

Evolution, Impact, and Responses to US Restrictions on Technological Investments in China

Baichuan Sang, Yunxin Wu, Chuanchuan Li*

Abstract: As the United States escalates its review of Investments in China, its economic relationship with China is facing unprecedented challenges. Particularly, following the issuance of Executive Order 14105, the US has further specified investment restrictions in key areas such as semiconductors and microelectronics, quantum information technologies, and artificial intelligence. This paper comprehensively reviews the historical evolution of the US investment review regime towards China, analyzes the underlying logic of the strategic competition between China and the US, and extensively discusses the potential impacts of the new restrictive measures outlined in the executive order on Sino-US relations and the global economy. Additionally, this paper assesses the future trajectory of the US review of investments in China. Despite the adverse impact of US investment restrictions on China's technological development, China's core competitiveness in global technological competition and its vast market potential prevent the strategies of the US and its allies from being fully effective. To actively respond to US strategic containment in technology, China needs to take a series of countermeasures that include higher levels of opening-up to the outside world, active participation in global rulemaking, and strengthened international cooperation in technology.

Keywords: Review on Investments in China, Foreign Direct Investment, Investment Restrictions, Technological Competition

On August 9, 2023, US President Joe Biden signed the Executive Order on Addressing United States Investments in Certain National Security

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Technologies and Products in Countries of Concern (Executive Order 14105, hereinafter referred to as the EO), marking a new boundary in the global investment landscape. The EO aims to regulate the US investments in certain sensitive technologies and products, and especially imposes restrictions on investments in Chinese enterprises in key areas such as semiconductors and microelectronics, artificial intelligence (AI), and quantum information technologies. It authorizes the US Department of Commerce (DOC) and the US Department of the Treasury (USDT) to control these investments. This act will significantly impact US multinational companies and financial institutions' investments in China and is likely to prompt other Western countries to introduce similar restrictive measures, thereby having a profound impact on China's technological development. This paper reviews the historical evolution of the US investment review regime towards China, analyzes the internal logic of the strategic changes between China and the US, explores the potential impacts of the issuance of the EO on China, assesses future trends of the US investment review regime towards China, and makes relevant policy recommendations.

I. EVOLUTIONARY LOGIC OF THE US REVIEW REGIME OF TECHNOLOGICAL INVESTMENTS IN CHINA

In 2017, the US re-evaluated China's strategic role and broadened the definition of national security, thereby increasing the sensitivity of outbound investment reviews.¹ Since then, the scope of investment reviews involving China has continuously expanded, significantly affecting the development of bilateral direct investment relations. Scholars argue that among the many obstacles to the Sino-US bilateral investment, political factors have surpassed economic factors, becoming the main constraint.²

A. Historical Evolution of US Restrictions on Investments in China

Since the World War I, the US has continuously adjusted its national foreign

1 Zinan Hu, Chang Li and Shuyang Jin, Research on the Prospect and Impact of the US Construction of Foreign Investment Review Mechanism, *Asia-Pacific Economic Review*, Vol. 4, 2023, pp. 74-84.

2 Guannan Wang and Weixing Xiang, Political Logic of the US Selective Investment Restriction Policy and China's Response, *Northeast Asia Forum*, Vol. 5, 2023, pp. 84-98.

investment security review regime, attempting to find a balance between “opening-up” and “national security”. In recent years, the US has increasingly shown a tendency to use Foreign Investment Security Review as a policy tool to prevent and suppress competitors.³

The US foreign investment security review regime has a long history. During World War I, due to the fear of German companies investing in the US in industries related to military purposes, the US introduced the Trading with the Enemy Act of 1917, vesting the President with the power to deal with trade relations with enemy countries. In the 1970s, the US domestic economy entered a period of stagflation. In 1975, the US established the Committee on Foreign Investment in the United States (CFIUS), which became the symbol of the establishment of foreign investment review regime in the US. After the September 11 attacks, national security has become a primary concern of the US government and the public. The Foreign Investment and National Security Act (FINSAs), introduced in 2007, gave CFIUS legal status and established a detailed, strict, and procedural foreign investment review framework. After Trump took office, he further strengthened the functions of CFIUS and signed the Foreign Investment Risk Review Modernization Act (FIRRMA) and the Export Control Reform Act (ECRA) in 2018, underscoring a profound skepticism towards international trade and investment and a clear tendency towards unilateralism. In 2020, the US Congress further passed the Holding Foreign Companies Accountable Act (HFCAA), which attempts to discourage the US investors, and even joins Japan, the European Union, India, and the Republic of Korea in restricting investments in Chinese companies. On September 15, 2022, the White House issued Executive Order 14083, requiring CFIUS to concentrate on foreign investment reviews in key areas such as semiconductors, AI, and quantum computing, in order to assess the potential impact of the transactions on the US national interests and security.

On August 9, 2023, US President Joe Biden signed the EO, declaring the sectors of semiconductors, AI, and quantum computing as pivotal in future technological competition, significantly influencing economic security and military superiority, and further threatening the US global strategic position.

3 Junfang Zhang et al., The Latest Progress, Impact, and Suggestions of the US Security Review to Chinese Investment, *Intertrade*, Vol. 5, 2023, pp. 56–65.

Therefore, the restrictions on investments are based on the considerations of national security and global strategic competition. In tandem with the issuance of the EO, the USDT released a comprehensive Advanced Notice of Proposed Rulemaking (ANPRM), planning a complete prohibition on US capital outbound investments in the sensitive areas linked with the military, intelligence, surveillance, and cyber capabilities, and to ensure that all related investment activities are under their supervision. According to this notice, the USDT may implement a new Outbound Investment Program (OIP), which would comprehensively ban US investments in China (including the Hong Kong SAR of China, and the Macao SAR of China) in the areas of semiconductors and microelectronics, quantum information technology, and AI that are related to military, intelligence, surveillance, or cyber capabilities (see Table 1). With regard to these areas, any related outbound investments related to these three areas must be reported to the USDT. Furthermore, the USDT has emphasized that during their outbound investment review, the focus is not only on the traditional capital metrics, but also on the potential “value-added” carried by the investment behavior and its impact on the national interests.

As the Sino-US competition intensifies, the US has begun to contemplate new regulatory regimes, particularly focusing on the restriction of capital outflows to China. The issuance of the EO signifies a notable shift in the US outbound investment policy. Through the EO, the US clarified its stance on investments in specific technology sectors and has officially introduced a “reverse outbound investment review regime” for China. This review regime complements the technology export restrictions that have been implemented earlier, and further broadens the boundaries of control, extending from “export control” to “investment control”. The intention is to diminish the likelihood of US funding and expertise helping China to develop and nurture advanced technologies and products, thereby achieving the ultimate goal of curbing China’s development.

B. the Internal Logic of Sino-US Investment Strategy Evolution

The evolution of the US investment strategy in the context of Sino-US relations can be regarded as two complex but interrelated co-evolutionary systems.

Over the past two US presidencies, the iterative changes in policy have not only reflected the strategic interplay between the two nations amidst global technological competition but have also exemplified the “survival of the fittest” mechanism inherent in the co-evolutionary principle.⁴

Table 1: Categories of Technology in Which ANPRM Prohibits Investment

Categories of Technology	Completely Prohibited	Filing Required
Semiconductors and Microelectronics	Development or production of electronic design automation software specifically for integrated circuit design; Development or production of front-end single-crystal manufacturing equipment for integrated circuit mass production; Integrated circuit design that exceeds the threshold of the Export Control Classification Number (ECCN) 3A090; Manufacture of certain advanced integrated circuits, including advanced logic devices, NAND memory, and DRAM chips; Installation or sale to third-party customers of supercomputers driven by certain advanced chips.	Others involving design, manufacture, and package transaction of integrated circuits.
Quantum Information Technology	Production of quantum computers and their components; Development of quantum sensing platforms specifically for military, government intelligence, or large-scale surveillance applications; Development of quantum networks or quantum communication systems specifically for secure communication, such as quantum key distribution.	
AI	Software development of integrated AI systems designed for the following purposes: Extensive use in military applications; Government intelligence; Mass public surveillance.	Software development of integrated AI systems specifically tailored for the following applications: Cybersecurity; Digital forensics tools and penetration testing tools; Control of robotic systems; Covert listening, where devices can intercept real-time conversations without consent of participants; Non-cooperative tracking and positioning; Facial recognition.

Source: The author compiled the table.

Note: The US relevant regulatory authorities are considering replacing “specifically for” with “primarily for”.

While the Trump administration’s primary policy tools were confined to tariffs, export restrictions, and entity listings, during the Biden administration

⁴ Hongzhi Gao, Monica Ren and Tsui-Yii Shih, Co-evolutions in Global De-coupling: Learning from the Global Semiconductor Industry, *International Business Review*, Vol. 6, 2023, No. 102118.

the policy focus shifted to the investment field, with substantial federal funding being poured into sensitive industries and increased restrictions on the flow of funds to Chinese-owned or controlled entities. These new measures of investment intervention would have been deemed impossible and unrealistic in the Trump era, and at the time might have been considered disruptive and even rejected by private companies. But with China's rapid technological advances, fears of falling behind China have arisen in the US, and the technological competition with China has been dragged into the Biden era and even intensified.

In the current phase, influenced by geopolitical factors such as the Russia-Ukraine conflict and Israeli-Palestinian conflict, the supply chain shortage in high-sensitivity industries has become a significant national security challenge for the world's major economies. In this context, the "logic of security" has gradually superseded the "logic of economy" and dominated the evolution of Sino-US investment strategies (see Figure 1).

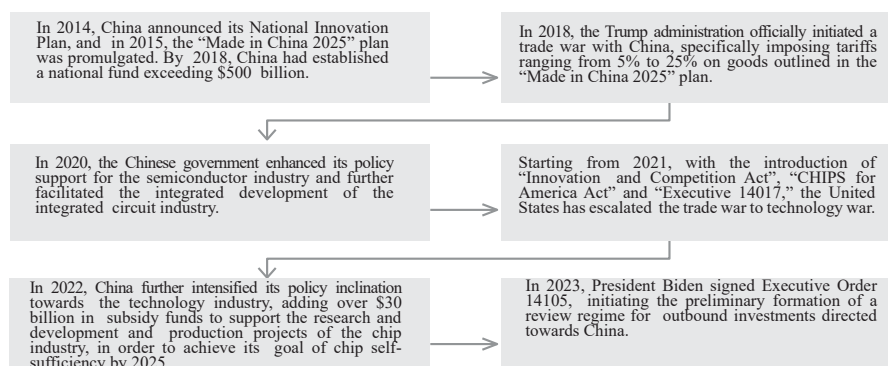


Figure 1: The Evolution of Sino-US Technology Industry Policies

Source: The author compiled the table.

Within the framework of co-evolution, China and the US appear to be following an evolutionary trajectory characterized by path dependence. Without the Trump administration's initial trade frictions centered on tariffs, export restrictions, and semiconductor controls, the Chinese government would not have to accelerate incentivized investment and policy support for its domestic high-tech sectors in response to these restrictions, and the Biden

administration's national investment-centered policies would not have been created.

Since 2021, a series of bills such as the US CHIPS and Science Act and the US Innovation and Competition Act, along with a succession of executive orders issued by the White House, can also be seen as a phased result in the co-evolution of Sino-US investment strategies. Given China's relative backwardness in key technological fields such as the chip and software industries, it is highly likely that the US will continue to exert pressure in these critical areas. Although the US still takes the lead in attracting high-end manufacturing investments due to its local advantages, China is continuously improving its innovations ecosystem through its vast market and talent, and has shown increasingly significant core competitiveness in global technology competition. A truly global market system that includes the Chinese market is the only way to sustain the capital flow, revenue, and profit levels necessary for continuous large-scale innovation.

It is also true that the direct economic ties between China and the US have developed to a high degree of mutual dependence, and the pursuit of absolute decoupling and de-globalization is ultimately an irrational choice (Williamson, 2021).⁵ From a co-evolutionary perspective, the evolution, selection, and retention among different economies fundamentally aim to ensure the continuation of survival capabilities, rather than simply replacing existing entities. Based on this, these two governments have adopted strategic and regulatory policy measures to balance each other's potential threats or to reduce the other's dominance in a specific industrial ecosystem. Although this strategic interdependence is limited, it is key to maintaining a subtle balance throughout their continuous evolution.

II. THE POTENTIAL IMPACT OF THE US REVIEW REGIME ON INVESTMENTS IN CHINA

The US implementation of a reverse review regime on investments in China has not only directly impacted their bilateral investment relationship, but also

⁵ Peter Williamson, *De-globalisation and Decoupling: Post-COVID-19 Myths versus Realities*, *Management and Organization Review*, Vol. 1, 2021, pp. 29-34.

indirectly influenced China's venture capital market. This impact is notably varied across different industries. Furthermore, these measures could potentially change the investment confidence of other global economies in China, thereby complicating the global investment landscape.

A. The Scale of US Technological Investments in China Will Fall

Since 2017, there has been a significant change in the US attitude towards foreign investment, particularly concerning investments from China. Realizing that the rapid development and expanding international influence of Chinese technology was a potential threat to the US long-term strategic interests, the US government has intensified its review of investments from China. By expanding the authority of the CFIUS and establishing stricter regimes for assessing the risks of foreign investment, the US has adopted a more cautious approach towards direct investment from China. The US government has increasingly expressed concerns over investments from China involving national security, especially in the field of critical technology and infrastructure.⁶ Although the flow of direct investment from China to the US continues to increase, the rate of growth has noticeably slowed down (see Figure 2), and some high-profile Chinese mergers and acquisitions have been obstructed or canceled. The threshold for Chinese investors in high-tech, high-end manufacturing, and data-sensitive industries have been raised.

The issuance of the EO marks a further tightening of the US government's investment review for China. As this regime is gradually implemented, the scale of US investment in China will possibly continue to decline, especially in technology, where this decrease will be more significant. First, Sino-US trade friction is escalating, having negatively impacted business operations. With the imposition of tariffs by both sides, the operating costs of enterprises have significantly increased. Moreover, the uncertainty of trade policy has further amplified the risks for enterprises, directly suppressing the willingness of US investors to invest in China. Second, in the context of slowing global economic growth, investors tend to adopt more conservative investment strategies, more cautiously arranging their capital flows. At the same time, an increasing

⁶ Thilo Hanemann et al., Two-way Street: 2021 Update: US-China Investment Trends, https://rhg.com/wp-content/uploads/2021/05/RHG_TWS-2021_Full-Report_Final.pdf (Last Visited on April 28, 2023).

number of countries have begun to implement protectionist policies to restrict outbound investment to protect their domestic industries and technologies. The macroeconomic trends and rise of protectionism pose obstacles to transnational investment between China and the US. Third, when faced by the rapid rise of emerging markets, the US is reconfiguring its global supply chains, aiming to reduce its dependence on China. This strategic shift is particularly evident in the field of high-tech, which will also reduce direct investment from the US in China.

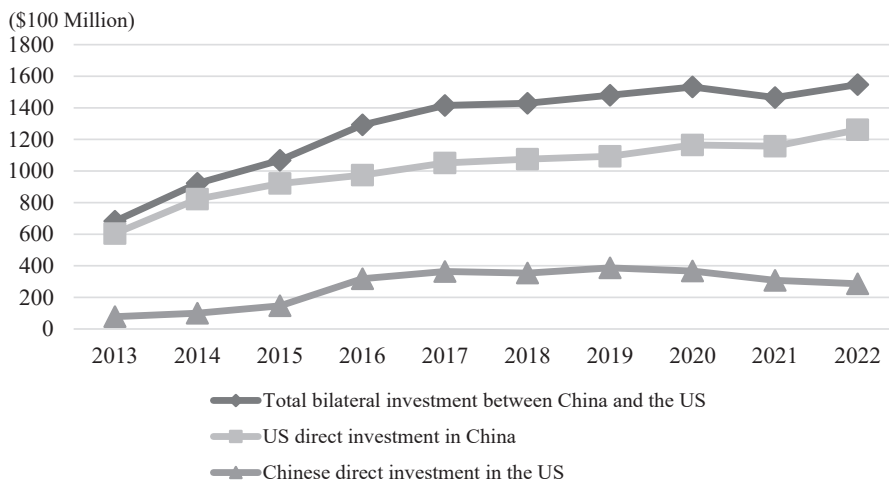


Figure 2: Sino-US Bilateral Investment and the Change of US Direct Investment Flow to China

Source: The author drew the line chart based on data from the International Trade Administration of the US Department of Commerce.

B. China's Local Investors Will Become a Crucial Engine of Growth for Tech Startups

China's emphasis on technological innovation and its widespread adoption of mobile technology have driven the rise of consumer tech companies. Over the past two decades, China has made significant progress in fields such as AI, mobile payments, and 5G communications. Notably, the substantial growth rates generated by China's tech industry have been highly attractive to US venture capital, leading to a surge of investment into Chinese tech startups and record-breaking fundraising levels. However, amid escalating geopolitical tensions, US venture capital investments in China peaked in 2018. In 2022, it

experienced a significant decline (see Figure 3).

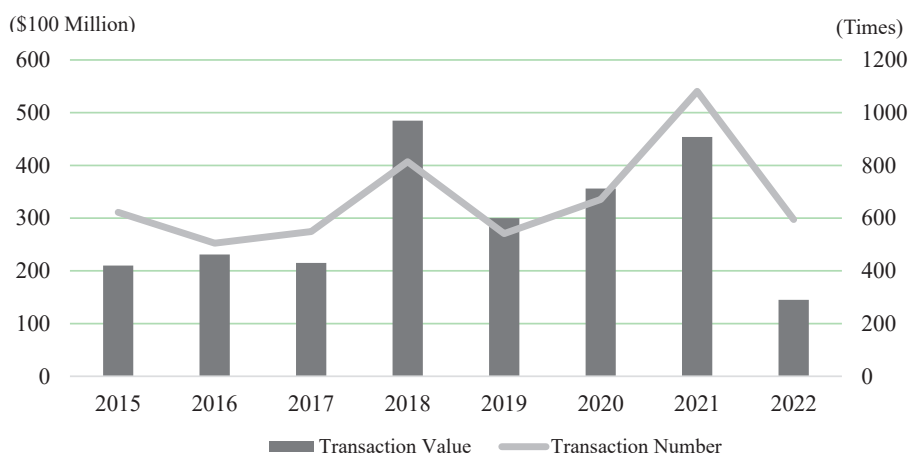


Figure 3: The Status of US Venture Capital Investments in China from 2015 to 2022

Source: The author drew the line chart based on data from Pitchbook database.

Although the EO primarily targets investments in the fields of AI, quantum computing, and semiconductors, most technology startups in China require funding from venture capital. Compared to other industries, tech companies more often require substantial capital for research and development (R&D), product iteration, and market expansion, which is difficult to achieve through traditional financial channels or internal cash flow in the short term. The changes in proportion of US venture capital investments in different technology sectors in China from 2014 to 2019 are shown in Figure 4. Investors have shown the greatest interest in the fields of AI, big data, and oncology, with venture capital in AI growing particularly significantly, exceeding 8% of startups.

The issuance of the EO will have some negative impact in two ways. First, it will prevent US capital from supporting Chinese startups, particularly those in the AI and semiconductor industries. Second, it will restrict the transfer of specialized technology for advanced chips. China's domestic venture capital ecosystem has benefited from external funding, and the inflow of international capital has accelerated the pace of internet technology development and the growth of Chinese venture capital firms. The US has historically been the preferred source of capital for Chinese companies, and many high-growth

internet companies are backed by US investors (see Figures 5 and 6). If US investors adjust their strategies or even withdraw due to investment restriction policies, Chinese startups may find it more difficult to secure the investment to fund their product prototyping and development, which would increase the challenges they face in their growth and expansion.

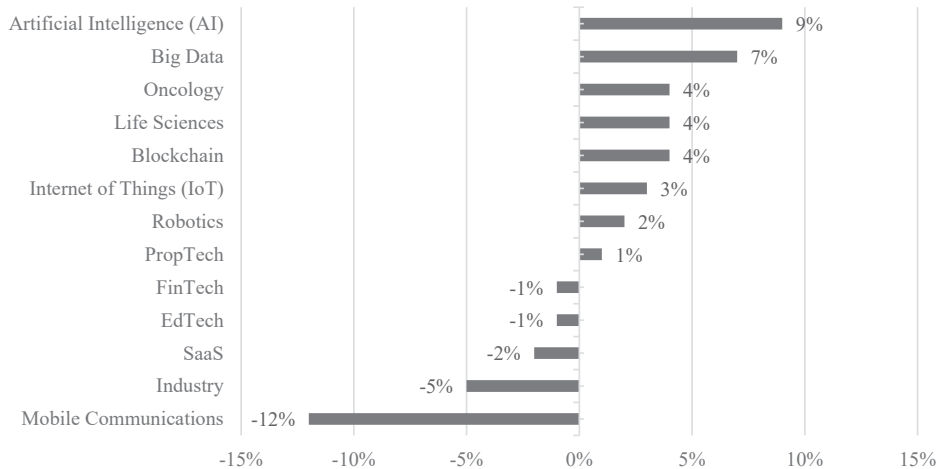


Figure 4: Changes in Proportion of US Venture Capital Investments in China by Sector, 2019 Compared to 2014

Source: The author drew the line chart based on the Rhodium Group's Investment Database.

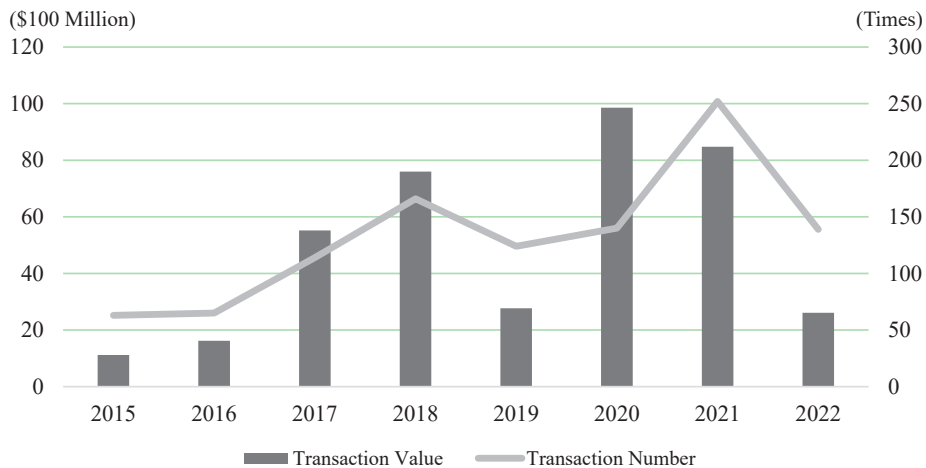


Figure 5: The Status of US Investor Participation in Chinese Artificial Intelligence Venture Capital Investments from 2015 to 2022

Source: The author drew the line chart based on data from Pitchbook database.

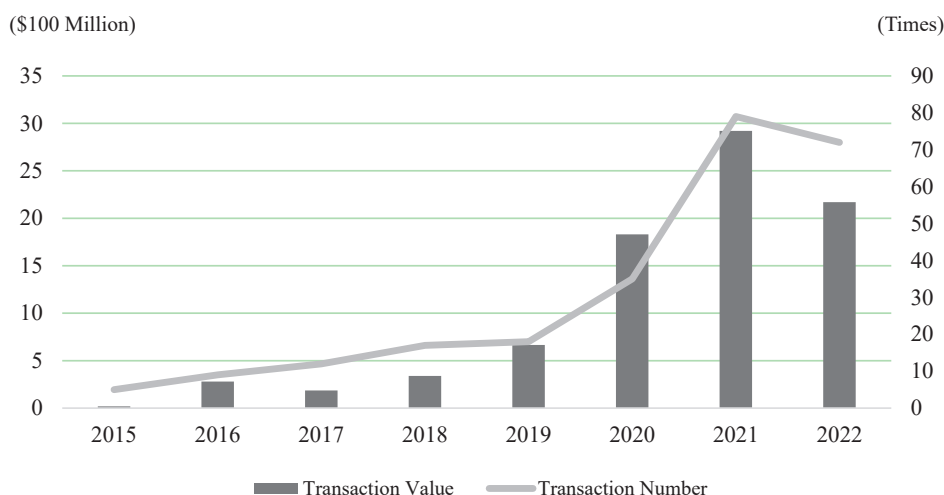


Figure 6: The Status of US Investor Participation in Chinese Semiconductor Venture Capital Investments from 2015 to 2022

Source: The author drew the line chart based on data from Pitchbook database.

It is worth acknowledging that China's venture capital market has shown increasing maturity and specialization under the impetus of government policies and the active participation of international capital, and that Renminbi-denominated funds have gradually developed unique investment philosophies and strategies.⁷ The trend of China's venture capital market indicates that local capital is playing an increasingly important role in supporting the growth and innovation of numerous enterprises. In the context of Sino-US tensions, as the US government places stricter review on foreign direct investments that are strategically significant or in sensitive industries, the role of local Chinese investment is becoming increasingly prominent. Chinese investors are expected to play a greater role in these fields. According to statistics from Crunchbase, from 2015 to 2021, 71% of AI investment deals come from Chinese investors only. In the field of quantum information technology, the connection between US investors and Chinese quantum technology companies is almost zero.

⁷ Ngor Luong, Panel 3: Current and Emerging Technologies in US-China Economic and National Security Competition: Testimony before the US-China Economic and Security Review Commission, <https://cset.georgetown.edu/publication/panel-2-current-and-emerging-technologies-in-US-China-economic-and-national-security-competitionpanel-2/> (Last Visited on March 12, 2024).

C. US Investment Restrictions on China Are Unlikely to Impact Entire Industry Sectors

From 2000 to 2019, nearly 43% of US direct investment in China was in areas that could potentially be most restricted, such as automotive parts, chemical products, industrial machinery and equipment, electronics and electrical equipment, pharmaceuticals and biotechnology, semiconductors, and medical devices (see Figure 7).⁸

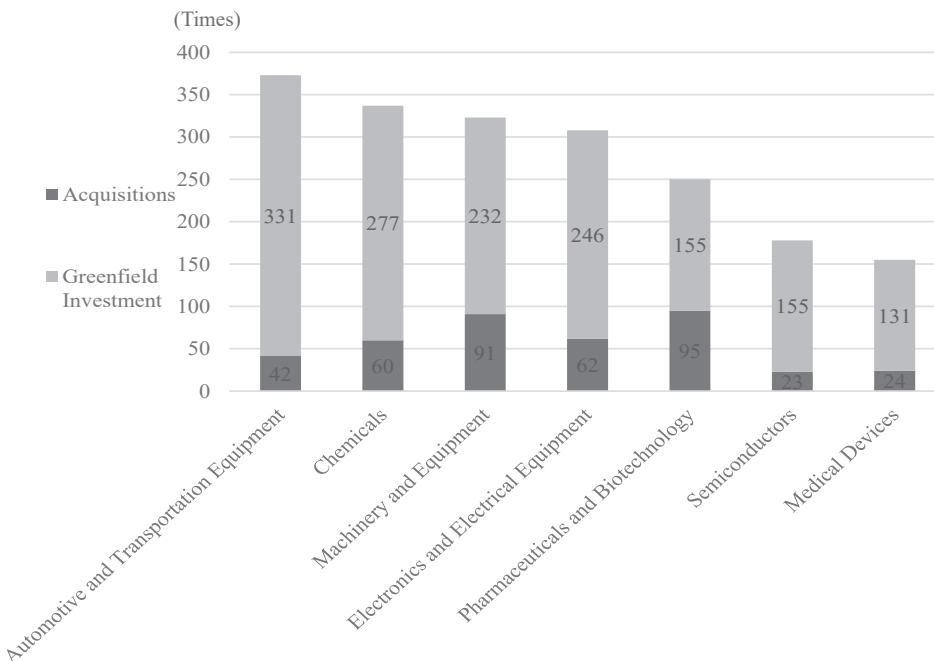


Figure 7: Sub-sectors Potentially Affected by the US Direct Investment Restrictions in China, 2000–2019

Source: The author drew the line chart based on data from Thilo Hanemann et al. (2022).

The issuance of the EO has an overall impact on US companies' investment activities in China, but this impact is not uniform across all sectors. The extent of the impact will vary by industry, as these industries have different levels of dependence on the Chinese market and different sensitivities to local

⁸ Thilo Hanemann et al., An Outbound Investment Screening Regime for the United States? https://rhg.com/wp-content/uploads/2022/01/RHG_TWS_2022_US-Outbound-Investment_Pdf (Last Visited on December 11, 2023).

technology, and the trend of US investment in China over the 2016–2020 period varies significantly by industry (see Table 2).

Table 2: Total Volume and Trends of US Direct Investment in China

(Unit: \$100 Million, %)

Main Industry	Total FDI from 1990 to 2020	FDI Flow in 2016	FDI Flow in 2020	Change Ratio from 2016 to 2020
Energy	206.6	5.61	0.5	−91
Information and Communication Technology	407.4	40.2	4.97	−88
Consumer Goods and Services	139.1	25	4.77	−81
Transportation and Infrastructure	77	4.94	0.99	−8
Machinery	147.7	2.03	0.5	−66
Health, Pharmaceuticals and Biotechnology	186.9	9.04	4.71	−48
Real Estate and Hospitality and Tourism	227.5	7.03	4.4	−37
Basic Materials, Metals, Chemicals	280.8	5.91	4.37	−26
Entertainment, Media and Education	116	9.97	8.28	−17
Financial and Business Services	211.6	1.63	2.52	55
Agriculture and Food	19.9	7.39	13.1	77
Automotive and Transportation Equipment	263.3	7.09	16.7	136
Electronics and Electrical Equipment	94.6	1.5	8.02	435

Source: The author compiled the table based on the Rhodium Group's Investment Database.

Despite the significant impact of government regulations on cross-border investments, the US multinational companies continue to increase their investments in R&D sectors in China. As one of the world's largest single markets, especially in the high-tech sector, China's outstanding achievements in the digital economy and technological innovation continue to offer investors highly attractive growth opportunities. The vast size and rapid growth of the Chinese market, along with its strong demand for innovative technologies and services, drive the US companies to continuously seek competitive advantages and invest in R&D within the Chinese market to achieve their goals (see Table 3).

In the fields of professional, scientific, and technical services, electronics and electrical equipment, and information technology, the inflow of capital from the US is significant, and these sectors not only represent the forefront

Table 3: R&D Expenditures of the US Multinational Enterprises' Investments in China during 2013–2021(Unit: \$100 Million)

Year	Total sum	Mineral and Energy	Food	Basic Materials, Metals, Chemicals	Machinery	Electronics and Electrical Equipment	Transportation Equipment
2021	55.5	0.077	0.22	4.61	2.82	12.19	3.52
2020	44.4	0.04	0.20	4.01	2.30	10.56	2.39
2019	42.7	0.04	0.22	4.26	2.06	11.87	2.89
2018	39.44	(*)	0.25	4.84	2.09	10.09	2.88
2017	36.44	(*)	0.42	3.92	2.00	7.49	4.02
2016	32.80	(*)	0.25	3.79	1.48	6.61	2.48
2015	34.23	0.01	0.22	4.23	1.67	6.71	2.29
2014	30.48	0.02	0.21	4.17	1.13	5.94	1.59
2013	22.01	0	0.12	2.68	0.58	5.67	1.62

Year	Wholesale Trade	Retail	Information Technology	Finance and Insurance	Professional, Scientific and Technical Services	Other Industries
2021	1.39	0.02	8.29	0.06	17.88	0.72
2020	1.07	(D)	5.31	0.06	14.90	(D)
2019	1.38	(D)	4.79	0.01	11.82	(D)
2018	1.33	0.02	4.65	(*)	9.59	0.05
2017	0.90	0.02	4.23	0.01	10.35	0.04
2016	1.15	0.06	(D)	0.01	9.72	(D)
2015	1.38	0.05	(D)	0.00	10.86	(D)
2014	0.93	0.06	(D)	0	10.55	(D)
2013	(D)	(*)	(D)	0	7.55	0.01

Source: The author compiled the table based on the International Trade Administration of the US Department of Commerce.

Notes: (D) denotes data that is not disclosed; (*) indicates a non-zero value that has been rounded to zero.

of technological innovation but also the core of the US direct investment in China. For example, in 2021, US companies' R&D expenditures in these three sectors accounted for 69.1% of their total R&D investment in China. The stringent restrictions imposed by the EO undoubtedly weaken the market competitiveness of the US companies with leading positions in the global value chain and increase their sunk costs, which also cause strong dissatisfaction among the US companies.

The investment decisions of multinational companies are complex and influenced not only by policy but also by market demand, cost-benefit analysis, and global competition. Although trade policies, supply chain restructuring, and specific regulatory environments have led to a reduction in the US investment

in certain sensitive areas in China, the US and China remain interested in maintaining and increasing investments across most industries, given the vast size of the Chinese consumer market. Moreover, the production characteristics of various industries are a significant factor influencing the US investment in China. Many industries where the US invests heavily in China rely on economies of scale, and as the global manufacturing and supply chain hub, China is crucial for production and supply chain operations. Unless the US enforces comprehensive and stringent legal restrictions on investment in China, any attempt to curb the development of China's tech industry through unilateral limitations is unlikely to achieve the desired outcome.

D. US Review and Restrictions on Investments in China May Lead to Similar Actions by the EU and Other Economies

The investment restrictions that the US has imposed on China's tech sector are no longer simply a matter between the two countries, potentially triggering a chain reaction that could reshape the existing global production and trading systems. Throughout this process, the US may also influence the positions and decisions of major global economies, significantly shaping the future of the global high-tech industry. By leveraging the narrative of "democracy versus authoritarianism", the US has exaggerated the so-called "threat" that China poses to the international economic system and global supply chains. In this wave of deglobalization, the European and American countries have increasingly reinforced the "firewall" under the guise of "national security", raising the thresholds for foreign investment reviews. This has made it increasingly difficult for Chinese companies to engage in overseas investments and acquisitions, limiting their access to advanced foreign technologies and markets, while intensifying China's geopolitical risks. Notably, in June 2023, the developed G7 economies unanimously agreed to include outbound investment restrictions as part of their overall strategic toolkit.

Recently, despite the continued decline in the US direct investment in China, capital inflows from the EU to the Chinese market have shown steady growth. Particularly in the context of intensifying Sino-US technological competition, the EU's attitude has become a crucial variable. However, on January 24, 2024, the EU issued a strategic plan aimed at ensuring economic

security. This emphasizes the need for member states to collaborate to avoid potential conflicts in investment and export controls, with the goal of an overall strengthening of the review of domestic and foreign investments and implementing strict export controls on technologies with potential military applications.

Currently, the EU is considering a formal review of the extent to which its companies use developed or lower-end chips from China and is working with the US to establish early warning mechanisms for supply chain disruptions. The US-EU Trade and Technology Commission (TTC) meeting that will be held in Belgium in April 2024 will further share information on inbound and outbound investment screening initiatives and export controls. There is every indication that the European Commission's review could mark the first step toward joint measures with the United States, including restrictions or other deterrents.

As one of the world's largest markets, the EU's economic and technological strength is significant, and its economic decisions and policy inclinations have a major impact on global trade and investment flows. In other words, the EU's further actions will reinforce or weaken the US policies aimed at limiting technological investments in China. If the EU chooses to align with the US and implement stringent technology blockades against China, the gap between China and the West in high-tech sectors will deepen. Conversely, if the EU adopts a more independent and neutral stance, and maintains an open stance to technological exchange and cooperation with China, it could help counteract the trend of fragmentation in the global technology sector and add positive momentum to the stability and cooperation of the technology ecosystem.

III. TREND FORECASTS OF US REVIEW ON TECHNOLOGICAL INVESTMENTS IN CHINA

In global context, the strategic competition between China and the US will be an ongoing process. It is expected that the US investment review regime to China will be further improved and developed in the direction of more targeted and alliance-oriented.⁹

⁹ Wenling Chen, US New Moves to Contain China in Several Key Economic Areas, *Frontiers*, Vol. 5, 2023, pp. 80–100.

A. Reverse Investment Review Regime Is Becoming Increasingly Strict and Is Highly Likely to Be Elevated to the Legislative Level

With the increasingly fierce competition among great powers, especially in the context of escalating trade frictions between China and the US, both of the major US political parties and the House and the Senate have reached a high level of consensus: the US needs to adopt additional policy measures, such as establishing a reverse outbound investment review regime, to ensure it maintains the greatest strategic advantage over China in critical technology areas and global competition. The issuance of the EO underscores the Biden administration's determination to build a reverse outbound investment review regime. This is not the first time the US has introduced the concept of mandatory review of outbound investments, and several legislative proposals on this topic are currently under discussion in Congress:

In May 2022, the US House of Representatives passed the America Competes Act of 2022, which includes the National Critical Capabilities Defense Act (NCCDA) proposal. This proposal aims to designate China, Russia, Iran, the Democratic People's Republic of Korea, Cuba, and Venezuela as countries of concern and to review investments in sectors that could provide "national critical capabilities", including semiconductors, critical minerals, pharmaceuticals, AI, quantum technology, and large-capacity batteries. The proposal also suggests the creation of a new interagency committee, the National Critical Capabilities Committee (NCCC), to rigorously review the US companies' outbound investments. If the committee finds that a US company's outbound investment behavior poses a risk to critical national capabilities, it would have the authority to block or modify the transaction to ensure that the US is not subjected to an "unacceptable threat".

On July 25, 2023, the US Senate passed the Outbound Investment Transparency Act of 2023 (OITA), an amendment to the National Defense Authorization Act (NDAA) regarding outbound investment review, which includes mandatory notification of investments review in a number of technology areas that are critical to the nation's capabilities, including semiconductor manufacturing, microelectronics, AI, satellite communications, and quantum information science and technology. The proposal intends to

review investments in supply chains and critical industries to enhance offshore transparency in key sectors, thereby safeguarding the security of the US critical and emerging technologies as well as supply chain integrity.

In the future, the US may rely on legislative means to solidify its investment review regime regarding China, ensuring that its policy objectives are supported by a more robust legal foundation and more efficient enforcement. If such a bill is passed by the US Congress and eventually becomes enforceable law, the US position on outbound investment regulation will be strengthened as never before. Such a change would mean that the US would be the first of the major Western developed economies to embark on the path of formalized legislative control of outbound investment, which could not only bring new challenges to the Sino-US economic relationship, but also serve as a model for other countries to follow, prompting more Western countries to adopt similar review and restrictive measures on investment from China.

B. Investment Review Will Become More Targeted, with Policy Formulation Becoming More Cautious and Balanced

As the world's second-largest economy, China is a primary trading partner for most countries. In this context, if the US investment review regime over-emphasizes "fragmentation" and "decoupling", it could lead to the politicization of the US outbound investments, fostering the rise of populism, protectionism, and xenophobia. This approach would not only put the US companies at a significant disadvantage in global industrial competition but also diminish the US attractiveness to global investors. In light of China's growing national strength, the US will be more prudent and balanced in building its investment restrictions on China. In the future, the US may avoid broad-based investment restrictions and instead focus on highly sensitive technology investments with potential implications for national security and critical technologies, to prevent the outflow of key US technologies.

From the US perspective, the US benefits from an open global investment climate and needs to maintain a long-term commitment to open investment. The Trump administration's comprehensive decoupling strategy called for review of investment activities that could access non-public technology information from the US companies, critical technology sectors, sensitive citizen data, or real

estate in sensitive areas. However, this strategy faced widespread opposition due to its overly broad definitions and the extensive supply chains involved, making it difficult to execute and ensure compliance. In contrast, the Biden administration, recognizing the challenges of establishing a comprehensive investment review regime, has adopted a more feasible “small yard, high fence” policy toward China — “selectively restricting rather than severing the flow of goods, capital, information, and people between these two countries in ways that enhance the US welfare and security”.

A broadly defined system would require an expanding bureaucracy and an increase in government power, which could burden the US investment companies engaged in international business by creating excessive barriers and put them at a disadvantage status compared to their foreign counterparts. Partial decoupling is more realistic than complete decoupling, and the White House has adopted a narrower “de-risking” approach instead of a broad decoupling agenda. This policy narrows the scope of restrictions on investments in China, specifically targeting sectors such as semiconductors, microelectronics, quantum technology, and AI. It allows the US to continue engaging with China in areas that do not threaten the US technological supremacy and benefit consumers, such as low-end chip manufacturing and other labor-intensive and cost-driven manufacturing sectors. Currently, this investment policy of precise restriction is a balance for the US between national security and economic development, that is, in control of the US core technology, at the same time, taking into account the stability of the supply chain, technological cooperation and international competitiveness and other considerations, in order to minimize the negative impact of the strategy of restricting investment in China on its own.

C. Investment Review Regimes Will Become More Alliance-based, with Enhanced Export Controls on Key Sectors

Under the successive impacts of the COVID-19 pandemic, the Russia-Ukraine conflict, and the Israel-Palestine conflict, Western countries have significantly heightened their focus on supply chain security and self-sufficiency in raw materials, with unprecedented levels of restrictions on critical and sensitive technologies. Under the US export restrictions, China’s integrated circuit imports fell to \$349.4 billion in 2023, reflecting a year-on-year decrease

of 15.4%. The US is employing a series of strategies, including alliance-based investment review regimes, incentivizing policies, and extraterritorial jurisdiction, to leverage its technological advantages and export restrictions. These measures aim to influence international politics and economics, disrupt or sever China's technological cooperation with major innovative countries, and exclude China from global innovation and industrial chains.

The US employs two primary strategies to promote the alliance of investment review regime. The first strategy involves proposing incentive policies. The FIRRMA explicitly states that if an investor's home country has a review regime resembling that of the US, their investment may be exempt from review. Currently, the US has granted review exemptions to the United Kingdom and New Zealand, and this policy will encourage its allies to enact similar legislation. The second strategy involves exercising extraterritorial jurisdiction to compel other countries to align with its objectives. The US has pressured the Netherlands and Japan, forcing them to make economic sacrifices by restricting the export of advanced chip manufacturing technology and equipment to China.

The US leverages its technological dominance by using export controls as a foreign policy tool to influence global politics and economics. By imposing export restrictions on certain critical semiconductor equipment and technologies, the US can pressure specific countries, prompting them to make compromises on political or economic issues. Additionally, the US actively coordinates with its allies and international partners through multilateral mechanisms such as the Wassenaar Arrangement to collectively formulate and enforce export control measures on high-tech products, particularly semiconductors, to jointly safeguard international security and maintain technological superiority. As international dynamics and technological advancements evolve, the US will continuously adjust its export control strategies. For instance, in response to emerging technological challenges and the advancements of competitors, the US may update its control lists, adding new technologies or products to maintain the effectiveness and precision of its strategy. The US continually revises its export control policies based on changes in global developments and trends in technological development, ensuring that its strategy remains effective and targeted.

IV. STRATEGIES FOR RESPONDING TO THE US TECHNOLOGICAL INVESTMENT REVIEW REGIME

In response to the ongoing escalation and evolution of the US economic strategy towards China, China should further increase its high level of opening-up to the outside world and deepen economic connectivity with the US. By actively participating in formulating international rules in high-tech fields, it can enhance its global voice. Simultaneously, it should strengthen cooperation with international partners in technology R&D, fostering the growth of domestic innovation industries and providing new momentum for the transformation and upgrading of its economy.

A. Further Promoting High-level Opening-up and Optimizing the Business Environment for Multinational Corporations

China's vast population and sustained economic growth have fostered an enormous market, which has long been a critical part of the strategic competition between China and the US. Despite the increasingly stringent US government restrictions on investment in China and the shadow cast over the investment prospects of American high-tech companies by potential political and trade conflicts, the immense potential of the Chinese market, its rapid technological development, developed manufacturing and supply chain systems, advanced infrastructure, and increasingly open investment environment continue to have an irresistible attraction for the US high-tech firms.

The Action Plan to Solidly Promote High-level Opening-up, Attract Foreign Investment issued by the General Office of the State Council of China puts forward 24 measures in 5 areas, among which "expanding market access and enhancing the level of liberalization for foreign investment" is the first of the 5 areas. To further expand market access and enhance the level of liberalization for foreign investment, China can take several steps to improve the business environment, elevate the liberalization of foreign investment, refine non-discriminatory and fair competition regulations, increase policy transparency and stability, and provide financial services and support such as tax incentives and financing facilities, thereby reducing the operational costs and risks for foreign businesses in China.

Firstly, it is crucial to optimize the negative list for foreign investment access. This includes reducing the number of restricted items, particularly in key sectors like services, manufacturing, and agriculture, and enhancing the list's transparency and predictability to ensure that all industry access rules are clear and easy for foreign investors to understand. Secondly, strengthening intellectual property protection is key for attracting high-tech foreign investment. This requires establishing a comprehensive legal framework, increasing enforcement efforts, and improving judicial and administrative protection mechanisms to ensure more efficient and fair handling of infringement cases.

Additionally, China should further open up its service sectors, high-tech industries, and advanced manufacturing, particularly by encouraging foreign investment in high-tech and advanced manufacturing sectors. This includes supporting foreign capital involvement in key areas and projects included within the “Made in China 2025” initiative. Simultaneously, China should relax foreign investment access in service sectors such as finance, education, healthcare, culture, and social services, and improve the facilitation of foreign investments.

For American multinational companies, China's vast consumer market offers extensive opportunities for the sale of technological products. Particularly in the high-tech sector, the rapid adoption and application of new technologies by Chinese users provide an ideal testing ground for high-tech companies to trial new products, quickly iterate, and optimize their technological solutions. Moreover, rapid advancements in cutting-edge fields like 5G, AI, and Internet of Things (IoT) offer the US tech firms advanced platforms for technology application. Through enhanced cooperation, economic development in China and the US can create more commercial and investment opportunities, promoting mutual prosperity and growth.

B. Actively Participating in the Rulemaking in High-tech Fields to Occupy a Leading Position in Global Technology Standards

While the US is intensifying its outbound investment review, particularly targeting China, it is also uniting with its allies to dominate global rule-making in an attempt to weaken China's technological advancements and

industrial upgrading. This is particularly evident in the field of AI, where the US and Europe are collaboratively drafting codes of conduct for AI that are more reflective of ideological biases and the strategic needs of so-called great power competition. These approaches often focus on drawing lines around rules rather than addressing the substantive issues arising from technological development, which is detrimental to the open and inclusive advancement of global technology. An incomplete regulatory framework not only affects the compliance of technological practices but also mentions aspects such as innovation promotion, intellectual property protection, data security assurance, and the fair and ethical use of AI technology. In view of this, as a significant player in the AI sector, China needs to actively engage in formulating global rules. Leveraging its strengths in algorithm research, data processing, and market scale, China should strive to secure a favorable international position and work to enhance the voice and representation of developing countries in global AI governance.

First, it should align domestic regulations with international standards to create an open, transparent, and fair AI development ecosystem. Second, it should strengthen communication and cooperation with other countries and regions when formulating AI rules, thereby forming a broad international alliance. Third, it should encourage Chinese AI companies and research institutions to actively participate in standard-setting activities within organizations such as the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC) to have a greater influence on the standardization process. China should also actively propose forward-looking perspectives and solutions in international discussions, contributing its insights to the development of global AI. This approach ensures that all countries can benefit from equal rights, opportunities, and rules in AI development and governance, and promotes international cooperation and assistance targeting developing countries, to narrow the gap in intelligent technology and governance capabilities. China should also actively support the establishment of an international AI governance body under the United Nations framework to coordinate global AI development, security, and governance issues.

At this critical juncture in the future trajectory of the global economy,

technology, and politics, the decisions and interactions of all parties are of utmost importance. AI must be developed with an attitude of openness and cooperation, and requires the support of global computing power and technology. In this way, China can not only establish a more positive and constructive international image, but also effectively convey its values and governance concepts in AI, further expanding its global voice and influence.

C. Strengthening Technology Research and Development Cooperation with Foreign Countries to Promote Domestic Innovation Industry Development

In response to the challenges posed by US investment restrictions on China, it is imperative for China to enhance its R&D capabilities to reduce dependence on external core technologies. The key to achieving this goal is to build a technology ecosystem that is self-sustaining and innovation-driven. Strengthening technology R&D cooperation with foreign countries can accelerate the development of China's innovation industries.

First, establishing and optimizing multilateral and bilateral scientific and technological cooperation frameworks is crucial for enhancing international technology R&D collaboration. China can promote technological exchange and cooperation with other countries by participating in or establishing international scientific organizations and forums. Additionally, by signing bilateral scientific and technological cooperation agreements, establishing joint research centers, and facilitating the exchange of researchers and project collaborations, China can deepen its technological cooperation with specific countries or regions.

Second, intensifying international cooperation in key technological fields is an important way to enhance China's technological innovation and international competitiveness. In cutting-edge technology areas such as AI, biotechnology, clean energy, and new materials, China can accelerate technological innovation and application by importing advanced foreign technologies, attracting top international research talent, and establishing partnerships with high-level foreign research institutions and enterprises.

Third, strengthening intellectual property protection and technology transfer mechanisms is crucial for ensuring the effectiveness of technology cooperation. China needs to improve its intellectual property laws and

regulations, increase penalties for intellectual property infringements, and build a robust platform for technology transfer and commercialization. Encouraging and protecting the ownership and reasonable use of technological innovations will help create a fair competitive environment for international cooperation.

Finally, cultivating internationally oriented technology talent is the foundation for enhancing international technology cooperation. China can implement more open education policies, encourage Chinese scholars to study abroad and foreign scholars to work in China, and provide exchange opportunities through international science and technology cooperation projects. This can enable China to effectively improve its researchers' capabilities for international collaboration and levels of innovation.

It is worth to note that strengthening international technology R&D cooperation also faces challenges and risks. Cooperation involves addressing a range of legal issues such as intellectual property rights, technology transfer, and market access, necessitating the establishment of sound cooperation mechanisms and legal protection systems.

In summary, by building a multi-layered and broad-based international cooperation framework, intensifying cooperation in key technology areas, enhancing intellectual property protection and technology transfer mechanisms, and cultivating internationalized technology talent, China can effectively strengthen its technology R&D cooperation with foreign countries, promote technological progress and industrial upgrading, and thus enhance its international competitiveness and influence. China should further increase the R&D investment in the foundational research. Through policy guidance and financial support, it is essential not only to at the foundational research encourage research institutions and higher education institutions to explore scientific frontiers, but also to motivate enterprises to practically apply basic research results, achieving major breakthroughs in key technological fields. Especially in the key areas of semiconductors, AI, biotechnology, new energy and new materials, it is crucial to establish a complete self-sustaining technology innovation chain and develop internationally competitive enterprises and research institutions.