Proceedings of the 3rd International Conference on Management Research and Economic Development
DOI: 10.54254/2754-1169/181/2025.22803

Analysis of Legal Protection Pathways for Commercial Data under the Anti-Unfair Competition Law

Yue Yu

Harbin Institute of Technology, Harbin, China
yuyuebao04@163.com

Abstract: In the era of digital economy, as a core resource for enterprises and a critical element of market competition, the balance between the protection and circulation of commercial data has become a key proposition for promoting high-quality economic development. Although the *Opinions on Building a Foundation for Data Systems to Better Leverage the Role of Data Elements* issued by the Central Committee of the Communist Party of China and the State Council has clarified the framework for foundational data systems, China's Anti-Unfair Competition Law still faces challenges such as ambiguous application of legal provisions, unclear definitions of protection scope, and difficulties in judicial practice recognition. This paper analyzes typical cases such as "Sina Weibo v. Momo" and "Dianping v. Baidu," dissecting the root causes of dilemmas from perspectives including legal lag, inherent characteristics of commercial data, and insufficient market maturity. In response, this paper proposes solutions such as adding special provisions for commercial data, establishing criteria for object identification, and optimizing the content of the Anti-Unfair Competition Law, drawing on Japan's regulatory experience to fully leverage the "incubator" role of the Anti-Unfair Competition Law. By curbing unfair data competition while promoting data circulation, stimulating innovation momentum, and establishing a systematic and scientific protection mechanism under the Anti-Unfair Competition Law, this study aims to provide a Chinese solution for data governance and safeguard the high-quality development of the digital economy.

Keywords: Commercial Data, Anti-Unfair Competition Law, Dedicated Provisions on Commercial Data, Intellectual Property Protection

1. Introduction

1.1. Research background and significance

Amidst the flourishing digital economy, commercial data has evolved into both a strategic corporate asset and a decisive competitive differentiator, wielding transformative power in driving sustainable economic growth and accelerating technological innovation. In December 2022, the Central Committee of the Communist Party of China and the State Council promulgated the Opinions on Establishing Foundational Data Institutions to Optimize Data Element Utilization (hereafter "Data Twenty Measures"), systematically articulating institutional frameworks for data property rights allocation, cross-domain data circulation mechanisms, value distribution protocols, and multi-stakeholder governance architectures. This policy blueprint mandates the creation of robust data

DOI: 10.54254/2754-1169/181/2025.22803

infrastructure to harness the full productive potential of data as a factor of production, while institutionalizing governance mechanisms to safeguard high-quality development of the digital economy.

Against this backdrop, in-depth research on the protection of commercial data under the Anti-Unfair Competition Law carries dual significance:

At the academic level, it provides new research perspectives for the theoretical framework of behavioral regulation under the Anti-Unfair Competition Law. The non-exclusivity and replicability inherent in commercial data challenge fundamental theories within the Anti-Unfair Competition Law, such as the determination of competitive relationships and the boundaries of legitimate rights and interests. Through systematic analysis of commercial data issues, this study aims to identify theoretical gaps in the current legal framework, propose solutions to bridge these gaps, and offer actionable references for addressing legal loopholes in practice.

At the practical level, this inquiry holds twofold implications. First, it facilitates the advancement of legislative development and judicial adjudication. Through systematic analysis of landmark cases such as Sina Weibo v. Maimai and Dianping v. Baidu, this research seeks to delineate clear boundaries for legally protected entities and establish criteria for assessing the legitimacy of data utilization practices. Second, it addresses the strategic imperatives of digital economic development. A robust Anti-Unfair Competition Law framework can mitigate risks of commercial data infringement, enable post-facto rights remediation, and safeguard market competition order. By fostering an environment conducive to data exploitation, such mechanisms will catalyze innovation momentum in data utilization, ultimately realizing the societal objective of high-quality development within the digital economy.

1.2. Literature review

Regarding the protection of commercial data, scholars have proposed diverse solutions. Liu Lin advocates addressing the abuse of general provisions in the Anti-Unfair Competition Law by explicitly enumerating data-related unfair competition practices, supplemented by a multi-layered protection framework integrating tort law, contract law, and copyright law.[1] While this approach achieves comprehensive coverage of derivative issues in commercial data, it risks reducing judicial efficiency in practice and places significant cognitive demands on judicial officers.

Hu Li contends that the Anti-Unfair Competition Law inadequately safeguards commercial data, asserting that establishing data property rights constitutes the optimal solution.[2] However, although such rights could enhance protection for rights holders, absolute and in rem entitlements may inadvertently foster data silos, impede data circulation, and exacerbate market monopolies.

Kong Xiangjun proposes amending the Anti-Unfair Competition Law to include a dedicated section on commercial data, creating a quasi-rights or weak-rights protection regime.[3] This method balances reasonable protection of commercial data with incentives for enterprises to increase innovation efforts and expand R&D investments.

Drawing from Japan's legislative experience in its Unfair Competition Prevention Act, Li Yang and Su Yi conclude that commercial data protection is better served through competition law frameworks, predicting that the legal system governing commercial data will stabilize in the future.[4] While this perspective offers valuable insights for legislative reforms in China, it necessitates further adaptation to domestic socio-legal contexts.

DOI: 10.54254/2754-1169/181/2025.22803

2. Commercial data protection under the anti-unfair competition law: practices and shortcomings

At present, the Anti-Unfair Competition Law can provide effective responses and remedies for commercial data disputes. However, with the accumulation of practical experience, the law has revealed inherent limitations, including ambiguous application of legal provisions, ill-defined scope of protection, and difficulties in judicial determinations—issues that risk undermining judicial integrity and distorting market competition dynamics.

2.1. Ambiguous application of legal provisions

In the cases of Sina Weibo v. Maimai and Dianping v. Baidu, the absence of specific provisions governing commercial data compelled courts to invoke Article 2 of the Anti-Unfair Competition Law of the People's Republic of China, which states: "In production and business activities, operators shall adhere to the principles of voluntariness, equality, fairness, and good faith, and comply with laws and business ethics. Unfair competition, as defined by this Law, refers to acts by operators in production and business activities that violate the provisions hereof, disrupt market competition order, or harm the lawful rights and interests of other operators or consumers."

The judicial reliance on such general principled provisions has proven viable in resolving commercial data disputes between market entities and providing legal remedies for rights holders. However, excessive dependence on and misuse of these provisions inevitably leads to systemic dysfunction in judicial proceedings. In practice, judges retain full discretion over whether and how to apply general principles, which not only heightens the risk of inconsistent rulings in similar cases but also risks distorting the law's original intent of "combating unfair competition" into a tool for "suppressing competition itself"—thereby contravening the statutory purpose of fostering and safeguarding fair market competition.

Furthermore, overlaps exist between commercial data protection and both the Internet-Specific Provisions (Article 12) and Trade Secrets Provisions (Article 9) of the Anti-Unfair Competition Law. While Article 12 regulates competition in internet markets and Article 9 safeguards trade secrets, commercial data disputes do not fully align with these frameworks:

1.Internet-Specific Provisions: Commercial data issues often fall outside the scope of acts that "obstruct or disrupt the normal operation of network products/services legally provided by competitors"—a threshold requirement under Article 12, which remains operationally ambiguous and difficult to delineate in practice.

2.Trade Secrets Provisions: Commercial data, as aggregated information clusters, inherently lacks the confidentiality measures required for trade secret protection under Article 9, since its value often derives from controlled sharing rather than strict secrecy.

Consequently, neither the Internet-Specific Provisions nor the Trade Secrets Provisions can comprehensively address commercial data disputes, leaving regulatory gaps in their application.

2.2. Defined scope of protection

Unlike tangible assets protected under traditional property rights, the scope of commercial data safeguarded by the Anti-Unfair Competition Law remains ambiguously defined. For instance, Taobao's "Business Advisor" data product aggregates user activity traces (e.g., searches, purchases, reviews) generated through the Taobao app. As revealed in Alibaba's 2024 "Double Eleven" sales report, 589 brands exceeded RMB 100 million in transaction volume on the event day. Such massive data streams—combining raw user behavior with algorithmic processing—encompass raw data (e.g., clickstreams), derivative data (e.g., trend predictions), and processed data products (e.g., consumer profiling), exhibiting multi-layered attributes.

DOI: 10.54254/2754-1169/181/2025.22803

However, the current Anti-Unfair Competition Law lacks explicit criteria for defining protectable commercial data. This ambiguity not only risks judicial misapplication (e.g., inconsistent rulings on derivative data ownership) but also discourages stakeholders from innovating in data collection and utilization. A case in point is the Dianping v. Baidu decision, where courts condemned data scraping as unfair competition yet avoided clarifying whether technically reprocessed derivative data (e.g., restructured datasets) fall within legal protection. Such jurisprudential gaps may inadvertently entrench monopolistic practices by large enterprises while stifling market entry for SMEs.

2.3. Judicial determination challenges

In judicial practice concerning the resolution of commercial data disputes under the Anti-Unfair Competition Law, a unified or "formulaic" determination standard has yet to be established. In the first-instance judgment of Dianping v. Baidu, the court held that Baidu's conduct "violated recognized business ethics and the principle of good faith," thereby constituting unfair competition. However, the reliance on "recognized business ethics" is inherently problematic, as such ethics resemble social morality and lack clear textual definitions, often leading to conflicting interpretations in adjudication. Law and morality must not be conflated; courts must avoid subjective assumptions rooted in natural human reasoning.

Furthermore, the foundational purpose of the AUCL lies in regulating "competition." The preliminary requirement of establishing a competitive relationship between market entities is ill-suited to addressing commercial data disputes. For instance, Baidu operates as a search engine providing information retrieval services, whereas Dianping functions as a third-party platform aggregating consumer reviews. Their core business models do not align with traditional notions of direct competition, challenging the AUCL's framework for identifying competitive relationships.

Lastly, determining the legitimacy of competitive conduct remains contentious. Competition is intrinsic to markets, and data scraping does not per se equate to unfair competition. To address this, courts have adopted a proportionality balancing test, weighing the interests of competing businesses and consumer rights to identify optimal solutions. However, such balancing involves complex considerations and substantial judicial costs, rendering it impractical for widespread application in analogous cases.

3. Analysis of the dilemma causes in commercial data protection under the anti-unfair competition law

Fundamentally, the inadequacy of the superstructure is shaped by its economic base. The Anti-Unfair Competition Law (AUCL)'s weakness in addressing commercial data issues stems not only from inherent legal deficiencies but also from practical constraints arising from China's digital economy realities. To resolve existing challenges, only by diagnosing the root causes of the AUCL's dilemma in commercial data protection—whether legal, technical, or socioeconomic—can policymakers devise targeted solutions that align legal frameworks with the evolving demands of data-driven markets.

3.1. Abstractness and lagging nature of legal provisions

The abstractness and lagging nature of legal provisions directly lead to ambiguities in the application of law in commercial data protection practices. These characteristics stem both from limitations in legislative techniques and the rapid evolution of commercial data markets. The lagging nature of the law compels judicial authorities to resolve disputes between businesses by invoking abstract rules, resulting in a detrimental cycle of **"**vague norms → arbitrary interpretations → ineffective regulations.**"**

DOI: 10.54254/2754-1169/181/2025.22803

The current Anti-Unfair Competition Law was enacted in 2019 when the commercial data market was still immature. Legislators could neither foresee competitive behaviors in this market nor precisely define the scope of protectable data objects. To address emerging issues, courts often resort to general catch-all provisions or Article 12(4) of the AUCL's "Internet-specific clause," which prohibits "other acts that hinder or disrupt the normal operation of network products or services legally provided by other operators."

However, in commercial data disputes, most issues must be resolved through catch-all provisions, yet the law fails to define key terms within these provisions or establish actionable judicial guidelines. This results in subjective adjudication standards. In practice, courts frequently justify protections based on the "sweat of the brow doctrine." For example, in Taobao v. Meijing, the court emphasized that Taobao's collected raw data lacked proprietary rights. Conversely, in Dianping v. Baidu, the court recognized proprietary interests in unprocessed user reviews scraped by Baidu, prohibiting the use of publicly available data on grounds of "violating commercial ethics"—a ruling that conflicts with the data circulation principles advocated in the Data Twenty Measures.

Such contradictory outcomes in similar cases, stemming from divergent judicial interpretations of abstract provisions, further expose the flaws of vague legal clauses.

3.2. Impact of commercial data characteristics

The inherent attributes of commercial data create challenges in defining the scope of protection under the Anti-Unfair Competition Law. Data (as electronic records) and information (as semantic content) are conceptually distinct, with the latter embedded within the former.[5] Commercial data itself possesses three defining characteristics: non-physical nature, non-rivalrous consumption, and non-exclusive control.[6]

First, the non-physical nature distinguishes commercial data from tangible objects, removing it from the traditional property law framework of "possession-dominion-disposition." Data, composed of binary code (0/1 strings), exists as an intangible entity in cyberspace.[7] It cannot be fully protected through the Personal Information Protection Law or trade secret provisions targeting informational content, nor through physical safeguards. This intangibility complicates the AUCL's delineation of protectable objects: treating data via quasi-property approaches aligns with conventional property rights logic, while relying on competition-based interests inadequately addresses corporate protection needs.

Second, non-rivalrous consumption allows simultaneous data use by multiple parties without value depreciation, conflicting with the AUCL's requirement for competitive harm in traditional disputes. Ambiguities persist regarding whether multi-party utilization of public data constitutes unfair competition when included within the AUCL's protective ambit.

Third, non-exclusive control complicates platforms' ability to assert rights once data enters circulation. The current AUCL lacks stratified data entitlement provisions for circulated data. In the Taobao v. Meijing case, the court avoided analyzing data ownership, reflecting legislative gaps and exposing incompatibilities between digital economies and traditional legal frameworks.

3.3. Immaturity of the data market

The rapid evolution of data markets has amplified judicial uncertainty in legal determinations: novel data generation mechanisms—such as outputs from generative artificial intelligence (AI) that defy categorization as either raw data replicas or traditional derivative data—continually redefine technological boundaries. Concurrently, evolving data flow paradigms challenge conventional database architectures due to heightened liquidity, while expanding data utilization scenarios reshape inter-enterprise dynamics, transitioning from exclusive competition to hybrid collaboration-

DOI: 10.54254/2754-1169/181/2025.22803

competition models that transcend traditional conceptions of competitive relationships. These emerging complexities compound case-specific adjudication challenges.

According to the National Informatization Development Report (2023) released by the Cyberspace Administration of China on September 8, 2024, China's annual data production reached 32.85 zettabytes (ZB) in 2023, with the big data industry attaining a market size of RMB 1.74 trillion (10.45% year-on-year growth). The digital economy's core industries contributed over RMB 12 trillion in added value, accounting for approximately 10% of GDP. As the world's third-largest data market, China remains in a critical phase of accelerated development, where legal protection of digital rights constitutes an essential prerequisite for sustaining GDP growth and data economy advancement. However, the Anti-Unfair Competition Law (AUCL) has yet to systematically address commercial data market demands.

Judicial practice disproportionately relies on assessments of business ethics violations to establish unfair competition—a criterion increasingly problematic as market-driven redefinitions of ethical norms outpace legal codification. This fluidity exacerbates subjective adjudicative tendencies. Furthermore, commercial data has diversified beyond raw datasets into derivative data and processed data products. Sustained legal preparedness through responsive regulatory frameworks remains imperative to ensure the stable progression of China's data markets.

4. Recommendations for improving anti-unfair competition law protection of commercial data

As evidenced by the aforementioned factors, China's commercial data market fundamentally differs from traditional markets and requires granting it sufficient time to develop. Concurrently, the Anti-Unfair Competition Law (AUCL) must enhance its mechanisms for commercial data protection by enacting dedicated commercial data provisions, establishing clear object identification criteria and leveraging the AUCL's "incubator role".

These measures will safeguard and foster the growth of commercial data ecosystems and the broader digital economy.

4.1. Establishing specialized commercial data provisions

The sustained expansion of commercial data markets has progressively exposed derivative regulatory challenges, with China's data entitlement framework remaining in nascent exploratory stages. The enactment of dedicated commercial data provisions has thus become an imperative legislative priority. Current Chinese law lacks specialized clauses for commercial data protection, with only a general reference in Art. 127 of the Civil Code. The December 2024 Anti-Unfair Competition Law (Revised Draft) published by the National People's Congress website notably eliminated the proposed commercial data provision (previously Art. 18 in the 2022 draft), instead inserting a new Paragraph 4 under Art. 13: "Obtaining and utilizing data lawfully held by other business operators through fraudulent, coercive, cyber-intrusive, or other improper means." This revision evades substantive qualification of commercial data rights, merely enumerating prohibited infringing acts—a dual-edged approach that provides provisional legal benchmarks while preserving interpretative flexibility for future judicial evolution.

Japan's Unfair Competition Prevention Act exemplifies specialized data protection through codified requirements for protectable data (Art. 2-1-5), enumerated prohibited acts, and statutory exemptions. However, its framework exhibits systemic flaws: overreliance on technical safeguards, conceptual overlaps with trade secret protections, and narrow applicability.[8]

DOI: 10.54254/2754-1169/181/2025.22803

China's prospective commercial data provisions should selectively integrate foreign legislative experiences while aligning with domestic market realities through a three-element doctrinal architecture:[9]

1.Objective Elements: Define protectable data scope by establishing thresholds for originality, economic value, and investment intensity to prevent regulatory duplication or gaps.

2.Behavioral Elements: Adopt a negative list approach to proscribe unfair data practices, accounting for technological diversity across acquisition, utilization, and circulation phases.

3.Consequence Elements: Institutionalize objective adjudication standards through technical metrics (e.g., API call audits) and economic models (e.g., data asset depreciation rates) to quantify damages and allocate liability.

This framework operationalizes the Data Twenty Measures' dual mandate of market regulation and developmental facilitation, ultimately constructing a governance paradigm that synthesizes international best practices with Chinese contextual specificity.

4.2. Establishing clear object identification criteria

The Anti-Unfair Competition Law must establish clear criteria for identifying protectable commercial data. Japan's Unfair Competition Prevention Act (Article 2(1)(5)) narrowly defines protected data as "technical or operational information managed electromagnetically, accumulated in substantial quantities, and provided to specific parties for business purposes," a formulation that risks excluding categories of data already recognized as protectable in Chinese judicial practice, such as aggregated consumer reviews validated in Dianping v. Baidu (Data Utilization Dispute). Under China's AUCL, protectable commercial data should instead encompass electronically structured compilations that are systematically collected, processed, and utilized by businesses for market activities, provided they demonstrate measurable commercial value. This approach necessitates balancing value-driven imperatives—prioritizing data's role in fostering innovation—with form-based governance mechanisms tailored to technological realities.

Scholar Kong Xiangjun proposes a five-element framework to refine protectability standards: legitimacy, compilatory nature, administrative control, controlled accessibility, and commercial valuation.[10] Legitimacy requires end-to-end compliance, from lawful data acquisition to GDPR-aligned processing and unambiguous entitlement relationships. The compilatory nature excludes isolated data points and public information, focusing instead on integrated datasets of sufficient scale and density to warrant protection. Administrative control mandates technical safeguards like encryption and access logging to establish legally cognizable "digital boundaries," while controlled accessibility permits conditional third-party use through licensing frameworks, distinguishing commercial data from trade secrets and mitigating data monopolization. Commercial valuation, as evidenced in Dianping v. Baidu, underscores the judiciary's growing reliance on economic metrics to quantify data's market impact.

Japan's restrictive model, criticized for overemphasizing technical management and blurring distinctions with trade secret protections, highlights the need for China to develop context-specific rules. By synthesizing international insights with domestic market demands—particularly the Data Twenty Measures' emphasis on developmental governance—China can forge a protection framework that avoids regulatory fragmentation while nurturing a dynamic data economy.

4.3. Leveraging the "incubator role" of the anti-unfair competition law

China's current exploration of proprietary rights legislation for commercial data remains at an incipient stage, necessitating the Anti-Unfair Competition Law to assume an incubatory role. However, the AUCL requires substantive revisions to address the unique attributes of commercial

DOI: 10.54254/2754-1169/181/2025.22803

data and developmental gaps in data markets, particularly in rectifying flawed evaluative paradigms. To tackle the judicial complexities of determining "substantial substitution"—a critical threshold for liability—scholar Shi Xinyuan proposes a tripartite typology: (1) "scraping-plus-surpassing", (2) "scraping-plus-substitution", and (3) "scraping-without-surpassing-or-substitution".[11] This framework provides a referential basis for adjudicating substantial substitution. Legal determinations should categorically deem direct service substitution through data scraping as unlawful, while adopting nuanced balancing tests for scenarios involving surpassed or non-substitutive uses. Such assessments must weigh operator interests against consumer welfare, prioritize digital interoperability, and respect market Darwinism.

As a legal regime embodying regulatory restraint, the AUCL should avoid excessive market intervention, instead fostering a co-regulatory ecosystem where statutory norms coexist with industry self-governance. Integrating evolving business ethics with market principles, this approach would incorporate sector-specific codes of conduct, technical standards, and judicially crafted rules to preserve competitive autonomy.[12] During data exchanges between operators or between operators and consumers, proactive adoption of the Robots Exclusion Protocol (a website crawling standard) is encouraged to delineate behavioral boundaries and liability ex ante, thereby mitigating legal risks.

The AUCL, functioning as an institutional incubator, must cultivate an innovation-conducive environment that balances pluralistic interests while stimulating market vitality. Confronting emerging challenges in the digital economy, the law must transition from reactive adjudication to proactive governance—evolving into a dynamic "growth catalyst" for high-quality economic development, as envisioned in the Data Twenty Measures.

5. Conclusion

In the context of the digital economy's deepening development, China's legal protection of commercial data faces critical challenges, including ambiguous legal provisions, uncertain data ownership rights, and inconsistent identification standards. The Anti-Unfair Competition Law must systematically and scientifically address market demands by learning from Japan's legal framework for categorizing data acquisition, usage, and disclosure practices. Tailoring these insights to China's national conditions and judicial experience, dedicated commercial data provisions should be introduced to clarify object identification criteria and establish negative lists for prohibited competitive data behaviors.

Technologically, enterprises should be encouraged to adopt measures such as blockchain-based declarations of data ownership and anti-leakage protocols. Judicial practice should incorporate quantitative standards—like data uniqueness coefficients and economic value thresholds—to assist courts in rendering legally sound and rationally justified rulings.

At the industry ecosystem level, a tripartite protection mechanism combining legislative guidance, industry self-regulation, and judicial remedies should be established. By promoting market self-adjustment and adhering to the AUCL's restrained regulatory philosophy, a healthy competitive environment can be fostered.

These reforms will enable China to balance commercial data protection with circulation, achieving dual goals of data value creation and market order maintenance. Such efforts will safeguard consumer rights, enhance public welfare, stimulate corporate innovation, and build a distinctive commercial data protection system. By positioning the AUCL as both a "guardian" and "catalyst" for high-quality digital economic growth, China will contribute its solutions and wisdom to global data governance.

References

[1] *Liu, L. (2022) The Rise and Critique of Commercial Data Property Rights Theory in the Big Data Era. Journal of Huazhong University of Science and Technology (Social Science Edition), 36(2), 99-107.*

DOI: 10.54254/2754-1169/181/2025.22803

[2] Hu, L. (2024) On the Protection Model and Rights Setting of Data Property. Journal of Northeast Normal University (Philosophy and Social Sciences Edition), 2024(4), 156-164.

[3] Kong, X.J. (2024) Practical Reflection and Legislative Prospects of Commercial Data Protection: A Path Based on the Property Attributes of Data Information. Comparative Law Review, 2024(3), 72-92.

[4] Li, Y. & Su, Y. (2023) Rethinking and Resolving the Protection Model of Commercial Data. Social Sciences in Guangdong, 2023(4), 255-266.

[5] Liu, Y. , Gao, Z. (2022) Legislative Protection of Commercial Data under the Dichotomy of Data and Information Concepts. Science Technology and Law (Chinese-English Version), 2022(4), 1-9+82.

[6] Research Group of Beijing Internet Court. (2024) Systemic Coordination and Rule Innovation in the Judicial Protection of Data Rights via Intellectual Property Law. Journal of Law Application, 2024(4), 102-119.

[7] Wu, G.D. (2023) Private Law Protection and Path Selection for Commercial Data. Comparative Law Review, 2023(4), 185-200.

[8] Li, Y. (2021) The Japanese Anti-Unfair Competition Law Model for Data Protection and Its Examination. Journal of Political Science and Law, 2021(4), 69-80.

[9] Yuan, B. (2024) Reflection and Reconstruction of the Normative Structure of the "Commercial Data Clause" in the Anti-Unfair Competition Law. Ningxia Social Sciences, 2024(5), 131-143.

[10] Kong, X.J. (2022) Commercial Data Rights: A New Type of Industrial Property in the Digital Era—Integration into Industrial Property and Three Principles for Ownership Definition. Comparative Law Review, 2022(1), 83-100.

[11] Shi, X.Y. (2024) Methodological Examination of Commercial Data Adjustment in the Anti-Unfair Competition Law. Nankai Journal (Philosophy, Literature and Social Science Edition), 2024(1), 51-66.

[12] Liu, Z.H. (2022) Protection of Commercial Data by Competition Law: Coupling Relationship, Practical Challenges, and Optimization Strategies. China Business and Market, 36(12), 114-123.