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 first in the series *The Price and Cost of Science Degrees.* For more information, visit www.air.org/PriceCostScienceDegrees.

Where Are Students Getting Science Bachelor's Degrees?

What Are They Paying?

Rising college tuitions are a major concern for both students and policymakers. Increasingly high tuition levels coincide with a growing demand for graduates with science degrees, both in the social, behavioral, and economic (SBE) fields and in what is more traditionally considered STEM—science, technology, engineering, and mathematics. This demand can only be met by broadening the participation of diverse groups in STEM fields. Efforts to increase the number of STEM degrees may be challenged by student concerns about the price of college and debt that might result. This data brief looks at the types of institutions from which STEM and SBE students are earning their degrees and what students are paying for their education, with special emphasis on variations across different types of undergraduate institutions and the price paid by underrepresented minorities (URMs) and individuals who are not URMs.

Source: The data in Tables 1 and 2 are from the 2011 Integrated Postsecondary Education Data System. Specialty institutions and students whose race was unknown are not included.

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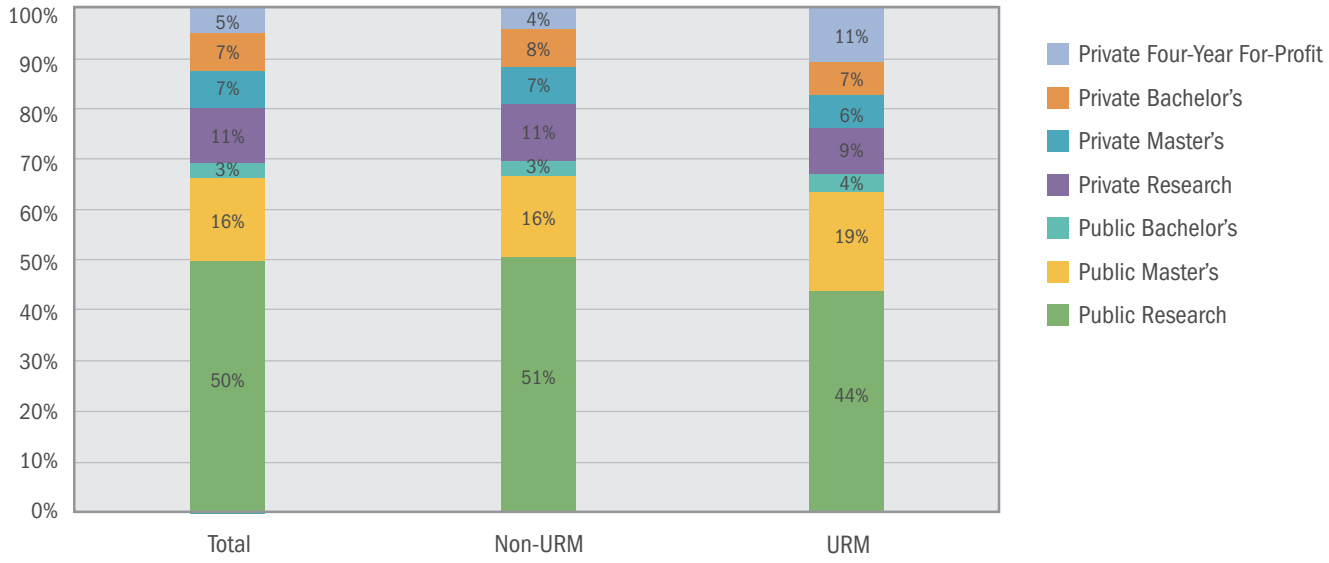
Table 1. Source of STEM and SBE Degrees by Type of Institution and Minority Status

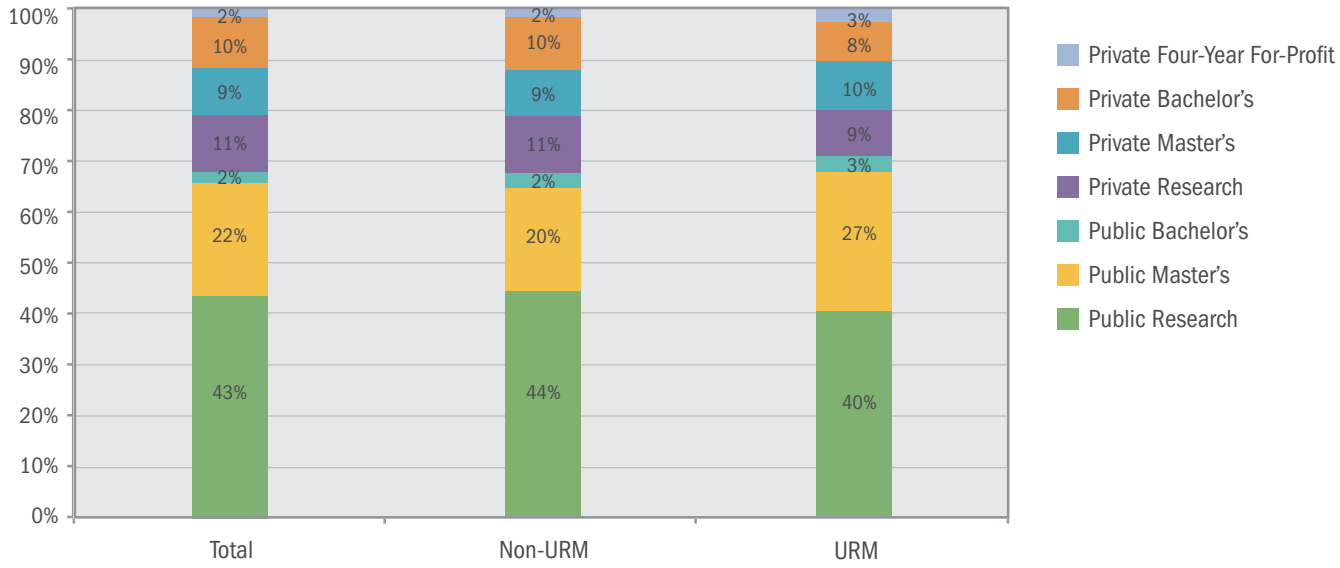
STEM

2010–2011 Academic Year



SBE

2010–2011 Academic Year

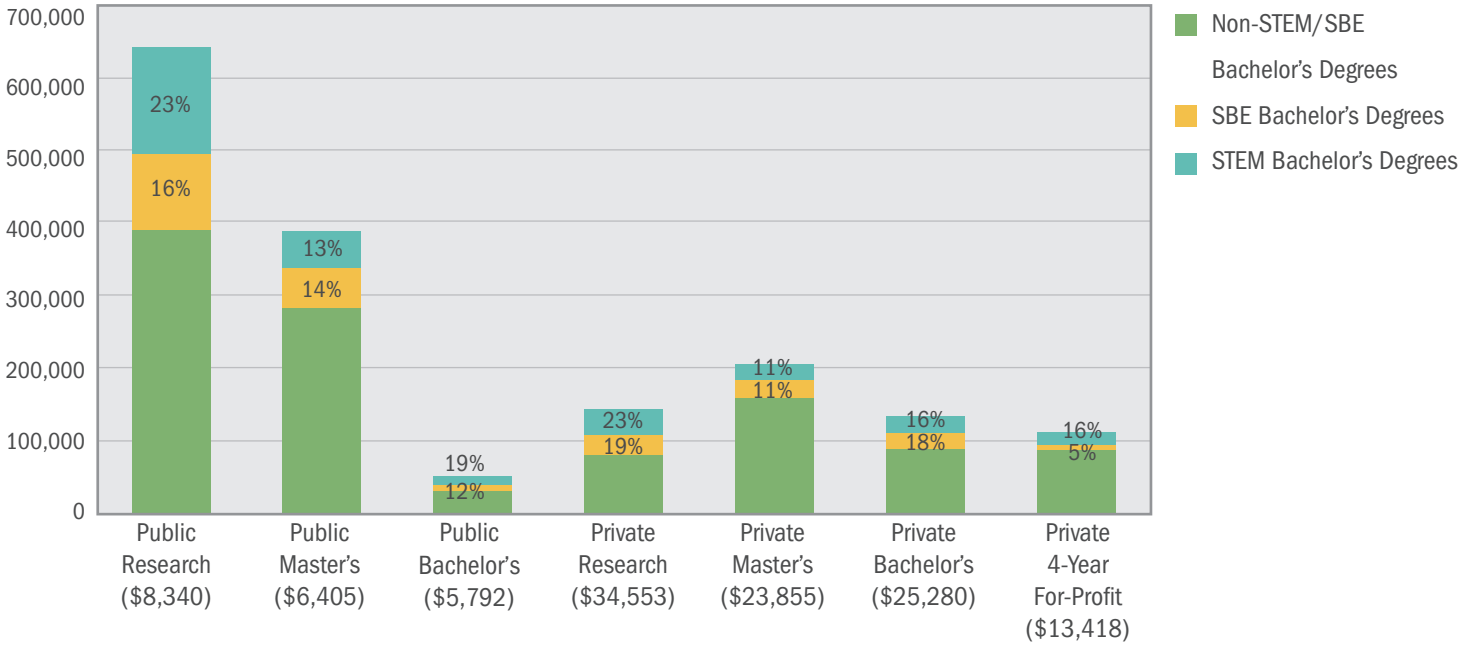


Non-underrepresented minority (Non-URM) includes: White (non-Hispanic), Asian, Pacific Islander, multiracial and foreign-born students.
Underrepresented minority (URM) includes: Black, Hispanic, and Native American students.
Note: Specialty institutions and 2-year institutions that grant bachelor's degrees are excluded, as are students whose race/ethnicity is unknown.

Source: Integrated Postsecondary Education Data System (IPEDS), 2010–2011 academic year.

- Public research universities awarded half of all STEM and 43 percent of all SBE degrees in 2010–11.
- URMs are somewhat less likely than non-URMs to earn STEM and SBE degrees from public research universities.
- Slightly more than two thirds of all STEM and SBE degrees were awarded by public colleges and universities.
- A higher percentage of URMs than non-URMs received STEM degrees from private, for-profit colleges.

Table 2. Proportion of STEM and SBE Bachelor's Degrees Awarded by Institutional Type and Average Tuition



STEM (science, technology, engineering, and mathematics) reflects the U.S. Immigration and Customs Enforcement (ICE) 2012 list of designated STEM degree programs and includes degrees in agriculture, computer and information sciences, engineering and engineering technologies, biological and biomedical sciences, mathematics and statistics, physical sciences, and science technologies.

SBE (social, behavioral, and economic sciences) includes degrees in psychology, anthropology, archeology, economics, geography, international relations, political science, sociology, and urban affairs.

Note: Specialty institutions and two-year institutions that grant bachelor's degrees are excluded, as are students whose race/ethnicity is unknown.

Price reflects the weighted average of in-state tuition and fees (e.g. "sticker price").

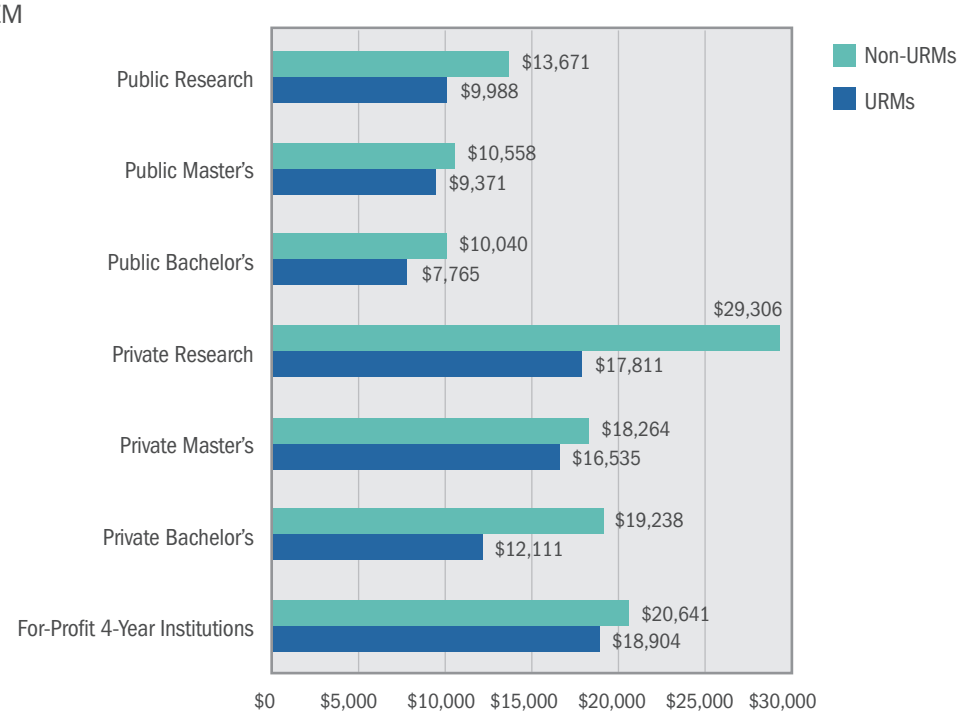
Source: Integrated Postsecondary Education Data System (IPEDS), 2010–2011 academic year.

- Slightly under a quarter of all bachelor's degrees awarded in the public and private research universities were in STEM fields.
- The average tuition and fees charged by public research universities was $8,340; the average charged by private research universities was $34,553.

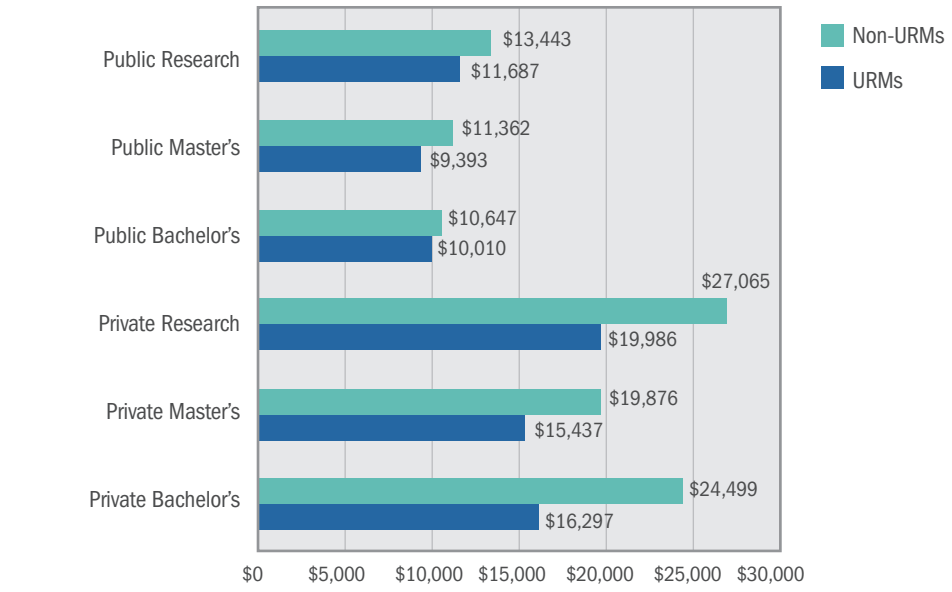
About 80 percent of all full-time undergraduates receive some form of financial aid to help defray the costs of their education. The difference between all student expenses—tuition and fees, room and board, books and supplies, transportation and other education-related expenses—and the sum of the grants received is often referred to as the "net price." Table 3 provides the average net price paid by URM and non-URM students who are about to graduate with degrees in STEM and SBE fields.

Table 3. Net Price Paid by URM and Non-URM Students by Type of Institution

STEM



SBE



Source: The data used in Table 3 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.

- Across all types of institutions and for both STEM and SBE degree recipients, URM students report a lower "net price," or pay less to attend college than non-URM students.
- The differences between what STEM and SBE students pay within the same types of institutions are generally small.
- The net price for URM STEM majors attending public research universities, which account for 44 percent of URMs who earn STEM degrees, is slightly less than $10,000.
- STEM URM students who had the highest net price are those who attend private, for-profit institutions. URM students pay, on average, $18,904 to attend these schools, a price that is over $1,000 more than what URM students pay to attend private, not-for-profit research universities.

Implications

The majority of students, both URMs and non-URMs, are obtaining STEM and SBE degrees from public colleges and universities where both the sticker price and net price are generally less than those in private institutions. URM students also have a lower net price than non-URMs within any given group of institutions. However, a companion data brief finds that URM students also incur more debt than non-URM students in all types of institutions (see *How Much Debt Do Science Bachelor's Degree Recipients Accrue?*). The quest to increase the number of STEM degrees and hold down what students pay for their education requires understanding not only what types of financial aid students receive to reduce the price but also how much debt accrues. This is particularly important in efforts to broaden participation in STEM fields.