Research on the Application of Big Data Statistical Analysis in the Field of Economic Management

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Abstract. Nowadays, the Internet and computer are becoming more and more popular in the society. People become the transmitter and receiver of information through the Internet. This way has changed the traditional life, work and study mode of human beings. With the continuous increase of data and information, its application value gradually increases. Researchers use big data statistics to help people manage their personal data. This paper analyzes the application of big data analysis in the field of economic management and makes the corresponding summary.

Keywords: Economic management, Big data, Statistical analysis

1. Introduction
In recent years, the dependence of human beings on computer network technology has gradually increased[1]. Network technology has gradually entered all fields of human work and life. With the continuous progress of human society, the field of economics and management has been continuously expanded by human beings[2]. During this period, big data statistical analysis technology has been applied in many fields of society and made a lot of achievements.

Enterprises are facing greater competitive pressure in today's market economy. How to ensure the vitality and cohesion of the enterprise has become a key issue for the future development of the enterprise. The development of informational technology and big data technology provides enterprises with opportunities for rapid development[3]. The researchers found that the application of big data statistical methods in the economic field is effective.

2. General summary of big data statistics technology

2.1. Preliminary cognition of big data
Big data exists in different areas of our society. It has different interpretations in different industries
and fields. Big data is a collection of all information[4]. The researchers found that the advantage of big data lies in its selectivity. It can work out the analytic plan of the relevant statistical data. It also can comprehensively analyze the data. It is more convenient than the traditional data analysis technology and it is deeply loved by people.

2.2. The development of big data statistical thinking
Researchers found that if we want to do a good job in data statistics, we need to change our statistical thinking. There are many sample data recorded by traditional data statistics technology. They are very complex[5]. People's statistical work is very laborious and time-consuming at that time. However, the statistical method of big data is targeted. It uses unstructured data samples. It can use scientific statistical methods to help people sort out and analyze relevant data.

2.3. The development of big data analytic thinking
The traditional way of data analysis is rigid. It only analyzes the development trend of a large number of data, and the useful value of the analyzed information is low[6]. However, big data can be analyzed from a large number of data in the fastest way through advanced technology so that it can get valuable information for us.

3. The role of big data statistical technology in the field of economic management

3.1. It can collect all kinds of data
The work in the field of economic management is mainly based on the analytic results of various types of data in social economy. Big data technology can collect and sort out all kinds of data, and it can get useful information for human beings. In the decision-making process of economic management, big data statistics can provide dynamic data analysis for people. It can ensure the adaptability of economic decision-making management.

3.2. It can improve the speed of data processing
Traditional data analysis is carried out by manual collection and computer-aided processing. This method is seriously lagged, and the efficiency is very low. The data used in big data statistics is targeted. It will use the Internet to collect relevant data for analysis. This approach avoids the impact of irrelevant data.

3.3. It can broaden the channels of informational sources
Big data statistics technology can capture network information by using key words and extracting related technologies with key words. It analyzes the validity of information in time. This can ensure the accuracy of relevant information. It can lay the foundation for the accurate analysis of data and information.

4. The application of big data statistical technology in economic management

4.1. Application of economic model based on big data
Big data statistics technology can adjust different information in the informational model according to
the actual situation of the market. It can analyze the development trend of market economy in the future. This way can help researchers directly find the trend of economic development and help them adjust the content of relevant work.

4.2. Early warning of risks in economic management
Due to technical constraints, people cannot get timely warning of some risk factors in the market in the traditional economic management mode. People often can't take measures quickly after the economic risk comes. However, big data technology can monitor the risk of market economy. It can predict the possible risk problems in the development of market economy, and help people to make a plan to solve the risk in advance through the way of network analysis.

4.3. The construction of economic management database
Different industries have different economic management models. The researchers find that enterprises can establish different kinds of economic management databases through big data statistical technology. People can extract all kinds of information they want from the database. The security of this kind of database is very high. It can avoid the attack of computer virus. Generally speaking, it can establish a new economic management database. The researchers investigated the understanding and use of big data analysis in six regions. The survey results are shown in Fig 1, the analytic chart is shown in Fig 2, Fig 3 and Fig 4.

| Option                        | 1  | 2  | 3  | 4  | 5  | 6  |
|-------------------------------|----|----|----|----|----|----|
| Understand big data           | 40%| 35%| 20%| 35%| 50%| 41%|
| Use of big data               | 35%| 30%| 15%| 30%| 40%| 22%|
| Proportion of big data in economic management | 67%| 40%| 50%| 55%| 80%| 68%|

**Figure 1.** Understanding and use of big data in six regions
5. The importance of application of big data analysis technology in economic management

5.1. *It can provide strong technical support for economic theory*

The content of economic theory is abstract. So it's hard to understand. It is difficult for traditional economic statistics to provide technical support for economic theory. In the process of applying big data analysis technology to economic statistics, technicians can effectively collect information through informational platform. This way can test economic theory and provide technical support for the quantification of economic theory.

5.2. *It can improve the accuracy of economic model*

In the process of establishing traditional economic model, the influence of external factors cannot be ignored. Therefore, the accuracy of the economic model at that time was very low. After using big data analysis method, external factors can be controlled by it. In other words, it can eliminate the influence of external factors and improve the accuracy of economic model.

5.3. *It can realize the customization of economic statistics*
In traditional economic statistics, the collection and collation of data needs a lot of manpower and material resources. This way of working efficiency is relatively low. Big data analysis technology can realize the automatic collection, screening and sorting of information. Technical personnel can quickly get useful information, which can greatly improve work efficiency.

6. Conclusion

Big data statistics plays a very important role in economic management. It can promote the efficiency of economic statistics and the optimization of economic theory. Its application provides enterprises with better methods and technical support for data statistics. In general, big data analysis method can optimize enterprise management and management structure and improve enterprise efficiency, cohesion and core competitiveness. It promotes the application of the concept of economic management in various fields of society, and provides a reliable guarantee for the economic development of the country and the production and operation of enterprises.

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