According to the latest data released by the National Science Board in its 2020 Science and Engineering Indicators report, the United States leads in a number of science and engineering (S&E) measures. For example, the U.S. invests the most in research and development, attracts the most venture capital, awards the most doctoral degrees, and provides the most business, financial, and information services.

A state’s S&E performance helps fuel its and the nation’s economy. Four benchmarks of Ohio’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.

### Rising Cost of a Bachelor’s Degree

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.

<table>
<thead>
<tr>
<th>Year</th>
<th>U.S.</th>
<th>Ohio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>$10,000</td>
<td>$15,000</td>
</tr>
<tr>
<td>2005</td>
<td>$15,000</td>
<td>$15,000</td>
</tr>
<tr>
<td>2010</td>
<td>$20,000</td>
<td>$20,000</td>
</tr>
<tr>
<td>2015</td>
<td>$25,000</td>
<td>$25,000</td>
</tr>
<tr>
<td>2018</td>
<td>$30,000</td>
<td>$30,000</td>
</tr>
</tbody>
</table>

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

### STEM Workforce: People Working in STEM Occupations

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.

Jobs in S&E as a percent of all jobs in 2018

<table>
<thead>
<tr>
<th>Region</th>
<th>Scientists/Engineers</th>
<th>Workers in Technical Occupations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ohio</td>
<td>4.6%</td>
<td>1.1%</td>
</tr>
<tr>
<td>U.S.</td>
<td>4.9%</td>
<td>1.3%</td>
</tr>
</tbody>
</table>


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National Science Board  NationalScienceBrd@nsf.gov  | 703.292.7000
NSB Indicators Resource Page | nsf.gov/nsb/sei

National Science Foundation  ncses.nsf.gov/indicators
Real Change in Research & Development Performed

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). Ohio is one of 15 states that performs between $5-$15 billion per year in R&D. In this figure, Ohio’s percent change in R&D spending is compared to the two highest and the second lowest state within this group.

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

Venture Capital Investment

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.

Source: Pitchbook Venture Capital and Private Equity Database

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

Year 2000 R&D Spending Level

2000

2016

Highest two

150.3% OR

109.5% AL

Lowest two

38.0% U.S.

16.6% CO

12.3% Ohio

Total 2016 Research and Development Performed

OH $12.0B
U.S. $515.3B

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

Millions

Ohio Total

50 States & D.C. Median

Total 2017 Venture Capital Investment

OH $371M
U.S. $80.6B

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