

Congress of the United States  
Washington, DC 20515

August 13, 2024

The Honorable Alan Estevez  
Under Secretary for Industry and Security  
Department of Commerce  
1401 Constitution Ave. NW  
Washington, DC 20230

Dear Under Secretary Estevez,

We write regarding the October 2022 export controls issued by the Bureau of Industry and Standards (BIS) to restrict the People's Republic of China's (PRC's) ability to both purchase and manufacture certain high-end semiconductor chips and associated technologies.<sup>1</sup> These export controls followed shortly after the passage of the *CHIPS and Science Act of 2022*, sweeping legislation designed to reinvigorate U.S. leadership in science and technology and rebuild semiconductor manufacturing capacity and the associated supply chain in the United States. Even in passing the *CHIPS and Science Act*, with \$52.7 billion in funds appropriated to help reshore our semiconductor manufacturing capacity and reinvest in our leadership in semiconductor innovation, we recognized that more steps would be needed to protect and grow U.S. industry and protect U.S. economic and national security. Accordingly, we strongly support the need for targeted export controls with a focus on cutting off certain PRC entities from cutting-edge technologies and manufacturing equipment.

However, we are concerned that these controls were taken unilaterally, not in full partnership with our allies who also manufacture advanced semiconductors and associated equipment and tools that they sell to China. Our export controls remain misaligned with those of our allies, specifically Japan, South Korea, and the Netherlands, in the following ways:

---

<sup>1</sup> "Commerce Implements New Export Controls on Advanced Computing and Semiconductor Manufacturing Items to the People's Republic of China (PRC)," Department of Commerce, *press release*, October 7, 2022, <https://www.bis.doc.gov/index.php/documents/about-bis/newsroom/press-releases/3158-2022-10-07-bis-press-release-advanced-computing-and-semiconductor-manufacturing-controls-final/file>.

- **End User/Use.** No other country has a similar list to the U.S. entity list. Further, neither Japan nor the Netherlands have identified PRC as a “country of concern.” The United States also imposes end use restrictions that our allies do not.
- **Approach to Licensing.** The United States operates under a “presumption of denial” for companies applying for licenses to install or service specific equipment and tools to be used by specific customers or for specific uses in China. Our allies have much more lenient licensing regimes.
- **Chokepoint Technology List.** While full alignment has not been achieved, we appreciate that BIS is actively working to align this list with our allies.
- **Controls on memory.** Only the U.S. has applied controls to memory chips and associated equipment and tools.

The unfortunate result is that U.S. tooling and equipment companies are rapidly losing both global market share and their leadership in innovation. An April 2022 study by the Federal Reserve Bank of New York found that export controls impose “significant collateral damage” on the affected U.S. firms and further, “following U.S. export controls, China has boosted domestic innovation and self-reliance, and increased purchases from non-U.S. firms that produce similar technology to the U.S.-made ones subject to export controls.”<sup>2</sup> Finally, the study found no indication that U.S. companies have established new commercial relationships with firms located in allied nations.<sup>3</sup> As their revenue falls, these U.S. companies have less to invest in research and development (R&D), eroding their edge in innovation and putting at risk yet more market share as a result.<sup>4</sup> Some companies are even at risk of a “death spiral.” The Fiscal Year 2024 appropriations bill reallocating \$3.5 billion of CHIPS funding to a DOD priority project puts them yet further at risk.

In the meantime, companies located in allied countries continue to grow their Chinese (and global) market share, and in some cases, their U.S. market share. For example, between 2022 and 2023, the Dutch company ASML increased its revenue by 35 percent in the same time span, due to a 161 percent revenue increase in China. Prior to 2022, California-based Lam Research had a global monopoly on certain memory chip etching machines. After the company was forced to leave their machines in YMTC in late 2022, the Japan-based company Tokyo Electron (also operating in the Chinese fab) was able to develop similar technology in an extremely short timeframe to replace the American company in the Chinese market. According to KLA Corporation, another California-based company, Tokyo Electron has also seized the global market (including the U.S. market) for an EUV inspection technology once dominated by KLA. In short, our allies’ export controls have done little to restrict their companies’ participation in

---

<sup>2</sup> Crosignani, Matteo, Lina Han, Marco Macchiavelli, and André F. Silva. 2024. “Geopolitical Risk and Decoupling: Evidence from U.S. Export Controls.” Federal Reserve Bank of New York Staff Reports, no. 1096, April. <https://doi.org/10.59576/sr.1096>.

<sup>3</sup> Ibid.

<sup>4</sup> Kirti Gupta, Chris Borges, and Andrea Leonard Palazzi, “Collateral Damage: The Domestic Impact of U.S. Semiconductor Export Controls,” CSIS, July 9, 2024, <https://www.csis.org/analysis/collateral-damage-domestic-impact-us-semiconductor-export-controls>.

the Chinese market and it is unclear if they have done anything to restrict Chinese access to advanced technologies.

We want to be unambiguously clear. Neither we, nor the U.S. companies that we've spoken to, are asking to reenter the Chinese market. However, we are deeply concerned about the harm being done to U.S. companies and U.S. leadership in semiconductor innovation by unilateral export controls with questionable national security benefits. And we are even more troubled that BIS is thinking of forging ahead with yet another round of unilateral export controls on semiconductor manufacturing equipment and tooling in the near term. Another round could send longstanding U.S. companies into a death spiral and undercut the entire purpose of the *CHIPS Act*.

We urge you to use all forms of leverage available to the U.S. government to bring our allies along in aligning their export controls with ours. As necessary, we would support tariffs on technologies imported from allied countries that compete directly with U.S. companies for U.S. market share.

Finally, we know your staff briefed our respective staffs on this topic over the last few weeks. We would appreciate an updated briefing from your staff to better understand what steps you are taking to move our allies toward multilateral export controls, how you are measuring the effectiveness of the existing controls in meeting the stated goals, and how you are balancing the need to restrict PRC access to advanced technologies with the equally compelling need to bolster our own domestic semiconductor industry and supply chain. We ask that you pause additional unilateral export controls until you have adequately justified that such controls will not damage U.S. competitiveness in advanced semiconductors and semiconductor manufacturing equipment. To set up this briefing, and if you have any questions, please have your staff contact Dahlia Sokolov and Alan McQuinn of the Committee's minority staff and Priscilla Kim in the Office of Senator Alex Padilla.

Sincerely,



Zoe Lofgren  
Ranking Member  
House Committee on Science,  
Space, and Technology



Alex Padilla  
United States Senator

cc:

Antony Blinken, U.S. Secretary of State

Gina Raimondo, U.S. Secretary of Commerce

Laurie Locascio, U.S. Under Secretary of Standards and Technology