

Data Evidence Collection and Legal Norms in Administrative Law Enforcement

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Abstract: *With the rapid development of data technology, data evidence collection has become a key means of improving efficiency and accuracy in administrative law enforcement. However, the widespread application of data evidence collection has introduced new challenges related to legal compliance and privacy protection. This paper analyzes the core role of administrative law enforcement in modern society and the practical challenges it faces, explores the specific application scenarios and operational processes of data evidence collection in administrative law enforcement, and evaluates the current legal norms related to data evidence collection. Drawing on international experience, this paper proposes recommendations for improving data evidence collection legal norms in China, aiming to provide legal support and technical assistance for administrative law enforcement practices. The study seeks to offer references and guidance for the reasonable application of data evidence collection in administrative law enforcement and the development of legal norms.*

Keywords: *Administrative Law Enforcement; Data Evidence Collection; Legal Norms; Social Governance; Privacy Protection*

Introduction

With the advancement of modern technology, data evidence collection has emerged as a new method for acquiring evidence and is widely used in administrative law enforcement. Data evidence collection not only enhances the precision and efficiency of law enforcement but also provides substantial support for handling complex cases. However, as data evidence collection becomes more prevalent, issues regarding legal compliance, particularly in privacy protection, data security, and the effectiveness of evidence, have increasingly come to the forefront. Therefore, a thorough investigation into the application of data evidence collection in administrative law enforcement and the development and improvement of relevant legal norms is of significant theoretical and practical importance.

1. The Importance and Challenges of Administrative Law Enforcement in Modern Society

1.1 The Core Role of Administrative Law Enforcement in Social Governance

Administrative law enforcement plays a crucial role in modern social governance, with its core functions reflected in maintaining public order, ensuring social fairness, and promoting economic development. First, administrative law enforcement is a direct manifestation of the implementation of laws. By promptly investigating and sanctioning illegal activities, it ensures the authority and effectiveness of laws, thereby maintaining basic social order and justice. Second, administrative law enforcement has preventive and management functions, particularly in areas such as environmental protection, market regulation, and public safety. Through regulating market behavior and curbing illegal activities, administrative law enforcement ensures social safety and stability. Additionally, administrative law enforcement enhances government governance capabilities. By enforcing laws in accordance with legal procedures, the government can better respond to public needs and improve the quality and efficiency of public services. Therefore, administrative law enforcement is not only a crucial guarantee for the implementation of the legal system but also an indispensable key element in the social governance system.^[1]

1.2 Practical Challenges Facing Administrative Law Enforcement

Despite its important role in social governance, administrative law enforcement faces several practical challenges. First, with rapid societal development and technological advancements, the scope and targets of administrative law enforcement have become increasingly complex. Traditional enforcement methods and models are struggling to keep up with new challenges. For example, the proliferation of the internet and big data technology has introduced new types of illegal activities, which traditional evidence collection and enforcement methods find difficult to address. Second, the fairness and impartiality of administrative law enforcement are increasingly questioned. Issues such as selective enforcement and excessive enforcement weaken the credibility and authority of administrative law enforcement. Additionally, challenges arise in cross-departmental and cross-regional collaboration. Problems such as information asymmetry and inconsistent enforcement standards between departments lead to inefficiencies, and even enforcement blind spots and loopholes. Therefore, administrative law enforcement needs continuous reform and innovation to address the increasingly complex social governance environment through the introduction of technological tools and improvements in enforcement mechanisms.

1.3 The Trust Crisis and Public Supervision in Administrative Law Enforcement

In modern society, the trust crisis facing administrative law enforcement is becoming more prominent, affecting enforcement outcomes and challenging the overall governance capacity of society. The trust crisis arises from several factors: first, the lack of transparency and fairness in the enforcement process, where some enforcement actions lack effective oversight mechanisms, leading to public doubts about the fairness of enforcement. Second, the abuse of power and corruption among law enforcement personnel undermine government credibility, leading to public distrust in administrative law enforcement. Third, the neglect of citizen rights during enforcement, especially in sensitive areas like data evidence collection, if mishandled, can lead to public concerns about privacy rights and information security.^[2]

To mitigate the trust crisis in administrative law enforcement, it is essential to strengthen the mechanisms for public supervision to ensure the transparency and openness of the enforcement process. Introducing social oversight, enhancing media supervision, and increasing public participation can effectively improve the transparency and fairness of administrative law enforcement, restoring public trust in government enforcement. Additionally, it is necessary to intensify education and training for law enforcement personnel, reinforcing legal awareness and professional ethics, and establishing a sound accountability mechanism to ensure the legality and compliance of enforcement actions, thereby enhancing the social recognition and credibility of administrative law enforcement.

2. Application of Data Forensics in Administrative Law Enforcement

2.1 Application Scenarios of Data Forensics in Administrative Law Enforcement

In modern administrative law enforcement, data forensics has become a crucial method for evidence collection and is widely applied across various fields and scenarios.

Firstly, in the context of cybercrime and information security regulation, data forensics supports the fight against cybercrime and tracking illegal activities by collecting and analyzing electronic evidence such as network logs, emails, and social media records. Secondly, in market regulation and antitrust enforcement, data forensics effectively retrieves business transaction records, financial data, and communication logs to uncover evidence of monopolistic behavior, commercial fraud, and unfair competition. In environmental protection enforcement, data forensics technology is employed to monitor and analyze pollution source data, collecting evidence of illegal emissions to strengthen oversight and punishment of pollution activities. Additionally, in the field of public health and safety enforcement, data forensics can collect and analyze data related to public health events, such as epidemic spread records and food safety data, providing scientific evidence for relevant enforcement actions.

2.2 Operation Process and Technical Support of Data Forensics

The operation process of data forensics involves several stages, requiring high standards of legal and technical professionalism. The initial stage of data forensics is the identification and collection of evidence. During this phase, law enforcement officers need to identify the data sources and use legal

means to collect the data, ensuring the integrity and authenticity of the evidence. This typically includes extracting data from electronic devices, intercepting network communication data, and obtaining cloud storage data. The next stage is the preservation and analysis of data. During data preservation, anti-tampering measures must be implemented, such as using encryption technologies and digital signatures, to ensure the security and traceability of the data. Subsequently, law enforcement officers analyze the collected data using data mining, pattern recognition, and other technological methods to extract information relevant to the case from large volumes of data and generate evidence reports for judicial review. The final stage is the presentation and use of data forensics. Data evidence needs to be submitted to judicial institutions in a compliant manner, and it must be legally valid and effective in court, providing strong support for enforcement actions and judicial trials.^[3]

In terms of technical support, data forensics relies on advanced software, hardware facilities, and technological methods. For example, computer forensics software helps law enforcement officers quickly locate and recover deleted or hidden data, while network forensics tools are used to track online activities and gather related evidence. With the development of artificial intelligence and big data technology, the analytical capabilities of data forensics have significantly improved. Machine learning algorithms allow law enforcement officers to automatically identify anomalous patterns and illegal activities from vast amounts of data. Additionally, the application of blockchain technology provides new security measures for data forensics. Its decentralized and tamper-proof characteristics enhance the credibility and legal effectiveness of data evidence. The continuous advancement of technology provides strong support for the application of data forensics in administrative law enforcement, but it also raises higher demands for the professional skills and legal awareness of law enforcement officers. Continuous training and standardized procedures are essential to ensure the legality and effectiveness of the data forensics process.^[4]

3. Establishing and Improving Legal Norms for Data Collection in Administrative Enforcement

3.1 Evaluation of Current Data Collection Legal Norms

Current legal norms for data collection play a crucial role in ensuring the legality and effectiveness of administrative enforcement, providing a fundamental legal basis for enforcement agencies in complex administrative environments. However, with the rapid advancement of information technology and continuous innovation in technical methods, these legal norms' limitations and inadequacies have become increasingly apparent, particularly concerning the uniqueness of digital evidence, making the current legal framework appear relatively outdated and inadequate.

Firstly, existing legal norms primarily focus on traditional evidence collection methods, with well-established provisions for physical and documentary evidence. However, due to the intangible, mutable, and easily replicable nature of digital evidence, issues of evidence legitimacy and chain of custody present unprecedented challenges. Current laws lack clear guidelines and operational standards for the collection, preservation, and verification of digital evidence, leading to difficulties in legal application and potentially resulting in non-standardized collection procedures and invalid evidence. Additionally, digital evidence often involves sensitive information such as personal privacy and commercial secrets, which current laws inadequately address in terms of protecting relevant rights during the collection process.

Secondly, in China's current legal system, provisions related to data collection are scattered across various laws and regulations, lacking systematic and unified structuring. This fragmented legal structure not only complicates comprehensive understanding and adherence for enforcement personnel but may also lead to conflicts and inconsistencies between different laws, impacting the fairness and effectiveness of enforcement. More critically, the absence of a unified legal framework can result in inconsistent standards among different agencies, affecting the uniformity and authority of enforcement actions.

Furthermore, with the widespread use of new technologies like big data, artificial intelligence, and blockchain, the technical methods involved in data collection continue to evolve, while current legal norms have not kept pace with these technological advancements. This leads to legal ambiguities surrounding new collection methods, potentially triggering disputes about legality and evidence validity. For instance, the application of artificial intelligence in data analysis and collection enhances efficiency and accuracy but may raise concerns about the transparency and explainability of the collection process, with current laws lacking clear regulations.

Thus, a comprehensive evaluation and update of current data collection legal norms have become

imperative. This evaluation should extend beyond merely reviewing existing provisions to addressing modern technological developments and practical enforcement needs, offering practical improvement suggestions. Such updates should ensure that legal norms adapt to the rapidly changing social environment and technological advancements, providing clear and actionable legal bases for enforcement personnel, thereby ensuring the legality, effectiveness, and fairness of administrative enforcement.^[5]

3.2 International Experience in Data Collection Legal Norms

In the process of constructing and improving China's data collection legal norms, drawing on international experience is crucial for enhancing the quality of the legal system and meeting the demands for cross-border enforcement cooperation and legal coordination in a globalized context. Many countries have established mature systems and practices in data collection legal norms, offering valuable insights and references for China's legal development.

Firstly, the United States has a relatively well-established system for data collection legal norms. The Federal Rules of Evidence, as an integral part of the U.S. judicial system, set detailed regulations for the collection, preservation, and use of electronic evidence. Particularly in terms of evidence admissibility, authenticity, and integrity, U.S. laws have established stringent standards, enhancing the reliability of electronic evidence and providing clear operational guidelines for enforcement agencies. For example, federal courts require electronic evidence, such as emails, digital documents, and other forms of electronic data, to be authentic and not easily tampered with or deleted due to technical factors. Additionally, the Electronic Communications Privacy Act (ECPA) and the Computer Fraud and Abuse Act (CFAA) further regulate the protection of personal privacy rights during data collection, balancing data acquisition with individual rights.

Secondly, the European Union's General Data Protection Regulation (GDPR) sets globally recognized high standards in data protection. GDPR not only imposes strict regulations on data protection and privacy but also provides a clear legal framework for data collection. Its core principles include legality, fairness, transparency, data minimization, and storage limitation, ensuring that data is not misused during the collection process and that data collection methods align with enforcement objectives. GDPR's dual protection mechanism for personal data privacy while allowing data collection under strict legal conditions offers important insights for improving China's legal norms.

Moreover, the United Kingdom's Regulation of Investigatory Powers Act (RIPA) provides comprehensive legal grounds for authorizing data collection by enforcement agencies. RIPA emphasizes judicial authorization and multiple oversight mechanisms during data collection, ensuring strict legal supervision to prevent abuse of power. This combination of judicial authorization and oversight helps enhance the legitimacy and transparency of enforcement actions, offering valuable guidance for strengthening enforcement supervision and safeguarding civil rights in China's legal framework.

Drawing on these international experiences can provide rich references for constructing and improving China's data collection legal norms.

3.3 Recommendations for Improving China's Data Collection Legal Norms

To address the shortcomings in China's data collection legal norms and incorporate international best practices, the following recommendations are proposed to ensure the legal system meets modern information and digitalization needs.

Firstly, developing a dedicated Data Collection Law is a critical step toward improving China's data collection legal norms. This law should systematically integrate existing related legal provisions to form a unified, standardized legal framework for data collection. The law should clearly define the scope of data collection, detail the procedures, technical standards, and admissibility of data evidence, and specify methods for data extraction, storage, and handling to ensure procedural norms and evidence reliability. Additionally, the Data Collection Law should recognize modern technological methods, such as data encryption and electronic signatures, to enhance the scientific and effective nature of data collection, providing robust legal support for administrative enforcement.

Secondly, enhancing privacy protection and data security management in data collection is another critical aspect of legal improvement. The Data Collection Law should establish principles of legality for data collection, storage, and use, and stipulate stringent data protection measures. The law should include compliance requirements for data processing, such as access control, encryption, and data anonymization, to prevent data leakage and misuse. It should also outline protection measures for personal privacy and

commercial secrets during data collection, ensuring effective enforcement without infringing on fundamental rights. Introducing data protection officer systems and impact assessment mechanisms can improve transparency and security in data management.

Additionally, establishing robust judicial and social oversight mechanisms is crucial for refining data collection legal norms. Legislative bodies should create independent review institutions to oversee the legality and fairness of data collection processes and prevent potential abuse of power. These institutions should have adequate authority and resources to monitor and rectify improper practices. Furthermore, a public participation mechanism should be introduced, allowing the public to supervise and report on data collection activities, enhancing the legal norms' societal oversight. This approach can increase enforcement transparency and build public trust in data collection and administrative enforcement.^[6]

Lastly, legal norms need to be forward-looking and flexible to address rapid technological advancements. A dynamic revision mechanism should be established to regularly evaluate and update legal provisions in response to technological and societal changes. For example, with the widespread use of artificial intelligence and blockchain, laws should promptly adjust to cover new challenges posed by these technologies. Establishing technical expert advisory committees can provide professional insights for legal revisions, ensuring that legal provisions reflect the latest technological developments and practical needs. This will ensure that data collection legal norms remain effective and applicable in the digital age, safeguarding the legality and effectiveness of administrative enforcement.

Conclusion

This paper provides a comprehensive analysis of the application scenarios, operational processes, and legal norms related to data evidence collection in administrative enforcement. It highlights the importance of data evidence collection in modern social governance and the legal challenges it faces. The study demonstrates that while data evidence collection has become an indispensable tool in administrative enforcement, its extensive use also brings significant challenges related to legal compliance and privacy protection. By evaluating existing legal norms and drawing on international experiences, this paper offers recommendations to improve the legal framework for data evidence collection in China, aiming to enhance the legality, fairness, and effectiveness of administrative enforcement. Moving forward, to address the challenges posed by emerging technologies and complex enforcement environments, China needs to further refine its legal framework for data evidence collection to ensure that enforcement processes balance efficiency and fairness.

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