

# Opportunities, Challenges and Countermeasures of Government Public Management in The Era of Big Data

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**Abstract:** All along, the state regards science and technology as the primary productive force, so as to promote economic growth, social progress and national development. As the leading force of public management, the government is not only the practitioner of information construction, but also the guide. Nowadays, the amount of information involved in government public management is increasing, and the application of big data in government public management ensures that information acquisition is more convenient, faster and more accurate, and lays a good foundation for the stable development of society. This paper analyzes the challenges faced by government public management in the era of big data, and puts forward practical countermeasures and suggestions.

**Keywords:** Era of big data, Government public management, Challenge, Response suggestions.

## 1. Introduction

With the development of the new era, the content of government public management is becoming more and more complicated. If we can make full use of the advantages of big data, it can help the government to quickly obtain accurate and timely information, which is conducive to the smooth development of all work. Big data not only brings convenience to the government's public management, but also inevitably brings great challenges. In order to conform to the development trend of the times, it is necessary not only to change ideas, but also to have the support of professionals. At the same time, relevant laws and regulations are needed to guarantee the application of big data. This paper analyzes the opportunities and challenges faced by government public management in the era of big data, and puts forward some constructive suggestions, hoping to provide reference for the full use of big data advantages in government public management.

## 2. Opportunities for Government Public Management in The Era of Big Data

### 2.1. Big data promotes the change of public management thinking mode

The era of big data has changed people's way of life, and their thinking patterns have also changed. In the past, when analyzing an event, probability analysis was often used, which led to a big deviation in the results[1]. In the face of massive data information in the era of big data, it is obviously difficult to obtain accurate results if traditional analysis methods are still used, which will affect the scientific decision-making of government managers. Therefore, the management thinking of government managers is gradually changing from empirical decision-making to data decision-making. Public management staff should change their thinking mode, adopt scientific and reasonable data analysis method, and find the internal correlation among data, which is conducive to the smooth development of public management[2]. In the era of big data, government

information is no longer closed, but open. The public has become the main body of supervision of public management activities, and the government can also implement new policies with the help of big data platform.

### 2.2. Big data promotes public management from closed to open

In the traditional process of public management, the analysis of data is limited, and communication is limited. The era of big data is completely different, and various interactive platforms make the interaction between various subjects more frequent, and the communication channels are numerous and smooth[3]. In the process of today's social development, the government's public management involves more and more contents, while the government's official website based on the big data platform is improved in openness and subject to public supervision. The government can mine and integrate data information to ensure that the government has more accurate data for reference when making decisions.

### 2.3. Big data promotes the government to improve service quality

At present, the government functions are changing from management to service, and the collection, collation, analysis and application of big data speed up the transformation of its functions and promote the continuous improvement of government service quality. Under the support of big data, government decision-making is supported by accurate data, which makes policy formulation more scientific and reasonable[4]. On the one hand, the effective application of big data is to facilitate the public to know more about the relevant information released by the government; on the other hand, when analyzing big data, the government functions can be brought into full play. With the help of big data system, the information needed in the work can be extracted, so as to facilitate the development of the work and solve the public management problems in a short time[5].

### 2.4. Big data promotes the government to improve work quality and efficiency

In the era of big data, there are more and more channels for the public to obtain information and data. They can express

their demands through the platform, and the government can adjust the work content in time according to this information to ensure that the work is more targeted and effective. Government management can make decisions based on big data and work practice, and all departments can realize real-time communication. When problems arise, they can also use big data to find reasons and methods, and then take measures[6]. All departments work closely together to avoid the situation that work implementation is not in place due to overlapping functions, and the work quality and efficiency are greatly improved, thus gaining recognition from the public and being more satisfied with public management.

### **2.5. Big data makes policy making more scientific and reasonable**

The era of big data has arrived, which has a great impact on people's life, study and work. Big data thinking has become the fundamental idea of dealing with problems in all walks of life, and many types of policies and systems are bound to be involved in government public management[7]. To ensure that policies and systems are more in line with public opinion, it is also necessary to make full use of big data thinking, collect and sort out citizens' thoughts, behaviors and other related information, and through the integration and analysis of a large amount of information and data, formulate public management policies on the basis of understanding public opinion to ensure public management policies. In addition, when analyzing big data, government public management staff can also provide constructive opinions for policy making, realizing the close communication, exchange and interaction between the government and the public, innovating the public management mode, and laying a good foundation for policy making[8].

## **3. Challenges Faced by Government Public Management in The Era of Big Data**

### **3.1. The administrative thinking mode is outdated**

Although the government's public management functions are gradually changing in the era of big data, some managers still find it difficult to change the traditional thinking mode in a short time. They often wait until the problems occur before they find out the reasons and find ways to make up for them[9]. They attach great importance to post-processing but neglect prevention beforehand. In the era of big data, if the government still maintains a fixed thinking mode in the process of public management, it is obviously incompatible with the needs of social development. The most remarkable feature of the era of big data is the diversity of information acquisition channels and the fast speed of information dissemination.

### **3.2. Data administrative culture awareness is not strong**

In the era of big data, government public managers should seek truth from facts and pay attention to data accuracy in their work. However, many people think that data is code, and they don't really realize that data can be used as the analysis basis of events or things, which leads to low data quality and utilization rate in the process of government public management[10]. Data analysis is not regarded as an

important method in public management, and thus the quality of information can't be guaranteed, which leads many people to question the relevant data released by the government, resulting in the reduction of the credibility and authority of the government in the eyes of the public.

### **3.3. Lack of professionals in big data technology**

With the rapid development of information technology and the popularity of the Internet, a huge amount of data is generated in the Internet. If we want to make full use of these data, we need the support of professional and technical personnel. However, at present, the government's public management lacks big data professionals, which leads to insufficient depth of data mining and low utilization rate, and it is difficult to dig out the hidden value behind big data, which is obviously a waste of resources[11].

### **3.4. Big data sharing is not enough**

Among the massive information resources, the government's public management information resources occupy a dominant position. However, it is difficult for these data and information to be effectively shared among local governments, government departments, government and the public, and the integration of information resources is obviously insufficient, which leads to the underutilization of information, complicated government approval process, and unreasonable personnel arrangement in institutions, which not only leads to low work efficiency, but also increases costs. In addition, the openness of data information in the government's public management is still low, and the publication of some information lags behind and is not timely enough, which makes the public doubt the government data, thinking that the data is inaccurate and opaque, which reduces the credibility of the government, and greatly affects its image and reputation[12].

### **3.5. The laws and regulations related to big data are not perfect**

As the representative of advanced information technology in the information age, the value brought by the wide application of big data in government public management is unquestionable, but everything has two sides. While big data plays a positive role in bringing opportunities to public management, it also has big security risks, such as information security and personal information disclosure. At present, the state has strengthened its management efforts in protecting personal privacy and strengthening network information security. However, there is still no authoritative supporting law to guarantee it, which makes it difficult for information resources among government departments to be effectively shared. When personal privacy is violated, it is difficult for the government to collect citizens' real thoughts in public management, citizens' trust in the government is reduced, and government information disclosure becomes a mere formality.

## **4. Suggestions for Government Public Management to Actively Respond to Challenges in The Era of Big Data**

### **4.1. Strengthen the culture of data administration and the cultivation of data thinking, and make use of big data to make scientific decisions**

In government public management, the application of big data often depends on people's ideological understanding. Only by accepting big data ideologically and fully recognizing its important role in management can we really make good use of data resources. This requires cultivating the data administrative culture and thinking consciousness of government public management departments and their staff, collecting and sorting out information through big data platform, understanding public needs, carrying out corresponding data analysis, deducing the correlation among data, and then providing the basis for government decision-making. In big data thinking, it emphasizes the prediction and prevention of risks in advance. At the same time, with the help of new media such as WeChat and Weibo, we can try our best to avoid the phenomenon of inadequate information communication and isolated information island, build a bridge of communication between the government and the public, ensure the timely release of government information, and respond to the public's feedback suggestions at the first time. At the same time, the government's public management thinking should turn passivity into initiative, pay more attention to risk prevention beforehand, do a good job in big data forecasting and decision-making, give full play to the leading function of government decision-making, and ensure more scientific and reasonable decision-making.

### **4.2. Cultivate and absorb innovative talents in big data technology**

In the era of big data, the government's demand for public management talents is increasing, and the requirements are getting higher and higher. It is necessary to have not only professional data analysis ability, but also strong forecasting ability. Individuals not only have the ability to innovate, but also can promote the formation of innovative teams. First, we should attach importance to the cultivation and introduction of talents in big data technology, requiring them to have knowledge of computer software and hardware, and at the same time be able to conduct in-depth analysis of data. They not only have knowledge and skills, but also have certain innovation ability, and can focus on public management-related work; Second, build a professional management team for big data. In the information technology era, only with the support of professional teams can valuable information in massive data be deeply mined and better utilized, so as to avoid the waste or idleness of a large amount of useful data information; Third, there are many types of data involved in public management, which not only need to be collected and analyzed quickly, but also need to ensure the authenticity and reliability of the data, which can provide an accurate basis for government decision-making. Therefore, it is necessary to cultivate data management talents with strong coordination ability based on large databases.

### **4.3. Build a data government to ensure transparency of government data**

The data government mentioned here, that is, the government official website, releases relevant information to the public in time and shares the data collected and collated by the government through official website, which not only provides an interactive platform for the public, but also fully reflects the public's right to know and speak. Under the guidance of the government and the participation of all social forces, problems are solved together. It can also be said that under mutual supervision, the public makes feasible suggestions through the platform, which is helpful to the improvement of the government's public management. At the same time, the government collects and collates more data and information through official website, and the amount of information is increasing. Building a data government can eliminate the problems caused by the isolated information island, realize the integration, sharing and utilization of information, greatly reduce administrative costs, improve work efficiency, promote the openness and transparency of government data, and enhance government credibility.

### **4.4. Use big data to improve the government's public management supervision system**

In the era of big data, everyone is the maker, disseminator and supervisor of information, so in the process of public management, public management behavior can be effectively supervised through big data. First, establish and improve the supervision and management system, and give full play to the role of internal and external supervision bodies. The internal supervision bodies are financial and legislative departments, while the external supervision bodies are social forces, including the public and news media. Secondly, the relevant laws and regulations should be improved, and the social teams and citizens involved in supervision should be given legal protection to ensure the full play of their supervision functions. Finally, the government information disclosure system should be improved, and the government information should be released in a timely manner to ensure that the public can get information at the first time, so as to strengthen the supervision of the government.

### **4.5. Improve the construction of big data laws and regulations**

Big data technology plays a very important role in the government's public management. We must constantly improve the laws and regulations related to big data, use legal weapons to protect many legal rights involved in public management, and formulate, implement, adjust, revise and abolish data schemes. First, according to China's national conditions, formulate laws and regulations such as the Data Quality Law and the Regulations on the Openness of Government Data Information, which match the current public management, so as to guarantee the integrity of government public management data and the authenticity of information; Secondly, the laws related to big data, such as Network Information Protection Decision and Personal Information Protection Decision, will be continuously improved to solve the problem of citizen information leakage and strengthen the protection of citizens' personal privacy rights. At the same time, it is necessary to ensure the national network information security, improve the ownership of data information property rights, protection, data storage and other

related laws, and ensure that the application of big data technology in the government's public management process has laws to follow. Under the legal constraints, we should give full play to the advantages of big data technology more scientifically and rationally, and create a culture of rule of law. Thirdly, drawing lessons from the successful experience of foreign countries in the legal construction of big data technology, and based on China's national conditions, we will issue big data application management guidelines, which will lay a good foundation for improving the quality and efficiency of government public management. With the support and constraint of the law, we will give full play to our advantages and eliminate hidden dangers.

## 5. Conclusion

In recent years, with the popularity of the Internet, the era of big data has arrived, and all walks of life have begun to apply big data to daily management, which not only improves work efficiency, but also realizes information sharing and promotes the rapid development of all walks of life. Although the application of big data in government public management is short, it has achieved good results. With the continuous progress of society, the scope of government's public management is becoming wider and wider, which requires the government to firmly grasp the development opportunity of big data, actively respond to challenges, innovate constantly, and better serve the society and the people.

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