

# *On the legal Regulation of Data Transaction*

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**Abstract**—With the implementation of the national big data strategy and the development of Internet and cloud computing, the big data deeply penetrated various industries. The circulation of data resources becomes the objective demand of social development. At present, data transaction is in the explorative stage of in China. The provisions of data application and protection are scattered in various methods and documents, and the content is unsystematic. Beginning with the rights and obligations of the subject of data transaction, the commercial characteristics of data transaction are summarized from existing laws and regulations and disclosed industry practices. A development route balancing industry self-discipline and legal supervision was proposed. Further clarifications of supervision department, regulatory basis and supervision content are crucial to the orderly development of the big data transaction industry.

**Keywords**—*The right of the data subject; Data transaction regulation; data protection*

## I. INTRODUCTION

Advances in science and technology will make data the most important asset of future society. The opening and circulation of data is the premise and foundation of the value of data resources. The circulation of data resources has become the objective demand of social development. The big data industry based on data mining application shows tremendous commercial and social value. Data transaction makes data circulation a more conceivable market behavior, and consequently and monetization and capitalization of big data. Market mechanism promotes the efficiency of data application. Especially, it provides data developers with a unified data retrieval and development platform, and data users with abundant data sources. Big data practices proliferate in China, but the corresponding legal regulations are still in the exploratory stage. Among scholars, enterprises and governments, the economic value of data is well recognized and the legitimacy of data transactions, feasible business models and regulatory measures are under intense rumination.

## II. THE NECESSITY OF EXPLORING THE DISTRIBUTION OF RIGHTS AND OBLIGATIONS OF TRADING ENTITIES

### A. Subjective Interest Involved in Data Transactions

The data age is characterized by the aggregation of large amounts of data. A single piece of data may be of no value or use value. Therefore, data flow makes data aggregation possible. From this point of view, data trading is the core of the big data industry, because it provides a way for the flow of data. At present, the research on data protection and data transaction mostly focuses on the level of personal information, but the data used for transaction is not only personal data, there are

many types. In the era of big data, the collection and application of massive data will inevitably involve a wide range of stakeholders, and the content and distribution of their rights will be more complex. For example, personal data involves personal privacy, industrial data involves intellectual property rights, enterprise data involves trade secrets and government data even involves national security. In the process of data circulation, there will be different interests overlapping and combining.

### B. Rapid Transformation of Trading Entities

To regulate the data trading market, first of all, we should regulate the behavior of the data trading subject, which refers to the market participants. The main trading entities are data suppliers, data demand side and data trading platforms. It also includes service providers that provide third-party quality assessment services and technical support for data trading activities. Normalizing the behavior of data transaction subjects is the basis of guaranteeing the legalization of the rights and obligations of each subject, and is conducive to avoiding chaos in the data transaction market. Because of the low cost of data replication and circulation, there may be multiple controllers for the same data. These controllers may be in the same or different stages of the data production process, such as the initial data collection stage and data processing stage. With the continuous processing and value-added of data, there will be more subjects who have the right to benefit from the data. The same subject has a faster transformation between the data controllers and the original owners, which is also one of the reasons for the complexity of data ownership. If the data transaction behavior only depends on the contract agreement, it does not meet the economic benefit goal, nor does it conform to the characteristics of the big data industry. At the same time, there will be difficulties in relieving rights. Therefore, we should clarify the content of rights and obligations and the distribution mechanism of data transaction subjects, so as to create a relatively definite and orderly trading environment.

### C. Rights and Obligations are the Starting Point of Constructing the Mechanism of Balancing Interests

When discussing the legal relationship of each transaction subject, we should deal with the balance of interests of each participant to promote data circulation and improve the efficiency of realizing data assets. The market has a natural tendency to promote the balance of interests, but there will also be local chaos of monopoly and failure. The balance of interests of market participants should include the balance of rights and obligations and the realization of rights and obligations, both of which are inseparable from legislative activities. Legislation is a process of measuring interests. The

promulgation of laws is the result of weighing the interests of all parties under the complex social background. In fact, modern legislation is only a negotiation process of interest identification, interest selection, interest integration and interest expression. In this process, legislators aim to achieve the balance of interests. The legislator's research on interests clarifies the purpose of legislation, has a proper evaluation of various interests, and formulates a proper legal system for arranging various interests of society. In countries and regions where the data protection system is relatively perfect, the balance of data collection, processing and circulation has changed from the balance of legislation to the balance of judicial application. At present, our country is still in the conflict stage where the interests of various stakeholders are diversified and their demands are inconsistent. In the process of exploring the protection of data resources rights, the purpose of legislation is not to create rights and obligations, but to legalize the legitimate interests already in practice into legal rights, while also confirming their affiliation, clarifying the content of rights, delineating the boundaries of rights. When the corresponding interests of different trading subjects rise to rights, they should leave enough public interest space for other stakeholders, especially for the public.

### III. RIGHTS AND OBLIGATIONS OF QUALIFIED TRADERS IN THE DATA MARKET

The data source organization or enterprise is at the supply end of the entire big data market. Its main feature is to deliver data products or services directly to users, including raw data, processed data and new data integrated by multiple data, corresponding to the roles of data producers, data processors and data integrators respectively. At present, the number of data suppliers and demand side differs greatly, and the number of data demand side is far more than that of suppliers. The data supplier also includes the seller's agent, who is entrusted by the data owner to provide data development and data opening services, and to replace the data owner to sell the entrusted data on the trading platform. Data demand side generally refer to enterprises or institutions that introduce external data to support their products or services. The application side reflects the objective demand of data transaction, which is the main driving force of the big data transaction market, and also drives the enterprises in the analysis area to enter the data circulation market. The development of the application side determines the upper limit of the scale of large data transactions. In addition, the demand side is dominated by Internet enterprises, and the coverage is limited.

From the current situation of data trading market, the right of data supplier is more than that of demand side. In the process of data online, the data supplier has the right to put forward the selling price first and choose the trading mode, but at the same time, it should also accept the platform's audit to ensure that the data supplier itself and the trading object meet the requirements of the platform standards and laws and regulations. The ordinary members of Guiyang Big Data Exchange have the following rights: (1) Members will be qualified to conduct big data transactions in Guiyang Big Data Exchange. Membership units will have legal Data Trading qualifications and obtain trading membership cards issued by the exchange. (2) Exchanges will promote the frequency of

submission of data transactions across the country and even globally. (3) The exchange will accept the entrustment of all its members to purchase the required data directionally. (4) Members can participate in various activities of the exchange and enjoy the unified brand promotion of the exchange free of charge. (5) Guiyang Big Data Exchange provides members with value-added services of data cleaning, desensitization, analysis and modeling. (6) After downloading and using the APP and trading terminal of the exchange, the member units will be required to send data transactions regularly. Buyers have the right to obtain compensation in case of data defect or damage to property, but they also have the obligation to ensure the legality of data usage and data direction. But for the data supplier, some individuals and enterprises have no ability to guarantee the data is flawless. Therefore, the responsibility for data quality should be allocated reasonably between the supplier and the platform.

### IV. DATA TRADING PLATFORM RIGHTS AND OBLIGATIONS

From the current practice of big data trading in China, the platform has the following rights: (1) Supervise and audit data transactions, and stopping illegal transactions in time in accordance with relevant laws, regulations and platform rules. (2) Examine and verify the qualifications of the participants in the transaction. According to *Guiyang Big Data Exchange 702 Convention*, *Zhongguancun Digital Data Exchange Platform Rules (Draft for Comment)*, *Anhui Big Data Trading Center Rules*, *Yangtze Big Data Trading Co., Ltd. Trading Rules*, *Harbin Data Exchange Center Trading Rules* and other platform rules, the data trading platform has the right to select data that can be traded online.

The core obligations of the trading platform are: (1) provide a stable and reliable platform environment, properly maintain the hosted data, and ensure data security; (2) promote the smooth progress of data transactions. Based on these two objectives, there are specific obligations as follows. First of all, the exchange should examine and verify the trading objects, have supervision responsibility for the whole process of trading, and accept the supervision of trade associations or alliances. Secondly, in the process of data circulation, the platform should provide secure storage in data hosting service technology, and the hosted data cannot be sold or illegally provided to others without authorization. Finally, in order to protect the rights and property of both sides of the transaction from damage, when necessary, cooperate with the law enforcement authorities to investigate the suspected illegal data content according to law. It is worth noting that the meaning of data intermediary is different from that of trading platform, and its obligations are also different. According to the current formulation in practice and theory, the meanings of data intermediation and trading platform are overlapping and different. For example, in a broad sense, Alibaba Cloud, Baidu Cloud, etc. can all become data intermediaries, but they are very different from the exchange's profit and operation modes. The obligations of such intermediaries are closer to those of data sellers.

## V. MARKET SELF-DISCIPLINE IN DATA TRADING INDUSTRY

### A. *Jurisprudential Analysis of Self-regulation*

According to economic theory, private order is a concept corresponding to public order. The transaction order formed by the official legal system or the control system supported by the government's compulsory force is public order. Private order is the trading order formed by the system arrangement of self-restraint and punishment spontaneously formed by the parties involved in the transaction. In a sense, self-discipline is a way of private order. Self-discipline plays an important role in the maintenance of market order when the government's compulsory force is in a blank state. At present, the practice of big data trading industry has been carried out and taken shape. However, at the national level, there is no law on the protection of data resources in China. The market order of big data trading is basically maintained by the rules of trading platform. However, with the continuous opening and circulation of data, self-regulatory management cannot achieve the purpose of rational allocation of resources and settling disputes. Therefore, we must construct the order of data trading market from the level of public power and formulate corresponding laws and policies, so as to gradually develop the early self-discipline into a reasonable, mature and efficient late self-discipline, that is, to use the self-discipline form of legal rules in the environment where the legal system has been relatively perfect.

### B. *Self-Discipline in Data Transaction Industry*

Comparing the current rules of the trading rules on the platform, as well as the rules on stopping transactions, data offline, and infringement compensation, we can find that the current self-regulatory specifications only apply to the platform for publishing rules, not the self-regulation of the entire industry such as *Guiyang Big Data Exchange 702 Convention*, *Zhongguancun Digital Data Exchange Platform Rules (Draft for Comment)*, *Anhui Big Data Trading Center Rules*, *Yangtze Big Data Trading Co., Ltd. Trading Rules*, *Harbin Data Exchange Center Trading Rules*, etc. The standards of the big data trading industry have not yet been unified, and the big data industry alliance is also regional. Due to the professional nature of data transmission, analysis, and application, the demander is likely to buy data that has no development value or is not needed. Therefore, in the short term, it is difficult for the market mechanism to unify the behavior and pricing of data re-sales. In the self-regulation of data transactions, the disclosure of the industry's quality standards, technical standards and transaction data content of the data should be specified. When the data industry gradually formed data quality standards and recognized product display forms, the paradigm of data property rights could be determined.

## VI. REGULATION OF DATA TRADING INDUSTRY

### A. *Supervision Department*

Before determining the regulatory authority, it is more important to solve the problem of regulatory feasibility. It is necessary to clarify the regulatory objectives and the criteria for judging related matters, including relatively uniform risk identification methods, so as to avoid the difficulties or even baseless of specific measures taken by the regulatory authorities. After these problems are solved, the

appropriateness of the department will be demonstrated. There are currently provincial and municipal big data management agencies in China. Guizhou Big Data Development Administration is the first provincial-level big data management organization in China. Its main work is to promote the construction of big data development infrastructure, including: make big data development strategy, plan and related industrial policies, and organize and implementing them; draft relevant local laws and regulations, formulate technical specifications and standards for local industries, and organize their implementation; promote the unified platform management of information system in Guizhou Province, promote information resources sharing, and put forward investment scale and direction proposals for large data fixed assets. In the future design of regulatory institutions, special departments should be authorized in government agencies to take charge of the supervision of large data flow and transactions.

### B. *Regulatory Basis*

Lack of standard and basis will fix supervision and law enforcement in a form, and supervision cannot be carried out. At present, the national policy is mainly a principled guidance, which clarifies the attitude of the state to support the development of big data industry. However, as far as its content is concerned, it does not specify the specific content of big data transactions. The Regulations on the Promotion and Application of Big Data in Guizhou Province is a local law with a low level of legal effect. As a regional local law, it has legal effect only in the administrative region of Guizhou Province. Judging from its content, there are only 39 articles, except for the general provisions and the supplementary rules, which mainly stipulate the four parts of development application, sharing openness, security management and legal responsibility. Among them, there are only 3 security management parts in Chapter 4. Although it has shown enough attention to the security of big data transactions, it is difficult to achieve the goal of supervision. China should construct a regulatory system for big data transactions in the form of administrative regulations as soon as possible, clarify the regulatory model, and regulate the core content of transaction entities, transaction scope, transaction prices, and transaction quality of big data transactions. In addition, regulatory enforcement activities require specific and feasible standards even if they are supported by the upper-level law. Otherwise, it will be difficult to put into practice. For regulation, sensitive information and non-sensitive information should have relatively reasonable division criteria. This is also the premise of supervision and the premise of the basic risk prevention and control of the data trading platform. Due to the fast technology update and the inexhaustible data names, it is more feasible to name the data according to the degree of desensitization. Therefore, it is in line with the law to classify the data according to the characteristics of the data.

### C. *Regulatory Focus*

First of all, the regulatory authorities should supervise the data trading platform in order to guide the on-site data trading. Data on transactions on the data exchange platform requires an important review process, which allows data transaction activities to be incorporated into the regulation and avoid data

black market. Secondly, in order to encourage standardization and on-marketization of transactions, it is necessary to foster a relatively certain trading environment for data transactions to reduce compliance risks and legal risks and support the upgrading of data trading platforms, the development of professional institutions such as relevant evaluation agencies and data quality management. On February 8, 2017, China's first national engineering laboratory for big data circulation and transaction technology was officially approved by the National Development and Reform Commission and will be jointly established by Inspur Group and Shanghai Data Exchange Center. The laboratory will work on China's big data sharing exchange and the poor circulation of transactions, unclear standards, uneven data quality, and insufficient traction of application requirements. For data transaction processes, systematic risk identification should be performed. In addition, since the risk exists in the production and operation activities of the unit at any time, the identification and measurement of the risk must also be a continuous and institutionalized process. This is the institutionalization and regularization principle of risk identification. These include the risk identification of the data trading platform itself and the way the regulatory authorities explore. The unification of its standards is also a precondition for the pre- and post-regulation of operations. Only with a unified risk identification program can supervision be implemented.

#### VII. CONCLUSION

The legal regulation of data transaction should achieve two goals, protection of the rights of data subjects and promotion of orderly data circulation. The purpose of the legislation is to make data transactions disciplined and reduce legal risks, so that each subject can better share the convenience brought by

scientific and technological progress. In the system design, focus should be given to the relevant obligations and responsibilities of data exchange (trading platform). Guiding the internalization of data trading market is an important link in the regulation of trading activities. The examination of the qualification of trading platform and the supervision of the whole process are also the gist of legal regulation. The innovation of law originates from social development and human demand to realize their own value. The legal regulation of data transaction is also the only way to realize the strategy of data power.

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