

RESEARCH INNOVATION'S LEGISLATIVE LEGACY

Research Ecosystem Before 1980

The Bayh-Dole Act created a uniform patent policy across federal research agencies. Congress perceived the need for a reliable technology transfer policy to ensure that federally funded research could move along the R&D pipeline. Usually, findings were published in the literature and effectively forgotten about, leading to a gap in U.S. global competitiveness and innovation that was beginning to grow in the 1970's.¹

The Importance of Bayh-Dole

Under **the Bayh-Dole Act (1980)**, academic institutions, nonprofits, and businesses were given ownership of any intellectual property (IP) that arose in part from federal funding.¹ These entities could then license that IP to industry, enabling commercial development.¹ This new method of technology transfer incentivized researchers to pursue commercialization of their innovations.

Under Bayh-Dole, the government retains non-exclusive, non-transferrable rights and a provision known as march-in authority ensures that patent holders commercialize their inventions.^{1,3} The U.S. experienced a 10-fold increase in patenting in the first two decades after Bayh-Dole was enacted.¹ Without the reliable patent protections included in Bayh-Dole, innovators couldn't risk decades and billions of dollars in R&D for the next treatment or cure.

Impacts of Technology Transfer

Between 1996 and 2017:



\$1.7T contributed to Gross Industrial Output²

100,000+ patents issued²



420,000+ inventions²

13,000+ start-ups formed²



5.9M jobs supported²

\$865B contributed to U.S. GDP²



\$2.6B

The estimated mean investment needed to bring a new drug to market in **2016** (using 2013 dollars)¹⁰



[Click here](#) for source information

1970

0

The amount of NIH-funded research that contributed to new drugs as of **1968**¹

5%

The percentage of over 28,000 Federal patents that were licensed by **1978**¹



Additional Legislation Ushering in Innovation

1980

1980- Stevenson-Wydler Technology Innovation Act

Provides a pathway for federal labs to share inventions with state and local governments and the private sector.⁴

1981- R&D credit

25% tax credits given to entities that invest a certain amount in R&D. Aims to solidify private investments in R&D.⁵

1986- Federal Technology Transfer Act

Cooperative Research and Development Agreements (CRADA) were strengthened, ensuring federal researchers retain patent rights and receive reimbursement.⁶

1988- Manufacturing Extension Partnership

Assists U.S. small and medium sized manufacturers in adopting new technologies and enhancing product innovation.⁷

1990

55

in 1976

The number of universities that had been granted a patent.¹

2000

240

in 2006

U.S. Patents Awarded to Universities¹

In 1980:

390

In 2015:

6,680

2010

R&D Spending

Industry
66.7%
\$129.5B⁹



Federal Agencies

22.2%
\$43B⁹



Academic & Research Institutions

8.1%
\$15.7B⁹



\$194.2B =

Medical and Health R&D Spending in **2018**⁹

2020