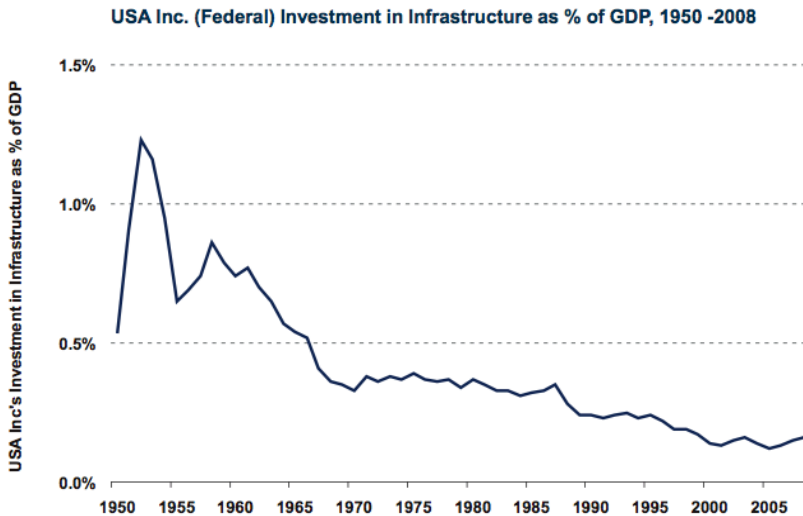


\$50 Billion later, what has the Chips Act actually changed?

On August 9th, 2022, President Biden signed the bipartisan CHIPS and Science Act to reinvigorate investment in the US semiconductor economy. The Chips Act was a \$280 Billion return to Democratic reinvestment policies largely ignored since President Johnson's Great Society in the late 60s. \$50 Billion was put aside for semiconductor investment. Of course, the big question is: **did it work?**

The Pre-Bill Status Quo

To understand the effects of the CHIPS and Science Act, one must first understand the US before its passage. Ever since the advent of computers in the US, the rest of the world ramped up semiconductor research as one of their top priorities while the Federal Government was content to slowly pull away and leave semiconductor R&D purely to the private sector.



([The Atlantic](#)¹).

“The share of modern semiconductor manufacturing capacity located in the U.S. has eroded from 37% in 1990 to 12% today, mostly because other countries’ governments have invested ambitiously in chip manufacturing incentives and the U.S. government has not. Meanwhile, federal investments in chip research have held flat as a share of GDP, while other countries have significantly ramped up research investments” ([SIA](#)²).

This lack of federal investment and incentives was a major factor in the shift to Chinese and Taiwanese manufacturing. When the incentives ran dry, companies took their manufacturing jobs offshore for cheaper labor and took billions of dollars in investment money with them.

As tensions rise between the US and China, this disparity in tech manufacturing has become a major aspect of both governments’ national security plans. Semiconductor development, largely based in Taiwan, is one of many foreign imports China wants to domestically produce in their Made in China 2025 initiative, setting aside over \$1 Trillion in domestic tech

investments ([Bloomberg](#)³). On the other hand, the US has focused its efforts on preserving the nationhood of Taiwan, thereby keeping its semiconductor market open to business. With China's massive strides in the 21st century, it was clear that a new approach was needed to stay competitive on the international stage.

Effects of the CHIPS and Science Act

President Biden's Chips Act marks a new era in US domestic investment policies: the Chips Act brought federal investment in collaboration with the private sector. Rather than running everything by the government, as many previous Democrats did, or leaving it by the private sector, as most Republicans did, Biden's approach represents a shockingly centrist ideology: as the government paved the way, companies would follow.

And they did! According to the [White House](#)⁴,

“Spurred by the passage of the CHIPS and Science Act of 2022, this week, companies have announced nearly \$50 billion in additional investments in American semiconductor manufacturing, bringing total business investment to nearly \$150 billion since President Biden took office.”

One major effect of the Chips Act is the return of offshore semiconductor companies to the US. Along with \$40 Billion from Micron, fab expansions from Intel, a \$4 Billion Qualcomm and Globalfoundries partnership, and many many more, now even TSMC (the largest semiconductor company) which is practically owned by the Taiwanese government can't hold back from a \$6 Billion fab deal in Arizona. In fact,

“...companies in the semiconductor ecosystem have announced [more than 80](#) new projects across 25 U.S. states—totaling nearly \$450 billion in private investments—since the CHIPS Act was introduced. These announced projects will create more than 56,000 jobs in the semiconductor ecosystem and support hundreds of thousands of additional U.S. jobs throughout the U.S. economy” ([SIA](#)⁵).

The spread of these investments across the US is also of significant importance. The White House promised that the Chips Act would benefit “ALL of America, and unlock opportunities in science and technology for those who have been historically left out,” as opposed to the coastal regions (such as Silicon Valley) that have seen the vast majority of technological investments in recent years ([White House](#)⁴).

To mitigate the mismanagement of the CHIPS and Science Act funds, the President’s “Council of Advisors on Science and Technology (PCAST)” has made many recommendations for the allotment of the funding. They proposed the creation of the “National Semiconductor Technology Center (NSTC)” ([White House](#)⁶), and [according to the Verge](#)⁷, endorsed:

• Intel	\$8.5 billion in funding
• TSMC	\$6.6 billion in funding
• Samsung	\$6.4 billion in funding
• Micron	\$6.14 billion in funding
• Global Foundries	\$1.5 billion in funding
• Microchip Technology	\$162 million in funding

- | | |
|-----------------------|--------------------------|
| • Polar Semiconductor | \$120 million in funding |
| • BAE Systems | \$35 million in funding |

The last two years since the passage of the CHIPS and Science Act have been an exciting time for semiconductor prospecting and domestic investment. President Biden's policies have reinvigorated domestic investment not seen for many decades and pushed the [economy](#)⁸ to the highest it's ever been. Chips Act funding is still being dished out today in strategic investments designed for both global competitiveness and addressing historically ignored regions of the US.

Perhaps the greatest achievement of the Chips Act was to spur investment from the private sector. This new model (at least in the US) holds much promise for successful government action and tapping into the vast potential of private investment. So, to answer whether the Chips Act was successful, while it may be too early to draw a full conclusion on its effects, one thing is clear: the CHIPS and Science Act was a massive legislative success and should be looked upon as a model for future US policies.

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