Thoughts on the Innovation of Economic and Social Development in the Era of Big Data

Hui Zhang

School of economics and management, Yangtze University, 434000, Hubei, China

Keywords: Big Data; Economic Society; Development and Innovation; Problem Thinking

Abstract: With the continuous progress of the development of information resources, the development and utilization of data resources have made great strides, and big data information technology is the most important technical achievement. This article aims to use big data to promote economic and social development and innovation in the era of big data. This article conducted a questionnaire survey on the impact of big data application in various fields by respondents from all walks of life in City A, and found that 93.48% of respondents believe that big data has promoted the work and improved work efficiency; 89.75% of the respondents believe that big data has promoted the birth of new industries, industrial innovation and capacity upgrade; 82.3% believe that using data as a scientific decision-making has improved the scientific level of decision-making; But half of the respondents are concerned about the disclosure of information in the era of big data. In this way, the strategy of using big data to promote economic and social development and innovation is proposed, with a view to providing a certain theoretical basis for the construction of a modern society.

1. Introduction

At this stage, with the rapid development and progress of China's society, the country's economic and technological levels have been well improved. Under such a background, Internet technology has been developed and popularized, and it has become the basic guarantee for people's life, work and learning [1-2]. At present, big data science, technology and capital resources, human resources, and natural resources constitute three important social production factors, which play an important role in the development of society as a whole [3-4]. The competition of contemporary social and economic resources has shifted from the competition of traditional physical resources to the competition of data and information resources [5]. In recent years, academia, industry and government agencies around the world have begun to actively pay attention to and pay attention to big data technology. The impact of big data is gradually penetrating into all areas of social life. Big data has become an important resource and a hot spot of concern for all sectors of society. It plays an irreplaceable role in the development of social economy and the improvement of human living standards [6].

Big data transforms human's original thinking framework, subverts the current scientific research thinking conventions, and helps humans open up a new model in terms of cognition and communication with the world [7]. Big data enables people to gain new cognition and create new value. In the era of the information explosion, the advent of big data is gradually changing human life, work and ideas. Big data has a close relationship with each of us, opening a transformation of a profoundly influential era [8-9]. There is important and potentially valuable information in big data, and big data technology can be largely converted into socio-economic value, known as "new oil in the future." Whoever masters big data technology will be more competitive [10].

Based on the analysis of the basic connotation of big data, this article understands its impact on economic development in the current society. And fundamentally think about innovative ways to use big data to promote economic and social development. We hope to innovate the social development situation and contribute scientific and technological power to build a new society.

2. Method

2.1 Big Data Technology

Big data technology is the scientific technology that efficiently obtains valuable information from the huge data torrent. In recent years, new technologies related to big data have emerged one after another, and the attention of all walks of life on big data technology has also increased day by day. These new technologies have become a booster for big data collection, storage, analysis processing and application. Using big data technology, people can mine the information and knowledge hidden in massive data, as an important basis for human socio-economic activities, help improve the operational efficiency of various fields of society, and promote the development of social productivity and advanced technology. Big data applications focus on three major areas: business intelligence, public services, and marketing. The application of big data is gradually penetrating into all walks of life in society, and the application technology of big data is also constantly developing and improving, so as to be able to adapt to the new requirements of various industries.

2.2 The Promotion of Big Data to Economic and Social Development

(1) Big data stimulates the industrial economy

The rational use of big data information in the process of industrial development can further optimize the industrial structure, adjust the industrial structure, and meet the needs of social and economic development. The reasonable use of big data can also better help enterprises to make decisions, and enterprises will inevitably encounter various problems in the development process. Analyze the development trend of the entire industry from big data and accurately obtain the overall development status of the enterprise. For specific enterprises, the development and application of big data can help enterprises to provide reliable data support for development decisions and improve the economic efficiency of enterprises.

(2) Promote the improvement of social governance

Actively developing and applying big data can make the decision of social governance more scientific and better play the role of social governance. The government can improve its service efficiency and decision-making level through big data, and promote the development of government affairs. Through the application, sharing and analysis of massive data, it can enable the government to have a higher service level and management capabilities in security, public opinion monitoring, traffic management and urban planning. In the fields of medical treatment, transportation, education, crime prevention, and anti-fraud, big data can play an active role.

3. Experiment

In order to understand the impact of big data on economic and social development, this article combines empirical analysis. In the context of the era of big data, we conducted a questionnaire survey on the personnel of some enterprises and units in City A. This time, 400 questionnaires were distributed and 386 were recovered. The effective questionnaires were 322, accounting for 83.42% of the returned questionnaires. In the 322 questionnaires, it covers 8 areas in City A, spanning a wide range of regions, with typical representativeness and universality. The interviewees come from different groups and at different ages, and the main group includes staff of public institutions, including civil servants, media workers, art workers; Medical workers with health systems; There are business and enterprise system managers; There are engineers in the financial industry, public security personnel and lawyers. There are white-collar workers in various industries including biomedicine, new materials, modern agriculture, modern service industry, modern manufacturing, and high-tech industries. The majority of the age group is 265 young people, accounting for 82.3%. Investigate the in-depth application of big data in various fields, and how to use big data to promote economic and social development and innovation.

4. Discussion

4.1 Analysis of the Impact of Big Data on Economic and Social Development

Through a survey of respondents from various industries in City A on the impact of big data applications in various fields, the results of the survey questionnaire were sorted and classified. It can be seen that the impact of the era of big data on the economic and social development of City A is shown in Table 1 and Figure 1.

Table 1. The impact of the era of big data on the economic and social development of city A

The impact of big data	Number of people	Approve
Promote the birth of new industries, industrial innovation and capacity upgrade	289	89.75%
Drive work and efficiency	301	93.48%
Improved decision-making	265	82.30%
Real-time grasp and analysis of market dynamics	298	92.55%
Provides a guarantee for the safety and stability of society	285	88.51%
Worried about the leakage of information	161	50.00%

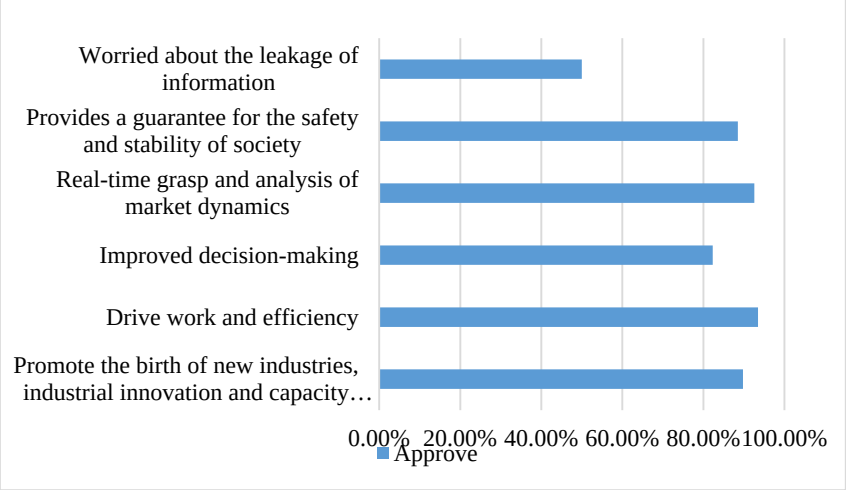

Figure 1. The impact of the era of big data on the economic and social development of city A

It can be seen that 89.75% of the respondents believe that big data has promoted the birth of new industries, industrial innovation and capacity upgrades; 93.48% of the respondents believe that big data has promoted work and improved work efficiency; 92.55% of the respondents believe that they can grasp and analyze the market dynamics in real time in the era of big data; 82.3% of the respondents believe that using data as a scientific decision-making has improved the level of decision-making; 88.51% of the respondents believe that big data provides protection for the safety and stability of society, but half of the respondents are concerned about the leakage of information in the era of big data. For the development and innovation of the economy and society, not only should the big data be taken as an important strategic goal to carry out the corresponding layout, but also the important nodes of the big data information technology should be well controlled. Furthermore, the economic and social development and big data are better integrated to innovate economic and social development.

4.2 Application of Big Data to Promote Economic and Social Development and Innovation Strategies

(1) Establishing a social awareness of big data

For future social progress and technological development, the most important carrier is the current big data information technology. Therefore, in the application of big data in innovative

economic and social development, the most basic and basic strategy should be to establish a big data consciousness, and fully integrate the big data consciousness into the overall social ideology. First of all, increase its propaganda and use various channels for corresponding propaganda, such as self-media, multimedia, public account, Weibo and other platforms, fully integrate big data technology into all strata, industries, and In the field. And lay a solid foundation for the sustainable development of big data in the future. Secondly, when applying big data technology in the development of innovative economy and society, we should have a clear understanding, neither can we completely trust the conclusions reached, nor can we fully hold a skeptical attitude.

(2) Formulate big data development strategy

At present, with the continuous progress of big data technology, it has its presence in the fields of education, transportation, housing, health, economy, and it has an increasing impact on the national economic industry. Therefore, some countries have joined big data information technology when formulating national strategic directions. In terms of actual development in my country, there are still certain deficiencies. First of all, it should be based on my country's actual situation and incorporate big data technology, for example, into my country's characteristic livelihood service system. Secondly, we should take my country's future development direction as the guide, formulate corresponding development goals, and organically integrate them into the sustainable development of our economy. Third, we should formulate corresponding development principles based on the current structural forms of various industries in my country, and guide the development in a healthy direction while standardizing the industrial behaviors in various industries. Fourth, the current strategic situation of my country's big data industry should be taken as the core, and the corresponding strategic layout should be carried out, for example, the corresponding industry policies should be promulgated for energy conservation, biomedicine, new energy and other industries. In terms of decision-making innovation in economic development, government departments at all levels can use data as a basis for scientific decision-making, policy evaluation, and policy formulation, thereby improving the scientific nature of decision-making. Using big data can combine personal experience, subject theory, and data information to realize the trinity of expert system, decision support system, and artificial intelligence, so that the data can generate new value.

(3) Give play to the innovative role of big data in social governance

My country is in a period of social transformation and development, and there is a general problem of low coordination among government departments, which leads to multiple policies and low social governance efficiency, which is easy to cause social conflicts. In the era of big data, social governance data has become increasingly available and growing in scale. With the support of big data technology, government departments have increasingly stronger data processing and analysis capabilities. The central government has proposed that the social governance system should be continuously innovated, and the modernization of governance capabilities and the modernization of the national governance system as the main direction of social governance innovation in the new period. That is to set up relevant institutions based on the process of output, analysis, storage and collection of social governance-related data, so that various government departments can achieve collaborative cooperation. By mining, collecting and processing various data, we can understand various public needs and grasp the public opinion. Realize social governance based on accurate analysis, and timely discover and solve social contradictions.

(4) Collaborative industry innovation

Economic development is closely related to big data, and the active application of big data can effectively promote industrial collaborative innovation. That is, the elements and resources of the innovation industry are gathered together, so that the vitality of the innovation elements is effectively released, and deep cooperation among the innovation subjects can be carried out. In the process of economic development and transformation, big data should be regarded as an important development direction. Through big data, strategic emerging industries should be spawned.At the same time, the active application of big data can also extend the existing industrial chain. The embedded commercial value and social value will be further excavated to promote the coordinated development of innovation subjects. The combination of big data technology and the Internet can

increase the added value of data analysis services, transform big data technology to traditional industries, and promote the upgrade of production capacity.

Conclusion

The 21st century is the era of big data. Active application of big data can effectively promote the development and innovation of the economy and society. My country has a huge potential market for big data, which is also a historic opportunity for my country to catch up with developed countries. With this as the background, it is necessary to establish social consciousness of big data as early as possible, raise big data into a national strategy, increase the importance of big data technology development, build a big data comprehensive information platform in the whole society, and grasp the direction of big data development. With the deep application of big data in various industries, it has promoted the innovation of my country's economic and social development to a certain extent. But as far as the innovation of current social and economic development is concerned, the application of big data still has certain flaws. Therefore, the corresponding department should also increase the in-depth study of big data. Furthermore, the economic and social development and big data are better integrated to innovate economic and social development.

References

[1] Barcikowska R. Innovation in Social-Economic Development in Poland. Research Institutes as Entities and Contractors of Innovative Activities in Poland[J]. Nephron Clinical Practice, 2017, 25(3):103-115.

[2] Faccin, Kadígia, Genari, Denise, Macke, Janaina. Interorganisational social capital and innovation: a multiple case study in wine producers networks in Serra Gaúcha[J]. Rai Revista De Administrao E Inovao, 2017, 14(1):52-66.

[3] Kumar H. Social Work, Social Development and Sustainable Development[J]. Corporate Governance An International Review, 2018, 19(5):471–488.

[4] Colpas-Castillo F, Arnulfo Tarón-Dunoyer. Economic Engineering and Social Innovation as a Business Strategy for Sustainable Development[J]. Contemporary Engineering Sciences, 2018, 11(51):2529-2536.

[5] Hanshuang DENG. Research on Pharmaceutical Engineering Innovation Based on Big Data Analysis[J]. boletin tecnico/technical bulletin, 2017, 55(7):562-568.

[6] Xue Y, Feng H. Path Analysis of Forest Carbon Sequestration on Poverty Alleviation Papermaking Company Innovation based on Big Data Analysis[J]. Paper Asia, 2019, 35(1):28-32.

[7] Li J. An optimization analysis of the entrepreneurship and innovation mechanism based on open source big data[J]. Boletin Tecnico/technical Bulletin, 2017, 55(15):291-297.

[8] Jiting Z. Study on big data combined with self-media education of ideological and politics based on the innovation-driven development model[J]. Revista De La Facultad De Ingenieria, 2017, 32(16):481-488.

[9] Cui X, Huang D. An empirical analysis of industrial technology innovation based on big data platform[J]. Boletin Tecnico/Technical Bulletin, 2017, 55(4):222-227.

[10] Luyao X. Study on the paper industry development and business innovation based on big data era and advertisement media[J]. Paper Asia, 2018, 1(9):56-60.