



Resetting the Next Stage of Taiwan's Economic Development Amid the US-China Geopolitical Tensions

By Min-Hua Chiang

Summary

The evolving US-China relations have played a key role in explaining Taiwan's economic development over the past few decades.

First, the different political ideologies set the United States and China apart during the Cold War era. To better resist the communist expansion, America needed an economically strong Taiwan to support the colossal military expense against Communist China's military invasion. Taiwan's post-war economic development started with US aid and it was boosted further by its enormous exports of final consumption goods to America.

Second, America's market opening to Chinese goods, following the US-China reconciliation, had turned Taiwan's dependence from exporting final consumption goods to America to exporting semi-industrial goods to China. Through its massive export-oriented investment in China, Taiwan also helped to fulfil the US policy of integrating China into the global economy.

However, the growing tension between the United States and China is likely to revert the global division of labour based on each country's comparative advantage. On the one hand, China has been eager to change its role from a downstream assembler to a high-technology provider in the global supply chain network. On the other hand, the United States has great concerns about potential threats to its national security after China's technology catch-up.

The immediate effect of the deteriorating US-China relations is the cross-strait economic de-coupling. Taiwan's investment in and exports to China have significantly declined in recent years following the US-China trade war and the US export control measures. Taiwan's heavy reliance on the semiconductor industry has also put its economic lifeline at risk amid the US-China competition in high technology. A strong and consistent US economic policy toward China and the region would facilitate the re-designing of Taiwan's role in the new global economic order. Nevertheless, the uncertain US-China relations at present have made Taiwan's policy response a daunting task. To benefit from the evolving global politics, Taiwan should:



- Continue the economic diversification policy to a wider range of countries in the world.
- Facilitate Taiwanese firms' global investment through formal and informal economic cooperation with overseas countries and financial aid and infrastructure investment in developing countries.
- Keep the dialogue open with China while reinforcing relations with the United States in all aspects.



Introduction

Taiwan is experiencing a historical momentum of economic transformation. The island can no longer rely on exporting industrial goods with high technology and capital intensity to China for its economic survival. On the one hand, the US export control measures have choked Taiwan's exports of advanced chips to the mainland. America is less likely to lift the restrictions on technology goods exported to China anytime soon. On the other hand, China's slowing economy and sluggish private consumption suggest a restrained market potential for Taiwanese firms to develop business there. Hence, Taiwan needs to find alternative markets to sustain its future export-oriented economic development.

It is not the first time that Taiwan has had to switch its economic reliance from one to another. The evolving geopolitical environment, notably the changing US-China relations over the past few decades, triggered the shift in Taiwan's economic reliance. From the 1950s to the 1970s, Taiwan's economic miracle was mainly attributed to its enormous exports of final consumption goods to the United States. Situated at the frontline of the first island chain in Asia-Pacific, the economic development of Taiwan was considered essential to prevent Communism from expanding.

After the 1980s, the lower tariffs that the United States granted to China have facilitated Taiwan's export-oriented investment in the mainland.² The products made by Taiwanese firms in China would have nowhere to go if the United States did not open its market for Chinese goods. The Taiwanese government's relaxation of investment and trade restrictions has further made the formation of triangular economic ties possible. These developments have thus allowed Taiwan to take orders from the US and export key components, intermediate goods, and capital equipment to China for the final assembly. China then exported the final consumption goods to America. In this way, Taiwan has still relied on the American market but through China as a cheap production site and export platform.

In recent years, the growing US-China tension has set a new scene for Taiwan's economic development. How Taiwan is going to respond to the next round of global power competition is central to continuing the succeeding chapter of its economic advancement.



Correlations between the US-China relations and Taiwan's economic development

Taiwan's economic development over the past few decades is highly related to US-China relations and the corresponding US policies towards the region. We can largely divide Taiwan's economic development path into three different stages as shown in Table 1.

First, Taiwan's geopolitical importance after the Chinese Communists took over mainland China provided an initial impetus for its economic development. Three days after North Korea, equipped by the Soviet Union and Communist China, launched an offensive action against South Korea in 1950, President Truman requested the Seventh Fleet to prevent any attack on Taiwan. Apart from the military protection, Taiwan was officially included in the US economic policy towards the "free countries" in the region through US aid.³

The US aid, composed of both military and economic aid, played an imperative role in Taiwan's post-war development. The military aid strengthened Taiwan's national defence and secured its economic development without being disrupted by China's military invasion. The economic aid helped the KMT government to settle the hyperinflation, trade deficit, and government deficit. Without US aid, which offered not only financial assistance but also policy consultation, several important post-war economic policy measures, such as land reforms, import substitution, and export promotion, would not have been successfully implemented.⁴

The close US-Taiwan relations also facilitated the business collaboration between the two countries. By cooperating with their subsidiaries on the island, American multinational corporations (MNCs) acquired the essential components and final products at the lowest cost with decent quality. Taiwanese businesses have gradually become key suppliers of intermediate goods and assemblers of final consumption goods for American MNCs.

Taiwan thus sustained high-speed economic growth rates throughout the 1970s and 1980s thanks to its massive exports of manufactured goods to the United States.⁵ However, Taiwan's economic growth has lost speed and undergone a downward trend since the 1990s (see Chart 1). The rising production cost at home and America's trade retaliations against Taiwanese goods suggested that Taiwan was no longer an ideal place for assembling and exporting final consumption goods to the United States.

China's economic opening up offered a great opportunity for Taiwanese firms to continue labour-intensive manufacturing production on the mainland. More significantly, through their massive export-oriented investment, Taiwanese firms have played a key role in integrating China into the global division of labour, which was part



of the US policy to incorporate the country into the global economy. The opening up of the US market to Chinese goods, following the US-China political reconciliation, also ensured the success of a similar export-led economic growth pattern in China. Meanwhile, Taiwan's economy continued to benefit from being a subcontractor of American MNCs through China as a final assembly place and export platform.

Finally, US-China relations have been deteriorating following China's economic rise and greater political assertiveness. The Obama administration's "Pivot to Asia" policy aimed to counterbalance China's growing influence. Through joining the Trans-Pacific Partnership (TPP), the United States sought to maintain its dominance in the region amidst China's power emergence. However, the Trump administration withdrew from the TPP, and America's policy to counterbalance the "China threat" did not come to an end. The trade war started with the Trump administration's higher tariffs for certain Chinese goods in 2018.⁶ In 2020, the Trump administration started to ban chips and chip-making equipment exported to Huawei and SMIC, China's two tech giants.⁷ The higher tariffs against Chinese goods and export control measures have remained throughout the first term of the Biden administration. Taiwanese manufacturers are among the most impacted by the US policy against China due to their close commercial ties with both sides.

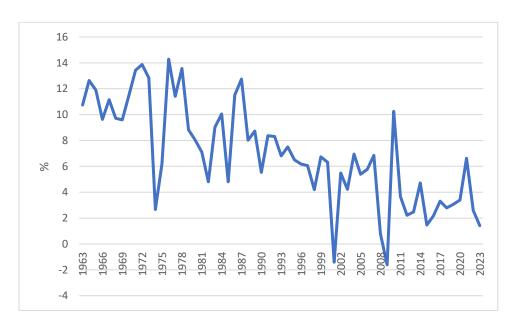


Chart 1 Taiwan's annual economic growth rate 1963-2023

Source: Ministry of Finance, Taiwan.



		Stage I	Stage II	Stage III
		1950s-1970s (30 years)	1980s-2000s (30 years)	2010s-present (another 20 years to go)
1	US- China political relations	Hostile	Rapprochement	• Tense
2	Corresponding US economic policy towards Taiwan	 US aid to Taiwan 1951-1965 US market opening t o Taiwanese goods 	Trade retaliation against Taiwan ese goods	 Resumption of Trade and Investment Framework Agreement between Taiwan and the United States Conclusion of US- Taiwan Initiative on 21st Century Trade
3	Corresponding US economic policy towards China	Limited economic exchanges between the US and China	The US market opening for Chinese goods through granting China the Most Favored Nation (MFN) and Permanent Normal Trade Relations (PNTR) statuses throughout the 1980s and 1990s The US allowed China to join WTO in 2001	US higher tariffs against Chinese goods US export control measures US ban on high-tech investment in China
4	Consequences on Taiwan's economy	Taiwan's reliance on exporting final consumption goods to the US	Taiwan's reliance on exporting intermediate goods to China for the final assembly	Taiwan's new chief export destinations in the dev elopment

Table 1 US-China relations and Taiwan's economy

Source: Compiled by the author.

From cross-strait economic integration to de-coupling

China used to be the most important overseas investment destination for Taiwanese firms. However, China has lost its significant comparative advantage in cheap labour for more than a decade now. After China's wage hike,⁸ following its enactment of the Labor Contract Law in 2008, Taiwan's investment in China dropped sharply from about US\$15 billion in 2010 to US\$9 billion in 2013 (Chart 2).



In recent years, the close economic ties across the Strait have been tested further by China's growing conflict with the United States. Taiwan's official figures reckoned the significant impact of America's trade sanctions and export control measures against China on Taiwan's investment. The island's investment in China dropped from nearly US\$10 billion in 2017 (before the trade war) to US\$4 billion in 2019 and US\$3 billion in 2023. With Taiwan's falling investment, China's share in Taiwan's global outward foreign direct investment (OFDI) has diminished from 61% in 2012 to 34% in 2022 and further down to 12% in 2023 (Chart 2).

Taiwan's future investment in China is expected to stay minimal. Primarily, Apple, a major source of manufacturing orders for Taiwan, has planned to reduce its production capacity in China by shifting a portion of its production to India and Vietnam over the coming years.

Second, Taiwanese service businesses also lack the motivation to invest in China. The Cross-Strait Service Trade Agreement has never been ratified in Taiwan's legislature following the Sunflower Student Movement against the Cross-Strait Service Trade Agreement in 2014. China has also threatened to withdraw the Economic Cooperation Framework Agreement (ECFA) with Taiwan if the cross-strait relations turn worse. ⁹ The fading cross-strait economic relations, as a result of the full suspension of ECFA, will then likely further trim down Taiwan's investment in China. Moreover, China's slowing economy, growing ageing demography, and limited private consumption are likely to hold back Taiwanese firms that seek to benefit from China's huge market potential. Politically, the Chinese government's crackdown on private business and the enactment of several unfriendly policies towards foreign investors¹⁰ are factors that might further discourage Taiwanese investment on the mainland.



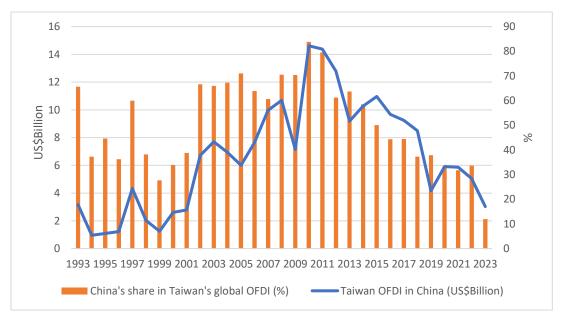


Chart 2 Taiwan's investment in China 1993-2023

Source: Investment Commission, Taiwan.

Apart from the falling investment, Taiwan's huge exports to China have also come to a watershed. To minimise the impact of US trade retaliation against Chinese exports, Taiwanese firms shifted the export platform to other developing countries. The US official statistics reckoned the shift of Asia's export platforms from China to other countries. The growth rates of America's imports from China were less significant than from Mexico, Vietnam, Taiwan, and the Asia-Pacific in the past few years.¹¹

Some of the export capacity was transferred to Taiwan. Taiwanese firms had relied on China to export ICT products to America. However, the official figures showed that the island's exports of ICT goods to the United States have had the most noticeable growth among all the export items to the United States over the past few years. ¹² The Taiwanese subcontractors' clients requested part of the shift of the export platform. For example, Taiwan's five major subcontractors for American MNCs were requested to move their production line back to Taiwan due to uncertain US-China trade relations. ¹³

Taiwan's growing exports to China and Hong Kong during 2020 and 2021 were mainly caused by Chinese firms' stockpiles of advanced chips before the enactment of export control measures. This is evidenced by Taiwan's greater growth of electronic components and ICT goods exported to China than other items. ¹⁴ Since 2020, TSMC has ceased taking orders from Huawei due to US restrictions. Owing to the significant share of advanced chips in Taiwan's exports to China, the impact on cross-strait trade relations is huge. China and Hong Kong's share in Taiwan's total exports slump to 35%



in 2023, from 44% in 2020 (Chart 3). During the same period, the shares of the United States, Europe, and Southeast Asian countries combined increased from 40% to 45%.¹⁵

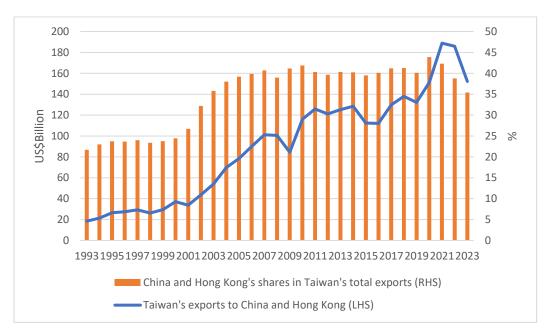


Chart 3 Taiwan's exports to China and Hong Kong

Source: Ministry of Finance, Taiwan.

Apart from the US policy that has impacted the cross-strait economic relations, China also exerts restrictions on economic exchanges with Taiwan. China has previously banned certain agricultural products imported from Taiwan. The number of Chinese visitors to Taiwan also dropped after Tsai Ing-Wen took office in 2016,¹⁶ and China further suspended preferential tariffs for 12 product items under the early harvest program of the ECFA from Taiwan on 1 January 2024.¹⁷

So far, those economic retaliations against Taiwan have had a limited impact on the island's overall economy. However, certain sectors and companies that rely on China's market might have been impacted. ¹⁸ In the long run, China's persistent economic retaliations against Taiwan and the ultimate ending of ECFA would only justify the current DPP government's economic diversification approach. Due to the uncertain geopolitical relations, Taiwanese firms are likely to accelerate their shift away from China and thus undercut China's ability to influence Taiwan. China is also likely to lose its leverage over Taiwan by pressuring the Taiwanese business people, a key strategy that China has used for its goal of cross-strait unification over the past few decades.



Re-configuration of the supply chain network in the semiconductor industry

Taiwan's semiconductor industry is the most vulnerable sector in the growing geopolitical rivalry between the United States and China. Taiwan has a particularly strong manufacturing strength in chip fabrication. The island is especially important in fabricating advanced chips in the world. It dominated cutting-edge logic production (below 10nm), accounting for 92% of the global market share in 2019. However, Taiwan's export-oriented economy is also highly reliant on the semiconductor industry. The statistics from the World Trade Organization showed that in 2022, nearly 42% of Taiwan's exports are integrated circuits and electronic components, higher than Singapore (26%), South Korea (17%), and China (6%).

China's strong intention to move up the technological ladder might change the global division of labour. In its "Made in China" plan, China aimed to reduce its reliance on foreign technology and increase its domestic supply of semiconductor chips to 40% in 2020 and 70% in 2025. So far, China has made little progress. In 2022, China accounted for 28% of global exports of integrated circuits and electronic components. Most of them were still made by foreign companies. Chips made by Chinese companies only accounted for a tiny portion of global semiconductor chip sales. Nevertheless, China's failure has not stopped the government from pouring money into chip fabrication. Through its state-backed fund, China is using the whole country's strength to grow its self-sufficiency in the semiconductor industry.

China might not be able to catch up with Taiwan's technology and manufacturing strength in the next few years. The global division of labor provides cost advantage and production efficiency which China alone will be less likely to achieve anytime soon. However, China's current technology constraints do not inhibit its political ambitions. If China chooses to take over Taiwan by force and acquire the essential technology on the island, the industries and economies of the United States and its allies will be under China's control. As such, diversifying chip production sites has now become the consensus among major countries in the world.

The outbreak of the global pandemic crisis has further reinforced the idea of safeguarding the supply of chips for the whole world. Accordingly, Taiwan Semiconductor Manufacturing Company (TSMC) has been encouraged to invest in other countries.

As early as 2020, TSMC announced its plan to build factories in Arizona in the United States.²⁵ The official launch of chip production is slated for the first half of 2025.²⁶ Apart from the United States, TSMC also planned to set up Japan Advanced Semiconductor Manufacturing in Japan in 2021,²⁷ following a request from Tokyo. TSMC also announced investment plans in Germany in August 2023.²⁸



TSMC is not the only Taiwanese company that has expanded its overseas investment; other high-technology companies, such as Gwafer, MediaTek, and Foxconn, have also increased capital in Singapore in recent years, according to statistics from Taiwan's Investment Commission.²⁹ Taiwan's leading producers in consumer electronics have also set up factories in India in recent years,³⁰ attracted by the increasing demand in India for chips from automakers and technology companies such as Apple.

Taiwan's official figures³¹ reckoned the trend of investment relocation away from China in the ICT industry, including chip fabrication, computer, and electronic manufacturing industries. Taiwan's investment in China's ICT industry has declined since 2012, whereas its investment in other countries rose quickly, especially in 2023 (Chart 4). The costly building of chip factories explained the sudden rise of Taiwan's ICT investment in other countries in 2023.

While building factories overseas, TSMC is also investing heavily in Taiwan (Figure 4). The total investment in Kaohsiung, Tainan, and Hsinchu amounted to over US\$130 billion, larger than its total investment in the United States, Japan, and Germany (about US\$64 billion).³²

Taiwan's semiconductor investment in China is less likely to pick up anytime soon. On the one hand, the CHIPS and Science Act has banned semiconductor companies receiving US government subsidies, including TSMC, ³³from investing in China for the next decade. On the other hand, some Taiwanese firms' business debacles in China also discouraged investment. For example, Taiwan's prominent electronic producer United Microelectronics (UMC), had suffered from forced technology transfer and hostile acquisition of local firms, backed by the Chinese government.³⁴

Looking into the future, more diversified overseas investment is expected to increase Taiwan's international visibility and exchanges with a greater number of countries. However, managing cultural diversity will be a challenging task for Taiwanese semiconductor companies with numerous overseas business operations in the future.

Relocating semiconductor manufacturing production and the assembly of high-technology products elsewhere will also help Taiwan diversify its exports of key components and other industrial goods as well as strengthen its commercial ties with other countries. As a result, China's role as Taiwan's leading destination for key components would change. For example, the United States has surpassed China as Taiwan's largest source of orders for electronic products since 2022, according to statistics released by Taiwan's Ministry of Economic Affairs. The orders for shipment from Southeast Asian countries of the same products also grew by over 200% over the last five years (2018-2023). In comparison, the orders for shipment from China have declined the most in the last two years.³⁵



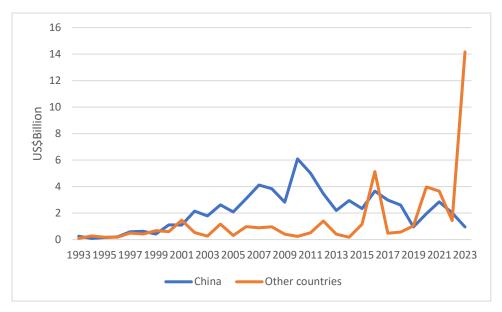


Chart 4 Taiwan's OFDI in the ICT industry in China and other countries 1993-2023

Source: Investment Commission, Taiwan.

Note: The ICT industry here includes "electronic parts and components manufacturing" and "computers, electronic and optical products manufacturing."



Conclusion

Over the past few decades, Taiwan's economic development has been entangled with the complexities of US-China relations. Taiwan was a key economic fortress against Communist China's power expansion during the Cold War era. Taiwan's essential role was adjusted when the United States' policy changed toward integrating China into the global economy. In recent years, China has been trying to break the hierarchy of the global supply chain network through technological advancement. The United States has also tried to pull back China's growing influence in the global political economy. Taiwan's indispensable role in the global semiconductor industry has tied it up with the growing rivalries between the two powers.

Taiwan's response to the new power relations will be critical to its future economic prosperity. Nevertheless, how the US-China relations will evolve is uncertain. Despite the clear geopolitical confrontation between the United States and China, the Biden administration claimed that it does not seek economic de-coupling with China. President Biden even said that the United States is willing to help China's current ailing economy. The uncertainty about US policy towards China and the corresponding economic measures will last until after the presidential election in November.

Nevertheless, the cross-strait economic ties are unlikely to be as close as before. Even with the improving US-China relations, there is still a bipartisan consensus in Washington DC about the "China threat." The investment that has already relocated away from China is unlikely to return to the country anytime soon. In addition, China's long-term economic prospects are likely to remain sluggish due to persistent housing market stagnation, local governments' deteriorating finances, limited private consumption, and ageing demography. Taiwan needs to find alternative markets to continue its export-oriented economic future.

In the near term, Taiwan will need to keep its foreign policy and economic measures flexible in the face of the unclear geopolitical environment. More specific policy recommendations are addressed as follows:

- To minimise the impact of the tense relations between the United States and China, Taiwan should continue to seek both formal and informal economic partnerships with other countries around the world, such as in Southeast Asia, India, South America, and Africa.
- To facilitate Taiwan's economic diversification, the government might consider increasing financial aid and infrastructure investment in countries where Taiwanese firms might be interested in investing.
- Taiwan's greater economic linkages with developing countries might unavoidably involve indirect economic ties with China due to China's close economic relations



with them. The Taiwanese government will eventually need to find a way to break the negotiation deadlock with the mainland.

The breakthrough of the cross-strait economic and political relations will rely on the US policy towards China. The United States is not only the most important source of technology for Taiwanese firms but also the key consumption market for Taiwanese products. Consolidated relations with America are fundamental to direct Taiwan's development toward economic prosperity and political stability in the future.



¹ Amsden A.H., "Taiwan's Economic History: A Case of Étatisme and a Challenge to Dependency Theory," *Modern China*, Vol.5, No.3, July 1979, pp.371-374; Chi Schive (1987), Trade Patterns and Trends of Taiwan, in Colin I. Bradford, Jr. and William H. Branson (eds.), *Trade and Structural Change in Pacific Asia*, 307-332.

- ² From 1980 to1999, the United States restored Most-Favoured Nations (MFN) status to China, offering low tariffs to Chinese exports to America. In 2000, China was granted the Permanent Normal Trade Relations (PNTR) status before its admission to the World Trade Organisation (WTO) in 2001. US-China trade issues, Congressional Research Service, July 30, 2018, https://crsreports.congress.gov/product/pdf/RL/RL33536, retrieved 18 March 2024.
- ³ The US aid to foreign countries after WWII was a demonstration of the US policy based on its political and security interests against the communist's expansion in "free" regimes. On the 10th of October, 1951, Congress approved the Mutual Security Act (MSA) in authorizing economic and military aid to the nations, which are friendly to the US to fortify the mutual security and the individual and collective defence in the "free countries." Republic of China: *China Yearbook 1958-1959*, China Publishing Co., Taipei, Taiwan, 1959, p.268.
- ⁴ Min-Hua Chiang, The U.S. aid and Taiwan's post-war economic development, 1951-1965, African and Asian Studies, 13, 2014, pp.100-120; James Lee, American diplomacy and export-oriented industrialization in Taiwan, Journal of East Asian Studies, Vol. 20, issue 3, 2020, pp.463-483.
- ⁵ Data source: Ministry of Economic Affairs, Taiwan.
- ⁶ Jim Tankersley and Keith Bradsher, Trump hits China with tariffs on \$200 billion in goods, escalating trade war, The New York Times, 17 September 2018, https://www.nytimes.com/2018/09/17/us/politics/trump-china-tariffs-trade.html, retrieved 18 March 2024.
- ⁷ Ana Swanson and Raymond Zhong, U.S. places restrictions on China's leading chip maker, The New York Times, 19 July 2021, https://www.nytimes.com/2020/09/26/technology/trump-china-smic-blacklist.html, retrieved 18 March 2024.
- ⁸After China enacted its Labour Contract Law in 2008, the annual average wage per worker increased more than four times, from RMB24,712 (about US\$3,385) in 2008 to RMB114,029 (US\$16,081) in 2022. Data source: Data source: National Bureau of Statistics, the People's Republic of China.
- ⁹ Matthew Strong, China threatens more changes to ECFA trade agreement with Taiwan, Taiwan News, 10 January 2024, https://www.taiwannews.com.tw/en/news/5075500, retrieved 18 March 2024.
- ¹⁰ China's data-security laws rattle Western business executives, The Economist, 4 May 2023, https://www.economist.com/business/2023/05/04/chinas-data-security-laws-rattle-western-business-executivesretrieved 19 March 2024.
- ¹¹ Data source: U.S. Bureau of Economic Analysis.
- ¹² Data source: Ministry of Finance, Taiwan.
- ¹³The information is derived from the TV interview of Taiwan's minister of economic affairs (Shen Jongchin) on 30 November 2019. *Global View by CEO Hsieh*.



- ¹⁴ Taiwan's export of electronic components and ICT goods to China in 2020 and 2021 grew by over 22%, the highest among all major goods exported to China. Data source: Ministry of Finance, Taiwan.
- ¹⁵ Data source: Ministry of Finance, Taiwan.
- ¹⁶ Data source: Tourism statistics database of the Tourism Administration, Ministry of Transportation and Communications, Taiwan, https://stat.taiwan.net.tw/, retrieved 18 March 2024.
- ¹⁷ China heaps pressure on Taiwan ahead of a big election. The Economist, 10 January 2024, https://www.economist.com/china/2024/01/10/china-heaps-pressure-on-taiwan-ahead-of-a-big-election, retrieved 19 March 2024.
- ¹⁸ For example, China accounted for nearly one-third of Taiwan's exports of plastics and rubbers in 2023 and 27% for mineral and chemical products, according to Taiwan's International Trade Administration. Taiwan's petrochemicals and plastics and rubber products enjoyed lower tariffs under the early harvest program of ECFA. ECFA, https://www.ecfa.org.tw/RelatedDoc.aspx?nid=14, retrieved 18 March 2024 (in Chinese).
- ¹⁹ 2021 State of the US Semiconductor Industry, Semiconductor Industry Association, chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.semiconductors.org/wp-content/uploads/2021/09/2021-SIA-State-of-the-Industry-Report.pdf, retrieved 25 January 2024.
- ²⁰ Data source: WTO Stats Dashboard, https://stats.wto.org/dashboard/merchandise_en.html, retrieved 25 January 2024.
- ²¹ Made in China 2025, Institute for Security & Development Policy, June 2018 https://isdp.eu/content/uploads/2018/06/Made-in-China-Backgrounder.pdf, retrieved 18 March 2024.
- ²²Data source: WTO Stats Dashboard, https://stats.wto.org/dashboard/merchandise_en.html, retrieved 25 January 2024.
- ²³ Chang Che and John Liu, "De-Americanize": How China is remaking its chip business. The New York Times, 11 May 2023, https://www.nytimes.com/2023/05/11/technology/china-us-chip-controls.html, retrieved 18 March 2024.
- ²⁴ China is planning its biggest state-backed chip fund yet, T_HQ, 23 September 2023 https://techhq.com/2023/09/what-does-china-planning-its-biggest-state-backed-chip-fund-mean/, retrieved 25 January 2024.
- ²⁵ TSMC News archives, TSMC announced intention to build and operate an advanced semiconductor fab in the United States, 15 May 2020, https://pr.tsmc.com/english/news/2033, retrieved 18 March 2024.
- ²⁶ TSMC says skilled worker shortage delays start of Arizona chip production, CNN News, 21 July 2023, https://www.cnn.com/2023/07/21/tech/tsmc-arizona-production-delay/index.html, retrieved 18 March 2024.
- ²⁷ TSMC to build second Japan chip factory, Reuters, 6 February 2024, https://www.reuters.com/technology/tsmc-build-second-japan-chip-factory-raising-investment-20-bln-2024-02-06/, retrieved 18 March 2024; Sheila Chiang, "Chip giant TSMC opens first Japan factory as it diversifies away from Taiwan amid U.S.-China tensions," CNBC News, 26 February 2024, https://www.cnbc.com/2024/02/26/tsmc-opens-new-plant-in-japan-as-it-diversifies-away-from-taiwan.html, retrieved 18 March 2024.



- ²⁸ Ben Blanchard and Thomas Escritt, Germany spends bug to win \$11 billion TSMC chip plant, Reuters, August 8 2024, https://www.reuters.com/technology/taiwan-chipmaker-tsmc-approves-38-bln-germany-factory-plan-2023-08-08/, retrieved 18 March 2024.
- ²⁹News release, Investment Commission, Ministry of Economic Affairs, Taiwan, 15 January 2024, https://dir.moea.gov.tw/news.view?do=data&id=1823&lang=ch&type=new_ann, retrieved 18 March 2024 (in Chinese).
- ³⁰ Taiwan based Taisys to invest USD100 million in India semiconductor design platform. Businesswire India, 22 February 2024, https://www.businesswireindia.com/taiwan-based-taisys-to-invest-usd100-million-in-indian-semiconductor-design-platform-88843.html, retrieved 18 March 2024.
- ³¹ Data source: Investment Commission, Ministry of Economic Affairs, Taiwan.
- ³² The amounts are calculated by the author through various online news.
- ³³ Fact Sheet: CHIPS and Science Sct will lower costs, create jobs, strengthen supply chains, and counter China, The White House, August 09, 2022, https://www.whitehouse.gov/briefing-room/statements-releases/2022/08/09/fact-sheet-chips-and-science-act-will-lower-costs-create-jobs-strengthen-supply-chains-and-counter-china/, retrieved 18 March 2024.
- ³⁴ Rober Tsao regrets investing in China. Epoch Times, 4 September 2021, https://www.epochtimes.com/b5/21/9/4/n13210281.htm, retrieved 25 January 2024 (in Chinese).
- ³⁵ Data source: Ministry of Economic Affairs, Taiwan.
- ³⁶ Justin Sink, "Biden says US wants better ties to help China's economy," Bloomberg, 14 November 2023, https://www.bloomberg.com/news/articles/2023-11-14/biden-says-us-wants-better-relationship-to-help-china-s-economy, retrieved 19 March 2024.



About the Author



Min-Hua Chiang is a non-resident senior fellow at Taiwan Research Hub, University of Nottingham, and an adjunct fellow at the East-West Centre in Washington, DC.