

United States Senate

WASHINGTON, DC 20510

February 3, 2025

Howard Lutnick
Commerce Secretary Nominee-Designate
Chief Executive Officer
Cantor Fitzgerald
110 East 58th Street
New York, NY 10022

Dear Mr. Lutnick,

We write regarding the dangerous failures of U.S. export controls that resulted in the breakthrough development of an advanced AI model by a Chinese firm, and to ask that, if you are confirmed to be Secretary of Commerce, you act quickly to address them.

With last week's release of DeepSeek's R1, a Chinese artificial intelligence (AI) model that rivals leading U.S. models, we must confront the reality that the PRC challenge to our technological leadership is real, and missteps could seriously undercut our economic and national security. You have expressed your intention, as Secretary of Commerce, to be "very strong" on our technology controls and "empower" the Bureau of Industry and Security (BIS).¹ You have also been clear that we cannot settle for half-measures, lax enforcement, or loopholes that undermine our technology controls: "When we say no, the answer's got to be no."² We agree. But multiple administrations have failed – at the behest of corporate interests – to update and enforce our export controls in a timely manner. We cannot let that continue.

While many of the implications of DeepSeek's R1 remain unclear, one takeaway is beyond dispute: DeepSeek is an export control failure. DeepSeek needed a large cache of advanced U.S. AI chips, including Nvidia's H800 and possibly the more advanced H100,³ to train its model. These chips are currently prohibited from the People's Republic of China (PRC) under U.S. export controls, and DeepSeek should not have been able to acquire them. But because the Commerce Department bowed to corporate lobbying and failed to close an export control loophole in a timely manner, PRC companies like DeepSeek were able to accumulate a large number of these chips to train AI models.

¹ The Hill, "Trump Commerce pick slams China: 'Stop using our tools to compete,'" Miranda Nazzaro, January 1, 2025, <https://thehill.com/policy/technology/5113247-howard-lutnick-china-ai-competition/>.

² *Id.*

³ Bloomberg, "US Probing If DeepSeek Got Nvidia Chips From Firms in Singapore," Jordan Robertson, Mackenzie Hawkins, and Jenny Leonard, January 30, 2025, <https://www.bloomberg.com/news/articles/2025-01-31/us-probing-whether-deepseek-got-nvidia-chips-through-singapore?srnd=undefined>.

Frontier AI models are essential to Beijing's efforts to modernize its military⁴ and surveil its population. Because of the unique value of these models, the Biden Administration imposed far-reaching controls on advanced AI chips to the PRC in 2022. However, it failed to implement those controls effectively. In particular, the 2022 controls initially included a major loophole that allowed companies like Nvidia to keep selling advanced chips like the H800 to PRC customers.⁵ The Biden Administration moved to close this loophole, but through aggressive and shameless lobbying, Nvidia and other chipmakers wrangled a delay in the correction rule for over a year, allowing Chinese companies to stockpile U.S. AI chips like the H800.⁶ At the same time, industry shipped tens of thousands of restricted advanced chips like the H100 to shady brokers in Singapore and other countries that then smuggled them into the PRC.⁷

This was a dangerous mistake: If our export controls had been implemented without delay and properly enforced, DeepSeek would likely not have been able to train R1 as effectively, and U.S. AI leadership would be more secure today. Nvidia made billions in profit off the delay, but it resulted in a costly setback for our economic and national security, and leadership on artificial intelligence.

This is only one example in a string of recent export control-related failures that have gone unaddressed. Since mid-2023, blacklisted PRC chipmaker Semiconductor Manufacturing International Corporation (SMIC) has been violating U.S. export controls by using U.S. technology to produce advanced chips for Huawei and has faced no repercussions.⁸ In fact, some of SMIC's most advanced facilities remain free to acquire U.S. semiconductor equipment, such as SMIC Jingcheng, SMIC Xiqing, and SMIC Lingang, despite their parent company being on the Entity List.⁹ Similarly, the Chinese military's premier high-performance computing enterprise, Sugon, which is also on the Entity List, reportedly has been flouting U.S. export controls and acquiring U.S. technology through a cut-out entity.¹⁰ No action has been taken to address these regulatory gaps, which have undercut the efficacy of our export controls.

Our export control system needs to be modernized – and based on a strategy to protect our national security and to promote critical industries and technological development in the United States, not shaped by exceptions or other favors for well-connected corporate lobbyists. We are

⁴ U.S. Defense Department, “Military and Security Developments Involving the People’s Republic of China: A Report to Congress Pursuant to the National Defense Authorization Act for Fiscal Year 2000.” January 2025, p. 26, <https://media.defense.gov/2024/Dec/18/2003615520/-1/-1/0/MILITARY-AND-SECURITY-DEVELOPMENTS-INVOLVING-THE-PEOPLES-REPUBLIC-OF-CHINA-2024.PDF>.

⁵ Reuters, “Nvidia tweaks flagship H100 chip for export to China as H800,” Stephen Nellis and Jane Lanhee Lee, March 21, 2023, <https://finance.yahoo.com/news/nvidia-tweaks-flagship-h100-chip-161500447.html>.

⁶ New York Times, “How the Big Chip Makers Are Pushing Back on Biden’s China Agenda,” October 5, 2023, <https://www.nytimes.com/2023/10/05/technology/chip-makers-china-lobbying.html>.

⁷ Wall Street Journal, “The Underground Network Sneaking Nvidia Chips Into China,” Raffaele Huang, July 2, 2024, <https://www.wsj.com/tech/the-underground-network-sneaking-nvidia-chips-into-china-f733aaa6>; Center for a New American Security, “Preventing AI Chip Smuggling to China,” Tim First and Erich Grunewald, October 24, 2023, <https://www.cnas.org/publications/reports/preventing-ai-chip-smuggling-to-china>.

⁸ DigiTimes Asia, “SMIC’s unspoken mission and Huawei’s 5G smartphone chips,” Amanda Liang and Judy Lin, August 23, 2023, <https://www.digitimes.com/news/a20230823PD210/china-huawei-semiconductor-smic.html>.

⁹ 15 CFR 744.16

¹⁰ New York Times, “The Battle to Control the World’s Most Powerful Technology,” Katrin Bennhold and Ana Swanson, September 4, 2024, <https://www.nytimes.com/2024/09/04/podcasts/the-daily/china-chip-ai.html>.

ready to work with you to ensure BIS succeeds in this mission. In that spirit, there are several steps that we urge you to take, immediately if confirmed, to strengthen our export controls on the PRC:

1. Strengthen the AI Diffusion Rule. In January, BIS published its first proposed rule comprehensively regulating the export of advanced AI chips. The rule, for once, proactively addressed the range of diversionary tactics PRC companies could use to get around our controls. Yet Nvidia and other tech giants have come out against the rule and are urging the Trump Administration to weaken it or roll it back entirely.¹¹ That would be a mistake. We need a strong AI Diffusion framework, and the Trump Administration should strengthen the rule, not water it down at industry's request.
2. Restrict the H20 and equivalent chips. Although BIS currently restricts the most powerful chips for AI training, Nvidia and other chipmakers continue to sell advanced AI chips for deploying already-trained AI models to the PRC. Computing power for AI deployment is as important, if not more important, than computing power for AI training. Chips like the H20 are essential to the PRC's AI ambitions, and whether it can acquire them freely will determine the speed at which it can deploy AI in its military and surveillance apparatus. The Trump Administration should restrict these chips.
3. Clamp down on chip smuggling. Smugglers have adopted new tactics to get around U.S. chip controls. Smuggling and diversion are well-understood problems, and we must issue commonsense know-your-customer rules so companies in the United States are not doing business with cutout companies that can easily be identified as aliases of already-blacklisted PRC military companies like Sugon and Huawei.¹²
4. Add Changxin Memory Technology (CXMT) to the Entity List and apply the Foreign Direct Product Rule. A clear hurdle to the PRC's ability to produce advanced AI chips is high-bandwidth memory (HBM). In December 2023, the Biden Administration rightly prohibited shipments of HBM to the PRC. However, domestic PRC chipmaker CXMT, with the help of U.S. companies, has made breakthroughs in advanced memory, which will allow it to produce HBM at scale in the near future.¹³ CXMT's memory production almost certainly violates U.S. export controls, and unlike other advanced fabs in the PRC, the company has not been added to the Entity List.

Export controls are an essential defense against adversaries using our technology in manners contrary to our interests, and when export controls are implemented effectively, they can help us maintain American leadership on artificial intelligence and other critical technologies. But too often, powerful corporate interests succeed in prioritizing their short-term profits over our

¹¹ New York Times, "Biden Administration Ignites Firestorm With Rules Governing A.I.'s Global Spread," Ana Swanson and Tripp Mickle, January 9, 2025, <https://www.nytimes.com/2025/01/09/business/economy/biden-ai-chips-rules.html>.

¹² New York Times, "With Smugglers and Front Companies, China is Skirting American A.I. Bans," Ana Swanson and Claire Fu, August 4, 2024, <https://www.nytimes.com/2024/08/04/technology/china-ai-microchips.html>.

¹³ Bloomberg, "China's CXMT Memory Chip Breakthrough Beats US Export Controls," Debby Wu, January 28, 2025, <https://www.bloomberg.com/news/articles/2025-01-28/china-s-cxmt-memory-chip-breakthrough-beats-us-export-controls>.

economic and national security. It will be critical for the Commerce Department to prevent further missteps and to implement export controls that serve the United States and the American people.

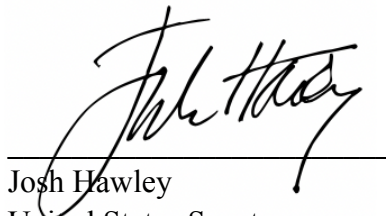
We request that you answer the following questions by February 18, 2025:

1. Will you comprehensively review the ways that DeepSeek procured advanced U.S. AI chips in spite of U.S. export controls and take necessary steps to close those loopholes, including through strengthening the AI Diffusion Rule and restricting the H20?
2. Will you take steps to close the glaring loopholes disclosed in this letter, including adding the Sugon alias Netrix and the remaining SMIC facilities to the Entity List? What additional steps will you take to address the diversion of advanced AI chips from Singapore that has been widely reported in media?
3. Will you commit to taking the necessary steps to insulate BIS from industry influence, including through hiring senior staffers without prior connections to industry or lobbying firms? If so, what additional steps will you take to ensure BIS is focused on securing our economic and national security rather than serving corporate interests?

Sincerely,



Elizabeth Warren
United States Senator



Josh Hawley
United States Senator

Cc: Mr. Michael Walz, Assistant to the President and National Security Advisor
Cc: The Honorable Marco Rubio, Secretary of State