Research on the Development of Network Economy under the Background of Big Data

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Abstract. As the product of the development of Chinese network technology and big data era, network economy plays an important role in promoting the economic development of China. The development of computer network technology and the arrival of the era of big data have changed the mode of social production and consumption and triggered a revolution in the development of the network economy. Now, the network economy is gradually accepted by the masses due to its advantages of high efficiency, speed and convenience. However, compared to the real economy, its "virtual economy" characteristics will increase the risks of transactions and supervision. Based on this, this paper has studied the opportunities and challenges faced by network economy development under the background of big data and puts forward some suggestions and measures for the network economy to adapt to the challenges from the era of big data.

Keywords: Network economy; Big data; Virtual economy.

1. Introduction
At present, China's economic development has entered a brand-new mode. The rapid development of network knowledge and technology has led to the transformation of the trading mode of goods and services, and transaction online has been made more and more frequently. By means of transactions online, consumers cannot only reduce the monetary costs but also the time costs from negotiation, contract fulfillment and after-sales. It can be said that the network economy has become more and more important in China's economic system with its advantages of high efficiency, speed and convenience. At this stage, the era of big data is gradually coming. It not only strengthens the resource nature of data, changes the mode of social production and consumption, but also triggers a revolution in the development of the network economy. Under the background of big data, simple data processing and analysis can no longer meet the needs of decision-making, especially social production and consumption decisions related to economic development, which has become a cycle process of “decision-making—execution-correction-decision”. In such a cyclical mode, network transactions are no longer a simple one-time behaviour, but a complex cyclic multiple-time behaviour. It has a profound impact on innovation in network transaction models and the development of the network economy. However, the network economy further "virtualized" by big data aggravates the risk and volatility of its development. Therefore, big data brings both opportunities and challenges to China's network economy development [1].
2. Big Data, Network Economy and Virtual Economy

2.1. Big Data
Big data refers to the inability to capture, manage and process data with existing software tools within affordable time ranges. In the process of data management, it is necessary to adopt new processing mode to improve decision-making power and optimize process, so as to meet the increasing and diversified information resources. At this stage, big data has been widely used in various production and living areas of society, occupying an important position in promoting the development of various fields. In terms of the characteristics of big data, it mainly includes five points: First, the amount of data resources is large. Second, the data types are diverse. Third, the data processing speed is fast. Fourth, the authenticity of resources is high. Fifth, the data value density is low.

2.2. Network Economy
The network economy is based on computer information technology. On this basis, various resources are integrated, and the internal and external information networks of the enterprise are used to manage business activities. The development of the network economy is based on information flow and logistics, and its main means is network technology. At present, as far as the network economy is concerned, it mainly includes e-commerce, Internet finance and so on and its biggest feature is its speed.

2.3. Virtual Economy
The virtual economy is relative to the real economy and an inevitable product of economic virtualization. The essence of the economy is a set of value systems, including material price systems and asset price systems. Unlike the material price system, which is supported by cost and technology, the asset price system is a set of specific price systems based on capitalized pricing methods, which is the virtual economy. It is mainly manifested in four aspects: high liquidity, instability, high risk and high speculation.

3. Formatting the Text
With the advent of big data era, the effective characteristics of data are strengthened, which makes it easy for users to obtain information related to decision-making from a lot of data and meet the needs of decision-making. With the popularization of computer technology, computer network has gradually entered the daily life of Chinese residents. Relying on the batch processing of big data, it strengthens the information sharing mechanism, gradually breaks the information monopoly or asymmetry between the supply and demand sides, reduces the market speculation of the supply side or the demand side by virtue of information advantages, and purifies the environment of transaction online. In addition, the powerful information support provided by big data is conducive to smooth supply and demand channels, facilitates a series of actions such as negotiation, contract signing and payment between supply and demand sides, greatly reducing transaction costs and improving transaction efficiency. At the same time, big data also helps the supply side to tap the potential of social demand and discover new demand wishes, thereby leading the supply and demand sides to innovate transaction content, enrich transaction models, and expand transaction scale, further encourage the transfer of offline transactions to online transactions, and drive related industry develops continuously and steadily, thus ensuring the supply and demand of China's economic development.

4. Problems in the Development of Network Economy under the Wave of Big Data
Big data provides more effective data resources for the development of China's network economy, reduces the information asymmetry between the supply and demand sides, smoothes the supply and demand channels, and improves the efficiency of transactions online. However, as the software and hardware environment required by big data and the regulatory mechanism are becoming more and more strict, it puts forward higher requirements for the development of the network economy.
4.1. The Function Position of the Network Economy is Easy to be Obscure
In the process of online economic transactions, the two parties to the transaction cannot achieve face-to-face communication. Therefore, during this process, the network economy has the characteristics of a virtual economy. At present, China's main economy is the real economy, which supports the overall development of our economy. The virtual economy is only a useful supplement but cannot really replace the real economy. However, with the continuous development of social economy and the wide application of big data technology in various fields of society, the transaction form and scale of network economy have been greatly improved. To a certain extent, this obscures the functional positioning of the network economy, which has led many people to believe that the real economy will be replaced by the network economy, which is obviously unscientific.

4.2. Supervision Crisis is Easy to Occur
Big data has brought unprecedented opportunities for the development of China's online economy. However, the big data resource system contains a huge amount of data resources and information system without secret protection. While deepening the degree of information sharing, it also makes a lot of irrelevant and even harmful information flood it. Coupled with the uncertainty of the identity of the trading group of the big data trading platform, it is difficult for the supply and demand parties to be effectively regulated. Many "non-market-oriented" commodities have flowed into the online trading platform, affecting the normal online transaction order and easily triggering a regulatory crisis in online transactions.

5. Suggestions and Measures for the Development of the Internet Economy under the Background of Big Data

5.1. Speed up the Development of Network Technology
In order to ensure the healthy, long-term and stable development of the network economy, it is necessary to ensure the safety and reliability of the external environment. A good network environment is the key factor to accelerate the development of network economy. Therefore, to speed up the popularization of network technology is the basic condition for the development of network economy in China. It aims to improve the computer performance, expand the scale of network income groups, and promote the stable development of network economy [2].

5.2. Strengthening Legislative Supervision
In the era of big data, the emergence and development of network economy is the trend and direction of the times. In the continuous development of network economy, more and more people benefit from it, which will eventually be accepted and recognized by the whole society. However, at this stage, China's network economy is in the primary stage of development, and there are also many improvements to be made. In addition, the existence of virtual economy will reduce the security of network economy to a certain extent, and then increase the risk which is not conducive to the long-term and stable development of network economy. Therefore, in view of this problem, China should strengthen the supervision of the network economy, and extend the investment of capital, human and material resources accordingly. While deepening the legislative supervision, we should enhance the supervision and management of the payment in the network economy, so as to reduce the market risk and improve the security of network economy development [3].

5.3. Regulating the Economic Behavior of the Network Industry
Although big data is conducive to further improving the transmission of information and reducing the inequality of information, the information supervision mechanism mainly occurs when two or more parties in the transaction come into play. For different supply groups or demand groups, different supply or demand subjects may rely on the advantages of the network to obtain or conceal more information, exacerbating the inequality of information within the supply group or the demand group, thereby causing malicious competition. Therefore, at the level of national macro regulation and control,
it is necessary to regulate the transactions of the supply and demand groups and build a reasonable competition pattern to ensure the healthy and orderly conduct of online economic behavior.

5.4. Regulate Internet Consumption Behavior

In the era of big data, both supply and demand sides can share information and reduce information misalignment. However, for different supply and demand entities, their own needs are different, so the information and materials that they want to obtain are different, which has caused differences between them. In addition, the inequality within the supply and demand entities also leads to the hidden or interception of the information required by the supply and demand entities. Therefore, under the guidance of the government, the state must strengthen macro-control, establish a network industry information supervision mechanism, and regulate the behavior of online consumption in order to ensure the sustainability of the development of the online economy.

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