

A Comparative Analysis of the International Competitiveness of China's Digital Service Trade

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Abstract: In the context of accelerated globalization and the rapid development of the digital economy, the scale of China's import and export trade continues to expand. Enhancing the international competitiveness of China's digital service trade is of significant importance. This article will analyze the current state of China's digital service trade development based on relevant theoretical concepts and provide a discussion on proposals for improving the international competitiveness of China's digital service trade, to offer a reference for the development of digital service trade in China.

Keywords: Digital service trade; Digital economy; International competitiveness

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1. Introduction

Currently, global economic development is progressively shifting toward a service-oriented economy. As one of the world's largest trading nations, digital service trade has become a key driving force of China's service trade. "We will promote the optimization and upgrading of trade in goods, innovate the development mechanism of trade in services, develop digital trade, and accelerate the building of a strong trade country," stated the report to the Party's 20th National Congress. In light of this, studying the international competitiveness of China's digital service trade holds significant practical importance to offer new insights for the development of service trade theory through discussions on industrial classification, infrastructure, and the level of openness.

2. Digital service trade-related overview

2.1. Digital service trade

Digital trade in services refers to cross-border transactions based on information and communication technology. It is a subset of digital trade and has close ties with trade in services. According to the Statistical Manual of International Trade in Services, digital trade in services is defined as trade completed through online ordering, including the trade of intangible goods ^[1]. In recent years, the OECD has conducted extensive research on digital service trade, further enriching this concept. The OECD views digital service trade as a form of cross-border

transaction facilitated by electronic information networks. Despite continuous development and refinement of the relevant definitions, certain limitations remain. The scope and depth of digital service trade often exceed the boundaries of existing definitions. At the same time, the form of digital service trade will also evolve with the development of digital technology ^[2]. Additionally, as digital technologies continue to evolve, the form of digital service trade will also transform. Moreover, with the growth of digital service trade, new challenges have emerged, including but not limited to the standardization of service quality, legal and regulatory issues related to cross-border data flows, and the rapid advancement of digital technologies. The international community must collaborate to establish effective management mechanisms and standards that will foster the healthy and sustainable development of digital service trade.

2.2. The relationship between the digital economy and digital trade

The relationship between the digital economy and digital trade is both close and complex, characterized by mutual reinforcement and interdependence. The digital economy refers to economic activities that are based on digitalization, such as the development, dissemination, and application of information resources. Digital trade, in contrast, refers to cross-border transactions of services and goods conducted through digital means ^[3]. On the one hand, the rapid advancement of information technology has enabled the digital economy to become a new engine driving global economic growth. In this process, a large volume of digital products and services are created and exchanged, directly contributing to the expansion and diversification of the digital trade market. On the other hand, digital trade involves more than just the exchange of goods and services; it also encompasses various aspects such as technology transfer and the flow of talent, offering a broad range of opportunities for innovation and development within the digital economy ^[4]. Particularly in fields such as software services, online education, and e-commerce, digital trade has become a crucial force in promoting the growth of the related digital economies.

2.3. The theory of national competitive advantage

The theory of National Competitive Advantage, developed by Michael Porter, asserts that a country's competitive advantage in the global economy depends on its resources, technology, and institutions. These advantages enable a country to achieve higher economic benefits and market share in international trade activities ^[5]. Therefore, according to this theory, a country should actively support its most competitive industries to maximize its gains in international economic and trade activities. For digital service trade, if a country aims to fully leverage its competitive advantage, it must focus on investing in essential production factors such as network infrastructure, human capital, and capital to enhance the competitiveness of its digital service trade sector. Demand conditions refer to the level of need for a product or service within the domestic market. When domestic demand exceeds that of foreign markets, it accelerates the generation of economies of scale, giving the country's industry a stronger competitive edge. This is because increasing demand for high-end goods drives businesses to innovate, improve product quality, and strengthen their global competitiveness ^[6]. If a country experiences a growing demand for digital service trade or anticipates a high demand ahead of foreign markets, it can stimulate the development of its digital service trade. This, in turn, leads to economies of scale, encourages technological reform, and ultimately enhances the global competitiveness of its digital service trade sector.

3. Analysis of the development status of China's digital service trade

3.1. The scale of digital services trade is becoming increasingly large

The World Trade Organization (WTO) and the United Nations Conference on Trade and Development (UNCTAD) update data on global trade in digital services annually. According to the relevant data, in 2023, the global export

volume of digital delivery services is projected to reach 4.25 trillion US dollars, representing a 9% year-on-year increase and accounting for 54.2% of global service exports, setting a new record. From 2019 to 2023, the average annual growth rate of global digital delivery service exports reached 10.8%, 4.9 percentage points higher than the growth rate of service exports during the same period^[7]. The deep integration and widespread application of digital technologies across all aspects of international trade continue to drive the transformation of global trade patterns. The number of global online shopping users is growing rapidly, and e-commerce activities are more vibrant than ever, indicating considerable development potential. With China's robust economic growth and the ongoing deepening of its opening-up policies, the scale of China's digital services trade is expected to continue expanding in the future. The connection between China and the international market will be further strengthened, fostering innovation and development in digital service trade and injecting new sources of momentum into the nation's economy.

3.2. The structure of trade in digital services has been continuously optimized

Currently, China's digital service trade is experiencing strong growth. According to data released by the Ministry of Commerce, China's total import and export of digital services in 2023 is expected to reach 366.6 billion US dollars, marking a 3.5% year-on-year increase. Among this, the import and export volume of cross-border e-commerce reached 2.38 trillion yuan, representing a 15.6% year-on-year growth and accounting for 5.7% of the total value of China's trade in goods. These figures indicate that China's digital service trade has become a vital engine driving the high-quality development of its service trade^[8]. Furthermore, with the rapid advancement of China's digital technologies, the structure of digital service trade is continuously optimizing. The scope of digital service trade has gradually shifted from traditional sectors, such as tourism and transportation, to emerging fields like cloud computing, big data, and artificial intelligence. These emerging areas not only enhance the efficiency and convenience of China's digital service trade but also broaden the scope and methods of service trade, expanding both the range of trade partners and how services are exchanged.

3.3. Digital service trade policies have been gradually improved

In recent years, China has continuously enhanced its policy system for digital trade in services. Both top-level design and detailed implementation rules have been scientifically planned and structured, resulting in a relatively comprehensive policy support framework. For instance, the release of the Opinions of the General Office of the CPC Central Committee and the General Office of the State Council on the Reform, Innovation, and Development of Digital Trade has provided clear direction and goals for the reform, innovation, and development of digital trade. This guideline defines the guiding ideology, working principles, and key objectives for digital trade development while also proposing specific measures to support the growth of digital trade segments and business entities, promote institution-based opening of digital trade, and improve the governance system for digital trade^[9]. Moreover, China has actively supported the development of various digital trade segments, including, but not limited to, digital product trade, digital services trade, and digital technology trade. The international expansion of China's digital product trade has been further advanced through strengthening innovation in digital application scenarios and models, improving the quality and level of digital content production, and cultivating and expanding cross-border digital delivery channels.

4. Suggestions on the development of international competitiveness of China's digital service trade

4.1. Improving the industrial classification of digital service trade

With the rapid advancement of information technology and the ongoing expansion of application fields, digital

service trade has become an integral part of international trade. In promoting the development of digital service trade, China should establish an industrial classification system tailored to its national conditions while also drawing on the best practices of other countries ^[10]. When classifying the digital service trade industry, it can be done based on the direction of service content, service form, service object, and industry adaptability. Digital service trade encompasses a broad range of services. Depending on the specific content of the service, it can be subdivided into categories such as data processing services, cloud computing services, online software services, digital education services, and more. Each service category has its unique technical requirements and market demand, which are closely linked to government policies and effective market mechanisms. Clear classification helps both enterprises and governments to conduct business and formulate policies in a targeted manner. The classification based on the form of service distinguishes digital service trade by the mode of provision, such as cloud-based services, downloadable services, and real-time online services. A clear classification facilitates the optimization of resource allocation and enhances the user experience. Additionally, classification based on service object and industry adaptability is essential. The customer base for digital service trade is diverse, encompassing not only individual consumers but also enterprises and government agencies ^[11]. Different customer groups and industries have distinct demands for digital services. Therefore, when classifying industries, it is crucial to consider the characteristics of the service objects and the needs of various industries to better meet the development needs of different sectors.

4.2. Strengthening infrastructure construction for trade in services

The construction of infrastructure for digital trade in services involves not only physical infrastructure but also the establishment of technical standards and service specifications. In this regard, China should strengthen top-level design by incorporating the digital transformation of service trade into the national economic development strategy, clarifying development goals, and creating long-term plans. For example, local governments should adopt a series of policies and measures based on local conditions and actual needs, encouraging enterprises to actively pursue the digital transformation of service trade through financial subsidies, tax relief, and other support. At the physical level, there should be increased investment in digital infrastructure ^[12]. This includes accelerating the construction of new infrastructure, such as 5G networks, data centers, digital twins, cloud computing platforms, and big data models to provide robust support for the digitalization of trade in services. Additionally, it is essential to deepen the integration of digital technologies with the real economy. Enterprises should be encouraged to adopt advanced technologies like big data, cloud computing, artificial intelligence, and the Internet of Things to enhance the quality and efficiency of digital service trade. Furthermore, it is crucial to establish and improve mechanisms for protecting digital intellectual property rights (IPR) and privacy. First, at the national level, a legal and regulatory system for IPR protection related to digital service trade should be established and refined, clarifying the ownership of data property rights and safeguarding innovation. Second, security norms should be defined for the collection, use, storage, and transmission of personal data to ensure the protection of personal privacy. For instance, investment in the research and development of data encryption, identity verification, access control, and other technical measures should be increased to ensure the proper protection of personal privacy and trade data.

4.3. Promoting the coordinated development of regional digital trade

First, it is essential to upgrade the level of network infrastructure in regions with relatively slower digital development. This can be achieved by accelerating the construction of new infrastructure, such as 5G networks and gigabit optical networks, in these areas to ensure that all regions have access to high-speed and stable network connections. This would provide a solid foundation for digital trade. At the same time, the promotion

of digital facilities, such as the Internet of Things (IoT) and big data centers, should be prioritized to improve data processing and storage capabilities, offering strong technical support for digital trade. Second, advanced information technologies, such as IoT, big data, and artificial intelligence, should be fully leveraged to drive the digital transformation and upgrading of production and manufacturing processes in the real economy. This would enhance production efficiency and quality levels. In practice, the digital intelligence of industrial supply chain management should be strengthened, with a focus on enabling traceability of manufacturing sources, real-time updates of warehousing and distribution, and achieving a high degree of intelligence and visualization of the supply chain. Such advancements can help reduce costs and increase efficiency^[13]. Moreover, the scope of digital services should be continuously expanded. Enterprises should be encouraged to strengthen their capacity for digital service trade, incorporating digital technologies such as intelligent systems, cross-border e-commerce, and mobile payment to transform offline trade activities into online operations and services. This will enhance the market competitiveness of enterprises. Finally, leading enterprises in the field of digital service trade in different regions should foster cooperation and exchanges. By leveraging brand effects, the “catfish effect,” and scale advantages, they can promote the coordinated development of regional digital trade, ensuring that digital trade becomes a driving force for growth and collaboration across different regions.

4.4. Enhancing the level of openness of digital service trade

In the context of the rapid development of the global digital economy, optimizing the business environment for digital service trade is crucial for enhancing the openness of digital service trade. First, China should actively improve relevant laws and regulations, strengthen intellectual property rights protection, and promote the facilitation of electronic payments. By providing a favorable operating environment for digital service trade enterprises, China can attract more foreign investors and enterprises to enter the Chinese market, thus fostering the development of two-way trade. Improving the transparency of the market environment is a top priority in this optimization process^[14]. This requires the development of unified industry standards and trading norms, simplifying approval processes, and lowering market access thresholds. These steps will help reduce uncertainties for foreign companies entering and operating in China, thereby increasing their confidence in the Chinese market. Additionally, information such as policies, regulations, industry guidelines, and market analysis should be promptly shared with enterprises through information disclosure platforms. Providing comprehensive market intelligence and policy interpretation will help enterprises make more informed strategic decisions. Second, China should continuously establish and improve a rapid adjudication mechanism for intellectual property rights, raising the cost of infringement and strengthening the protection of copyrights, patents, trademarks, and other intellectual property rights. This will not only encourage enterprises to invest more in innovation but also attract high-quality digital service trade projects to settle in China. Finally, accelerating the development of emerging payment methods, such as mobile payments and cross-border e-commerce, will simplify cross-border transaction processes and reduce transaction costs. This will also enhance the convenience and flexibility of China’s digital service trade, making it more competitive on the global stage.

4.5. Deepening international cooperation on digital service trade

Deepening cooperation on trade in digital services and investment can help broaden the international market for enterprises and is an effective way to enhance China’s international competitiveness in digital service trade. On the one hand, China should leverage its large domestic market and its strengths in internet technology to establish cooperative relations with foreign enterprises and develop and operate cross-border e-commerce platforms. In doing so, while promoting trade between the two sides, China can also enhance the international image and

brand value of its digital service trade ^[15]. On the other hand, China should actively promote the creation of an international platform for digital service trade exchange and cooperation. This can be achieved by hosting and participating in digital service trade fairs, academic seminars, and other related activities. These platforms for exchange and cooperation will not only strengthen collaboration between China and other countries in the digital services sector but also help China stay informed about the latest international development trends. This will ultimately contribute to the creation of a new pattern for China's "going out" and "bringing in" digital service trade, promoting a more robust global presence for China's digital services.

5. Conclusion

In a nutshell, enhancing China's competitiveness in global digital service trade is a long-term endeavor. This goal requires not only the focused attention and proactive actions of government departments but also the collective efforts of enterprises, research institutions, and all sectors of society. By forming a united front, these stakeholders can work together to promote the prosperity and development of China's digital service trade, ensuring its growth and competitiveness on the global stage.

Disclosure statement

The author declares no conflict of interest.

References

- [1] Li G, 2024, Research on the Path to Enhance China's Service Trade Competitiveness from the Perspective of Digital Economy. *National Circulation Economy*, (23): 41–44.
- [2] Shi Y, 2024, Study on the Impact of Digital Economy Development on the Optimization of China's Service Trade Export Structure. *International Business Finance and Accounting*, (21): 16–21 + 27.
- [3] Qiao L, 2024, Study on the Path of Digital Economy Enabling High-quality Development of China's Service Trade. *Journal of Liaoning Normal University (Social Science Edition)*, (05): 10–12 + 59.
- [4] Yao J, Chen L, 2024, Research on the Mechanism of Digital Economy Promoting the High-quality Development of China's Service Trade Exports. *Heilongjiang Finance*, (09): 36–40.
- [5] Yu T, Zhang Y, 2024, Research on the International Competitiveness of China's Digital Service Trade and Its Influencing Factors. *Business Economics*, (08): 80–85.
- [6] Hu K, 2024, Analysis on the Influence Mechanism of the Opening of Digital Service Trade on the Innovation Quality of Enterprises, dissertation, Southwestern University of Finance and Economics.
- [7] Liu J, Zhang C, 2024, Research on International Competitiveness of China's Digital Service Trade. *China Business Review*, (12): 9–13.
- [8] Zeng J, 2024, Study on the Impact of Digital Input on the Export Scale of Digital Service Trade, dissertation, Shanghai International Studies University.
- [9] Feng S, 2024, Study on the Impact of Digital Infrastructure Construction in Countries Along the "Belt and Road" on China's Service Trade Exports, dissertation, Harbin University of Commerce.
- [10] Hu Z, 2024, Research on the Mechanism of Digital Economy Promoting High-quality Development of China's Service Trade. *National Circulation Economy*, (04): 37–40.
- [11] Wang Q, Miao P, 2024, Collaborative Development of Digital Service Trade and Digital Infrastructure. *Contemporary Finance and Economics*, (02): 125–138.

- [12] Tan J, 2023, Research on International Competitiveness of Chinese Service Trade Enterprises under the Background of Digital Economy. *Modern Corporate Culture*, (31): 61–64.
- [13] Wang Y, 2024, Research on the Impact and Mechanism of Digital Service Trade Development on Enterprise Innovation Quality, dissertation, Beijing Foreign Studies University.
- [14] Xia J, 2023, Promoting High-quality Development of Service Trade with Digital Technology. *Red Flag Manuscript*, (19): 38–40.
- [15] Chen S, 2023, Research on Improving China’s Service Trade Competitiveness Relying on the Development of Digital Economy. *Guide of Economic Research*, (15): 72–74.

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