Nationally, about 1 in 16 workers (6.2% or 9 million) have occupations as scientists or engineers (4.9%), or technical workers (1.3%). The STEM workforce is larger still when defined as either those who hold a bachelor’s degree or higher in S&E (24.5 million) or those who use S&E technical expertise in their jobs (23.8 million), regardless of level of degree.

A state’s S&E performance helps fuel its and the nation’s economy. Four benchmarks of Maryland’s S&E performance are highlighted here: the cost of public higher education, the size of the STEM workforce, investment in research and development, and venture capital funding.

A bachelor’s degree is one of several entry points to higher paying jobs associated with science, engineering, and many technical occupations. Nationally, 34% of the total U.S. workforce has a bachelor’s degree or higher. In contrast, 76% of workers in S&E occupations have a bachelor’s degree or higher.

Source: National Center for Education Statistics, Digest of Education Statistics

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Research and development (R&D) spending is a driver of innovation. Investing in science and technology today has ripple-effect benefits throughout the economy over the long term.

Annual state performance in R&D varies considerably, from $289 million (SD) to $135.1 billion (CA). Maryland is one of 9 states that performs between $15 to $30 billion per year in R&D. In this figure, Maryland’s percent change in R&D spending is compared to the second highest and the two lowest states within this group.

Percent change in R&D spending: 2000 to 2016
(Adjusted for inflation to 2016 dollars)

Source: NSF, National Center for Science and Engineering Statistics, National Patterns of R&D Resources

Venture capital investment supports U.S. businesses that take on the risk of developing and commercializing cutting-edge, emerging technologies. States with high values are successful at attracting venture capital to fuel new kinds of business, and ultimately, expand economic growth.

Total annual venture capital investment: 2000 to 2017
(Adjusted for inflation to 2017 dollars)

Source: Pitchbook Venture Capital and Private Equity Database

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