



# Study on the Construction and Application of China's Data Access Right System Driven by Data Sharing

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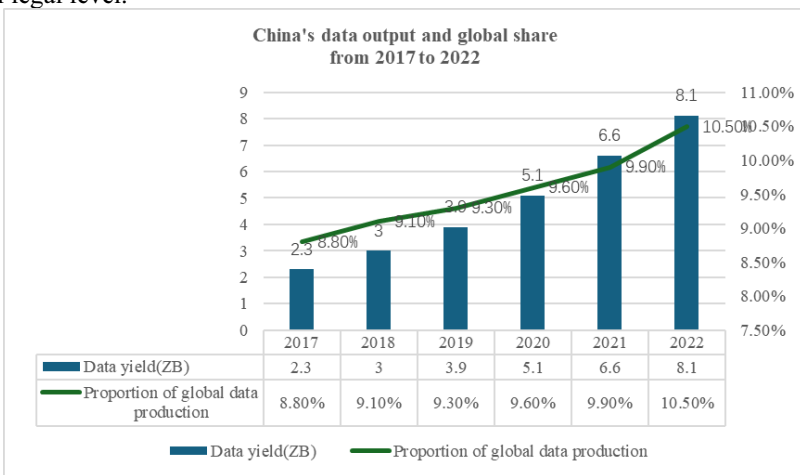
**Abstract.** As an emerging factor of production, data can only maximize its value under the premise of flexible circulation and comprehensive sharing. Based on the current status quo of unclear data property rights and unknown data usage, China's data resources as a whole show the dilemma of "unwilling to share, unable to share, afraid to share" islands. To address the issue of data property rights, academics have explored the paths of "traditional property rights", "intellectual property rights", "contractual claims", etc., but they are unable to effectively solve the problem due to their limitations. However, due to their limitations, they are unable to effectively resolve the natural contradiction between "property rights protection" and "sharing and utilization". The European Union has also experienced the legislative debate on whether or not to carry out data property rights, but it finally went towards the path of data de-property rights and made the construction of the right of access to data a systemic response. It can be seen that data titling is not the only way to promote data sharing. This paper draws on the experience of the EU's de-propertying path and takes the revised data property rights path as the theoretical basis for solving the problem of difficult data sharing through the introduction of a data access rights system.

**Keywords:** data sharing; data titling; data access rights regime.

## 1 Introduction

According to effective data, China's data output will reach 8.1ZB in 2022, a year-on-year increase of 22.7%, accounting for 10.5% of the world's total data output, ranking second in the world(See Figure 1 for details).With the gradual emergence of data value and the rapid growth of data production, legal issues related to the circulation and utilization of data and the sharing and opening of data are emerging. The positive voice of data sharing proponents is to give full play to the circulation value of data elements; The opposite of critics of data sharing is the lack of effective property rights norms and the difficulty of balancing the rights and interests of data element participants. For example: For the government, the focus is on how to promote the safe sharing and orderly sharing of data; for enterprises, the core of their concern is how to protect the rights and interests of the data they hold; and for individuals, the focus is on how to ensure that

their own collected data and information will not be unlawfully infringed upon. However, from the perspective of the current legal system, although China has formed three pillars of legislation, the issue of data property rights is still in a relatively blank state. Article 127 of the Civil Code only serves as an indicative invocation of norms concerning the expression of data and does not specify a specific regulatory path for data property rights. Similarly, although the Twenty Articles on Data promulgated by the State Council of the Central Committee of the Communist Party of China (CPC) in 2022 creatively put forward the concept of "three rights of data", which provides a new way of thinking for solving the problem of data property rights allocation,<sup>1</sup> at the present stage, concepts related to data property rights are only derived from the abovementioned policies. However, at this stage, the concept of "data property rights" only originates from the abovementioned policy documents and has not been built up at the national legal level.



**Fig. 1.** Source from China Academy of Information and Communications Technology, China Academy of Cyberspace

In other words, the vagueness and blankness of the legal property rights of data will, to a certain extent, affect the sharing and circulation of data, which will lead to the reality dilemma of "unwillingness to share data", "data can not be shared" and "data dare not share". The reality of the dilemma of "data unwillingness to share", "data can not be shared", and "data dare not share". However, This paper argues that the legal gap of data property rights is not the only reason for the difficulty of sharing data elements

<sup>1</sup>The Central Committee of the Communist Party of China and the State Council issued Opinions on Building a Data Base System to Better Give Full Play to the Role of Data Elements, which "defines the legal rights enjoyed by each participant in the process of data production, circulation, and use according to the source of the data and the characteristics of the data generation respectively, and establishes a mechanism for the operation of property rights with the right to hold data resources, the right to process and use the data, and the right to operate the data products, etc., in separate locations .....".

in China. The legal gap in data property rights is not the only reason, and it is impossible to rely solely on data property rights to achieve the comprehensive sharing of data. In this paper, we will take "data sharing" as the outcome-oriented goal, and through analyzing the divergent views on data titling in the current academic community and studying the development path from data titling to data de-titling in the European Union, we will conclude that neither data titling nor de-titling can solve the problem of "data property protection" and "data privacy". data property rights protection" and "data sharing and utilization" natural contradiction, on the contrary, should seek to serve the data access rights system to adapt to the circulation and sharing of data, this paper is based on the rationality and inevitability of the construction of the data access rights system driven by the data sharing, for China's future for the based on this paper, the construction of data access right system driven by data sharing is reasonable and inevitable, which will contribute to the future legislation of China for the allocation of data property rights.

## **2 Theoretical Differences in the Path of Data Titling in China**

Contrary to the behavioral regulation model based on the Anti-Unfair Competition Law, the data property rights path is a typical representative of the data empowerment model. In general, there are three main theoretical differences in the path of data property rights in China, namely, the "traditional property rights path" (including data ownership and data usufruct rights), the "intellectual property rights path" (including database special rights and trade secret rights), and the "intellectual property rights path" (including database special rights and trade secret rights), in which data is regarded as the subject of the transaction. (including data ownership and data usufruct rights), the "intellectual property rights path" (including database special rights and trade secret rights), and the "contractual claims path" (including user data authorization and enterprise data transactions), which studies data as a subject of the transaction. The following section describes these three theoretical differences:

### **2.1 The Doctrine of the "Traditional Path of Property Rights" and its Critique**

According to the doctrine of "traditional property right path", the legitimacy of the establishment of property rights for data is reflected in the fact that the civil subject enjoys a certain dominant right over the data, and the data are sufficient to become objects in civil law by arguing the following four aspects: first, the data have objective reality; second, the data have determinability; third, the data have property attributes as the fruits of labor; fourth, the data have the property attributes as the results of labor. Thirdly, as the fruit of labor, it has property attributes; and fourthly, it can enter the circulation market as an independent object of transaction.<sup>[1]</sup>This paper holds an opposing view to the doctrine of the "traditional path of property rights". Firstly, data does not have objective reality; data refers to the combination of 0 and 1 circulating on computers and networks,

that is to say, only with the help of a specific carrier, people can perceive this form of bits. Data is an abstract concept, its nature does not have objective reality, unlike tangible objects generally visible, touchable, unable to achieve the meaning of a priori perception through intuitive vision and pure representation; secondly, data does not have determinable; mainly reflected in its inability to be exclusive and control for the civil subject, on the contrary, the data only in the process of circulation to achieve the maximization of the value of its elements; lastly, the Data, as a fruit of labor, does not have any significance in itself, and it can only find its position after being given the information content of processing by people.<sup>[2]</sup> For example, the fruit of the labor of data is reflected in the way of presented as a data set or being used by processing into data service products, and a single piece of data can't represent the fruit of a piece of labor, and even more so, it can't be the object in the right of property. Overall, data is not an object in civil law, neither can it be exclusively appropriated and controlled by a civil subject, nor does it have a legitimate right to dispose of it.

## 2.2 The "Intellectual Property Rights Path" Doctrine and its Critique

According to the doctrine of "intellectual property rights path", commercial data is similar to the object of intellectual property rights to a certain extent, which is reflected in two aspects, namely, similar object attributes and similar information characteristics.<sup>[3]</sup> This article holds an opposing view to the doctrine of the "intellectual property rights path". First of all, the object attributes in intellectual property rights are not the same as the so-called "object attributes" of data, as the former is related to human intellectual activities that arise in the mental domain, and belongs to the category of non-material wealth (i.e., "spiritual interests") in the context of civil objects; the latter does not depend entirely on human intellectual activities. The former is related to human intellectual activity arises in the spiritual domain, and belongs to the category of non-material wealth (i.e. "spiritual interests") of civil objects; the latter does not depend entirely on human intellectual activity, but on the contrary, most of the data are collected by automatic capture of systems and equipment, which fails to meet the object requirement of "intellectual achievements" in intellectual property rights. At the same time, based on the data does not have the characteristics of objective reality and disability, it is difficult for data to become material wealth in the civil objects things, in other words, data is neither the object of the "traditional property rights path" doctrine nor the "intellectual property rights path" doctrine. In other words, data is neither the object of the "traditional property rights" doctrine nor the "intellectual property rights" doctrine. In other words, data is neither the object of the "traditional property right" doctrine nor the "intellectual property right" doctrine. Secondly, the non-material intellectual information involved in intellectual property rights is not the same as the so-called "information" of data, which emphasizes intellectual information, which is the property interest in information with creative significance.<sup>[4]</sup> The latter confuses "data" and "information". The latter blurs the distinction between "data" and "information" by equating "data", which is merely recorded but not linked, with "information", which can only be transformed through data processing.<sup>[5]</sup> In other words, only processed data

can be transformed into data knowledge. Therefore, the current doctrine of the "intellectual property rights path" ignores the dichotomy between "original data" and processed "derived data", and it is difficult to cater to the value of data elements in market circulation and trade. Trend.

### 2.3 The "Contractual Claims Route" Doctrine and its Critique

According to the "traditional property rights approach", the general status of claims cannot support the development of the modern data economy, and the limited use of data based only on the authorization of the user for the original personal data and the authorization of the enterprise for the derived processed data is a weak and non-absolute property status.<sup>[6]</sup> At the same time, the relativity of contractual claims is not sufficient to cope with the non-proprietary nature of data. is insufficient to cope with the non-proprietary character of data, and therefore a strong regime is needed to regulate the industry's transactional norms and thus clarify the attribution of data.<sup>[7]</sup> This article argues against the theory of the "path of contractual claims". Firstly, the data rights obtained based on users' authorization and consent are showing an extremely unreasonable trend of extreme expansion, with core terms such as "exclusive", "irrevocable" and "worldwide use" frequently found in users' data licensing terms. Core terms such as "exclusivity", "irrevocable", "global", etc. are common in user data authorization clauses.<sup>[8]</sup> For example, the Baidu User Agreement mentions: "For users who have uploaded data through the services of Baidu (including, but not limited to, Baidu APP, PostBar, Knowledge, Baidu Cloud, etc.) to the publicly accessible area on the website of Baidu, it is not necessary to provide the user with any information about the data. publicly accessible area of Baidu's website, the user agrees that Baidu has the right and license to fully sub-license the content".<sup>2</sup> It can be seen that some platforms are using the "blanket agreement" approach based on their dominant position to co-ordinate all transferable rights in user data to the platform, which not only violates the principle of fairness and reasonableness but also leads to the risk of improper use of personally identifiable information in user data. Secondly, the data rights obtained based on data transactions present the law of the jungle competition situation of "the stronger the stronger, the weaker the weaker", the root cause of this unfair phenomenon is the imbalance of negotiation power between the parties,<sup>[9]</sup> "either accept the whole thing or take a stance in the dark! The "take-it-all-or-leave-it-all" choice makes the data transaction a companion to the formal contract, which is a second reproduction of the "package deal" approach. Therefore, it is still difficult to rely solely on the "contractual claims path" doctrine to promote the compliant flow and sharing of data.

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<sup>2</sup> Baidu User Agreement, <https://passport.baidu.com/static/passpc-account/html/protocol.html>, accessed 19 December 2023.

### 3 Theoretical Construction of the Data Access Rights Regime in the Context of Data De-propertying

#### 3.1 Background to EU Data De-entitlement Legislation

EU data legislation has gone through a transition from "special rights in databases" to "data producers' rights" and finally established "data access rights". The first two rights are in the scope of data property rights (mainly "intellectual property rights path"), out of the consideration that data property rights can not solve the problem of data circulation and sharing of the reality of the problem, the European Union finally chose the data de-prioritisation of the legislative path. From this level, we can see that the EU has gone through the process of "trying, deepening and abandoning" from data titling to data de-titling, and has given reference to the corresponding experience. The following section will introduce the reasons why the EU has abandoned the data titling path and then argue the necessity of revising the data titling path in China.

#### 1. Attempts at Data Property Rights: Special Rights for Databases

Database and data are closely related, with the former obtaining legal protection by quantitative accumulation and intellectual cohesion, and the latter manifesting the bit form by the combination of 0 and 1. Some scholars have argued that the relationship between big data and data can be defined concerning the relationship between database and data year on year, because both big data and database are essentially collections of data, and that the problems faced by the two are similar to a certain extent.[10] In this regard, this paper holds a reserved view and argues that the scope of database protection established by the EU is much broader than the definition of Big Data itself. According to paragraph 1(2) of the 1996 EU Database Directive,<sup>3</sup> the databases protected in the EU have four characteristics, which are: firstly, the database forms a compilation of the volume and whether the database receives copyright protection is judged based on whether or not it embodies the author's intellectual creations; secondly, the protection of the database excludes access to the database during the use of computer programs; thirdly, the manner of compiling, storing and accessing the database includes similar processes such as electronic, electromagnetic or photoelectric processes; and fourthly, the protection of the database itself also extends to non-electronic databases (i.e., including traditional paper-based databases). It can be seen that the legislative protection of databases established in the EU does not focus only on the formal appearance of the quantitative accumulation of data, but also on the substantive contribution of the results of data compilation. It can be learned from the EU Database Directive that the EU provides comprehensive protection for both original and non-original databases through the dual approach of "copyright + special rights". The European Commission conducted two evaluations of the effects of the implementation of the EU Database Directive in 2005 and 2018, and the results of both evaluations showed "mixed" conclusions,[11] In

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<sup>3</sup> EU Databases Directive (on the legal protection of databases): A database is a collection of independent works, data, or other materials that are arranged in a systematic or orderly manner and that can be accessed separately by electronic or other means.

particular, the 2005 evaluation found that the special rights did not have a proven impact on database production. In particular, the 2005 evaluation concluded that the special rights had no proven impact on database production, and even had the opposite effect. This reflects the fact that the protection of sui generis rights in databases has not achieved the benefits that were expected before the legislation was enacted, but rather, in the absence of evidence that it was a legislative failure, a change in the status quo may be a new path and a new approach to exploring the possibilities of data titling.

## **2. Deepening Data Titling: Data Producer Rights**

Faced with the failure of the first attempts at data titling, the European Commission proposed the creation of Data Producer Rights at the EU level in 2017 in the document "Building a European Data Economy". Data Producer Right (DPR) creates a right that grants data producers the right to use and authorize others to use non-data producer rights data in the industry specifically refers to machine-generated data, i.e. data that does not have personally identifiable information. This type of machine-generated data is unlocked to maximize the value of the data market factor. The perspective of the European Commission has suggested two different paths to the creation of data producer rights: one path would be to design the right as a right in rem, i.e. ownership of data, characterized by the exclusivity of the particular data and the licensing of its use by others; the other path would be to design a set of purely defensive rights, i.e. to objectively and physically possess and control the data to defend against unlawful infringement of its machine-generated data by other subjects. unlawful infringement.[12] The opposing view is that the creation of data producers' rights would overlap with other intellectual property regimes such as copyright and special rights in databases, thus creating substantial dilemmas in the application of rights; moreover, the scope of protection is often difficult to define due to the rapidity of the generation of real-time data, and even creates uncertainty in the law.[13] A favorable view is that the emergence of the data producer's right breaks the traditional value of focusing only on the interests of the personality right of personal data and ignoring the interests of the property right of non-personal data and that the proposal of this right may push forward the breakthroughs and innovations of new types of data property rights on a global scale. As a right with exclusivity and exclusion, the data producers' right will also inevitably face the problem of difficulties in accessing and obtaining data, therefore, as the data producers' right faces serious theoretical and practical obstacles, the calls related to the right of access to data have gradually been seen by legislators.

## **3. Waiver of Data Titling: Data Access Rights**

The EU GDPR has set up strict standards for personal data protection, while the EU Data Act (hereinafter referred to as "the Act") has set up a regulatory framework specifically for the sharing and use of non-personal data, which together with the GDPR constitute the two pillars of data governance in the EU, not only to strengthen the protection of personal data but also to promote the flow of non-personal data to unleash the maximum value of data elements and build a new pattern of data governance. The bill emphasizes the potential of data value that is yet to be realized, and the need for a

new data governance landscape. The bill emphasizes the current state of the digital society, where the potential of data value has yet to be fully unleashed, and also affirms that regulating data access and use is a fundamental prerequisite for seizing digital opportunities. The full text of the bill is centered on the theme of "creating a cross-sectoral governance framework for data access and use", providing policy incentives and rules and regulations to give full play to cross-sectoral and cross-industry horizontal data sharing, and highlighting measures for data flow in B2B (business to business), B2G (business to government) and B2G (business to government), as well as measures for data management. In addition, the bill highlights B2B (business to business) and B2G (business to government) data flow measures, with B2B aiming at obtaining competitive and interoperable data processing services, which not only strengthens the bargaining power of small and medium-sized enterprises (SMEs) in data-sharing negotiations but also prevents large enterprises from abusing data-sharing contracts to suppress the weaker party; and the mandatory data-sharing of B2G helps the government to carry out public policies and services efficiently and effectively.

Overall, the Act balances the interests of all parties involved in data sharing and promotes wider as well as more regulated use of data by a wide range of actors, it creates a framework conducive to the flow of data sharing, and it addresses existing barriers that prevent businesses, consumers and the public sector from realizing the full potential value of data.

### **3.2 Theoretical Construction of a Data Access Rights Regime: The "New Data Property Rights Path" Doctrine and its Revision**

Based on distinguishing the difference between personal information and data assets, the theory of "new data property right path" represented by Long Weiquan scholars believes that the right construction should be carried out in two phases: firstly, for the users, the personality rights and property rights should be configured in the level of personal information, or the level of the initial data at the same time; secondly, for the data operators (enterprises), the data operation rights and data asset rights should be configured separately, based on the data operation, with the interest-driven mechanism as the demand. Secondly, for data operators (enterprises), the right to operate data and the right to data assets should be configured separately, with data operation as the basis and profit-driven mechanism as the appeal. In general, the doctrine of the "new property rights path for data" affirms the property value of data and argues that the value of data assets should be maximized through the allocation of property rights. However, the doctrine ignores the dilemma of the application of data property rights itself, i.e., legal empowerment cannot objectively solve the reality of the difficulties in the circulation and sharing of data; on the contrary, the model of additional legal empowerment for data holders, data processors and data processors will increase the solidification of the barrier of physical control of data, which will lead to the phenomenon of unhealthy competition where the circulation of data resources is only localized and individuals, who are the source of data, can only be subject to limited data products or services. Individuals as sources of data can only submit to a limited number of data products or data services. In other words, both the doctrine of data property rights and the doctrine



of "new data property" will inevitably fall into the unfavorable consequences of data monopoly, fragmentation of data rights, and the possession of exclusive data by data holders. Therefore, this article argues that the "new data property path" doctrine represented by Article 20 of the Data Law should be revised, and its core focus should be shifted from the "empowerment of who owns the data" to the "confirmation of who has access to the data", with the former emphasizing the importance of the data and the right of access. "The former emphasizes the absolute right to data, while the latter affirms the relative right to data, without creating the effect of data exclusivity and unlocking the current problem of data lock-in, and the amendment focuses on the introduction and construction of a system of data access rights.

#### 4 Specific Application of Data Access Rights Regimes Driven by Data Sharing

The data access right system envisaged in this paper is constructed in the context of the "separation of powers" proposed in Article 20 of the Data Act, to break the situation of data exclusivity, oriented towards realizing the efficient use of data, and to meet the needs of economic and social development, enterprises are granted the right to enjoy the right of access to and the right to use the data together with the consumers under certain conditions, and this system makes the actual data controller legally obliged to let others access the data. rights to achieve efficient use of data, the system makes the actual data controller legally obliged to let others access the data.<sup>[14]</sup> At the present stage when data property rights have not yet been fully established, the introduction of the data access right system can effectively help those who demand data access to break through the barrier of data property rights to realize efficient access and use of data. How to give full play to the sharing effect of the data access right system and how to balance the self-consistency between the data access right system and the "three rights of separation" proposed in Article 20 of the Data Act are the core elements of the construction of the data access right system(See Figure 2 for details).

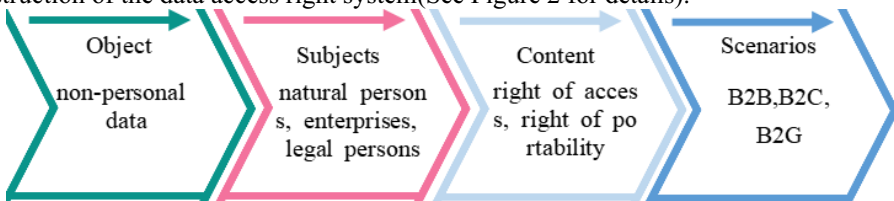


Fig. 2. Specific application of data access rights regimes driven by data sharing

##### 4.1 Object of the Right of Access to Data: Non-Personal Data

From the existing situation in China, most of the data is generated by users in cooperation with platforms. For personal data carrying information about natural persons, users can obtain access rights based on the Personal Information Protection Law. However, this access right is not thus extended to the user's non-personal data, so for non-personal

data controlled by the information processor, the individual's access right is very limited, and even protection cannot be obtained concerning the personal data and the indirectly obtained data. To overcome this limitation, some EU scholars advocate that non-personal data should be subject to non-waivable statutory access rights, i.e., data access rights to non-personal data. China can learn from the EU's setting of access rights to non-personal data to promote the maximization of the overall interests of non-personal data.

#### **4.2 Subjects of the Right of Access to Data: Natural Persons, Enterprises, Legal Persons**

The GDPR, enacted by the EU in 2016, specifies natural persons as the subjects of the right of access to data, whereas in the newly adopted Data Bill, the subjects of the right of access to data are extended to non-natural persons, mainly including users' access to businesses, business-to-business access, and governmental access to businesses. In summary, the three main subjects are covered, including natural persons, businesses, and legal persons. The appropriate expansion of the subject of data access rights enables a wider range of rights holders to obtain the freedom of data use, to better prevent and solve the problem of data locking and data silos. China can learn from the EU's consideration of the expansion of right holders of data access rights, and combine different access scenarios to protect the specific rights and interests of specialised right holders.

#### **4.3 Content of the Right of Access to Data: Right of Access, Right of Portability**

About the content of rights, the right of access to data mainly consists of two categories: the right of access and the right of portability. The so-called right of access refers to the right of the subject of the right to request the other party to provide the data produced by the subject of the right; the so-called right of portability refers to the right of a natural person to transfer the data produced by the subject of the right to a third party for processing and analyzing. As a non-exclusive right, the subject of the right access to data cannot prevent others from utilizing the data in question but only guarantees the subject of the right of access to and use of the data. The combination of the right of access to data and the right to data portability can better address the dilemma of data locking.

#### **4.4 Scenarios in Which the Right of Access to Data Applies: B2B, B2C, B2G**

When applied to B2B scenarios, the right of access to data can effectively guarantee that MSMEs have access to the data of corporate giants on a paid/non-paid basis through fair contracts, thus reversing the unfavorable negotiation position among enterprises; when applied to B2C scenarios, the right of access to data can effectively satisfy the needs of consumer groups in their daily lives, who can obtain legal remedies through access to non-personal data and exclude the mandatory choice of special services; when applied to B2G scenarios, the right of access to data can effectively enable government departments to obtain data from enterprises based on public interests and

other special needs. When applied to B2C scenarios, the right of access to data can effectively enable government departments to obtain data from enterprises based on public interest and other special needs. The

## 5 Conclusion

Big data is characterized by two sides, instrumental and crisis, and creates a kind of data divide under the ecosystem, the big data rich and the big data poor, respectively.<sup>[15]</sup> When the gap between the data poor and the data rich rises to the level of data inequality, the inequality will involve access to data resources, actual use of data, and efficiency of data use Face.<sup>[16]</sup> The gap that leads to loss and undermines public trust in the use of data can be reduced by constructing an ethical data processing framework, especially at the level of data sharing by proposing three constructs, which are (i) making the data and its governance available to third parties with consideration of impacts on the data subjects, etc.; (ii) making the results of the analysis of the data available to third parties and the process of constructing the health scores; and (iii) setting up the government access to the data.<sup>4</sup> The establishment of data access rights is based on the EU's path from data titling to data de-titling, and it is an effective program in line with the flow and sharing of data, which not only shares the "EU program" for the world's data governance but also shows us the natural incompatibility and non-self-concordance that exists between the move towards data titling and the flow and sharing of data. Therefore, the current situation of blank data property rights, not only provides an opportunity for the construction of the data access right system, but also challenges the concept of "separation of rights" of "Article 20 of the Data", but no matter what path it is heading towards, the guiding goal of data sharing and use is indisputable. In addition, the blank space of Article 127 of the Civil Code of China provides room for interpretation of the future de-property rights of data, and only by interpreting the "three rights of data" as granting the participants in the data market the right to use the data in a non-exclusive manner can the market failure existing in the data market be truly solved.

## Project

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<sup>4</sup> World Economic Forum. Good Data: Sharing Data and Fostering Public Trust and Willingness, 2021.

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