The United States leads the world in several science and engineering (S&E) measures. The latest data in the National Science Board’s 2024 Science and Engineering Indicators report show that globally the U.S. invests the most in research and development (R&D), attracts the most venture capital, and is the leading producer of service output from knowledge-and technology-intensive industries.

Four benchmarks of Oklahoma’s S&E performance are highlighted here: The economics of the Skilled Technical Workforce, the cost and economic benefit of a bachelor’s degree, investment in state R&D, and state venture capital investment levels.

Economics of the Skilled Technical Workforce

The Skilled Technical Workforce (STW) includes workers whose jobs require significant science, technology, engineering, and math (STEM) knowledge and expertise and who do not have a bachelor’s degree. Associates degrees in science and engineering are one of the many pathways into the STW and open up opportunities for higher-paying jobs.

Nationally, the STW makes up 52% of the nation’s STEM workforce. These workers fill critical roles in the economy, from welding and fabrication to cybersecurity and healthcare.

The Cost and Benefit of a Bachelor’s Degree

A STEM bachelor’s degree can provide a substantial return on investment and is one of several entry points to higher paying jobs associated with science, engineering, and many technical occupations.

Nationally, 39% of the total U.S. workforce has a bachelor’s degree or higher, but that rises to 48% in the STEM workforce.
Real Change in Research & Development Performed

R&D spending is a driver of innovation. Investing today in science, engineering, and technology has ripple-effect benefits throughout a state’s economy over the long-term.

Annual state performance in R&D varies considerably, from $347 million (SD) to $193 billion (CA). Oklahoma is one of 14 states that performs between $1-$5 billion per year in R&D. In this figure, Oklahoma’s percent change in R&D spending is shown along with that for the U.S., with the shaded area representing the range of changes for the other 14 states performing between $1-$5 billion per year in R&D.

Source: 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