Original Paper

Dilemma and Breakthrough: Necessity and Legitimacy of

Establishing Property Rights for Data Products

Yijing Xia^{1*}

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Abstract

The development of data products is the essential characteristic and condition of the digital economy, thus giving rise to a new form of ecological competition. The issue of unfair competition and data products is becoming increasingly prominent. At present, for the legal protection of data products, considering the restrictions on laws and regulations, legal remedies are provided according to the anti-unfair competition law. However, as for the disputes in the ownership of data products, the attribute of right becomes an unavoidable focus of dispute in juridical practice. Network operators have devoted an enormous amount of hard work to data products. Based on the theory of the property rights of labor, network operators are entitled to property rights. In the era of artificial intelligence and big data, lawmakers give property rights to data products. It is also an important measure in response to the development of times. This paper briefly analyzes the necessity and legitimacy of establishing property rights for data products.

Keywords

data products, emerging rights, anti-unfair competition

1. Introduction

In the era of big data, traditional enterprises are turning into platform-based enterprises. The development and operation of data products are essential features and conditions of the digital economy. Internet-based platforms have various features like openness, multilateral markets and network effects. Operators have gained competitive advantages from the business model of enhancing customer loyalty with data products. With the growing big-data industries, legal cases relating to data products will emerge constantly.

At present, there is no specific legal provision for defining, regulating and adjusting big data and data

¹ Southwest Minzu University, Chengdu, China

^{*}Yijing Xia, Southwest Minzu University, Chengdu, China

products. In the existing framework of law, the arbitration of data product disputes invokes the anti-unfair competition law. It cannot respond to the legal status and attributes of data products, thus leading to insufficient legal protection (Li, 2020). "The lawsuit of Taobao against Meijing Group" is the first dispute about unfair competition among data products. It acknowledged data enterprises' property rights to their data products. In juridical practice, data product is considered a property right in the anti-unfair competition law. Instead, it doesn't apply to the database of the intellectual property law or the property ownership right. In recent years, data rights aroused great concern in the academic circle. Nevertheless, this issue is more about analyzing data and data products. The distinction between "data products" and "data", the attribute of right, connotation and legal protection in data products are rarely discussed. Some scholars tried to define data products. They contended that data products have four aspects of property ownership rights. Hence, they should be given property rights (Li, 2022). By confirming the attribute of property ownership rights for data products, it is possible to expand the scope of legal remedies and protect the legitimate rights and interests of network operators (Li & Dai, 2022). In the era of artificial intelligence and big data, lawmakers should give property rights to data products. It is an important measure in response to the development of times.

2. Defining the Attributes of Data Products and Existing Ways of Protection

2.1 Demarcation of Data Products, User Information and Original Data

Table 1. Demarcation of Data Products, User Information and Original Data

	Definition	Users' rights and interests	Network operators'
			rights and interests
User	Information provided by users	Single user has no property	
information	or generated based on user	rights and interests in the	
	behavior	user information	
Original data	Recording or digital conversion	The right control based on	The right of useage
	of user information	consent	based on consent
Data product	Derived data based on original		Independent property
	network data analysis and		interest
	development		

Data products, user information and original data are essentially different in terms of physical properties, users and network operators' rights and interests (Table 1). The former is the creative product based on the latter. It is a new object of right different from original data and user information.

Network operators have property rights to data products. As for the production of data products, they mainly rely on the intellectual work of network workers. In terms of content display, data products show the derived data in the development of algorithms based on an enormous amount of original network data. From the perspective of market value, data products can be controlled and used by network operators and bring about some competitive advantages. Practically speaking, data products become the objects of market transactions. They have the essential value of commodity exchange. Network operators regard data products as an important property right and core competitiveness(Xu&Yuan, 2018).

2.2 Competition Law for the Legal Protection of Data Products

In juridical practice, data products are not merely defined as a property right but "the property right and interests in the sense of competition law". It serves as an exclusive interest for business operation and comparative advantages of enterprises (Long, 2018). Due to the protection of competition law, the rights of data products may come from the encroaching of market competitors and can not obtain relief in advance. In the academic circle, some viewpoints consider corporate rights in the negative empowerment as "quasi property rights" (Gao, 2019). Property rights and interests, as a legal concept, have fundamental and general value (Huang, 2018). To some extent, by viewing data products as new property rights and interests from the perspective of competition law, it is less stressful for judiciary authorities to demonstrate the legitimacy and systematism in terms of the intellectual property law and the property law (Zhang, 2020). Hence, despite the unclear authentic rights of data, the rights and interests of data product developers are safeguarded in response to the strategic development of big data. As for the legal protection and regulation of data products by the competition law, the primary concern is how to incorporate behaviors, which can hardly be accused by the anti-unfair competition law, into regulation. If the corresponding behaviors can be found in the current scope of unfair competition, then it is likely to describe the key elements of such unfair competition and (Zhang, 2020). At present, reliable remedy approaches can be obtained in the current framework of the law. However, over the long term, considering the increasing disputes over the ownership of data products, the attribute of rights will become the focus of dispute in juridical practice.

3. Dilemma: Limitations of Anti-Unfair Competition Laws Protecting Data Products

3.1 The Protection of Anti-Unfair Competition Laws Has Limitations in Subjects

Anti-unfair competition laws aim to regulate the acts of unfair competition, which requires both sides to be market entities in competitive relations. They do not specify whether entities without subject qualifications have the right to use data products.

Influenced by the decentration and destructuralization of the Internet economy, the patterns and behaviors of market competition demonstrate the struggle for data flows in multiple dimensions and fields (Chen, 2019). The business model for network operators in data product development and operation is available to all people. If data products are utilized by other entities without competitive

relations with network operators, it is hard for them to safeguard their lawful rights and interests (Li & Dai, 2022).

In the lawsuit of Taobao against Meijing Group, the court contended anti-that unfair competition laws regulate "competitive behaviors in the same and different industries." "With probability and correspondence of trade-off in the network user groups, they can be deemed as having competitive relations". During the application of anti-unfair competition laws, the court has maximized the explanation of the entities and scope of competition. However, due to the limited protection, the issue of rights infringement by non-competitive entities still cannot be effectively responded.

3.2 The Relief Obtained by Obligees Is Less than the Relief for General Tort

As previously discussed, the rights and interests protected by anti-unfair competition laws are not the rights in rem. Obligees can only claim rights to entities with competitive relations. Network operators' rights to data products do not have complete exclusiveness. For example, with the protection of anti-unfair competition laws, enterprises can prevent competitors from accessing and utilizing private information in data products. However, they cannot prevent non-competitive market entities from utilizing private information because of personal intentions or other factors, thus causing damage to corporate interests. As for non-right in rem, enterprises can only claim negative rights to personal information, such as ceasing damages and compensation for damages. They cannot obtain positive rights like transfer and guarantee, thus restricting the property rights of data products.

On the other hand, in essence, anti-unfair competition laws serve as passive protection against injurious acts. They cannot offer sufficient legal protection for data products that have the four powers and functions of ownership. According to the regulations of anti-unfair competition laws, market entities can only apply for legal remedies when suffering damages due to unfair competition. In other words, with the protection of anti-unfair competition, network operators can only appeal for legal protection when their interests are damaged by the injurious acts of others. According to some scholars, in this context, network operators' rights to data products are not forged by the law. Instead, they spring up along with the encroaching of market competitors (Xu & Yuan, 2018). Compared with the rights positively recognized by the law, the legal interests can only obtain relatively minor protection (Zeng, 2001).

4. The Necessity of Establishing Property Rights to Data Products

Firstly, giving property rights to data products can maximize the protection of network operators' rights and interests. After establishing the property rights to data products, entities are no longer confined to competitive relations. Besides, compared with the "faults" emphasized by the anti-unfair competition law, rights in rem are based upon property ownership rights. The burdenof proof on network operators is reduced. So it's more likely for them to apply for remedies against the damage to legitimate interests. Meanwhile, network operators can exercise the right of the real claim according to the features of data products, so as to expand the foundation of the right to demand delivery (Li & Dai, 2022).

Secondly, giving property rights to data products ensures the stable development of the data market. Data collectors and controllers make data products through intellectual work at enormous costs, so their property rights should be recognized. Guaranteeing data property rights to network operators can enhance their willingness and motivation for engaging in the development of the data economy. It not only supports the growth of the data industry but also encourages obligees to actively share, transfer and allow others to use data products, so as to forge efficient and well-organized competition in the industry.

5. Breakthrough: Legitimacy of Establishing Property Rights to Data Products

Data products are the crystallization of fruits of labor. Locke's theory on property rights labor lays the theoretical foundation for explaining the rationality of tangible and intangible property rights. He contended that different forms of labor can create values in products. The core of Locke's theory on property rights labor is that if labor is mixed with products in shared forms, laborers naturally gain ownership(Li, 2004). Although Locke's theory on property rights labor is inevitably limited by the era, it still has rational value.

As far as big data is concerned, the property value of original data can be overlooked. In the market economy, the reason why big data is an important resource is that it integrates individual entities and data into complex data, and analyzes the mass data to form new ways of usage (Li, 2020). Furthermore, data products are more than the simple gathering of original data or the general database based on its selection and compilation. Instead, it is an independent form of data after deep development and system integration. Network operators' hard work produces significant business values. For this reason, giving property rights to data products complies with the theory of property rights in labor.

In addition, from the perspective of utilitarianism, endowing property rights should attain the ultimate goal of social welfare improvement. Acknowledging network operators' property rights to data products is consistent with the utilitarian concept of balancing cost and profit, and maximizing social welfare (Li, 2022).

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