

Exploration on Administrative Management under the Background of Big Data Era

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Abstract: Under the background of the development of the Internet and big data technology, the use of information and communication technology and network platform can actively explore China's administrative management thinking, and broaden the integration with the economy, culture, society and various fields and administrative management to give play to the Internet and big data. The integration and optimization of resource allocation in China's social administration has improved the efficiency of China's administrative services. According to the current development momentum forecast, the incremental effect of the Internet + big data and the product effect will be an effective driving force for the advancement of China's administrative management. Based on this, the paper expounds the definition of big data and analyzes its connection and application in administrative management. At present, the application of big data in administrative management is insufficient and the countermeasures are improved. It is expected that administrative management can adapt to the trend of big data application and improve management efficiency and data quality.

1. Introduction

With the advent of broadband, mobile Internet, Internet of things, social network, cloud computing and other technological means, various terminal devices have generated an amazing amount of data, and the era of big data has come to us. Since big data era has come, the administrative institutions at all levels should seize the opportunity of the era have entrusted to, laying solid foundation in the era of big data network, set up the application platform of the era of large data, cultivate the spirit of the culture of the era of large data, build a based on new technology, new rules and new idea of service-oriented administration and decision-making platform. Are the benefits of big data using various, not only can make the government efficiency, management, market regulation, public service, urban infrastructure, social security was optimized, but also for the economy, education, culture, health, foreign all fields such as expensive benefits, bring tremendous change in all walks of life.

2. Definition of Big Data

Like many new words emerging in the digital age, the understanding of big data is also in flux

[1]. At first, people mainly focused on big data as the basic characteristics of data sets and believed that it was a data set with characteristics of Volume, Variety and Velocity (3V) [2]. In scientific research, the Internet, medical care, telecommunications, finance and other fields, the data size of big data is usually at least PB level, that is, 1 million GB. On the basis of 3V, industry leaders such as IBM, SAS, also summarized the accuracy, Veracity, Variability and Complexity, and other characteristics.

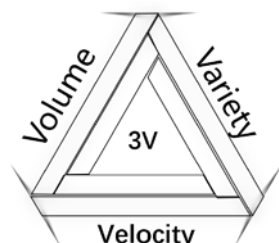


Fig 1 Big data features

In terms of technological development history, data (statistical) analysis has existed for hundreds of years, and data mining technology has existed for decades. Even in the period of exponential doubling of computing speed, big data revolution did not occur. Big data is more affected by the large increase of current data storage capacity, thus humans enter a "world without deletion" [3]. Big data is neither science nor technology, but an objective existence in the Internet era. In our view, big data is not only data, but also technology (algorithm). Although its appearance is the result of the continuous accumulation of human digital process, it can be extracted and widely valued because it brings new ideas and methods to human decision-making and management. In these senses, big data is the product of the interwoven fusion of data and algorithms, network and storage, decision-making and management. Without any of these layers, the complete meaning of big data cannot be covered.

3. Relationship between Big Data and Administrative Management

Big data and data-based management as a tool. Although big data as an analytical tool helps to improve management and decision-making efficiency, the management and decision-making related to data are regarded as the application of big data to generalize the scope of big data and mix big data with data-based management. As a kind of data set, big data and Internet big data and government information resources. Big data in public governance has different data sources, and the Internet is one of them. Fundamentally, the Internet is only the medium of data, and the Internet is the network of big data. Current Internet data, especially data based on search engines and social media, is a hot topic in big data research. In the process of public decision-making, the Internet has become one of the main sources of policy agenda, and some small events that are not originally significant may become big events in the network. This phenomenon is not caused by the complexity of physical media, but ultimately because there is meaningful correlation between Internet data, which reflects the value of big data.

3.1 Big data promotes the transformation of administrative functions

In the era of big data, the application of big data in the reform of administrative management system will effectively promote the transformation of administrative functions. Government functions include macro-control, market supervision, public service and social management. Big data can provide strong support in these four aspects. Big data is conducive to improving the level

of macro-control and strengthening the function of market supervision. The influence of big data on administrative functions is mainly reflected in public service and social management. The application of big data technology will improve the quality and level of the government's public provision, enhance the ability and efficiency of the government's social management, and enable the government to better perform public service functions and social management functions, so as to promote the transformation of the focus of government functions and the optimization of government functions.

3.2 Big data promotes the optimization of administrative organization structure

What our country implements is horizontal division of labor cooperation, vertical level management administrative organization structure. This kind of organization structure seems to promote the horizontal division of labor and cooperation, and the vertical management operates efficiently. However, with the change and development of The Times, its disadvantages become more and more obvious. Horizontally, this structure leads to a large number of departments, a bloated administrative structure, unclear division of authority and responsibility between departments, and duplication of authority and responsibility. Vertically, it leads to the problems of too many administrative levels, too high administrative costs, unsmooth information circulation and low efficiency. In the era of big data, big data is widely used in administrative management, which will promote the optimization of administrative organization structure. The characteristics of big data have revolutionized the way of information generation, transmission and sharing in the era of big data. Big data enables information to be generated at anytime and anywhere, anyone can become a disseminator of information, and information can be Shared unlimitedly through Internet, mobile Internet, Internet of things and other media. This will objectively push horizontal departments to break down barriers and realize the sharing and integration of information. It will break their own political situations, strengthen coordination and cooperation between departments and realize resource sharing. This objectively helps to break down the vertical barriers of bureaucracy, level up the government level, and realize the rapid transmission and integration of data and information, so as to optimize the administrative process. This indicates that the extensive application of big data will objectively require the division of labor among departments, unified coordination, reduction of hierarchical levels, and effective integration of information, so as to promote the optimization and upgrading of administrative organization structure. The government in general, the use of big data will objectively promote the optimization of the administrative organization structure, promote the administrative structure with dissecting the structure to develop in the direction of network structure, break the hierarchy, the barriers between departments, between the administrative organization and the functions and powers unifies, information dissemination, reduced administrative costs, greatly improve the administrative efficiency.

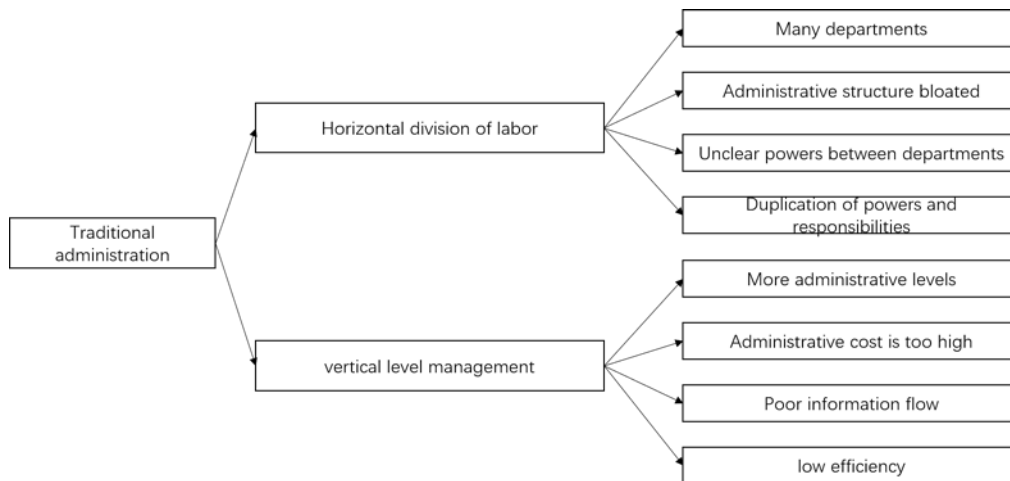


Fig 2 Disadvantages of traditional administrative management organization structure

3.3 Big data helps improve the administrative operation mechanism

The application of big data also has an important influence on the improvement of administrative operation mechanism, among which the most obvious and profound is the influence on administrative decision-making mechanism. In the era of big data, it is advocated to comprehensively master data, collect as much data as possible through Internet, mobile Internet, Internet of things and other information technologies, and find out the correlation through analysis and processing, so as to analyze and judge events and make predictions in accordance with objective laws. The administrative decision-making in the era of big data will change the traditional decision-making mode relying on experience and subjective judgment, and make the decision-making more scientific, democratic and legalized[4].

4. Deficiencies in the Development of China's Administrative Management in Big Data Era

4.1 Improper management of administrative data

In the era of big data, the most prominent feature is a large amount of data. Improper management of administrative data is one of the existing problems in the era of big data. Big data is generally a data set with a large amount of index data and complicated calculations. Facing the complicated data in the era of big data, administrative management lacks the ability to extract effective information, and lacks the ability to deal with cultural invasion, information disclosure and information screening.

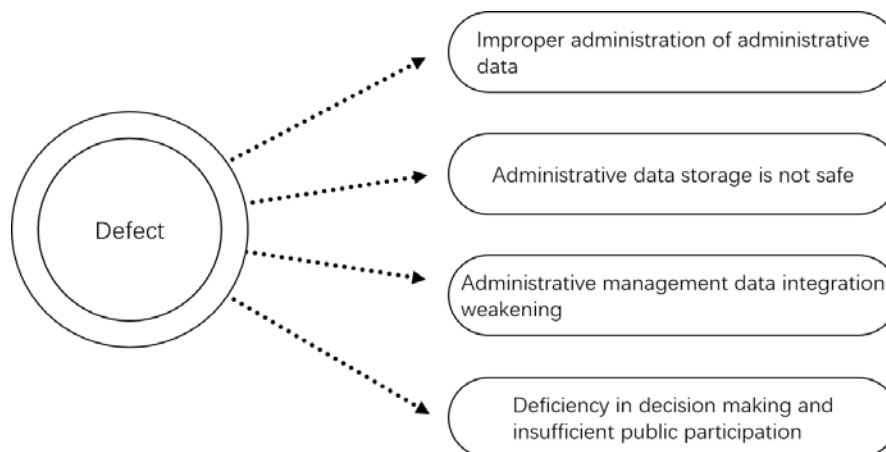


Fig 3 The deficiencies of China's administrative management in the era of big data

4.2 The weak storage security of administrative management data

Although the development of information technology and ability of the informatization construction of data classification, storage plays a positive role, but there are some huge amounts of data relating to the personal information data types, some even have higher illicit close sex, once these data leaks, will bring information providers to different degrees of damage and impact. In the trend of big data development, how to ensure the privacy of private data is a problem we must pay attention to.

4.3 Weak integration of administrative management data

The administrative management work in the era of big data is difficult to integrate due to various data types. The weakening of administrative management data integration restricts the development of administrative management work in the era of big data. In the era of big data, there are various kinds of information, such as network logs, audio, video and so on. The application of big data to handle administrative management affairs requires certain data application ability.

4.4 Apparent decision-making and insufficient public participation

At present, some decision-making functional departments only analyze many decision objects at the superficial level of simply collecting and summarizing data and information, and there are problems of analysis bias, misjudgment and improper decision-making. At the same time, interactivity is a prominent feature of the era of big data, and the existing problems of administrative management in the era of big data are also reflected in the limited public participation of administrative management. The current administrative decision-making mechanism lacks the effective participation of the public, and the administrative management work is deeply affected by the traditional management methods[5]. The role of the big data era in administrative management is not recognized, and the public cannot provide their own opinions to the decision makers in a timely manner. Therefore, it is imperative to explore strategies to optimize administrative management in the era of big data.

5. Measures to Follow the Trend of Big Data and Improve the Effectiveness of Administrative Management

5.1 To establish big data management thinking

The characteristics of big data lie in the massive nature of data and the high speed of data transmission. To realize the value of data, it is necessary to ensure the high speed of its mass nature and transmission. Therefore, government administrators must have an open mind, actively make data disclosure, from the government information disclosure, and then promote the disclosure of enterprise information and social organization information. Only when the whole society information is made public can the government ensure the massive nature of data collected and the timeliness of information dissemination. The era of big data has provided more convenient conditions for the dissemination of public opinions, and also provided a more convenient way for the government to absorb the opinions of the masses. Government officials should actively accept public opinions through big data technology, Internet platforms, micro blogs, WeChat and other means. At present, People's Daily and xinhuanet.com have daily public opinion analysis and relevant online platform for political inquiry and leveling. Government officials should make good use of the data collected by these media and platforms, make specific analysis of current issues of concern to the public, and actively solicit opinions from the public.

5.2 To establish the big data management platform

In order to effectively solve the problems of "information island" and information fragmentation and promote the unified integration and sharing of government data and information, it is necessary to establish a unified big data information management platform. On the basis of protecting state secrets, we will integrate data information held by all levels and departments of the government, establish a government big data information management platform, and take charge of the unified management and disclosure of government data[6]. The establishment of the government big data information management platform can effectively ensure the orderly flow and sharing of data among all departments, realize the connection between information resources and management platform, reduce the human interference to data information and reduce administrative costs. The establishment of big data management platform and the realization of unified management and sharing of data can lay a good foundation for the development of "one-stop" integrated public service model such as government service hall, and also solve the important problem of data fragmentation.

5.3 To improve the value of administrative management data

In the face of vast data and information, it is very important to improve the value of administrative management data to optimize administrative management in the era of big data. The value of the data is big data for the outstanding performance of the administrative service, therefore the administrative personnel should strengthen the analysis and research on the depth of the data, through the effective means of extraction and analysis of the data, from large data efficient data analysis, data mining and data management, improve the efficiency of administrative management, to ensure that policy implementation is clearer.

6. Conclusion

In a word, the more complete the basic data used for analysis, the more reliable the results will

be, and the more valuable information administrative departments will be able to obtain from it. It is no doubt that big data analysis is becoming a key point of change for all industries to participate in the competition and the development of advantages. Therefore, the effective integration of structured, semi-structured and unstructured data and the analysis and exploration of its potential value are the only way to improve the efficiency and competitiveness of administrative management in the era of big data. It needs to be pointed out that: first, big data technology is not mature in itself, and there are relatively few relevant technologies applied in the administrative management field. The relevant conclusions of this paper need to be further tested and revised. Second, compared with China's national conditions, due to the diversity of motivation, participation subjects and methodology behind big data, the establishment of its order must be a gradual process, which cannot be accomplished overnight, otherwise it will be biased.

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