

# The Impact of E-commerce Platform Tax Governance on Economic Development

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**Abstract.** With the rapid development of the electronic technology industry in the new era of digitalization, a series of emerging e-commerce platforms such as Google, Amazon, and Taobao have emerged. Digital platforms have created huge economic benefits for various countries and promoted economic development. However, with the increase in e-commerce platforms, many problems have begun to surface, the most representative of which is the tax issue. This article discusses the current status of taxation on e-commerce platforms and summarizes the existing problems. The main problems with taxation at present are the slow pace of system updates and the serious problem of tax evasion on cross-border platforms. Applying specific mathematical models is a way to observe the future trend of taxation issues. Finally, some possible measures to solve taxation problems in the future are proposed, as well as how countries should jointly deal with e-commerce platform taxation issues under the trend of globalization.

**Keywords:** E-commerce, platform taxation, application of mathematical models, economic development.

## 1. Introduction

In this era of big data, with rapid technological development, the development of e-commerce platform economy has become a hot topic. With the popularization of the Internet, e-commerce has become an important part of modern business activities. For the world, e-commerce platforms have made great contributions to promoting world economic exchanges, both for developing and developed countries. Developing countries can promote the transformation of the digital economy by building e-commerce platforms, thereby driving their own economic development; this emerging development channel also provides more development space and possibilities for developed countries, so that the economy can develop comprehensively. For individuals, such as entrepreneurs, cross-border e-commerce platforms provide a convenient promotion platform. Entrepreneurs can quickly enter the market with lower start-up funds and accumulate capital through large-scale and multi-purpose transactions. Consumers are also beneficiaries of the development of e-commerce platforms. The reduction of transaction thresholds allows consumers to participate in transactions more conveniently, which saves consumers shopping time and costs. From a long-term perspective, the development of e-commerce platforms is a topic worthy of attention. The trend of future technological development indicates that the economic development of e-commerce platforms will be paid more attention by more people. Different from traditional business platforms, e-commerce platforms are known for their low cost, low threshold, high efficiency and high returns. The rapid development of Internet technology has made the original fantasy of shopping a reality. The optimization of online services has enabled people to get the items they want at home, greatly improving the shopping experience of consumers.

Against the background of the rapid development of e-commerce platforms, many problems have begun to emerge slowly, and its tax governance has become one of the most important issues in this field. To study this issue, we can analyze it from both the economic and government perspectives. From an economic perspective, the implementation of some regulatory measures against e-commerce and the reduction of profit margins by raising commodity prices are a huge blow to the development of e-commerce [1]. But on the other hand, from the government's perspective, the introduction of a tax system can reasonably increase government revenue and also have a certain protective effect on

the interests of domestic industries [1, 2]. Therefore, how to find a balance between the interests of all parties has become a top priority.

E-commerce is an important part of the digital economy. Studying the impact of its tax governance will help balance the relationship between tax policies and economic development. In the process of tax governance, if the policy design is unreasonable, it may inhibit the development of e-commerce and thus affect the growth of the entire digital economy. On the contrary, scientific and reasonable tax policies can promote the prosperity and development of e-commerce, promote technological innovation and economic growth, and help the sustainable development of the national digital economy. Studying the impact of e-commerce platform tax governance on economic development is crucial. It not only involves tax fairness and the stability of government fiscal revenue, but also relates to the sustainable development of the digital economy, cross-border tax governance, and inclusive growth of the social economy.

This study aims to explore some problems in the current tax system by analyzing the current status of e-platform taxation in developing countries represented by China. The study uses the computable general equilibrium model to assist in studying the possible development trend of future e-taxation and proposes some future tax plans based on the current economic situation. This article is mainly divided into four parts: case description, problem analysis, suggestions, and conclusions, and the research is conducted in sections.

## 2. Case Description

Take China as an example. As one of the largest developing countries in the world, China is representative. In 2020, due to the epidemic, the world economy suffered a major blow. In a period when the offline economy could not develop, the platform economy has slowly emerged. Many small and medium-sized enterprises have discovered new business opportunities in the platform economy and invested in the platform economy market. In recent years, China's scientific and technological level has continued to improve, driving the rapid development of the platform economy. Take Guangdong Province, China as an example. Guangdong is in a leading position in the development of e-commerce. As a major manufacturing province, Guangdong has a large number of small and medium-sized enterprises [3]. Under the influence of the business environment, a large number of small and medium-sized enterprises have focused their business models on e-commerce [3]. As traditional enterprises transform into e-commerce companies, the tax system has not yet made corresponding adjustments. The main problems currently encountered by taxation are the difficulty of tax collection, the inability of current tax policies to adapt to the current environment, and the difficulty of introducing new tax policies [2]. In addition to the tax system problem, the development of e-commerce in different parts of the same country is also very different. According to the survey data of the E-commerce Research Center, the development of e-commerce in 625 cities in China varies greatly [3]. The development of first-tier cities with strong economic strength is significantly better than that of second- and third-tier cities, which shows that the impact of regional differences on the development of e-commerce cannot be ignored [3]. However, given the huge impact of e-commerce on economic development, it is still very necessary to solve the tax problem of e-commerce.

## 3. Problem Analysis

### 3.1. Global Economic Situation

To analyze the challenges of electronic platform tax governance in detail, it is necessary to look at the world economy. As an economic community, the economic development of each country will affect each other. After the financial crisis, the economies of countries around the world have basically suffered a major blow or been affected to a certain extent, and countries have begun to focus on economic issues. In 2014, the OECD issued a statement on the Base Erosion and Profit Shifting Project to prevent profit transfer to low corporate tax entities [4]. Then the European Commission

launched an anti-tax avoidance plan, the main purpose of which is to achieve fairer and simpler taxation. These policies are relatively early tax policies and laid the foundation for many tax policies today. Under the influence of these policies, the world economy has recovered to a certain extent. The key to the success of the early tax system is to discover policy loopholes in a timely manner according to the international situation and make reasonable improvements or introduce new policies.

### **3.2. Challenges Encountered by Ecommerce Platform Taxation**

Turn back to the taxation of e-commerce platforms, the taxation issues of e-commerce platforms can be mainly divided into two categories: technical and policy. E-commerce platforms face many technical challenges in tax governance, such as the complicated procedures for cross-border transactions and the difficulty in defining tax jurisdiction. The taxation standards for e-commerce platforms in different countries are not unified, which has caused many transaction problems. At the same time, the amount of transaction data on e-commerce platforms is very large, and current technical means cannot detect all technical loopholes, leaving hidden dangers. Now multinational e-commerce platforms basically earn profits in different tax jurisdictions, and the tax rates in different countries are different. Multinational platforms can avoid paying taxes in one country by transferring profits to another country with lower tax rates [5]. In the context of digital platforms, one way to avoid taxes is to use franchises to transfer profits to low-tax countries, thereby evading part of the tax [5]. In addition to the problems discovered by governments during the economic crisis, policy challenges also include the lag of tax policies. Today's e-commerce platforms are developing very rapidly, and the growth rate has even exceeded government expectations, resulting in many tax policies previously issued being unable to adapt to the new economic situation. China mainly levies value-added tax on e-commerce platforms, that is, a tax levied on each stage of the product or service process. In China, there are three levels of value-added tax for different categories of products or services, namely 13%, 9% and 6% [6]. There are also many other sales taxes and a large number of financial declarations. If the tax system is too complicated, it will affect the development of e-commerce platforms to a certain extent, and further affect the speed of economic development.

### **3.3. Some Successful Responses to Digital Platform Tax Issues**

After noticing the series of problems mentioned above, both electronic platforms and international organizations are actively making changes. Many people have realized the importance of electronic platform taxation. Digital media platforms have timely discovered the shortcomings of traditional operating models and made some improvements. The current business model of digital media platforms means that higher tax rates on revenue from the sale of media content will lead to lower prices for media content and an increase in the number of readers. This is contrary to the standard tax approach, which means higher prices and fewer users [5]. This is a good start and proves that change is necessary. Internationally, in order to address the above difficulties, the OECD launched a new work program in May 2019 to replace the permanent establishment rules with new contact points that are more suitable for the digital economy and define new profit split accounting rules [6, 7]. At the same time, in order to put pressure on the platforms, some countries decided to unilaterally implement digital service taxes. The key factor for the success of the above cases is to recognize the main problems of electronic platform taxation and make timely changes based on the international and market situations. It is also obvious that effective e-commerce tax governance has a significant impact on overall economic growth. First of all, the improvement of tax governance can significantly reduce the funds lost due to taxation and reduce the national fiscal burden. Through continuous improvement of more reasonable tax policies and more efficient tax collection and management mechanisms, the government can better control tax costs and increase tax revenue. Effective tax governance can also promote the rational allocation of market resources and reduce market distortions caused by unfair taxation. By conducting standardized tax management on e-commerce platforms, the interference of tax evasion on the market can be avoided as much as possible, thereby improving the efficiency of overall economic operation.

## 4. Summary

### 4.1. Balancing Tax Compliance and Economic Vitality through Government Assistance

The government can provide clear tax guidance to e-commerce companies, especially for small and medium-sized enterprises, and set up a special tax consulting platform to help companies understand and comply with tax laws and regulations. For e-commerce companies of different sizes, the government can implement differentiated tax rates. Large companies can bear higher tax burdens, while small and medium-sized enterprises can enjoy certain tax exemptions or preferential policies to encourage innovation and market diversification. For e-commerce companies that promote digital transformation and technological innovation, the government can provide tax incentives. For example, tax exemptions can be provided for expenditures on research and development and technological upgrades to encourage companies to invest in technological innovation and enhance market competitiveness. The government can dynamically adjust the tax policies of e-commerce platforms according to market development and changes in the economic environment by establishing a flexible tax policy adjustment mechanism to ensure the adaptability and flexibility of the policy and avoid excessive restrictions on market vitality.

### 4.2. Using Mathematical Models to Manage Taxes

A mathematical model that can be referenced at present is the computable general equilibrium (CGE) model. In the past, Shoven and Whalley introduced the computable general equilibrium model into taxation, which immediately paved the way for various possible policy applications [8]. In the dynamic landscape of economic modeling, the emergence of the computable general equilibrium (CGE) model marks a paradigm shift, making it an indispensable tool for unraveling the complex dynamics of modern economic systems [9]. The advantage of this model is that it can capture the complex interactions between economic entities and the subtle effects of various policies [9]. The current economic landscape is changing rapidly, and the demand for advanced modeling techniques is becoming increasingly high, and the CGE model is a good technological tool [9]. The CGE model can analyze the impact of e-commerce platform tax policies on economic development in the short and long term. In the short term, policies may trigger economic fluctuations such as resource reallocation and price adjustments, while in the long term, they may affect capital accumulation, technological progress and economic growth.

Through the CGE model, policymakers can identify the impact of tax policies on specific sectors or regions, especially in the context of differences in development between countries and regions today. Although the method still has limitations, the general equilibrium method provides a useful unified framework compared to other methods for studying the relationship between tax policies and income, efficiency, fairness and international competitiveness goals [10]. The application of this mathematical model is conducive to a more comprehensive assessment of the impact of the tax system on economic development, which is very necessary.

### 4.3. Pay Attention to the Importance and Specific Measures of International Cooperation

The growth of cross-border e-commerce transactions has challenged the traditional tax collection and management model, which may lead to the loss of tax base in some countries. International cooperation can reduce the possibility of e-commerce platforms taking advantage of tax differences to evade and avoid taxes through unified tax rules and coordinated tax policies. In addition, through international cooperation, countries can share tax information and experience, jointly address the problem of tax base erosion, and ensure the stability of tax revenues in various countries.

On the basis of existing tax agreements, countries can sign more bilateral and multilateral tax agreements, especially in cross-border e-commerce. These agreements should include clear provisions on tax information sharing, transfer pricing, permanent establishment recognition, etc., to ensure that countries can effectively collect taxes payable. It is also necessary to establish a global tax information sharing platform under the current trend of global economic development. The

platform should cover e-commerce transaction information, corporate tax return data, cross-border payment records, etc. This platform is led by international organizations or the United Nations to ensure that tax authorities in various countries can obtain accurate information in a timely manner and combat cross-border tax evasion.

## 5. Conclusion

The main findings of this study point out that the tax governance of e-commerce platforms has played an important role in increasing government fiscal revenue and promoting fair competition in the market. However, the study also shows that the current tax governance faces some challenges, such as the lag of tax laws and regulations, the difficulty of tax collection and management of cross-border e-commerce, and the insufficient application of information technology in tax collection and management. Therefore, it is recommended that the government speed up the updating of relevant laws and regulations and refer to some mathematical models to assist in the formulation of the tax system. At the same time, the tax governance of e-commerce will develop in a more intelligent and international direction in the future. With the continuous advancement of big data and artificial intelligence technology, tax collection and management will become more efficient and accurate. At the same time, the acceleration of the globalization process will prompt countries to strengthen cooperation in tax policies in order to jointly cope with the challenges brought by cross-border e-commerce. This will not only promote the sustainable development of the global economy but may also prompt countries to make profound adjustments in tax policies to adapt to the increasingly complex global situation of e-commerce.

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