Policy Synergy Research on the Development of Cross-border E-Commerce in China

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Abstract: The development of cross-border e-commerce cannot be separated from the support of policy, and policy formulation must conform to the law of cross-border e-commerce development, which needs to understand the theory of cross-border e-commerce development, clarify the factors and mechanisms affecting the development of cross-border e-commerce, on this basis, the policy formulated can have synergies, but also for the development of e-commerce to play a better role. On the basis of theoretical discussion, this paper puts forward the problem of the synergy of policy formulation.

Keywords: Cross-border e-commerce, Evaluation, Policy synergy

1 Introduction

Cross-border e-commerce mainly refers to e-commerce between countries, is the use of e-commerce platform to enable traders in two different countries (customs) to complete the transaction agreement, seal the advance payment, through international logistics companies to complete the delivery of goods, settlement of the purchase price, to achieve international transactions of commercial activities. Cross-border e-commerce solves trade barriers between countries, removes the restrictions that geographical factors bring to traditional transactions, achieves trade without borders, and facilitates the search for a broader market. In recent years, China's cross-border e-commerce rapid development, but in the development process of problems cannot be ignored. Although various policies and measures to promote the development of cross-border e-commerce are constantly being introduced, there is a clear lack of effective operational mechanism between various types of policies, which requires policymakers to understand the development law of cross-border e-commerce and grasp the key factors of policy co-operation.

2 The theoretical basis for the development of cross-border e-commerce

The theoretical basis of cross-border e-commerce includes the theoretical basis of traditional international trade and the influence of scientific and technological innovation and new development in the development of international trade.

2.1 Transaction fee theory

Transaction fees (Transaction Cost) also known as transaction costs, It was proposed by Coase (R. H. 1937), a Nobel laureate in economics. Transaction costs are the costs that an enterprise will pay to complete the exchange, including the costs of finding a transaction, entering into a contract, executing a transaction, supervising the transaction, and so on[1]. Williamson has a secondary definition of transaction cost, arguing that the concept of transaction cost is analysed from the pre-transaction and two periods after the conclusion of the contract: the cost before the transaction occurs, i.e. the sum of all the costs incurred to facilitate the formation of the transaction; The cost of compensating or terminating a contract after the contract is signed is also a transaction cost. Traditional international trade generally through pre-transaction consultation, signing and the implementation of the contract process of customs clearance, commodity inspection, settlement

of foreign exchange and other links, the transaction cycle is long, high transaction costs, and Internet-based technology-based e-commerce can not only greatly eliminate the information asymmetry between the parties to the transaction, but also reduce the transaction costs in all aspects of the transaction, In the end, the transaction cost of the whole trade process is reduced, and the enterprise brings more profit margins.

2.2 Industry gathering theory

Industrial Agglomer Theory is led by Michael J. E. Porter finished. According to Michael Porter (1998), industrial clusters are a geographically concentrated collection of companies and institutions that are geographically integrated in a particular area. Industrial clusters include a number of interconnected industries and other entities that play an important role in competition. Industrial clusters often extend down to sales channels and customers, and to manufacturers of ancillary products, as well as to industry companies that are related to skills or inputs. The development of cross-border e-commerce has played a great role in promoting the change of foreign trade business model, the optimization and upgrading of the industrial chain of technology and information, logistics, information, warehousing and so on. With the development of e-commerce, the relevant technology, operation mode, production mode and information resource allocation have been improved, the rise of cross-border e-commerce will be closely linked to the various related industrial chains, so that the economic ties within the industry and between trade enterprises more closely.

2.3 The theory of technological innovation

Schumpeter first proposed "innovation" in his book Economic Development Theory, which is the establishment of a new production function, and as the most successful application of Internet technology in commerce, e-commerce is undoubtedly an "innovation", forming a new production function containing technical items. The new production function makes the input of the same factors of production more output, and the economic efficiency of foreign trade enterprises and the whole industry can be improved, thus finally raising the total supply level of the whole society.

2.4 Long tail theory

The concept of "long tail" was first proposed by Chris Anderson, editor-in-chief of Wired magazine, in an October 2004 article in Long Tail to describe business models like Amazon. The main content of the long-tail theory is that as long as the product has enough storage and circulation channels, in the past those products that are not in strong demand or poor sales can occupy the market share can match or even exceed the mainstream market share occupied by a few popular goods. In other words, the accumulation of many small markets can produce the ability to match the mainstream market, the sales volume of enterprises from the traditional demand curve on behalf of the head of the best-selling goods to the long tail of the goods on behalf of the cold goods. The long-tail theory holds that as long as the goods are satisfied enough broad enough display space and circulation channels, the seemingly cold demand for very small demand will become "hot"[2]. Because the goods put on the Internet platform, sales channels and potential market will expand, cold goods will also have a huge market share.

2.5 The theory of competitive advantage

The theory of competitive advantage was put forward by Michael Porter, a professor at Harvard University in the United States. By analyzing every link and ancillary activity in the value chain, Michael Porter believes that differences between competitors' value chains are a key source of competitive advantage[3]. There are two main forms of competitive advantage: cost advantage and differentiation advantage, which play a vital role in the economic activity and economic results that the firm is engaged in. In the national competitive advantage, Michael Porter applied the theory of domestic competitive advantage to the international market from the perspective of international trade and international competition, and put forward the "diamond" system model to explain the formation and subsequent development of competitive advantage. The policy-making framework for cross-border e-commerce needs to combine enterprises, industries and the environment to ensure that policies effectively promote the competitive advantage of the cross-border e-commerce industry.

3 Environmental factors and driving mechanisms for the development of cross-border e-commerce

The rapid development of cross-border e-commerce has environmental factors, but also its internal driving mechanism, environmental factors are usually the soil of the development of new things, and the driving mechanism is the internal force of the sustainable

development of cross-border e-commerce.

3.1 Environmental factors

There are many factors affecting the development of cross-border e-commerce, including economic factors, information technology factors and so on.

3.1.1 Economic environment

The economic environment includes the scale of economic development, industrial structure and related supporting facilities construction. The scale of economic development is usually assessed by gross domestic product or gross national product, indicating the overall level of wealth creation. The rate of economic development refers to the ratio of GDP to the base period in the reporting period, calculated at constant prices. According to Keynes's theory of consumption function, the most fundamental factor that determines the level of consumption is disposable income. The relationship between industrial structure and economic growth has been studied more closely since The 1960s, such as Kuznets, Channeri and others, and proves that there is an intrinsic relationship between the evolution and upgrading of industrial structure and economic growth. The adjustment and optimization of industrial structure can promote economic growth, and economic growth can in turn promote the higher level and rationalization of industrial structure. At present, China's economy maintains medium-high growth, promotes the development of tertiary industry, including finance and logistics, and the proportion of tertiary industry to GDP is gradually increasing, and the economic environment provides a good opportunity for the development of cross-border e-commerce.

3.2 Information and communication environment

Robert Solo once said, "IT technology can contribute to productivity." The innovation of information technology represented by the Internet is the main source of power, cloud computing technology, big data technology, multi-screen Internet of Things and other information technology innovation, will become a strong backup for the development of China's enterprises cross-border e-commerce. The development of big data has become the most basic technical support background for business innovation and cross-border e-commerce. Big data technology can professionally analyze and process massive information, cloud computing technology supports to meet the global market's massive customer needs, provide efficient and targeted services, a platform for storing and computing massive amounts of data is a cross-border e-commerce enterprises and cross-border e-commerce platform to expand marketing business necessary.

3.3 Power mechanism for cross-border e-commerce development

The development of cross-border e-commerce under the influence of the effective environment, stimulates the initiative of e-commerce parties to participate in the initiative, various drivers, such as policy-driven, enterprises' own development requirements, the reasons for capital investment, as well as the support of Internet technology has become a powerful force for the rapid development of cross-border e-commerce[4].

3.3.1 Policy-driven

With the introduction of the concept of cross-border e-commerce, cross-border e-commerce has been more and more attention by the state and has issued a series of related documents to promote the harmonious and stable development of cross-border e-commerce. In order to support the emerging industry and promote its development, the state has given preferential policies on cross-border shopping tax, and the relevant ministries have carried out targeted reforms in accordance with the responsibilities and current situation of the Ministry of Commerce in order to effectively implement the views put forward by the State Council: the Ministry of Commerce supports the logistics industry to expand the online market to promote the network and intelligent development of the logistics industry. The Customs and Inspection and Quarantine Bureau has jointly enforced the law, cooperated in simplifying customs clearance and inspection efficiency, and issued a series of policies to promote the development of the logistics industry supporting e-commerce. Policy factors have become a powerful driver of the development of cross-border e-commerce.

3.3.2 Social media drivers

As a way of e-commerce, cross-border e-commerce presents different characteristics from traditional trade, in addition to products, but also need to consider how to increase the flow of the platform, stimulate consumer attention and browsing, thereby increasing the use of platform stickiness. Social media has an innate advantage in increasing traffic and is an effective solution. Social media is a growing role in leading consumption, advocacy, evaluation and motivation on

social media help to sustain old customers and develop new resources, in addition, social media provides the most convenient way to consult, browse, negotiate, and play an indispensable role in the development of cross-border e-commerce. Social media has become one of the drivers of cross-border e-commerce.

3.3.3 Capital-driven

The development and rise of cross-border e-commerce has attracted global capital, and traditional enterprises have invested a lot of capital into the cross-border e-commerce market through various ways, such as self-establishment, acquisition, equity participation, cooperation, etc. Under the adequate financial support, in the cross-border e-commerce indispensable platform construction, industrial gathering, logistics development, brand effect, talent training and so on have been more developed. The growing cross-border e-commerce industry has further attracted a large number of capital to enter, becoming a strong driver of cross-border e-commerce.

4 Evaluation method of influencing factors of cross-border e-commerce

The evaluation of the influencing factors of cross-border e-commerce is helpful to analyze the role weight of each influencing factor, so as to provide a good basis for policy formulation. At present, the main methods for the evaluation of e-commerce influence factors at home and abroad: hierarchical analysis, BP neural network, structural equation method, factor analysis, etc.

4.1 Analytic hierarchy process (AHP)

The application of hierarchical analysis method first appeared in the field of operational research. The 1977 article "Modeling of Unstructured Decision-Making Problems - Hierarchical Analysis", published by professor Satty, a renowned transport preparer, proposed and introduced mathematical methods into social problems for the first time[5]. The basic steps of the AHP approach are as follows: the step 1: building a hierarchical model, and the step 2: constructing a comparison matrix. Step 3: Calculate the weight of importance between each layer of elements. Step 4: The consistency of the matrix is tested. Step 5: Total level ingest. Step 6: Verify the consistency of the final weight sorting results. The AHP method has the advantages of simple operation, practicality and good system, and is gradually applied to scientific management and multi-objective decision-making.

4.2 BP neural network

BP neural network is a kind of artificial intelligence calculation method, which combines the algorithm's own curve fitting ability, can fit the trend of the action curve between the successful implementation of e-commerce and the influencing factors. BP neural network method shows the characteristics of strong applicability and high precision in the complex systems with many participating factors, but the algorithm efficiency of this method is not high, the convergence of curves is not strong, and it is easy to fall into local minimumvalue, so that the speed of development is reduced and even affects the healthy development of e-commerce[6].

4.3 Structural equations (SE)

At present, the widely used multivariate analysis method is SEM, which is different from the traditional statistical model, which can be studied as an important component of "submersible variables". Jiang Zhengjun et al. (2013) used SEM method to evaluate the success factors of C2C e-commerce website based on previous research and collected data, and constructed a successful model of C2C e-commerce, which can be multivariated processing at the same time, and allow measurement errors to exist within a certain range. Therefore, the model has some elasticity, more flexible than the neural network method, but because it cannot deal with the defects caused by the questionnaire itself, as well as the sample selection error, the model cannot intuitively express the meaning and practical meaning of the model. In other words, because the model requires more sample capacity, it also makes it more limited when dealing with real classification variables[7].

4.4 Factor analysis

At present, the most widely used factor analysis method in the analysis of the influence factors of e-commerce at home and abroad. Factor analysis is a multivariate statistical analysis method when information is lost to the least, which can transform complex variable relationships into a few variables. The factor analysis method can excavate the factors with potential dominant effect by recombining the information of the original variables on the basis of not simply deleting the original variables; The factor of potential domination is the contribution of the public factor by the factor rotation, which results in the concentration of the indicator of large load, so the model is well named and

interpretive. However, the process of calculating factor scores by the least-square-by-multiply will fail.

5 Analysis of the policy synergy mechanism of cross-border e-commerce

During the period of rapid development and growth of cross-border e-commerce, the government plays a vital macro-control role in the development of e-commerce through policy tools, as an invisible hand under the market economy system. Robust and perfect policy tools for the development of e-commerce to create a good environment and become a strong policy guarantee.

5.1 China's current relevant policy evaluation

Policy tools from the external environment of e-commerce business ecosystem to the internal development, should conform to the principle of equilibrium, innovative business mode, promote the vertical development depth and horizontal expansion of e-commerce, clear the coverage of e-commerce, the formation of a multi-dimensional innovation model as the core of the network development situation. China's e-commerce policy system has been initially formed. Existing policies already cover most of the supply-, environmental- and demand-based policy instruments, and have given comprehensive consideration to all aspects of the business economy. China's e-commerce development initially paid great attention to the creation of the economic environment, and in a short period of time has made outstanding achievements, but because of the policy origin, policy change faster, policy coordination is also particularly urgent.

5.2 Synergy requirements of China's relevant policies

Cross-border e-commerce transactions need to establish a sound coordination mechanism on the basis of clear objectives to promote the more healthy and orderly development of cross-border e-commerce.

5.2.1 Industrial policy and fair competition

Fair competition market is the prerequisite for the sustainable development of cross-border e-commerce, which requires policy makers to follow the principle of fair competition in order to mobilize the enthusiasm of micro-subjects and fully implement industrial policies. The guidance of industrial policy is usually contrary to fairness in a short period of time, which requires policy makers to coordinate the contradiction between the policy of maintaining fair competition in the market and the application of industrial policy by e-commerce technology, to make comprehensive trade-offs on the weight of the two objectives at different stages, and to pay attention to the coordination and complementarity of policies when implemented together. In order to strengthen the fair nature of tax policy while strengthening the supervision of the e-commerce industry, and by supporting the establishment of multi-subject collaborative innovation and the establishment of pilot parks, so that the relevant policies can be implemented, and contribute to the formation of a fair competition market and the development of cross-border e-commerce.

5.2.2 Trade and industrial policies

Cross-border e-commerce is a new form of international trade, but its essence is international trade, policy makers through the promulgation of trade policy, guide the direction of import and export, affect consumption patterns, simplify the process of cross-border transactions, promote the decline of transaction costs, so as to promote the development of cross-border e-commerce. And industrial policy can guide the industry to gather, upgrade, and then form a scale effect, reduce the cost of the industry, the formation of industry competitiveness. The coordinated development of trade policy and industrial policy is the key to the sustainable development of the economy, which is conducive to the establishment of new competitiveness of enterprises under the cross-border e-commerce development model.

6 Conclusion

China's cross-border e-commerce development policy plays a great role, so the coordination in policy-making is very important. Policy coordination should deal with the relationship between industrial policy and fair competition, not only to have a focus on supporting, but also can not destroy the level of competition environment, which requires policy makers to respect the laws of the market, abide by market rules; Policy coordination should also grasp the relationship between trade policy and industrial policy, not only pay attention to trade development, but also pay attention to the adjustment and upgrading of industrial structure, in order to promote the overall and healthy development of the economy.

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