

# The Realistic Problems and Practical Paths of Marketization Construction of Data Elements

Qile Yang

School of Economics and Management, Guangxi Normal University, Guilin 541000, China.

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**Abstract:** How to promote the circulation of data elements and release their value is a major issue that urgently needs to be solved in the digital economy era. The market-oriented construction of data elements provides feasible solutions to solve the problem of data element circulation. This article focuses on the market-oriented construction of data elements, sorts out the main problems faced by the market-oriented construction of data elements, and proposes feasible development paths based on this. Research has found that the current data element market mainly faces practical constraints such as a lack of multi-level trading systems, low sharing levels, and low quality of publicly available data. Based on this, it is suggested to improve the construction of the data element market trading system and promote scientific legislation and standardized supervision of the element market.

**Keywords:** Data Elements; Marketization Construction of Data Elements; Realistic Issues; Practical Path

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## 1. Introduction

Promoting the market-oriented construction of data elements and achieving market-oriented reform of data elements are key measures to unleash the value of data elements and promote the development of China's digital economy. According to the calculation of the China Academy of Information and Communications, the scale of China's digital economy has reached 50.2 trillion yuan in 2022, with a year-on-year nominal growth of 10.3%, accounting for approximately 41.5% of the gross domestic product. The digital economy has become an important component of China's national economy, serving as the core engine and key driving force for economic development. However, as a core element of the digital economy, a large amount of data element resources are concentrated in government departments and leading internet companies, and have not yet fully circulated in the market, seriously hindering the release of data element value, making it difficult for China to fully leverage the advantages of massive data and rich application scenarios. In addition, data elements are different from traditional production factors, and their special attributes such as virtuality, non competitiveness, and increasing marginal output make it difficult to manage and utilize them in traditional ways. Therefore, how to promote the free flow of data elements? How to cultivate a data element market? Becoming an important issue that urgently needs to be solved.

In recent years, the Chinese government has attached great importance to the cultivation of data elements and data element markets, and has issued a series of policy documents. On December 2, 2022, the Central Committee of the Communist Party of China and the State Council issued the "Opinions on Building a Data Infrastructure System to Better Play the Role of Data Elements", proposing to construct a data infrastructure system with Chinese characteristics from the perspectives of data property rights, circulation and trading, income distribution, and security governance, dividing data property rights into ownership rights based on ownership rights, management rights, and income rights. In this context, various regions have established national data bureaus and big data exchanges to actively explore the development path of market-oriented construction of data elements. This means that the construction of the data element market will enter a standardized and large-scale development stage. However, currently, the market-oriented construction of data elements is still in its infancy and faces

many problems. From the practical results, although scattered data transactions and data asset registration appear in economic activities, they are far less active than traditional production factors such as land, labor, and capital. Data element trading still faces issues such as data rights confirmation, data pricing, and data security, and the data element market mechanism has not yet truly formed. Therefore, based on the characteristics of data elements, this article scientifically explores the theoretical logic of data element marketization, sorts out the practical problems and paths of data element marketization, and provides important theoretical basis and practical inspiration for breaking through the bottleneck of data element market development and formulating relevant policies.

## **2. Literature Review**

The marketization construction of data elements in China is still in its initial stage, and existing research in China mostly focuses on the scientific connotation and internal logic of building a national unified data element market, the influencing factors and improvement paths of data element marketization construction, and other aspects. In contrast, research on the marketization of data elements in developed countries such as Europe and America started earlier. Among them, in terms of data element characteristics, data elements have characteristics such as virtuality (O'Leary, 2013; Jones and Tonetti, 2020), increasing returns to scale (Veldkam and Chung, 2019), and non-competitiveness (Jones and Tonetti, 2020). In addition, some scholars have also constructed data transaction models, such as Jones and Tonitti (2020), which study the changes in production efficiency and social welfare under different conditions of delegating data power to individuals and enterprises from a non-competitive perspective. In summary, existing domestic and foreign literature provides important theoretical guidance and scientific methodology for studying the complex mechanisms and logical relationships of multiple factors behind the marketization of data elements. Compared to previous studies, this article is based on the characteristics of China's data factor market, scientifically studying the theoretical logic of China's construction of a data factor market, sorting out the cultivation status and constraints of China's construction of a data factor market, and proposing suitable practical paths on this basis.

## **3. Realistic Issues in the Construction of Data Element Markets**

### **3.1 The Multi-Level Trading System of the Data Element Market Has Not Been Established Yet**

The data element market in China is developing rapidly. According to the calculation of the China Industrial Information Security Development Research Center, the size of China's data element market in 2022 is 81.5 billion yuan, with a growth rate of 49.51%. The Chinese government is also actively building a data element trading market and circulation infrastructure. However, there is still a lack of a multi-level trading system in China's data trading market. A mature factor trading market should involve the participation of multiple entities such as individuals, enterprises, and governments, as well as the existence of various trading models such as "supply intermediary demand". However, the main body of China's factor trading market is mostly enterprises, with less interaction between individuals and the government, and a lack of professional data trading institutions. At the same time, there is a lack of data brokers who serve individuals. Even with the existence of professional data brokers, the data scale cannot meet the trading requirements. The world data element market is currently undergoing rapid development. If China wants to develop the digital economy and achieve the transformation of old and new economic drivers, it must achieve natural circulation of data elements to improve the efficiency of market-oriented allocation of data elements.

### **3.2 The Number of Government Data Disclosure Platforms is Growing Rapidly, But the Quality of Shared Data is Relatively Low**

From the perspective of economic theory, the open sharing of data by government and other public institutions can bring a lot of economic value. Firstly, the circulation and sharing of data elements can significantly reduce transaction costs, the exchange of information can enable enterprises to accurately grasp market dynamics, and can reduce adverse selection and moral hazard. Secondly, the open sharing of data elements can promote the refinement and innovation of social division of labor, and increase the overall welfare of society. However, the non-competitiveness and non-exclusivity of data elements

may also lead to issues such as “construction site tragedy” in the market. However, in reality, the main problem faced by China in building a data element market is that market entities often choose not to disclose data based on the important economic value and significance of data element resources, and even tend to excessively collect data in order to seek monopolies and obtain high profits. These behaviors seriously damage the operational efficiency and public utility of the data element market, and further affect the implementation and formulation of national strategies.

## **4. The Practical Path of Building a Data Element Market**

### **4.1 Cultivate Data Economy Personnel and Enrich Market Trading Entities**

At present, the main service entities of China's big data trading platforms are enterprises and governments. However, in reality, China has a large number of individual data entities, and both from a supply and demand perspective, the flow of data elements and transactions of individual entities have a broad prospect and enormous value. Therefore, in the initial stage of marketization of data elements in China, the focus should be on fully utilizing the data economy personnel system, cultivating a group of professional data economy personnel, and making up for the shortcomings of the existing data element market trading mode. Specifically, in the data element market, data brokers can collect and integrate personal data, and strictly desensitize personal privacy data, allowing personal information data to participate in data element transactions, thereby achieving the goal of regulating and supervising on and off exchange transactions, and improving the data element trading system.

### **4.2 Breaking down Barriers to Data Element Circulation and Limiting Unfair Competition Behavior**

In the era of digital economy, data risks are becoming more prominent. Data trading platforms may collect and utilize data through improper means, thereby achieving monopolistic purposes and hindering normal industry competition, leading to problems in pricing mechanisms and causing losses in residents' welfare. For example, the platform collects data improperly, refuses to share data, and discriminates against algorithms. At this point, the market order has malfunctioned and requires mandatory supervision and punishment by the state. Therefore, the Chinese government should strengthen the top-level design of the data element market, establish relevant data management institutions or departments, adopt an inclusive and prudent regulatory attitude for governance, and promote autonomy of data trading platforms to achieve the protection of data element property rights and efficient and dynamic supervision.

## **References**

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