

Background: How the Bayh-Dole Act Supercharged Innovation—and Why We Can't Afford to Let It Stall

The National Picture

Before 1980, the federal government spent billions on research—only for the resulting inventions to collect dust in bureaucratic limbo. The Bayh-Dole Act flipped the script. By allowing universities and nonprofits to own and license inventions developed with federal R&D dollars, Bayh-Dole turned the U.S. research system into a dynamic engine of innovation.

The impact has been massive. In 2023 alone, U.S. universities and nonprofit research institutions filed over 25,000 invention disclosures, received nearly 7,400 patents, launched 903 startups, and executed over 92,000 licenses or options. From 1996 to 2020, these activities pumped \$1.9 trillion into the U.S. economy and supported more than 6.5 million jobs. Bayh-Dole doesn't just make good science useful—it makes it economically powerful.

It also ensures that federally funded discoveries don't languish in obscurity. Instead, they fuel local innovation ecosystems in every corner of the country, strengthening America's leadership in life sciences, advanced manufacturing, AI, and clean energy. In a moment when U.S. competitiveness hangs in the balance, Bayh-Dole remains one of our most important tools for converting research into results.

Major National Impacts of Bayh-Dole–Enabled Innovation

Over 554,000 new inventions have been disclosed by U.S. universities from 1996 to 2020.

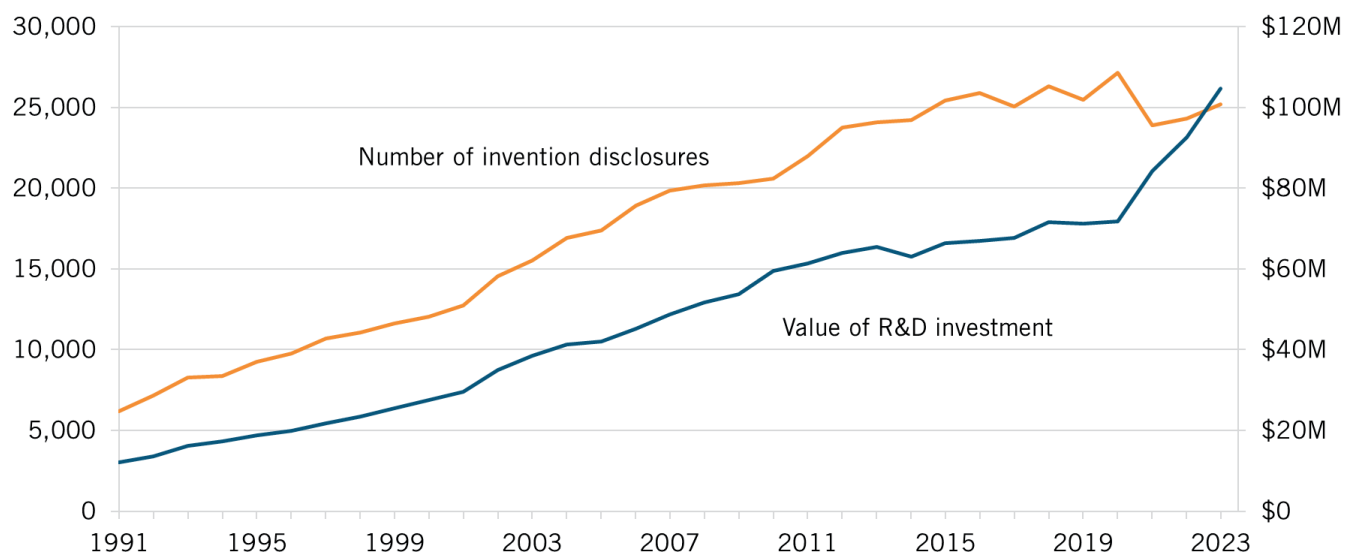
141,000 U.S. patents were granted and **18,000 startup companies** formed from academic research in that period.

University inventions now lead to an **average of three new startups and two new products every day** across the United States.

University-driven innovations have **bolstered U.S. GDP by up to \$1 trillion** and contributed **\$1.9 trillion in gross industrial output**.


Nearly **73% of university licensing deals** involve startups or small companies; such university spin-off firms boast higher success rates and file more patents than other businesses.

Relationship between federal R&D funding and invention disclosures




Data Courtesy Association of University Technology Managers (AUTM)


The State-Level View: Six Examples of Bayh-Dole at Work




In Colorado, Bayh-Dole has helped build a world-class innovation corridor, with \$3.9 billion in federal and \$1.3 billion in industry R&D flowing through the state's research institutions from 2017 to 2021. Over that period, universities produced 715 invention disclosures, 512 patents, and 133 startups. The University of Colorado Boulder, for example, transformed federal research into a breakthrough portable artificial lung, poised to reshape treatment for respiratory disease and trauma patients.




In Delaware, universities being powered by \$1.2 billion in federal R&D support, are punching well above their weight. From 2017 to 2021, they produced 125 invention disclosures, 84 patents, 24 startups, and 125 licenses or options. At the University of Delaware's STAR Campus, publicly funded research helped develop a therapeutic molecule to treat ALS—demonstrating how Bayh-Dole directly enables biotech breakthroughs in even the smallest states.




In Georgia, university-driven innovation is an absolute powerhouse. With \$7.4 billion in federal R&D and \$2.7 billion in private R&D between 2017 and 2021, its institutions filed 1,253 invention disclosures, received 592 patents, launched 153 startups, and secured 671 licenses. Emory University's co-invention of molnupiravir, a leading COVID-19 treatment, shows how Bayh-Dole turns local research into global public health solutions.



In Indiana, universities like Purdue and Indiana University are driving growth in life sciences and manufacturing, supported by \$6.2 billion in federal and \$2.4 billion in private R&D. From 2017 to 2021, they produced 854 invention disclosures, 443 patents, 112 startups, and nearly 600 licenses. At Purdue, researchers used federal support to develop a new treatment for multiple myeloma—now in human trials and already transforming patients' lives.



In Kansas, universities have worked to steadily build a regional biotech cluster grounded in innovation. Between 2017 and 2021, state institutions generated 429 invention disclosures, 219 patents, 43 startups, and 415 licenses—all supported by \$1.6 billion in federal and \$832 million in private R&D. The University of Kansas stands out for its research on neurological disease, including a compound to treat Parkinson's now advancing through the drug development pipeline.



In North Carolina, the Bayh-Dole Act has one of its most potent examples in action. With \$13.4 billion in federal and \$5.6 billion in private R&D investment between 2017 and 2021, its research universities filed 2,061 invention disclosures, earned 1,087 patents, launched 280 startups, and executed more than 1,300 licenses. UNC-Chapel Hill and Duke University anchor the state's booming life sciences sector. One standout: EnFuego Therapeutics, a UNC spinout developing advanced immunotherapies to fight cancer—evidence of how public research fuels private-sector cures.

Read the full report, “The Bayh-Dole Act’s Role in Stimulating University-Led Regional Economic Growth” at itif.org

