



Study on the Main Contents of the Fiscal Measures of the U.S. Chip Act and Their Actionability Under the WTO Perspective

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Abstract. Against the background of the prevalence of unilateral protectionism and the obstruction of WTO multilateral trade system reform, the United States provides huge financial subsidies and tax credits to its semiconductor industry and related enterprises through the Chip Act in an attempt to enhance the competitiveness of the U.S. semiconductor industry and dominate the international semiconductor market. Through a combination of literature review and case analysis, the main contents of the fiscal measures of the Chip Act are clarified, and its actionability is analyzed in conjunction with the SCM agreement, and it is found that it meets the general conditions of subsidies and has the characteristics of specificity, and at the same time causes damage to other countries' industries, which constitutes an actionable subsidy. Other countries can take unilateral countermeasures accordingly, or resort to multilateral dispute settlement bodies such as WTO.

Keywords: unilateral protectionism · the fiscal measures of the U.S. Chip Act · WTO · actionable subsidy

1 Introduction

Against the backdrop of the WTO Appellate Body shutdown and the urgent need for reform of the dispute settlement mechanism, on August 9, 2022, President Biden signed into effect the CHIPS and Science Act of 2022 (the “Chip Act”), which seeks to improve the competitiveness of U.S. semiconductor manufacturing and other key areas through several preferential measures of innovation. [1] Among other things, the fiscal subsidies and tax credits (hereinafter referred to as “fiscal measures”) in the Act will adversely affect the semiconductor industry in “foreign countries of concern” such as China and challenge the WTO system, which advocates multilateral trade. At the same time, scholars are divided on whether the fiscal measures provided by the Act constitute an actionable subsidy under the SCM Agreement. Through literature review and case analysis, we analyze the content of the fiscal measures of the Chip Act, refer to the relevant writings and articles of scholars, and combine with the relevant cases of the WTO panel and Appellate Body, we can clarify the background and main contents of the fiscal measures

of the Chip Act. Based on the SCM Agreement, the actionability analysis of the Chip Act reveals that the fiscal measures provided by the Act meet the requirements of actionable subsidies, and other countries can take unilateral countermeasures or resort to the multilateral trade dispute settlement mechanism.

2 Background of the Proposed Chip Act

The introduction and implementation of the “Chip Act” and its fiscal measures reflect the gradual intensification of international conflicts, the situation is becoming increasingly serious. First, the United States itself is facing a semiconductor supply chain crisis and security issues. In recent years, 75% of the world’s semiconductor production in East Asia, the U.S. chip manufacturing industry in the world’s share has declined sharply, from 37% in the 1990s to the current 12%. At the same time, the United States is not only at a relative disadvantage in production but also does not have an advantage in terms of cost. The difference between the U.S. and offshore semiconductor production costs can be up to 70%. Moreover, unilateral protectionism is prevalent and WTO’s multilateral trade system is blocked. The current WTO mechanism is not suitable for the current economic and trade pattern, resulting in the frequent occurrence of trade restriction measures and rule abuse in the system, and the old moderate liberal trade order has been severely hit. The U.S. took this opportunity to break through the supervision and constraints of the international trade system through the Chip Act, a domestic legislation, to achieve the containment of adjacent industries and to take in excess benefits.

The Chip Act can be divided into three major parts in terms of its overall structure, namely the Chip Act of 2022, the Research and Innovation Act, and the Supplemental Appropriations to Address Threats to the Supreme Court of the United States [1]. The Chip Act, which addresses the issue of justiciability, focuses on the fiscal measures provided to the semiconductor industry by the Chip Act of 2022. Under the Act, the U.S. federal government will provide up to \$54.2 billion in fiscal subsidies over five years and provide investment tax credits to advanced semiconductor manufacturing (ITC policy) [2]. Although the financial subsidies and tax credits have a certain role in promoting the U.S. semiconductor industry, the initiative also raises many questions. Among them, in the WTO law perspective, the fiscal measures constitute actionable subsidies, this “yellow light” subsidies through the state’s improper intervention to improve the competitiveness of the national semiconductor industry and enterprises, undermine the international market fair competition order, distort and damage the development of the international trade market.

3 Analysis of the Actionability of the Fiscal Measures of the Chip Act

3.1 The Fiscal Measures Provided by the Chip Act are Consistent with the General Determination of the SCM Agreement Regarding Subsidies

Article 1 of the SCM Agreement defines subsidies in terms of subject, form and effect, i.e., a subsidy is established when the following three conditions are met: (1) the subsidy

is provided by the government or a public agency (or a private agency authorized or entrusted by the government); (2) the subsidy is in the form of financial support or any form of income or price support; and (3) the subsidy results in a benefit to the relevant enterprise or industry [3].

The fiscal measures are directly implemented by the U.S. federal government, which meets the main elements of subsidies. Subsidies under the SCM agreement are a kind of governmental acts, where governmental acts are a broad concept, including not only the subsidies provided by central and local governments and public bodies, but also the subsidies provided by private institutions with government intervention. If the provider of the subsidy is the government or public bodies, one of the elements to determine whether there is a subsidy is whether the subsidy provider has exercised the functions of the government, and the degree of government involvement is the key to the issue [4]. The fiscal measures are directly directed and implemented by the U.S. federal government, as evidenced by the establishment of an interdepartmental agency, the Steering Committee for the Implementation of the Chip Act, which is responsible for the formulation of relevant policies to ensure the effective implementation of the Act by all departments, and the launch of a new platform by the U.S. Department of Commerce, “CHIPS. Gov”, dedicated to the implementation of the work related to the “Chip Act”. Thus, the U.S. federal government is the main body of the implementation of fiscal measures, the exercise of fiscal policy, tax regulation and other government functions, throughout the policy development and implementation of the two major measures, government participation is extremely high, in line with the main elements of subsidies.

Fiscal measures provide benefits to semiconductor companies through both fiscal subsidies and tax credits, which meet the formal elements of subsidies. There are two main ways of providing subsidies, namely fiscal support and income or price support. Of these, fiscal support can be divided into four main categories: (1) direct transfers of funds (e.g., grants, loans and equity injections) and potential direct transfers of funds or debt (e.g., loan guarantees); (2) waiver or non-collection of government taxes that would otherwise be levied (e.g., tax credits, etc.); (3) government provision of goods or services other than general infrastructure, or purchase of goods; (4) government payment to a financing agency for payment, or entrusts or directs a private agency to perform one or more of the above functions that would normally be attributable to the government. First, the Chip Act explicitly provides for financial subsidies to be allocated directly by the U.S. federal government to the corresponding semiconductor companies through various funds, implying a direct or potential transfer of funds by the U.S. federal government [5]. Second, the Chip Act provides a 25% tax credit for investment in the U.S. semiconductor manufacturing industry for the improvement and renewal of manufacturing equipment and manufacturing facilities, which, compared to the tax rules established by itself, indicates that the U.S. federal government relinquishes the power to collect taxes that should have been paid, and disguises the taxes that should have been paid to be retained in the investment enterprise to stimulate the development of investment in the semiconductor industry [6]. Therefore, the financial support and tax credit measures belong to the first category of “direct transfer of funds” and the second category of “waiver of government taxes” respectively, which meet the formal requirements.

U.S. semiconductor companies that are supported by fiscal measures to reduce production costs and increase operating profits meet the effects element of a subsidy. A “benefit” is a government subsidy program from which the subsidized party obtains some value that it cannot obtain in the marketplace, often in the form of increased revenue, reduced costs, or tax relief [7]. Article 14 of the SCM Agreement requires that the rules governing the calculation of subsidy benefits require that the financial assistance measure at issue be compared to the usual market practices and conditions to determine whether the financial assistance places the recipient in a more advantageous position [8]. In the case of Canada-Aircraft, both the Panel and the Appellate Body Report indicated that the key to determining whether a financial contribution confers a “benefit” is whether the financial contribution places the recipient in a better position relative to the market, and that if the requirements of the appeal are met, the “benefit” may be deemed to have been conferred, and thus constitutes a “subsidy” within the meaning of Article 1 of the SCM Agreement [9]. In this case, the financial subsidies provide up to \$52.7 billion to U.S. semiconductor companies for almost all aspects of manufacturing, assembly, testing, advanced packaging, and R&D, covering the entire chain of the semiconductor industry. Obviously, this is very different from the usual market practices and conditions. Secondly, compared to other companies in the market that are not entitled to tax credits, companies that enjoy the 25% tax credit will further reduce their own costs and improve their competitiveness, which is also a superior condition that the market cannot provide. In summary, the fiscal measures stipulated in the Chip Act meet the subject, form and effect elements of subsidies and constitute subsidies under the SCM Agreement.

3.2 The Fiscal Measures Provided by the Chip Act Have Specificity

Subsidies, as an important means for the government to exercise its macro-control power, are a manifestation of a country’s sovereign autonomy. In principle, international organizations and their rules should respect the acts exercised by countries based on their sovereignty, so WTO only regulates subsidies that seriously distort market competition and normal trade order. Therefore, the SCM Agreement requires a criterion for filtering and differentiation, and “specificity” is the criterion used to judge whether subsidies are eligible for regulation. According to Article 2.1 of the SCM Agreement, the specificity of subsidies can be classified into four types, namely, enterprise specificity, industry specificity, regional specificity and prohibited subsidies [10]. Article 2.1(a) (b) of the SCM Agreement provides that a subsidy is legally exclusive if the granting authority or the legislation under which it operates explicitly limits access to the subsidy to certain enterprises. Conversely, there is no legal exclusivity if the granting authority or the legislation under which it operates establishes objective criteria or conditions for eligibility for, and the amount of, the subsidy that are automatically granted upon meeting such criteria [11].

Focusing on the U.S. Chip Act, the financial subsidies and tax credits provided by the Act have the characteristics of legal exclusivity. The Act’s financial subsidies, such as the \$50 billion Department of Commerce Chip Fund, are targeted at companies in the U.S. semiconductor industry that are engaged in manufacturing, assembly, testing, advanced packaging or R&D, meaning that the scope of the subsidies is limited to companies in the specific semiconductor industry. Second, the Act’s financial subsidies are

only a general definition of the scope of funding, and there are no specific operational funding conditions, and it is difficult to automatically obtain eligibility for subsidies based on objective criteria, thus meeting the requirements of legal exclusivity. As for the tax credits, if the conditions of the incentives are determined, except for the export-oriented incentives, they should be excluded from the scope of the exclusivity of the law; however, most of the statements of the bill are such as “tax credits provide a 25% tax credit for investment in semiconductor manufacturing” “tax credits However, most of the statements in the bill are such as “the tax credit provides a 25% tax credit for investment in semiconductor manufacturing” and “the tax credit provides basic incentives for chip manufacturing repatriation, allowing appropriations to be focused on advanced semiconductor technologies that are particularly important to the national economy and security”, without specific tax credit scope and objective and neutral criteria, which are clearly policy-oriented and also meet the characteristics of legal exclusivity.

3.3 The Fiscal Measures Provided by the Chip Act Adversely Affect Other Countries and Constitute an Actionable Subsidy

In principle, if a subsidy is specific and adversely affects the interests of other countries and there is a causal relationship between the two, it can be considered as an actionable subsidy. The determination of specificity has been explained above, and the key issue of whether the fiscal measures of the Chip Act constitute an actionable subsidy lies in the determination of “adverse effects”. “(1) harming the domestic industry of another Member; (2) causing the loss or impairment of benefits obtained directly or indirectly by other Members under GATT 1994, in particular the benefits of concessions bound under Article 2 of GATT 1994, i.e. “non-violation claims”; (3) serious infringement of the interests of another member. For the first type of adverse effect, the term “injury” shall be understood to mean substantial injury to a domestic industry, the threat of substantial injury to a domestic industry, or substantial impediment to the establishment of such industry.

Some of the phenomena at this stage already reflect the damage and the threat of potential damage to other countries’ industries from fiscal measures. In the case of China, for example, the vast majority of U.S. equipment manufacturers received letters from the U.S. Department of Commerce around the time of the passage of the Chip Act asking them not to supply equipment to China for the manufacture of chips at or below 14 nm. With the further implementation of containment measures, the scope of U.S. technology export controls to China will be further expanded to include foundries of chips below 14 nm. Coupled with the “guardrail clause” and other discriminatory provisions against China, companies that currently have semiconductor plants in China and the United States, including TSMC (Nanjing), Samsung (Xi’an), Hynix (Dalian), etc., will be restricted from building or expanding advanced process foundries in China, resulting in the expansion of semiconductor companies in China in areas such as advanced process chips, and the difficulty of expanding through international cooperation. And it is difficult to obtain the corresponding talent and technical resources through international cooperation and other means, making the relevant core technology barriers in the short term can not make breakthrough progress, to a large extent, affect the development process of China’s semiconductor industry, and even make China’s semiconductor in

the global semiconductor industry from manufacturing and R & D base to service end markets. In addition, other countries, organizations and regions such as Japan, the European Union and Taiwan's semiconductor companies are also threatened and damaged to varying degrees. Accordingly, the U.S. Chip Act provides fiscal measures that harm the semiconductor industry in other countries and satisfy the "negative impact" requirement for actionable subsidies.

To sum up, firstly, the fiscal measures are directly provided by the U.S. federal government through financial subsidies and tax credits, granting additional benefits that U.S. semiconductor enterprises cannot obtain in the market, satisfying the conditions of the subject, form and effect of the subsidies, which constitute subsidies under the SCM Agreement. Secondly, the fiscal measure is explicitly limited to the U.S. semiconductor industry, and there are no objective criteria or conditions for obtaining the subsidy, which is an industry-specific subsidy with legal exclusivity. Finally, the measure damages the development of another member country's semiconductor industry and adversely affects the semiconductor industry of other countries, which constitutes an actionable subsidy, whereby the injured country may resort to the multilateral dispute settlement mechanism or take unilateral countermeasures, including countervailing duties and countermeasures.

4 Conclusion

The introduction and implementation of the U.S. "Chip Act" and its fiscal measures are the derivatives and concrete manifestations of the prevalence of unilateral protectionism in the international community and the trauma to the multilateral trade system of the WTO. Under the WTO rules on subsidies, the U.S. financial subsidies of up to \$54.2 billion and 25% tax credits provided through the "Chip Act" are consistent with the general determination of subsidies, and are targeted at specific U.S. semiconductor industries and enterprises, with specific characteristics. In addition, the aforementioned fiscal measures have caused damage to the semiconductor industry in other countries such as China, which meets the constitutive elements of an actionable subsidy and is actionable. In the context of the prevalence of unilateral protectionism and the weakness of the multilateral trade system, it is important to promote the improvement and development of the WTO and other multilateral trade systems, and to use the rights and means granted by it to timely characterize and curb the above-mentioned fiscal measures, in order to deter unilateral protectionist forces, resist the wave of anti-economic integration, and maintain the operation of the multilateral trade system.

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