



Impact of Digital Economy on Efficiency of Tax Collection and Administration

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Abstract. As a product of the deep integration of information technology and the real economy, the digital economy is characterized by high efficiency, information sharing, boundarylessness, and innovation profoundly changing traditional economic forms and tax collection and administration models. On the one hand, the digital economy provides opportunities for improving tax collection efficiency by broadening the tax base, increasing tax revenue, and enhancing tax transparency; On the other hand, its complexity and concealment also pose challenges to traditional tax systems, increasing the difficulty of tax supervision, leading to tax revenue loss and regulatory blind spots. The article combines international practical experience to analyze the effective practices of countries such as the United States, the United Kingdom, and Australia in building electronic tax platforms and promoting tax digitization. At the same time, it is pointed out that China has initially established a modern tax collection and administration system of "the digital taxation age" through the merger of national and local taxes and the "Golden Tax Phase IV" reform. Continuously promoting technological innovation, strengthening cross departmental collaboration and data sharing, and enhancing the tax code to conform to the digital economy's growing trend.

Keywords: Digital Economy, Tax, Tax Collection Efficiency.

1 Introduction

Tax collection and administration are an important guarantee for national fiscal revenue, and a key role in maintaining economic order, promoting social equity, and national stability. A sound tax collection and administration system can ensure timely and sufficient collection of taxes, reduce tax evasion, enhance the government's fiscal transparency and credibility, and provide steady funding for the growth of the national economy. The expansion of the digital economy, big data and artificial intelligence technologies must be used to optimize the tax administration and collection system, adapt to the dynamic and complex environment, and guarantee that all economic income is subject to legal taxes.

The digital economy is a product of the integration of informatization, globalization, and technological progress, gradually becoming a new engine for global economic growth. It has not only driven the transformation of the global economy, but also

changed traditional business models, transaction methods, and consumer behavior on a global scale. The digital economy has given rise to new economic forms, such as cross-border e-commerce, digital currency, sharing economy, etc. The emergence of these emerging formats and business models often cannot be effectively covered and regulated by traditional tax systems, as a result, it faces unprecedented challenges. Therefore, improving the effectiveness of tax administration and collection has emerged as a critical issue that tax departments must address immediately.

The purpose of this study is to investigate in detail how the digital economy affects the effectiveness of tax administration and collection. And combined with the practical experience at home and abroad, it suggests a way to increase tax collection efficiency in light of the digital economy. Specifically, this article analyzes the impact of the digital economy on tax administration. It discusses how to use digital means to optimize tax administration and improve the efficiency and fairness of tax collection and administration.

2 Connotation and Characteristics of Digital Economy

2.1 Connotations

A new economic activity known as the "digital economy" uses digital technology as its primary engine and links people, businesses, equipment, and data via the Internet, mobile devices, big data, information and communication technology, and other digital tools. It is not only the digitization of the traditional economy, but also a profound transformation that involves various links such as production, distribution, exchange, and consumption [1].

Data is a key production factor in the digital economy, and through the precise sharing of data, economic entities can achieve interconnectivity [2]. Driven by the digitization of information technology, it emphasizes the deep integration of digital technology and the real economy to promote high-quality economic development.

2.2 Characteristics

Efficiency. Digital technology can improve production efficiency, reduce operating costs, and optimize resource allocation [3]. With advanced digital technologies such as artificial intelligence, cloud computing, and the Internet of Things, enterprises can achieve automation and intelligence in their production processes, thereby significantly improving production efficiency. Meanwhile, digital management can accurately grasp market demand and supply chain conditions, helping enterprises reduce operating costs and minimize resource waste.

Boundless. The digital economy breaks the boundaries of traditional industries and promotes cross-industry and cross-domain cooperation and integration [4]. For example, e-commerce deeply integrates retailing with logistics and finance, while digital healthcare integrates healthcare, information technology, and big data analysis to achieve cross-disciplinary collaboration and innovation, enhancing the coordination and flexibility of the overall economy.

Innovation. The digital economy has a high degree of innovation, and constantly emerging new technologies, products, and services, such as smart homes, online education, digital finance, etc. It not only enriches people's way of production and lifestyle but also reshapes the operation mode of traditional industries, providing broad innovation space for enterprises and pushing society as a whole to develop in the direction of more intelligent and personalized.

3 Positive Impact

Expand the tax base [5]. The digital economy expands tax coverage by capturing and integrating into the tax system business and consumer behavior that is difficult to reach with traditional tax collection and administration. For example, with the growth of the Internet, cross-border e-commerce transactions are more frequent and complex, tax authorities find it challenging to monitor the situation using the conventional model, which results in a partial loss of tax revenue [5]. However, in the era of the digital economy, cross-border e-commerce platforms can record real-time information and details of goods or services, transaction amounts, etc., providing tax authorities with a basis for taxation, including potentially missed tax sources in the collection expanding the breadth of the tax base.

Increase tax revenue. The digital economy can effectively reduce tax evasion, especially in the fields of e-commerce and digital currency. In e-commerce, intelligent platforms use digital technology to monitor transactions in real time, which can detect anomalies in promptly and prevent tax evasion such as concealing transactions and false declarations by enterprises and individuals. Despite the anonymity of digital currency transactions, tax losses can be avoided and stable income growth ensured through the establishment of a sound regulatory system and the implementation of taxation on the issuance, trading, and exchange of digital currencies.

Enhance tax transparency and accuracy. Through big data analysis, tax departments can track taxpayers' behavior in time, identify the potential risk and improve tax management efficiency and fairness. With the help of data collection and analysis of taxpayers' finances, transactions, invoices and other tax-related data, it is possible to detect abnormal fluctuations in the tax burden of enterprises, the authenticity of invoices and other tax issues. This real-time monitoring and precise analysis make tax management more efficient, avoid tax loopholes, and improve management efficiency.

4 Negative Impact

Increased the complexity of tax collection and administration [6]. New industries like digital currency and international e-commerce have emerged as a result of the digital economy. The old tax collection and administration model is hard to adjust to, and the complexity of collection and administration has significantly grown. The anonymity of digital currencies makes it difficult to trace the identity of transaction subjects, and transactions are not restricted by geography, which increases the difficulty of tax su-

pervision. Cross-border e-commerce platforms have multiplicity and complexity, involving regulations from different countries and regions, diverse operating models, and complex transaction processes. A transaction often involves multiple parties from multiple countries, and tax authorities face enormous challenges in determining tax jurisdiction and accounting for tax payable amount.

Causing tax revenue loss and regulatory blind spots [6]. It is difficult for traditional tax regulation to cover all transactions due to the hidden and global nature of some economic activities in the digital economy, which increases tax loss [6]. Among these, developing countries have relatively weak technological levels and tax supervision systems, making it difficult to effectively regulate digital economic activities, and there are a large number of regulatory blind spots. Different countries have different tax policies, which provide opportunities for enterprises to avoid taxes, such as transferring profits to low-tax areas through virtual companies, transfer pricing, and other methods.

5 International Practical Experiences and Implications for China

5.1 International Practical Experiences

In terms of digital tax collection and administration, developed countries have taken various measures to improve tax collection efficiency. For example, the United States has greatly simplified the tax declaration process and reduced tax evasion rates by establishing an electronic tax system (e-file) [7]. The UK has launched the Making Tax Digital (MTD) platform, which requires enterprises to record digitally and declare tax information in time, making tax management more transparent [7]. Australia has made tax collection and administration more precise and efficient through electronic tax reporting systems and digital audit tools [8]. These tools can help tax authorities identify potential tax evasion behaviors and conduct targeted audits.

Taking Indonesia as an example of developing countries, the digitalization of its core tax management system (CTAS) has solved the problems of inefficiency, unfairness, and lack of transparency in traditional tax management [9]. The system integrates technologies such as artificial intelligence and blockchain to achieve automation in tax management. The tax authorities seamlessly integrate with banks and corporate financial systems to achieve real-time data synchronization and avoid risks caused by information asymmetry.

International experience has shown that the construction of digital tax platforms, tax data sharing, and cross-departmental collaboration are the keys to improving tax collection and administration efficiency. In countries such as the European Union, the United States, and China, tax authorities have improved transparency and management efficiency through digital platforms. However, developing countries such as Nigeria face problems, ranging from technological backwardness, outdated regulations, and insufficient international cooperation. Therefore, in the promotion of digital tax reform, it is important to take into account the actual situation of different countries and regions and formulate appropriate tax policies.

5.2 Implications for China

Based on the experience of developed countries, in 2018, the Chinese government abolished the local tax bureau and implemented a policy of merging national and local taxes. Firstly, there is no longer any information gap between local and federal taxes, achieving unified management and sharing of tax data, and enhancing the transparency and efficiency of tax administration [10]. Secondly, the independence of the tax department has been enhanced after the merger, effectively curbing local governments' improper intervention in tax collection and administration, reducing gray areas and further standardizing tax collection and administration behavior.

In 2023, the "Golden Tax Phase IV" was piloted in Shanghai and other spots, and will be fully launched in 2025, marking the tax collection and administration of China's official entry into a new era of "the digital taxation age" [11]. Golden Tax Phase IV has achieved comprehensive coverage and automated processing of tax collection and administration by integrating information resources from tax departments, introducing technologies such as big data and artificial intelligence, greatly improving the efficiency of tax collection and administration. Not only does it simplify the tax accounting and payment process for enterprises, but it also efficiently and intelligently completes the entire process of tax invoicing, data accounting, declaration and payment, risk assessment, etc. through the platform, reducing the cost of tax compliance for enterprises [11].

6 Conclusion

In summary, the traditional tax administration and collection system is facing previously unheard-of difficulties as a result of the digital economy's explosive growth, while also providing unparalleled opportunities. This study analyzes the core characteristics of the digital economy and its profound impact on tax collection and administration efficiency. Tax departments can increase the effectiveness of tax collection and administration by utilizing digital technologies, but they also need to address issues such as tax loss and regulatory blind spots. The key to increasing the efficiency of tax collection and administration lies in the rational design of policies, effective application of technology, and international cooperation. This study not only enriches theoretical research on the modernization of tax governance but also provides feasible references and guidance for policy formulation and practical optimization.

With the ongoing advancements in big data and artificial intelligence technologies, tax departments can achieve more automation in tax auditing, tax collection and other aspects, and enhance the intelligence level of tax management. To increase the overall effectiveness of tax administration and collection, the tax department should improve information exchange and cooperative oversight with other pertinent departments (such as banks, customs, etc.). With the advancement of globalization, cross-border tax cooperation will become even more critical. Through international cooperation, the challenges of digital taxation can be addressed collectively, promoting global tax transparency and fairness.

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