

The Role of Taiwan Under U.S. Semiconductor and AI Regulation


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Since the outbreak of the U.S.–China trade war in 2018, the United States’ trade and technology policies—especially in the areas of semiconductors and artificial intelligence (AI)—have drawn global attention. Across the Trump administration, the Biden presidency, and now Trump’s return to office in 2025, U.S. control over China has undergone steady evolution. These policies have had profound implications not only for China but also for Taiwan, whose semiconductor and AI industries are closely tied to both superpowers. The following analysis traces the development of U.S. export, investment, and talent mobility controls under Trump 1.0, the Biden administration, and Trump 2.0, and examines how these shifts affect Taiwan.

Trump's three control policies for the 1.0 era have taken shape

During Trump’s first term (2017–2020), the U.S. government escalated trade and technology restrictions as tensions with China intensified. Beginning in 2018, Washington implemented the Export Control Reform Act (ECRA), introducing new controls on semiconductors, quantum computation technologies, and AI systems under the justification of national security. China’s “Made in China 2025” strategy was perceived as a direct threat to U.S. technological leadership, prompting Trump’s administration to adopt a confrontational approach. Measures included placing Huawei and 68 of its affiliates on the Entity List in 2019, effectively preventing them from procuring American chips and technologies. The administration also expanded the Foreign Direct Product Rule (FDPR), extending export bans to products manufactured abroad using U.S. technology, which significantly limited China’s ability to secure advanced chips through third parties.

Investment scrutiny also intensified. The Foreign Investment Risk Review Modernization Act (FIRRMA) strengthened the United States’ monitoring of foreign

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investment, particularly in critical technologies. This led to the blocking of several Chinese attempts to acquire American semiconductor firms and increased monitoring of tech-related investments. At the same time, the Trump administration tightened controls on talent mobility, imposing stricter visa reviews on Chinese STEM researchers and tightening H-1B visa policies out of concern that expertise could be transferred back to China.


Biden's "Small Yard, High Fence"

When Biden took office in 2021, he largely maintained Trump's strategic direction but refined and expanded export and investment controls under a more coordinated, multilateral framework. His administration embraced the "Small Yard, High Fence" strategy, focusing on narrowly defined but highly sensitive technologies. AI and advanced AI chips became key targets: companies such as NVIDIA and AMD publicly confirmed that leading accelerators like the A100 and MI250 were no longer permitted to enter the Chinese market. In late 2022, the U.S. further added multiple Chinese AI firms to its export blacklist, deepening restrictions on China's access to frontier AI development.

Biden also strengthened cooperation with allies, most notably Japan and the Netherlands, to jointly restrict the export of semiconductor manufacturing equipment to China. This move severely limited China's ability to acquire cutting-edge lithography and process tools. On the investment front, Biden introduced unprecedented review mechanisms for outbound investment, requiring U.S. companies to report or restrict investments involving sensitive national security technologies. Although Biden relaxed Trump-era restrictions on foreign STEM talent and streamlined visa policies to attract researchers, controls remained in place for individuals involved in China's military-linked or high-risk technology fields.

The leap forward in Trump 2.0's control policies

With Trump's return to office in 2025, U.S. policy toward China has once again shifted toward more aggressive protectionism. Trump 2.0 is expected to intensify trade pressure, including the introduction of new tariffs, stricter quotas, and expanded restrictions on semiconductor imports through Section 232 investigations. The



administration plans to abandon Biden's tiered export-control framework for AI chips and instead condition access to U.S. technology on the outcome of bilateral trade negotiations. This approach gives the U.S. greater leverage in negotiations and reinforces Trump's broader strategy of linking technology access directly to trade outcomes.

Taiwan plays a prominent role in this new phase. The Trump administration has urged Taiwan to increase semiconductor-related investment in the United States. In 2025, TSMC announced further expansion in Arizona, including the addition of three advanced-node fabs. Although these investments strengthen U.S.–Taiwan cooperation, they also come with heightened expectations from Washington regarding production capacity and talent commitments.

Taiwan's role is becoming crucial

For Taiwan, the impact of evolving U.S. policies is multifaceted. Since 2020, Taiwanese outbound investment has shifted increasingly from China to the United States, mirroring trends in semiconductor industry exports. While China remains a major market for Taiwanese chips, U.S. market share has steadily grown, deepening Taiwan's dependence on American demand. Nonetheless, Taiwan's semiconductor supply chain remains deeply interconnected with China, and cross-strait technology exchanges—especially in mature-node chips—continue to be significant. As the U.S.-China rivalry intensifies, Taiwan may face rising pressure to navigate between the two markets.

In summary, U.S. semiconductor and AI controls have undergone significant evolution from Trump 1.0 through the Biden era and now into Trump 2.0. Despite differences in executing approach, all three administrations share a common objective: restricting China's access to critical technologies in the name of national security. For Taiwan, the United States is becoming an increasingly important market and political partner, yet its longstanding economic links with China cannot be easily severed. As competition between Washington and Beijing intensifies, Taiwan's strategic importance in the global semiconductor and AI supply chains will only increase, and the challenge of maintaining a balance between the two powers will come into sharper focus.