Proceedings of the 10th International Conference on Economic Management and Green Development
DOI: 10.54254/2754-1169/2026.37106

Corporate Tax Aggressive Behavior in the Digital Economy: Research Progress and Future Directions

Xiaolin Wu

Curtin University, Singapore Campus, Singapore, Singapore
wuxiaolin_cus@163.com

Abstract. In recent years, the digital economy has developed rapidly. However, a mismatch exists between the value creation of the digital economy and the rules of taxation distribution. The existing literature supports that the digital economy can bring positive changes to tax management, but there are also hidden concerns about shadow economy, transnational tax management, and other related issues. The existing literature still lacks comprehensive analysis and research, with insufficient in-depth discussion of key issues. This article adopts the methods of keyword retrieval and reference traceability to identify literature related to digital economy and tax management, and systematically analyze and summarize them. It aims to explore the development of the system and comprehensively analyze the advantages and weaknesses. The proposal of corresponding solutions and the analysis and solution of problems are of great significance to the reliable and efficient development of the digital economy in the field of taxation. At the same time, this study helps to clarify the development vein and identify key factors, assisting management and practitioners adapt to technological changes and deepening understanding of relevant issues. It also supports and promotes the reform of relevant policies and laws and regulations, while providing guidance for future research.

Keywords: Digital Economy, Tax Governance, Policy Evolution, Corporate Tax Avoidance

1. Introduction

Digital economy refers to a series of economic activities that take the use of digital knowledge and information as the key production factor, modern information network as an important carrier, and the effective use of information and communication technology as an important driving force for efficiency improvement and economic structure optimization. It can be divided into two modules: digital industrialization and industrial digitalization. Radical tax planning points to the act of exploiting loopholes in digital rules to pay less taxes.

For the development of the digital economy in terms of taxation. With the development of the economy, more and more small, medium and micro enterprises use digital technology and platforms for internal management and marketing. However, compared with large enterprises, small, medium and micro enterprises have obviously received greater restrictions in application, and in China, small, medium and micro enterprises account for more than 90% of all enterprises. This change has not only brought positive changes to enterprises and management systems, but also challenges.

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Shadow economy is an important factor and is widespread [1]. The shadow economy is divided into two categories. One is to conceal and not report under legal circumstances, which is to evade taxes, social security, evade supervision, and hide compliant business. The other is an illegal activity itself, which includes smuggling, contraband trading, fraud and other criminal economy. In terms of policy, both the international community and China have gradually improved the policy of this issue, and there are also new progress, new discoveries and shortcomings in the application of enterprises. At the same time, there are still hidden dangers and potential for improvement on specific issues, such as digital currency, transnational transactions, gaps between enterprises of different sizes and the difficulty of unification.

This article first provides an overview introduction based on the context of policy development and the general global layout, and then highlight the concerns and priorities of some specific scenarios and policies, and put forward the perspective that should be paid attention to in future development on the basis of a certain degree of evaluation. Conduct comprehensive critical analysis at the theoretical level, increase the understanding of industry practitioners at the practical level, deepen understanding, predict industry trends at the industry level, stimulate public attention and thinking, and promote the improvement of relevant policies. This article puts forward a core point: whether the value of the digital economy in tax management can be fully realized depends to a large extent on the improvement of differentiated coverage.

2. Major threats and policy evolution

2.1. The evolution of corporate tax aggression

On the basis of the development of digital economy, there is a shadow of vague tax boundaries and insufficient regulatory constraints. On the one hand, there is a situation where multinational enterprises focus on transferring new digital intangible assets such as large models, business pricing algorithms and data sets. This is an algorithmic black box radical tax planning, and it is difficult for the tax authorities to verify the real value of the model. Specifically, relevant literature mentions that the transfer of intellectual property rights, permanent institutional agreements (CSAs) and platform-based income models may distort accounting profits in different jurisdictions, but they do not necessarily lead to corresponding changes in tax declaration indicators. For instance, in dealing method of algorithmic black box, it is difficult for the tax bureau to define how to share the cost of model training to different countries, which makes the existing transfer pricing rules basically fail. The ETR and BTD may only capture part of the performance of tax avoidance in the digital economy, thus underestimating the role of data-driven value creation, algorithm rent and platform network effects. This limitation shows that the existing empirical model may not fully reflect the structural characteristics of digital enterprises, highlighting the need to adopt other measurement strategies to capture the unique tax planning mechanism of large science and technology enterprises.

These studies collectively show that digitalization blurs the traditional tax boundaries, and this model enables enterprises to Profit transfer through intangible assets has exacerbated the uncertainty of the fiscal and capital markets. This also shows that traditional tax planning mainly relies on the geographical separation of production, financing and intellectual property ownership, while digital enterprises create differences in value through highly mobile intangible assets, algorithm systems and platform-mediated user participation [2]. This kind of challenge appeal for the new strategy. On the other hand, the iteration of shadow economic means such as private domain transactions avoids taxes by upgrading from virtual invoices to bulk main splitting, tampering with the nature of income and other means, and private currencies also have regulatory gaps. For example, multinational

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companies are also engaged in regulatory arbitrage, strategically exploiting the differences between tax policies of different countries by taking advantage of tax havens such as Bermuda, the Cayman Islands and Panama, thus exacerbating the problem of tax evasion. At the international level, tax evasion driven by the shadow economy has seriously affected the government's revenue, fiscal stability and the fairness of the overall tax system.

In practice, individuals and enterprises may manipulate financial statements, increase operating expenses, or use nominal accounts to conceal the real ownership of assets. Reports from the International Monetary Fund (IMF) and the Organization for Economic Cooperation and Development (OECD) point out that developing countries lose billions of dollars every year due to tax base erosion and profit transfer (BEPS), which allow multinational companies to make illegal profits. For example, in the European Union, the shadow economy has led to a significant loss of fiscal revenue, with Poland reaching 4.2% of gross domestic product (GDP) and Germany reaching 1.9%, 2.9% in the Czech Republic. An independent study of the Czech Republic estimates that unregulated economic activities cause an annual loss of about 7.2% of GDP tax revenue. Similarly, in the United States, the shadow economy is estimated to account for 7.9% to 21% of the reported GDP, resulting in an annual loss of between $300 billion and $400 billion in tax revenue. Digitalization has brought new challenges to tax collection and management. The emergence of cryptocurrencies and blockchain-based financial systems has given rise to new ways of tax evasion, enabling individuals and enterprises to transact anonymously [3]. At the same time, there will also be a substantial situation of local operation to win tax incentives.

In general, large multinational enterprises erode the cross-border tax base through algorithms and intangible assets. Medium-sized cross-border enterprises are not covered by the pillar one rule and become a vacuum zone of supervision. For small enterprises, hidden income and shadow economy are concentrated. Potential solutions also need to developed around this differentiated landscape.

2.2. Positive aspects

Despite the negative impact of the digital economy, the positive changes and industry changes it brings cannot be ignored. These include the improvement of transparency and accuracy, the overall use of adjustment in the overall environment of the economic cycle, the positive impact on the macro-employment rate and stakeholder trust, and the optimization of the direction of tax avoidance. First of all, digitalization makes enterprise data more accurate and traceable. The application of digital technologies such as electronic declaration will leave digital traces of all the company's activities, thus improving the transparency of the data generated. This enhances the use of the data generated by the tax authorities. In fact, providing relevant and high-quality data helps the tax administration department to optimize the algorithm, understand the tax strategy of the enterprise more deeply, accurately identify high-risk taxpayers, and realize real-time monitoring of tax compliance. Electronic invoices and automatic information exchange can reduce information asymmetry, and also help managers monitor the tax risks of enterprises in real time. The results of OLS regression show that for every 1 unit increase in the digital level, the difference in book tax will be reduced by 40.4755, which is statistically significant at the significance level of 5% [4].

The latest initiative is the "Digital Morocco 2030" strategy, which aims to realize the digitalization of public services and improve the national e-government ranking. At the same time, by creating 240,000 direct jobs and contributing 100 billion dirhams to GDP by 2030, it will promote the development of the digital economy. The strategy uses cutting-edge technologies such as artificial intelligence to improve the quality of public services and the level of interaction with the private sector. In addition, the revision of the Good Governance Practice Guidelines in 2025 is also

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an important step to strengthen Moroccan corporate governance, mainly through the introduction of independent directors into the board of directors, the strengthening of the accountability mechanism, and the implementation of regular evaluation and financial transparency systems [4].

Then, improve the accuracy of the report and the trust of stakeholders. Relevant literature suggests that this digital transformation prompts management to adopt a more positive emotional expression, with a marginal contribution of 8.6%, further improving the trust of enterprises. It has also improved the employment rate [5]. At the same time, empirical results show that the positive impact of digitalization on innovation has countercyclical characteristics. During the economic recession, this shows that more positive support is needed to promote innovation and economic recovery to promote innovation and economic recovery. Many countries are promoting the digital economy and making it an important strategic foundation for a new round of scientific and technological revolution [6]. In addition, the application of digital technology (DTA) has promoted innovation and the development of new digital products, including the empirical results of green technology, showing that DTA reduces the degree of tax avoidance of Chinese enterprises through corporate green behavior (CGB) [7].

2.3. Progress status and policy evolution

The international layout, policies and domestic policies are gradually improving. For an international point of view, the BEPS plan released by the OECD in 2015 identify a problem. The OECD two-pillar program in 2021 stipulates that market countries have the right to share part of the tax and stipulate a global minimum tax rate of 15%, which will be officially implemented in 2023. For China, from the perspective of the development timeline, the first phase of Golden Tax is aimed at the problem of fake invoices. The second phase of Golden Tax is nationwide networked to crack down on false invoices. The third phase of Golden Tax is the first national unified tax collection and management platform, with invoices serving as core documents for judging tax payment. The fourth phase of Golden Tax is to control taxes with numbers, and external cross-departmental data is opened, covering the scope. The fourth phase of the Gold Tax is the qualitative change point that is officially implemented by the numerical tax paradigm. Broadly, invoices are electronic in all fields, accompanied by functions such as intelligent risk warning. Domestic supervision relies on the fourth phase of gold tax to identify risks. At the same time, there are problems of limited algorithm black boxes and weak overseas data. According to the 2024 Digital Transformation Report, 60% of China's enterprises remains at the primary stage of digitalization, while only 3.2% of enterprises with a high digital level and driven by intelligence [8].

3. Future development direction

3.1. The development direction of different dimensions

There are three dimensions suggestion in list: technical level, organizational level, and regulatory level. At the technical level, it is necessary to strengthen the traceability of technical process nodes, strengthen the coverage, transparency and convenience of query of data. When problems are identified, database should enable the rapid tracing of problematic data sources and evidence chains. In daily operation, we can also develop the analysis function of the database. Predict and identify abnormalities. At the organizational level, greater support should be provided to small and medium-sized enterprises. Digital coverage should be implemented according to the situation of different enterprises, with systematic optimization focusing on their the key points. At the regulatory level,

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rules and regulations for specific cases and scenarios should be further refined, while the supervision system should continue to be improved.

3.2. The focus of different types of enterprises for algorithm black boxes

Different types of enterprises have different targeted solution directions. For large multinational enterprise facing cross-border tax base erosion driven by intangible assets, four major suggestions can be considered. Firstly, supplement the digital dimension proxy variable to improve the transfer pricing document. Secondly, upgrade BEPS transfer pricing rules for AI intangible assets. Thirdly, combine pillar rule with the one-sided bottom tool. Finally, under the technical auxiliary supervision to implement privacy computing audit. For medium-sized cross-border digital enterprises that are exempt from the Pillar One rules and may therefore fall into a governance vacuum, four solutions can be considered. Firstly, promote amount B (Amount B) Simplify transfer pricing. Secondly, domestic legislation as a supplementary connectionin detail, apply domestic income tax rules to fill the gap in international treaties. Thirdly, simplified proxy variable profit distribution method, do not copy the complex compliance of pillar one, in detail, there is no need for a complete amount A full process. Design a lightweight three-factor (income-user-compute power) distribution formula for profit division of medium-sized enterprises related intangible asset transactions, reduce compliance costs, and distinguish it from the high-standard compliance of ultra-large groups. Finally, regional multilateral coordination. For small and micro enterprises and individual entrepreneurs facing cross-border shadow activities and hidden income, another four solutions are proposed. Firstly, compulsory obligation to submit tax-related information on cross-border digital platforms and payment service providers. Secondly, lower-threshold simplified collection and management system, Thirdly, cross-border automatic exchange of tax information. Finally, distinguish risk level classification and management.

4. Conclusion

This article points out the development vein, key issues, technology application advantages and suggestions. Three main contributions are put forward: first, to identify the problem of insufficient coverage of digital supervision and digital development under the situation of differentiation; second, to see the focus and limitations of supervision by sorting out the context of development; and third, to explain the advantages and future feasibility of the digital economy through the establishment of an analysis framework. Future research should focus on: analyzing how different types of enterprises should really go through empirical case studies, clarifying the direction of technological improvement that different enterprises should focus on, and promoting the combination of institutional compliance with scenarios. Only by achieving comprehensive coverage while recognizing differentiated circumstances can the digital economy be reliably and efficiently integrated in taxation and corporate governance process.

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