

Theoretical Analysis and Trend Prediction of International Economic and Trade Rules Reconstruction under the Impact of Digital Economy

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Abstract: Existing international economic and trade rules have formed an organic unity with “fair competition rules”, interest adjustment rules, and enforcement rules as the three main pillars. The breadth and depth of the rules are rapidly expanding with intensive economic and trade negotiations, and gradually entering a period of reconstruction. The emergence of the digital economy injects new topics into the evolution of rules while also impacting the existing framework and content. Based on the revision of the origin and evolution theory of existing systems, this paper constructs a theoretical model for the reconstruction of international economic and trade rules under the impact of the digital economy, proposes implementation paths and typical models, and predicts future trends and adjustment directions. The main conclusions are as follows: First, the emergence of the digital economy has broken the steady state in the evolution of international economic and trade rules. The emergence of potential interests induces relevant interest groups to put forward rules appeals, and finally reaches a political equilibrium through domestic and international two-stage games; Second, in the process of reconstructing digital economic and trade rules, the United States has formed a “gradual reshaping + inside-out promotion model”, the European Union has formed a “focused effort + inside-out supervision model”, and China has formed an “integrated innovation + outside-in compulsion model”; Third, the reconstruction of international economic and trade rules under the impact of digital trade is mainly reflected at the level of “fair competition rules”, with minor adjustments at the level of interest adjustment rules and enforcement rules; Fourth, China’s participation in reconstructing international economic and trade rules started late but progressed quickly. However, it still faces institutional and mechanism obstacles, as well as challenges from the international environment and pressures. China urgently needs to take corresponding measures to promote the innovative development of digital economic and trade rules.

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I. INTRODUCTION

At the opening ceremony of the Boao Forum for Asia Annual Conference 2022, Chinese President Xi Jinping pointed out, “Right now, changes of the world, of our times and history are unfolding in ways as never before. These changes are posing challenges that must be taken seriously by humanity ... While governance deficit in areas like climate change has hardly been addressed, new issues such as digital governance are also vying for attention”.¹ The digital economy has reconstructed the supply of factors, reshaped social productivity, changed the competitive landscape among nations, and had a significant impact on traditional economic and trade rules. At the current stage, there are not only many new issues that have not been covered by the traditional economic and trade rules system, but also the urgent need to adjust the existing rules to the demands of the digital economy. As competition among major countries increasingly shifts from the real economy to the rules level, how to seize this significant historical opportunity in the reconstruction of international economic and trade rules, dominate the formulation of international rules, and empower the economy with these rules has become an important strategy for countries to carry out digital governance and achieve a digital powerhouse. In order to make a difference in practice, it is necessary to conduct in-depth research at the theoretical level, thereby providing a theoretical basis and intellectual support for reality. Against this backdrop, related research has emerged and focuses on the following three areas: the reconstruction of international economic and trade rules, the digital economic and trade rules, and the institutional origin and evolution.

The related research on the reconstruction of international economic and trade rules mainly focuses on two aspects: the characteristics and development trends of reconstruction and the strategies and practices of various countries in participating in the reconstruction. Firstly, some studies analyzed the development trends and characteristics of the reconstruction of international

¹ Xi Jinping's Keynote Speech at the Opening Ceremony of the Boao Forum for Asia Annual Conference 2022, *Guangming Daily*, https://www.gov.cn/xinwen/2022-04/21/content_5686424.htm (Last Visited on June 10, 2025).

economic and trade rules.² Secondly, some studies examined the strategic intentions and implementation methods of the United States in reshaping international economic and trade rules and rebuilding a new international economic order;³ Li Sun and Zehua Zhao (2021) analyzed Japan's strategy in responding to the reconstruction of international economic and trade rules;⁴ some studies analyzed how the European Union formulates trade strategies in the reconstruction of international economic and trade rules;⁵ some studies proposed strategic choices and policy suggestions for China's participation in the reconstruction of international economic and trade rules.⁶ Given that the reconstruction of international economic and trade rules is a new phenomenon emerging during the adjustment period of the world economic order, most of the current research on it focuses on the two aspects mentioned above. The theoretical discussions are still in their initial stages, with limited research results. Representative studies are as follows: Putnam (1988) studied the formation mechanism of international economic and trade rules, elucidating the means and goals of game-playing in the process of forming international economic and trade rules through the dual-layer game theory of domestic

2 Qingjun Xu, Main Features of World Trade in 2014 and Development Trends in 2015, *Intertrade*, No. 5, 2015, pp. 14–18; Naigen Zhang, Reconstruction of International Economic and Trade Rules under the “Belt and Road” Initiative, *Law Science*, No. 5, 2016, pp. 93–103; Wei Liu, The “Belt and Road” Initiative and China's Participation in the Reshaping of International Economic and Trade Rules, *Study and Practice*, No. 9, 2017, pp. 5–12; Rongjiu Xue and Fengming Yang, The Wave of Reconstructing International Economic and Trade Rules and China's Response, *Intertrade*, No. 12, 2014, pp. 4–13; Bo Yuan, Guanghui Li, and Jinliang Quan, New Trends in International Economic and Trade Rules and China's Free Trade Zone Response Strategies, *Journal of International Economic Cooperation*, No. 7, 2017, pp. 34–38.

3 Li Fu, The Reconstruction Practice of International Trade Rules Dominated by the US and Europe in the New Century and China's Choice, *Practice in Foreign Economic Relations and Trade*, No. 1, 2017, pp. 6–10; Zhizhong Yao, The Rules Dispute in Sino-US Economic and Trade Conflict, *Contemporary Economic Research*, No. 10, 2019, pp. 91–95; Jie Bai and Qingyi Su, The Rules, Impact, and China's Countermeasures of the CPTPP: A Comparative Analysis with TPP, *International Economic Review*, No. 1, 2019, pp. 58–76.

4 Li Sun and Zehua Zhao, Strategic Analysis of Japan's Reliance on Regional Economic Integration to Dominate the International Economic and Trade Rule-making Power, *Contemporary Economy of Japan*, No. 1, 2021, pp. 83–94.

5 Bin Ye, Prospects of China-Europe Bilateral Investment Agreement Negotiation, *Global Review*, No. 6, 2015, pp. 117–135; *Supra* n. 2, Naigen Zhang (2016).

6 Feng Lu et al., Why China? – The Economic Logic of the “Belt and Road”, *International Economic Review*, No. 3, 2015, pp. 9–34; Qingyi Su, Should China Join the CPTPP? *International Economic Review*, No. 4, 2019, pp. 107–127; Guoxue Li and Yan Dong, International Mode of Production Change, Reshaping of International Economic Rules and Construction of Institutional Open High Ground, *Academia Bimestris*, No. 5, 2020, pp. 21–30.

politics and international politics;⁷ Xiangyang Li (2014) analyzed the specific mechanisms and influencing factors of the formation of international economic rules;⁸ Yan Dong (2021), based on Marxist historical materialism, started from the principle of contradictory movements between the economic base and superstructure, analyzing the essence, connotation, and pattern of the reconstruction of international economic and trade rules.⁹

Research on the digital economic and trade rules is generally conducted in the following five dimensions. Firstly, some scholars analyzed the digital economic and trade rules in specific countries, specific issues, and specific trade agreements, providing a solid research foundation for understanding these rules.¹⁰ Secondly, some researchers analyzed the overall content and development characteristics of digital economic and trade rules, grasping them systematically from a broader perspective.¹¹ Thirdly, Nianli Zhou and Huanqi Chen (2020) conducted an empirical analysis of the effects of digital economic and trade rules, analyzing the economic effects of these rules

7 Putnam R. D., Diplomacy and Domestic Policies: The Logic of Two-level Games, *International Organization*, Vol. 42, No. 3, 1988, pp. 2-68.

8 Xiangyang Li, The Development Direction of the International Economic Order, *Contemporary International Relations*, No. 7, 2014, pp. 20-22.

9 Yan Dong, Research on the Reshaping of International Economic and Trade Rules and China's Participation Path, *Studies on Socialism with Chinese Characteristics*, No. 3, 2021, pp. 27-40.

10 Mosi Li, New Trends in Digital Economic and Trade Rules and Negotiations in Ultra-large Free Trade Agreements, *Journal of Shanghai Normal University (Philosophy & Social Sciences Edition)*, Vol. 46, No. 1, 2017, pp. 100-107; Nianli Zhou and Huanqi Chen, Analysis of the Deepening and Expansion of the "American Model" of Digital Trade Rules Based on the USMCA, *Journal of International Trade*, No. 9, 2019, pp. 1-17; Nianli Zhou and Xixian Wu, Research on the Development and Evolution of American Digital Trade Rules – From the Perspective of the US-Japan Digital Trade Agreement, *Asia-Pacific Economic Review*, No. 2, 2022, pp. 44-51; Yunsong Yue and Peng Huo, WTO E-commerce Negotiations and Digital Trade Rules Game, *International Business Research*, Vol. 42, No. 1, 2021, pp. 73-85.

11 Yang Li, Huanqi Chen and Nianli Zhou, The Challenges and Responses of China to the "American Template" of Digital Trade Rules, *Intertrade*, No. 10, 2016, pp. 24-27; Yanxin Cui and Tuo Wang, The Latest Development Trends of Digital Trade Rules and China's Response Strategies, *Globalization*, No. 3, 2018, pp. 98-107; Mounan Zhang and Nianli Zhou, The US-China Digital Trade Game and China's Countermeasures, *Macroeconomic Management*, No. 7, 2019, pp. 13-19; Feng Lu and Shuangshuang Li, Multilateral Trade System Should Change for Innovation: New Developments in WTO Reform, *Academic Research*, No. 5, 2020, pp. 78-87; Junjie Hong and Ming Chen, The Challenges and Responses of China to Digital Trade Rules under the Mega Free Trade Agreement Framework, *Intertrade*, No. 5, 2021, pp. 4-11; Jie Bai, Da Zhang and Yue Wang, The Evolution of Digital Trade Rules and China's Response, *Asia-Pacific Economic Review*, No. 5, 2021, pp. 53-61; Hongru Xiong et al., Digital Trade Rules: Key Issues, Real Challenges and Construction Strategies, *Reform*, No. 1, 2021, pp. 65-73.

from a quantitative perspective.¹² Fourthly, some studies proposed policy recommendations for promoting digital trade and developing the digital economy based on the specific situation of China's digital trade development.¹³ Lastly, some studies theoretically analyzed major issues such as the theoretical logic of modern national governance in the digital age, the digitization of traditional trade rules after the emergence of digital trade, and the governance of new digital trade rules, initiating the process of research on digital economic and trade rules and digital governance theory.¹⁴

Considering that rules are one of the manifestations of institutions, and one of the focuses of this paper is to construct a theoretical model of the evolution of international economic and trade rules, it inevitably involves theories on the origin and evolution of institutions in institutional economics. In this field, the Western representatives are none other than Lance E. Davis and Douglass C. North, who established an institutional innovation model in their book *Institutional Change and American Economic Growth* published in 1971, and outlined the inherent connections among the motivations, subjects, processes, and consequences of institutional innovation with a clear logical structure.¹⁵ Based on Davis and North's institutional innovation model and a critical examination of historical events, Yuyan Zhang (2017) further revised and deepened the concepts of institutions, influencing factors, the blocking effect of "counter-acting groups" in the process of institutional innovation, the importance of individuals, groups government to institutional innovation, understanding and organizational delays, the connotation of institutional equilibrium, types of institutions (neutral institutional innovation and non-neutral institutional innovation), etc. On this

12 Nianli Zhou and Huanqi Chen, Study on the Digital Trade Effects of American Digital Trade Rules under the RTAs Framework, *The Journal of World Economy*, Vol. 43, No. 10, 2020, pp. 28–51.

13 Mengnan Zhang, Global Digital Trade Strategy: New Rules and Challenges, *Regional Economic Review*, No. 5, 2018, pp. 23–27; Lingyun Gao and Yu Fan, New Developments in Global Digital Trade Rules and China's Policy Choices, *International Economic Review*, No. 2, 2020, pp. 162–172; Hongru Xiong and Jietang Tian, Breaking through the Encirclement: The "China Plan" for Cross-border Data Flow Rules, *Frontiers*, No. Z1, 2021, pp. 54–62.

14 Zhentao Yin and Xiujun Xu, Modernization of National Governance in the Digital Age: Theoretical Logic, Real-world Orientation and Chinese Solutions, *CASS Journal of Political Science*, No. 4, 2021, pp. 143–154; Bin Sheng and Jiang Gao, Digital Trade: An Analytical Framework, *Journal of International Trade*, No. 8, 2021, pp. 1–18.

15 Lance Davis and Douglass North, *Institutional Change and American Economic Growth*, Translated by Zhihua Zhang, Shanghai Gezhi Publishing House/Shanghai People's Publishing House, 2019, pp. 39–63.

basis, Yuyan Zhang (2017) established a model of the origin and evolution of institutions and proposed some refreshing and very meaningful concepts, such as “institutional non-neutrality” and “institutional paradox”,¹⁶ thereby further promoting the development of theory.

The aforementioned scholars have each made indispensable contributions, yet further research is still necessary. Firstly, there exists a phenomenon of “one leg being long and the other short” in the research on the reconstruction of international economic and trade rules, as well as the field of digital economic and trade rules. The “phenomenon-based research” has grown robustly like bamboo shoots after a spring rain, with its research coverage closely following the negotiation process of international economic and trade rules, and its fineness is increasingly improving. However, the “theory-based research” involves some fundamental issues in the formulation or reconstruction of international (digital) economic and trade rules, such as a lack of theoretical analysis on the origin, internal mechanisms, and effects, which urgently need to be filled. Secondly, although research on institutional origin and evolution has become increasingly refined, the related theories are based on general studies of institutions and lack application in the field of international economic and trade rules. Therefore, this paper tries to make three attempts in the following aspects in order to enrich current theoretical research. Firstly, it applies the institutional innovation model to the field of international economic and trade rules formulation, proposing an evolution model of international economic and trade rules. Secondly, it analyzes the theoretical basis for the reconstruction of international economic and trade rules under the impact of the digital economy. Thirdly, it refines the implementation paths and typical models of digital trade for the reconstruction of international economic and trade rules.

II. CURRENT STATUS OF INTERNATIONAL ECONOMIC AND TRADE RULES RECONSTRUCTION UNDER THE IMPACT OF THE DIGITAL ECONOMY

In 1995, two significant events occurred. Firstly, the World Trade Organization (WTO) included issues of access to public telecommunications networks and

¹⁶ Yuyan Zhang, *Economic Development and Institutional Choice – An Economic Analysis of Institutions*, Renmin University of China Press, 2017, pp. 204–206.

personal information protection in its legal text. Secondly, the US government published the Intellectual Property and the National Information Infrastructure: The Report of the Working Group on Intellectual Property Rights, discussing the impact of the digital age on the existing intellectual property legal system. Since then, the process of reconstructing economic and trade rules in the digital economy has begun, which has continued for 28 years until the end of 2023. During this period, the digital economy has been booming, continuously impacting the traditional international economic and trade rules system. However, due to the lag in rules-making, the current impact of the digital economy is relatively limited in scope, prominently manifested in the chapter on digital trade (or e-commerce), while other traditional chapters have only been partially affected and have not undergone comprehensive adjustments. This section elaborates on the stages, characteristics, and areas of the digital economy's impact on the reconstruction of international economic and trade rules.

A. Stages

As previously mentioned, the reconstruction of international economic and trade rules by the digital economy is prominently reflected in the field of digital trade. Therefore, its reconstruction process highly coincides with the evolution of digital economic and trade rules, and has roughly gone through three stages: budding, formation, and development. The first stage is the budding stage (1995–2014). During this period, the development of e-commerce accelerated, but the degree of economic digitization was still very low. At this time, digital economic and trade rules appeared successively in multilateral and bilateral free trade agreements (FTAs), mainly presented in the form of e-commerce. The relevant rules gradually expanded from individual clauses to a separate chapter on e-commerce, but did not form a basic framework for digital economic and trade rules. The second stage is the formation stage (2015–2018). This stage took the Trans-Pacific Partnership Agreement (TPP) as a milestone, forming the basic framework and main content of digital trade rules. Subsequently, digital economic and trade rules based on the TPP template gradually expanded, and the American and European templates for digital economic and trade rules were formed respectively. The third stage is the development stage (from 2019 to

present). At this stage, digital economic and trade rules have made significant progress under bilateral, regional, and multilateral frameworks, entering a phase of fine-tuning. Specialized digital trade agreements began to emerge.¹⁷ The participation of the Asia-Pacific region gradually increased, forming a diversified development pattern with comprehensive participation from economies such as the United States, Europe, and the Asia-Pacific region.

B. Characteristics

Firstly, the scope of reconstruction is continuously expanding. The regulatory subjects have gradually extended from producers to consumers, government, and emerging business models such as internet platforms. The areas of rules adjustment have progressively expanded from digital trade facilitation to data flow and development, digital governance, and more. Secondly, the rules are balanced in the process of advancing to a high level. Based on the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), the United States–Mexico–Canada Agreement (USMCA) has pushed digital trade to unprecedented high standards while also pushing digital trade liberalization and cross-border information transmission freedom to extremes. However, these radical provisions did not have the profound impact desired by the United States, and they were quickly adjusted in the subsequent US–Japan Digital Trade Agreement (UJDTA), with major concerns such as digital sovereignty and national security being reflected in the rules setting. Finally, the mandatory nature of the rules is continuously strengthening. In the WTO, there was only one mandatory provision related to tariffs, which increased to three in the US–Korea FTA, and then developed into ten in the CPTPP. The increase in mandatory provisions is not only a result of an increasing consensus among contracting parties but also helps to improve the utilization rate of FTAs.

C. Fields

International economic and trade rules are an organic unity with “fair competition rules”, interest adjustment rules, and enforcement rules as their three main pillars. The “fair competition rules” hold a core position, aiming to

¹⁷ Specifically refers to the US–Japan Digital Trade Agreement (UJDTA) and the Digital Economy Partnership Agreement (DEPA).

use all means to eliminate barriers, providing a fair competition environment for international trade and investment, mainly including trade liberalization clauses and fair competition clauses. Interest adjustment rules aim to adjust the interests between contracting parties, between domestic and foreign countries, and between developing and developed countries, balancing long-term goals and short-term interests of the contracting parties. These rules primarily include: trade remedy clauses, relevant clauses under non-discrimination principles (Most-Favored-Nation Treatment (MFNT) clauses and National Treatment (NT) clauses), preferential treatment principles for developing and least developed countries, as well as other special interest arrangements. Enforcement rules aim to manage and supervise the implementation of agreements, mainly including predictability and transparency-related clauses as well as implementation clauses.¹⁸

Under the impact of the digital economy, existing international economic and trade rules have begun to respond to the rules appeals of the digital economy and have made corresponding adjustments. Now, in conjunction with the current real progress of the digital economy in reconstructing international economic and trade rules, the areas of rules that are being adjusted and those that have not yet been adjusted are listed in Table 1.

18 The “fair competition rules”, interest adjustment rules, and enforcement rules are the authors’ original classification of current high-standard economic and trade rules into these three categories based on the basic principles of WTO operation and in conjunction with the original intent of rules setting. International economic and trade rules serve the development of international trade. Promoting trade liberalization is the primary issue that economic and trade rules need to address, so the initial economic and trade rules were mainly designed to reduce tariffs and non-tariff barriers in goods trade. With the deepening development of economic globalization, rules have gradually expanded from goods trade to services trade and investment fields, from border measures to behind-the-border measures, and from product and factor openness to institutional openness. This is reflected in the trade liberalization clauses and fair competition clauses in the rules, referred to as the “fair competition rules”. The establishment of the “fair competition rules” contains both realistic demands and idealistic sentiments. In implementation, they often encounter various conflicts of interest and constraints, making it difficult to fully implement. Therefore, in order to better achieve and implement agreements, it is necessary to consider the legitimate concerns of the contracting parties, leading to the emergence of interest adjustment rules outside it. Both the “fair competition rules” and interest adjustment rules set a grand goal for trade liberalization while effectively adjusting the interests of the contracting parties during the implementation process, providing a solid rule basis for the fulfillment of the agreement. However, how to effectively implement the agreement remains a concern and must be faced by the contracting parties. For this reason, specific provisions have been set up in trade agreements to ensure the grounding of the agreement, which are tentatively called enforcement rules.

Table 1: Specific Areas of International Economic and Trade Rule Reconstruction under the Impact of the Digital Economy

Rules Settings		Adjustment of Rules
“Fair Competition Rules”	Trade Liberalization Clauses	Adjusted: Treatment of Goods Trade, Market Access, Rules of Origin and Procedures for Origin, Customs Administration and Trade Facilitation, Sanitary and Phytosanitary Measures, Technical Barriers to Trade, Digital Trade, Financial Services, Telecommunications, Competitiveness and Business Facilitation
		Unadjusted: Agriculture, Textiles and Clothing, Investment, Cross-border Trade in Services, Temporary Admission of Business Personnel
	Fair Competition Clauses	Adjusted: Digital Trade, Competition Policy, SMEs, Government Procurement, Intellectual Property Rights, Macroeconomic Policies and Exchange Rates, Corporate Governance, Regulatory Harmonization, Domestic Regulation
		Unadjusted: State-owned Enterprises and Designated Monopolies, Labor, Environment
Interest Adjustment Rules	Non-Discrimination Clauses	Adjusted: The National Treatment Principle
		Unadjusted: The Principle of MFNT
	The Principle of Preferential Treatment and Other Special Interest Arrangements for Developing Countries and Least Developed Countries	Adjusted: Exceptions and General Provisions
Enforcement Rules		Unadjusted: Trade Remedies, Cooperation and Capacity-building, Developmental Provisions
	Predictability and Transparency Clauses	Adjusted: Transparency
		Unadjusted: Anti-corruption, Publication and Administration, Promulgation and Implementation of Laws
	Implementation Clauses	Adjusted: Dispute Settlement
		Unadjusted: Bilateral Cooperation and Dialogue, Management and Mechanism Provisions, Final Provisions

Source: Compiled by the authors.

As shown in Table 1, the rules being adjusted primarily refer to those already included in agreements such as the WTO, TPP, CPTPP, USMCA, EU-Canada Comprehensive Economic and Trade Agreement (CETA), EU-Japan Economic Partnership Agreement (EPA), UJDTA, Digital Economy Partnership Agreement (DEPA), etc. The unadjusted rules refer to those not yet included in the aforementioned agreement text. It mainly includes two meanings: one is that it is necessary to adjust according to the trend of rules adjustment but has not yet been included in the text; and the other is that it does not need to be adjusted in the short term based on theoretical analysis. These rules either have little relation to the digital economy or their current regulations are relatively complete, so the digital economy has not posed a challenge for them. As can be seen in Table 1, under the impact of the digital economy, the scope of reconstruction has spread to most traditional fields. However, it needs to be reiterated here that apart from the chapter on digital trade, the adjustment range in other traditional fields is relatively small. For instance, the rules and

procedures related to origin only involve the promotion and mutual recognition of electronic certificates of origin. The field of sanitary and phytosanitary measures is also mainly reflected in the use and mutual recognition of electronic inspection and quarantine certificates, and deep-level comprehensive adjustments have not yet begun. Table 1 is formulated according to the current real progress of the digital economy's impact on national economic and trade rules. Given that the world has entered a period of intensive rules reconstruction, the adjustment process will inevitably accelerate. Therefore, the above classifications shall be updated in a timely manner according to international negotiation progress and domestic law implementation situations in various countries.

III. THEORETICAL ANALYSIS OF THE RECONSTRUCTION OF INTERNATIONAL ECONOMIC AND TRADE RULES UNDER THE IMPACT OF DIGITAL ECONOMY

This section first applies the theory of institutional origin and evolution in institutional economics to construct an evolution model of international economic and trade rules, providing a theoretical basis for a deeper understanding of the creation and changes of international economic and trade rules. And then it studies the dynamic adjustment of the original evolution model of international economic and trade rules under the impact of the digital economy.

A. Evolution Model of International Economic and Trade Rules

Davis and North established an institutional innovation model, and Yuyan Zhang (2017) proposed a model of the origin and evolution of institutions based on their model with modifications.¹⁹ However, these primarily focus on general political economic systems, without specifically analyzing international economic and trade rules. This section aims to propose a theoretical model that aligns with the characteristics of international economic and trade rules — the evolution model of international economic and trade rules, which is used to explore the theoretical mechanisms of the formation of international economic

¹⁹ *Supra* n. 16, pp. 128–149.

and trade rules, institutional equilibrium, and steady-state transformation.

In the evolution process of international economic and trade rules, countries play a very significant role. Each country participates in the formulation of international economic and trade rules based on its corresponding initial conditions. These initial conditions mainly include natural endowments and comparative advantages formed on this basis. For instance, some countries are resource-rich, while others are labor-intensive, capital-intensive, or technology-intensive. The primary driving force behind the evolution of rules is the emergence of potential benefits, which may be positive such as achieving comparative advantages or obtaining economies of scale. It could also be reducing negative losses, for instance, lowering transaction costs, reducing uncertainty, or mitigating externalities. Under the temptation of potential benefits, the first action group appears. This group is the most direct stakeholder, attempting to gain profits or reduce losses by establishing certain economic and trade rules. At this time, there may be ready-made plans, or there may not be. If there are ready-made plans, that would be ideal; if not, it will be necessary to formulate plans, which will result in a certain time lag. After a plan is formulated, it is necessary to evaluate the feasibility of the plan. If the expected benefits of the plan exceed its expected costs, and the expected net benefit is positive, then the plan can be implemented. However, if the expected benefits of the plan are less than its expected costs, and the expected net benefit is negative, then the plan is not feasible. After the evaluation is completed, the plan enters the implementation phase, but it usually does not immediately become a rule. It generally requires the assistance of a second action group. At this time, the second action group may be a multilateral organization such as the WTO, or a regional or bilateral negotiation platform, or an international legislative body, arbitration institution, etc. International economic and trade rules emerge when the implementation plan of the first action group is elevated to a formal legal system arrangement with binding force on stakeholders with the assistance of the second action group. After that, the first and second action groups participating in the rules-making will get potential benefits or allocate benefits. The institutional equilibrium is achieved, the rules creation process ends and it enters a steady state. However, this equilibrium will not always persist. Technological progress and industrial transformation, as well as changes in the international political and economic environment, will affect the

original driving forces of rules creation. They may change the initial conditions under which a country operates or generate new potential benefits, tempting new first-mover groups to emerge and initiate a second round of rules creation. In this way, new rules are constantly being created, and from a long-term and systematic perspective, this process forms the evolution of rules (Figure 1).

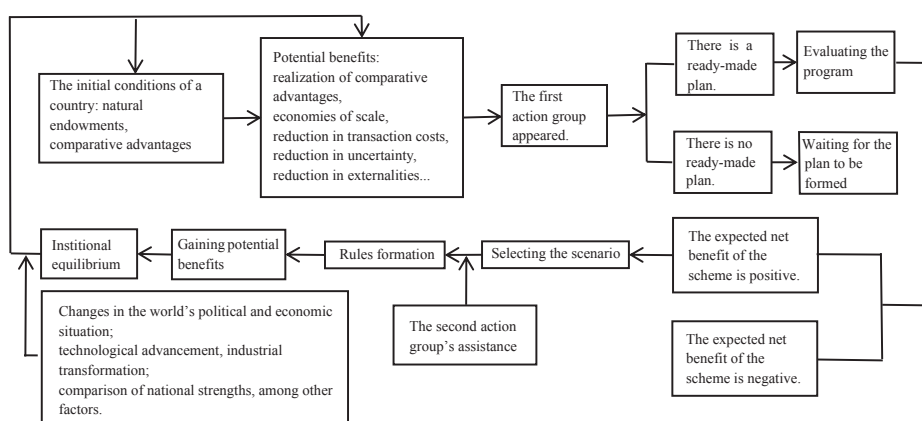


Figure 1: Theoretical Model of the Origin and Evolution of International Economic and Trade Rules

Source: Compiled by the authors.

B. Amendment of the Evolution Model of International Economic and Trade Rules under the Impact of Digital Economy

The digital economy has reconstructed the supply of factors, bringing about a new round of technological progress and industrial transformation, and changing the balance of power among nations. The evolution model of international economic and trade rules must also be adjusted under the impact of the digital economy to reflect its theoretical demands.

Firstly, the emergence of potential benefits is specifically reflected in the following five aspects: (i) Realizing comparative advantages. The digital economy has reconstructed the supply of production factors, with data becoming the fourth major production factor following labor, capital, and technology, which will inevitably generate corresponding factor returns. In order to obtain data returns, issues such as data rights confirmation, pricing, trading, accounting, assetization, transmission, security, and privacy protection must be supported by rules. Moreover, in order to sustainably obtain

comparative advantages, enterprises must continuously innovate in digital technology²⁰ and strive to occupy a monopolistic position in the market. This requires countries to provide industrial policy support for digital technology enterprises and encourage continuous innovation in digital technology through appropriate intellectual property protection.²¹ (ii) Increasing trade volume. Although increasing trade volume is not separately reflected in the evolution model of international economic and trade rules, the increase in trade volume is an important way to realize comparative advantages. Trade that cannot be realized under traditional trade models can be achieved with the support of digital technology. This change greatly expands the generalized margin of trade growth and brings potential trade gains, making the industry's call for promoting digital trade liberalization unprecedentedly strong. (iii) Gaining economies of scale. Metcalfe's law states that the value of a network is directly proportional to the square of its nodes (i.e., the number of users). This implies that in the digital economy era, the classical theory of diminishing returns to scale is being questioned, and increasing returns to scale has become a reality. Companies with data resources as their core competitiveness no longer have boundaries, and expanding data scale has become their only choice. Under this transformation, digital companies have a stronger demand for globalization than any other type of company, and at this point, promoting cross-border data flow and eliminating local data storage has become their demand. (iv) Reducing transaction costs. The widespread use of search engines and large internet platforms makes the information required for transactions more abundant and promotes the effective integration of resources. Electronic payment methods facilitate transactions, and blockchain technology enhances the credibility of transactions. All these are conducive to improving transaction efficiency and ultimately reducing transaction costs. (v) Reducing externalities. The

20 Moore's Law, that is, the processing power of chips doubles every eighteen months and the price keeps falling. This means that although the first generation of new products entering the market occupies 50% of the market share, it is also eliminated very quickly. Moore's Law determines the supercompetitive characteristics of the digital economy. It means that what countries compete for is not a one-time technological advantage, but an advantage determined by long-term technological innovation capabilities.

21 That is, the first generation of products entering the market can automatically obtain a 50% market share, while new products of the same type produced by other companies can only share the remaining 50%. This forms a monopolistic competition situation in the digital economy. The advantages of early entry and monopoly encourage digital enterprises to enter the market as early as possible and occupy a monopolistic position in order to gain comparative advantages.

emergence of digital economy has also brought many new problems, which have negative externalities on society and urgently need corresponding rules for governance. For example, intellectual property infringement on Internet, tax loopholes in e-commerce, cross-border leakage of data information, theft and misuse of consumer information, internet fraud, rampant spam messages, monopoly of internet platforms, cyber security, and the invasion of ethics and morality by artificial intelligence.

Induced by the aforementioned potential benefits, relevant interest groups have begun to emerge and make rules appeals. The first group consists of producers, specifically including digital transformation companies, digital technology research and development companies, internet platforms, etc.; the second group is consumers; and the third group is the government. The rules appeals of these three major interest groups are shown in Table 2.

Table 2: Rules Appeals of Producers, Consumers, and Government in the Digital Economy

Interest Groups	Rules Appeals
Producers	Digital Transformation Enterprises: These enterprises focus on digital trade facilitation, such as duty-free digital transmission, electronic authentication and signatures, paperless trade, popularization of electronic payment methods, use of digital currency, etc.
	Digital Technology Research and Development Enterprises: Most of these enterprises focus on intellectual property protection in the digital economy, such as strengthening intellectual property protection in the internet environment, prohibiting companies from being forced to provide source code and algorithms, establishing strict systems to prevent trade secrets from being stolen, and using encryption technology for product protection in Information and Communication Technology (ICT). However, a new phenomenon has emerged in AI industry — the opening-up of technology and the construction of open-source communities.
	Internet Platform Enterprises: These types of enterprises focus on cross-border data development and utilization, as well as intellectual property exemption. Examples include the free flow of commercial information across borders, non-local data storage, openness and usage of the internet, mining of data's commercial value, and intellectual property exemptions for internet platforms.
Consumers	Digital Trade Facilitation: Digital Transmission Duty Exemption, Electronic Certification and Signatures, Paperless Trade, Popularization of Electronic Payment Methods, Use of Digital Currencies, etc.
	Consumer Rights Protection: Online Consumer Protection, Personal Information (Privacy) Protection, and Defense Against Malicious Algorithm Attacks
Government	Development and Utilization of Data Resources: Government Data Grading and Opening, Industry Data Platform Construction and Utilization, Construction of Digital Infrastructure, Evaluation of Data Value, Trading Rules, Inclusion of Data in the Balance Sheet, etc.

Source: Compiled by the authors.

Firstly, there are appeals from producers. Producers can be further divided into digital transformation enterprises, digital technology research and development enterprises, and internet platform enterprises. Digital transformation enterprises mainly refer to traditional enterprises that improve their production, sales, and management models in order to adapt to the digital economy. These types of enterprises involve both goods trade and

services trade. Their appeals to rules is relatively fundamental, hoping to achieve process reengineering under the digital technology and digital trade model, empower enterprise development, and increase profit margins. At the international level, they focus on the liberalization of digital trade, hoping to realize tariff-free digital transmission, promote electronic certification and signatures, and paperless trade. Digital technology research and development companies mainly focus on technology development, providing products and services that are intensive on digital technology. Based on the above appeal, these enterprises also hope to protect their source code, algorithms, encryption information technology, trade secrets, etc. They wish that these intellectual properties could also be protected in a network environment, thereby offsetting the initial research and development costs and maximizing the benefits brought by digital technology. However, what cannot be ignored is the emerging phenomenon of technology open-source and open-source community construction in the AI industry. Internet platform companies do not engage in the production and provision of digital products and services; essentially, they are digital transaction platforms. In addition to the basic policy appeal of digital transformation enterprises, this category of enterprises has higher requirements in terms of the free cross-border flow of commercial information, such as non-local data storage, open and usage of networks, and mining of data's commercial value. At the same time, as platforms frequently publish or users independently post digital content involving intellectual property rights, in order to minimize the interference of intellectual property infringement caused by published information on company operations, these platforms hope to avoid such liability through intellectual property exemption clauses.

Secondly, there are appeals from consumers. It mainly involves two aspects. The first is the desire for transactions in a digital environment to be as convenient as possible. At this level, consumers share the same appeals as producers. Free digital transmission of goods and services can lead to lower payment prices. The widespread use of electronic authentication and signatures, paperless trade, electronic payment methods, and digital currencies can make trade more convenient and reduce transaction costs. The second aspect is the protection of consumer rights. On one hand, consumers hope that online fraud will be curbed and severely punished, and the consumption process will be transparent, controllable, and traceable. On the other hand, consumers provide

a lot of personal private data when purchasing digital products, receiving digital services, and using electronic payments. Therefore, they hope that the government can better protect personal privacy and prevent theft and illegal use of personal data as well as infringements on their rights and security. At the same time, they also worry that large internet platforms may use malicious algorithms to adopt discriminatory pricing strategies, reducing consumer surplus.

Thirdly, there are appeals from the government. Although the government is the policymaker and enforcer, it also has its own interests in participating in the digital economy and digital trade. One aspect is the acquisition, rights confirmation, development, and utilization of data. It is a fundamental issue that needs to be addressed for a country to develop its digital economy. Only after the rights to data resources, data processing usage, and data product operation are clearly defined can the value of data be developed and utilized. Of course, this involves issues related to government data grading and openness. The government's maximization of data openness, while ensuring data security, is a crucial step in mining the value of government data. To acquire data more effectively and swiftly, it is necessary for the government to strengthen the construction of digital infrastructure, such as submarine optical cables, dedicated data lines, and computational infrastructure. The second is digital governance. In the process of developing the digital economy and digital trade, many issues need to be resolved, and many behaviors must be regulated. Given this, the government needs to: (i) strengthen the electronic transaction regulatory framework to provide institutional support for the full-process supervision of electronic transactions, since it is necessary to regulate large Internet monopoly platforms that have emerged in the process of digital economic development, such as the usage of malicious algorithms, to prevent them from manipulating the market and infringing upon the interests of consumers and producers by exploiting their monopolistic positions; (ii) in response to cross-border data transmission, establish corresponding regulatory and risk prevention mechanisms to protect data sovereignty and national security; (iii) process the vast amount of spam information generated in the development of the digital economy, and clean up the social network environment; (iv) propose an artificial intelligence governance framework, especially for the detection and evaluation of large-scale general artificial intelligence models with systemic

risks, to ensure their benign development within ethical boundaries as well as national security boundaries; (v) improve the level of e-governance to maximize government efficiency and save transaction costs. Enhancing the inclusiveness of the digital economy and minimizing the phenomenon of special groups being marginalized by digital technology and the widening of the rich-poor gap through the development of new technologies, products or training. The third aspect is the great power competition. The digital economy is the main field of future international economic competition. In order to enhance a country's economic influence and discourse power, introducing digital currency and expanding its usage scope is an important strategy for major powers to improve their competitiveness. At the same time, the great power competition is also reflected in the research and application of digital technology, as well as the resolution of disputes over digital trade.

Under the guidance of the aforementioned rules appeals, relevant interest groups begin to enter the rules creation stage, entering the latter half of the model, that is, from the “emergence of the first action group” to the “end of institutional equilibrium”.

IV. IMPLEMENTATION PATH AND TYPICAL MODELS OF INTERNATIONAL ECONOMIC AND TRADE RULES RECONSTRUCTION UNDER THE IMPACT OF DIGITAL ECONOMY

A. Implementation Path of International Economic and Trade Rules Reconstruction under the Impact of Digital Economy

The implementation path of the digital economy's reconstructing of traditional economic and trade rules is manifested in both domestic rules-making stage and international rules-making stage. These two stages are filled with intense games among interest groups and a subsequent political equilibrium that are reached.

1. Domestic Rules-making Stage

A certain interest group, such as producers, consumers, or the government, will make rules appeals to policymakers based on potential benefits. At this point, it becomes the first action group, and the rules appeals it puts forward are referred

to as the scheme. The implementation of the scheme may potentially affect other stakeholders, at which point affected stakeholders will emerge. If the scheme infringes upon the interests of these stakeholders, they will take action. This could involve intense negotiations with the first action group to prevent the scheme from becoming a legal regulation, or lobbying legislative bodies to make the government aware of the negative impacts of the scheme and thus not pass it. If the scheme has a positive impact on other interest groups, these interest groups or “free riders” will get the maximum benefit with the minimum cost, or lobby the government to promote the implementation of the scheme together with the first action group. Subsequently, the second action group, namely the domestic legislature, emerges to represent the state in evaluating the scheme. Assuming that the legislature pursues the maximization of national interests, it will fully assess the impact of the scheme with this goal in mind. This generally includes the degree of impact on the welfare of consumers, producers, central government, local governments, etc. Upon evaluation, if the scheme is deemed to maximize national interest, the second action group, namely the domestic legislature, will assist in elevating the scheme into national law.²² At this point, the domestic rules-making stage is over.²³ If the national interest cannot be maximized, the scheme faces modification and perfection, and the domestic rules-making stage returns to the process of scheme formulation.

The related rules are profound and extensive, with each rule involving different interest demands and game processes. A unified analysis is neither scientific nor realistic. This section will conduct a theoretical analysis using the example of whether the government imposes a digital tax on internet platforms. With the rise of large-scale internet platforms, both business revenue and profit have reached new highs. Whether to tax them and how to determine the optimal tax rate are indeed important policy issues considered by governments worldwide. Assuming there are three interest groups influencing

22 Grossman G. M. and Helpman E., Protection for Sale, *American Economic Review*, Vol. 84, No. 4, 1994, pp. 833-850.

23 *Ibid.* This process can be theoretically analyzed using the protective agency model proposed by Grossman and Helpman (1994). This model vividly reproduces the game process among the three major interest groups – producers, consumers, and government – in the domestic rules-making stage, as well as the political equilibrium formed. However, the derivation process involves a large amount of mathematical analysis and empirical testing, which will not be elaborated due to space limitations.

the formulation of this rule, they are the government, internet platform companies, and consumers. In terms of the government, there are three policy options: firstly, not to tax the internet platforms; secondly, to levy a tax with a rate $t \leq \alpha$; thirdly, to impose a tax with a rate $t > \alpha$. The government's taxation on internet platform companies is primarily aimed at increasing government revenue and regulating the platforms. For ease of analysis, this section assumes that government welfare is mainly reflected in tax revenue. According to the Laffer curve, α represents the turning point of taxation. When it exceeds α , internet platforms may experience a contraction due to excessive tax burdens, and government tax revenue may also decrease due to the reduction in the tax base. For internet platform companies, their optimal choice is not to hope for government taxation, and if there is taxation, the lower the better. In order to avoid welfare loss, platforms will pass on the tax burden to consumers to varying degrees based on the different price elasticities of consumer demand. The lower the elasticity, the greater the magnitude of transfer; the higher the elasticity, the smaller the magnitude of transfer. From the consumers' perspective, their optimal choice is influenced by two factors: firstly, when the government imposes a tax on the platforms, it increases government revenue and improves consumers' welfare through transfer payments; secondly, when the government imposes a tax on the platforms, the platforms pass some of the tax burdens onto consumers, such as increasing product prices, leading to a decrease in consumers' welfare. Consumers need to make choices based on the impact brought about by these two factors.

In this process, the government holds the dominant power over tax policy. Of course, it will take into account the welfare of the platforms, consumers, and the government to make optimal decisions. Companies lobby the government to minimize the impact of government taxation on their welfare to the greatest extent. Factors such as scale, tax-paying capacity, development space, and industry status can significantly affect the lobbying ability. The lobbying ability of consumers is the weakest. Firstly, the loss caused by government taxation to consumers' welfare is indirect and uncertain, often requiring precise assessment. Secondly, even if the loss is certain, for individual lobbyists, the cost of lobbying is often greater than the welfare loss, making it economically unfeasible. Thirdly, even from a cost-benefit perspective, where benefits

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outweigh costs, consumers are unwilling to lobby the government due to high organizational costs and a large number of free riders. This is specifically divided into nine scenarios (See Table 3).

As can be seen in Table 3, under different scenarios, the profits of game participants exhibit significant heterogeneity. However, in the long run, if the government does not levy taxes and the platforms expand, the government will lose corresponding revenues. This could lead to an overly large platforms due to a lack of necessary regulations, potentially causing harm to the interests of other game participants. If the government imposes heavy taxes, it may result in a double-loss situation where the platforms contract and the tax base decreases. Therefore, policy equilibrium is achieved when the government levies taxes with the tax rate $t \leq \alpha$. However, as for which of the three scenarios will achieve the final equilibrium under the choice of government behavior, further analysis based on specific data is required.

Table 3: Analysis of Game Behavior in Internet Platform Taxation

Choice of Government Behavior	Platforms Behavior Selection	Welfare and Scale of Internet Platform Enterprises	Consumers' Welfare	Government Welfare	
				Current Income	Future Income
The government does not levy taxes.	No saved taxes are passed on to consumers.	Improvements in welfare**, and expansion in scale	No improvement	No increase	No increase
	Part of the saved tax revenue is shifted to consumers.	Improvements in welfare*, and expansion in scale	Improvement*	No increase	No increase
	The saved taxes are completely transferred to consumers.	No improvement in welfare, expansion in scale	Improvement**	No increase	No increase
The government imposes a tax with a rate less than or equal to α .	The platforms bears the full tax burden itself.	Impairment in welfare**, expansion in scale	Improvement*	Increase*	Increase**
	The platforms shifts part of the tax burden to consumers.	Impairment in welfare*, expansion in scale	Not sure	Increase*	Increase**
	The platforms fully transfers the tax burden to consumers.	No impairment in welfare, expansion in scale	Impairment*	Increase*	Increase**
The government imposes a tax with a rate greater than α .	The platforms bears the full tax burden itself.	Impairment in welfare***, shrinking scale	Improvement*	Increase**	Reduce
	The platforms shifts part of the tax burden to consumers.	Impairment in welfare**, shrinking scale	Not sure	Increase**	Reduce
	The platforms fully transfers the tax burden to consumers.	Impairment in welfare*, shrinking scale	Impairment*	Increase**	Reduce

Note: * indicates the degree of magnitude, and the more the *, the greater the severity.

Source: Compiled by the authors.

2. International Rule Making Stage

Major economies all aspire to exert their influence and make their voices heard in rules-making at the international level, given that competition among major powers has shifted from the realm of physical economy to that of rules. This is particularly true in the field of digital economic and trade rules. As a leader in digital economic and trade rules, the United States often internationalizes its domestic regulations, which involves the process of creating international rules. At this point, the economies become the first action group, negotiating at the international level with their preferred solutions. Similar to the domestic rules-making process, proposals by parties have an impact on the interests of other states and stakeholders emerge and assess the proposal from a cost-benefit perspective. If there is a significant conflict of interest, intense negotiations will ensue; if the interests align, a negotiation alliance will form. After the conclusion of the negotiations, stakeholders will sign regional trade agreements or bilateral trade agreements in the name of a second action group, such as international organizations like the WTO or regional groups. This institutionalizes the results of the negotiations, marking the end of the international rule-creation process. However, it is worth noting that the international rules-making process significantly differs from the domestic one. That is, there are no supranational governmental bodies in international negotiations, and at this point, optimal trade rules may not necessarily reflect the maximization of world interests, but rather depend on the contest of negotiation power among various countries. Except for the WTO, which requires a two-thirds majority vote, most regional and bilateral trade agreement negotiations follow the “law of the jungle” of “survival of the fittest”. The dominant party often manages to internationalize the rules that reflect their domestic preferences, ensuring that their demands are adequately represented. However, the weaker party is often in a marginal and passive position, having to comply with the rules set by the dominant economies. As a result, their interests are often violated and their rights suppressed.

Although domestic rules-making and international rules-making are two stages in the formulation of international economic and trade rules, with a sequential order, there is still a strong interactivity between them. For instance, the more comprehensive and advanced the domestic rules, the greater the

opportunity to make significant contributions to the field of international rules-making. At the same time, international rules can also promote the improvement of domestic rules. A key driving factor for many developing countries in perfecting their domestic rules is the proactive alignment with international rules or the pressure imposed by international rules.

3. Case Analysis

The creation process of Interactive Computer Services is analyzed as an example. Interactive Computer Services fall under the liability exemption rules of internet platforms. In order to promote the development of domestic internet platforms, the United States first incorporated this clause into the USMCA which was followed by the UJDTA. The main content is: Neither the internet platform company nor the users are responsible for the content published on the platform, unless the platform company or users have participated in the creation and development of this information in whole or in part, and they have no obligation to restrict access to harmful or negative content within it. With the rise of the platform economy, massive non-transactional data interactions have become the main form of data flow. At the same time, a common misunderstanding about data circulation neglects the way data interacts and is used.²⁴ How to scientifically govern data interaction not only has significant implications for data flow, but is also closely related to the development and growth of internet platforms. The creation process of this clause took 25 years, including a 3-year domestic rules-making stage in the United States and a 22-year international rules-making stage.

The context of this clause is that large internet platforms publish a massive amount of information in daily life. However, some information is published without the consent of the information owner, which is suspected of intellectual property infringement. When copyright infringement occurs on the Internet, the infringing website or materials may appear and disappear in a short period of time. Moreover, most users on the Internet present themselves anonymously or under false identities. When copyright holders cannot find the real infringers, they will turn to the Internet Service Provider (ISP) with a certain identity and who is easy to find for claims. As a result, ISPs often become defendants

²⁴ Xiaojuan Jiang, *Data Transaction and Data Interaction – Key to Understanding the Characteristics of the Data Factor Market*, *China Cyberspace*, No. 1, 2024, pp. 32–36.

in copyright infringement cases. They not only bear administrative costs and economic compensation during the litigation process, but may also suffer negative public opinion, which could impact the company's long-term development.

To reduce the above-mentioned negative impacts, ISPs emerged as the first action group. After a cost-benefit analysis, they proposed their own scheme, namely that states should exempt internet platforms from liability for intellectual property infringement with regard to the content published on them. At this time, it coincided with the revision of the US government's bill. In September 1995, the US government issued Intellectual Property and the National Information Infrastructure: The Report of the Working Group on Intellectual Property Rights (also known as the "White Paper"). The White Paper starts from the perspective of law, technology, and education, discusses the impact of the digital age on the current intellectual property legal system, and proposes suggestions for amending copyright law provisions and putting them into practice. After that, on October 28, 1998, the Digital Millennium Copyright Act of the United States officially took effect. This appeal of ISPs was successfully incorporated into the bill, which is reflected in the second part of the act, namely the Online Copyright Infringement Liability Limitation clause. This clause stipulates that an international ISP is not liable for copyright infringements committed through its network. At this point, the process of domestic rules creation has come to an end.

Subsequently, economies such as Germany and the European Union formulated their own "safe harbor" rules based on practical considerations. China also adopted the "safe harbor clause" in 2006 and incorporated it into the Regulations on Protection of the Right to Network Dissemination of Information. In 2010 and 2012, the United States refined the "safe harbor clause". After Trump took office in January 2017, the US government began to renegotiate the North American Free Trade Agreement (NAFTA). During the negotiation process, the United States further upgraded the "safe harbor clause" to support the development and growth of internet platforms. Under the new rules, not only are internet platforms exempt from liability for intellectual property infringements of the content they publish, but users of these platforms are also exempt from this responsibility. Of course, this is predicated on neither the platform nor its users being involved in the creation of the information

published. This provision is quite extreme, but it has been recognized by Canada and Mexico and has been incorporated into the USMCA. At the same time, the Interactive Computer Services Terms have been recognized by Japan and have been incorporated into the UJDTA that came into effect in 2020. As a result, the scope of application of this clause has been further expanded.

However, this clause has been controversial since its implementation. Some people argue that there is abuse of this clause, and that it has become a “safe harbor” for search engines and sharing websites, and even a shield for some websites to avoid liability for infringement. Therefore, although the Interactive Computer Services Terms were born out of the demands of large internet platform companies, they also need to be better balanced with internet regulation and governance, and further revisions are needed.

B. Typical Models of Economic and Trade Rules Reconstruction under the Impact of Digital Economy

The process of international economic and trade rules reconstruction under the digital economy has been ongoing for more than twenty years. During this process, distinctive and significantly different models have gradually formed, namely the American model, the European Union model, and the Chinese model.

1. American Model: Gradual Reshaping + Inside-out Promotion Model

The United States is the earliest country in the world to reconstruct existing economic and trade rules to adapt to digital trade and the digital economy. Although, in this process, the United States has formulated some relatively extreme terms for digital trade liberalization to achieve its own interests, its contributions cannot be overlooked. In this process, the “American Model” gradually formed, namely the “gradual reshaping + inside-out promotion model”.

“Gradual reshaping” refers to the long process of rules reshaping in the United States, like “small steps and quick progress”, that is, continuous and minor adjustments and innovations. The formation process of digital economic and trade rules in the FTAs signed by the United States is used as an example for illustration. In 2001, the US-Jordan FTA was reached, in which e-commerce provisions appeared for the first time, including three sub-provisions. Compared

with subsequent digital economic and trade rules, this provision is very simple, but its symbolic significance is relatively greater. In 2004, the US-Chile FTA was signed, in which e-commerce was introduced as a separate chapter. The related provisions were further enriched, including 6 articles and 1 annex. Subsequently, the FTAs signed by the United States with developing countries have basically used the US-Chile FTA as a template for promotion, maintaining the number of e-commerce provisions at around 6. The FTAs signed by the United States with developed countries are mostly based on the US-Chile FTA, with limited extensions such as the US-Australia FTA and the US-Korea FTA, which have 8 and 9 articles respectively. By the time of the TPP, digital trade provisions expanded to 16 articles, and further increased to 18 articles for the USMCA. The UJDTA then made retroactive adjustments to more aggressive digital economic and trade rules and enhanced government regulatory measures, ultimately expanding the digital trade provisions to 22 articles. This entire process took 20 years.

“Inside-out” refers to the process of rules reshaping in the United States, which conforms to the general logic of rules-making. That is, it first nurtures, develops, matures, and elevates to national laws and regulations. Subsequently, it internationalizes these rules by incorporating corresponding clauses into bilateral and regional trade agreements, gradually expanding the influence of the “American template” on digital economic and trade rules. When this expansion reaches a certain extent, it then surges towards multilateralism, specifically towards the WTO, ultimately completing the multilateralization of rules and achieving binding effects on all WTO contracting parties.

The formation of the American model is inseparable from the United States’ leading role in the field of digital economic and trade rules-making. The United States is not only a pioneer in digital economic and trade rules, but also a leader in international economic and trade rules, with virtually no objects for reference or replication. Therefore, the creation and adjustment of rules mostly start from within the country, presenting a “gradual reshaping + inside-out promotion model” that carries a strong sense of exploration.

2. EU Model: Focused Effort + Inside-out Supervision Model

The European Union (EU) has a significant gap compared to China and the United States in areas such as digital infrastructure, digital markets, leading

internet platforms, and digital technology companies. However, it is bold in innovation in terms of digital regulation, not only forming the “focused effort + inside-out supervision model” but also becoming a “rules giant” in certain niche fields.

The term “focused effort” refers to the fact that unlike the United States, the EU has not formed a rules system that leads the direction of digital economic and trade rules internationally. Instead, it has concentrated its effort over a period of time on carefully crafting a specific niche field, promoting institutional innovation in this area. For instance, a series of laws and regulations such as the General Data Protection Regulation (GDPR), the Directive on Security of Network and Information Systems (NISD), etc., have established leading rules for data protection and information security. The Digital Markets Act and the Digital Services Act, among others, have constructed regulatory systems specifically for internet platforms, especially large-scale ones. Furthermore, the world’s first comprehensive regulatory law in the field of AI, namely the Artificial Intelligence Act, has become a leading piece of legislation in the AI regulatory domain.

“Inside-out” refers to the fact that most of the rules proposed by the EU are rooted in the inherent needs and traditional culture of EU society. For instance, the regulation of internet platforms is primarily aimed at protecting the EU digital market from external internet giants, maintaining a healthy competitive environment, and obtaining corresponding profits. This reflects the intrinsic need of the EU to build a unified digital market. Focus on traditional culture is reflected in the high level of protection for personal privacy and comprehensive supervision of AI. The strict legislation in these two areas also reflects that the EU has raised human rights to a new height. It is worth mentioning that the EU’s model of “inside-out” is not exactly the same as that of the United States. Compared with the ambitious promotion model of the United States, the EU pays more attention to the construction of institutional mechanisms within the economy and strictly regulates stakeholders involved in Europe, so as to exert the influence of rules.

The formation of the EU model is primarily due to two reasons. Firstly, it is constrained at the material level, that is, as mentioned earlier, the development level of the digital economy in Europe is not as advanced as that in the United States, hence the sources of institutional innovation and application scenarios

are not as rich as those in the US. In the absence of a good ecosystem for institutional innovation, it is impossible to form a grand and profound rules system, and efforts can only be focused on key areas. Secondly, there is the influence of humanism. The Renaissance and Enlightenment movements advocated for natural rights, arguing that laws should start from humanity. Therefore, throughout the process of formulating various laws, human rights have always been given an unparalleled status. Upon closer examination of many EU legislations related to humans, their advancements are at the forefront of the world.

3. Chinese Model: Integrated Innovation + Outside-in Compulsion Model

“Integrated innovation” refers to the process in which China adopts a “big leap” approach to rules creation, using milestone events as time nodes for significant rules innovation or adjustment. This is illustrated by the formation process of digital economic and trade rules in the FTAs that China has signed. The China-Korea FTA was China’s first bilateral FTA to include a dedicated chapter on e-commerce, marking a crucial step forward in the field of digital economic and trade rules formulation. The e-commerce chapter of the China-Korea FTA consists of 9 articles, mainly focusing on the liberalization and facilitation of digital trade. Compared with the China-Korea FTA, the standards of the China-Australia FTA are higher, not only with more detailed clauses but also with some new clauses added. For instance, by enhancing the regulatory power over e-commerce through adding a domestic electronic regulatory framework, and improving the efficiency and enforceability of information transmission among contracting parties by adding transparency clauses, the number of articles has increased to 11, and the content has expanded from digital trade border clauses to behind-the-border clauses. The Regional Comprehensive Economic Partnership (RCEP) builds upon China’s existing digital economic and trade rules, adding four new regulations: unsolicited electronic information, non-localization of computing facilities, cross-border transmission of information via electronic means, and cybersecurity. This represents a substantive breakthrough from the existing agreements, with the number of articles increased to 17, incorporating important topics such as cross-border data flow and cybersecurity into the agreement. In summary, from the initial emergence

of e-commerce terms to the formation of a relatively complete rules system, the construction process of e-commerce rules at the China FTA level has only taken 5 years. Currently, China is actively promoting its accession to the CPTPP and DEPA, participating more proactively in the formulation of global digital trade rules.²⁵

“Outside-in” refers to the fact that the main driving force for China’s rules reconstructing comes from foreign pressure, and it presents the adjustment of domestic laws and regulations under high-standard digital trade international rules. In the seven years from 2014 to 2021, China has successively introduced or updated the following laws: the Law of the People’s Republic of China on the Protection of the Rights and Interests of Consumers in 2014, the National Security Law of the People’s Republic of China in 2015, the Cybersecurity Law of the People’s Republic of China in 2017, the Personal Information Protection Law of the People’s Republic of China (Draft for Comments) published in 2020, the Data Security Law of the People’s Republic of China implemented in September 2021, and the Regulations on the Administration of Network Data Security (Draft for Comments) released in November 2021. The speed of legal advancement is astonishing.

The reasons are as follows: Although China is the world’s second-largest digital economy, it has not yet gained influence in the field of rules-making commensurate with its strength. It is urgent to explore digital economic and trade rules innovation in the vast Chinese market, and comprehensively promote the integration of domestic digital economic rules with those of foreign economies. At this time, under the leadership of the United States, digital economic and trade rules have made significant progress and entered a stage of fine-tuning. The integration and coordination of rules are also an inevitable requirement for deep globalization. Therefore, China has proactively engaged in the alignment of high-standard international economic and trade rules, not only continuously incorporating and learning from high-standard international digital economic and trade rules in trade agreements, but also rapidly advancing the formulation and improvement of domestic laws and regulations. At present, the Chinese model is in line with the development status of China’s digital

²⁵ Guoyong Liang, New Trends in Global Digital Trade Rules and China’s Strategic Choice, *International Economic Review*, No. 4, 2023, pp. 139-155.

economy and digital trade, and it is an important lever for China to overtake other countries.

V. PREDICTION OF KEY ISSUES IN THE RECONSTRUCTION OF INTERNATIONAL ECONOMIC AND TRADE RULES UNDER THE IMPACT OF DIGITAL ECONOMY

The emergence of digital economy poses challenges to traditional international economic and trade rules, which must be reconstructed to reflect their appeals for rules. This viewpoint has been echoed in practice across various countries. This section primarily contemplates a question: what should be the ideal state of the reconstruction of international economic and trade rules in the digital economy, and which rules should be adjusted? Traditional trade rules mainly include “fair competition rules”, interest adjustment rules, and enforcement rules. In the digital economy, the traditional economic and trade concepts characterized by freedom and fairness remain unchanged, but specific rules setting must consider the integration and compatibility with the digital economy. Based on an analysis of the development trends of the digital economy and in-depth research into relevant departments, this section believes that the reconstruction of international economic and trade rules by the digital economy is prominently reflected at the level of “fair competition rules”. There will be minor adjustments at the levels of interest adjustment rules and enforcement rules, covering issues in sequence consistent with the CPTPP.

A. Adjustments of the “Fair Competition Rules”

The “fair competition rules” include provisions for trade liberalization and fair competition. The adjustment of trade liberalization provisions is mainly reflected in the following aspects: (i) Treatment of goods trade and market access. The concept of goods extends from traditional tangible goods to digital products. At this point, rules such as the definition of digital products, the levy and reduction of tariffs on digital products, export controls, and import restrictions need to be extended to the field of digital trade. In particular, the sustainability of exempting electronic transmission from tariffs needs to

be explored. (ii) Rules of origin and origin procedures. The current rules of origin are primarily based on the trade of tangible goods. The core provision, the calculation method for the regional value content, is also based on the calculation method for the value of raw materials. With the emergence of digital content trade, data, and information trade, the digitization characteristics of global value chains will become prominent, and the identification and calculation methods for regional value content need to be further improved. (iii) Customs management and trade facilitation. In terms of customs management, new product and service forms such as digital content trade, data and information trade, digital service trade, and digital technology trade need to be reflected in the existing coding system. The management of e-commerce transaction product information also needs to be adjusted accordingly. The sharp increase in cross-border e-commerce transactions and the fragmentation of transactions have brought new issues in tax collection and inspection and quarantine. All these require customs to establish corresponding rules for management and seek a balance between efficiency and security. Moreover, how to utilize digital technology to enhance customs clearance efficiency and ensure safety is also a key area for future customs management. In terms of trade facilitation, the use and mutual recognition of electronic documents (such as bills of lading, certificates of origin, health inspection certificates, etc.), the promotion of international templates for electronic invoices, and the internationalization of electronic payment systems are all important means to promote trade facilitation. (iv) Sanitary and phytosanitary measures. This section primarily reflects the promotion of inspection and quarantine technology by digital technologies, such as blockchain, big data, algorithms, etc. These can be applied in this field to improve the accuracy and efficiency of inspection and quarantine, thereby reducing costs. Some relatively mature technologies can be promoted within the domain, contributing to the overall enhancement of inspection and quarantine levels for all parties involved. (v) Technical barriers to trade. The relevant rules of technical barriers to trade are mainly reflected in three aspects: technical regulations, technical standards, and conformity assessment procedures. Corresponding international standards should be established to regulate the new technologies derived from the digital economy. Technical regulations and conformity assessment procedures also need to be

adjusted on this basis to urge contracting parties to reach a consensus in the field of digital technology rules. (vi) Investment. This primarily involves the issue of foreign investment in digital infrastructure. Unlike traditional infrastructure, foreign investment in digital infrastructure often involves national security and information security, thus subject to stricter foreign investment reviews. Major economies such as the United States, Japan, Europe, and China have stipulated this in their domestic laws, but it has not been elevated to the international level. How to reasonably define the scope of digital infrastructure, conditions, content, procedures, etc. for foreign investment review at the international level is a field that needs to be improved in the future. (vii) Cross-border service trade. Firstly, the general rules of services trade should be adjusted according to the characteristics of digital trade. Secondly, sectors of finance and telecommunications with a high degree of dependence on digital trade, such as internet finance, digital currency, digital financial technology, as well as reliable telecommunication systems and technological tracks, should also undergo corresponding adjustments. Thirdly, the existing 160 sub-sectors in the service commitment table are facing expansion, and some new sectors derived from the digital economy need to be included. Fourthly, under the digital economy, the boundaries of four modes of service provision — cross-border delivery, overseas consumption, commercial presence, and movement of natural persons — are becoming increasingly blurred. The General Agreement on Trade in Services (GATS) needs to define these four modes of provision and reassess the existing service trade commitment table.

The adjustment of fair competition clauses is mainly manifested in the following aspects. (i) Digital trade. The special chapter on digital trade is a concentrated section on rules adjustments, mainly including three parts: facilitation of digital trade; data development, sharing and flow; and digital governance. Although most of the rules for digital trade facilitation will be reflected in the special chapter on digital trade, the analysis of this paper has already been included in the sections on goods trade, customs management, and trade facilitation, so it will not be repeated here. This section primarily analyzes two aspects: data development and sharing, and cross-border information flow. In terms of data development and sharing, it involves the opening, sharing, and utilization of personal, corporate, industry, and government data, as well as the

construction of related systems such as data empowerment, asset recognition in financial statements, and transaction rules. In terms of cross-border information flow, it involves data localization, offshore data regulation, and the access and use of the Internet.²⁶ Digital governance is primarily manifested in the protection of personal information,²⁷ intellectual property rights, internet platform governance, technology governance, industry governance, digital sovereignty, international cybersecurity,²⁸ as well as cooperation and dispute resolution. (ii) Government procurement. The core clause of government procurement is actually the list of commitments in government procurement. Currently, the items included in this list are only divided into three major categories: goods, services, and construction services. The procurement of digital products and services is intertwined with goods and services. However, as digital technology develops and the forms of digital trade diversify, how these products and services are reflected in government procurement rules, and whether it is necessary to establish separate procurement categories, are issues worth discussing. In addition, taking corresponding measures to improve the digitization level of government procurement is also an important part of building a digital government. (iii) Competition policy. The creation of a fair competition environment should be extended to the digital domain, which is currently prominently manifested in the state's regulation of large internet platforms. In the long run, the international coordination of digital economy regulatory frameworks and digital competition policies should become the focus of regulation. (iv) Intellectual property rights. Intellectual property rights are a key area of focus in the adjustment of international economic and trade rules. Infringements on intellectual property rights become easier and harder to be held accountable in a digital environment. After intellectual property rights are infringed upon, the victims often fail to protect their rights due to high

26 The trade barrier report submitted by the American Internet Association specifically mentions the issue of internet blocking, which has been pushed to the forefront by the United States.

27 In the field of personal information protection, it is particularly important to promote international consensus on the "shield of privacy" framework.

28 International cybersecurity specifically includes: firstly, the constraints on a country's behavior in cyberspace; secondly, the integrity and security of a country's internet infrastructure; thirdly, enhancing the understanding of the importance of cyber diplomacy among contracting parties, such as issues related to cyber deterrence, foreign policy formulation, and negotiations, which have been involved in the Ukraine crisis; fourthly, establishing mechanisms to respond to server data leaks, hacker attacks, etc.

costs of litigation and a lack of competent authorities, resulting in insufficient protection of intellectual property rights. Therefore, the identification of intellectual property infringement in a digital environment, the division of responsibilities, punishments, and avoidance measures all require corresponding rules for support. In addition, the protection of digital technology, such as the protection of source code, algorithms, and information technology products, is also very important. (v) Small and medium-sized enterprises. The digital economy and digital trade have a significant and far-reaching impact on the technology, products, management, and business models of small and medium-sized enterprises. The rules for small and medium-sized enterprises are primarily designed to provide institutional support for their development. In the digital economy environment, establishing an effective social service system, especially the information service system, is extremely important for small and medium-sized enterprises to participate in the global value chains and obtain trade benefits. (vi) Regulatory consistency and domestic regulation. The emergence of global value chains requires international regulatory consistency, but the resurgence of anti-globalization has gradually shifted international regulatory consistency back to regional regulatory consistency. The digital economy gives new characteristics to regulations, namely the need for consensus at the level of digital governance. This is covered in the above-mentioned areas of digital trade, competition policy and intellectual property rights.

B. Adjustment of Interest Adjustment Rules

The rules for interest adjustment include non-discrimination clauses, preferential treatment principles for developing and least developed countries, as well as other special interest arrangements. Interest adjustment is actually embedded throughout the entire international economic and trade rules, but the interest adjustment of the above two types of rules directly targets specific countries, significantly adjusting the distribution of interests among countries.

Non-discrimination clauses primarily encompass the principles of MFNT and NT. In the digital trade environment, many new intersections and conflicts of interest have emerged, necessitating adjustments to rules for coordinating stakeholder interests, thereby reaching a new consensus. For instance, should a country provide NT to foreign cloud service providers? Can a country ensure

non-discrimination between domestic and foreign service providers in cross-border data flow regulations? Can foreign digital infrastructure providers enter a country and enjoy NT? These all require further coordination and clarification. Moreover, the interest adjustment rules previously reached under goods trade and services trade need to be extended to the digital trade sector and undergo an adaptability assessment. The construction path of these rules is likely to start with the principle of NT, then extended to the principle of MFNT.

The principles of preferential treatment for developing and least developed countries, as well as other special interest arrangements, are mainly implemented through trade remedies, development, cooperative capacity building, exceptions, and general clauses. As the digital divide deepens, the divergence of interests between digitally strong and weak countries will gradually become prominent. Due to the non-neutrality of rules, existing digital economic and trade rules more reflect the interests of digitally strong countries. Digitally weak countries currently do not have much ability to participate in or lead the formulation of international digital economic and trade rules, and the rules game in the short term is mainly reflected among digitally strong countries. As the digital economy increasingly becomes the driving force and source of future economic development, the game between digitally strong and weak countries will also gradually become prominent. Digitally weak countries may reduce the impact of digital economic and trade rules on them through trade remedy measures, and strive for support and assistance from digitally strong countries through development and cooperative capacity building clauses. In addition, due to the uniqueness of the digital economy, countries will use exception clauses to ensure their national security (digital sovereignty, information security, cybersecurity, etc.) and macroeconomic policy independence (monetary policy, exchange rate policy, tax policy, etc.), so as to maximize the benefits brought by the digital economy under the premise of security.

C. Adjustment of Enforcement Rules

The enforcement rules include provisions for predictability and transparency, as well as implementation clauses. Due to the strong generality of these clauses, there are very few adjustments in digital trade, which will not be elaborated further.

VI. CONCLUSIONS AND IMPLICATIONS

A. Research Conclusion

Traditional international economic and trade rules are an organic unity with “fair competition rules”, interest adjustment rules, and enforcement rules as the three main pillars. Under the impact of digital economy, traditional international economic and trade rules have been continuously challenged and have begun to be reconstructed. The reconstructing process started in 1995 and has gone through the stages of budding, formation, and development. During this period, the scope of reconstructing has been continuously expanding, and the rules have increasingly taken into account balance while advancing to a higher level, with the mandatory nature of the rules also continuously strengthened.

The theoretical evolution mechanism of international economic and trade rules is as follows: countries participate in the formulation of international economic and trade rules based on their initial conditions. The original driving force for rules evolution is the emergence of potential benefits. Under the temptation of potential benefits, the first action group appears and proposes a rules scheme, which, with the assistance of the second action group, forms international economic and trade rules. An institutional equilibrium is achieved and it enters a steady state. Under the influence of external factors such as international politics and economy, the steady state is disrupted and new potential benefits are generated, luring a new first action group to appear, thereby initiating the second round of the rules creation process. By repeating this process, the evolution of international economic and trade rules is formed.

The emergence of digital economy has disrupted the steady state of the evolution of international economic and trade rules. It has reshaped social productivity, reconstructed factor supplies, and altered comparative advantages among nations. At this point, potential benefits arise, specifically including achieving comparative advantage, obtaining economies of scale, realizing network externalities, and reducing transaction costs. Under the inducement of these potential benefits, the first action group emerged (such as producers, consumers, and government), proposing different rules appeals. Guided by these rules appeals, it enters the stage of rules creation.

The implementation path of the digital economy's reconstruction of international economic and trade rules is reflected in the domestic rules-making stage and the international rules-making stage. In the domestic rules-making stage, relevant interest groups act as the first action group to fiercely vie for their own maximization of interests and lobby the government. The government will choose a plan under the principle of maximizing national interests and promote it to become domestic laws and regulations with the help of the second action group. At the international rules-making stage, countries act as the first action group to negotiate at the international level with the aim of maximizing their own interests, and institutionalize the negotiation results with the help of the second action group such as international organizations and FTAs.

Under the impact of the digital economy, distinctive and significantly different models have emerged in the process of reconstructing international economic and trade rules: the American model, characterized by “gradual reshaping + inside-out promotion”; the European Union model, marked by “focused effort + inside-out regulation”; and the Chinese model, which is based on “integrated innovation + outside-in compulsion”. The Chinese model aligns with the current development status of China's digital economy and digital trade, serving as a crucial lever for China to overtake other countries.

The reconstruction of traditional trade rules by the digital economy mainly manifests at the level of “fair competition rules”, with minor adjustments occurring at the levels of interest adjustment rules and enforcement rules. Most terms related to trade liberalization and fair competition within the “fair competition rules” face significant challenges and urgently need adjustment. Changes in interest adjustment rules mainly involve non-discrimination clauses and other special interest arrangements, while the principle of preferential treatment for developing countries and least developed countries has not yet been adjusted. The applicability of the enforcement rules themselves is strong, with very few clauses requiring adjustment.

B. Policy Implications

Currently, China has become an active participant, substantial contributor, and potential leader. However, at this stage, it still faces constraints from institutional mechanisms and external pressures. It is mainly manifested in:

(i) In the process of benchmarking high-standard digital economic and trade rules, there are significant systemic obstacles. The excessive emphasis on risk prevention and security awareness results in the inability to fully exploit and utilize data resources. (ii) The innovation of digital economic and trade rules involves many institutions, making it difficult to coordinate, which slows down the process of rules innovation and limits the spillover effects of the digital economy. (iii) Some rules dominated by developed countries such as the United States and Europe are not in line with China's interests and are inconsistent with the direction of reform. However, in order to protect their own interests, the United States and Europe often form alliances to pressure China, causing China to face significant international pressure. (iv) The competition in digital technology is becoming increasingly fierce. The development and utilization of digital technology operate independently, highlighting a trend towards decoupling. The process of key breakthroughs in digital technology has slowed down, and there are difficulties in establishing international standards for digital technology. How to coordinate the mutual learning and integration of domestic and international digital economic and trade rules, as well as the opening-up of high-level domestic digital economic and trade systems, is a problem that we currently face and urgently need to solve. In view of these, this paper proposes the following policy suggestions.

Firstly, China should explore new models and approaches to promote the full utilization and rational flow of data resources. The first point is to promote the rapid development of digital technologies such as privacy computing. By making data available but invisible, it solves the issues of data security and privacy protection in collaborative data computations, thereby promoting the construction of a data factor market and the mining of data value. The second point is to explore the establishment of offshore data centers. Cross-border data flow involves data sovereignty and national security, and it is neither safe nor realistic to fully liberalize cross-border data flow. Offshore data centers can not only be unrestricted by domestic policies on cross-border data flow but also provide an effective channel for enterprises and the government to understand the latest international information and technological trends.

Secondly, China should collaborate on digital economic and trade rules innovation to enhance the efficiency of institutional innovation. The first point

is that a Digital Economic and Trade Rules Coordination Office is set up to provide organizational support for the innovation and utilization of national digital economic and trade rules. Over a decade ago, the Shenzhen Special Economic Zone took the lead in setting up a productive services department, which greatly promoted the development of local productive services. This innovation has become a historical anecdote. More than a decade later, the digital economy has arrived. Setting up a Digital Economic and Trade Rules Coordination Office in reform-pioneering areas such as Shenzhen to take the lead in promoting the implementation of innovative strategies for digital economic and trade rules is not only an undeniable responsibility of being at the forefront of reform and opening-up, but also a rare historical opportunity. The second point is to implement the research commissioner system proposed by President Xi, appointing experts, who are familiar with international economic and trade rules, to reside permanently in the Hainan Free Trade Port, the Guangdong–Hong Kong–Macao Greater Bay Area, and other free trade zones where digital economy and trade are developed. Based on the operational practice of the digital economy and trade, rules innovation and scenario exploration should be carried out. In this way, it can not only form a digital trade system arrangement with local characteristics but also serve as a testing ground for national digital economic and trade rules innovation.

Thirdly, China should clarify the expectations of “big and small players” for China, treat them differently, and diffuse the pressure. The United States and Europe are the “big players” in the game of digital economic and trade rules. They believe that their rules are international rules, hoping that all countries, including China, should align with their standards, reflecting the characteristic of “rules first”. Therefore, under strong pressure, how to achieve the maximum rules compatibility through rational benchmarking is very important.²⁹ Developing countries or digital minors are the “small players” among them, and New Zealand, Singapore and Chile are the leading countries. They have no ambition to “dominate” the rules, and they hope to achieve their own interests more and better with the help of China, reflecting the characteristics of “interests first”. Therefore, China basically has no pressure to comply with them, and can directly negotiate based on interests. By going with the flow and building

²⁹ For specific measures on how to benchmark, please refer to *Supra* n. 11, Jie Bai, Da Zhang and Yue Wang (2021).

consensus on digital governance and facilitation of digital trade among all parties, it can enhance the influence of Chinese rules.

Fourthly, China should promote the research and development of digital technology and accelerate the enhancement of China's digital competitiveness. The trend of decoupling between the United States, Europe, and China in the field of digital technology is becoming increasingly evident, making it unrealistic to jointly develop digital technology and explore application scenarios. In view of this, China should make efforts in the following aspects.

(i) China should increase the government's support for the pilot stage of digital technology, allowing digital technology to be quickly transformed into digital products or services, and improving the efficiency of scientific and technological transformation. The pilot test is a low-lying area for the transformation of scientific and technological achievements, and digital technology is no exception. It is of great significance to use government power to overcome the shortcomings of scientific and technological innovation. (ii) China should strengthen the industry-leading role of leading enterprises and designate leading enterprises as the main players in key digital technology fields, fully leveraging their driving roles in joint research and development, technology spillover, standard setting, and overall industrial chain development. (iii) China should leverage the economic efficiency of digital platforms and enhance their support for nascent digital enterprises, and fully leverage the resource integration capabilities of existing digital platforms to extend the scope of science and technology services, provide various services throughout the lifecycle process for startups or small and micro enterprises, comprehensively enhancing their survival rate and competitiveness. (iv) China should promote the construction of a digital open-source ecosystem, pool digital open-source sources, fully exploit the spillover effect of digital technology open-sourcing, make good use of the "latecomer advantage", and expand the empowering role of international leading open-source digital technology in China.