



# LexNext Innovation Examiner

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## Newsletter Highlights

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## DOJ VS. NVIDIA: NATIONAL SECURITY RISKS

Last month, the U.S. Department of Justice (DOJ) opened an antitrust case into Nvidia.

“If firms in the AI ecosystem violate the antitrust laws, the Antitrust Division will have something to say about it,” sniffed Assistant Attorney General Jonathan Kanter.

According to the Washington Post, Nvidia got its name from a play on “Invidia,” the Latin word for envy. In recent years, it is clear the Department of Justice doesn’t like it when companies get big. This time, their narrow-minded enforcement program threatens especially important American technology innovation and national security.

### What’s At Risk?

America’s leadership in the specialized computer chips, techniques and learning models for AI is crucial. Both the Biden and Trump Administrations placed AI on the White House’s list of critical and emerging technologies. Yet, America’s lead in AI is in jeopardy. Chinese researchers accounted for 40% of all global AI publications in 2021, exceeding the United Kingdom, Europe (15%), and the United States (10%) combined.

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Digging deeper, the good news is that the US still has a clear lead in certain cutting-edge aspects of AI. China's research has focused on machine learning. The US leads in research publications in high-performance computing, integrated circuits design and fabrication, and natural language processing. Nvidia's most sophisticated AI chips are vital to all those areas. That is why the Biden Administration appropriately banned sales of certain Nvidia chips to China.

### The Power of the Private Sector

At the Pentagon, officials realize private sector investment is America's best weapon for staying ahead of China in AI. The Pentagon relies on large-scale private companies to push forward in AI.

"Fundamentally, the engine of ideas and innovation is going to be in the private sector," said Radha Plumb, the Department of Defense's Chief Digital and Artificial Intelligence Officer, at a CSIS event July 15. She adds, "(the) pointy end of the spear for AI and technology development" comes from private companies, often with commercial or dual-use cases in mind.

The Commerce Department also has a broader view because the AI chips market is growing by leaps and bounds. "The volume of chips that AI companies project they need is mind-boggling," US Commerce Secretary Gina Raimondo has said. The burgeoning market itself will open doors for many companies to grow.

What does the Justice Department want to do, break up Nvidia to encourage competition? That tactic seems risky and unnecessary. This market is fast-moving and extremely competitive. And there are many large tech companies with vast resources to take on Nvidia in any number of ways.

"I remember when everybody thought that Microsoft was just too big for anyone to compete with them, and the antitrust regulators were scrutinizing them in the early '90s," Shawn Collins, a partner at Stradling Yocca Carlson & Rauth, told Fast Company. "Now Microsoft is one of many computer companies in the world." Nvidia itself is a success story: a start-up hatched over dinner at Denny's in 1993, growing to rival and surpass giants like Intel and AMD.

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## A New Era

Since the 2010s, there has been a huge upswing in computing power and chip demand. Processing speeds of AI systems soared from the 1.9 million Petaflops for the gamer's Alpha Go in 2016 to the 314 million Petaflops for Chat GPT-3 in 2020 and on to 2.7 billion Petaflops for the Minerva system in 2022. This benefits America from a national security standpoint while opening vast economic opportunities.

And, unlike in the case of Standard Oil in the early 20th century, which antitrust enforcers often reference, there are no economic victims of Nvidia, except for possibly the Chinese. Big is not synonymous with bad. Big companies can invest heavily in research and development. Nvidia spent \$9.5B on R&D in the year prior to April 2024, and that was a 25% increase from 2023. Contrast that with the \$650 million budgeted for Plumb's office at the Pentagon.

## Have We Forgotten National Security?

A central concern is that Justice and the Federal Trade Commission (FTC) will drive the AI and antitrust discussion full speed ahead while disregarding national security priorities and failing to document any evidence of domestic economic harm. On the one hand, the White House, under two administrations, has prioritized critical and emerging technologies like AI to stay ahead of China. On the other hand, the FTC and DOJ, which are not in charge of national security, cannot seem to help themselves when it comes to taking on companies just because they are big.

America's tech leaders are on the front lines of global competition. Securing America's lead in AI depends on companies with the cash and labor resources to scale up large teams. There is no alternative, for neither universities nor the federal government can deploy at scale.

"Creating cutting-edge AI models now demands a substantial amount of data, computing power, and financial resources that are not available in academia," found the 2024 Stanford AI Index. "Federal investment is great," said DoD's Plumb to the Center for Strategic and International Studies, but "it really pales in comparison to the private investment in companies broadly and AI companies specifically."

Case closed.

