Center for STEM EDUCATION & INNOVATION
at American Institutes for Research

Delta Cost Project
at American Institutes for Research

DATA BRIEF

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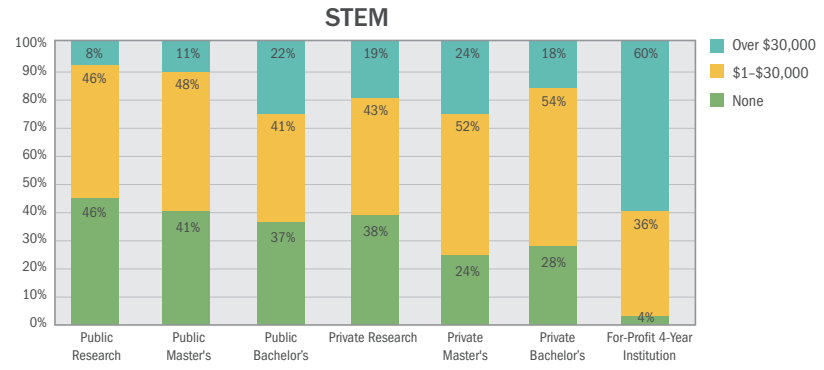
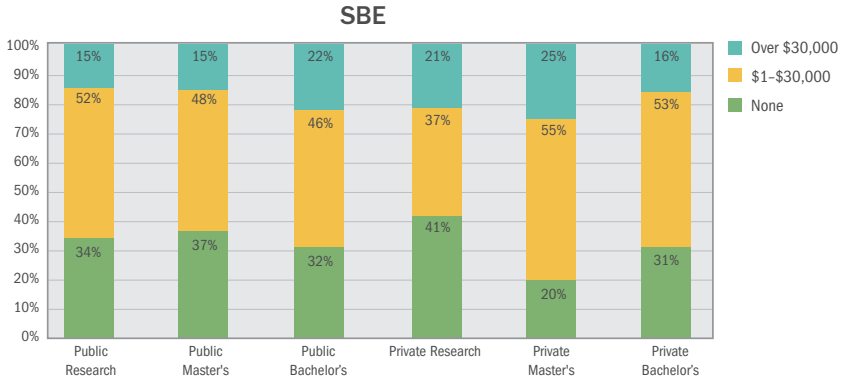
This data brief is the second in the series *The Price and Cost of Science Degrees.* For more information, visit www.air.org/PriceCostScienceDegrees.

How Much Debt Do Science Bachelor's Degree Recipients Accrue?

The debt levels of college graduates have reached the trillion dollar mark and are a source of great concern for students, their families, and policymakers. Some research has indicated that even the possibility of debt can deter some students from attending certain colleges and universities and from majoring in certain fields.[1] Many factors can impact debt levels, and the following tables examine differences in undergraduate debt by type of institution attended and whether the degree obtained was in a science, technology, engineering, and mathematics (STEM) field or in the social, behavioral, and economic (SBE) sciences. Differences between students who are underrepresented in the STEM[2] fields and those who are not also are considered.

Table 1. Undergraduate Debt Levels in STEM and SBE by Type of Institution





[1] Malcolm, L., & Dowd, A. (2012). The impact of undergraduate debt on the graduate school enrollment of STEM baccalaureates. *The Review of Higher Education, 35*(2), 265–305.

[2] Underrepresented minority (URM) students include native-born Hispanic, African-American, and Native American students.

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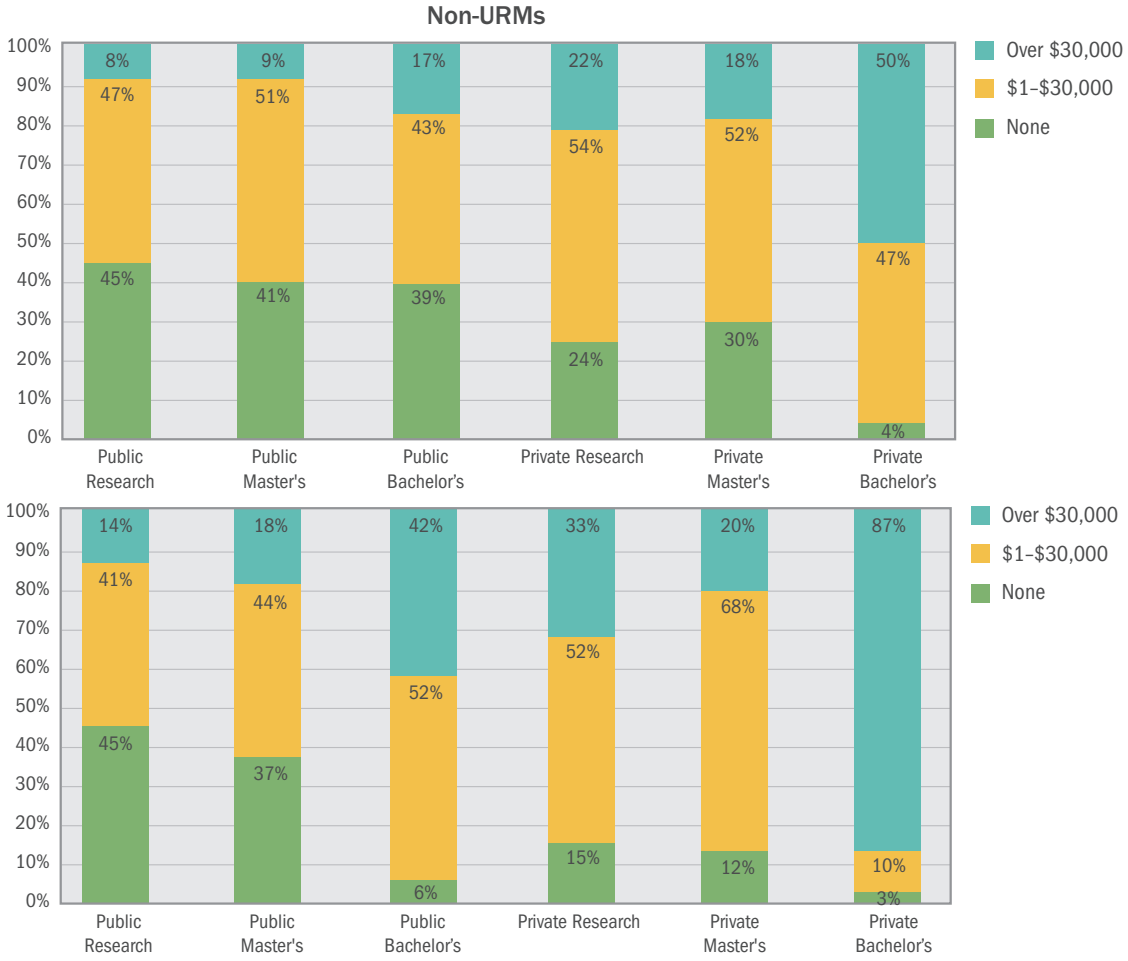
Source: The data used in this document are from the 2007–08 National Postsecondary Student Aid Study. The sample is limited to students in a baccalaureate program who expected to earn their degree between July 2007 and June 2008. The sample is further limited to students who were in at least their fourth year of undergraduate education and had a major classified as a STEM or SBE field.

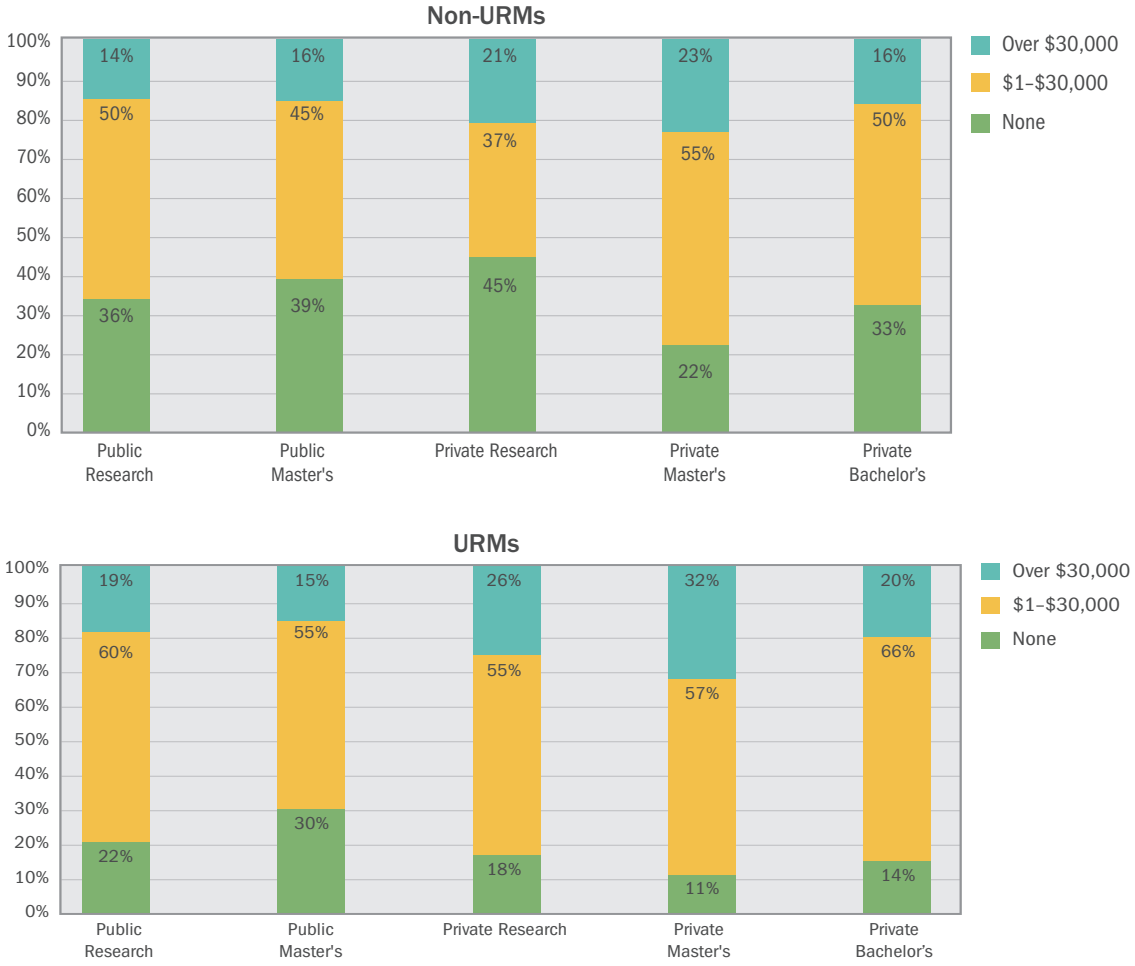
Table 2. Undergraduate Debt in STEM by Minority Status and Type of Institution



- In general, differences in undergraduate debt levels between STEM and SBE majors are relatively small. For students attending public research institutions, SBE degree seekers are more likely to accumulate debt and almost twice as likely to accrue more than $30,000 in debt as STEM majors.
- Across all types of institutions,[3] URM students obtaining STEM bachelor's degrees were more likely to accrue more than $30,000 in undergraduate debt than non-URM students. The disparity in private research or doctoral institutions was particularly large, with 42 percent of URM students and only 17 percent of non-URM students accruing more than $30,000 in undergraduate debt.
- In all types of private institutions, non-URM students were more likely than URM students to be debt free. Again, the largest disparity was observed within private research institutions, where 39 percent of non-URM students and only 6 percent of URM students did not end up with debt during their undergraduate career.

[3] Students attending public baccalaureate colleges have been removed from these results because of the small number of URM and non-URM students attending these institutions in the sample.

Table 3. Undergraduate Debt in SBE Fields by Minority Status and Type of Institution



- Similar to students obtaining bachelor's degrees in STEM fields, URM students earning SBE bachelor's degrees were slightly more likely than non-URM students to accrue more than $30,000 in undergraduate debt, and they were less likely to have no debt during their undergraduate careers.
- The largest difference in debt accumulation was again observed in private research or doctoral institutions, where 45 percent of non-URM students and only 18 percent of URM students graduated with no debt during their undergraduate education.
- Overall, racial/ethnic differences in undergraduate debt were larger in the STEM fields than in the SBE fields.

Implications

The consistently higher debt levels of URM students obtaining undergraduate degrees in both STEM and SBE fields raises a number of important questions. In particular, the need to increase the number of STEM degrees must include all students. A companion data brief, *How Much Debt to Science Ph.D.s Accrue?*, finds that individuals who obtained doctorates in STEM fields were considerably less likely to have debt from their undergraduate education than the national average. Often, undergraduate grants and scholarships do not cover all educational expenses, particularly in more expensive private institutions, and students find themselves needing to borrow money. The impact of debt on graduate and career decisions, particularly for first-generation and URM students, could potentially collide with the national need to build the STEM workforce.