# Comparative Analysis of Digital Trade Terms Under RCEP and CPTPP Agreements

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**Abstract.** The digital economy is developing rapidly relying on the products of new technological revolution such as artificial intelligence and internet of things, which has had an impact on the global trading system. Countries all over the world are paying more and more attention to the development of digital trade. Digital trade not only promotes the development of global trade, but also brings challenges to the construction of global digital trade rules. Since the signing and entry into force of RCEP, China is promoting the docking and integration with CPTPP rules. This article focuses on the field of digital trade, by comparing the digital trade terms of RCEP and CPTPP, analyzes the impact and challenges on China's digital trade, provides the direction of China's efforts in applying for CPTPP in the next step, and puts forward relevant enlightenment and suggestions.

**Keywords:** RCEP, CPTPP, Digital trade terms.

## 1. Introduction

Since the outbreak of the COVID-19 epidemic, the digital economy has become an important driving force for stabilizing the industrial chain and supply chain and driving the global economic recovery and growth. In the field of trade, the epidemic has led to the obstruction of people flow and logistics and forced the digital transformation of traditional trade. The development of digital trade is a new momentum to expand foreign trade, a new trend in the development of global trade and an important measure for countries to build a powerful trading nation. The China government also attaches great importance to the development of digital trade. In November 2019, the Central Committee of the Communist Party of China and the State Council's Guidance on Promoting High-quality Development of Trade formally proposed to "Speed up the Development of Digital Trade". On September 2, 2021, General Secretary Xi Jinping proposed to build a "digital trade demonstration zone" at the "China International Fair for Trade in Services Global Service Trade Summit". In his 2022 government work report, Premier Li Keqiang also mentioned "Innovative development of service trade, digital trade and promotion of implementation of the negative list of cross-border service trade".

On January 1, 2022, RCEP officially entered into force, marking the official launch of the free trade zone with the largest population, the largest economic and trade scale and the greatest development potential in the world today. Judging from the text of the agreement, compared with the lack of standardization rules for digital trade under the current WTO framework, especially the chapters on high-level e-commerce, financial services and telecommunication services, the demands and determination of member countries in strengthening digital economic and trade cooperation are more highlighted. On September 16, 2021, China also submitted to New Zealand, the depository of CPTPP, a written letter from China formally joining the CPTPP, actively seeking to join the CPTPP. CPTPP emphasizes the liberalization of service trade and the liberalization of trade in digital products. We can see that both RCEP and CPTPP, the new generation of FTAs, interpret the digital trade terms as separate chapters, which shows the importance of digital trade terms to FTAs.

The CPTPP led by Japan is ahead of the regional strategic cooperation, which affects the construction of the global digital trade rules system. RCEP covers countries in the Asia-Pacific region such as China, Korea and Japan, and has played a role in promoting and facilitating the strategic cooperation in digital trade and the establishment of a digital partnership network in the Asia-Pacific region. <The US-Mexico Agreement>, <the US-Japan Digital Trade Agreement> and other agreements are also making digital trade rules work in the form of regional trade agreements. <The

White Paper on Global Digital Economy (2022)> pointed out that China's digital economy reached US$ 7.1 trillion in 2021, ranking second in the world after the United States. Under this background, China should further study the digital trade regulation under the current regional trade agreements, actively promote regional multilateral cooperation, put forward the "China plan" in the global digital trade regulation, seize the opportunities, meet the challenges, and promote the high-quality development of our economy. By comparing the digital trade rules between RCEP and CPTPP, it is also helpful to butt in with high-level digital trade rules such as CPTPP, providing new ideas for China to join in the negotiation of CPTPP digital trade rules, and actively participating in the governance of global digital trade rules.

Firstly, this paper discusses the concept of digital trade and selects the terms related to digital trade in RCEP and CPTPP based on the concept. Secondly, from the perspective of RCEP, it compares the digital trade terms of CPTPP . After evaluating the results of the comparison, RCEP of many countries including China has successfully come into effect. China is making efforts to apply for joining CPTPP in the next step. We can provide directions for further efforts in the application from the perspective of digital trade, and put forward enlightenment and suggestions.

## 2. The concept of digital trade

Internationally, from the point of view of the definition of digital trade by the official institutions of all countries in the world, digital trade was equated with electronic commerce in the early stage. As early as in the ‘e-commerce work plan’ set up by the second WTO ministerial conference in 1998, the concept of ‘e-commerce’ was defined as the production, sale or delivery of goods and services through electronic means, and was regarded as the concept of ‘digital trade’ for a long time. In 2014, USITC classified digital trade into four categories in <Digital Trade in the United States and the Global Economy II>, namely, search engines, social media, digital deliverables and other digital products and services. The scope of digital trade has gradually expanded. And include physical goods in the definition of digital trade. In 2017, USITC defined digital trade for the third time in <Global Digital Trade–Market Opportunities and Major Foreign Trade Barriers>, and specifically classified digital products and services into six categories, The connotation and extension of digital trade are also extending. There is now a growing consensus that it includes digitally supported transactions in trade in goods and services that can be delivered digitally or physically, involving consumers, companies and governments. In academia, Weber (2010) [1] proposed that digital trade refers to trade involving the transmission of valuable products or services through electronic delivery. The core of digital trade is digital products or services. This definition is vague and does not provide a detailed description of the specific form of electronic delivery transmission and the specific form of products and services transmitted.

At home, although there is no clear and unified definition of digital trade, the official and academic circles have also done a lot of exploration on the concept of digital trade. The rise of digital trade is based on the digital economy. Officially, the digital economy is defined as a series of economic activities in the <G-20 Digital Economic Development and Cooperation Initiative> (2016), which takes digital information and knowledge as production factors, modern information network as an important activity space, and effectively uses information and communication technology (ICT) as an important driving force for productivity growth. Therefore, the continuous development of the digital economy has largely innovated industrial products and influenced the global trading system, thus forming digital trade (Carlsson, 2004; Khumalo, 2010; Maetal, 2019; Meltzer, 2019; Wu Weihua, 2019; Lan Qingxin and Doukai, 2019) [2]. Compared with traditional commerce and trade and e-commerce, the <White Paper on the Development and Impact of Digital Trade 2019> released by China Institute of Communications highlights digital trade in goods and services. The report considers digital trade to be a form of trade in which information and communication technologies play an important role. In its research, the the State Council Development Research Center believes that digital trade refers to a new type of trade that is transmitted through the Internet, relies on cross-

border flow of data, settles accounts through electronic payments, delivers goods and carries out services. In the domestic academic circles, Ivan Sharafanov and Bai Shuqiang (2018) [3] defined the connotation of digital trade in narrow sense and broad sense according to the analysis of foreign scholars on the narrow sense and broad sense of digital products. Among them, the narrow sense of digital trade refers to relying on the Internet to provide the necessary digital information for the trade subject through digital exchange technology; Digital trade in a broad sense is to add the four core factors of ICT products and services, digital products and services, personnel mobility and data transmission into the concept of digital trade. Ma Shuzhong (2018) [4] believes that digital trade is the expansion and extension of traditional trade in the era of digital economy, and defines digital trade based on the actual situation of China's digital trade development. He describes it as a new type of trade activity that takes modern information network as the carrier, and realizes the efficient exchange of traditional physical goods, digital products and services, digital knowledge and information through the effective use of information and communication technology, and further promotes the transformation of consumer internet to industrial internet, and finally realizes the intellectualization of manufacturing industry. Xu Jinhai and Zhou Rongrong (2019) [5] pointed out that as digital products in digital trade are intermediate products that occupy a large proportion in international trade, the continuous development of digital trade caused by the continuous updating of digital products will have a very important impact on the production and interests of various industries in the global value chain.

**Table 1.** Terms of RCEP and CPTPP relating to digital trade

| | RCEP | CPTPP |
|---|---|---|
| E-commerce | 12.1Definition12.2Principles and objectives12.3Scope 12.4Cooperation12.5Paperless trade12.6Electronic authentication and electronic signature12.7Online consumer protection12.8Online personal information protection12.9 Unsolicited electronic commerce12.10Domestic regulatory framework12.11 Customs duties12.12 Transparency12.13Cyber security12.14Location of computing facilities12.15 Electronic cross-border transmission of information 12.16E-commerce dialogue 12.17 Dispute resolution | 14.1 Definition 14.2 Scope and General Provisions14.3 Customs Duties 14.4Non-discriminatory Treatment of Digital Products 14.5 Domestic Electronic Transactions Framework14.6Electronic Authentication and Electronic Signatures14.7Online Consumer Protection14.8Personal Information Protection14.9Paperless Trade 14.10Principles for Access to and Use of the Internet for Electronic Commerce14.11Electronic Cross-border Transmission of Information14.12Internet Interoperability Cost Sharing 14.13 Computing Facilities in Place 14.14Invited Commercial Electronic Information Only 14.15Cooperation14.16Cooperation in Network Security Matters 14.17 Source Code 14.18Dispute Resolution. |
| financial services | Chapter 8 Appendix 1.9 Information Transfer and Information Processing | 11.8specific information processing |
| Telecommunications services | Chapter 8 Appendix 2.4 Access and Use 2.21 Flexibility in Technology Selection | 13.4 Access to public telecommunications services and the flexibility to use 13.23 technology options |
| investment | 10.6 Prohibition of Performance Requirements | 9.10 Performance requirements |
| intellectual property | 11.15 Protecting Rights, Managing Electronic Information 11.55 Domain Names 11.75 Digital Environments Effective Actions against Infringement | 18.24 Trademarks Electronic System 18.28 Domain Names |
| small and medium-sized enterprises | 14.3 Cooperation | 24.1 Information Sharing |

In this article, we also need to clarify the relationship between ‘electronic commerce’ and ‘digital trade’. ‘Electronic commerce’refers to the production, distribution, marketing, sale or delivery of goods through electronic means, which is slightly narrower than digital trade. ‘Digital trade’often includes intellectual property rights and so on. Based on the above definition, unless otherwise specified, we consider those terms that explicitly refer to and refer to e-commerce, digital trade and data flow to be digital trade terms. Some keywords are used as shortcuts to identify such terms (e.g. ‘data’, ‘digital’, ‘electronic’, ‘information and communications’, ‘internet’, ‘online’, ‘information technology’). As these keywords will appear in different sections besides the section on electronic commerce, such as financial services, intellectual property rights, small and medium-sized enterprises, etc., we conducted a cross-cutting analysis on the digital trade terms. Analyzing the terms of digital trade in this way would be more extensive. The RCEP document we discussed was a PDF version compiled by China Free Trade Zone Service Network on November 15, 2020; CPTPP is a PDF version issued by the International Economic and Trade Relations Department of the Ministry of Commerce of the Republic of China on January 14, 2021. Among these trems, RCEP contains 25 specific provisions relating to digital trade, including Annex 1 Financial Services, Annex 2 Telecommunications Services, Chapter 10 Investment, Chapter 11 Intellectual Property Rights, Chapter 12 Electronic Commerce and Chapter 14 Small and Medium-sized Enterprises in Chapter 8. In contrast, the provisions in CPTPP relating to digital trade are Chapter 11 Financial Services, Chapter 13 Telecommunications, Chapter 14 Electronic Commerce, Chapter 18 Intellectual Property, Chapter 24 Small and Medium Enterprises. A total of 25 specific terms. Refer to Table 1 for specific distribution.

## 3. Similarities in Terms Comparison

### 3.1. Promoting trade facilitation

Both RECP and CPTPP advocate the promotion of paperless trade, accept electronic trade management documents and provide electronic trade management documents to the public. In the terms of electronic authentication and electronic signature, it is also stipulated that the legal effect of electronic signature cannot be denied, and the use of interoperable electronic authentication is also encouraged. The provisions of these two terms of RCEP and CPTPP are basically similar, both of which are aimed at improving the level of trade facilitation and reducing the trade costs and risks to a certain extent. Because the transmission of paper-based documents takes time cost and human and financial costs, and there is a prohibition on imposing tariffs on electronic transmission in both customs tariff terms. Therefore, recognizing the legal effects of electronic trade documents and electronic signatures can also reduce the transmission time of documents and the clearing time of customs to a certain extent, improve the efficiency of business, and thus improve the efficiency of trade.

### 3.2. Emphasis on personal information and consumer protection

In terms of personal information, personal information and privacy are crucial to maintaining online trust. Both 12.8 of RCEP and 14.8 of CPTPP state in the treaty: "Each party shall adopt or maintain a legal framework to protect the personal information of e-commerce users. This is in line with the development of all countries in the world. The growth of international trade and the competitiveness of the digital economy depend on the uninterrupted flow of information across borders.

In terms of consumer protection, both RCEP's 12.7 and CPTPP's 14.7 require the protection of online consumers, and each Party shall adopt or maintain consumer protection laws.

RCEP and CPTPP both advocate emphasizing protection and privacy for personal information and consumers, and the provisions in this respect are similar. Both sides are working hard to jointly create a strong digital trading environment.

### 3.3. Elimination of trade distorting barriers

This is reflected in the restrictions on data transmission and localization requirements. In terms of data localization, both agreements contain a broad ban on data localization, which prohibits the localization of data storage as a condition for entering the country's market for commercial activities, and at the same time provide an exception clause that allows parties to enforce data localization based on public policy objectives. The addition of this exception will show the flexibility of RCEP and CPTPP and the non-discrimination of eliminating trade barriers. Because this exception mainly refers to measures that achieve public policy objectives and do not constitute discrimination or trade restrictions, as well as necessary measures to protect their basic security interests. The data localization rules require that data be stored in the relevant jurisdictions, so this feature of the treaty helps provide certainty for businesses seeking to optimise investment decisions.

In terms of data transmission, both RCEP and CPTPP also believe that data for commercial purposes can flow across borders. Consistent with the exception clause of data localization, both agreements have provisions that cannot prevent the cross-border flow of data based on public policy objectives, and the cross-border flow of data can also reflect the restrictions that both agreements are committed to eliminating trade barriers.

Both data localization and data transmission restrictions can be used by the government as a restrictive measure, but a balance must be struck between data localization and data transmission to ensure the feasibility of an open Internet.

### 3.4. All pay attention to network security

In RCEP12.13 and CPTPP 14.16. Both stressed the importance of network security and stressed the need to strengthen the capabilities of national computer security incident authorities and to use existing mechanisms for cooperation. Network security is an important part of the digital economy, and a secure network environment is the foundation for the smooth progress of digital trade. Therefore, the security issue deserves the attention of all parties. Both clauses emphasize the issue of network security separately, indicating that both are committed to exploring the depth and breadth of network security.

The strong strength of the network security industry is the cornerstone of safeguarding the security of the national network space. The successful signing of RCEP will definitely push the network security industry into a boom. After China applies for joining the CPTPP in the next step, in order to actively deal with the cross-border flow of data, localization of computing facilities, source code protection and other provisions and to integrate with them as soon as possible, the country will definitely increase the investment in network security to eliminate any possible national information security risks.

## 4. Differences

### 4.1. Customs duties

On the issue of customs duties, although both sides stressed the prohibition of imposing duties on electronic transmissions. However, in specific details, RCEP's 12.11 stipulates that each party shall maintain that it is currently prohibited to levy tariffs on electronic transmissions between parties. The "current" shows that this may be a non-permanent practice, and also stipulates that further adjustments and deliberations on tariffs on electronic transmissions and electronic commerce can be made according to the WTO Ministerial Conference, which shows a more flexible feature; However, this provision of CPTPP does not emphasize the current situation. It only explains that no contracting party may impose tariffs on electronic transmissions from its brackets. We can understand that this is a permanent practice. Further, there is no mention of some more flexible provisions prohibiting the imposition of tariffs on electronic transmissions. This also reflects the difference in flexibility between RCEP and CPTPP in this respect. Therefore, if RCEP is taken as an example, China should

explain and emphasize the flexibility of the terms in the negotiation of the subsequent application for CPT PP.

Moreover, as for the digital tax, while China is negotiating, China's commerce and taxation authorities should step up their detailed research on the digital service tax, conduct a comprehensive analysis on the terms of its existing plan and the industrial fields that may be involved in electronic transmission, etc., and launch the digital service tax in a timely manner, formulate relevant tax rates, so as to save for a rainy day. At the same time, we should step up our research on the possible impact of the digital service tax on the digital industry in China, and make a plan to deal with it.

### 4.2. Cross-border transmission of information by electronic means

Regarding the cross-border transmission of information by electronic means, the first two articles of RCEP 12.15 and CPTPP 14.11 are the same. Both parties consider the differences in regulatory requirements of various countries and consider that data that can be used for commercial purposes can flow across borders. At the same time, Article A of Article 3 also stipulates that the cross-border flow of data must not be prevented based on public policy objectives. However, the difference is that an exception clause for the protection of security-based interests has been added to Clause B of Article 3 of RCEP12.15. CPTPP does not have a description of the safety exception clause.

Allowing data to flow across borders is meant to encourage the opening up of e-commerce and digital trading markets. However, due to the security and development situation in China, there are still some disputes with CPTPP over the electronic cross-border transmission of information. According to the "Network Security Law", China strictly controls the cross-border flow of data. CPTPP is committed to reducing barriers to the development of digital trade and is more open to data. Data is a new factor of production in the era of digital economy. It is the basic and strategic resources of the country and directly relates to the national information security, technological security and economic security. How to make the data flow and ensure the safety of the data flow is a big test facing China. Data security capability is a direct reflection of national competitiveness. Therefore, the safety exception clause is particularly important in the next CPTPP negotiation.

### 4.3. Non-discrimination in Digital Products and Services

RCEP does not have market access regulations for digital products and services. In CPTPP, 14.4 emphasizes the non-discrimination of digital products. This is not covered by RCEP. This provision prohibits signatory countries from favouring domestic products and their creators and owners, or discriminating against foreign products or foreign manufacturers. This means that if a country decides to open certain digital products, it must offer the same opening to domestic and foreign digital products. "Products" herein include computer programs, video and audio recordings for sale and electronic transmission. Since these goods are digital in themselves, rather than tangible goods that are traded solely through electronic interaction, it can be said that this represents the fundamental impetus of the Treaty to digital trade.

CPTPP requires non-discriminatory treatment of digital products to reduce digital trade barriers and facilitate foreign digital products and services to enter other countries' markets. China's claim in this regard is that it is currently very difficult to accept the non-discriminatory treatment clause for digital products. Because China's independent research and development capability on the core technology, key equipment and operating system in the information network field is not strong, but the internet giants in developed countries have strong advantages in the information industry, so once non-discriminatory treatment is adopted, it will inevitably squeeze the development space of China's information industry and make China's digital enterprises face huge impact. Therefore, there are certain differences between China's proposal and CPTPP's proposal in the market access of digital products and services, which is also the key area for the next negotiation.

### 4.4. Source Code

The algorithm represented by the source code usually includes business secrets and information that gives it a competitive advantage. It is the key technology in current digital products. RCEP has not mentioned the issue of source code. With regard to digital intellectual property rights in the digital trade clause of standard CPTPP, 14.17 stipulates the issue of source code. It is prohibited to transfer or access the source code as an import condition. Even for national security reasons, the government cannot force suppliers to provide source code to foreign governments. It prohibits signatory countries from requiring software companies to obtain their source code. But the ban is limited to mass-market software, excluding software used for critical infrastructure. The CPTPP was developed from the TPP led by the United States before, so he has also kept some protection of trade secrets and national security in the United States to a certain extent. This is unique to CPT PP. The terms of the source code give enterprises absolute control over the source code, protect the intellectual property rights of mass market software, and help improve the enthusiasm of these enterprises for innovation.

The provisions of CPTPP have clearly stipulated that member countries are prohibited from forcibly requiring the transfer and disclosure of source code. However, China is currently at odds with the provisions of CPTPP in this regard, and China tends to temporarily refuse to accept the source code provisions. The difference on the source code issue is that China needs to work hard to reach an agreement in the next application for joining CPT PP.

### 4.5. Location of computer facilities

Regarding the location of the computer facilities, pay close attention to RCEP 12.14 and CPTPP14.13. So far, RCEP Chapter 12.14 is almost a mirror image of the first three paragraphs of the CPTPP article, all of which require that data storage should not be localized as a condition for entering the country's market to conduct business. However, there is a difference in the setting of the exceptional conditions, and the footnote added by CPTPP and RCEP in Article 12.14.3(a) is inconsistent: "For the purpose of this item, the Parties declare that the necessity of implementing such lawful public policies shall be determined by the implementing Parties." This means that the legitimacy of any public policy that may require companies to establish computer facilities in member states is self-judgment and self-belief. In other words, if one party says so, anything can be considered legal. Moreover, subparagraph (b) continues, in case of insufficient footnotes, that the article does not prevent a party from taking "any measures that it considers necessary to protect its underlying security interest". No other party may object to such measures. "and there is no such limitation in CPTPP. In contrast, CPTPP14.13.3(b) proposes a clause that does not prevent a Party from taking measures to localize computer facilities as market quasi-human conditions based on the pursuit of legitimate public policy objectives, and states that such measures should not "impose restrictions on the use or location of computer facilities beyond those required to achieve the objectives".

Compared with RCEP, it is obvious that CPTPP unilaterally considers the parties to have made improvements in this provision, which is an improvement. In China, according to the "Regulations on the Administration of Online Publishing", "Regulations on the Administration of Maps" and "Measures for the Administration of Electronic Banking", China requires that some computing facilities must be localized. Some may be based on public policies, while others are based on the objectives of national security and development strategies. On the one hand, China's opinion is different from that of CPTPP, so in the next CPTPP negotiation, China should focus on weighing the benefits and losses in this respect.

### 4.6. Inclusiveness and Transparency

Compared with CPTPP, the member countries of RCEP include countries with great differences in economic system and development level. For example, Japan and Cambodia, this also determines that RCEP must take into account the demands of all parties and balance the interests of all parties when reaching an agreement. Therefore, RCEP has adopted some special provisions of differential treatment for less developed regions. For example, in the middle of "paperless trade", "electronic

authentication and electronic signature", "online consumer protection", "online personal information protection" and "unsolicited commercial electronic information", Cambodia, Laos and Myanmar are not required to use this clause within five years from the effective date of the agreement. The RCEP Agreement gives the least developed economies transition period and development space, and takes care of the interests of the least developed economies, which reflects the strong inclusiveness of the RCEP Agreement. In contrast to CPTPP, this agreement does not have any special requirements of this type.

Transparency is described separately in RCEP12.12, which includes that one Party should publish all relevant measures as soon as possible and respond to another Party's request for specific information as soon as possible. While CPTPP does not provide a separate description of transparency. The unique transparency rules provide a powerful environment for better shaping the e-commerce environment, which can enable the parties to communicate information for a longer period of time, and also reflect the characteristics of openness.

The above terms show that RCEP is more inclusive and transparent than CPTPP in some specific details. China should also be transparent and inclusive in the next negotiation process of applying for CPT PP.

## 5. Challenges to China's Digital Trade

At present, digital technology innovation and e-commerce are flourishing. According to data from the United Nations Conference on Trade and Development (UNCTAD), the world's exports of digitally delivered services have grown at an average annual rate of 7%- 8% over the past decade. The digital trade has become the key driver of global economic development. However, with the rapid development of digital trade, there is no uniform global digital trade rules. Therefore, most countries, in order to seek their own interests in the field of digital trade and grasp the initiative and the right to speak in the formulation of digital trade rules, participate in the construction of digital trade regulations by participating in multilateral regional cooperation and joining free trade agreements. At present, the developed countries such as the United States, Japan and Europe are at the forefront of the world in terms of economic development, and gradually control the right to speak in the formulation of digital trade rules. Especially, the emergence of ‘American template’ and ‘European template’ has a great impact on the construction of a new system of digital trade rules. At the same time, it also challenges the development of digital trade in China. The continuous evolution of global rules also makes China's digital trade industry face a more complex international environment.

### 5.1. China's Pressure on High Standard Digital Trade Rules Increases

At present, RCEP has come into effect, and the higher standard rules in CPTPP also put forward higher requirements for the development of China's digital trade. For example, the formulation of standards in terms of source code and data storage localization is consistent for both developed and developing countries. But now, the development of global digital trade is extremely uneven. The four developed economies of the United States, Germany, Japan and South Korea account for more than 50% of the global e-commerce sales. A few digital platforms dominate the global cross-border electronic commerce market. Global digital services exports are highly concentrated in a few countries. The United States and Europe are the core regions of global digital services supply (China Institute of Information and Communication's Annual Observation Report on Global Digital Economic and Trade Rules (2022)). In this context, the agreement rules and standards consistency is a challenge for developing countries, which will bring some hidden digital trade barriers to China, hinder the development of digital trade in China, and increase the pressure of China on high-standard digital trade rules.

### 5.2. It is more difficult to balance trade freedom with national security.

On the one hand, the free flow of data across borders can promote the development of digital trade, but on the other hand, it can also cause negative issues such as information security and privacy disclosure. On this issue, different countries hold different opinions. The United States advocates allowing the free flow of data across borders on the basis of ensuring the security of private information, and believes that the data dividend can be realized only when the data are shared in common. China attaches great importance to information security, network security and privacy protection, and has issued relevant laws and regulations. For example, the <Law of the People's Republic of China on Internet Security> clearly stipulates the cross-border flow of data and localization of data storage, and puts forward corresponding restrictions. The premise of free flow of cross-border data is that information security can be guaranteed, and the sustainable development of digital trade must be based on information security. Therefore, it is a challenge for China to balance the freedom of trade with the national security, taking into account the domestic information security protection and the demand of data circulation for the development of international digital trade.

## 6. Enlightenment

We can see from the comparison of the terms of RCEP and CPTPP digital trade that the development of digital trade and the transformation it brings will affect a wide range of stakeholders in different regions, developed economies and emerging economies, especially for the member countries in the region. Because they have gained the advantage of more advanced management skills and policies to manage the opportunities offered by digital trade. Small and medium-sized enterprises will benefit from these provisions. What they should think about is how to arrange a reasonable strategy to benefit more from these provisions. Policymakers are also facing a huge test of how to balance security with revenue.

### 6.1. Relevant Enterprises

2.4 Emphasized that both RCEP and CPTPP pay attention to network security, especially for the cross-border flow of data, they should not only ensure the flow of data, but also pay attention to the security of data, which includes the security of data storage and the security of data flow. This will bring new opportunities to relevant enterprises, such as network security companies and data storage enterprises. Enterprises should grasp the business opportunities.

Network security is not only an important chapter in the new generation of FTA, but also a key industry for China's development. Therefore, as a network security enterprise, we must first perfect the research and development of network security products to adapt to the current new rules; Secondly, as a typical knowledge-intensive industry, the network security industry should continuously strengthen the reserve of network security talents. Finally, the network security enterprises should strengthen the integration of the upper, middle and lower reaches of the industrial chain to enhance business revenue.

At present, the massive growth of information data storage has become one of the important contents of the development of information technology. The development of network storage industry has become the inevitable trend of the development of digital technology in IT industry, which naturally brings huge business opportunities to storage equipment manufacturers. Behind this huge storage market is the battle for storage technology. In many storage enterprises, there are many storage technologies and products with their own characteristics that are active in the market. Enterprises should organically combine these products to build the network storage system desired by users.

### 6.2. Policy makers

With the development of digital trade in full swing, the formulation of digital trade rules has also become the focus of international attention. Especially for each member country that actively

participates in the FTA, they are actively exporting their own digital trade rules by signing free trade agreements and putting forward proposals to the World Trade Organization. At the stage of initial exploration of digital trade rules, China can also actively participate in the negotiation of international digital trade rules and put forward its own trade proposals to avoid being dominated by digital trade rules proposed by other countries. By comparing the digital trade terms of RCEP and CPTPP, we can see the emergence stage. China is paying close attention to the non-discriminatory treatment of digital products, source code issues, cross-border flow of data, localization of data and other aspects, which are also urgent issues for policy makers to consider. And in the next step to join CPTPP, digital trade rules should be proposed from the following aspects:

### 6.2.1 Cross-border data flows

From 3.1 Comparison of Cross-border Data Flows, CPTPP allows cross-border transmission of electronic information. However, article 37 of the 2017 version of China's Internet Security Law stipulates that personal information and important data collected and generated by the operators of key information infrastructure during their operations in People's Republic of China (PRC) shall be stored in China. In this respect, China's legislation is somewhat different from the provisions of CPT PP. CPTPP allows cross-border free movement for a higher level of openness. China is also currently making active reforms in this regard. It has adjusted Article 37 by adding that those that are really necessary to be provided overseas due to business needs shall be subject to safety assessment in accordance with the measures formulated by the national internet information department in conjunction with relevant departments in the State Council. If there are other provisions in laws and administrative regulations, such provisions shall prevail. In 2021, the "Data Safety Law" came into effect one after another, supplementing and improving the management system of cross-border data flow in China.

Although the adjusted 37 items have relaxed the cross-border flow of data, a more specific allocation system is still required on some issues. For example, the criteria for identifying "important data" and what type of business "business needs" should be, and on the issue of "security assessment", it should also specify what meets the conditions for security assessment, as well as some detailed provisions such as risk monitoring after the data leave the country. The policy makers in the next step need to make efforts in this respect, not only to ensure the flow of data, but also to ensure the safety of data flow. We can also use open platforms such as the Digital Trade Pilot Zone to conduct cross-border data flow experiments and explore a system that takes into account both security and efficiency. Or, for example, RCEP's rules directly set up "safety exception clauses" and "modification, implementation and termination" and other flexible clauses, or implement exceptions for cultural and audio-visual industries and national supervision with the help of EU's experience, so as to reserve negotiation space for better adaptation to changes in digital trade in the future.

### 6.2.2 Computer facilities location

In the comparison according to 3.5, both RCEP and CPTPP require that data storage should not be localized as a condition for entering the country's market to conduct business. However, according to Article 8 (3) of China's current Regulations on the Administration of Online Publishing, the necessary technical equipment for engaging in online publishing services must be stored in People's Republic of China (PRC). China's "Map Management Regulations" in 2016 stipulates that the servers of the Internet map service units should be located in the territory of China; Article 10 (4) of the Measures for the Administration of Electronic Banking in China states that the electronic banking operation business system and business processing server facilities of Chinese banking financial institutions are located in People's Republic of China (PRC). In the above regulations, China also requires the localization of computer facilities in some areas. This contradicts the digital trade rules of RCEP and CPTPP. Therefore, it is also the focus of our negotiation of digital trade rules. China's requirement for localization of computer facilities in some key areas is based on rational data defense, which ensures its own security by controlling its own data. Therefore, at this point, the policy makers cannot make concessions in the next negotiation. By comparing the terms of RCEP and CPTPP in this respect,

RCEP emphasizes that any measure that one party considers necessary to protect its basic security interest shall not be challenged by other parties; The CPTPP says it cannot prevent a party from pursuing legitimate public policy objectives. In the language of RCEP, more emphasis is placed on one's own right to speak. In the negotiation of the next CPTPP, policy makers can consider industries that specifically pursue legal public policy objectives based on the relevant provisions of RCEP, or more strive for one's own rights in the language of the terms.

### 6.2.3 Source code

In the comparison of 3.4, RCEP did not emphasize the rules of source code. CPTPP began to set up special source code rules, which explicitly prohibited the parties from requiring the software owner to transfer or allow access to its source code, but only applied to mass market software, and explicitly excluded its use in key infrastructure. This is to strengthen the protection of digital intellectual property rights of mass market software source code. China has not yet introduced a specific source code clause into the international economic and trade agreements, which is still blank in this respect, but it is not advisable to completely avoid this issue. Moreover, China is actively studying to join the CPT PP. In the subsequent negotiation stage, the discussion on this issue is inevitable. Therefore, the policy makers should clarify China's source code rules as soon as possible, which will help China to participate in the negotiations with a more active attitude. China should combine security control with system innovation in depth as the basic stand of source code. Domestically, China should strengthen the protection of intellectual property rights of software source code and encourage innovation, except for the specific provisions of domestic laws. For those that do not require the software owner to transfer the source code, it can refer to the "Code Law" to explicitly prohibit the competent authority from requiring the software owner to provide the source code, encourage the software owner to voluntarily transfer and provide the source code, and promise not to compulsorily share the source code. From an international perspective, China should pay attention to whether the introduction of source code will hinder the realization of important public policy objectives such as network security, so as to set more autonomous and flexible provisions on the terms of the source code. Apart from retaining the original "except for critical infrastructure", it can also advocate the exclusive use of customized software, which is actually in line with the specific exceptions of its own practice.

### 6.2.4. Non-discriminatory treatment of digital products and services

In the comparative part of 3.3, it is found that CPTPP requires non-discriminatory treatment for digital products and services, and RCEP does not have such a provision. "Digital products" herein include computer programs, video and audio recordings for sale and electronic transmission. However, judging from the current policies, according to the 7 information transmission areas and 12 cultural areas stipulated in the 2021 edition of the Special Measures for the Administration of Foreign Investment Access (Negative List), it is prohibited to invest in news organizations, audio-visual products and electronic publications, radio stations, radio and television transmission networks, internet information services, internet publishing services, internet audio-visual program services, internet cultural operations, etc. This series of prohibited sexual behaviors is in contradiction with the non-discrimination of digital products in CPTPP, which may affect the current cultural and information transmission policies of China. Therefore, in the negotiation of actively joining CPTPP, the focus is on the non-discrimination rules of China's digital products and services. On the one hand, the policy makers, on the basis of actively expanding the opening of cultural market, have included terms such as investment, news and publication in the inconsistent measures of CPT PP. Alternatively, an exception clause may be added to this clause of CPTPP, and the specific industry for which the exception is indicated in the notes, such as finance, investment, etc.

## 7. Summary

First of all, China should take advantage of the "the belt and road initiative" to strengthen cooperation with other countries in the digital field, actively carry out bilateral and multilateral

cooperation in digital governance, participate in the negotiation and formulation of rules, contribute China's wisdom to the construction of global digital trade rules, and put forward China's proposal. Secondly, we should strengthen the construction of laws and regulations in the field of digital trade, improve standards and norms such as data intellectual property rights and personal information security, and strengthen regulatory legislation to create a good institutional environment for the development of digital trade. Finally, China should strengthen the government supervision, play the role of government supervision in digital trade to the regulatory requirements mentioned in the terms of standard RCEP and CPTPP such as cross-border information transmission through electronic means and unsolicited commercial electronic information, and carry out supervision cooperation with the member countries under the agreement in the fields related to digital trade.

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