

# *Ownership and Rules for Capital Contribution in the Digital Economy*

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**Abstract:** Data assets typically involve multiple overlapping domains including intellectual property rights, contractual licensing, user privacy rights, platform liability, competition law, and data protection legislation. With the improvement of regulations such as the Company Law (Revised) and the Implementation Measures for Company Registration Administration (2025), data has established preliminary legal foundations as a form of capital contribution in corporate structures. However, current legislation still lacks clarity regarding ownership determination, valuation mechanisms, and contribution rules for corporate data assets, resulting in institutional conflicts. Therefore, it is essential to develop a theoretical framework and draw on international best practices to establish the "data usage income rights" system. This requires clarifying contribution requirements for data assets, building a professional evaluation and registration system, and improving judicial relief mechanisms. Through coordinated multi-dimensional measures, a systematic framework for ownership and capital contribution can be established, thereby providing robust legal safeguards for the market circulation of data elements.

## **1. Introduction**

In the digital economy era, data (including databases, algorithms, models, and user information) has emerged as a key production factor alongside land, labor, and capital, serving as the core resource driving corporate growth and industrial innovation. The commercial value of data assets varies depending on factors such as quality, scale, domain, and temporal attributes. From a legal perspective, this implies that data assets constitute property that can be monetized. While most countries' laws on non-monetary asset contributions require transferability—meaning assets must be independently transferable—China's "Implementation Measures for Company Registration Administration" (effective February 10, 2025) explicitly states in Article 6 that "shareholders may legally contribute data and virtual network assets as capital." However, legal definitions of data assets remain ambiguous, lacking standardized evaluation criteria and transfer mechanisms, with corresponding liability frameworks requiring further refinement. Therefore, establishing clear ownership rules and a viable capital contribution system for data assets has become a critical challenge in legislative and judicial practice. This article will systematically explore: (1) Ownership determination of data assets; (2) Feasibility of capital contribution through data usage rights; (3) Pathways for aligning and improving current legal frameworks.

## 2. Ownership of corporate data assets

### 2.1 Theoretical basis and system comparison

First, the traditional "ownership" paradigm of property rights has encountered challenges in the data domain, driving the gradual emergence of the "data usage and benefit rights" theory. This theory proposes a structural separation of rights over data: when involving personal data, natural persons possess fundamental personality rights and original data rights as the foundation; enterprises enjoy usufructuary rights—including possession, use, benefits, and disposition—for data sets that have been legally collected, substantially processed through intellectual labor and capital investment, and undergone desensitization and aggregation<sup>[2]</sup>. While usufructuary rights fall within the scope of traditional tangible property rights, there remains debate regarding whether data assets qualify as such. The concept of data usage and benefit rights partially addresses the theoretical dilemma of establishing absolute ownership over data. By granting enterprises exclusive and transferable usufructuary rights over specific data sets, this framework not only provides legal support and commercial incentives for corporate data development, transactions, and investments, but also fundamentally respects and preserves individuals' basic rights to their original information. This approach achieves an effective balance between data control, utilization efficiency, and personal rights protection, establishing a more suitable theoretical foundation for data asset circulation.

Secondly, in terms of institutional practice, the EU and the US exhibit two markedly different evolutionary paths. The EU tends to establish new property rights through legislation. Its proposed Data Act introduces the "data producer rights" concept, granting manufacturers, developers, and other entities non-personal data usage rights. This breaks down platform data lock-in and promotes B2B sharing, demonstrating distinct regulatory intervention characteristics. In contrast, the US relies more on market mechanisms and judicial precedents. Within legal frameworks like copyright law, it expands data utilization through "fair use" principles, emphasizing free flow and innovation. Both models have their pros and cons: the EU's framework is clear but potentially rigid, while the US model is flexible and efficient yet lacks sufficient protection for individual rights. China's future institutional design should draw lessons from these experiences to find a dynamic balance between market autonomy and government regulation.

Finally, at the micro-enterprise level, the legal positioning of data assets requires urgent clarification. Regardless of whether their rights stem from data usage benefits or other specific property rights, as long as data assets are legally controlled by enterprises and can generate future economic benefits, they should be legally classified as corporate intangible assets and become a key component of corporate property rights. This legal positioning holds significant implications: In accounting processes, data assets can be recognized, measured, and included in balance sheets; in investment and financing sectors, it provides a property rights foundation for enterprises to contribute data assets as capital or secure pledge financing; during corporate governance and mergers & acquisitions, data assets as core properties must follow resolutions of corporate authorities and principles of independent corporate property in disposal, management, and profit distribution; even during bankruptcy proceedings, data assets will participate in unified liquidation and distribution as bankruptcy assets. Establishing data assets firmly within the legal framework of corporate intangible assets serves as the logical starting point for subsequent commercial activities' legal regulations.

### 2.2 Disputes over ownership of legal attributes

The fundamental obstacle to defining data asset ownership lies in the lack of clear legal characterization. As intangible, reproducible, and non-exclusive objects, data struggles to fit into the traditional "property-credit" dual property rights framework. Property rights theory emphasizes direct

control and exclusive management of tangible assets, while data's infinite replicability and sharing nature lack physical exclusivity. Credit relationships, centered on relativity and specific obligations, fail to address disputes over derivative rights after data anonymization and aggregation<sup>[1]</sup>. This legal ambiguity between "neither property nor credit" creates instability in delineating rights boundaries among data originators, collectors, processors, and users. When enterprises legally collect user personal information and form derivative datasets through de-identification analysis, the ownership becomes contentious—should rights belong to users, enterprises, or both? Article 127 of China's Civil Code recognizes data protection in principle but lacks explicit rights definition. The Data Security Law and Personal Information Protection Law regulate data processing from national security and privacy perspectives, emphasizing legal sources and user authorization, yet neither directly defines data asset ownership. China's first local data legislation, the Shenzhen Special Economic Zone Data Regulations, only introduces the concept of "data producer rights," allowing market entities to claim property rights over legally processed data products and services.

### **2.3 Typical types in practice and adjudicative differences**

The ambiguity in legal definitions and gaps in established regulations ultimately manifest as judicial inconsistencies in adjudicating data asset disputes. Current disputes primarily revolve around three typical scenarios: First, in corporate mergers or partnership dissolution cases, courts applying different legal frameworks—such as intellectual property, trade secrets, or anti-unfair competition laws—often reach markedly divergent rulings regarding ownership of core databases developed through joint operations. Second, regarding data scraping legality between online platforms and third parties, some rulings deem infringement based on platform investments and competition protection, while others demonstrate flexibility by considering data sharing and public interest, resulting in inconsistent standards. Third, when users seek distribution of data-derived value, courts exhibit significant divergence in determining whether users have rights to claim benefits beyond personal information scope. These judicial inconsistencies clearly demonstrate that without unified data ownership rules, judicial authorities must rely on case-by-case adjudication to navigate the field. This not only undermines legal uniformity and predictability but also creates uncertainty for market participants regarding stable transactional expectations.

## **3. Feasible path of company data asset contribution rules**

### **3.1 The lag of existing investment rules**

When the company invests data assets as shares, the current commercial legal system has significant deficiencies and lags.

While the Company Law outlines general requirements for non-monetary asset contributions—"that can be valued in monetary terms and legally transferred"—Article 6 of the 2025 Implementation Measures for Company Registration Administration explicitly states: "Where laws regulate the ownership of data or virtual network assets, shareholders may contribute such assets as capital in accordance with legal provisions." This provision directly establishes data assets as valid capital contributions. However, critical ambiguities persist: whether data transfers constitute control rights transfers or absolute ownership assignments, and the methodologies and institutions authorized to assess their value. These regulatory gaps not only inflate transaction costs and compliance risks but also hinder data-empowered startups from optimizing their assets, ultimately failing to meet the innovative demands of capital systems in the digital economy.

### 3.2 Strengthening rules at the legal level

First, it is essential to clarify the eligibility criteria for data asset contributions through relevant interpretations or regulations of the Company Law. The core focus should be on refining the concept of "legally transferable" assets, specifically defining the complete transfer of data control rights, usage rights, and corresponding revenue rights. Simultaneously, a transfer validity determination mechanism should be established, premised on compliance reviews of data sources. Second, a dedicated disclosure and commitment procedure for data asset contributions should be introduced. Contributors must provide written guarantees regarding the legality of data sources, clarity of rights, and absence of transfer restrictions, with these commitments publicly disclosed to all shareholders to balance transaction efficiency and security. Finally, given the multiple contribution methods for data assets—including ownership transfers, usage/rights contributions, and service-related contributions—corresponding legal consequences such as tax treatment, disclosure obligations, and creditor protection mechanisms should be determined for each form. In the long term, efforts should be made to promote the enactment of a Data Property Rights Law. This legislation would establish data usage/revenue rights as a new category of property rights, fundamentally addressing the source of rights for data asset contributions and providing clear, stable top-level legal support for corporate data capitalization.

### 3.3 Professional construction of evaluation and information disclosure system

To address the inherent uncertainty in data asset valuation, it is imperative to establish differentiated evaluation guidelines. These should recommend appropriate assessment methodologies tailored to specific data asset types and business models, while clarifying key parameter selection criteria. This includes defining reference ranges for data economic lifespans and incorporating third-party data validation for benefit projections. Furthermore, mandatory dynamic and comprehensive disclosure requirements must be implemented. In corporate charters and capital contribution documents, alongside valuation figures, detailed specifications should be provided regarding asset composition, application scenarios, rights limitations, value preservation mechanisms, and primary risks. This approach ensures the unique characteristics of data assets are fully subject to market supervision, enabling shareholders and creditors to independently assess their true value and risks, thereby strengthening the foundation of capital credibility.

### 3.4 Compliance use and privacy protection after investment

To prevent and resolve rights conflicts arising from data asset investments, it is essential to establish clear rights boundaries and conflict resolution mechanisms in both investment agreements and corporate bylaws<sup>[3]</sup>. Additionally, both the investor and the receiving enterprise must ensure compliance with data asset regulations and protect personal data or sensitive information privacy. The core provisions should address three key aspects: First, non-compete clauses and data feedback restrictions for investors, explicitly stipulating that after transferring data usage rights, investors must not continue using the core data within their original business scope, with clear transition periods and compensation mechanisms. Second, rules governing the ownership of subsequent data asset development rights, pre-arranging that new data rights derived from the invested data shall primarily belong to the company, while allowing reasonable compensation based on the investor's contribution. Third, data security and compliance liability-sharing mechanisms, specifying the investor's compensation obligations when the company suffers losses due to defects in the investor's original data. Through meticulous contractual design, such measures can effectively reduce post-investment disputes and ensure the company's independent and efficient operation of data assets.

## **4. Specific paths to improve the definition of corporate data assets ownership and contribution rules**

### **4.1 Establish ownership definition rules with the right to use and benefit of enterprise data as the core**

Establishing corporate data usage rights represents the fundamental solution to data ownership disputes. This entitlement requires enterprises to legally control data and conduct substantive processing and integration, granting them exclusive property rights to possess, utilize, profit from, and dispose of specific data sets. The design of this rights framework should emphasize hierarchical and time-bound characteristics: Hierarchical aspects involve clearly distinguishing individuals 'personal rights to raw data from enterprises' property rights over derived datasets, ensuring a clear division of rights structures. Time-boundness requires that data usage rights lack perpetual validity, with durations aligned to data's economic lifespan and technological iteration cycles. A renewal review mechanism should also be established to prevent monopolistic rights from hindering reasonable data circulation and reuse. By enacting legislation to confirm this new property right, it will provide stable legal foundations for data asset ownership, operation, and transactions.

### **4.2 Clarifying the substantive requirements and procedural standards of data asset contribution**

Under the premise of clear ownership, it is essential to establish explicit substantive requirements and standardized procedures for data asset contributions. The substantive requirements should focus on three core aspects: legality, separability, and value certainty. Legality requires that the entire process of acquiring, processing, and using data assets strictly comply with personal information protection, cybersecurity, and related laws and regulations, and must pass independent compliance reviews. Separability emphasizes that the contribution subject must be technically and legally separable from other corporate assets, forming a clearly defined, independently transferable property unit to ensure the company can exercise rights without interference<sup>[4]</sup>. Value certainty demands that data assets possess verifiable application scenarios and relatively stable revenue expectations, providing objective basis for value assessment. At the procedural level, a joint review mechanism led by market regulatory authorities and supported by industry regulators should be established. Contributors are required to submit complete ownership certificates, technical solutions, evaluation reports, and compliance commitments, ensuring authenticity and legality of contributions through standardized processes.

### **4.3 Establishing an evaluation, registration and supervision mechanism for data assets investment**

To ensure the authenticity and legality of data asset investments, establishing a professional evaluation system and a unified registration and disclosure mechanism is essential to guarantee fair and transparent processes. The evaluation mechanism should adopt a composite model led by professional institutions with third-party audits collaborating: Evaluation agencies must apply specific technical standards, comprehensively utilizing the income approach, market approach, and cost approach to determine value while disclosing detailed evaluation parameters and assumptions. Third-party audits are responsible for independently verifying the scale, quality, ownership status, and technical isolation effectiveness of data assets, thereby solidifying the foundation for evaluation conclusions. For registration, we can draw on the mature experience of the Unified Movable Property Guarantee Registration System to build a nationally centralized data asset investment registration

platform. This platform would uniformly record key information including asset descriptions, ownership status, valuation, and rights restrictions. Such measures not only possess legal validity for rights disclosure and third-party confrontation but also serve as an information hub for market supervision, risk warnings, and industry management.

#### 4.4 Improve the rules of judicial relief and liability distribution for disputes over data assets

A robust judicial remedy and liability allocation mechanism serves as the ultimate safeguard for maintaining order in the data asset investment market. The attribution principle requires differentiated liability allocation: For data with rights defects, the no-fault liability principle applies where investors compensate; for disputes over inaccurate valuation, the diligence obligation of evaluation agencies is assessed under the fault liability principle. Damages calculation should be flexible, considering factors such as rights holders' losses, infringers' profits, data licensing fees, and market fluctuations. In litigation, the burden of proof reversal may be introduced, requiring investors to demonstrate data legality and effective technical isolation. This approach balances parties' capabilities, establishes clear adjudication rules, standardizes investment practices, and protects corporate and creditor interests.

### 5. Conclusion

In the context of deepening digital economy development, establishing clear and systematic rules for defining data asset ownership and investment mechanisms has become imperative. This paper analyzes current challenges including ambiguous legal attributes, regulatory gaps, and inconsistent judicial interpretations. It demonstrates the necessity and feasibility of establishing "corporate data usage revenue rights" as a theoretical foundation, proposing institutional improvements through legal reinforcement, evaluation registration, conflict prevention, and judicial remedies. Only by enacting legislation to confirm rights, refining investment standards, building professional evaluation and registration systems, and providing effective judicial safeguards can we lay institutional foundations for the market circulation and efficient allocation of data elements. This will unlock the value potential of data assets and propel the digital economy to achieve steady and sustainable development within the rule of law framework.

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