



# Research on Government Data Openness and Citizen Privacy Protection in the Context of Big Data

Tianlong Wu

Harbin University of Commerce, Harbin, China

13130312903@163.com

**Abstract.** Data is a strategic resource for a country, and in the context of the advent of the big data era, government data openness has become a focus of international attention. The openness of government data is of great significance for promoting interaction between the government and the people, improving government management level, and promoting the transformation of government service functions. However, in today's rapidly developing world of information, while making full use of this information, it may also infringe on its privacy. Therefore, this article focuses on how to improve the transparency of government data disclosure under the premise of personal privacy protection in the big data environment.

**Keywords:** big data; Government data openness; Privacy protection

## 1 Introduction

Marxist philosophy believes that we should use dialectical thinking to view problems in two, and comprehensively and objectively evaluate the issues of government data openness and citizen privacy protection in the context of big data. Shang Xixue and Han Haiting believe that government data has become an important component of the data market. However, there is still a lack of rigorous institutional logic and norms regarding the privacy protection of citizens' personal information during the process of government data openness<sup>[1]</sup>. Based on the comparison of EU experience, Zhang Qianwen believes that China can enhance the appropriateness of open behavior through clear legislative authorization, comprehensively use legislative and technical means to reduce the restrictive nature of open behavior, classify personal and government information to ensure the balance of open behavior, and build a diversified government data open supervision and relief mechanism<sup>[2]</sup>. Ding Hongfa believes that in the process of government data openness, management systems and standardized operating procedures should be established. This problem should be addressed from the perspectives of data security and privacy protection. Based on existing research findings, in the era of big data, the contradiction between government data disclosure and personal privacy protection is becoming increasingly prominent and will continue for a long time<sup>[3]</sup>. Based on existing research findings, in the era of big data, the con-

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Z. Wang et al. (eds.), *Proceedings of the 2023 2nd International Conference on Public Service, Economic Management and Sustainable Development (PESD 2023)*, Advances in Economics, Business and Management Research 273,

[https://doi.org/10.2991/978-94-6463-344-3\\_12](https://doi.org/10.2991/978-94-6463-344-3_12)

tradiction between government data disclosure and personal privacy protection is becoming increasingly prominent and will continue for a long time. Therefore, when facing this contradictory system, it is necessary to not only see the promoting effect of big data on government data disclosure, but also timely analyze the threats and challenges that citizens' privacy protection may face.

## **2 Overview of government data openness and citizen privacy protection in the context of big data**

### **2.1 Data**

Data is a carrier of information that can appear in various forms such as images, sound, text, and video. European Union countries generally define personal data as relevant information of identifiable natural persons, that is, through specific information, a natural person can be clearly identified, such as name, gender, age, phone number, home address, work unit, etc. IBM proposed the 4V characteristics of big data in the early stages, namely Volume, Diversity, Velocity, and Verity, and later incorporated Value to form the 5V characteristics. Data is a valuable new type of resource. In the process of fulfilling social management responsibilities, governments at all levels collect massive amounts of personal data from the public. On the premise of not infringing on national secrets and personal privacy, they open up and utilize it. This can not only maximize the economic value of data, but also generate more benefits from it. It can also promote interaction between government and the public, as well as between government and enterprises, and enhance public participation in politics, Promote the transformation of government functions and accelerate the process of socialist democratization.

### **2.2 Government data openness**

Open government means that the government should actively participate in the openness of data, strengthen cooperation between the government and the people, and involve the public based on data openness, in order to promote the transformation of government functions, establish a service-oriented government. Government data openness plays a role in protecting the basic rights of citizens, improving public services, promoting development and innovation. It is different from government information disclosure. It is an activity that focuses on the government and values its disclosure. Users can search, download, browse, and use this information according to legal regulations. Its main purpose is to enable the government to fulfill its administrative responsibilities and ensure the basic right of the public to know. For government data disclosure, it tends to be more interactive between the government and the public, Strengthen public participation and cooperation.

### **2.3 Citizen privacy protection**

Personal privacy refers to information that belongs only to oneself and is not related to national, social, or public interests, and one does not want others to know. The right to privacy is about the right to privacy. Personal privacy in government data disclosure refers to the disclosure of personal information, activities, and spaces related to natural persons that the government has stored, collected, utilized, and disseminated to the public. D. J. Solove believes that "privacy is an institutional paradigm established by humans, not a natural product <sup>[4]</sup>." Westin explores the understanding of privacy rights, stating that "the so-called privacy is the freedom to control one's own information <sup>[5]</sup> Floridi differs from most people's understanding of privacy by treating the subject of privacy as a group rather than referring solely to an individual <sup>[6]</sup>. The above early research on privacy and privacy rights provides direction for us to explore privacy protection in government data openness in the future.

## **3 Issues Faced by Government Data Openness and Citizen Privacy Protection**

### **3.1 Inadequate legal system for privacy protection**

At present, it is difficult for relevant laws and regulations in China to match the development of big data, especially in terms of government data disclosure, personal privacy, etc. There are many shortcomings, and relevant legislation is relatively lagging behind. In China, the legislation on privacy protection started relatively late and was previously mainly focused on major legal provisions such as the Constitution. After decades of development, China has a clear definition of personal privacy and a relatively clear understanding of it. With the continuous improvement of citizens' awareness of safeguarding their rights, their understanding of privacy is constantly deepening, and society's requirements for privacy legislation are also constantly increasing. On this basis, China's legislation has also undergone a transition from indirect protection to direct protection of personal privacy. From scratch, it can be said that China has made great achievements in privacy protection. However, with the rapid development of science and technology, and the continuous improvement of government data openness, privacy and security leakage and diffusion risks still exist in the big data environment. In addition, in addition to special laws, other relevant laws and regulations need to be supported, and the provisions on privacy protection in other legislation also urgently need to be improved. At the national level, the legal system for personal privacy protection is not sound, and local governments also need relevant policy support to protect privacy and security when data is made public.

### **3.2 Incomplete data open supervision and management mechanism**

The disclosure of government data involves multiple departments and levels of work, but China has not yet had a national strategic plan to coordinate it. The comprehensive coordination ability between departments is not strong, and the data opening

work of each local government is independent, and the level of data sharing is not high, which cannot fully utilize the value of government data. In addition, the lack of supervision and constraint mechanisms for government data disclosure greatly hinders its smooth implementation. In addition, in China, civil servants have insufficient understanding of information disclosure, and the original intention of disclosing government data is to promote the social reuse of government data resources, so as to better meet the needs of the public and provide convenience for the public; At the same time, it can also enable the public to better supervise the government, enhance its work efficiency, and enhance its sense of responsibility. However, the lack of supervision and constraint mechanisms for government data disclosure greatly hinders its smooth implementation. In addition, some government officials do not have the necessary awareness and ability to disclose data, and lack specialized personnel to open up government data and analyze big data, all of which bring difficulties to data openness.

### **3.3 Public awareness of data participation is not strong.**

Due to the insufficient processing capacity of the public for data, there are certain difficulties in obtaining, processing, and reusing it, which leads to the virtual disclosure of government data and the inability to achieve the goal of data disclosure. Some members of society have a herd mentality and do not have sufficient judgment on the authenticity of data and information, making them easily hijacked by malicious online comments. In addition, the "threshold" for obtaining government data is high, especially for vulnerable groups who face challenges in accessing and using data, forming a "digital divide". Although in recent years, due to the advancement of education and science and technology, their political sensitivity and willingness to participate have increased, overall, their level of participation is still very low. Data disclosure is still led by the government, which inevitably leads to problems such as incomplete data collection, low availability, and the inability of the public to access the required data. If there is no collaborative interaction between enterprise organizations, government data disclosure will not form a positive interactive atmosphere, resulting in low work efficiency and inability to achieve the expected purpose of government data disclosure.

## **4 Suggestions for government data openness and citizen privacy protection measures**

### **4.1 Improve the legal and regulatory system for privacy protection**

Establish a sound legal and regulatory system for government data openness and citizen privacy protection, clarifying the rights and obligations of governments, enterprises, and individuals in data openness and privacy protection. At present, the legal provisions on personal privacy protection in China are mainly scattered among major laws, scattered and incomplete. China should strengthen legislation on citizen privacy

and personal information protection. Specifically, the following should be achieved: on the one hand, laws and regulations on personal information protection should be promulgated to strengthen the protection of personal information privacy security. On the other hand, establish a sound legal system for privacy protection. In the current big data environment, to strengthen the protection of citizens' personal privacy, it is necessary to establish a comprehensive legal system under the guidance of the Constitution, in order to achieve effective protection of personal privacy.

#### **4.2 Improving the data management and supervision mechanism**

Government data openness should comply with laws and regulations, and establish specialized organizational structures responsible for formulating, implementing, and evaluating, in order to promote the development of government data openness work with unified behavioral standards, thereby ensuring the convenience of users in accessing and using data, improving the utilization efficiency of open data, and fully leveraging the value of data resources. At the same time, establish and improve relevant regulatory and accountability mechanisms, evaluate the implementation of government data disclosure, and revise and improve it based on the evaluation, thus playing a positive role in promoting the in-depth development of government data disclosure work in China.

#### **4.3 Enhancing public awareness of the significance of government data openness**

To enable various social groups to actively participate in government data disclosure and fully mobilize the enthusiasm of the public, it is necessary to raise public awareness of data, and enable them to better understand the impact of big data on people's lives. In fact, big data has penetrated into people's daily lives. Promote this policy to the general public, especially young people, through media such as schools, the internet, and television, to increase their awareness and participation in it. To make the public aware of government data openness, not only can it enhance government transparency and the feasibility of decision-making, but it can also facilitate people's daily production and life, which is of great significance for building a service-oriented government. However, along with opportunities, there are also enormous challenges. To establish risk awareness, when conducting government data disclosure work, it is necessary to raise awareness of the security risks of the country, society, and individuals, consciously operate in accordance with relevant laws, and prevent data abuse.

### **5 Conclusion**

In recent years, the government's data disclosure work has made significant progress, but this is not an overnight achievement and requires long-term adjustments and improvements. Currently, China's government information disclosure is still in its early stages. However, we have great room for development and determination. In terms of

legal system, improve the legal and regulatory system for privacy protection, and provide guarantees for the privacy protection of Chinese citizens; In terms of organizational mechanisms, improve data management and supervision mechanisms; In terms of social participation, raise public awareness of the significance of government data openness, and form a good environment for government data openness to meet the opportunities and challenges brought by the big data era.

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