

Research on the Effect of Network Economy on International Economic Trade

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Keywords: International trade; network economy; e-commerce; industrial structure

Abstract: The development of the network economy has accelerated the formation of a new pattern of international trade and has had a profound impact on the global economy and trade. The concept and characteristics of network economy are described, and its positive impact on international economic and trade activities is analyzed from four levels: enriching trade forms, developing service trade, improving transaction efficiency, and breaking trade barriers. It also focuses on the negative factors in four aspects: trade risks, logistics system, talent team, and technology level, and explores the innovative development path of China's international economy and trade in the new era. Based on the above analysis, the innovative development route of China's international economic trade in the new era is studied, which can provide an important reference for the healthy development of China's economy.

1. Introduction

Along with the continuous development of network technology, it substantially promotes the development of the network economy. Nowadays, the network has become an important part of people's daily life, and the dependence of the economy on the network continues to increase. As a new economic form in the era of knowledge economy, the network economy occupies a key position in international economic and trade activities by its virtualization, high speed, all-weather and innovative features. According to the General Administration of Customs of China, the total value of import and export of goods trade in 2021 was RMB 39.1 trillion, which increased by 21.4% year-on-year, a record-high scale. Foreign trade shows significant characteristics such as expansion of scale and share, enhanced vitality of the main body, optimization of commodity structure, and upgrading of service trade. Under this background, the study of the specific impact of the network economy on international economic and trade development can provide a reference experience for the optimization of China's foreign trade development strategy.

2. Overview of the network economy

2.1 Basic Concept

The network economy is essentially an economic activity that uses the Internet platform as a medium to provide producers and consumers with commodity transactions and services. Defining the concept from a broad perspective, the network economy can be regarded as an economic form of

transition from industrial economy to a digital economy ^[1]. In a narrow sense, the network economy is an economic model closely related to computers and the Internet. In the era of "Internet+", the birth of the network economy has given new impetus to the development of the global economy in a high growth phase. According to the "Global Digital Report October 2021", the number of global Internet users has exceeded 4.88 billion, accounting for 61.8% of the world's total population. Meanwhile, the World Internet Development Report 2021 shows that the United States and China are leading internet development globally. With policy and technical support, industries are accelerating their digital transformation, while at the same time communication network infrastructure is being upgraded. This further accelerates the growth rate of the global network economy and deepens the integration and development of the network economy with the real economy, making the network economy play an important role in leading global economic growth.

2.2 Main features

2.2.1 Perfectly competitive market state

Based on the market structure analysis of economic theory, a perfectly competitive market is an ideal market model. There are a large number of enterprises engaged in production and sales in the industry, and these enterprises provide standardized products to the market in the same form, so that the products in the competitive market environment are both homogeneous and liberalized, and constitute barriers to entry and exit ^[2]. Since the network economy is mostly based on network information, it ensures that the competitive information obtained by individuals has fairness characteristics in terms of quantity and quality. Therefore, it can prevent economic agents from being affected by information barriers or monopoly factors in the decision-making process and maintain the fairness of market competition.

2.2.2 Characterized by strategic information resource sharing

Computer platforms and network information technology development provide convenient conditions for information transfer and processing. At present, information has become a strategic resource in the network economic environment, and economic agents can obtain complete and comprehensive price information at a low cost. According to the neoclassical macroeconomic school of thought, subjects engaged in market economy should carry out economic activities by combining market demand and relevant price signals. The popularization of Internet platforms provides the possibility to realize the above-mentioned economic behaviors. However, at the same time, it should be clear that information sharing should be controlled within a certain scale to ensure that SMEs can share the advantages of large enterprises in terms of brand influence and market share, while large enterprises can also share the advantages of SMEs in terms of professionalism, concentration, and flexibility.

2.2.3 Consistent with the law of increasing marginal effects

According to the theory of inishing marginal utility, as consumption increases, utility accumulates, and the increase in utility from new consumption becomes less and less significant ^[3]. On the contrary, in the network economy, information resources are recyclable and renewable, and are not competitive and exclusive from the perspective of producers and consumers. Therefore, it is inferred that the cost of information resources does not tend to rise along with the incremental use of information resources. At the same time, the short update cycle and rapid development of information technology depend mainly on the changing relationship between supply and demand, and are less subject to the interference of factors such as market capacity saturation. Therefore, the input and output of the

product in the network economy environment show the characteristics of increasing marginal effects.

2.2.4 Direct Economy and Broadening Development Access

On the one hand, the development of network economy is conducive to the formation of direct economy. From the perspective of roundabout production economics, roundabout production is conducive to promoting technological progress, acquiring value by pulling consumption and reacting to production, gradually improving the industrial chain and promoting specialized division of labor in the process, and finally improving economic efficiency and remuneration rate. Returning to the essence of the network economy, it provides a platform for direct contact between producers and consumers, relying on end-to-end communication to reduce intermediate links and form a network of direct sales model, thus saving transaction costs. On the other hand, the development of network economy helps enterprises to realize scale operation. In the traditional economic environment, the development of economies of scale is the only way to optimize resource allocation and improve economic efficiency. The network economy is no longer the only development path to scale economy, but can provide a variety of paths to play a new economic effect, such as strengthening the construction of e-commerce, integrating the concept of green development, enhancing the Internet technical support, etc., to help the development of business operations.

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3.1 Positive Effects

3.1.1 Enriching trade forms

In the network economy environment, the communication distance between producers and consumers is shortened and personalized and customized products and services are bred in a multi-dimensional competitive environment. The enterprises deploy their own human, financial, information, and other resources in the planning, design, processing, and sales of products, which makes the organization of business activities appear mobile, and the design of product marketing strategies is closely integrated with the needs of users in the network platform, thus giving rise to increasingly diversified trade forms and enhancing the effectiveness of product promotion.

3.1.2 Promote the development of services trade

In international economic trade activities, the current service-oriented trade is still in the stage of continuous recovery and rapid expansion. The consumption mode of transition from goods to services is taking place. The core advantage of the network as a platform for the implementation of service trade at this stage is to reduce trade costs and break the limitations of space and time ^[4]. It can also provide a broader development space for service suppliers, thus improving the competitiveness of relevant practitioners. The rise of e-commerce platforms in the network economy provides a new online trading platform for traditional commercial trade, on the basis of which a variety of forms such as network marketing and targeted push are bred to provide strong support for the improvement of service trade efficiency.

3.1.3 Enhance the efficiency of transactions

In traditional economic trade activities, product and service transactions involve complex procedures and processes, and consumers consume a lot of manpower, material resources and waiting time between submitting orders and receiving goods, which is not conducive to promoting

international economic and trade exchanges ^[5]. Along with the development of the network economy, B2B and B2C models led by e-commerce have emerged, establishing direct communication and interaction channels between individuals and enterprises and different subjects in the supply chain, effectively shortening transaction time, improving trade efficiency, and optimizing the consumer experience.

3.1.4 Removing trade barriers

In the past, international economic and trade activities were frequently impeded by trade barriers, exacerbating the challenges faced by Chinese enterprises in expanding their international market presence. However, the network economy, characterized by globalization and openness, has emerged as a critical avenue for global economic market connection and information exchange, facilitating the diversification of transaction objects, transaction space, and transaction forms. This has furthered supply chain and trade cooperation in the global market and effectively dismantled trade barriers, thereby creating favorable conditions for economic and trade activities across all nations.

3.2 Negative effects

3.2.1 Increased trade risk

The network economy depends on the development of the Internet platform, but the network platform also faces certain security risks, such as the platform being hacked, information leakage and other situations are easy consumer payment and transaction process poses a threat, resulting in consumer and producer interests are damaged ^[6]. In addition, the unsoundness of the review mechanism, the lack of the whole process of supervision and complete after-sales service mechanism, etc., further increase the implementation of international economic and trade activities hindered by the process, increasing the potential risk of the trade.

3.2.2 Shortage of complex talents

The network economy and e-commerce platform and e-commerce operation mode keep synchronous development, which puts forward realistic requirements for the cultivation of relevant composite talents. However, the existing research results show that the number of composite talents in the field of international economy and trade in China does not match the development situation. There is a large gap in the supply of composite talent in the talent market. It is difficult to ensure that China's international economic trade reaches its development goals according to the expected progress, if there are not enough complex talents.

3.2.3 Backward logistics system

E-commerce platform provides an important transaction channel and carrier for the development of the network economy. At this stage, China's e-commerce platform system has some problems, mainly in the construction of logistics system in the primary stage, the lack of professional logistics personnel, the front and back end of the logistics system is not effective, which restricts the development of international economic and trade growth rate.

3.2.4 Low technical level

China is in an inferior position in the international trade division of labor, which is related to the restricted development capital, technology level and international recognition conditions. Although the construction of the domestic value chain in recent years has to some extent improved the volume

of China's import and export trade and optimized the trade structure, the technological content and added value in existing export products still need to be improved, and it is still necessary to further improve the technological level and added value of products.

4. Exploration of the innovative development route of international economic trade

4.1 Improve infrastructure for the network

Along with the development of China's network economy, the network infrastructure is now fully completed, and the national Internet penetration rate will reach 73% by the end of 2021. In the future, the penetration of industrial Internet and 5G network in the national economic development and industry integration and innovation should be accelerated. In this context, we should continue to improve the infrastructure construction and development layout, focus on the Internet entrance and exit level to increase the number of backbone networks and nodes, introduce 5G and other technologies to improve network transmission rates, and deepen the deployment of network infrastructure in urban and rural nodes based on the edge of mountainous areas and other locations, thereby comprehensively improving the coverage of communication networks and expanding the extension of international economic trade.

4.2 Optimize the industrial structure

In the premise of broadening the market layout of the enterprise for the international economic and trade field, it is necessary to strictly implement the preliminary market research work. Combined with the real needs of the international market for their industrial structure, product marketing direction of adjustment. For light, intensive, environmentally friendly, multi-functional, high value-added products should be increased support, and according to market demand for industrial structure optimization. At the same time, the government should reasonably use macro-control means to intervene to open up paths for products to be sold to foreign markets and better broaden the market outlets for our export products.

4.3 Strengthen the training of talents

It is necessary to change the talent concept of "emphasizing theory rather than practice" in the past, promote the close integration of theory and practice, and form a new situation of talent cultivation in the new era. Improving the talent cultivation system and environment, and carrying out collaborative innovation at various levels, such as defining property rights and guaranteeing system. It should improve the existing intellectual property protection system and norms, clarify the system related to property rights and talent training, and urge enterprises to reasonably allocate resources to the training and introduction of talents, so as to cultivate composite talents with excellent quality and ability in various aspects, such as e-commerce, computer technology and information technology literacy.

4.4 Increase technology input

Technological innovation capacity is an important reflection of the country's strength, and the continuous improvement of the country's technological innovation capacity can significantly enhance the competitiveness of its products in international trade. Whether it is the improvement of product quality due to the improvement of the technological content of products, or the reduction of production costs brought about by the application of advanced technology, the country's products in the international trade arena hold a price advantage, the formation of a strong competitive edge in the

international trade market.

The government should not only gradually increase the proportion of financial investment in research and innovation in fiscal expenditure, and introduce relevant preferential policies and special funds to encourage technological innovation, but also constantly enhance the awareness of technological innovation and improve the ability of technological innovation. And also through various other channels, such as economic leverage and incentives to increase investment in science and technology.

5. Conclusion

The development of the network economy promotes the gradual improvement of China's trade structure and helps improve China's position in the international division of labor. In the background of network economy, China should grasp the opportunity, and defend its advantages, relying on the popularity of network infrastructure, technology promotion and appreciation, industrial structure optimization, composite talent training and other multiple initiatives to create a good internal environment for the development of China's foreign trade. On this basis, it is necessary to strengthen scientific and technological innovation in order to better realize the transformation of China from a large trading country to a strong trading country.

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