Research on the Challenges and Innovation Models of Public Management in the Age of Big Data

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Abstract: In recent years, China's computer level has been further developed, and the computing power of big data technology has been further improved, which has also caused a great impact on China's public management work. Through the application of big data technology in the public management process, it can further improve its decision-making level and service capability, and promote the social risk management ability to be further improved to meet the individual needs of the people. The challenges of public management and the innovation model in the era of big data are explored and analyzed.

1. Introduction
The arrival of the era of big data has had a relatively large impact on people's daily life, production and thinking patterns. The continuous development and wide application of big data technology has also led to the application of more information methods in the field of public management, and the time and space situation of public management has undergone major changes. It can be said that big data technology can provide key technical support for the innovation and optimization of the public management service model. It also requires the active application of big data thinking and means at all levels of government, as well as various modes such as institutional and organizational innovation can be used to improve their public management level to meet people's needs for public management work.

2. The Connotation and Characteristics of The Era of Big Data
Big data is not a simple evaluation of the amount or amount of data, it is the information technology which captures useful data by screening large amounts of data. China's life will also change with the arrival of the era of big data. Through the application of a series of big data means, it can also accelerate the development of public management and public services, and can achieve good public management from the three levels of data, analysis and processing and industry integration by achieving secure collaborative governance.

At present, there is no uniform definition of the meaning of big data in the academic world, but it is certain that big data is an information explosion effect formed by the revolutionary advancement of information technology, and can obtain great value products and services [1] through a model for effective analysis of massive data. Big data technology also has three features: large, high speed and diverse. With the continuous development of computer technology in China, the current society is also developing towards the era of innovative Internet, and the data generated by people in daily life and work has also been greatly improved. Through the application of big data technology, effective information can be filtered in massive data to meet the individual needs of the public. Therefore, various government departments also need to actively apply big data technology to continuously optimize and innovate the existing public management model, thereby obtaining good innovation.
management effects.

3. Changes in The Field of Public Management in The Era of Big Data

The arrival of the era of big data can first promote the service quality and service efficiency of public services, and can also obtain good government behavior network supervision effects, and the quality of public services has been effectively improved. Through the application of big data technology, relevant tracking and evaluation work can also be completed, and the quality of public service provision and the problems in the service process can be effectively analyzed, and the service effect is further improved.

Through the application of big data technology, the public opinion crisis ability of public administration can be promoted. There are still many complicated factors in the process of social development in our country, and there are many emergencies. The unpredictability and uncertainty brought by emergencies also make the handling of public opinion ability be an important indicator to measure social governance ability [2]. The application of big data technology can reasonably predict the uncertain factors in the process of social development, and promote the further improvement of the handling of public opinion events.

Finally, the application of big data technology can also effectively meet the needs of the public. With the advent of the era of big data and the continuous development of society, individuals have begun to present multi-dimensional and heterogeneous features, and the independence and subjectivity of individuals have become more significant. Through the application of big data technology, more detailed data mining can be achieved, which can achieve good public management effects and meet the various needs of the public with sufficient technical support.

4. Opportunities for Public Management Work in the Era of Big Data

4.1 Improve Decision-Making Science

In order to improve the decision-making ability in public management work, big data technology can also be applied to effectively integrate and analyze various information resources, and then obtain key information in massive data to provide good support and decision basis for subsequent public management work. With the continuous development of information in a timely manner, people can participate in the discussion of public decision-making through various modes such as Weibo and WeChat, so that relevant departments can fully analyze the actual needs and hotspots of the people. Guarantee the effectiveness and scientificity of public management decisions. In addition, in the process of applying big data technology, people's participation, initiative and responsiveness can be effectively enhanced. Therefore, public management decisions in the era of big data need to rely on rich and detailed data to be carried out, which can also promote the scientific and democratic decision-making of public decision-making, has a certain positive significance and further develop the public management work in China.

4.2 Big Data Technology Can Enhance The Risk of The Management Ability of Society

In recent years, the incidence of various risk events in China has been greatly improved, like the natural disasters, financial crises, and public health crises have also caused great threats to people's lives and production. With the application of big data technology, it can also directly convert the passive response after the original risk into the active prediction between the risk occurrence, and promote the initiative, effectiveness and forward-looking of risk management. The application of big data technology can also effectively predict the occurrence of social crisis and risk, so as to further improve the controllability of risk. For example, the tsunami warning in Japan after the 3.11 earthquake was also an important example of the use of big data, and effectively reduced the casualties and economic losses [3].
5. Public Management Work Optimization Measures in The Era of Big Data

5.1 Challenges of Public Management in the Age of Big Data

① The feasibility is not strong and the means are too single. Through the application of modern public management technology, it has good forward-looking characteristics for some public events, so it has been widely used in the public government management departments of our country. However, some emerging management technology goals still have problems with low application significance. These public management technologies and platforms have become one of the indicators of government performance, and have caused great obstacles to the further development of public management work in China. In addition, some public administration departments still have a single and rigid management model in the current management work, and they cannot play a good role in promoting the optimization of public management. In recent years, the stampede in Shanghai, the restrictions on the purchase of milk powder in Hong Kong, and the law enforcement of urban management violence have led to problems such as the simple and rude public management model at all levels of government in China, so that the effect of good public management can be obtained. But it will lead the question like the management ability of the government department is too rude, and will have many adverse effects on the subsequent development of public management work.

② Management lacks big data awareness. China's big data technology started relatively late and has developed rapidly in recent years. However, the public's awareness of big data is limited, and some management departments have problems with lack of data awareness in their work. In the current analysis of mass incidents in China, many incidents are caused by lack of public opinion ability and poor data collection ability, which makes some public opinions unable to be solved in time, and can only respond passively to public crises and leads public event processing effect. Analysis of the stampede accident on the Shanghai Bund, it seems to be an accident, but still can be judged by the flow of mobile phones. However, due to the lack of big data awareness, the local management department did not strictly control the density of personnel, and did not do the relevant prevention work, which led to the occurrence of tragedy [4].

③ Data distortion is more serious. In the current performance appraisal system, some government personnel will also make access to promotion opportunities by fabricating false data models. For example, when the GDP increase is determined, because the evaluation indicators are too single or their economic resources are limited, This has led some government personnel to be less satisfied with the actual data, and to obtain the opportunity for promotion through the model of renewal data. For example, the total industrial output value of Henglan Town in Guangdong in 2012 was only 2.22 billion yuan, but the total industrial output value in the local annual report was as high as 8.51 billion yuan, which means that the total industrial output value of the town is increased nearly 6 billion yuan, it is impossible to fully display the actual development of the local area. In addition, in the era of big data, personal privacy and daily behavior will be monitored in many cases, and national security is subject to relatively large threats. Therefore, there are certain application risks in the application process of big data technology.

5.2 Innovative Mode of Public Management in The Era of Big Data

① Issue relevant laws and regulations to maintain the security of big data. Compared with some developed countries such as Europe and the United States, there are still problems in China's personal data privacy legislation. Although the arrival of the era of big data has given certain convenience to public management, it will infringe on the legitimate rights and interests of the public to a certain extent, and it shows the gaps in government data security maintenance and data legislation. Therefore, the relevant government units also need to continuously optimize and improve the existing data security system, and also actively introduce relevant laws and regulations to fully play the guiding role of legal norms. In addition, there is a need to make reasonable provisions for the use of organizational or personal data, and to regulate the type of data. In the process of data collection and processing, a standardized management system is also needed to fully utilize the performance of big data technology.
In addition, in the process of data security legislation, it is necessary to define the data storage time limit, and then perform storage restriction on data positioning based on combining different types and purposes. In addition, the “forgotten right” of personal data needs to be fully protected to avoid problems such as user information and privacy disclosure, and to protect citizens’ normal rights and interests from being harmed.

② Do a good job in public opinion analysis. In order to allow public opinion supervision and analysis functions to be fully utilized, public administration departments are required to continuously improve and strengthen the information collection channels. Through the powerful public opinion analysis platform, it can also effectively cover many functions such as publicity, evaluation and public opinion report. With the help of the public opinion analysis function in big data technology, it can effectively collect and analyze various Internet information through information collection channels, and can also have good tracking effect for some hot topics, and can timely analyze the public opinion events. In addition, it is necessary to do a good job of public opinion guidance through a variety of modes, and some negative information needs to be processed in a timely manner, and useful information can also be disseminated in the first time [5]. Finally, it is necessary to adopt the public opinion evaluation and the public opinion processing function, and also need to provide feedback on the handling situation in the first time to enhance the public’s conviction.

③ Strengthen the construction of social public management data platform. Only on the basis of the social public management data platform and the main body construction work can we meet the needs of public health services. For example, through the transformation of street light micro base stations, construction of data acquisition platforms and other modes, the application of big data technology can be fully exerted. In the process of constructing the social public management data platform and the main body, taking the construction of smart city as an example, it is necessary to construct a new social public management model based on data value-added services and intelligent technologies to make its own public management service level. And the quality of management services has been effectively improved. Government departments need to strengthen the construction of big data management products and actively develop related technologies. The public can access the government website through network technology, and through the establishment of the relevant push mechanism, the use value of a large amount of original data can be fully utilized, thereby obtaining the optimization and utilization effect of the data resource.

6. Conclusion:
As an important basis for ensuring the stable development of the society, public management work needs to strengthen the attention of relevant management departments, and it is necessary to continuously optimize the existing public management mode which is based on the actual development of the society. The arrival of the era of big data has also had a very big impact on China's public management work. This requires government departments to have a full understanding of the connotation and characteristics of big data technology, and to be able to change the public management in the era of big data, at the same time the challenges faced were fully recognized, and subsequent measures were taken to improve the use of big data technologies, thereby promoting the improvement of local public management and providing the public with better public management services.

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