

A Review of Research on Open Government Data

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Abstract: [Purpose/Significance] Since Data.gov.uk was officially launched in the United Kingdom in 2009, government open data has been in full swing in various countries. This paper summarizes the existing representative studies on government data openness in a logical way, in order to provide reference for the subsequent related studies and help China's government open data to develop further. [Methodology/Process] Through literature analysis, content analysis and case study analysis, we sort out the relevant research literature and practice profiles, and analyze the current status of the theoretical research and practice progress of government open data. [Results/Conclusions] Current studies focusing mainly on government open data can be categorized into the following major groups: domestic and international practice studies, policy governance studies, risk control, privacy security and technology empowerment studies.

Keywords: government open data, privacy risk

1. Introduction

In 2014, the United Nations Department of Economic and Social Affairs released the United Nations 2014 e-Government Survey Report increasing the attention to open government data (government open data), focusing on the strategy of open government data as well as the opportunities and challenges faced at the present time. 2021 The Data Security Law of the People's Republic of China, which was passed in 2021, puts forward specific requirements for the security and openness of government data, and the Central Network Security and Informatization Committee issued the "14th Five-Year Plan for National Informatization", which proposes to accelerate the open sharing and development and utilization of government data to create a service-oriented government. The introduction of a series of laws, regulations and policy documents on public data opening fully expresses the determination of the Party and the government to open up data and improves the standardization of data opening and sharing.

2. Development Path of Government Data Openness at Home and Abroad

2.1 Domestic Practice

For the domestic are government open data practice, some scholars multi-location common research, through comparative analysis to discover the laws and characteristics. Zhang Yongjin through the research of Wuhan, Zhejiang, Foshan, Sichuan and other places of data open status quo, derived the basic law of local government data openness. Huang Ruhua, Wang Chunying investigated and analyzed the current situation of 13 local government open data platforms in China from the aspects of general situation, data service, data resource construction, data organization and retrieval, and put forward improvement suggestions from the aspect of development gap. Tan Biyong, Chen Yan examined the current situation of data quality of government open data platforms in 10 representative provinces and cities in China from the perspective of macro-functional structure of government open data platforms.

2.2 Overseas Practice

According to the 2013 government opening data, China's census ranked 57th. Studies on foreign practices mainly focus on developed countries such as Europe, the United States and the United Kingdom. By comparing the open data initiatives of typical countries, this study summarizes the main experience and makes suggestions related to China's national conditions. Most of the research is concentrated in the United States, such as Hou Renhua, Xu Shaotong used five case studies and www.data.gov as examples, from the perspective of data management, the characteristics of their data, data collection methods, data management strategies, methods and benefits of data use, and a data website in the United States. Wang Qingyi and Gao Jie analyzed the service provided by Data.gov website from four aspects, including data provision and data retrieval.

2.3 Governance model innovation

Focusing on the revitalization of data resources is a key move in the construction of digital government. Chen Ling, Duan Yaoqing based on the LDA model to build the coupling model between digital government construction and government open data and its evaluation system, pointing out that the coupling level of the two belongs to the moderate coupling level and benign coordination coupling. It can be seen that there is a need for the government, the public, enterprises and other parties to collaborate and participate in promoting the benign synergistic development of China's digital government construction and government open data. Huang Jing, Zhou Rui based on information life cycle management theory, constructed a government data governance framework including data collection, data organization, data storage.

The value, controllability and independence of data make it a new type of property, clarifying the legal attributes and ownership of government data, and determining the open mode compatible with "service" and "operation" on the basis of refined differentiation is an important task in the study of government data openness nowadays. Regarding the construction of data revenue right system in government data opening, Wang Cheng pointed out that it is reasonable for the government to charge for open data, and there is a pricing model of free, cost-based, and "cost plus benefit" for open data. The government data commissioner system is a concrete example of how government data management is organized.

2.4 Policy Diversity

Yanyan Sun,Zhijian Lv examined China's open government data development strategy from five aspects: high-level design, government accountability, informationization construction, private sector participation and ideology. The Importance of Policy Building The legislation and practice of public data openness has been unfolding, but the rights basis of the system is not yet clear enough . To address this issue, Wang Xizhen believes that China's public data openness system should focus on constructing a data openness order and corresponding management mechanism that meets the requirements of fair utilization at the level of ground rules, rather than hastily stipulating that public data is owned by the government .

3. Technology Enablement in the 5G Era

In the long run, while data security is important, the opening and sharing of government data is a general trend. The government needs to strike a balance between openness and security by improving mechanisms to protect open public data . The research on personal privacy protection in government data openness has generally gone through 3 stages: the formal emergence of privacy issues, personal privacy protection in government information disclosure, and personal privacy protection in government data openness. It is suggested that domestic research should be carried out in 4 aspects . Based on the concept of risk management, the handling of personal information in government data opening should differentiate the risk level faced by different types of data opening, and set up a differentiated personal information protection obligation system for the purpose of promoting the rational use of personal information.

4. Reflections

At present, the research on open government data in China presents the following characteristics

4.1 Focus on New Crown Epidemic Theme

Whether it is data mining and in-depth analysis of the data openness of the people's governments of various provinces and cities across the country, the CDC, the Health Commission and other relevant departments of the epidemic, the construction of the data portrait of the new coronavirus epidemic, exploring the behavioral characteristics of the various subjects of interest in different symbiotic states, or the assessment of the governmental data openness work of many regions during the 2019 new coronavirus pneumonia epidemic, it all reflect the importance scholars attach to the epidemic in the post epidemic era. It also puts forward corresponding countermeasures and suggestions for China's government data openness and security under the new coronavirus epidemic, which provides scientific references for improving the strength of combating major disaster risks and accelerating the transformation of the modernization of the country's governance capacity.

4.2 More Objective Assessment Methods

Based on international assessment practices such as Open Data Barometer, Global Open Data Index, Open Government Data Index, European Public Sector Information Scoreboard, and Open Government Data Feasibility Study, scholars have formulated various assessment frameworks in accordance with China's national conditions and conducted comparative studies on China's open data practices in public management.

4.3 Insufficient Follow-up Research on the Platform Remains

Globally, the use of government open data portals is still in its infancy.The Open Data Maturity Report 2019 published by EDP points out that the frequency of use of national open data portals is still low. Even if all 28 EU member states have such portals, only 16 % of them make daily data requests to the system. Open Government is committed to ensuring not only public participation, but also long-term practical cooperation with citizens and community-based non-governmental organizations (NGOs) in order to achieve common goals and thus deepen the democratic process.

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