

# The Necessity and Ways of Opening Government Data

CHEN Keqin

(Law school China University of Political Science and Law, Beijing 100088, China)

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**ABSTRACT:** With the advent of the era of big data, the importance of government data to social and economic development has become more and more significant, but 80% of government data in China are "hidden in the dark", which greatly hinders the reuse of government data by social subjects, so opening government data should become a new proposition for national governance. However, the lack of clarity in the nature of government data makes the opening of government data lack the necessary incentives and sufficient motivation; the confusion in the relationship between government data opening and government information disclosure makes the opening of government data lack a direct normative basis and strong legal support. By analyzing the functions and characteristics of government data, this paper argues that government data belongs to the administrative public property, so based on the constitutional concept of equal rights, government data should be opened to the whole society in the way of free utilization.

**KEYWORDS:** open government data ; government information ; administrative public property ; right to equality ; public use

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## I. STATEMENT OF PROBLEM

Government data is a product of the big data era, and "data analysis makes businesses as omnipotent and omniscient as God." [1]The tremendous economic utilization value hidden in government data makes it an increasingly important foundation for mass entrepreneurship, industrial innovation, and economic growth, according to a study that reported that the use of big data by healthcare organizations could create \$300 billion in value annually, and that the use of big data by the retail industry could increase sales by 60%. [2]Not only can businesses benefit from Big Data, but natural people can also use the data to make better decisions, such as analyzing the rise and fall of airline tickets to predict when to get the best deals, analyzing the cure rate of a hospital for a certain disease to choose the best hospital, and analyzing the crime rate of a certain area to choose a home to buy. But the problem exists that these data are usually held by the state, which has not yet fully opened up these government data, and natural persons do not have the ability and opportunity to access these data, but large economic entities can contact bureaucratic groups to trade data by virtue of their strong economic power or rich human resources, bringing about the problem of data dictatorship and data monopoly, resulting in unequal access rights to government data. [3]Joel Gurin argues that if big data is monopolized by powerful entities, it could lead to an Orwellian-type future, in which the welfare of a free society is undermined, but with open access to big data, the risks would be minimized and the potential benefits would be greater.[4]

In 2015, the State Council of the People's Republic of China issued the Action Plan for Promoting the Development of Big Data, making the important assertion that "data has become a fundamental strategic resource of the country" and "promoting the open sharing of government data", and the social and economic value of government data has become increasingly prominent. In the past six years, some places have made certain progress in the compilation of government data opening regulations, platform construction, data release and application development, By the end of April 2021, 174 provincial and city local governments in China have gone online with open data platforms, including 18 provincial platforms and 156 city platforms.[5]Behind the digital bubble is the pursuit of political performance that is not willing to lag behind and the implementation of policies that dare not slacken, but the quality and effectiveness of government data openness is worrying. Overall, China's government data opening is still at the level of small open scope, poor data quality, slow update frequency and low utilization. The level of openness of different government data open platforms varies, and they are either used as a carrier for government information disclosure, announcing information such as administrative license approval results, administrative penalty filings, etc.; or used as a platform for providing information on online government services, announcing information such as cosmetic production license conditions, entrance to the test appointment for driver's license applicants, and accounting qualification test score inquiries. This reflects the dilemma that the substantive connotation of government data is poorly defined and the purpose of government data opening is unclear in Chinese practice, and also exposes the separation between practice and theory, and the disconnection between form and substance of Chinese government data opening.

While many developed countries around the world have fully opened up government data, China has been cautious in the process of opening up government data, and the practice level is still at the stage of piloting in some regions, and the legislation level has not yet introduced a unified national government data opening bill. Therefore, only by clarifying the relationship between government data and government information, as well as the necessity and path of opening government data, and promoting the further opening of government data, can China be invincible in the competition of big data.

## **II. THE RELATIONSHIP BETWEEN OPEN GOVERNMENT DATA AND GOVERNMENT INFORMATION**

The conceptual similarity of government data and government information makes some scholars believe that there is no need to distinguish between the two. For example, some scholars believe that data and information are the relationship between carrier and content, and their value goals are both to maintain private or public interests, and data openness is just an inevitable product of the development of Internet technology, so in terms of concept, value and management, data openness is just an evolved version of information disclosure.[6]Some researchers believe that government data openness is just an evolved version of government information disclosure, and that data openness and information disclosure are unified in achieving the goal of government openness, and that "the right to know never stops at openness, but for the expression, participation, supervision and reuse after openness." [7]Open government data allows the public to monitor not only the financial status of the government, the final results of administrative legislation, administrative decisions, and administrative actions, but also the rationality of the process of making administrative decisions. [8]However, government data openness has its unique value and significance, and thus the relationship between government data openness and government information disclosure needs to be clarified to ensure that their respective functions are brought into play.

### **(1) Open government data highlights the value of public services**

On April 15, 2019, the revised Regulations on Disclosure of Government Information were released. The Regulations insist on the principle of openness and the exception of non-disclosure, further clarify the scope of disclosure and the boundary of non-disclosure, improve the procedures of disclosure upon application, and more fully protect the people's right to access government information, which has painted a colorful stroke on the milestone of China's rule of law government construction. However, in the "big data era", government information disclosure has ushered in a new challenge, with the "right to use information" as the core of government data opening has surpassed the "right to know" as the core of government information disclosure. In the first article, the purpose of the Regulations on Disclosure of Government Information points out the dual role of government information, to monitor the government and serve the public. But from the relevant provisions of the Regulations and social practice, the use of government information to serve the people still seems to be only goal-oriented, paper talk. Without a detailed specification of the basis, the corresponding supporting system, specific measures, through the disclosure of government information to serve the production, life and economic and social activities of social subjects, I'm afraid it's just a pipe dream. The proposition of "open government data" is a good medicine to implement the purpose of the legislation. However, what is government data, how to identify the attributes of government data, and what is the relationship between government data and government information have not been decided in the theoretical and practical circles.

Unlike government information directly related to the interests of the people, such as administrative legislation, administrative decision-making, administrative planning, financial revenue and expenditure, and emergency warning information, government data is often not directly related to the interests of citizens. Against the background that the Regulations on Disclosure of Government Information does not compel the government to open government data, the government lacks intrinsic motivation to open government data because it takes a lot of time and costs to collect, publish, and maintain government data, while not opening government data can bring additional economic benefits. Whether government departments have the duty and obligation to open government data is closely related to the properties of government data. If government data belongs to the private property of the government, the government is free to decide the scope of openness and choose the target of openness independently. And if government data is a public product, it means that government data should be opened to all social groups without bias and privacy, except for state secrets, commercial secrets and personal privacy. Therefore, determining the attributes of government data is the first step to solve the question of whether government data should be opened.

### **(2) Government data opening is independent of government information disclosure**

The existing literature on the relationship between government data and government information mainly has the controversy between the inclusion or the same and the independence, the former believes that government data is a part of government information, the latter advocates that government data should be distinctly separated from government information. There are major differences between government data and government information.

Formally, the levels and expressions of the two are different, with government data being the bottom and original, and government information being processed and analyzed. [9]In essence, the value objectives of the two are different, with government information disclosure focusing on political value, which aims to strengthen public supervision of the government, and government data openness emphasizing commercial utility or practical value, which aims to serve self-development through the reuse of government data by the public. [10]

The purpose of clarifying the relationship between government data and government information is to bring their respective values into play and build a unified "open government" system. There are several differences between "government data" and "government information that shall be actively disclosed by administrative organs" as stipulated in Article 20 of the Regulations on Disclosure of Government Information. The latter can be stored in paper form, and the purpose of converting it into electronic form is to realize online disclosure and facilitate the search of administrative relatives. Secondly, the originality of government data is different. Government data should be released in its original and unmodified form as soon as possible, while government information is usually the result of data processing by administrative organs, such as formulating policies or plans, issuing supervision and inspection results or emergency programs based on data. Some foreign scholars divide the development of thinking into four stages: data, information, knowledge, and wisdom. Data is the basis for information generation, and data is raw and unprocessed, and its existence itself has no meaning except for its existence; while information is what links data together and gives it meaning. [11]However, in the era of Big Data, government data has moved away from its lowest form and has some value in itself, and governments often process raw data and release it in a format that is easy for parties to understand and reuse, but this does not detract from the "originality" feature of government data. Thirdly, the functions are different. Opening government data is more to bring into play the value of data services to citizens and society, which is centered on providing services and shows a picture of public-private cooperation; opening government information is more to create a transparent government to accept public supervision, which is centered on rights protection and creates a scene of two opposing creations.

Although there are many differences between open government data and open government information, the two are also closely related. For example, some scholars believe that open government information is the premise and foundation of open data, and open data is the development and leap forward of open information, and the two have both undertaking and progressive relationship, as well as quantitative and qualitative differences. [12]Information disclosure has laid a solid institutional foundation for data openness, which enables data openness to develop deeper along the track of information disclosure. In the United States, for example, despite the enactment of the Freedom of Information Act (FOIA) in the 1960s, government information is still not fully accessible and shared by the public, which is due to both the lack of internal motivation for the government to actively open up information and the insufficient external incentive for the people to demand open government data. Therefore, in order to solve the current situation of inadequate government information disclosure, the Obama administration proposed the "Open Government Data" reform, which requires administrative agencies to disclose government data in a uniform format on the nationwide website data.gov. On January 14, 2019, the Open, Public, Electronic, and Necessary (OPEN) Government Data Act officially became law in the United States, which requires non-sensitive data produced by U.S. government agencies to be publicly released in an "accessible" and "machine-readable" manner. The Act requires that non-sensitive data produced by U.S. government agencies be publicly released in an "accessible" and "machine-readable" manner. This new legislation will effectively expand the open domain of government data and ensure that the value-added potential of government data is further realized. As can be seen, government information in a broad sense includes government data, but open government data has its own unique value orientation and contemporary connotation, and it marks a shift in the national governance system from a management model of confrontation between power and rights to a service model of public-private partnership governance. Government data openness enables people to have more diversified information sources and broader vision, and they potentially participate in social governance while satisfying their own growing needs for a better life, making society a better place. For example, people use real-time traffic data to rationalize traffic travel while reducing traffic congestion, use economic data to scientifically invest in the business sector while promoting economic growth, and use environmental data to prevent pollution sources while protecting the natural environment. In order to bring into play the reuse and value-added of government data, it is necessary to build a set of institutional system parallel to government information disclosure and improve the breadth and depth of government data opening.

### **III. THE ADMINISTRATIVE PUBLIC PROPERTY ATTRIBUTES OF GOVERNMENT DATA**

It is important to define whether government data belongs to public or private property. If government data belongs to administrative private property, the administrative organ enjoys the right to exempt from opening government data; while if government data is administrative public property, the administrative organ has the duty and obligation to open government data to the public.

(1) Identify its attributes from the perspective of the function of government data

In practice, France has developed a set of rules based on jurisprudence to distinguish between public and private property based on the "role of property", and the scope of public property has evolved from including only "property for direct public use" in the 19th century to also including "property for public services" in the 20th century. The definition of "property for public services" as public property is subject to the restriction that "the property in its natural or artificial state must be used exclusively or principally for the purpose for which it was intended". What is the role of government data? Does it have the role of "for direct public use" or "for public services", or both?

Government data usually has three roles. First, to realize economic value. Entrepreneurs and researchers can develop new applications and platforms by aggregating, repackaging, or redistributing government data; or they can profitably use the data to provide services related to travel, business planning, shopping advice, and so on. [13] In the United States, for example, the U.S. government's use of the Global Positioning System (GPS), once used for military purposes, for civilian and commercial access has enabled GPS-driven innovation in aircraft navigation systems and precision agriculture, contributing tens of billions of dollars in annual value to the U.S. economy. [14] Second, provide social services. Governments around the world are creating and collecting vast amounts of data covering a wide range of areas such as environment, education, geography, weather, science, population, transportation, tourism, health insurance, crime, occupational safety, and product safety. [15] These data form part of the daily functions of government and are used to better serve the productive lives of citizens, such as demographic disease statistics that can predict the incidence of disease to allow Climate change and biodiversity data can help predict the future development of the agricultural market so that the government can better guide the relevant operators to reduce economic losses; crime statistics can help the government to rationally allocate police forces to maintain public safety. [16] The U.K. Department of Transport helps drivers save road time by making transport data, such as road restrictions, publicly available to help drivers plan their routes wisely; health regulators publish data on the success of cardiology procedures to help patients choose the hospital with the highest statistical success rate for treatment. [17] Third, increase public participation. Open government data can promote citizen participation in public decision-making and improve the democratic legitimacy of public administration. Only when citizens have full access to the basic information of the public sector can they actively participate in the process of forming public decisions and make judgments on the rationality of the decisions made by the government to achieve a good situation of public-private cooperative governance.

From the functions of government data, it is clear that government data may be used by the government directly to provide services to the public, and may also be used by the public directly. In other words, government data are both "public services" and "public use". From the perspective of the purpose of government data generation, the government collects personal or commercial information not for the purpose of providing such information to the public, but for the purpose of gaining a comprehensive understanding and control of information in a specific field, so as to achieve effective supervision or provide quality services in that field. For example, through the registration of enterprises and institutions, we can know how many enterprises, how many schools, and how many hospitals there are in that jurisdiction, so that we can provide services and regulate these enterprises and institutions in a targeted manner. This is different from the government building roads, bridges, and parks for the purpose of providing direct access to the public. However, at the same time, the public can use these data to gain some economic value. It can be seen that government data belongs to the category of public property and has the attributes of both for public services and for public use.

(2) Identify its attributes from the perspective of the characteristics of government data

Administrative public property has three characteristics: public purpose, managed by public authorities, and not limited to physical objects, and government data meet these three characteristics.

First of all, public purpose is the main characteristic of public property. The key to distinguish whether state property is public property or not is whether it has a public interest purpose. If the state-owned assets invested by the state into the state-owned enterprises are pursued with the value of obtaining equity income and preserving value, and citizens cannot obtain income and usable value from them, then the state-owned operating assets are not administrative public property. In addition, collective property with collective interests at its core, as well as military and diplomatic property with national interests at its core, are also not public property. [18] Only state property for public services or public use with the purpose of maintaining public welfare is public property. Some scholars believe that "public purpose is the root of the creation and existence of public property, without this attribute, public property can be completely equivalent to private property, and there is no need for public property to exist. Public property has public purpose and reliance" [19] Therefore even if public property is used by special license or exclusive license, as long as the property is not used by the government for the purpose of profit, but to meet the needs of public interest, the property is public property. For government data, government data is an indispensable and important basis for citizens' life and production, therefore, government data should be

characterized as administrative public property, so as to guarantee citizens' equal right to access government data.

Second, public property should be managed by public authorities. Public authorities here include not only administrative organs at all levels and organizations authorized by laws and regulations with the function of managing public affairs, but also public service enterprises performing public service duties such as water supply, power supply and gas supply. If a property is managed and provided by a private entity, the property does not belong to public property and is not subject to the adjustment of public law. For example, by collecting and analyzing the traces of our cell phone or computer usage, enterprises can learn our personal information such as our whereabouts, interests and habits, and provide us with targeted services with the help of these data, ultimately achieving the purpose of prompting our consumption. The data owned by enterprises is not managed by public authorities, so it does not belong to public property, and we have no right to request enterprises to open the data they own, but can only resort to private law to request remedies when the right to privacy is violated, such as when the information is leaked or misused. Government data, on the other hand, is information acquired by the government in the course of performing its functions, collected, stored and managed by government agencies, and therefore has the characteristics of "managed by public agencies" as public property.

Finally, administrative public property is not limited to physical objects, which is also an important feature that distinguishes administrative public property from civil law objects. "Incorporeal things that are not recognized in civil law, such as radio waves, network resources, and even the environment, are in the category of public property because of their public value." [20]The traditional public property theory holds that public property should be limited to corporeal objects, but with the expansion of governmental functions and the diversification of governmental purposes, and the progress of technology and the development of the times, government information, government data, the environment and other inanimate objects become an essential part of the government's performance of its duties or the needs of public life, and should also be included in the scope of administrative public property.

#### **IV. THE WAYS OF OPENING GOVERNMENT DATA**

The inclusion of government data into the scope of administrative public property is also a response to the "socialist public property" in the Constitution of the People's Republic of China. "Public property" is not a concept in the sense of ownership in the constitutional text, and its "core connotation lies in the public nature of its existence and service function, rather than the right property in terms of material form and value embodiment." [21] In addition to state-owned property such as mineral deposits, water flows, forests, mountains, grasslands, wastelands, beaches, and land, which are explicitly authorized by the Constitution, public property also includes "property for public services" and "property for public use" for the purpose of public interest, while government data has the characteristics and functions of both "public services" and "public use". The attribute of public property is given to government data, which means that the government has the legal responsibility to ensure that the public purpose and public interest value of government data are realized. [22]

##### **(1) Comprehensive opening based on the right to equality**

With the transformation from a liberal state of law to a social state of law, the government's duties are no longer limited to passively safeguarding people's rights from infringement, and the demands on the government go beyond the boundary of administration according to law, and the government is given the service function of providing subsistence care for the people. The role of the government has changed from that of a "manager who intervenes and protects in individual areas" to that of a "service provider who actively provides care for the survival of the people". If government information disclosure based on the right to know corresponds to the fundamental constitutional right to political freedom, then government data opening based on value-added data utilization corresponds to the fundamental constitutional right to society. The social rights stipulated in the Constitution include the rights to labor, rest, material security, cultural life, education, etc. The realization of these basic rights requires active assistance from the state, which is the transformation of the government's role from that of a manager as a "night police" to that of a "caregiver for survival". This is a direct reflection of the change in the government's role from being a "night police" administrator to a "caregiver". However, the state's assistance to citizens is only as an aid, i.e., to encourage individuals to devote themselves to meeting the needs of society, and only when society itself cannot meet the needs of the social good does the state need to intervene. "The people's dependence on state services and welfare measures for everything will also inhibit the development of individual talents." [23]However, as far as the government provides government data as a service, since more than 80% of government data are monopolized by the government and the public cannot satisfy their own needs for data, the need for the government to open government data to the public is further highlighted. In the era of big data, people expect the state to provide more government information to help them make more accurate judgments, so that they can arrange their lives and production scientifically and reasonably, and gain greater benefits from it. However, the current situation that government data is "hidden in the dark" has disappointed the public's expectation of using government data, but some enterprises have obtained data from the government with their strong power to

create economic profits for themselves. The public and enterprises are both taxpayers, but enterprises have access to administrative public property, while the public cannot access administrative public property because government data is not open, which is clearly contrary to the constitutional right to equality.

Article 33 of the Constitution specifies that the right to equality is a fundamental right of Chinese citizens, i.e., "All citizens of the People's Republic of China are equal before the law. The State respects and safeguards human rights." The constitutional right to equality is a form of equality, i.e., to maintain equal opportunities for citizens in the process of personality creation and development by eliminating differences between people in terms of gender, race, natural ability, and capacity. Its direct manifestation is the same treatment in the same situation and different treatment in different situations, allowing the existence of reasonable differences. The constitutional right to equality may be violated if substantially undifferentiated individuals or groups experience unequal treatment. Rousseau has this classic statement about the right to equality, "The social convention establishes such an equality among citizens that they are all subject to the same conditions, and that they shall all enjoy the same rights." "The whole act of the convention truly binds, or cares for, all citizens equally; so that the sovereign recognizes only the community of the land of the state, without distinguishing between those who constitute it." [24]Government data, as administrative public property, should be guaranteed to all citizens, legal persons, and organizations without discrimination,"the use of property by the public does not differ according to their gender, occupation, family origin, education, religious beliefs, property status, etc." [25]Some countries in foreign countries have adopted legislative documents to clarify the principle of equality of public property. For example, Article 244 of Japan's "Local Self-Government Law" stipulates that: "Ordinary public local organizations shall not refuse residents access to public facilities without a valid reason. A general public local organization shall not take undue discriminatory measures regarding the use of public facilities by residents." Government data as administrative public property means that government data is not the exclusive property of the government, but the common wealth of the nation, and everyone has equal access to government data.

## (2) Experiences from open government data in foreign countries

The normative basis for extraterritorial government data openness can be traced back to December 2007, when 30 open government data advocates wrote down eight principles of open government data in California, which are complete, first-hand, timely, accessible, machine-readable, non-discriminatory, non-exclusive, and license-free. [26]In June 2013, the G8 released the Open Data Charter, which specifies five principles that should be followed for the release, access, and reuse of government data, which are Open Data by Default, Quality and Quantity, Usable by All, Releasing Data for Improved Governance, Releasing Data for Innovation. [27]On May 25, 2016, the U.S. Senate and House of Representatives considered and passed the Open, Public, Electronic, and Necessary Government Data Act (which is also called the Open Government Data Act). On December 21, 2018, the U.S. House of Representatives voted to pass H.R. 4174 (Foundations for Evidence-Based Policymaking Act of 2017), a bill that would allow government agencies at all levels to voluntarily open up the public data they hold, only in individual cases where national security is involved or where special reasons exist. The Open Government Data Act officially became law as part of the FEBP, representing another leading victory for the United States in the race to open government data in the information age. Although the EU adopted the Re-use of Public Sector Information Regulations in 2003 to provide legislative guarantee for the public to obtain the right to re-use government information, the EU PSI Directive, at the beginning of its release, had a biased position on the attributes of public sector information. However, when the EU PSI Directive was first issued, it had a misconception about the attributes of public sector information, that is, public sector information was treated as the assets of the government, and the public had to pay a certain amount of fees for trading with the government if they wanted to obtain government information. [28]The EU PSI Directive was amended in June 2013. In June 2013, the PSI Directive was amended to facilitate the sharing of information from government agencies and institutions across member states. [29]but there are still more obstacles to the operation of the EU PSI Directive, such as fees that are much higher than the costs; the exclusion of data generated by utilities and transport sectors from the scope of data; insufficient dynamic updating of data; and the exclusive use of data by private companies and administrative authorities by agreement, etc. In order to break these obstacles to the full use of public sector information, the On April 25, 2018, the European Commission adopted a proposal to amend the Public Sector Information Reuse Directive. This amendment is of great importance to promote open government data, improve the transparency of government data, and prevent government data from being monopolized by a few interest groups. [30]

Thus, it can be seen that opening up government data has been elevated to a high level of national strategic development, and it has become the consensus of many developed countries to fully guarantee the comprehensive opening and deep utilization of government data through legislation. On the contrary, in China, there is not yet a unified open government data legislation at the national level, and the practice of open government data still presents the disadvantages of small scope, little content and low degree of openness; poor data availability and insufficient real-time. If China is not to be left behind in the wave of the information era, it

must fully realize the necessity of opening government data and make a breakthrough and surpass in the breadth and depth of openness.

(3) The path choice of opening government data

The administrative public property of government data determines the necessity of opening up government data, so in what way should government data be opened to the public? The use of public property can be divided into "free use" and "licensed use" according to whether or not prior permission from administrative organs is required. In the case of scarce resources, administrative organs can set certain permission conditions for the use of public property in order to effectively utilize the value of public property. However, government data is non-exclusive and non-competitive, and each person's independent use of government data will not hinder the use of others, nor will it reduce the quantity and value of government data. Therefore, government data should be used in a "free access" way to better protect the equal rights of citizens to access and use government data. The way to realize the free use of government data is to open it to non-specific groups in the society, and openness means non-discrimination and non-differentiation, and any entity or individual has equal opportunity to access government data.

Then how can the interests of citizens' equal access to and free use of government data be guaranteed? The answer to this question cannot be separated from the characterization of citizens' interest in the free use of government data. Whether the interest of free use of public property is a subjective public right or a reflexive interest determines whether the public can initiate administrative litigation against the government for not providing government data. If the public law norms require the administrative organ to do or not to do a certain act out of public interest rather than a specific personal interest, the citizen's interest is a reflexive interest in this case, and even if that interest is damaged, the party cannot obtain a remedy through judicial means. On the contrary, if the legal norms explicitly recognize the protection of individual interests, the interest is a subjective public right, and the party can therefore qualify as a plaintiff in administrative litigation. In Germany, the general view is that the right to free use of public property is a subjective public right, such as the Federal Court of Justice's view that "the content of the general right of use is a security grant in the nature of a fundamental right, the core of which is found in Article 2(1) (right to free development of personality), Article 3(1) (right to equality) and Article 14(1) (right to property) of the German Basic Law ". If a citizen makes a request to an administrative organ to open government data and the administrative organ does not open it without a justifiable reason, the subjective right of the citizen to freely use government data is violated. The administrative public property attribute of government data gives the government the duty to fulfill the responsibility of maximizing the benefits of government data. The government's management of data should change from passive inaction to active action, i.e., the government should not only possess the data and protect it from leakage and destruction, but also actively use the data to maximize the benefits of government data, an administrative public property. The government should assume the function of promoting the full use of public property, such as developing and organizing government data with the help of social forces to realize the greater economic value of government data. Therefore, if a citizen or an enterprise requests a public authority to open a certain government data and the public authority does not reply or the reply is not open, the applicant for data opening can request judicial remedy for the public authority's inaction.

## V. SUMMARY

Opening up government data is an inevitable choice to protect the rights of the relative and a necessary way to promote the modernization of national governance system and governance capacity. Opening government data is both a direct satisfaction of the relative's right to benefit and an important guarantee of the relative's right to participate in the government. If a public authority owns a certain government data but does not open it to the society, the relator can request the public authority to open the government data, which is a direct manifestation of the administrative relator's right to benefit. In addition, open government data not only helps to create economic value, but also helps to strengthen democratic politics. With the transformation of government functions and the awakening of civil rights awareness, the government's management mode of society has changed from the traditional "power-obedience" domination mode to the "consultation-cooperation" governance mode. Through the cooperative management of public life by the government and citizens, the novel relationship between the political state and civil society is reshaped, leading to the path of good governance. [31]The disclosure of government data before administrative decisions are made can strengthen public participation and transform the management relationship between the state and citizens into a collaborative relationship, which is fundamentally different from government information disclosure that focuses on guaranteeing citizens' right to know and strengthening post-facto supervision. [32]If open government information is confrontational, with the public eager to obtain information that the government wants to conceal; open government data is cooperative and win-win, with open government data actively mobilizing citizens' participation, and citizens' input can effectively improve the government's governance capacity, enhance the legitimacy and legality of government authorities, and strengthen social subjects' conscientiousness to comply with administrative decisions. In turn, a stable

political environment can feed the public and ensure the smooth realization of other rights of the relative. Therefore, the government should pay more attention to the necessity of opening government data, enhance the functional advantages of government data in safeguarding citizens' rights and improving government governance capacity, and promote the opening of government data to a new level. As Joel Gurin, an American scholar, says: Open government data is essentially a technological revolution, driven by the growing ability to collect and analyze data, and a philosophical revolution, driven by the belief that data should be available to all citizens. [33]

#### NOTES:

- [1]. Ian Ayres. Big Data Thinking and Decision Making [M]. translated by Gong Sang-jin, People's Post and Telecommunications Publishing House, 2014:33.
- [2]. James Manyika, Michael Chui et al..Big data: The next frontier for innovation, competition, and productivity[R]. McKinsey Global Institute, May 2011 Report.
- [3]. He Yuan. The Overall Legal Framework of Government Data Openness [J]. Administrative Law Studies, 2017(6):63.
- [4]. Gurin, Joel. Big Data and Open Data: How Open Will the Future Be [J]. A Journal of Law and Policy for the Information Society, 2015(3):703-704.
- [5]. Digital and Mobile Governance Lab, Fudan University. China Local Government Data Openness Report (H1 2021): Indicator System and City Benchmarking [R]. <http://ifopendata.cn/static/report>.
- [6]. Huang Juan, Zhao Qian, and Zhang Ruixin. On Government Data Openness and Information Disclosure: Reflection and Reconstruction of Existing Views [J]. Chinese Administration, 2016(11):13.
- [7]. Xiao Weibing. On the Legislative Model of Chinese Government Data Openness [J]. Contemporary Law, 2017 (3):47.
- [8]. Hu Xiaoming. From Government Information Disclosure to Government Data Openness [J]. E-Government, 2015(1):67 .
- [9]. Song Hualin. The Development and Construction of the Open Legal System of Chinese Government Data [J]. Administrative Law Research, 2018(2):39.
- [10]. Zheng Lei. The value creation mechanism of open government data: an ecosystem perspective [J]. E-Government, 2015(7):3 .
- [11]. Data, Information, Knowledge, and Wisdom, Gene Bellinger and Durval Castro and Anthony Mills, [OL].<http://www.systems-thinking.org/dikw/dikw.htm>.
- [12]. Fu Xiwen and Zheng Lei. A Review of Domestic Research on Government Data Openness [J]. E-Government, 2013(6):10.
- [13]. Jyh-An Lee. Licensing Open Government Data [J].Hastings Business Law Journal, 2017(2).
- [14]. Obama Administration Releases Historic Open Data Rules to Enhance Government Efficiency and Fuel Economic Growth, REPOST ,May 9, 2013.[DB].
- [15]. Jyh-An Lee. Licensing Open Government Data [J].Hastings Business Law Journal, 2017(2).
- [16]. Okediji, Ruth L. Government as Owner of Intellectual Property: Considerations for Public Welfare in the Era of Big Data [J]. Vanderbilt Journal of Entertainment & Technology Law, 2016(2):333.
- [17]. Andrasko, Jozef, and Matus Mesarcik. Quo Vadis Open Data [J]. Masaryk University Journal of Law and Technology, 2018(2):183.
- [18]. Zhou Youyong. Monograph on Administrative Law [M]. People's University of China Press, 2010:219 .
- [19]. Jiang Ming'an, Yu Lingyun. Administrative Law[M]. Science Press, 2010:681 .
- [20]. Zhou Youyong. Monograph on Administrative Law [M]. People's University of China Press, 2010:219 .
- [21]. Wang Qinghong. A Historical Examination of the Concept of Public Property in New China - Centering on the Constitution [J]. Theoretical Guide, 2014:39.
- [22]. Gan Chaoying. A Historical Review of the Constitutional Property System in New China [J]. Chinese Jurisprudence, 2010(4):137 .
- [23]. Chen Xinmin. The Basic Theory of German Public Law (Upper Book) [M]. Shandong People's Publishing House, 2001:192.
- [24]. Gong Xiangrui. Comparative Constitutional and Administrative Law [J].Law Press , 2003:83.
- [25]. Ying Songnian. Contemporary Chinese Administrative Law (volumes 1~8) [M]. People's Publishing House, 2018:742.
- [26]. The 8 Principles of Open Government Data, [OL].<https://opengovdata.org/>.
- [27]. G8 Open Data Charter and Technical Annex.[DB].
- [28]. DIRECTIVE 2003/98/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 17 november 2003 on the re-use of public sector information.[DB].
- [29]. DIRECTIVE 2013/37/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 26 June 2013 amending Directive 2003/98/EC on the re-use of public sector information.[DB].
- [30]. Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the re-use of public sector information (recast).[DB].
- [31]. Yu Keping. Governance and Good Governance [J].Social Science Literature Press, 2000:8-9.
- [32]. Noveck, Beth Simone. Rights-Based and Tech-Driven: Open Data, Freedom of Information [J].Yale Human Rights and Development Law Journal, 2017(19).
- [33]. Gurin, Joel. Big Data and Open Data: How Open Will the Future Be [J]. A Journal of Law and Policy for the Information Society, 2015(3):703-704.

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