Application of Computer-aided in the Theoretical Impact of International Trade and the Analysis of Real Challenge for Electronic Commerce on International Trade

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Abstract. With the popularity of the Internet, information technology has developed at an alarming rate. E-commerce has brought earth-shaking changes to people's lives. E-commerce is changing people's way of life and international trade. It created a new business model. E-commerce makes people's life more convenient and fast. People can buy anything they want on the Internet, without the restriction of time and space. Through the computer-aided, traders from all over the world who participate in trade can exchange trade online without meeting each other. So, e-commerce has brought strong impact and challenge to traditional international trade. With its unique openness, cross-regional and timeliness, e-commerce has rapidly occupied the global economic market. E-commerce has brought many changes, such as transaction mode, reduced transaction costs, increased transaction opportunities and so on. This paper first analyses the current situation of e-commerce in the new economic situation. And then analyses the theoretical impact and practical challenges on international trade. Finally, this paper puts forward some improvement measures.

Keywords: Theoretic Shock, Realistic Challenge, E-commerce, International Trade, Computer-aided

1. Introduction

Compared with the developed countries such as the United States, Europe and the mouth-based countries, the e-commerce in China started relatively late, but showed a very promising momentum of development. With the improvement of network facilities and e-commerce environment, the number of Internet users is increasing. At the same time, the volume of e-commerce transactions has a very rapid growth momentum. According to relevant statistics, our e-commerce transactions in 2009 amounted to 3.75 trillion yuan, and in 2018 reached 31.63 trillion yuan. The e-commerce turnover statistics in China are shown in Figure 1. Total Transaction Amount of Cross-Border E-Commerce are shown in Figure 2.
Under the market economy system, the demand for e-commerce in various social fields will continue to increase. At the same time, the public will also recognize the practicability of e-commerce, which will enhance their awareness of the application of e-commerce. We need to improve and build infrastructure. We need to promote the virtuous circle of logistics, capital flow and information flow from macro and micro aspects, and further promote the sustainable development of e-commerce.

![Figure 1. E-commerce turnover statistics in China.](image1)

![Figure 2. Total transaction amount of cross-border e-commerce.](image2)

Data source: National Bureau of Statistics

2. The theoretical impact of e-commerce on international trade

2.1. The influence of comparative advantage theory

The biggest impact of e-commerce on the comparative advantage theory is the change of the production possibilities boundary preconditions. With the rapid change of e-commerce technology, the hypothetical premise of this theory has been greatly affected. In e-commerce activities, electronic ordering system, bar code technology and electronic data exchange technology have a significant impact on the industrial structure. It is widely used in the field of trade, which greatly improves social productivity. There are many uncertainties in economic, technological and socio-political changes. So, in the e-commerce environment, the production possibility boundary can only be static analyzed on a
relatively short-term economic basis. When technology changes, the production possibility boundary will not play its original role[1].

2.2. The impact on H-0 theory

H-0 theory is based on the uneven distribution of factors of production in different countries. It emphasizes the important role that different countries and factors endow different products to trade. Compared with the comparative advantage theory, H-0 theory provides a further explanation. A country's resource enjoyment is its comparative advantage, including natural resources, capital resources, labor and human resources. With the continuous development of e-commerce, H-0 theory also poses new challenges. Many new factors of production begin to emerge slowly with the change of economic form, resulting in some core factors that have a significant impact on a country's trade, such as knowledge, information and some potential customers. This greatly weakens the role of production factors in international trade. The different prices of factors of production in each country constitute the premise of H-0 theory. International trade through factor price differences can enable a country to gain the benefits of comparative advantage. E-commerce is widely used, and the rapid development of international trade can quickly adjust the global pattern, which makes the initial comparative advantage interests change in international trade[2].

3. The realistic challenge of e-commerce on international trade

3.1. The international tax system has been broken

The breakdown of the international tax system is mainly manifested in the enormous challenge of the "permanent establishment". "Permanent Establishment" occupies an important position in today's international tax field, which is a common international principle. According to international standards, only when a permanent institution is established in a country can it obtain a regional tax jurisdiction, and at the same time, it can collect tax from that institution. Under the condition of e-commerce trade, non-residents of any country can carry out sales activities at IP address. So, how to identify the permanent establishment has become a major issue. If the user does not need the website to promote sales, publicize products and provide labor services, there is no way to be defined as a non-permanent establishment and get tax-free treatment. This has created such a situation. Many domestic consumers buy foreign goods and services through the Internet, while foreign businessmen have never appeared in China. So, it is impossible to incorporate the sales and business activities of foreign businessmen into the taxation scope. However, when it comes to preferential policies for goods and services tax, such as export tax rebate policy, subsidy policy and other issues, the existing rules can not give a good solution. E-commerce brings new challenges to tax management in various countries.

3.2. Laws and regulations are not perfect enough

Trade transactions on the Internet can not be well realized by people. The virtuality of e-commerce needs corresponding laws and regulations to restrict and regulate. However, due to its inherent uncertainty and clarity, it is difficult to formulate the relevant legal system. This requires not only the participation of the information industry, but also the participation of multiple industries. The government also plays a very important role in this process. The application of e-commerce has created a new form of trade mechanism. The original laws and regulations restricting traditional trade can not
play a better role in the new forms of trade, sometimes even occur completely inapplicable phenomena. At present, China has not promulgated relevant laws and regulations in the field of e-commerce. Many problems in e-commerce trade have not yet been issued special normative documents, such as security payment, contract disputes and digital signatures[3].

4. Strategies for the Development on International Trade in E-commerce

4.1. Enhancing the initiative of e-commerce

First, we need to enhance the awareness of e-commerce. Leaders of international trade enterprises should be aware of the advantages of e-commerce and form a correct and comprehensive understanding. At the same time, we should recognize the impact of e-commerce on the traditional model and the future development prospects. We need to continue to increase the intensity of e-commerce. At the same time, we can occupy an absolute dominant position in the electronic competition. Second, international trade enterprises need to change their operation mode. Enterprises should make it clear that e-commerce is an important direction of international trade in the future. In the future, we should pay enough attention to e-commerce in the construction of our company. At the same time, business managers should see the shortcomings of the traditional operation mode. Managers need to change the traditional mode of operation with the help of e-commerce. In this way, we can enhance the competitiveness of the company[4].

4.2. Perfecting laws and regulations

Firstly, the relevant laws should be enacted. Different countries have different legal systems, so Transnational E-commerce has to face the common constraints of different legal systems. The same event may have different impacts in different countries. Therefore, our government should choose a public legal system as an international standard in the development of e-commerce, so as to reduce the legal constraints. In addition, tax evasion and tax avoidance are easy to occur in the process of e-commerce development. Our country's law should be constantly improved and corresponding punishment measures should be taken to avoid tax evasion and tax evasion. In this way, e-commerce can develop healthily from a long-term perspective with the support of national leaders[5].

5. Conclusion

E-commerce has a far-reaching impact on improving the level of international trade based on the computer-aided. Based on the e-commerce current situation in China's international trade, this paper reveals the main problems, and lists some suggestions. In the future, China should strengthen the construction of e-commerce infrastructure, formulate and improve relevant laws and regulations. At the same time, enterprises themselves should gradually establish their own credit system. We will strive for more competitive advantages in international trade and more trade profits[6].

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