

The Benchmarking Strategy for Provincial Free Trade Zones in International High-Standard E-Commerce Rules: A Case Study of China (Jiangsu) Pilot Free Trade Zone

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Abstract

Cross-border e-commerce has become an important part of international trade. Most of the bilateral or multilateral free trade agreements signed in recent years have a special chapter on e-commerce to regulate them. This article summarizes the main contents of international high-standard e-commerce rules and summarizes them into four major aspects: 1) Reduce the access barriers of cross-border e-commerce trade; 2) Promote the facilitation of electronic transactions; 3) Protect intellectual property rights and online consumer rights; 4) Explore the digital trade rules and services tax. Furthermore, based on the analysis of China's free trade zone and China (Jiangsu) pilot free trade zone, the practical path of provincial-level free trade zones benchmarking international high-standard e-commerce rules is proposed from four aspects. First, technical standards and systems should be aligned with international high standard rules. Second, optimize laws and regulations to improve the business environment. Third, strengthen innovation, infrastructure construction and talent training. Fourth, deepen international and domestic cooperation and exchanges. The research provides a useful reference for how provincial free trade zones can benchmark against international high-standard e-commerce rules.

Keywords

E-Commerce, Free Trade Zones, International High-Standard, Benchmarking Strategy

1. The Rise of International E-Commerce and Free Trade

In 1991, the opening of the Internet to commercial use marked the beginning of the possibilities of e-commerce. Since then, the rapid development of web technology, especially the advent of web browsers, has greatly promoted the popularity of e-commerce. With the advancement of globalization and the increase of international trade activities, it is more and more urgent for enterprises and consumers to have a kind of fast, convenient and low-cost transaction methods. In this context, E-commerce facilitates the globalization of trade by providing a borderless platform that enables buyers and sellers around the world to transact easily. On the other hand, the increase in consumer demand for shopping convenience and personalization has also contributed to the development of e-commerce. As online shopping can provide a wider range of options, it is more convenient and faster than traditional retail.

With the continuous advancement of Internet technology and the popularization of smart phones, e-commerce has developed from the early B2B and B2C models to cover C2C, G2C and other models. Currently, China, the United States and the United Kingdom are the world's largest e-commerce markets. In 2023, global retail e-commerce sales reached an estimated 5.8 trillion U.S. dollars (Chevalier, 2024). Since the end of the new crown pneumonia epidemic, the application of AI (artificial intelligence), big data, cloud computing and other technologies is constantly optimizing the user experience of e-commerce and improving the efficiency of transactions. Through AI technology, merchants can provide personalized product recommendations based on consumers' shopping habits and preferences. Besides, cross-border e-commerce is becoming a very important part of international trade. Many e-commerce platforms, such as Amazon and Alibaba, have established a strong cross-border transaction network, making it easy for consumers to purchase goods from all over the world (He et al., 2023; Chen et al., 2024). Moreover, with the rapid development of e-commerce, governments around the world are gradually improving relevant laws and regulations to protect consumer rights and regulate market order. For example, the European Union's GDPR (General Data Protection Regulation) imposes strict requirements on data processing in e-commerce (Long et al., 2016; Voigt & Bussche, 2017). From a global perspective, despite the challenges of data security and privacy protection, the future development prospects of e-commerce are still very broad. With the further development of technology and the gradual optimization of the policy environment, e-commerce will play a more important role in the global economy.

The rise and development of global free trade is one of the important symbols of international economic integration, which reflects the increased interdependence and openness in global economic activities. The establishment of free trade zones, the signing of multilateral trade agreements, and the establishment of international trade organizations are all key parts of this process (Pomfret, 2021; Dong et al., 2023). On the one hand, economic globalization is the most direct

background for the rise of free trade. After World War II, countries around the world, especially Western countries, began to promote the reduction of trade barriers to promote economic recovery and growth. The General Agreement on Tariffs and Trade (GATT) in 1947 and the subsequent establishment of the World Trade Organization (WTO) were important milestones in the promotion of global free trade (Gnangnon, 2023; Braithwaite, 2024; Sykes, 2024). On the other hand, technological advances, especially the development of information and communication technologies, have greatly reduced the cost and complexity of cross-border trade, making the international flow of goods and services more convenient. These technological advances provide the possibility of practical operation for free trade.

Despite the rise of protectionism in recent years, there are still a large number of free trade agreements in force around the world. For example, the signing of CETA (Comprehensive Economic and Trade Agreement) between the EU and Canada and the Trans-Pacific Partnership (TPP) show the global expansion of free trade agreements (Park, 2020; Wu, 2020). According to the World Trade Organization, as of 1 August 2024, 369 regional trade agreements are already being implemented around the world (WTO, 2024). According to UNCTAD, global trade totaled a record \$28.5 trillion in 2021. In 2023, global trade is expected to reach around \$31 trillion despite the declining of global demand, which indicates that global trade is showing a steady recovery (UNCTAD, 2024). Moreover, in the development of free trade, environmental protection and social responsibility are increasingly taken into account. Many trade agreements are beginning to include provisions on environmental protection and labor rights to ensure that trade growth does not come at the expense of sustainable development. In addition, with the rapid development of e-commerce and digital services, digital trade has become a new area of free trade (Burri, 2021). This includes the cross-border flow of data and the international transaction of digital products, which need to be regulated and guided by new international rules. In short, as an important part of global economic integration, the development of free trade has a direct impact on the health and stability of the global economy. In the future, the development of free trade will take more into account the balanced development of the global economy and fair trade between countries. At the same time, it will also need to deal with new challenges brought about by changes in the global political and economic environment, such as trade wars and the resetting of tariff barriers.

2. The Main Content of Current International High-Standard E-Commerce Rules

Since the economic crisis in 2008, e-commerce has played an increasingly important role in international trade with the development of internet technology. At present, there are many bilateral or multilateral investment and trade rules signed by countries around the world, and each has its own characteristics. Thus, a rule cannot simply be held to be the highest standard. We consider that international high-

standard e-commerce rules do not refer to the e-commerce clauses in a specific trade agreement, nor to the specific e-commerce-related agreements signed and implemented between two or more developed regions or developed countries, but to a system of rules that can be reached and promoted internationally after fully considering the resource endowment, development stage, economy, society, population, environment, technology and other factors of each country (Ravenhill, 2017; Biegong, 2020; Petri & Plummer, 2020). High-standard e-commerce rules, such as the core provisions of e-commerce in TPP, CPTPP, TTIP, RCEP, USMCA, etc., all make strict provisions on tariffs, free flow of digital information, prohibition of mandatory service localization, privacy and security protection, etc., in promoting electronic transactions of trade in goods and services (Grieverson et al., 2021; Sheng & Jin, 2022; Lin, 2024).

2.1. Reduce the Access Barriers of Cross-Border E-Commerce Trade

In the context of the globalization of e-commerce, market access has become one of the key factors, especially as TNCs (Transnational Corporations) and SMEs (Small and Medium-sized Enterprises) are seeking to enter new markets. A number of international trade agreements contain specific provisions on market access for e-commerce. For example, the TPP places special emphasis on market access for e-commerce, which stipulates that member states should allow e-commerce companies from other member countries to enter their markets and ensure that these companies operate on a non-discriminatory basis. Besides, the EU-driven Single Digital Marketplace strategy also simplifies the rules for cross-border electronic transactions, aiming to break down national borders in online services and e-commerce to ensure that businesses and consumers in all EU member states can compete and spend freely in their internal markets.

With regard to the cross-border transfer of data, high standards of electronic commerce rules require the contract parties to permit the cross-border transfer of information, including personal information, by electronic means for the purpose of carrying out business for the related persons (Long et al., 2016). Furthermore, the signed countries may not impose customs duties on electronic transmissions and their contents between persons in one Contracting Party and another Contracting Party. With regard to the location of computer facilities, the use of computing facilities in the territory of that Party or the placement of facilities in the territory of the Contracting Party shall not be made a condition for persons covered by the requirement to operate in its territory. As to source code, the Parties may also not make a requirement for the transfer or acquisition of software source code in the possession of a person in another Contracting Party a condition for the import, distribution, sale or use of the software and the products containing the software in their territory.

For example, the European Union's GDPR (General Data Protection Regulation) sets out the principles of data processing, the rights of data subjects, and strict conditions for cross-border data transfers, requiring third countries to

ensure a substantial level of data protection when receiving personal data from EU member states. This is usually achieved through mechanisms such as “adequacy decisions”, “standard contractual clauses” or “corporate rules” (Buckley et al., 2024; Corning, 2024). As another example, the USMCA encourages the free flow of data in its e-commerce chapter and prohibits member states from imposing data localization requirements, which require companies to store data on servers in their own countries. This regulation helps to reduce the operating costs of enterprises and promote digital trade. In addition, the APEC Cross-Border Privacy Rules (CBPR) require participating countries to ensure that their domestic laws provide adequate protection for personal information (Sullivan, 2019). The Digital Economy Partnership Agreement (DEPA) between New Zealand, Chile and Singapore also contains provisions to promote the digital economy and e-commerce, with particular emphasis on the importance of data flows and the protection of privacy (Peters, 2023).

2.2. Promote the Facilitation of Electronic Transactions

In order to promote the development of electronic transactions, the international high-standard e-commerce rules have carried out a series of strict regulations in the framework of electronic transactions, electronic payment security, electronic signatures and paperless trade. With regard to domestic electronic transaction frameworks, high international standards of electronic commerce rules generally require that contracting parties maintain a legal framework for electronic transactions that is consistent with the principles of the 1996 UNCITRAL Model Law on Electronic Commerce or the United Nations Convention on the Use of Electronic Communications in International Contracts, signed in New York in November 2005, in an effort to avoid imposing any unnecessary regulatory burden on electronic transactions and to facilitate the issuance of recommendations by stakeholders.

In global e-commerce, electronic payment security is the key to maintaining transaction security and protecting consumers’ financial information (Hasbolah et al., 2023; Houcheimi & Mezei, 2024). This includes requiring payment systems to comply with international security standards, such as PCI DSS (Payment Card Industry Data Security Standard) or PSD2 (Payment Services Directive 2). Among them, the PCI DSS standard includes 12 requirements, covering aspects such as network security, policies, procedures, network architecture, and software design. PSD2 in the European Union introduces strict customer authentication requirements, known as Strong Customer Authentication (SCA), which are mandatory for all electronic payments within the European Economic Area (EEA). In addition, high international standards of electronic commerce rules require States parties to take appropriate security measures to prevent fraud and protect consumers’ financial information. At the same time, there is a need to be transparent about the processing of electronic payments to ensure that consumers have the right to know and control.

In the area of electronic signatures, the United Nations Commission on International Trade Law (UNCITRAL) Model Electronic Signatures Act (2001) is one of the most important legal texts on electronic signatures internationally. The European Union's Electronic Signatures Directive (1999/93/EC) provides legal recognition for electronic signatures, ensuring that their legal effect is consistent across member states. In addition, the EU has adopted a more comprehensive eIDAS regulation (EU No 910/2014), which further regulates the use of electronic signatures and their verification services, emphasizing the concepts of advanced electronic signatures and qualified electronic signatures. The United States Electronic Signature Global and National Commerce Act (E-SIGN Act) also specifies the qualifications and responsibilities of certification service providers. According to many high standard free trade agreements signed in recent ten years, Contracting Parties shall not prohibit the parties to an electronic transaction from jointly deciding on the appropriate method of authentication for the transaction, nor shall they prevent the parties to the electronic transaction from having the opportunity to prove to judicial or administrative authorities that their transaction complies with the requirements of the relevant legalization law. Except as otherwise provided by law, the legal validity of a signature may not be denied solely on the ground that it is by electronic means. For paperless trade, Parties should, to the extent possible, make trade administrative documents available to the public electronically and make electronically submitted trade administrative documents as legally valid as paper copies of such documents.

2.3. Protect Intellectual Property Rights and Online Consumer Rights

Intellectual property rights are one of the typical post-border issues in international investment and trade (Drahos, 2016). The pursuit of high standards of intellectual property protection is an important direction for the reform of investment and trade rules promoted by developed countries. For example, under the leadership of the United States, the TPP has made high-level provisions for the protection of intellectual property rights, resulting in the TPP negotiations not succeeding for a long time. After the withdrawal of the United States, 11 of the 22 provisions that were set aside by the CPTPP treaty are intellectual property protection (Drahos, 2016; Ji & Rana, 2019; Park, Petri et al., 2021). With the increase in the volume of digital product transactions, intellectual property rights have become the focus of e-commerce regulations. High standards of e-commerce rules require countries to strengthen the protection of copyrights, trademarks and patents to prevent the circulation of pirated and counterfeit products. This includes the regulatory responsibility of online platforms for infringement and providing effective legal means to deal with infringement of intellectual property rights.

Moreover, in the e-commerce environment, challenges such as the ease of reproducibility of digital content and the complexity of cross-border enforcement of IP protection make infringement more difficult to monitor and sanction. In response to these challenges, countries around the world have strengthened the

protection of intellectual property rights through a series of international regulations and agreements. For example, the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) of the World Intellectual Property Organization (WIPO) and the World Trade Organization (WTO) sets minimum standards for member countries to provide consistent mechanisms for the protection and enforcement of intellectual property rights. With regard to how to protect authors' intellectual property rights in the Internet domain, high-standard rules such as the TPP suggest that contracting parties should ensure that authors have access to legal remedies when dealing with such infringements, and that they should provide safe harbors for online services of Internet service providers. In addition, TPP, CPTPP and other high-standard investment and trade rules also have criminal punishment requirements for some serious infringement of intellectual property rights, which can be roughly divided into two categories: one is the behavior that should be applied to criminal procedures and criminal punishment, and the other is the behavior that should at least include but is not limited to criminal procedure and criminal punishment.

With the rapid development of e-commerce, consumers are facing many risks in online shopping, such as fraud, privacy breaches, and service quality issues (Janavičiūtė et al., 2024; Park, Shin et al., 2024; Singh et al., 2024). As a result, there is an increasing international focus on consumer protection in e-commerce, with the aim of building a safe and fair digital market environment. For example, the European Union's Consumer Rights Directive provides for a wide range of consumer protection measures, including transparency requirements for product descriptions, the right to return goods, and remedies for breach of contract. The Federal Trade Commission (FTC) in the United States also sets guidelines for online advertising and privacy protection. At present, the protection of the rights and interests of online consumers by high-standard e-commerce rules such as TPP, CPTPP, and RCEP is mainly concentrated in three aspects. First, each Party should adopt or maintain consumer protection laws that prohibit fraud and commercial fraud that cause or potentially harm to online consumers. Second, with regard to the protection of personal information, each Party shall adopt or maintain a legal framework for the protection of the personal information of e-commerce users, publish relevant information on the protection of personal information provided to e-commerce users, including how individuals seek redress and how enterprises comply with all legal requirements, and adopt non-discriminatory practices as far as possible in protecting e-commerce users from harm, and encourage the establishment of mechanisms to enhance the compatibility between different systems. Third, in the case of unsolicited commercial electronic information, each Party should require the information provider to improve the recipient's ability to prevent the receipt of such information on the one hand, and to obtain the recipient's consent to receive the commercial electronic information on the other hand, or to minimize the amount of information.

2.4. Explore the Digital Trade Rules and Services Tax

With the rapid expansion of the digital economy, the international community is increasingly concerned about the taxation of multinational technology companies. The Digital Services Tax (DST) was created to tax businesses that provide cross-border digital services to ensure that they contribute a fair tax to the public services and infrastructure development in the countries in which they operate (Brauner, 2024; Ma et al., 2024; Martinez et al., 2024). The digital services tax is mainly aimed at businesses that provide digital services such as online advertising, sales of user data and digital interface services within a country, often without a physical presence in the place where the services are provided. The purpose of DST is to correct the shortcomings of the traditional tax system, so that digital giants with high profits but light tax burdens can make a reasonable contribution to the use of public resources in the local market.

The introduction of the digital services tax has sparked widespread controversy around the world (Bassey et al., 2022; Avi-Yonah et al., 2022; Tuttmann et al., 2023). On the one hand, proponents see DST as a means for the state to counter tax avoidance by digital giants, reducing base erosion and profit shifting. Critics, on the other hand, argue that such taxes could lead to unfair tax burdens and trade wars. The European Union had proposed a 3% tax rate on digital businesses with revenues above a certain threshold, but it was not finally approved due to disagreement among member states (Amie, Hok et al., 2021). However, some member states such as France and Italy have introduced their own DST regulations separately. The United States opposes the separate taxation of United States technology companies by other countries, arguing that it is unfair to United States companies, and it prefers to solve international tax problems through international cooperation. The United Kingdom has begun imposing a 2% digital services tax on businesses in areas such as search engines, social media services and online marketplaces from April 2020. In sum, at present, there is no agreement in this area. However, it is foreseeable that it will inevitably appear in the future negotiations on high-standard investment and trade rules and e-commerce.

The Organization for Economic Co-operation and Development (OECD) is pushing more than 130 countries around the world to agree on harmonized rules for digital services tax in international e-commerce (OECD, 2023). The goal of this global framework is to create a fairer and more uniform international tax environment. However, the implementation of the digital services tax involves not only the formulation of tax policies, but also the precise identification of the nature of the income and services of the enterprise. This puts forward high technical requirements for both tax authorities and taxable enterprises, increasing compliance costs. In addition, how to ensure the fairness and effectiveness of tax revenues and avoid negative impacts on innovation and small businesses is also an important factor that must be considered when designing and implementing a digital services tax.

3. The Status Quo of China's Free Trade Zones and the Experiences of China (Jiangsu) Pilot Free Trade Zone in E-Commerce

3.1. The Status Quo of China's Free Trade Zones

The development of China's free trade zones has become an important part of the country's strategy of opening up to the outside world and economic globalization. Since the establishment of the Shanghai Free Trade Zone, the first free trade zone in 2013, China has set up a number of free trade zones, which have become testing grounds for reform and opening up, driving further opening up and structural adjustment of China's economy. As of 2024, China has set up a total of 22 pilot free trade zones, covering the initial eastern coastal areas to the central and western regions and the northeast region (Xinhuashe, 2024). At present, these free trade zones are not only limited to traditional economically developed areas, but also include some strategic emerging and border areas, such as Yunnan and Heilongjiang. China is taking the free trade zone as an important starting point for opening up to the outside world, and driving the high-quality development of the regional economy through institutional innovation.

The core advantage of China's free trade zones (FTZ) lies in institutional innovation. According to China's Ministry of Commerce, companies in the FTZ enjoy more trade facilitation and investment liberalization policies, such as simplified customs procedures, preferential tax policies, and more open market access for services. For example, according to statistics released by the Ministry of Commerce in 2023, more than 100 institutional innovations have been implemented within the FTZ since 2022, which have effectively improved the international competitiveness of the regional economy (Chinese Academy of International Trade & Economic Cooperation, 2023). As an important platform for China's opening up and economic globalization, China's free trade zones have become a key force in promoting regional economic development and international cooperation. For example, since its establishment, the Shanghai Free Trade Zone has attracted more than US\$70 billion in foreign investment, and has become a gathering place for emerging industries and high-tech enterprises (Securities Times, 2023). In addition, China's free trade zones have also promoted the diversification and premiumization of trade, increasing the added value of products and services. Through continuous institutional innovation and policy optimization, China's many free trade zones will continue to play their unique role in global economic integration.

Despite the remarkable achievements, the development of China's FTZs still faces a number of challenges, including the convergence of institutional innovation with existing laws and regulations, the resistance of local protectionism, and the uncertainty of the global economic environment. In the future, China will continue to optimize the development strategy of the free trade zone, strengthen the alignment with international economic and trade rules, and promote deeper market access and investment liberalization. China's free trade zones will have a

highly developed system of trade liberalization laws, regulations, and policies. Moreover, the institutional mechanism will also be sounder and more perfect. In addition, the business environment will fully meet the needs of free trade in goods and services, free flow of people, free flow of information, and free entry and exit of capital, and support and promote the development of free trade at a high level and to a great extent.

3.2. The Establishment and Development of China (Jiangsu) Pilot Free Trade Zone

The establishment of the China (Jiangsu) Pilot Free Trade Zone was officially approved by the State Council on August 2, 2019. Jiangsu Pilot Free Trade Zone covers a total area of 119.97 square kilometers, covering three areas: Nanjing Area (39.55 square kilometers), Suzhou Area (60.15 square kilometers (including Suzhou Industrial Park Comprehensive Bonded Zone (5.28 square kilometers), and Lianyungang Area (including Lianyungang Comprehensive Bonded Zone (including 2.44 square kilometers of Lianyungang Comprehensive Bonded Zone) (China Jiangsu Pilot Free Trade Zone, 2024a). The strategic positioning and development goal of the Jiangsu Pilot Free Trade Zone is to take institutional innovation as the core and replication and promotion as the basic requirements, and fully implement the requirements of the central government on deepening the adjustment of industrial structure and in-depth implementation of the innovation-driven development strategy. Jiangsu Pilot Free Trade Zone will promote all-round and high-level opening-up and accelerate the construction of the intersection of the “Belt and Road”. Eventually, the Jiangsu Pilot Free Trade Zone will be built into a pilot zone for China’s open economic development and a demonstration area for the innovative development and industrial transformation and upgrading of the real economy.

The establishment of the Jiangsu Free Trade Zone has significantly increased the total import and export volume of the region’s foreign trade, which has effectively promoted the foreign trade and economic opening of Jiangsu Province. Since 2019, the total import and export volume of the Jiangsu Pilot Free Trade Zone has reached 2.6 trillion yuan (People’s Daily Online, 2024). The Jiangsu Free Trade Zone attaches great importance to the development of high-tech industries and modern service industries. As an important part of the free trade zone, the Suzhou area has become an important base for high-end manufacturing and international trade. In addition, the Jiangsu Pilot Free Trade Zone is also actively exploring new business formats such as international medical care and digital trade to promote the innovative development of service trade. In particular, the Jiangsu Pilot Free Trade Zone has outstanding performance in institutional innovation, especially in simplifying administrative procedures, promoting “single window” services, and optimizing the business environment. This has greatly shortened the time for setting up a business and significantly improved the efficiency of customs clearance. In addition, the Jiangsu Pilot Free Trade Zone has also introduced a series of financial innovation

policies, such as cross-border financial leasing, to attract more international investment and financial institutions.

3.3. Jiangsu Pilot Free Trade Zone's Advanced Experience and Practices in Promoting the Development of E-Commerce

The establishment of the China (Jiangsu) Pilot Free Trade Zone was officially approved by the State Council on August 2, 2019. Jiangsu Pilot Free Trade Zone covers a total area of 119.97 square kilometers, covering three areas: Nanjing Area (39.55 square kilometers), Suzhou Area (60.15 square kilometers (including Suzhou Industrial Park Comprehensive Bonded Zone (5.28 square kilometers), and Lianyungang Area (including Lianyungang Comprehensive Bonded Zone (including 2.44 square kilometers of Lianyungang Comprehensive Bonded Zone)). The strategic positioning and development goal of the Jiangsu Pilot Free Trade Zone is to take institutional innovation as the core and replication and promotion as the basic requirements, and fully implement the requirements of the central government on deepening the adjustment of industrial structure and in-depth implementation of the innovation-driven development strategy. Jiangsu Pilot Free Trade Zone will promote all-round and high-level opening-up and accelerate the construction of the intersection of the "Belt and Road". Eventually, the Jiangsu Pilot Free Trade Zone will be built into a pilot zone for China's open economic development and a demonstration area for the innovative development and industrial transformation and upgrading of the real economy.

Over the past five years, the cross-border e-commerce business in the Jiangsu Pilot Free Trade Zone has experienced rapid growth. According to data reported by JSChina.com.cn, Jiangsu's foreign trade volume reached 2.48 trillion yuan in 2023, of which 1.6 trillion yuan was exported and 88.189 billion yuan was imported. Moreover, Jiangsu Province has formulated a specific action plan to promote the high-quality development of cross-border e-commerce. It is expected that by 2025, Jiangsu Province will achieve major breakthroughs in the field of cross-border e-commerce, including the establishment of more than 30 distinctive cross-border e-commerce industrial belts, the construction of more than 120 cross-border e-commerce industrial parks, and the cultivation of more than 600 industry-leading and internationally competitive cross-border e-commerce enterprises. In addition, Jiangsu Province will also focus on cultivating more than 100 public overseas warehouses and more than 100 cross-border e-commerce export brands with certain international influence, so as to continuously improve the development ecology and foreign trade contribution of cross-border e-commerce (China Jiangsu Pilot Free Trade Zone, 2024b).

Overall, the development experience of the Jiangsu Pilot Free Trade Zone in e-commerce emphasizes the importance of policy support, ecosystem building, infrastructure improvement, international cooperation, and innovation and talent training.

1) Policy innovation and institutional optimization. The policy innovation of cross-border e-commerce in the Jiangsu Pilot Free Trade Zone is mainly reflected

in simplifying administrative approval, reducing trade costs, and improving customs clearance efficiency. Specifically, the Jiangsu Pilot Free Trade Zone has implemented a number of new measures, including the establishment of a comprehensive pilot zone for cross-border e-commerce, the introduction of a “one-stop” service, and the introduction of more flexible customs supervision measures. For example, the Changzhou Comprehensive Bonded Zone has established a cross-border e-commerce supervision and customs clearance center, which has greatly improved the operational efficiency of cross-border e-commerce.

2) E-commerce platform and ecosystem building. The Jiangsu Pilot Free Trade Zone has promoted the integration of e-commerce and traditional manufacturing by building an integrated service platform. For example, the city of Suzhou has set up a dedicated cross-border e-commerce working group to help local businesses expand overseas markets and obtain orders. The establishment of these platforms and working groups provides comprehensive support for enterprises, from market development and brand building to follow-up logistics and payment services.

3) Improvement of logistics and warehousing infrastructure. In order to support the efficient operation of cross-border e-commerce, the Jiangsu Pilot Free Trade Zone has invested heavily in the construction of a modern logistics system. In particular, the Jiangsu Pilot Free Trade Zone has built an international logistics distribution center, overseas warehouses and an efficient mainland transportation network with high standards. More representatively, Nanjing unveiled a one-stop service platform at the 2024 Cross-border E-commerce Opening and Cooperation Conference, aiming to support cross-border e-commerce activities, which is the first such platform in Jiangsu Province.

4) International cooperation and market expansion. The Jiangsu Pilot Free Trade Zone actively establishes cooperative relations with international partners and promotes technological exchanges and market integration through bilateral and multilateral channels. On the one hand, the Jiangsu Pilot Free Trade Zone actively cooperates with foreign e-commerce platforms, opening more doors for Jiangsu enterprises to enter foreign markets, thereby promoting the vigorous development of international trade and cross-border e-commerce. On the other hand, we will take the initiative to benchmark against high-standard international economic and trade rules such as CPTPP and DEPA (Digital Economy Partnership Agreement), and actively explore and carry out pilot trials and stress tests. In addition, the Jiangsu Pilot Free Trade Zone also actively participates in international e-commerce exhibitions and forums to enhance the international influence of Jiangsu enterprises.

4. The Specific Paths of the Jiangsu Pilot Free Trade Zone to Benchmark International High-Standard E-Commerce Rules

With the rapid development of global e-commerce, international e-commerce rules are also constantly updated and improved, especially in data protection,

consumer rights protection, cross-border electronic payment, and market access. Benchmarking against high international standards will not only help the Jiangsu Pilot Free Trade Zone attract more international investment, but also help enhance the international competitiveness of regional enterprises, thereby promoting the wider integration of Jiangsu Province and even China into the global market. In practice, Jiangsu Province can benchmark against international high-standard e-commerce rules from the following aspects.

4.1. Technical Standards and Systems Should Be Aligned with International High Standard Rules

Technical standards and systems are the underlying infrastructure of e-commerce. In cross-border e-commerce, there may be differences in the technical standards and systems for the transmission of electronic information from different countries, which can create obstacles to the use of e-commerce users. On the one hand, data security and privacy protection are the key concerns of cross-border e-commerce enterprises and consumers in cross-border e-commerce (Mattoo & Meltzer, 2018). In line with international high-standard e-commerce rules, the Jiangsu FTZ needs to establish a data security management system that is compatible with international data protection regulations such as GDPR, which mainly includes the application of data encryption technology, user data access control, and security management of cross-border data transmission. In addition, companies in the region are required to obtain international certifications, such as ISO/IEC 27001, to demonstrate the effectiveness of their data protection measures.

On the other hand, the legal validity and security of electronic signatures are key to cross-border e-commerce. The Jiangsu Pilot Free Trade Zone can refer to the United States's E-SIGN Act or the European Union's eIDAS and other rules to formulate electronic signature regulations that meet international standards to ensure that electronic signatures have the same legal effect in all commercial activities. At the same time, the Jiangsu Pilot Free Trade Zone can also consider applying emerging technologies such as blockchain to improve the tamper-proof and traceability of transaction records, so as to better ensure the security of e-commerce transactions.

4.2. Optimize Laws and Regulations to Improve the Business Environment

Legal protection is the foundation for the sound operation of cross-border e-commerce. Legal supervision plays a very important role in protecting the legitimate rights and interests of all parties involved in e-commerce, regulating e-commerce behavior, and maintaining market order. In order to promote the sustainable and healthy development of e-commerce, China officially implemented the "Electronic commerce law" on January 1, 2019. However, cross-border e-commerce is an international business activity in which transaction entities belonging to

different customs borders reach transactions through e-commerce platforms, carry out electronic payment settlement, and deliver goods through cross-border e-commerce logistics and remote warehousing, so as to complete the transaction. At present, the “Electronic commerce law” only applies to e-commerce activities within the territory of the People’s Republic of China, and lacks regulatory effect on e-commerce activities outside China.

On the one hand, in order to create a fair and competitive market environment, the Jiangsu Pilot Free Trade Zone needs to formulate or improve laws and regulations related to cross-border e-commerce in line with international standards, covering consumer protection, anti-monopoly policies, intellectual property protection and other fields. For example, consider drawing on the provisions of the United States Consumer Protection Act on transparency in online transactions to provide consumers with comprehensive information and the right of withdrawal.

On the other hand, in order to promote the facilitation of cross-border e-commerce, the Jiangsu Pilot Free Trade Zone can deepen cooperation with international payment giants such as PayPal and Visa. Facilitate payments for e-commerce by streamlining the cross-border payment process and ensuring the security and stability of the payment system. In addition, by aligning with international tax policies such as the OECD’s Base Erosion and Profit Shifting (BEPS) program, the Jiangsu Pilot Free Trade Zone can try to optimize the tax policy for cross-border e-commerce transactions within the scope of the national policy, which will help prevent base erosion and profit shifting.

Headings, or heads, are organizational devices that guide the reader through your paper. There are two types: component heads and text heads.

4.3. Strengthen Innovation, Infrastructure Construction and Talent Training

Innovation is the most salient feature of China’s pilot free trade zones. The main purpose of the Chinese government’s establishment of pilot free trade zones in various provinces and cities is to promote the development of international trade through institutional innovation. In this regard, the Jiangsu Free Trade Zone, which is located in China’s southeast coastal region and the highland of opening up to the outside world, naturally has significant geographical advantages. At present, China has shifted from high-speed development to high-quality development. In this context, the Jiangsu Pilot Free Trade Zone should adhere to the clear orientation of high-quality development and continue to strengthen scientific and technological and industrial innovation. In terms of e-commerce, by encouraging and supporting innovation, we will continue to cultivate new quality productivity and achieve the long-term sustainable development of China’s cross-border e-commerce industry in the new era.

At the practical level, the Jiangsu Pilot Free Trade Zone can strengthen the docking with international technical standards and support the development of e-commerce by promoting the application of emerging technologies such as cloud

computing, big data, and artificial intelligence. Besides, the Jiangsu Pilot Free Trade Zone should also strengthen the construction of network infrastructure, improve the coverage and quality of the network, and provide stable technical support for e-commerce activities. In addition, the Jiangsu Pilot Free Trade Zone can also formulate preferential policies to attract e-commerce-related enterprises with high and new technologies to settle in the free trade zone. At the same time, the Jiangsu Pilot Free Trade Zone should also increase the training and introduction of e-commerce talents. For relevant talents operating in the Pilot Free Trade Zone, the Jiangsu Pilot Free Trade Zone can collect their needs and provide them with the necessary training and educational resources. In particular, taking into account the continuous negotiation of international economic and trade rules and the changes in the political and economic situation, it is necessary for the Jiangsu Pilot Free Trade Zone to increase investment in cultivating a group of e-commerce professionals with an international perspective.

4.4. Deepen International and Domestic Cooperation and Exchanges

Since its establishment, Jiangsu Pilot Free Trade Zone has always adhered to the fundamental requirements of serving the national strategy. On the one hand, the Jiangsu Pilot Free Trade Zone continues to deepen opening-up and cooperation, actively benchmarks against high-standard international economic and trade rules such as CPTPP and RCEP, and actively explores and carries out pilot trials and stress tests focusing on trade in goods, services and digital trade (Corning, 2022; Peters, 2023). On the other hand, the Jiangsu Pilot Free Trade Zone also attaches great importance to promoting linkage and joint innovation and development with other free trade zones and platforms in China and the province. In the past five years, the Jiangsu Free Trade Zone has achieved opening linkage with the Yangtze River Economic Belt and the Yangtze River Delta Pilot Free Trade Zone. In addition, there are currently 57 national economic development zones, high-tech zones, comprehensive bonded zones and other platform carriers in Jiangsu Province that are jointly building linkage innovation development zones with Jiangsu Free Trade Zone. This provides strong support for the development of cross-border e-commerce in the Jiangsu Free Trade Zone.

China is a major international trader with large demand for both exports and imports. With the development of Internet technology and global economic integration, China's cross-border e-commerce will inevitably show a rapid growth trend. In this context, cross-border e-commerce in the Jiangsu Pilot Free Trade Zone will also face huge opportunities. In order to fully seize this opportunity, the Jiangsu Free Trade Zone can work in two aspects: deepening international and domestic cooperation, and participating in the formulation of international high-standard rules in depth. On the one hand, the Jiangsu Pilot Free Trade Zone can take advantage of the free trade zone platforms already established by the Chinese government with other countries to learn from the international advanced e-commerce management experience by establishing and deepening bilateral or multilateral cooperation

mechanisms and share best practices with free trade zones around the world. This will not only help improve the management level of the Jiangsu Pilot Free Trade Zone, but also provide support for Jiangsu and Chinese enterprises to explore the international market. On the other hand, the Jiangsu Pilot Free Trade Zone can also actively participate in the activities of international standardization organizations such as ISO and ITU, especially in the formulation of international standards related to global e-commerce. This will not only enhance the international influence of the Jiangsu Pilot Free Trade Zone, but also help promote its competitiveness and standard compatibility in global e-commerce. Moreover, by actively participating in the formulation of international standards, it is also conducive to the Jiangsu Free Trade Zone to play a more active role in international e-commerce rules, which will also help promote the healthy development of global e-commerce.

5. Conclusion

E-commerce is an important aspect of international trade and plays an increasingly important role in the modern economy and society. From the perspective of the current mainstream international bilateral or multilateral trade agreements, they basically contain the chapter of e-commerce. However, in terms of specific provisions, there are still considerable differences in the formulation and implementation of e-commerce laws and regulations among countries. Benchmarking international high-standard e-commerce rules is conducive to the integration and high-quality development of e-commerce in the country and region. At present, most of the research on e-commerce rules focuses on the regional and national levels, but there is a lack of research on the level of free trade zones within the countries responsible for specific implementation. In this regard, this paper makes a specific analysis from the perspective of provincial free trade zones. Under the framework of the free trade agreements in which China has participated, the Jiangsu Pilot Free Trade Zone is a complex and systematic task to benchmark with international high-standard e-commerce rules. In terms of specific paths, the path of the Jiangsu Pilot Free Trade Zone to benchmark international high-standard e-commerce rules will involve multiple levels, which mainly include technical docking, regulatory compatibility, policy optimization and international cooperation. The implementation of these measures will not only enhance the international competitiveness of the Jiangsu Pilot Free Trade Zone in terms of e-commerce, but also provide an effective experience and model for China's wider integration into the global market. Through continuous reform and innovation and international cooperation, the Jiangsu Pilot Free Trade Zone is expected to achieve greater development and success in the field of global e-commerce.

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Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

- Amie, A., Hok, D., Stephanny, P., & Shingler, E. S. (2021). *Digital Services Tax: Why the World Is Watching*.
<https://news.bloombergtax.com/daily-tax-report/digital-services-tax-why-the-world-is-watching>
- Avi-Yonah, R. S., Kim, Y. R., & Sam, K. (2022). A New Framework for Digital Taxation. *Harvard International Law Journal*, 63, 279-341.
- Bassey, E., Mulligan, E., & Ojo, A. (2022). A Conceptual Framework for Digital Tax Administration—A Systematic Review. *Government Information Quarterly*, 39, Article 101754. <https://doi.org/10.1016/j.giq.2022.101754>
- Biegon, R. (2020). US Hegemony and the Trans-Pacific Partnership: Consensus, Crisis, and Common Sense. *The Chinese Journal of International Politics*, 13, 69-101.
<https://doi.org/10.1093/cjip/poaa001>
- Braithwaite, S. (2024). Absolute and Size-Adjusted Trade Flows: An Analysis of RTAs and GATT/WTO Membership. *The World Economy*, 47, 3893-3908.
<https://doi.org/10.1111/twec.13610>
- Brauner, Y. (2024). Taxation of Information and the Data Revolution. *Iowa Law Review*, 109, 1959-2016.
- Buckley, G., Caulfield, T., & Becker, I. (2024). How Might the GDPR Evolve? A Question of Politics, Pace and Punishment. *Computer Law & Security Review*, 54, Article 106033.
<https://doi.org/10.1016/j.clsr.2024.106033>
- Burri, M. (2021). Towards a New Treaty on Digital Trade. *Journal of World Trade*, 55, 77-100. <https://doi.org/10.54648/trad2021003>
- Chen, K., Luo, S., & Kin Tong, D. Y. (2024). Cross Border E-Commerce Development and Enterprise Digital Technology Innovation—Empirical Evidence from Listed Companies in China. *Heliyon*, 10, e34744. <https://doi.org/10.1016/j.heliyon.2024.e34744>
- Chevalier, S. (2024). *Global Retail E-Commerce Sales 2014-2027*.
<https://www.statista.com/statistics/379046/worldwide-retail-e-commerce-sales/>
- China Jiangsu Pilot Free Trade Zone (2024a). *China (Jiangsu) Pilot Free Trade Zone*.
<http://doc.jiangsu.gov.cn/col/col79303/index.html>
- China Jiangsu Pilot Free Trade Zone (2024b). *Press Conference on the Fifth Anniversary of the Establishment of the China (Jiangsu) Pilot Free Trade Zone*.
http://doc.jiangsu.gov.cn/art/2024/9/10/art_79282_11352668.html
- Chinese Academy of International Trade & Economic Cooperation (2023). *Report on the Development of China's Pilot Free Trade Zones (2023)*. Chinese Academy of International Trade and Economic Cooperation of Ministry of Commerce.
- Corning, G. P. (2022). ASEAN and the Regime Complex for Digital Trade in the Asia-pacific. *Journal of World Trade*, 56, 915-938. <https://doi.org/10.54648/trad2022038>
- Corning, G. P. (2024). The Diffusion of Data Privacy Laws in Southeast Asia: Learning and

- the Extraterritorial Reach of the EU's GDPR. *Contemporary Politics*.
<https://doi.org/10.1080/13569775.2024.2310220>
- Dong, W., Chen, K., & Liu, X. (2023). Role of Regional Trade Agreements in Enhancing Investments in Mineral Resources Projects in ASEAN. *Resources Policy*, 85, Article 103893. <https://doi.org/10.1016/j.resourpol.2023.103893>
- Drahoš, P. (2016). China, the TPP and Intellectual Property. *IIC-International Review of Intellectual Property and Competition Law*, 47, 1-4.
<https://doi.org/10.1007/s40319-015-0432-y>
- Gnangnon, S. K. (2023). Effect of the Duration of Membership in the GATT/WTO on Economic Growth Volatility. *Structural Change and Economic Dynamics*, 65, 448-467.
<https://doi.org/10.1016/j.strueco.2023.04.004>
- Grievesson, R., Holzner, M., & Vukšić, G. (2021). Regional Economic Cooperation in the Western Balkans: The Role of Stabilization and Association Agreements, Bilateral Investment Treaties and Free Trade Agreements in Regional Investment and Trade Flows. *Eastern European Economics*, 59, 3-24. <https://doi.org/10.1080/00128775.2020.1846130>
- Hasbolah, H. B., Sidek, S. B., Mohamed Khadri, N. A. B., Md. Isa Yusuff, Y. Z. B., Abdullah, Z. B., & Abdullah, F. A. B. (2023). Exploring Aggravating Factors towards Digital Wallet Acceptance: An Approach from Online Shoppers. In B. Alareeni, & A. Hamdan (Eds.), *Impact of Artificial Intelligence, and the Fourth Industrial Revolution on Business Success* (pp. 235-246). Springer International Publishing.
https://doi.org/10.1007/978-3-031-08093-7_16
- He, X., Ye, T., & Yu, D. (2023). Exploring the Academic Development Trace and Theme Evolution in Cross-Border Electronic Commerce. *Electronic Markets*, 33, Article No. 53.
<https://doi.org/10.1007/s12525-023-00676-x>
- Houcheimi, A., & Mezei, J. (2024). The Role of Secure Online Payments in Enabling the Development of E-Tailing. *Journal of Organizational Computing and Electronic Commerce*. <https://doi.org/10.1080/10919392.2024.2371236>
- Janavičiūtė, A., Liutkevičius, A., Dabužinskas, G., & Morkevičius, N. (2024). Experimental Evaluation of Possible Feature Combinations for the Detection of Fraudulent Online Shops. *Applied Sciences*, 14, Article 919. <https://doi.org/10.3390/app14020919>
- Ji, X., & Rana, P. B. (2019). A Deal That Does Not Die: The United States and the Rise, Fall and Future of the (CP) TPP. *Pacific Focus*, 34, 230-255.
<https://doi.org/10.1111/pafo.12143>
- Lin, L. (2024). Deciphering RCEP: A Deep Dive into Financial Services Treaty Language in the Asia-Pacific. *Asia Pacific Law Review*, 32, 213-238.
<https://doi.org/10.1080/10192557.2023.2285528>
- Long, W. R., Scali, G. et al. (2016). *EU General Data Protection Regulation* (pp. 302-307). Privacy & Data Security Practice Series of Bloomberg Law.
<https://www.sidley.com/-/media/publications/gdpr-portfolio-section-iii-with-cover.pdf>
- Ma, Z., Zhou, P., & Fu, N. (2024). Research on the Taxation of Mobile Commerce Digital Assets. In J. Wei, & G. Margetis (Eds.), *Human-Centered Design, Operation and Evaluation of Mobile Communications* (pp. 106-118). Springer Nature.
https://doi.org/10.1007/978-3-031-60487-4_9
- Martinez, M. T. A., Gesualdo, M., & Pycroft, J. (2024). Storm in the Cloud: A Study on the Macroeconomic Impact of the UK's Digital Service Tax. *Economic Systems Research*.
<https://doi.org/10.1080/09535314.2024.2374767>
- Mattoo, A., & Meltzer, J. P. (2018). International Data Flows and Privacy: The Conflict and Its Resolution. *Journal of International Economic Law*, 21, 769-789.

- <https://doi.org/10.1093/jiel/jgy044>
- OECD (2023). *138 Countries and Jurisdictions Agree Historic Milestone to Implement Global Tax Deal*.
- Park, C., Petri, P. A., & Plummer, M. G. (2021). The Economics of Conflict and Cooperation in the Asia-Pacific: RCEP, CPTPP and the US-China Trade War. *East Asian Economic Review*, 25, 233-272. <https://doi.org/10.11644/kiep.eaer.2021.25.3.397>
- Park, I. (2020). Regional Trade Agreements in East Asia: Past and Future. *Development Policy Review*, 38, 206-225. <https://doi.org/10.1111/dpr.12418>
- Park, J., Shin, W., Kim, B., & Kim, M. (2024). Spillover Effects of Data Breach on Consumer Perceptions: Evidence from the E-Commerce Industry. *Internet Research*. <https://doi.org/10.1108/intr-11-2022-0898>
- People's Daily Online (2024). *The Total Import and Export Volume of Foreign Trade in Jiangsu Pilot Free Trade Zone Has Reached 2.6 Trillion Yuan in Five Years, Accounting for 1/10 of the Province*.
- Peters, M. A. (2023). Digital Trade, Digital Economy and the Digital Economy Partnership Agreement (DEPA). *Educational Philosophy and Theory*, 55, 747-755. <https://doi.org/10.1080/00131857.2022.2041413>
- Petri, P. A., & Plummer, M. G. (2020). Should China Join the New Trans-Pacific Partnership? *China & World Economy*, 28, 18-36. <https://doi.org/10.1111/cwe.12319>
- Pomfret, R. (2021). 'Regionalism' and the Global Trade System. *The World Economy*, 44, 2496-2514. <https://doi.org/10.1111/twec.13155>
- Ravenhill, J. (2017). The Political Economy of the Trans-Pacific Partnership: A '21st Century' Trade Agreement? *New Political Economy*, 22, 573-594. <https://doi.org/10.1080/13563467.2017.1270925>
- Securities Times (2023). *The 10th Anniversary of the Shanghai Free Trade Zone: The Cumulative Foreign Investment Reached US \$58.6 Billion, Accounting for about 30% of the Same Period in Shanghai*.
- Sheng, B., & Jin, C. (2022). An Evaluation of the Regional Comprehensive Economic Partnership Agreement: Market Access and Trading Rules. *China & World Economy*, 30, 49-74. <https://doi.org/10.1111/cwe.12437>
- Singh, C., Dash, M. K., Sahu, R., & Kumar, A. (2024). Investigating the Acceptance Intentions of Online Shopping Assistants in E-Commerce Interactions: Mediating Role of Trust and Effects of Consumer Demographics. *Heliyon*, 10, e25031. <https://doi.org/10.1016/j.heliyon.2024.e25031>
- Sullivan, C. (2019). EU GDPR or APEC CBPR? A Comparative Analysis of the Approach of the EU and APEC to Cross Border Data Transfers and Protection of Personal Data in the IoT Era. *Computer Law & Security Review*, 35, 380-397. <https://doi.org/10.1016/j.clsr.2019.05.004>
- Sykes, A. O. (2024). The Utility of Appellate Review at the WTO and Its Optimal Structure. *Journal of International Economic Law*. <https://doi.org/10.1093/jiel/jgae029>
- Tuttman, C., Blum, G., & Macadar, M. A. (2023). Overdelivery in a Digital Service Implementation on a Tax Recovery Program. In D. Getschko, I. Lindgren, M. Yildiz, M. Peixoto, F. Barbosa, & C. Braga (Eds.), *Proceedings of the 16th International Conference on Theory and Practice of Electronic Governance* (pp. 401-403). Association for Computing Machinery. <https://doi.org/10.1145/3614321.3614376>
- UNCTAD (2024). *Infographics*.
- Voigt, P., & Bussche, A. V. D. (2017). *The EU General Data Protection Regulation (GDPR)*:

A Practical Guide. Springer International Publishing.

WTO (2024). *Regional Trade Agreements*.

Wu, C. (2020). ASEAN at the Crossroads: Trap and Track between CPTPP and RCEP. *Journal of International Economic Law*, 23, 97-117. <https://doi.org/10.1093/jiel/jgz032>

Xinhuashe (2024). *How Does the Implementation of the Promotion Strategy of the Pilot Free Trade Zone Reflect the Requirements of Encouraging Initiative and Integrated Exploration*.