



Current Economic News

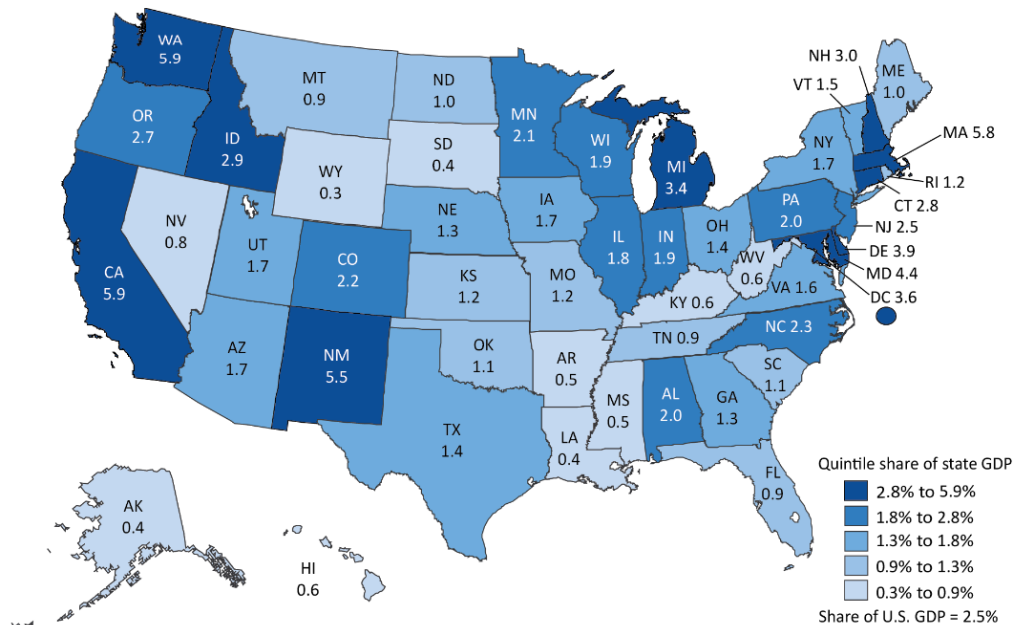
Research and Development

September 4, 2025

In 2024, the [Bureau of Economic Analysis](#) (BEA) released experimental data on Research and Development (R&D). Yesterday, they expanded this preliminary dataset to have historical data back to 2012, and updated it to include 2023. This extended data provides fascinating insights into each state's R&D.

This is important because R&D tends to provide value for not just one year; investing in R&D allows companies to stay competitive with new products, and ensures economies grow for years after the initial investment. For this reason, examining how much each state invests in R&D can help to see which states will grow in the next few years. One way the BEA examines this is by the following map, which shows how much of a share of state GDP goes into R&D value added.

Research and Development Value Added: Share of State GDP, 2023



U.S. Bureau of Economic Analysis

“Value Added” here means the dollar value that an industry generates from R&D, discounting costs of energy and materials. The location of the production is used, not the location of the funder. In five states, more than 4% of their GDP came from R&D value added in 2023.

Table 1: Percent of 2023 GDP that is R&D value added	
Washington	5.9%
California	5.9%
Massachusetts	5.8%
New Mexico	5.5%
Maryland	4.4%

However, this is only part of the story. In 2023, the United States as a whole created \$701,032,700,000 of value added through R&D. The amount that each state spent on R&D differed, but California told a very unusual story:

Table 2: Percent of the total R&D in US spent in each state 2023	
California	32.3%
Washington	6.8%
Massachusetts	6.0%
New York	5.3%
Texas	5.0%

An outsize one-third of total R&D investment comes from California alone. This is mainly because California has the largest economy among the states; although California invests a large proportion of its GDP on R&D, as shown in Table 1, it is not an unusual amount. But a closer look at where this value comes from reveals a deeper level.

Table 3 California R&D Value Added		
Description	Millions of Dollars	% of Total
Research and development	\$226,466.7	100.0%
Private	\$219,131.6	96.8%
Business	\$211,696.2	93.5%
Manufacturing	\$75,736.9	33.4%
Chemical manufacturing	\$18,100.8	8.0%
Computer and electronic product manufacturing	\$40,320.5	17.8%
Transportation equipment manufacturing	\$8,859.9	3.9%
Other manufacturing	\$8,455.7	3.7%
Nonmanufacturing	\$135,959.3	60.0%
Information	\$50,159.0	22.1%
Professional, scientific, and technical services	\$70,714.4	31.2%
Other nonmanufacturing	\$15,085.9	6.7%
Nonprofit institutions, universities, and government	\$40,211.20	17.8%

A third of California's R&D value comes from Manufacturing, particularly in the area "Computers and Electronics." As California is home to Silicon Valley, this neatly explains the large amount of value in California; it mostly comes from private development in Computers. The amount invested in this sector has increased steadily since 2012. In 2012, \$15.1 million of value added came from Computers; in 2023, this was \$40.3 million. This increase of 160% shows that Silicon Valley continues to be an important part of California's economy.

The majority of the remaining development is in Information and Professional Services, which may also come from investment in Silicon Valley.

Compare this to Washington, which spends a similar proportion of the GDP on R&D.

Table 4 Washington R&D Value Added		
Description	Millions of Dollars	% of Total
Research and development	\$48,034.9	100.0%
Private	\$46,831.3	97.5%
Business	\$44,663.2	93.0%
Manufacturing	\$5,153.2	10.7%
Chemical manufacturing	\$1,240.8	2.6%
Computer and electronic product manufacturing	\$2,055.9	4.3%
Transportation equipment manufacturing	\$989.6	2.1%
Other manufacturing	\$866.9	1.8%
Nonmanufacturing	\$39,510.0	82.3%
Information	\$25,531.0	53.2%
Professional, scientific, and technical services	\$7,097.3	14.8%
Other nonmanufacturing	\$6,881.6	14.3%
Nonprofit institutions, universities, and government	\$7,896.8	16.4%

Washington creates very little R&D Value in Computers, and only 10.7% overall is spent in Manufacturing. The largest percentage is instead on Information. As [Washington's largest companies](#) include headquarters for Amazon, Microsoft, and T-Mobile, it is not surprising that Information is important to the state.

Focusing on R&D can set states up for success. In 2012, California had 3.8% of its GDP in R&D. This led to an immediate 5.4% growth in GDP from 2012-2013, the fourth highest in the nation. That has persisted to a 94.6% growth from 2012-2024, the 10th highest in the nation. Washington also had a high GDP growth rate in both the long- and the short-term.

Obviously, R&D cannot describe every reason why states succeed or fail. Each state has its own strengths. But, value added from R&D is an important indicator of success. It will be interesting to see more data from the BEA on this important topic.