EMERGENT RISK INTERNATIONAL



SEMICONDUCTOR OUTLOOK

State of the Shield

Taiwan’s Semiconductor Chip Manufacturing

TIMEFRAME: PRESENT TO 2032

October 9, 2026

Key Judgments

1 Taiwan will gradually lose its globally dominant semiconductor role over many years, but the industry will continue to act as a deterrent to Chinese aggression at least through this decade.

2 The US will succeed at reshoring chip manufacturing through the next five years, but will remain reliant on Taiwanese suppliers in the deep supply chain, keeping the US invested in Taiwan's security.

3 Taiwanese resistance to US pressure to reshore advanced chip manufacturing will draw the two governments into disruptive trade rivalries and create supply chain uncertainty.

TIMEFRAME

Present to 2032

INDICATORS TO WATCH

- Increased advanced semiconductor chip manufacturing outside Taiwan
- Higher Taiwanese defense spending
- Increased US tariffs on Taiwanese chips
- Reduced US and Chinese semiconductor chip imports from Taiwan
- Incidents of Chinese industrial espionage targeting Taiwan's semiconductor industry
- Reduced global data center construction and reduced AI industry capital expenditure

SECTION 1

Why Now

Since 2000, Taiwan's semiconductor chip industry has been described as its "silicon shield," in theory making the island too valuable to the global economy to be fought over. The shield rests on two foundations: that Taiwan's semiconductor chip industry is too valuable to mainland China's supply chains for China to risk losing access to it or damaging it, in an invasion; and that the global economy's reliance on Taiwanese chip manufacturing would ensure the US, Europe, Japan and others would defend Taiwan if required.

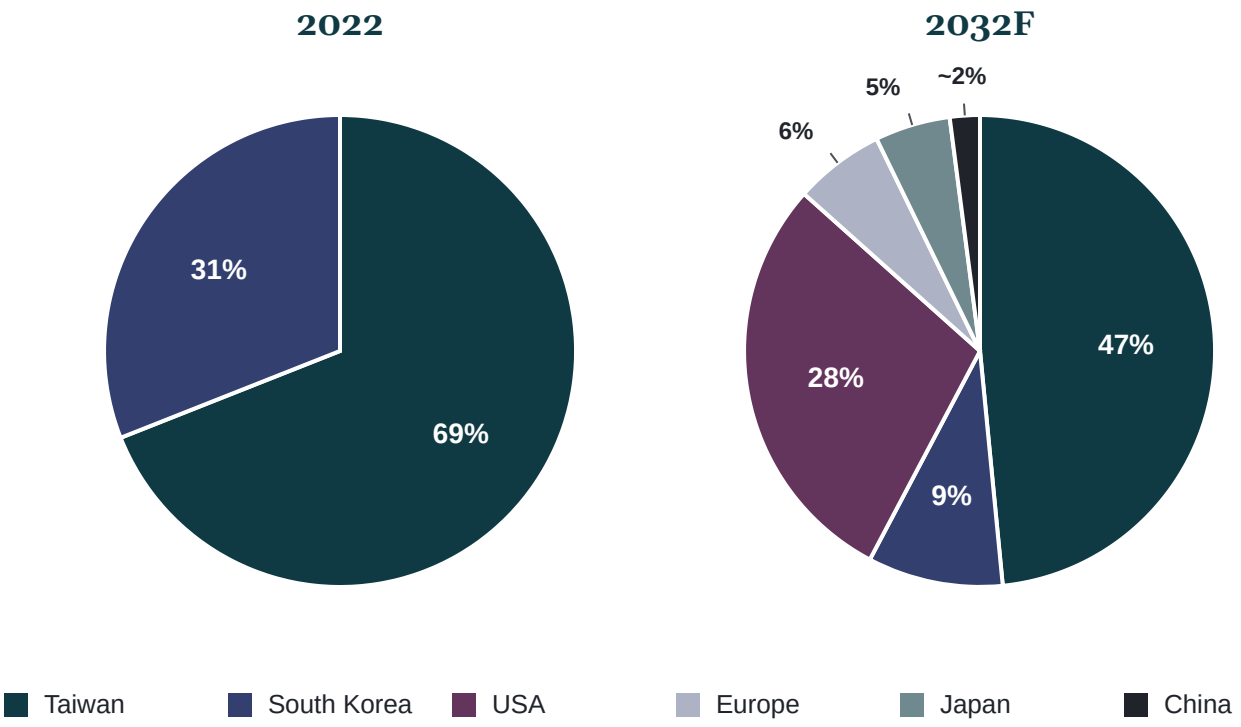
For several decades, Taiwan has dominated global semiconductor chip manufacturing and has particularly led on manufacturing the most leading-edge advanced chips. The Chinese government has sought to reduce reliance on Taiwan and increase self-sufficiency in chip manufacturing; however, US, Dutch and Japanese sanctions have barred China's access to advanced chip design and manufacturing equipment. Nonetheless, China's share of chip manufacturing has increased in recent years and is forecast to increase further. At the same time, the US government has sought to reduce its reliance on Taiwanese chip manufacturing by encouraging reshoring.

Both foundations of Taiwan's silicon shield are therefore under threat, even as the AI boom grows chip demand exponentially. This analysis explores whether the silicon shield is weakening, how this will affect Taiwan's security, and implications for global technology supply chains.

FIGURE 1

Advanced Semiconductor Chip Manufacturing by Region

Source: Semiconductor Industry Association



Taiwan's historical dominance of advanced chip manufacturing is under threat as the US, China and others seek to reshore manufacturing. While Taiwan is forecast to remain the single largest producer in 2032, the forecast rapid growth of US advanced manufacturing will reduce Taiwan's geopolitical leverage.

SECTION 2

What Next and Why it Matters

Taiwan will continue to dominate global chip manufacturing for the next few years, but rapidly growing Chinese manufacturing will erode that lead after 2030 and gradually reduce Chinese supply chain concerns about a conflict with Taiwan.

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What Next and Why it Matters

By value, the Taiwan Semiconductor Manufacturing Corporation (TSMC) has about 72% of the global market (expected to hit $1.5 trillion this year), driven by its production of the most advanced, high-value chips, but it manufactures the chips in Taiwan, China and the US. By location, Taiwan in 2024 had about 44% of global foundry capacity, ahead of China at 28%, but is forecast to fall to 40% by 2027, while China's capacity is forecast to rise to 31%. Taiwan's dominance is more pronounced for advanced chips, where it currently produces over 60% of global supply, but the forecast fall is also greater, down to below 50% by 2032.

Mainland China and Hong Kong took 48.4% of Taiwan's integrated circuit exports in January–August 2026, according to Taiwan's Ministry of Finance, highlighting the deep supply chain interdependence and China's likely continued reliance on Taiwan for at least several more years, until its capacity grows. The Chinese industry failed to meet a 2025 goal of 70% self-sufficiency and a new goal of 80% self-sufficiency by 2030 also appears unrealistic. Nonetheless, Beijing plans to invest $150 billion in its chip industry and has mandated Chinese technology manufacturers use 50% domestically produced chips.[1]

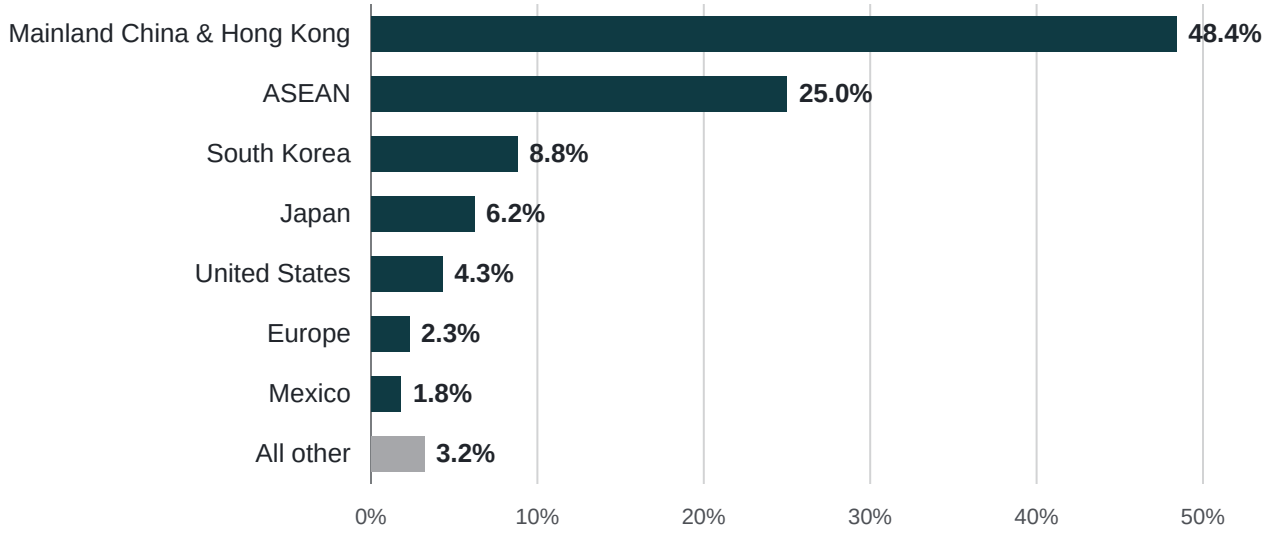
The US government probably will succeed in reducing direct reliance on Taiwanese chip manufacturing, but will not be able to replicate Taiwan's second and third order supply chain providers, leaving US-based chip manufacturers and their customers still reliant on Taiwanese suppliers.

The 2022 US CHIPS Act provided around $53 billion to strengthen the US domestic semiconductor chip industry, including $39 billion and a 25% tax credit to support domestic manufacturing. The US government has set out a goal of producing 50% of US' chip needs domestically and 50% in Taiwan, according to US Commerce Secretary Howard Lutnick in 2025, who downplayed the importance of Taiwan's silicon shield.

FIGURE 2

Where Taiwan's Chip Exports Go: January–August 2026

Source: Taiwan Ministry of Finance, Statistical Bulletin No. 15, September 17, 2026 (integrated circuits, HS 8542)



Mainland China and Hong Kong remain by far the largest destination for Taiwan's chips. The US takes 4.3% of Taiwan's chip exports directly; Taiwan's surge in exports to the US is led by AI servers and other systems. Shares of export value; "All other" is the remainder.

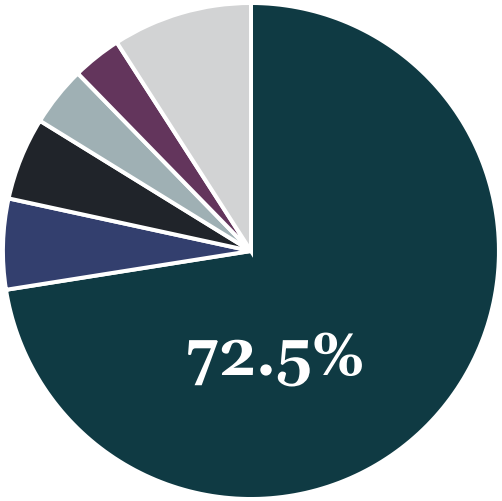
Current plans for manufacturing are forecast to increase the US share of chip manufacturing to around 14% by 2032, including about 28% of advanced chips.

While the US government probably will increase direct US chip manufacturing, the US is highly unlikely to replicate Taiwan's deep supplier ecosystem. The Taiwanese government lists over 300 semiconductor chip firms on the island, not including the many manufacturers of key chemical and materials inputs to the manufacturing process. Even as US-based manufacturing increases, it will still largely be done in TSMC-owned foundries and will rely heavily on inputs from TSMC's Taiwan-based suppliers, reinforcing US reliance on Taiwan.

FIGURE 3

Share of Global Revenue by Company: Q2, 2026

Sources: Trendforce



COMPANY (HQ)	SHARE
TSMC (Taiwan)	**72.5%**
Samsung Foundry (S. Korea)	**5.9%**
SMIC (China)	**5.4%**
UMC (Taiwan)	**3.9%**
GlobalFoundries (US)	**3.2%**
Others	**9.1%**

The Taiwan Semiconductor Manufacturing Corporation (TSMC) generates by far the most revenue in the semiconductor industry due to its domination of advanced, high-value chips needed for AI operations.

Similarly, US-based manufacturing faces an acute shortage of skilled and trained workers. The number of US college students in semiconductor-related courses has remained static since 1990 and the industry estimates a shortage of around 67,000 workers in 2030. TSMC has brought some of its workers to its US foundries, but US government immigration policies limit employment visas for skilled workers.

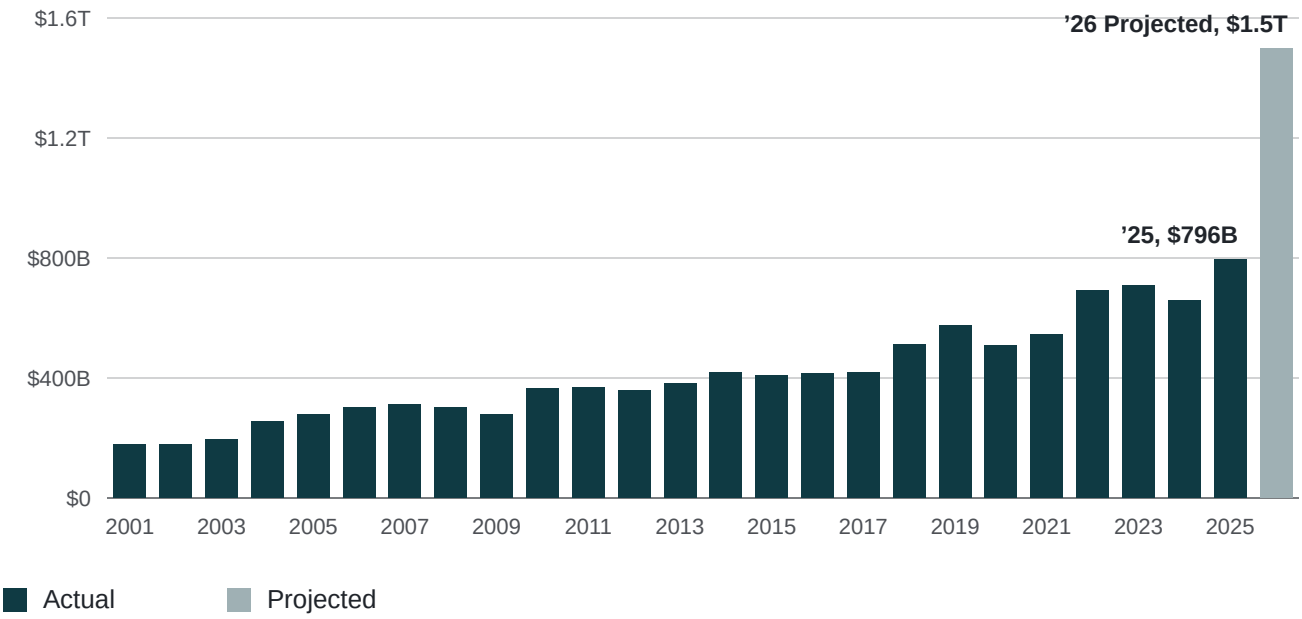
The Taiwanese government will resist US government pressure to relocate advanced chip manufacturing to the US, potentially triggering US-Taiwan trade conflicts.

Taiwanese confidence in US strategic deterrence is waning, increasing Taiwan's reliance on its own defense and broad economic engagement with Europe and Asia, not only via the semiconductor industry. Over half

FIGURE 4

Global Semiconductor Sales Revenue

Source: WSTS



Exponential demand for high value memory and logic chips to power AI systems has driven up the semiconductor industry's revenue over the past two years, rather than solely increased manufacturing output.

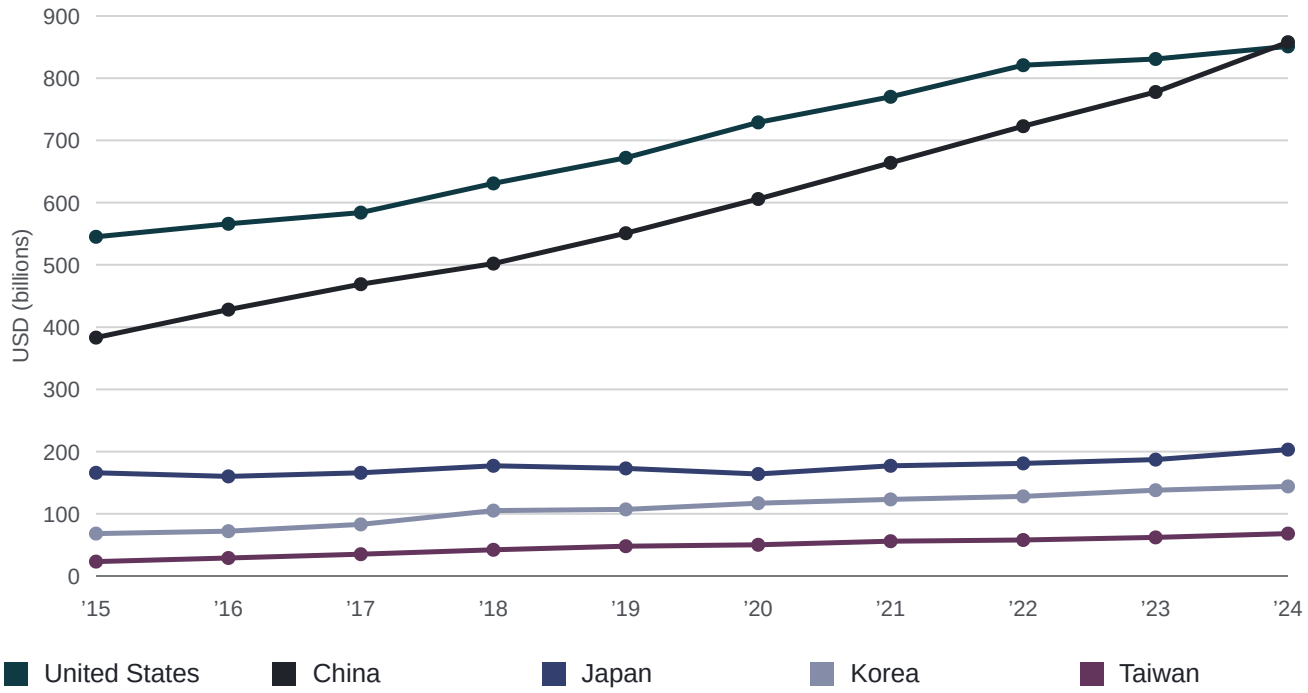
of the Taiwanese public do not believe the US keeps its word, according to a 2026 survey, while 36% of respondents did not believe the US would defend Taiwan from a Chinese attack, down from 69% in 2021. Moreover, a quarter of 2026 respondents believed that Taiwanese companies building chip factories in the US lowered the likelihood the US would defend Taiwan. The Taiwanese public saw the island's dominance of advanced chip manufacturing as particularly important, with 85% opposing transferring advanced manufacturing to the US.

Such a transfer is still occurring, with industry forecasts predicting the US share of advanced chip manufacturing will rise from 0% in 2022 to 28% by 2032; however, the Taiwanese government has put policies in place to slow the process. In late 2025, the government tightened its

FIGURE 5

Semiconductor Research and Development Spending

Source: OECD



While Taiwan and Taiwanese companies lead the world in chip manufacturing, comparatively little research and development is done in Taiwan. Advanced chips and advanced chip manufacturing tools are still mostly designed in the US, while US restrictions on advanced chip technology exports to China have spurred the Chinese government to rapidly increase its research and development funding. Despite US increases in R&D, the US is unlikely to offset its lack of a Taiwan-style deep semiconductor-focused supply chain ecosystem in the near term.

restrictions on fabrication of advanced chips overseas, limiting such manufacturing to chips two generations behind those being made in Taiwan. The previous rule had only specified one generation of delay.

The US administration almost certainly will push back against Taiwan's efforts to retain advanced chip manufacturing. The US president has on multiple occasions claimed Taiwan "stole" the US semiconductor industry and has threatened punitive tariffs. Washington and Taipei reached a trade deal in January, reducing tariffs to 15% and permitting Taiwanese chip manufacturers to import chips tariff-free, provided they

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What Next and Why it Matters

also manufacture chips in the US. The agreement did not specify the level of chip to be created, and the US administration will probably threaten further trade measures against Taiwan to expand advanced chip manufacturing in the US.

NOTE

[1] Data released after this report was produced: Taiwan's Ministry of Finance figures published November 9, 2026 show the US took 31.7% of Taiwan's total exports in January–October 2026, its highest share in 36 years, while mainland China and Hong Kong took 23.8%, the lowest in 27 years. Integrated circuit exports reached a record US$31.17 billion in October 2026, up 63% year on year. Sources: Ministry of Finance, Statistical Bulletin No. 15 (September 17, 2026) and October 2026 trade release (November 9, 2026).



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