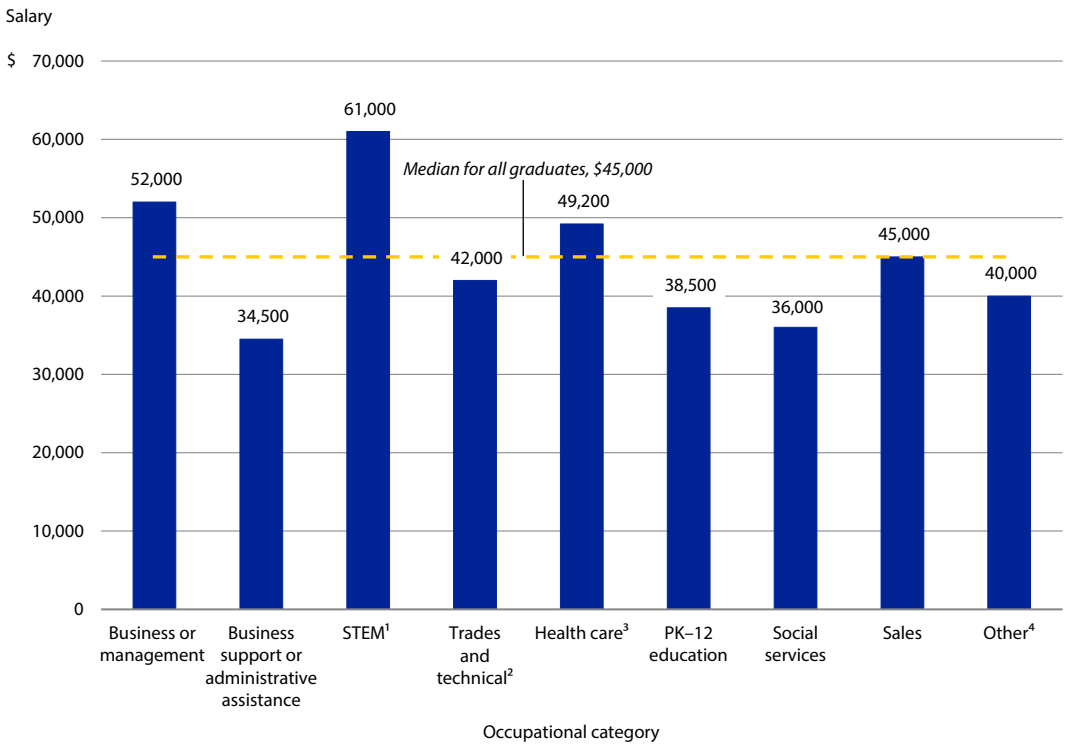
[5] During the second follow-up interview, 2007–08 graduates were asked about the job in which they were currently or most recently employed for more than 3 months. The data presented in this section on occupation and salary refer to this "primary" job.

In terms of race/ethnicity, proportionally more Asian graduates than their White, Black, and Hispanic peers were employed in STEM occupations (18 percent vs. 8–11 percent). A smaller proportion of Asian graduates than those from other racial/ethnic groups were teachers (3 percent vs. 7–11 percent).

Salary also varied by occupation. The median annualized salary[6] for graduates who were employed full time[7] was $45,000 (figure 2). Graduates in STEM occupations reported the highest median salaries ($61,000), whereas graduates employed in business support or administrative assistance occupations generally earned lower median salaries ($34,500) than graduates in the other occupational categories, except social services professionals, whose median salaries ($36,000) were not lower by a statistically significant margin.

## FIGURE 2.

**MEDIAN ANNUALIZED SALARY BY OCCUPATION**
**Among 2007–08 bachelor's degree recipients who were employed full time in their current or most recent primary job, median annualized salary, by occupational category: 2012**



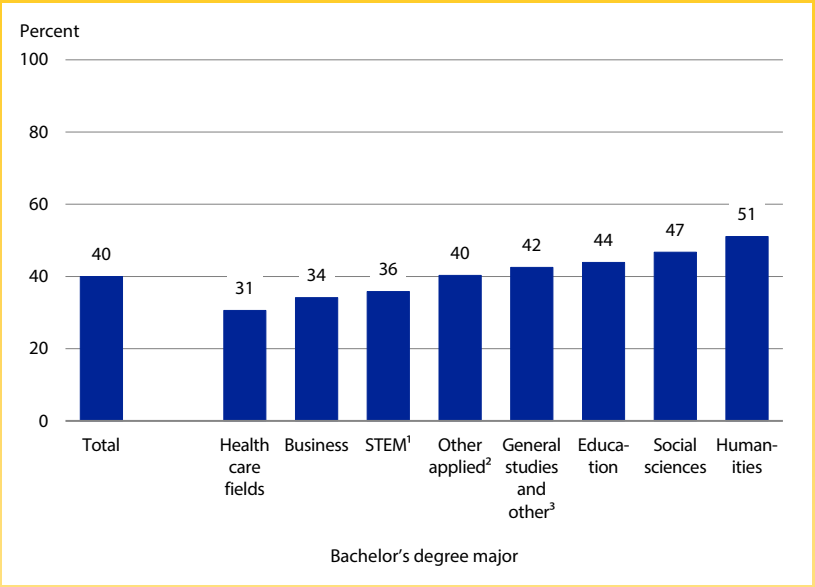

[1] Science, technology, engineering, and mathematics (STEM) occupations include computer/information systems occupations, engineers, life scientists, math-related occupations, and physical scientists.
[2] Includes agricultural occupations; construction and mining occupations; engineering technicians; fitters, tradesmen, and mechanics; food service occupations; military-specific occupations; personal care occupations; protective service occupations; sports occupations; and transport support occupations.
[3] Includes nurses.
[4] Includes air transportation professionals, artists and designers, communication professionals, information professionals, legal professionals, other educators, postsecondary educators, and social scientists.
NOTE: The respondent's primary job is defined as the respondent's current or most recent job that lasted more than 3 months. This figure includes only respondents who were employed full time (more than 35 hours per week) in their primary job. Estimates include graduates from Title IV eligible postsecondary institutions in the 50 states, the District of Columbia, and Puerto Rico. To recreate the table(s) used to produce these estimates within PowerStats (https://nces.ed.gov/datalab), use the following QuickRetrieve code once logged into the application: bkdbknfa.
SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12).

[6] Salary for the primary job, as reported by the respondent, calculated on an annual basis.
[7] Employed full time was defined as working more than 35 hours per week.

Research has focused on how those who graduated during the Great Recession (2007–2009), many of whom were just entering the labor market, fared in the labor force (Carnevale and Cheah 2015; Stone, Van Horn, and Zukin 2012). Among 2007–08 bachelor's degree recipients, 40 percent had been unemployed (not working but looking for work) for 1 month or more at least once during the 4 years since earning their degree (figure 3). The percentage of graduates who had been unemployed for at least 1 month varied by bachelor's degree major: a lower proportion of health care majors had been unemployed for 1 month or more over the course of 4 years compared with their peers in other majors (31 percent vs. 40–51 percent), although the percentages of business (34 percent) and STEM[8] (36 percent) majors were not different from health care majors by a statistically significant margin.

## FIGURE 3.

**UNEMPLOYMENT AFTER A BACHELOR'S DEGREE**
**Among 2007–08 bachelor's degree recipients, percentage who had been unemployed for 1 month or more at least once since earning the bachelor's degree, by bachelor's degree major: 2012**




[1] Science, technology, engineering, and mathematics (STEM) majors include computer and information sciences; engineering and engineering technology; and biological and physical science, science technology, mathematics, and agriculture.
[2] Includes personal and consumer services; manufacturing, construction, repair, and transportation; military technology and protective services; architecture; communications; public administration and human services; design and applied arts; law and legal studies; library sciences; and theology and religious vocations.
[3] Other includes basic skills and citizenship activities, leisure and recreational activities, personal awareness and self-improvement, high school and secondary diplomas and certificate programs, and interpersonal and social skills.
NOTE: Those who were not working but looking for work are defined as unemployed. Percent unemployed is the number of respondents who were unemployed divided by all respondents, including those who were employed full time or part time, employed in multiple jobs, unemployed, or outside of the labor force (not working and not looking for work). Graduates with multiple majors were classified by the first major field of study reported. For estimates of the percentage of graduates in each bachelor's degree major, see Cataldi, E.F., Woo, J., and Staklis, S. (2017). *Four Years After a Bachelor's Degree: Employment, Enrollment, and Debt Among College Graduates* (NCES 2017-438). U.S. Department of Education. Washington, DC: National Center for Education Statistics. Estimates include graduates from Title IV eligible postsecondary institutions in the 50 states, the District of Columbia, and Puerto Rico. To recreate the table(s) used to produce these estimates within PowerStats (https://nces.ed.gov/datalab), use the following QuickRetrieve code once logged into the application: bkdbkn19.
SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12).

[8] STEM majors include computer and information sciences; engineering and engineering technology; and biological and physical science, science technology, mathematics, and agriculture.

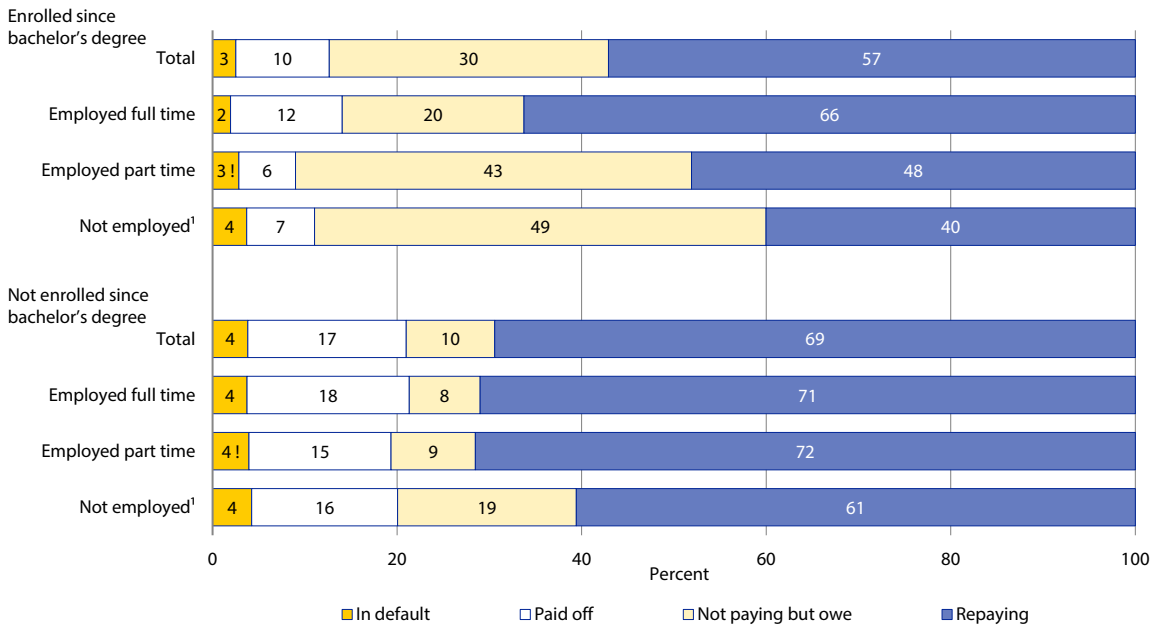
# 2 How many graduates were repaying education loans, and what was their debt burden in 2012?

As of 2012, about three-quarters of 2007–08 bachelor's degree recipients had taken out education loans for either their undergraduate or graduate education (Velez and Woo 2017). The percentage of graduates who borrowed and the average amount borrowed varied with postbaccalaureate enrollment. Among graduates who had not enrolled in a degree program after earning the bachelor's degree, two-thirds borrowed an average of $29,600 (Velez and Woo 2017). Among those who enrolled, however, 71 percent borrowed an average of $63,600 (Velez and Woo 2017).

Similarly, whether graduates were in default, had paid off, were not repaying but owed, or were repaying their education loans in 2012 varied depending on whether graduates had enrolled in further education. Four years after earning their first bachelor's degree[9] in 2007–08, one-tenth of graduates who borrowed for their education and had enrolled in additional degree programs had paid off their loans, and 57 percent were in repayment (figure 4).

## FIGURE 4.

**REPAYMENT STATUS**
**Among 2007–08 first-time bachelor's degree recipients who had borrowed for their education, percentage distribution of loan repayment status, by enrollment and employment status: 2012**




! Interpret data with caution. Estimate is unstable because the standard error is between 30 and 50 percent of the estimate.
[1] Not employed includes both those out of the labor force (not looking for work) and those unemployed (looking for work).
NOTE: Excludes the 7.2 percent of 2007–08 bachelor's degree recipients who had earned another bachelor's degree prior to 2007–08. Full-time and part-time employment status is based on respondent report. This table contains variables that exclude loans prior to 1995; however, some consolidated loan variables may include pre-1995 loans. Loan repayment status includes federal and private borrowing. Detail may not sum to totals because of rounding. Includes Direct Subsidized and Unsubsidized Loans, Perkins Loans, and other loans to students for graduate or undergraduate enrollment. Excludes Parent PLUS (Parent Loans to Undergraduate Students) Loans to parents of dependent undergraduates. Estimates include graduates from Title IV eligible postsecondary institutions in the 50 states, the District of Columbia, and Puerto Rico. To recreate the table(s) used to produce these estimates within PowerStats (https://nces.ed.gov/datalab), use the following QuickRetrieve codes once logged into the application: bkdbkn6f and bkdbkncb.
SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12).

[9] This section excludes the 7 percent of 2007–08 bachelor's degree recipients who had earned another bachelor's degree prior to 2007–08.

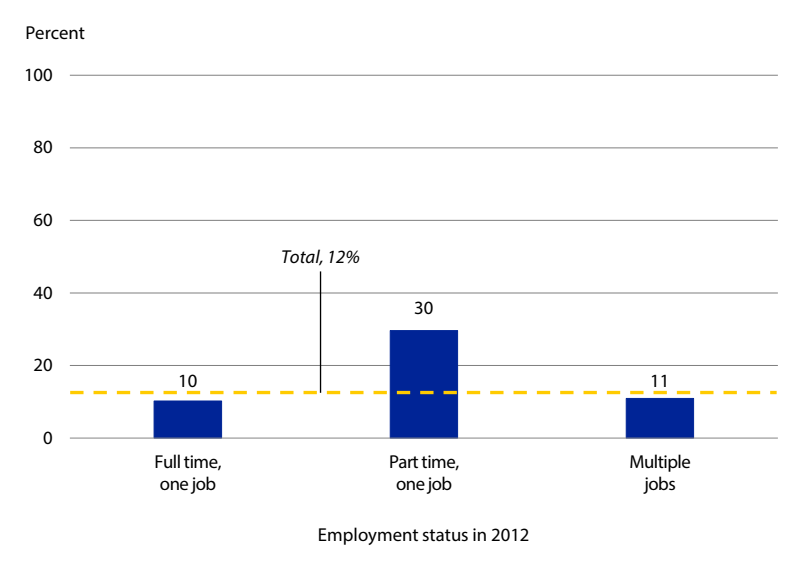
Thirty percent of those who had enrolled were not paying but owed on their student loans, and 3 percent were in default on their loans. Compared with graduates who had enrolled, larger proportions of graduates who had not enrolled were repaying (69 percent) or had paid off (17 percent) their loans, and a smaller proportion owed but were not paying (10 percent). Four percent of graduates with no further enrollment were in default in 2012.

Graduates' repayment status varied with their employment status in 2012. Among those who had enrolled for additional education, relatively more full-time than part-time employees or those who were not employed[10] were in repayment (66 percent vs. 48 and 40 percent, respectively). Among those who had not enrolled since earning their bachelor's degree, 71 percent of graduates who were employed full time in 2012 were in repayment, compared with 61 percent of those who were not employed.

Among employed graduates who were repaying their undergraduate or graduate loans, monthly loan payments accounted for about 12 percent, on average, of their monthly salary in 2012 (figure 5). This ratio of monthly loan payments to monthly salary, known as "debt burden," was higher for those employed in one part-time job in 2012 than for those employed full time or in multiple jobs (30 percent vs. 10 and 11 percent, respectively).

## FIGURE 5.

**DEBT BURDEN BY EMPLOYMENT**
**Among 2007–08 first-time bachelor's degree recipients who had borrowed for their education, were employed, and were in repayment, average monthly loan payment as a percentage of monthly salary, by employment status: 2012**



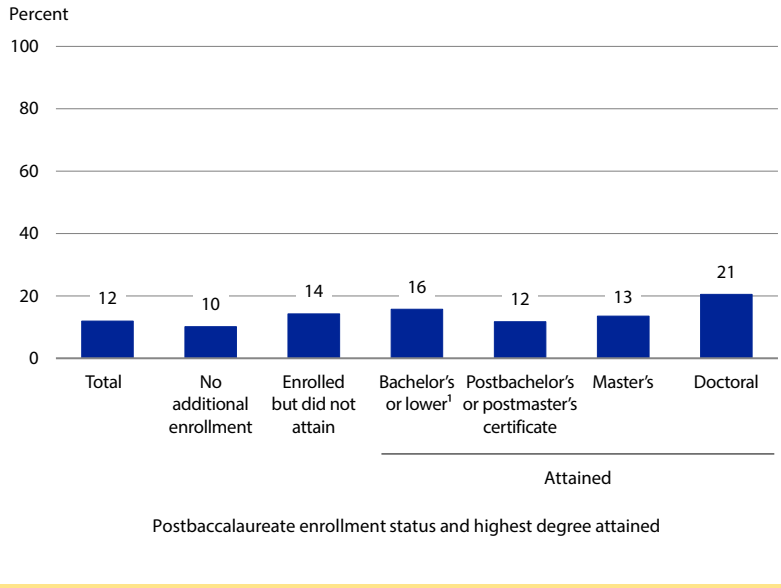

NOTE: Excludes the 7.2 percent of 2007–08 bachelor's degree recipients who had earned another bachelor's degree prior to 2007–08. Full-time and part-time employment status is based on respondent report. Estimates exclude borrowers without any salary. Debt burden is the monthly student loan payment as a percentage of monthly salary. Monthly salary is calculated by dividing annualized salary across all jobs by 12. This table contains variables that exclude loans prior to 1995; however, some consolidated loan variables may include pre-1995 loans. Cumulative federal debt includes Direct Subsidized and Unsubsidized Loans, Perkins Loans, and other loans to students for graduate or undergraduate enrollment. Excludes Parent PLUS (Parent Loans to Undergraduate Students) Loans to parents of dependent undergraduates. Estimates include graduates from Title IV eligible postsecondary institutions in the 50 states, the District of Columbia, and Puerto Rico. To recreate the table(s) used to produce these estimates within PowerStats (https://nces.ed.gov/datalab), use the following QuickRetrieve code once logged into the application: bkdbkn56.
SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12).

[10] Not employed includes both those out of the labor force (not looking for work) and those unemployed (looking for work).

With 10 percent, on average, of their monthly salary going toward loan payments, those who had not enrolled since receiving their bachelor's degree had a lower debt burden than those who had enrolled in additional degree programs but had not yet attained the degree (14 percent). Graduates who had not enrolled further also had a lower debt burden than those whose highest postbaccalaureate attainment was another bachelor's degree (16 percent), a master's degree (13 percent), or a doctoral degree (21 percent) (figure 6).

## FIGURE 6.

**DEBT BURDEN BY DEGREE ATTAINMENT**
**Among 2007–08 first-time bachelor's degree recipients who had borrowed for their education, were employed, and were in repayment, average monthly loan payment as a percentage of monthly salary, by postbaccalaureate enrollment status and highest degree attained: 2012**



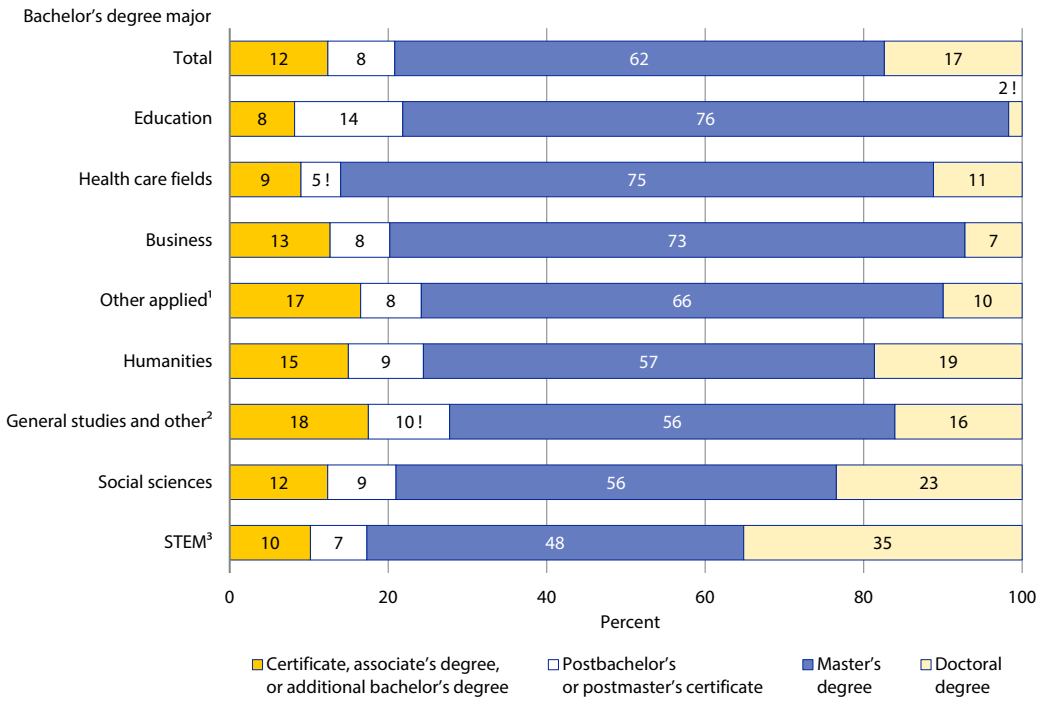

[1] Bachelor's or lower includes certificate, associate's, and additional bachelor's degree programs.
NOTE: Excludes the 7.2 percent of 2007–08 bachelor's degree recipients who had earned another bachelor's degree prior to 2007–08. Estimates exclude borrowers without any salary. Debt burden is the monthly student loan payment as a percentage of monthly salary. Monthly salary is calculated by dividing annualized salary across all jobs by 12. This table contains variables that exclude loans prior to 1995; however, some consolidated loan variables may include pre-1995 loans. Cumulative federal debt includes Direct Subsidized and Unsubsidized Loans, Perkins Loans, and other loans to students for graduate or undergraduate enrollment. Excludes Parent PLUS (Parent Loans to Undergraduate Students) Loans to parents of dependent undergraduates. Estimates include graduates from Title IV eligible postsecondary institutions in the 50 states, the District of Columbia, and Puerto Rico. To recreate the table(s) used to produce these estimates within PowerStats (https://nces.ed.gov/datalab), use the following QuickRetrieve code once logged into the application: bkdbkn7a.
SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12).

# 3 In what types of degree programs did graduates enroll after receiving their 2007–08 bachelor's degrees? What additional degrees or certificates did they earn within 4 years of completing their bachelor's degrees?

Of the 44 percent of graduates who had pursued an additional degree within 4 years of completing a bachelor's degree (Cataldi, Woo, and Staklis 2017), the majority (62 percent) had enrolled in a master's degree program (figure 7).[11] Eight percent had enrolled in a post-bachelor's or postmaster's certificate program, and 17 percent had enrolled in a doctoral degree program. Another 12 percent had enrolled in subbaccalaureate certificate, associate's degree, or additional bachelor's degree programs.

## FIGURE 7.

**ENROLLMENT AFTER EARNING A BACHELOR'S DEGREE**
**Percentage distribution of 2007–08 bachelor's degree recipients who enrolled in a degree program within 4 years of earning the bachelor's degree, by type of highest degree program in which enrolled and bachelor's degree major: 2012**




! Interpret data with caution. Estimate is unstable because the standard error is between 30 and 50 percent of the estimate.
[1] Includes personal and consumer services; manufacturing, construction, repair, and transportation; military technology and protective services; architecture; communications; public administration and human services; design and applied arts; law and legal studies; library sciences; and theology and religious vocations.
[2] Other includes basic skills and citizenship activities, leisure and recreational activities, personal awareness and self-improvement, high school and secondary diplomas and certificate programs, and interpersonal and social skills.
[3] Science, technology, engineering, and mathematics (STEM) majors include computer and information sciences; engineering and engineering technology; and biological and physical science, science technology, mathematics, and agriculture.
NOTE: Includes the 44 percent of respondents who enrolled in another degree program after the 2007–08 bachelor's degree. For estimates of the percentage of graduates in each bachelor's degree major, see Cataldi, E.F., Woo, J., and Staklis, S. (2017). *Four Years After a Bachelor's Degree: Employment, Enrollment, and Debt Among College Graduates* (NCES 2017-438). U.S. Department of Education. Washington, DC: National Center for Education Statistics. Graduates with multiple majors were classified by the first major field of study reported. Detail may not sum to totals because of rounding. Estimates include graduates from Title IV eligible postsecondary institutions in the 50 states, the District of Columbia, and Puerto Rico. To recreate the table(s) used to produce these estimates within PowerStats (https://nces.ed.gov/datalab), use the following QuickRetrieve code once logged into the application: bkdbkn60.
SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12).

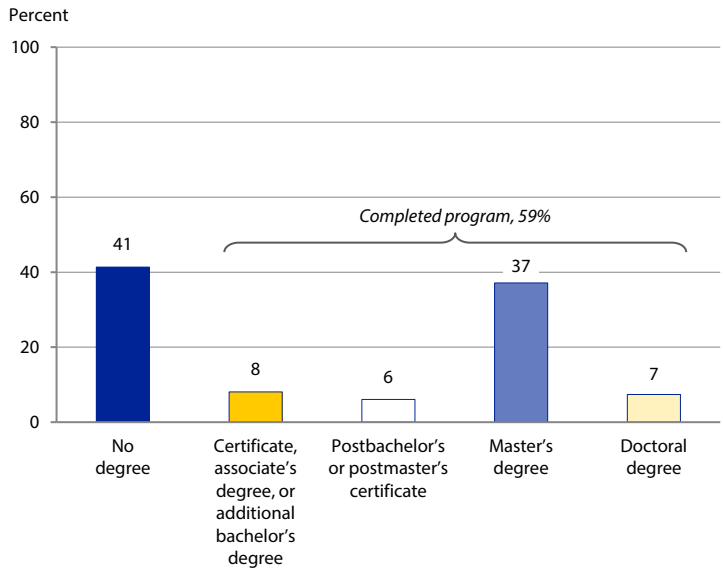
[11] In this Statistics in Brief, postbaccalaureate degree program enrollment and attainment reflect the highest degree program in which graduates enrolled and the highest degree attained after the bachelor's degree, respectively.

Bachelor's degree recipients' enrollment after college varied with undergraduate major. Among education majors who enrolled, three-fourths chose a master's degree program. In contrast, about one-half (48 percent) of STEM majors with further enrollment had enrolled in a master's degree program. Proportionally more STEM majors than graduates who had majored in all other fields pursued a doctoral degree (35 percent vs. 2–23 percent).

Within 4 years of earning the 2007–08 bachelor's degree, 59 percent of graduates who had enrolled in an additional postsecondary degree or certificate program had completed a program (figure 8). Of those who had enrolled, 37 percent of graduates earned a master's degree; 8 percent earned a subbaccalaureate certificate, associate's degree, or additional bachelor's degree; 6 percent earned a postbachelor's or postmaster's certificate; and 7 percent earned a doctoral degree.

## FIGURE 8.

**POSTBACCALAUREATE DEGREE COMPLETION**
**Percentage distribution of 2007–08 bachelor's degree recipients who had enrolled in postbaccalaureate education, by highest degree completed: 2012**




NOTE: Detail may not sum to totals because of rounding. Estimates include graduates from Title IV eligible postsecondary institutions in the 50 states, the District of Columbia, and Puerto Rico. To recreate the table(s) used to produce these estimates within PowerStats (https://nces.ed.gov/datalab), use the following QuickRetrieve codes once logged into the application: bkdbkn38 and bkdbknc0.
SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12).

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### https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2018435

More detailed information on 2007–08 bachelor's degree recipients in 2012 can be found in Web Tables produced by the National Center for Education Statistics (NCES) using the B&B:08/12 data. Included are estimates of demographic, enrollment, and employment characteristics. A First Look that examines employment experiences among these college graduates is also available.

*Web Tables—Four Years After a Bachelor's Degree: Employment, Enrollment, and Debt Among College Graduates* (NCES 2017-438). https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2017438

*Baccalaureate and Beyond: A First Look at the Employment Experiences and Lives of College Graduates, 4 Years On (B&B:08/12)* (NCES 2014-141). https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2014141

## TECHNICAL NOTES

### *Survey Methodology*

The estimates provided in this Statistics in Brief are based on data collected through the second follow-up of B&B:08/12, which describes the enrollment and employment experiences of a national sample of 2007–08 bachelor's degree recipients 4 years after graduation. The second follow-up explores postbaccalaureate employment and enrollment, as well as student loan debt and repayment. B&B:08/12 is the third in a series of studies of bachelor's degree recipients. The previous studies followed 1992–93 graduates through 2003 (B&B:93/03) and 1999–2000 graduates through 2001 (B&B:2000/01). The B&B studies allow researchers to address questions about the undergraduate experiences of bachelor's degree recipients, including their participation in various undergraduate financial aid programs, undergraduate debt, and repayment of that debt; entrance into and progress through degree programs after the bachelor's degree; and postbaccalaureate employment, particularly for graduates who became elementary or secondary teachers.

In the 2008 base-year study, as well as the follow-up studies in 2009 and 2012, students provided data through instruments administered over the Internet or by telephone. In addition to student responses, data were collected from the institutions attended by sampled students and other relevant databases, including U.S. Department of Education records on student loan and grant programs and student financial aid applications. Students' transcripts from the bachelor's degree-granting institution were collected in 2009 as part of the Postsecondary Education Transcript Study, creating a record of academic enrollment including coursetaking, credit accumulation, academic performance, and degree receipt prior to and including the 2007–08 bachelor's degree.

Of the approximately 137,800 undergraduate students who were sampled for the 2007–08 National Postsecondary Student Aid Study (NPSAS:08), about 17,160 students were determined to be eligible for B&B:08/09. Eligible students were those who had enrolled at an institution that was eligible to participate in Title IV federal student aid programs and was located in one of the 50 states, the District of Columbia, or Puerto Rico; who had completed the requirements for a bachelor's degree between July 1, 2007, and June 30, 2008; and who were awarded a bachelor's degree by the institution from which they were sampled no later than June 30, 2009. Of those students, about 17,110 were deemed eligible for B&B:08/12.[12] These students represent approximately 1.6 million students who completed the requirements for a bachelor's degree between July 1, 2007, and June 30, 2008. Exhibit 1 provides detailed information about the B&B:08/12 data collection.

**Exhibit 1. Selected statistics on the 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12) data collections: 2012**

| Statistic | B&B:08/12 |
|---|---|
| Target population | Bachelor's degree recipients in 2007–08 |
| Target population size | 1.6 million |
| Sampling frame (institutions) | 2004–05 and 2005–06 IPEDS IC,[1] Fall Enrollment, and Completion files |
| Number of sampled institutions (NPSAS:08[2]) | 1,960 |
| Number of eligible institutions (NPSAS:08) | 1,940 |
| Number of participating institutions (NPSAS:08) | 1,730 |
| Percent of eligible institutions that provided student enrollment lists (unweighted) | 89.0 |
| Percent of eligible institutions that provided student enrollment lists (weighted) | 90.1 |
| Number of sampled students (B&B:08/12) | 17,160 |
| Number of eligible students (B&B:08/12) | 17,110 |
| B&B:08/12 interview response rate (unweighted) | 85.1 |
| B&B:08/12 interview response rate (bookend weighted)[3] | 77.1 |
| B&B:08/12 interview response rate (panel weighted)[4] | 68.2 |

[1] The 2004–05 and 2005–06 Integrated Postsecondary Education Data System (IPEDS) Institutional Characteristics (IC), Fall Enrollment, and Completions files were used to construct the institution sampling frame.
[2] The 2007–08 National Postsecondary Student Aid Study (NPSAS:08) was the base-year study for B&B:08/12.
[3] The bookend weight, WTD000, includes NPSAS:08 study respondents who completed a B&B:08/12 interview.
[4] The panel weight, WTE000, includes NPSAS:08 study respondents who completed both a 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09) interview and a B&B:08/12 interview.
SOURCE: Cominole, M., Shepherd, B., and Siegel, P. (2015). *2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12) Data File Documentation* (NCES 2015-141). U.S. Department of Education. Washington, DC: National Center for Education Statistics.

[12] Approximately 17,160 students were eligible for B&B:08/09. About 30 students were found to be ineligible, and approximately 20 were deceased as of B&B:08/12, reducing the eligible sample size to about 17,110.

The institution sampling frame for NPSAS:08 was constructed from the 2004–05 and 2005–06 Institutional Characteristics, Fall Enrollment, and Completions files of the Integrated Postsecondary Education Data System, 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. The sampling design included first selecting eligible institutions and then selecting students from those institutions that provided enrollment lists (participating institutions). Institutions were selected with probabilities proportional to a composite measure of size based on expected 2007–08 enrollment. With approximately 1,700 institutions participating in the study, the weighted institution response rate was 90 percent. Eligible sampled students were defined as study respondents if at least 11 key data elements were available from any data source. Approximately 114,000 undergraduates and 14,000 graduate students were study respondents, and the weighted student response rates for both levels were 96 percent.[13] Estimates were weighted to adjust for the unequal probability of selection into the sample and for nonresponse.

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 design used in NPSAS:08 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 Statistics in Brief, uses the balanced repeated replication method to adjust variance estimation for the complex sample design (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, and imputing missing data.

For more information on B&B:08/12 methodology, see the following:

*2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12): Data File Documentation* (NCES 2015-141). https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2015141.

*Baccalaureate and Beyond: A First Look at the Employment Experiences and Lives of College Graduates, 4 Years On (B&B:08/12)* (NCES 2014-141). https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2014141.

**VARIABLES USED**

The variables used in this Statistics in Brief are listed below. Visit the NCES DataLab website at https://nces.ed.gov/datalab to view detailed information on question wording for variables coming directly from an interview, how variables were constructed, and their sources. The program files that generated the statistics presented in this Statistics in Brief can be found at https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2018435.

| Label | Name |
|---|---|
| Annualized salary in primary job in 2012 | B2CJSAL |
| Bachelor's degree major | MAJORS4Y |
| Cumulative amount borrowed for education through 2012 | B2BORAT |
| Employment and enrollment status in 2012 | B2LFP12 |
| Full-time/part-time employment status in 2012 | B2EMPRT |
| Highest degree completed before bachelor's degree | HIOTHDEG |
| Highest degree program ever enrolled in after bachelor's degree | B2HIENR |
| Highest degree completed after bachelor's degree | B2HIDEG |
| Hours worked per week in current primary job | B2CJHRS |
| Months unemployed since bachelor's degree | B2MUNEM |
| Occupational category of primary job in 2012 | B2CJOCC33 |
| Race/ethnicity | RACE |
| Monthly loan payment as a percentage of monthly salary | B2EDPCT |
| Repayment status for any loans taken for education in 2012 | B2PAYSTAT |
| Sex | GENDER |

[13] Data on graduate students from NPSAS:08 are not included in this study.

### *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" (Seastrom 2014).

In the case of B&B:08/12, this means that nonresponse bias analysis could be required at any of three levels: institutions, interview respondents, or items. The institutional response rate for NPSAS:08 was 90 percent; therefore, nonresponse bias analysis was not required at that level.

As shown in exhibit 1, the weighted interview response rates for the 17,110 eligible B&B:08/12 sample members were below 85 percent. Therefore, nonresponse bias analyses were conducted at the interview level to estimate the level of bias due to nonresponse before weighting and after application of the three weights computed for the study. Details concerning these analyses are available in Cataldi et al. (2014) and Cominole, Shepherd, and Siegel (2015). Exhibit 2 presents estimates of relative bias and the percentage of variable categories with statistically significant bias before and after the panel weight was adjusted for nonresponse. These results indicate that adjusting the panel weight for nonresponse reduced some of the bias due to nonresponse but did not eliminate it. Exhibit 2 also presents pre- and poststratification differences between estimates that were already adjusted for nonresponse.

Only one variable used in the analyses for this Statistics in Brief required nonresponse bias analysis: B2PAYSTAT (81 percent). The nonresponse bias analysis conducted for this variable determined whether respondents and nonrespondents differed on the following characteristics: institution control, region, and total enrollment; whether the student was a federal aid recipient, was a state aid recipient, was a recipient of any aid, was a Pell Grant

**Exhibit 2. Summary of interview-level nonresponse bias analysis results and differences between pre- and poststratification estimates using panel weight, by type of institution: 2012**

| Nonresponse bias statistics | Overall | Public | Private nonprofit | For-profit |
|---|---|---|---|---|
| Before nonresponse weight adjustments | | | | |
| Mean estimated relative bias | 5.23 | 5.12 | 6.61 | 10.21 |
| Median estimated relative bias | 4.43 | 4.19 | 5.42 | 8.93 |
| Percent of variable categories significantly biased | 44.83 | 48.98 | 40.82 | 2.94 |
| After nonresponse weight adjustments | | | | |
| Mean estimated relative bias | 1.48 | 3.22 | 4.21 | 15.71 |
| Median estimated relative bias | # | 1.50 | 2.38 | 12.11 |
| Percent of variable categories significantly biased | 6.90 | 10.20 | 2.04 | 2.94 |
| Difference between means for respondents before and after poststratification adjustment[1] | | | | |
| Mean absolute difference across characteristics | 1.29 | 1.40 | 1.83 | 5.44 |
| Median absolute difference across characteristics | 0.80 | 0.75 | 1.22 | 5.75 |
| Difference between means for full sample and respondents after poststratification adjustment[2] | | | | |
| Mean absolute difference across characteristics | 1.31 | 1.53 | 1.81 | 3.87 |
| Median absolute difference across characteristics | 0.80 | 0.94 | 1.52 | 3.88 |

# Rounds to zero.

[1] Respondents before poststratification adjustment are weighted using the base weight, adjusted for nonresponse. Respondents after poststratification adjustment are weighted using the base weight, adjusted for nonresponse and poststratification.

[2] Full sample is weighted using the base weight. Respondents after poststratification adjustment are weighted using the base weight, adjusted for nonresponse and poststratification.

NOTE: Relative bias and significance were calculated on respondents versus full sample. Relative bias is defined as the ratio of estimated bias to the weighted mean of the full sample. Variable categories with fewer than 30 nonrespondents were suppressed for calculations in this table.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12).

recipient, or borrowed a Stafford Loan; and the amount, if any, of a student's Pell Grant, Stafford Loan, or PLUS (Parent Loans for Undergraduate Students) loan. Differences between respondents and nonrespondents on this variable were tested for statistical significance at the 5 percent level.

Respondents differed from nonrespondents on 29 percent of the characteristics analyzed, indicating that there may be bias in this estimate (exhibit 3). 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 variables related to demographic, enrollment, institution, and financial aid characteristics (Krotki, Black, and Creel 2005). The potential for bias in the estimate may be reduced by imputation.

Because imputation procedures are designed specifically to identify donors with similar characteristics to those with missing data, the imputation is assumed to reduce bias. Although 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 this categorical variable, 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 estimated differences were tested for statistical significance at the 5 percent level. A significant difference in the item means after imputation implies a reduction in bias due to imputation. A nonsignificant difference suggests that imputation may not have reduced bias, that the sample size was too small to detect a significant difference, or that there was little bias to be reduced. A statistical test of the differences between the means before and after imputation for this variable was significant, indicating that the nonresponse bias was reduced through imputation.

For more detailed information on nonresponse bias analysis and an overview of the survey methodology for B&B:08/12, see *2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12): Data File Documentation* (NCES 2015-141) (https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2015141).

**Exhibit 3. Bias analysis results**

| | | Preimputation | | | |
|---|---|---|---|---|---|
| Variable name | Response rate | Median percent relative bias across characteristics | Percent of characteristics with significant bias | Characteristic with greatest significant bias | Percent difference in means or average percent difference across all categories pre- and postimputation |
| B2PAYSTAT | 80.6 | 4.2 | 28.95 | Whether had Stafford loan | 0.13 * |

* Indicates statistically significant difference at $p < .05$.
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 $p < .05$.
SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12).

### *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[14] 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 that one can report 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.[15] 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 that the values are the same or equivalent.

[14] 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.
[15] No adjustments were made for multiple comparisons.

## REFERENCES


Carnevale, A.P., and Cheah, B. (2015). *From Hard Times to Better Times: College Majors, Unemployment, and Earnings*. Washington, DC: Georgetown University, Center on Education and the Workforce. Retrieved February 26, 2015, from https://cew.georgetown.edu/wp-content/uploads/HardTimes2015-Report.pdf.

Cataldi, E.F., Siegel, P., Shepherd, B., and Cooney, J. (2014). *Baccalaureate and Beyond: A First Look at the Employment Experiences and Lives of College Graduates, 4 Years On (B&B:08/12)* (NCES 2014-141). U.S. Department of Education. Washington, DC: National Center for Education Statistics.

Cataldi, E.F., Woo, J., and Staklis, S. (2017). *Four Years After a Bachelor's Degree: Employment, Enrollment, and Debt Among College Graduates* (NCES 2017-438). U.S. Department of Education. Washington, DC: National Center for Education Statistics.

Cominole, M., Shepherd, B., and Siegel, P. (2015). *2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12): Data File Documentation* (NCES 2015-141). U.S. Department of Education. Washington, DC: National Center for Education Statistics.

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

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.

Stone, C., Van Horn, C., and Zukin, C. (2012). *Chasing the American Dream: Recent College Graduates and the Great Recession*. John J. Heldrich Center for Workforce Development, Rutgers University. Retrieved February 26, 2015, from http://www.heldrich.rutgers.edu/sites/default/files/products/uploads/Chasing_American_Dream_Report.pdf.

Seastrom, M. (2014). *NCES Statistical Standards* (NCES 2014-097). U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved February 26, 2015, from https://nces.ed.gov/statprog/2012/.

Velez, E.D., and Woo, J.H. (2017). *The Debt Burden of Bachelor's Degree Recipients* (NCES 2017-436). U.S. Department of Education. Washington, DC: National Center for Education Statistics.

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

# APPENDIX A. DATA TABLES

### Table A-1. Estimates for figure 1: EMPLOYMENT AND ENROLLMENT STATUS
### Percentage distribution of 2007–08 bachelor's degree recipients, by employment and enrollment status: 2012

| | Employed only | Employed and enrolled | Enrolled only | Not enrolled, unemployed | Not enrolled, out of the labor force |
|---|---|---|---|---|---|
| Bachelor's degree recipients | 69.0 | 10.7 | 5.7 | 6.7 | 7.9 |

NOTE: Detail may not sum to totals because of rounding. Estimates include graduates from Title IV eligible postsecondary institutions in the 50 states, the District of Columbia, and Puerto Rico. To recreate the table(s) used to produce these estimates within PowerStats (https://nces.ed.gov/datalab), use the following QuickRetrieve code once logged into the application: bkdbkne6.
SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12).

### Table A-2. Estimates for figure 2: MEDIAN ANNUALIZED SALARY BY OCCUPATION
### Among 2007–08 bachelor's degree recipients who were employed full time in their current or most recent primary job, median annualized salary, by occupational category: 2012

| | Total | Business or management | Business support or administrative assistance | STEM[1] | Trades and technical[2] | Health care[3] | PK–12 education | Social services | Sales | Other[4] |
|---|---|---|---|---|---|---|---|---|---|---|
| Salary | $45,000 | $52,000 | $34,500 | $61,000 | $42,000 | $49,200 | $38,500 | $36,000 | $45,000 | $40,000 |

[1] Science, technology, engineering, and mathematics (STEM) occupations include computer/information systems occupations, engineers, life scientists, math-related occupations, and physical scientists.
[2] Includes agricultural occupations; construction and mining occupations; engineering technicians; fitters, tradesmen, and mechanics; food service occupations; military-specific occupations; personal care occupations; protective service occupations; sports occupations; and transport support occupations.
[3] Includes nurses.
[4] Includes air transportation professionals, artists and designers, communication professionals, information professionals, legal professionals, other educators, postsecondary educators, and social scientists.
NOTE: The respondent's primary job is defined as the respondent's current or most recent job that lasted more than 3 months. This figure includes only respondents who were employed full time (more than 35 hours per week) in their primary job. Estimates include graduates from Title IV eligible postsecondary institutions in the 50 states, the District of Columbia, and Puerto Rico. To recreate the table(s) used to produce these estimates within PowerStats (https://nces.ed.gov/datalab), use the following QuickRetrieve code once logged into the application: bkdbknfa.
SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12).

**Table A-3. Estimates for figure 3: UNEMPLOYMENT AFTER A BACHELOR'S DEGREE**
**Among 2007–08 bachelor's degree recipients, percentage who had been unemployed for 1 month or more at least once since earning the bachelor's degree, by bachelor's degree major: 2012**

| Bachelor's degree major | Unemployed 1 month or more since bachelor's degree |
|---|---|
| **Total** | **40.0** |
| Health care fields | 30.6 |
| Business | 34.1 |
| STEM[1] | 35.8 |
| Other applied[2] | 40.3 |
| General studies and other[3] | 42.5 |
| Education | 43.9 |
| Social sciences | 46.7 |
| Humanities | 51.1 |

[1] Science, technology, engineering, and mathematics (STEM) majors include computer and information sciences; engineering and engineering technology; and biological and physical science, science technology, mathematics, and agriculture.
[2] Includes personal and consumer services; manufacturing, construction, repair, and transportation; military technology and protective services; architecture; communications; public administration and human services; design and applied arts; law and legal studies; library sciences; and theology and religious vocations.
[3] Other includes basic skills and citizenship activities, leisure and recreational activities, personal awareness and self-improvement, high school and secondary diplomas and certificate programs, and interpersonal and social skills.
NOTE: Those who were not working but looking for work are defined as unemployed. Percent unemployed is the number of respondents who were unemployed divided by all respondents, including those who were employed full time or part time, employed in multiple jobs, unemployed, or outside of the labor force (not working and not looking for work). Graduates with multiple majors were classified by the first major field of study reported. For estimates of the percentage of graduates in each bachelor's degree major, see Cataldi, E.F., Woo, J., and Staklis, S. (2017). *Four Years After a Bachelor's Degree: Employment, Enrollment, and Debt Among College Graduates* (NCES 2017-438). U.S. Department of Education. Washington, DC: National Center for Education Statistics. Estimates include graduates from Title IV eligible postsecondary institutions in the 50 states, the District of Columbia, and Puerto Rico. To recreate the table(s) used to produce these estimates within PowerStats (https://nces.ed.gov/datalab), use the following QuickRetrieve code once logged into the application: bkdbkn19.
SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12).

**Table A-4. Estimates for figure 4: REPAYMENT STATUS**
**Among 2007–08 first-time bachelor's degree recipients who had borrowed for their education, percentage distribution of loan repayment status, by enrollment and employment status: 2012**

| Enrollment and employment status | In default | Paid off | Not paying but owe | Repaying |
|---|---|---|---|---|
| Enrolled since bachelor's degree | | | | |
| Total | 2.5 | 10.1 | 30.3 | 57.1 |
| Employed full time | 1.9 | 12.1 | 19.7 | 66.2 |
| Employed part time | 2.9 ! | 6.1 | 42.9 | 48.1 |
| Not employed[1] | 3.7 | 7.4 | 48.9 | 40.0 |
| Not enrolled since bachelor's degree | | | | |
| Total | 3.8 | 17.2 | 9.6 | 69.4 |
| Employed full time | 3.7 | 17.6 | 7.7 | 71.0 |
| Employed part time | 3.9 ! | 15.4 | 9.1 | 71.5 |
| Not employed[1] | 4.2 | 15.8 | 19.4 | 60.6 |

! Interpret data with caution. Estimate is unstable because the standard error is between 30 and 50 percent of the estimate.
[1] Not employed includes both those out of the labor force (not looking for work) and those unemployed (looking for work).
NOTE: Excludes the 7.2 percent of 2007–08 bachelor's degree recipients who had earned another bachelor's degree prior to 2007–08. Full-time and part-time employment status is based on respondent report. This table contains variables that exclude loans prior to 1995; however, some consolidated loan variables may include pre-1995 loans. Loan repayment status includes federal and private borrowing. Detail may not sum to totals because of rounding. Includes Direct Subsidized and Unsubsidized Loans, Perkins Loans, and other loans to students for graduate or undergraduate enrollment. Excludes Parent PLUS (Parent Loans to Undergraduate Students) Loans to parents of dependent undergraduates. Estimates include graduates from Title IV eligible postsecondary institutions in the 50 states, the District of Columbia, and Puerto Rico. To recreate the table(s) used to produce these estimates within PowerStats (https://nces.ed.gov/datalab), use the following QuickRetrieve codes once logged into the application: bkdbkn6f and bkdbkncb.
SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12).

### Table A-5. Estimates for figure 5: DEBT BURDEN BY EMPLOYMENT
### Among 2007–08 first-time bachelor's degree recipients who had borrowed for their education, were employed, and were in repayment, average monthly loan payment as a percentage of monthly salary, by employment status: 2012

| Employment status | Debt burden |
|---|---|
| **Total** | **11.9** |
| Employment status in 2012 | |
| Full time, one job | 10.2 |
| Part time, one job | 29.6 |
| Multiple jobs | 10.9 |

NOTE: Excludes the 7.2 percent of 2007–08 bachelor's degree recipients who had earned another bachelor's degree prior to 2007–08. Full-time and part-time employment status is based on respondent report. Estimates exclude borrowers without any salary. Debt burden is the monthly student loan payment as a percentage of monthly salary. Monthly salary is calculated by dividing annualized salary across all jobs by 12. This table contains variables that exclude loans prior to 1995; however, some consolidated loan variables may include pre-1995 loans. Cumulative federal debt includes Direct Subsidized and Unsubsidized Loans, Perkins Loans, and other loans to students for graduate or undergraduate enrollment. Excludes Parent PLUS (Parent Loans to Undergraduate Students) Loans to parents of dependent undergraduates. Estimates include graduates from Title IV eligible postsecondary institutions in the 50 states, the District of Columbia, and Puerto Rico. To recreate the table(s) used to produce these estimates within PowerStats (https://nces.ed.gov/datalab), use the following QuickRetrieve code once logged into the application: bkdbkn56.
SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12).

### Table A-6. Estimates for figure 6: DEBT BURDEN BY DEGREE ATTAINMENT
### Among 2007–08 first-time bachelor's degree recipients who had borrowed for their education, were employed, and were in repayment, average monthly loan payment as a percentage of monthly salary, by postbaccalaureate enrollment status and highest degree attained: 2012

| Postbaccalaureate enrollment status and highest degree attained | Debt burden |
|---|---|
| **Total** | **11.9** |
| No additional enrollment | 10.1 |
| Enrolled but did not attain | 14.2 |
| Attained | |
| Bachelor's or lower[1] | 15.7 |
| Postbachelor's or postmaster's certificate | 11.7 |
| Master's | 13.5 |
| Doctoral | 20.5 |

[1] Bachelor's or lower includes certificate, associate's, and additional bachelor's degree programs.
NOTE: Excludes the 7.2 percent of 2007–08 bachelor's degree recipients who had earned another bachelor's degree prior to 2007–08. Estimates exclude borrowers without any salary. Debt burden is the monthly student loan payment as a percentage of monthly salary. Monthly salary is calculated by dividing annualized salary across all jobs by 12. This table contains variables that exclude loans prior to 1995; however, some consolidated loan variables may include pre-1995 loans. Cumulative federal debt includes Direct Subsidized and Unsubsidized Loans, Perkins Loans, and other loans to students for graduate or undergraduate enrollment. Excludes Parent PLUS (Parent Loans to Undergraduate Students) Loans to parents of dependent undergraduates. Estimates include graduates from Title IV eligible postsecondary institutions in the 50 states, the District of Columbia, and Puerto Rico. To recreate the table(s) used to produce these estimates within PowerStats (https://nces.ed.gov/datalab), use the following QuickRetrieve code once logged into the application: bkdbkn7a.
SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12).

**Table A-7. Estimates for figure 7: ENROLLMENT AFTER EARNING A BACHELOR'S DEGREE**
**Percentage distribution of 2007–08 bachelor's degree recipients who enrolled in a degree program within 4 years of earning the bachelor's degree, by type of highest degree program in which enrolled and bachelor's degree major: 2012**

| Bachelor's degree major | Certificate, associate's degree, or additional bachelor's degree | Postbachelor's or postmaster's certificate | Master's degree | Doctoral degree |
|---|---|---|---|---|
| **Total** | **12.4** | **8.4** | **61.8** | **17.4** |
| Education | 8.2 | 13.6 | 76.5 | 1.7 ! |
| Health care fields | 9.0 | 5.0 ! | 74.8 | 11.2 |
| Business | 12.7 | 7.5 | 72.6 | 7.2 |
| Other applied[1] | 16.5 | 7.7 | 65.9 | 10.0 |
| Humanities | 15.0 | 9.5 | 56.9 | 18.6 |
| General studies and other[2] | 17.5 | 10.2 ! | 56.2 | 16.0 |
| Social sciences | 12.4 | 8.6 | 55.6 | 23.4 |
| STEM[3] | 10.2 | 7.1 | 47.5 | 35.1 |

! Interpret data with caution. Estimate is unstable because the standard error is between 30 and 50 percent of the estimate.
[1] Includes personal and consumer services; manufacturing, construction, repair, and transportation; military technology and protective services; architecture; communications; public administration and human services; design and applied arts; law and legal studies; library sciences; and theology and religious vocations.
[2] Other includes basic skills and citizenship activities, leisure and recreational activities, personal awareness and self-improvement, high school and secondary diplomas and certificate programs, and interpersonal and social skills.
[3] Science, technology, engineering, and mathematics (STEM) majors include computer and information sciences; engineering and engineering technology; and biological and physical science, science technology, mathematics, and agriculture.
NOTE: Includes the 44 percent of respondents who enrolled in another degree program after the 2007–08 bachelor's degree. For estimates of the percentage of graduates in each bachelor's degree major, see Cataldi, E.F., Woo, J., and Staklis, S. (2017). *Four Years After a Bachelor's Degree: Employment, Enrollment, and Debt Among College Graduates* (NCES 2017-438). U.S. Department of Education. Washington, DC: National Center for Education Statistics. Graduates with multiple majors were classified by the first major field of study reported. Detail may not sum to totals because of rounding. Estimates include graduates from Title IV eligible postsecondary institutions in the 50 states, the District of Columbia, and Puerto Rico. To recreate the table(s) used to produce these estimates within PowerStats (https://nces.ed.gov/datalab), use the following QuickRetrieve code once logged into the application: bkdbkn60.
SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12).

**Table A-8. Estimates for figure 8: POSTBACCALAUREATE DEGREE COMPLETION**
**Percentage distribution of 2007–08 bachelor's degree recipients who had enrolled in postbaccalaureate education, by highest degree completed: 2012**

| | No degree | Completed program | Certificate, associate's degree, or additional bachelor's degree | Postbachelor's or postmaster's certificate | Master's degree | Doctoral degree |
|---|---|---|---|---|---|---|
| Bachelor's degree recipients | 41.4 | 58.6 | 8.1 | 6.1 | 37.1 | 7.4 |

NOTE: Detail may not sum to totals because of rounding. Estimates include graduates from Title IV eligible postsecondary institutions in the 50 states, the District of Columbia, and Puerto Rico. To recreate the table(s) used to produce these estimates within PowerStats (https://nces.ed.gov/datalab), use the following QuickRetrieve codes once logged into the application: bkdbkn38 and bkdbknc0.
SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12).

# APPENDIX B. STANDARD ERROR TABLES

**Table B-1. Standard errors for table A-1 and figure 1: EMPLOYMENT AND ENROLLMENT STATUS**
**Percentage distribution of 2007–08 bachelor's degree recipients, by employment and enrollment status: 2012**

| | Employed only | Employed and enrolled | Enrolled only | Not enrolled, unemployed | Not enrolled, out of the labor force |
|---|---|---|---|---|---|
| Bachelor's degree recipients | 0.59 | 0.37 | 0.31 | 0.34 | 0.36 |

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12).

**Table B-2. Standard errors for table A-2 and figure 2: MEDIAN ANNUALIZED SALARY BY OCCUPATION**
**Among 2007–08 bachelor's degree recipients who were employed full time in their current or most recent primary job, median annualized salary, by occupational category: 2012**

| | Total | Business or management | Business support or administrative assistance | STEM | Trades and technical | Health care | PK–12 education | Social services | Sales | Other |
|---|---|---|---|---|---|---|---|---|---|---|
| Salary | $590 | $950 | $760 | $1,290 | $1,730 | $830 | $660 | $810 | $1,610 | $920 |

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12).

**Table B-3. Standard errors for table A-3 and figure 3: UNEMPLOYMENT AFTER A BACHELOR'S DEGREE**
**Among 2007–08 bachelor's degree recipients, percentage who had been unemployed for 1 month or more at least once since earning the bachelor's degree, by bachelor's degree major: 2012**

| Bachelor's degree major | Unemployed 1 month or more since bachelor's degree |
|---|---|
| **Total** | **0.77** |
| Health care fields | 2.29 |
| Business | 1.55 |
| STEM | 1.59 |
| Other applied | 1.67 |
| General studies and other | 3.19 |
| Education | 2.01 |
| Social sciences | 1.65 |
| Humanities | 1.89 |

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12).

**Table B-4. Standard errors for table A-4 and figure 4: REPAYMENT STATUS**
**Among 2007–08 first-time bachelor's degree recipients who had borrowed for their education, percentage distribution of loan repayment status, by enrollment and employment status: 2012**

| Enrollment and employment status | In default | Paid off | Not paying but owe | Repaying |
|---|---|---|---|---|
| Enrolled since bachelor's degree | | | | |
| Total | 0.37 | 0.69 | 0.98 | 1.02 |
| Employed full time | 0.38 | 1.02 | 1.12 | 1.35 |
| Employed part time | 1.09 | 1.55 | 3.00 | 3.07 |
| Not employed | 0.95 | 1.30 | 2.12 | 1.94 |
| Not enrolled since bachelor's degree | | | | |
| Total | 0.42 | 0.89 | 0.77 | 1.17 |
| Employed full time | 0.49 | 1.06 | 0.75 | 1.25 |
| Employed part time | 1.33 | 2.58 | 1.88 | 3.49 |
| Not employed | 1.08 | 2.12 | 2.47 | 2.83 |

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12).

**Table B-5. Standard errors for table A-5 and figure 5: DEBT BURDEN BY EMPLOYMENT**
**Among 2007–08 first-time bachelor's degree recipients who had borrowed for their education, were employed, and were in repayment, average monthly loan payment as a percentage of monthly salary, by employment status: 2012**

| Employment status | Debt burden |
|---|---|
| **Total** | **0.32** |
| Employment status in 2012 | |
| Full time, one job | 0.27 |
| Part time, one job | 2.25 |
| Multiple jobs | 0.89 |

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12).

**Table B-6. Standard errors for table A-6 and figure 6: DEBT BURDEN BY DEGREE ATTAINMENT**
**Among 2007–08 first-time bachelor's degree recipients who had borrowed for their education, were employed, and were in repayment, average monthly loan payment as a percentage of monthly salary, by postbaccalaureate enrollment status and highest degree attained: 2012**

| Postbaccalaureate enrollment status and highest degree attained | Debt burden |
|---|---|
| **Total** | **0.32** |
| No additional enrollment | 0.36 |
| Enrolled but did not attain | 1.15 |
| Attained | |
| Bachelor's or lower | 2.40 |
| Postbachelor's or postmaster's certificate | 0.94 |
| Master's | 0.72 |
| Doctoral | 2.19 |

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12).

**Table B-7. Standard errors for table A-7 and figure 7: ENROLLMENT AFTER EARNING A BACHELOR'S DEGREE Percentage distribution of 2007–08 bachelor's degree recipients who enrolled in a degree program within 4 years of earning the bachelor's degree, by type of highest degree program in which enrolled and bachelor's degree major: 2012**

| Bachelor's degree major | Certificate, associate's degree, or additional bachelor's degree | Postbachelor's or postmaster's certificate | Master's degree | Doctoral degree |
|---|---|---|---|---|
| **Total** | **0.70** | **0.51** | **0.88** | **0.64** |
| Education | 1.45 | 1.97 | 2.29 | 0.68 |
| Health care fields | 2.08 | 1.78 | 2.49 | 1.97 |
| Business | 1.73 | 1.43 | 2.20 | 1.45 |
| Other applied | 1.94 | 1.44 | 2.45 | 1.61 |
| Humanities | 1.76 | 1.70 | 2.45 | 1.80 |
| General studies and other | 3.88 | 3.36 | 4.67 | 3.73 |
| Social sciences | 1.62 | 1.09 | 2.36 | 1.66 |
| STEM | 1.46 | 1.13 | 2.07 | 2.15 |

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12).

**Table B-8. Standard errors for table A-8 and figure 8: POSTBACCALAUREATE DEGREE COMPLETION Percentage distribution of 2007–08 bachelor's degree recipients who had enrolled in postbaccalaureate education, by highest degree completed: 2012**

| | No degree | Completed program | Certificate, associate's degree, or additional bachelor's degree | Postbachelor's or postmaster's certificate | Master's degree | Doctoral degree |
|---|---|---|---|---|---|---|
| Bachelor's degree recipients | 0.97 | 0.97 | 0.54 | 0.51 | 0.91 | 0.48 |

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12).

**Table B-9. Standard errors for table 1. OCCUPATION BY SEX AND RACE/ETHNICITY**
**Among 2007–08 bachelor's degree recipients who had a current or most recent primary job, percentage distribution of occupational category of primary job, by sex and race/ethnicity: 2012**

| Student characteristics | Business or management | Business support or administrative assistance | STEM | Trades and technical | Health care | PK–12 education | Social services | Sales | Other occupations |
|---|---|---|---|---|---|---|---|---|---|
| **Total** | **0.54** | **0.50** | **0.38** | **0.41** | **0.30** | **0.33** | **0.30** | **0.27** | **0.46** |
| Sex | | | | | | | | | |
| Male | 1.00 | 0.61 | 0.77 | 0.78 | 0.38 | 0.44 | 0.36 | 0.53 | 0.74 |
| Female | 0.66 | 0.68 | 0.32 | 0.46 | 0.50 | 0.54 | 0.44 | 0.34 | 0.64 |
| Race/ethnicity | | | | | | | | | |
| White | 0.59 | 0.57 | 0.41 | 0.49 | 0.35 | 0.38 | 0.35 | 0.30 | 0.54 |
| Black | 1.67 | 1.54 | 1.36 | 1.77 | 1.63 | 1.32 | 1.21 | 1.29 | 1.51 |
| Hispanic | 1.80 | 1.76 | 1.25 | 1.45 | 1.26 | 1.19 | 1.24 | 0.99 | 1.60 |
| Asian | 2.78 | 2.16 | 2.38 | 1.81 | 1.83 | 0.70 | 1.18 | 1.15 | 2.19 |
| Other | 2.73 | 2.15 | 2.24 | 2.39 | 2.02 | 2.03 | 1.46 | 1.98 | 2.46 |

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12).

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