Public Affairs Management and Innovation from Big Data

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Abstract. Public affairs management concerns the citizens and people's livelihoods, and is also one of the main management responsibilities of the government. In recent years, with the increase in the content of public affairs management tasks and the improvement of citizen's quality of public affairs management services, the difficulty of government public affairs management has also increased. As a data processing technology based on the huge computing power of computers, big data can be processed in batches, quickly and accurately in the face of massive data. Therefore, big data has become one of the important technical methods for public affairs management. This paper mainly expounds the content of big data on public affairs management and the existing problems in public affairs management, analyzes the feasibility of big data technology, and proposes corresponding solutions for the existing problems.

Keywords: Public affairs management · Big Data · Emergency response

1 Introduction

Public affairs management aims at maintaining the overall stability and efficiency of society. It is one of the methods to process policies involving a wide range of areas and people in batches, and the payment of health insurance and provident funds are important components of public affairs management. With a very long history, from the beginning of tribal societies, public affairs management includes distributing food and tools to people. As human productivity has improved, public affairs management has also been enriched [1]. As technology and big data mature, it has been a trend to apply them for the improvement of public affairs management. Acting as an important new technology nowadays, big data has been widely applied in various industries, such as artificial intelligence, and has brought satisfying results [2]. In summary, this paper illustrates these problems in public affairs management and proposes practical solutions to solve the current problems using big data.

2 The Benefits of Big Data for Public Affairs Management

Due to the advancement of China's socialist system, substantial progress has been achieved in social and economic development. However, accordingly, problems in the

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distribution of social wealth and resources have emerged, and the accompanying conflicts have been increasing. These have posed a severe test to China's governance ability. How to improve the government's ability to allocate and better serve citizens has become a challenge for the government in public affairs management. Persistent innovation and reform are the specific methods to better handle the problem in the first stage. Public administration serves the people. Therefore, in the process of dealing with the massive amount of user information, big data is a solution to the problem to achieve intelligent and modern management. Big data should be applied to serve public affairs management. It can not only effectively integrate various resources, but also realize the sharing of resources in multiple departments, which can improve the efficiency and quality of services of various departments and the satisfaction of citizens. More data can bring more convenience to citizens. Big data can solve one or more approval work previously done by multiple government departments, which not only reduces the burden on government departments, but also improves work efficiency and saves time. Big data can link the isolated data among various government departments. It achieves data interoperability and reduces data errors. With the cloud storing the data, it can also strengthen security.

3 The Existing Problems in Public Affairs Management

At present, without a unified definition in academia, public affairs management is still defined vaguely. At present, public affairs management can be understood in both a broad and narrow sense. In a broad sense, public affairs management refers to the government's management of society, economy, culture, and politics. In a narrow sense, to satisfy the needs of social development, public affairs management refers to the government's management of social issues that do not belong to economic, cultural, and political issues. From a practical perspective, it mainly explores the management of present social issues by government departments.

3.1 Poor Management and Organization

Due to the influence of coordinating local affairs during the planned economy era in China, some local governments have always put the government in the dominant position in the management and organization, while neglecting other organizations [3].

3.2 Inadequate Emergency Management

Confronting these pressing problems, a single management model may lead to severe consequences. To deal with problems quickly, managers tend to ignore technology and citizens, leading to mistakes in decision-making. The major safety problems that have occurred in our country in recent years were related to this [4].

3.3 *Lack of Timeliness in Handling Public A*ffairs

Due to the redundancy of government departments, it is easy to misuse power and expand the system when the government deals with a large number of social issues.

As a result, the "integrated" government structure is inefficient when handling large-scale public affairs. Additionally, as China continues its reforms and opens up, some local governments adhere to the mindset of "government controls all" from the planned economy era, overlooking the positive role played by new technologies in enhancing government governance. The presence of corruption in public affairs management leads to social management problems and eventually to a lack of government management functions.

3.4 *Reasonable Distribution of Public R*esources

Due to the rapid scale of China's present social development that leads to the outdated current social governance system, government departments lack management and coordination ability to achieve intelligent management for various specific problems. There are three main aspects as follows. First, the increase of data makes it more difficult to expand grassroots governance and raises the cost of government departments. Second, the lack of coordination ability among various government departments in China consumes vast time and economic cost in the process. Third, the lack of sample comparison makes it unable to deal with the social crisis effectively.

4 Innovative Solutions Based on Big Data

4.1 Effective Optimization of Management and Organization

The complexity of public affairs management mainly results from the diversity of management objects and the backwardness of management models. The diversity of management methods has greatly increased the difficulty of management, and the content of management has expanded geometrically as the society and economy develop. The perspective of big data helps to realize the innovation of national governance at the technical level and also provides objective conditions for the transformation of management functions of local governments. At present, in public affairs management, the government, society, and individuals have formed a diversified management system, which has become the consensus in grassroots governance. The Chinese government has made clear the importance of building a diversified governance structure for grassroots management. However, in the process of implementing a diversified governance system, it is still difficult to deal with information in various fields with existing processing methods alone in the process of identifying, classifying, and processing information. In the current processing of information technology, big data has become the main information processing method, widely used in computers, artificial intelligence, and other fields. Similarly, in public affairs management, utilizing big data for the accurate management of information in various fields can effectively improve the timeliness of public affairs governance. In recent years, as the government increases investment in public products and public affairs and urban-rural integration advances, grassroots governance has posed a big test in the current management system of public affairs such as medical care. Public affairs management requires big data technology to optimize the management and organization and improve the management system to ultimately provide a strong safeguard for the governance of public affairs in China.

4.2 Timeliness and Security of Processing

Decision-makers need to summarize and analyze the solved events in the process of event processing to avoid the same events next time, and this is widely used in the field of public safety. It is difficult to establish a comprehensive detection and early warning system with traditional learning models to make scientific predictions and avoid repetitive mistakes. Big data can help to establish a complete learning model. Algorithms can analyze the digitally processed events and establish a complete feedback mechanism to achieve scientific prediction to the maximum extent. Big Data is a data processing technology based on network, so it can realize the public connection and sharing of all kinds of data, the remote processing and analysis of public affairs, and the establishment of relevant algorithm models through the network. Big data can also solve remote public affairs through the network, improves government implementation efficiency, reduces government administrative costs, and quickly improves the accuracy of prediction models. Its transparent processing can also integrate citizens into the management process, further enhance the error correction of processing public affairs, and help to improve governance capacity and establish early warning mechanisms.

Facing the storage and confidentiality of massive information data, big data will use encryption technology, which provides higher security for processed data. It centralizes the management of data, avoids separate management methods, unifies the storage, use, and transmission of data, reduces management difficulties, and costs, and enhances the security of data and systems.

4.3 Achieving Innovative Management of Public Affairs

To innovate the existing management methods and dynamically optimize them is the only way to achieve the goal of public affairs management. Big data is mainly composed of two parts: “big” and “data”. “Big” mainly refers to the massive amount of data processed by technology. Computers consume massive computing power in the processing, which also results in big errors [7]. From the perspective of big data, current innovations in public affairs management are mainly reflected in the following three aspects. First, big data can collect more comprehensive information on public affairs, and big data and its derived cloud technology can track people’s daily lives and make predictions based on scientific models. Therefore, it can provide more scientific results. Second, big data can process a wide range of information, far exceeding the ability of traditional computing methods. It greatly streamlines the work of personnel and improves efficiency. Third, big data prediction can provide operators with more macro-level processing methods, which also contributes to the development of next-generation technologies. Yet, nothing is perfect in the world, and there are certain limitations. In particular, the application of big data is still in the exploration stage [8].

4.4 Rational Distribution and Use of Public Resources

To meet the demand for quality of management services of public affairs, the government should use technology for decision-making. As the most effective method for

public affairs management, big data has the advantage of handling massive data information and complex data types [5]. Firstly, the government has established specialized data and statistics departments, such as the National Bureau of Statistics that regularly conducts population censuses or economic surveys and has a large amount of data on economy and society. Secondly, the government's work concerns citizens. Various data resources have also been acquired in public affairs management. These data have great potential value. After analysis and processing, they can make scientific judgments and predictions for government work and provide effective grounds for the government's decision-making. With big data, a large amount of personal information can be transmitted as data information through the network. Computer models analyze these data to get information on personal consumption, health, income, and credit to make clear judgments [6]. The essence of big data technology is to figure out the hidden values in the data through analysis and mining to guide the implementation of behavioral decisions. "Big data + decision" can effectively ensure the science of governance decisions. By analyzing vast data resources of complicated public affairs management, big data can provide decision support for the government's social governance. The integration of big data technology into public affairs governance and upgrading the knowledge governance of public affairs from traditional experience-oriented to data-based decision-making can effectively avoid governance failures caused by vague cognitive systems. Through big data analysis and data mining, existing government resources should be rationally distributed to public affairs management services to truly achieve effective integration of resources and maximize resource value.

5 Conclusion

Big data, an important tool currently, efficiently, and accurately process massive amounts of information and have become a processing tool and strategic resource in many fields. In public affairs management, the traditional management methods have the problems of poor timeliness and untimely emergency response in the face of massive user data. How to innovate to change the traditional management methods has become the main issue that public affairs management encounters. As the problems faced by public affairs management relate to various aspects, it objectively needs to be innovated with the help of big data technology. In this paper, we identify shortcomings in traditional public management methodologies and propose innovative solutions based on big data to advance public affairs management, create new changes and enhance the development of public affairs management in China.

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