

# Developing Medical Examiner Offices in China: Necessity and Administration Mode

Song Suimin<sup>1,2</sup>, Ma Chunling<sup>2,3</sup>, Li Shujin<sup>2,4</sup>, Cong Bin<sup>1,2</sup>

1. Institute of Evidence Law and Forensic Science, China University of Political Science and Law, Beijing 100088, China

2. College of Forensic Medicine Hebei Medical University, Shijiazhuang 050017, China

3. Hebei Key Laboratory of Forensic Medicine, Shijiazhuang 050017, China

4. Hebei Forensic Molecular Identification Co-innovation Center, Shijiazhuang 050017, China

**Abstract:** In China, deepening the judicial system reforms and improving the unified management system for judicial authentication are important for promoting the overall law-based governance of the country. Reforming the management of forensic identification services is the top priority to establish a unified management system for judicial authentication. In this paper, different management systems of forensic identification are compared and the current weaknesses in forensic identification in China, such as decentralized management departments, excessive marketization, unbalanced regional development, and insufficient research investment, are analyzed. Based on this analysis, the feasibility and necessity of establishing an administration mode of medical examiner offices in China are investigated. Moreover, the operating mechanism and responsibilities of the medical examiner offices are discussed. We propose that China should integrate its forensic resources into different departments and empower forensic professionals to establish a unified medical examiner office system which is independent of the judicial system and operates at the national, provincial, and municipal levels, so as to improve the authority and credibility of forensic identification. The medical examiner offices should be responsible for judicial authentication, scientific research, professional title assessment, personnel training, and formulation of technical standards and guidelines for forensic identification.

**Keywords:** the administration of judicial authentication; medical examiner office; administration mode; social governance

## 1 Introduction

The forensic identification management system is not only a kind of judicial security system, but also an integral part of the public service system as it integrates social governance with public service [1]. In 2017, the central government of China proposed to improve the unified judicial authentication management system, adapt to the reform of the trial-centered litigation system, and continuously improve the quality and credibility of judicial authentication. At present, there are two main viewpoints among academics regarding the reform of judicial authentication management field, especially the reform of forensic identification management. One recommends proceeding step by step on the basis of the existing administration mode, following the route of identification service marketization, and boosting the efficiency and authority of forensic identification by continuously improving the supervision and management system. Another viewpoint is that over ten years of forensic identification marketization have proved that complete forensic identification marketization is a failed strategy. In major countries worldwide, the forensic identification services are directly funded and controlled by the government. Likewise, China should abandon marketization and establish government-funded medical examiner

---

**Received date:** May 22, 2020; **revised date:** June 27, 2020

**Corresponding author:** Cong Bin, professor of School of College of Forensic Medicine Hebei Medical University, member of the Chinese Academy of Engineering. Major research field is forensic medicine. E-mail: hbydcongbin@126.com

**Funding program:** CAE Advisory Project "Strategic Research on Forensic Science and Legalization of Social Governance" (2019-XZ-31)

**Chinese version:** Strategic Study of CAE 2020, 22 (4): 154–160

**Cited item:** Song Suimin et al. Developing Medical Examiner Offices in China: Necessity and Administration Mode. *Strategic Study of CAE*, <https://doi.org/10.15302/J-SSCAE-2020.04.022>

offices which will assume the judicial functions of the country. The United States, Germany, the UK, and Japan, have different forms of forensic identification management system, but what they have in common is that they are not fully marketized, and their reform is directed toward “unified” management.

There are reasons to believe that the decentralized administration and marketization of forensic services in China would inevitably hinder the country’s reform goal of establishing a unified, efficient, and authoritative forensic identification management system. This paper begins by revealing the rapid “unification” of forensic identification management seen in major countries. Next, it analyzes weaknesses in current forensic identification management practices in China, by looking at aspects such as marketization, regional development, and scientific research resources. Finally, it discusses the feasibility and necessity of establishing medical examiner offices to strengthen the forensic identification system. It is proposed that taking inspiration from foreign countries, the state must be made responsible for the establishment and operation of forensic medical examination institutions and the installation of a forensic medical office management system that is tailored for China. The purpose is to truly realize the reform of unified judicial authentication management system, improve the authority and fairness of forensic identification, and provide forensic technical support for promoting overall law-based governance of the country.

## **2 Forensic identification management reforms in other nations**

### **2.1 Forensic identification systems in the United States and Europe**

In the United States, the forensic identification system is diverse and varies from state to state. Each state has an independent forensic identification institution, but there is no identification institution in the judicial system. On the whole, the United States has three forensic identification management systems, namely, medical examiner system, coroner system, and mixed coroner and medical examiner system. As of 2003, 22 states in the United States use the medical examiner system (the state-level medical examiner office is an independent state agency that supervises the county medical examiner offices), 11 states have the coroner system, and 18 states use a mixed medical examiner and coroner system [2]. The government directly employs medical examiners. Medical examiners must hold a doctor’s practicing license issued by the federal government and a practicing license of forensic pathology and pathological anatomy issued by the College of American Pathologists (CAP). They are responsible for the examination and identification of corpses in cases of death by various causes prescribed by the law. The state laws in the United States reveal that the subordination and management of medical examiner offices is not consistent as some institutions work directly under the government, some are independent and operate under the National Institutes of Health, and some are part of police departments. In the United States, the monetary expenses of forensic identification institutions, such as the costs incurred in establishing an office, maintaining operations, compensating the personnel, and carrying out identification procedures, are directly borne by the government.

European countries have diverse forensic identification management systems and seem to have varying positions on whether the police and procuratorate systems should establish forensic identification institutions, but the basic reforms are all oriented toward unified management. In the UK, the Forensic Identification Service Bureau was established in 2003. It was originally a part of the police system but was later separated from it. At present, it is a self-financing state-owned public company [3]. In Germany, the forensic identification technology is quite developed. Forensic identification institutions are mainly set up in universities and scientific research institutions, in which qualified forensic physicians of medical universities are responsible for autopsy and pathological analysis. The police, procuratorate, court, and other judicial departments do not set up forensic identification institutions, and the identification fees are paid by the government.

### **2.2 Japanese forensic identification system**

The administration mode of forensic identification institutions in Japan is similar to that in Germany. Forensic identification work is mainly undertaken by the forensic medicine teaching and research section of universities. The identification institution is usually set up in the medical department of a university or the forensic medicine teaching and research section of a medical university in each county (equivalent to the province in China), independent of the police and procuratorate systems. The police and procuratorate systems have no forensic identification institution or department. Based on whether the university in a specific administrative area has a forensic medicine teaching and research section or not, each county sets up one or two forensic identification

departments in the university. Cities such as Tokyo and Osaka have also established offices for monitoring medical affairs, which are mainly responsible for the forensic identification of abnormal deaths. The costs of equipment and personnel are borne by the university, and all identification costs are paid by the government, which results in the forensic institutions having a high degree of authority and a greater focus on public welfare.

### 2.3 Applying reform elements from other countries to China

Establishing a unified forensic identification management system has become the current reform trend in most countries. In recent years, many countries have gradually strengthened the unified management of forensic identification in different ways [4], and established a forensic identification management system suitable for their respective national conditions through continuous reforms. The study of foreign forensic identification systems has provided insights that have helped determine the actions that need to be taken to improve China's unified forensic identification management mechanism, namely: establishing national medical examiner offices dedicated to public welfare, avoiding excessive marketization, raising the access threshold of identification institutions and practitioners, and improving the authority and neutrality of forensic identification.

At present, the domestic academic circles have reached a basic consensus on the public welfare of forensic identification institutions and the neutrality of investigative authorities. The public opinion is strongly in favor of setting up a unified national forensic identification institution (national medical examiner office) managed by the state. In October 2019, a survey regarding this issue was conducted among medical examiner from three systems: the national security system, higher education system, and social identification institutions. Based on 922 valid questionnaires, it was found that the proportions of forensic medical examiner from each system that strongly support establishing a unified national forensic identification institution are 88.35%, 88.8%, and 84.69% respectively (Table 1).

**Table 1.** Questionnaire on the establishment of a national forensic identification management institution.

Institution	Strongly do not support (proportion)	Not support (proportion)	Not sure (proportion)	Basically support (proportion)	Strongly support (proportion)	Subtotal
Public security system	15(3.18%)	7(1.48%)	33(6.99%)	87(18.43%)	330(69.92%)	472
University identification institution	5(2.07%)	6(2.49%)	16(6.64%)	63(26.14%)	151(62.66%)	241
Social identification institution	5(2.39%)	13(6.22%)	14(6.70%)	39(18.66%)	138(66.03%)	209

## 3 Problems in the field of domestic forensic identification management

### 3.1 A unified identification management mechanism has not been formed yet.

In 2017, the Central Leading Group for Overall Law-based Governance of the country convened a special meeting, which put forward the requirements for establishing a sound and unified judicial authentication management system as part of reform efforts. At present, the administration of forensic identification services involves many governmental organs such as public security, procuratorate, court, judicial bureau, national security institution, and health commission. Multiple management not only leads to management confusion, but also leads to irregularity in identification standards. Especially, the identification institutions established for investigation purposes are generally affiliated with the investigative technology departments. During the course of the investigation and criminal identification, it is easy to be influenced by preconceptions and prejudices [5], which sometimes leads to wrong judgments. Some scholars analyzed 20 cases of criminal misjudgment and found that 75% of cases had problems in forensic identification [6], which seriously violated the legitimate rights and interests of citizens. Even after the promulgation of the *Decision on the Administration of Judicial Authentication* in 2005, this situation has not been alleviated. This clearly shows that the repeated occurrence of such authentication incidents is neither accidental nor caused by the incompetence of the public security organs; rather, it is the result of a flimsy authentication management system [7]. Since the 2005 reform, forensic identification departments of public security organs are required to “file” with the judicial management department. Although this looks like unification on the surface, when compared to the unified judicial identification management system through judicial reform, it is found to be undoubtedly only “similar in appearance but different in essence”. A truly unified judicial authentication management system is still missing and it is important to continue pushing for its formation.

### 3.2 Prominent excessive forensic identification marketization

Before the promulgation of the *Decision on the Administration of Juridical Authentication* in 2005, there were few social authentication institutions, and pitfalls in the forensic identification management system (i.e., “self-investigation and self-identification” and “self-review and self-identification”) were obvious. After the 2005 reform, the above-mentioned problems have been improved to a large extent, but a unified forensic identification management system has not been formed yet, and some new problems have emerged. The source of these new problems lies in the excessive marketization of forensic identification. Essentially, the forensic identification business has been completely opened up to the business world and forensic identification institutions operate independently according to market dynamics, that is, they assume sole responsibility for their profits and losses. Basically, the state does not provide any funds, technology, or equipment. The marketization is driven by capitalist motivations, and thus there is a natural conflict with the attribute of juridical justice. Some unprincipled forensic identification institutions use illegal means to market their services and obtain resources, which seriously undermines orderly judicial proceedings. For example, scalping of identification resources is rampant in some regions and many identification institutions are involved in it. Marketization has also brought deeper contradictions. Due to the marketization of forensic identification, the authority and neutrality of forensic identification are often questioned. The problems of overdue identification and repeated identification are prominent in litigation, and some even lead to collective petitions due to the lack of credibility of identification results [8], which seriously affects social stability.

### 3.3 Unbalanced regional development of forensic identification level

While the domestic reform of forensic identification management progresses, the problem of uneven development has also emerged. This kind of regional structural imbalance is manifested horizontally in developed and underdeveloped provinces. Because developed provinces have advantages with respect to funds, technology, and talents, the forensic identification public services in developed and underdeveloped provinces are not balanced in terms of quality and quantity. While the institutions in developed provinces have a large number of forensic medicine professionals working for them, the institutions in underdeveloped provinces face a shortage of personnel. China has a vast territory with regions at different levels of economic development. Without a well-organized plan for forensic identification management reform across the country, it will be difficult to achieve the goal of judicial reform “making everyone feel fair and just”. Based on 472 questionnaires in a forensic identification survey in the public security systems in Beijing, Tianjin, Hebei, Shandong, Gansu, and Yunnan held in October 2019, it was found that the condition of forensic medical examiners in the public security system at levels of province, city, and county in China is uneven; especially the condition of forensic medical examiners in the public security system at district and county levels is disappointing. Even in some public security organs at district and county levels, there are no forensic medical examiners. It is difficult to recruit urgently-needed forensic medical examiners in border areas, ethnic minorities areas, and grassroots areas. Low remuneration cannot retain forensic talents, which brings great constraints to the smooth development of work [9].

### 3.4 Decentralization of scientific research resources

The scientific nature of forensic identification opinions requires stable and continuous investment in scientific research. However, at present China’s forensic scientific research resources are decentralized and there are problems such as lack of overall planning (scientific research personnel, scientific research funds, and scientific research direction), insufficient investment, low technology conversion rate, and high conversion cost. Taking 2019 as an example, the total funds allocated to forensic science research by the National Natural Science Foundation of China was only 22.34 million yuan, which was distributed among 18 research institutions and 34 research scholars [10]. The Ministry of Public Security, procuratorate, court, and the Ministry of Justice also set up varying small amounts of research funds. The United States invested more than USD 210 million in forensic science research in 2019, with a total of 402 scientific research projects [11], and the National Institute of Justice (NIJ) under the Department of Justice in the United States is responsible for the approval and administration of this investment. This is in sharp contrast with China’s decentralized mode of administration and scientific research.

### 3.5 Unreasonable establishment of forensic identification institutions

At present, all forensic identification departments under decentralized management have their own laboratories

and equipment. The sharing mechanism fails to work smoothly and is basically not open to each other. Most of China's forensic identification equipment and reagents rely on imports and are very expensive, while the utilization rate of some equipment is very low, which greatly wastes public resources. In 1993, *Proposal on the Establishment of a Set of Judicial Authentication Institutions by Public Security, Procuratorate and Court Systems* issued by the Ministry of Finance suggested to the Central Political and Law Commission that functional departments at the same level in the same area should jointly establish a set of forensic identification institutions to provide unified authentication services to judicial departments. Another major problem is related to the haphazard establishment of social identification institutions. As a rational economic entity, the social identification institution pursues the maximization of benefits and would not invest a large amount of money to purchase instruments and equipment. Hence, a number of small, scattered, chaotic, and low-quality social identification institutions are formed. According to statistics, as of the end of 2017, there were 4338 identification institutions registered and managed by judicial administrative authorities in China, and the institutions with only one practicing category account for 55.14% of the total number of institutions (forensic clinical identification is the vast majority), and the institutions with more than 5 practicing categories only account for 9.31%. In terms of "four major categories" of institutions, the institutions with only one practicing category account for 48.0% of the "four major categories" of institutions, and the institutions with more than 5 business items account for only 12.66% [12]. Such "small, scattered, chaotic, and low-quality" social forensic identification institutions have brought many problems to maintenance of law and order and judicial litigation.

## 4 The necessity of establishing medical examiner offices in China

### 4.1 The inherent demand for overall law-based governance of country

"Overall law-based governance of the country" is one of the "four overall" strategic aims proposed by the central government. Chinese socialism has entered a new era. China is going through a period of remarkable social transformation and contradictions. Solving social problems, promoting social fairness, and maintaining social harmony and stability are important elements of overall law-based governance. Forensic identification management is the unification of social management and social public services. Identification opinions supported by forensic technology are an independent type of evidence in China's civil law, criminal law, and administrative law, and have common attributes of evidence. It runs through the entire stream of judicial activities from case filing and investigation to trial and plays an important role in the overall law-based governance of the country. Therefore, establishing an efficient, authoritative, and neutral forensic identification management system is not only necessary to regulate its own technology, but also to promote the inherent needs of overall law-based governance of the country.

### 4.2 The inevitable requirements of judicial reform

According to the *Implementation Opinions on Improving the Unified Judicial Authentication Management System* (2017) reviewed and approved at the 37th Meeting of the Central Leading Group for Comprehensively Deepening Reform, the judicial authentication system is a judicial security system for solving the specialized issues involved in litigation and helping judicial organs to ascertain case facts. To improve the unified judicial identification management system, it is necessary to adapt to the reform of the trial-centered litigation system, continuously improve the quality and credibility of judicial identification, and ensure the smooth progress of litigation activities. Promoting judicial justice and striving to make people feel fairly treated in judicial cases are specific requirements of the central government regarding judicial work. Specifically, in the field of forensic identification, in addition to solving the aforementioned problems, more attention should be paid to the problem of regional structural imbalance in judicial relief in China. Only by relying on national power can effective solutions to these problems be found. Judicial reforms will lay a solid foundation for the people to enjoy high-quality forensic identification services.

### 4.3 The administration mode of medical examiner offices has obvious advantages

As mentioned above, foreign forensic identification management systems have undergone adjustments and their reforms were gradually orientated to "unification" and "commonweal." In consideration of the unique problems in the field of forensic identification management, the advantages of establishing medical examiner offices in China are as follows.

(1) It can thoroughly solve the existing domestic problems such as the decentralization of forensic technology resources and the irregular and uncoordinated relationship among the functions and authorities of the relevant administrative departments. Unified planning for the nationwide development of forensic services will promote the coordinated development of forensic institutions across the country and other related national undertakings.

(2) It can improve the authority and efficiency of forensic identification and facilitate trial-centered judicial reform. It can completely eliminate profit-seeking from forensic identification and restore the principle of working to serve the people, reduce litigation costs, improve the authority of forensic identification, and promote judicial justice.

(3) It can guarantee that forensic medical examiner offices in all regions will receive support at all levels of operation including personnel recruitment, finance, and material acquisition. This will promote balanced and coordinated regional development. Building a high-level forensic identification team can better serve judicial operations.

## **5 Feasibility analysis of establishing medical examiner offices based on the principle of commonweal**

### **5.1 In line with the current value orientation of domestic social governance**

Some scholars divide China's social governance mode from 1978 to the present into three stages: management under social system, social control, and social governance. The concept of social governance lays more emphasis on "systematic governance, legal governance, comprehensive governance, and source governance" and pursues "good law and good governance" [13]. During the period of social transformation, the subjects of public interest and social structure of all strata are undergoing profound changes, and citizens' awareness of rights protection and evidence awareness has gradually increased. As the last line of defense for maintaining social fairness and justice, justice attracts great public attention. As an important part of the judicial system, the forensic identification management system plays a key role and is closely related to public interest. In this context, transforming social issues into legal issues, transforming qualified legal issues into technical issues, and resolving contradictions and disputes through technical means can be deemed as the scientific value orientation of social governance mode [14]. Therefore, fixing the forensic identification management system, establishing a national medical examiner office, and highlighting the authority, neutrality, and commonweal of forensic identification conform to the current reform concept of forensic identification management mechanism, and also to the value orientation of social governance in the new era.

### **5.2 In line with the direction of domestic judicial reform**

At present, China is vigorously advancing the trial-centered judicial reform. The new judicial reform puts forward higher requirements on the acquisition, confirmation, and review of evidence. As one of the statutory evidence types, the authentication opinion shall be scientific, efficient, authoritative, and neutral to the minimum. There is still a big gap between the above basic requirements and the current forensic identification quality in China. According to information released by Jiangsu Higher People's Court, the court stopped entrusting 54 forensic identification institutions on November 12, 2019. The identification work of 215 cases undertaken by these institutions under the entrustment of courts at all levels in Jiangsu Province was seriously overdue [15]. Some of the "overdue" and "low-efficiency" identifications are caused by insufficient attention to the cases entrusted by the courts, and for some cases additional identification materials are repeatedly being requested, which seriously hinders the efficiency of the trial. The authority also needs to be improved urgently. According to the survey results of Institute of Litigation Law Research of China University of Political Science and Law on the practicing situations of forensic identification in Beijing in 2015, the overall evaluation of the identification industry by the society tends to be neutral, with a satisfaction rate of only 10.24%. The satisfaction level of different legal occupational populations with the professional activities of forensic medicine is relatively low [16]. In addition, the problems of repeated identification and multiple identification are more prominent. Therefore, in the context of "overall law-based country governance in an all-round way," we should follow the current judicial reform direction to build an efficient, authoritative, neutral, and unified forensic identification management system tailored to the needs and conditions of the Chinese society.



### 5.3 Meet the needs of public security management

In 2019, the *Opinions on Strengthening Scientific and Technological Innovation to Support the Construction of Safe China* reviewed and approved at the 10th Meeting of the Central Committee for Comprehensive Deepening Reform highlighted the promotion of the construction of Safe China, giving full play to the supporting and leading role of scientific and technological innovation. It also highlighted the importance of strengthening basic research and key technology research, special equipment and application demonstration research, deepening intelligence capabilities, and enhancing social governance. Forensic technology may enable us to utilize deoxyribonucleic acid (DNA) and other technologies to track, investigate, and identify terrorists; identify victims; and detect explosives and toxic and harmful substances in anti-terrorism activities. In the civil sphere, owing to technological advantages, forensic medicine can play a unique role in the prevention and treatment of natural disasters and public health events such as earthquakes, mining disasters, shipwrecks, explosions, major traffic accidents, and major epidemics. This shows that the construction of social security management is inseparable from forensic technology support, and the national strategic demand for forensic technology requires a coordinated layout of forensic identification management.

### 5.4 The unique management system in China provides a security for the administration mode of medical examiner office

The political system in China has unique political and organizational advantages. At present, the self-established internal identification institutions due to the investigation needs mainly involve three departments: public security, procuratorate, and the Ministry of National Security. These departments are under the united leadership of Central Political and Law Commission. From an administrative viewpoint, the administrative risk of a unified forensic identification management system is relatively low. According to the Statistical Annual Report 2017 issued by the Administration of Judicial Identification, the Ministry of Justice, among the social identification institutions administrated by the judicial department, the “four major categories” of institutions established by relying on health departments, educational institutions, and scientific research institutions accounted for 63.05%, and the three provinces with the highest proportion are Henan (99.47%), Hebei (87.59%), and Liaoning (87.50%). Therefore, the establishment of a real-sense unified forensic identification management system has political guaranty from the perspective of administrative management.

## 6 Suggestions on the administration mode of medical examiner offices

### 6.1 Operation mechanism of the medical examiner offices

According to the status quo of forensic identification in China, it is necessary to: 1) establish a unified forensic identification institution that takes scientific research institutes as the core, integrates the existing forensic resources of various departments, and makes use of existing forensic professional talents, which is independent of the public security, procuratorate and court systems; 2) establish technical institutions of medical examiner offices (non-profit institutions) at national, provincial, and municipal levels; and 3) set up branches of prefecture-level city medical examiner offices in all county-level administrative areas, and 4) formulate the evaluation system and standards of three-level forensic medical examiner offices in accordance with the law. All levels of medical examiner offices are subject to the management and supervision of judicial administrative departments of governments at all levels, changing the current situations of decentralized forensic identification institutions and non-concentrated resources. The director of the medical examiner office shall be appointed by the local government and must function in alignment with the national medical examiner office. The medical examiner office is a national technical identification institution under the administration of the government and is fully appropriated by the state finance.

### 6.2 Main functions of the medical examiner offices

(1) Forensic identification: Responsible for on-site investigation, autopsy, identification of injury degree, disability assessment of traffic accidents, and major work-related accidents involving personal injuries and deaths in various criminal, civil, administrative, and other cases as well as the judicial psychiatric medical identification, individual identification of biological evidence, and kinship identification, poison test, drug identification, medical damage identification, and other technical works.

(2) Scientific research and professional title evaluation: Strengthen the R&D of forensic professional technology as well as the fundamental and applied research related to forensic medicine. Relevant departments of the national government may authorize state-level medical examiner offices to organize subordinated medical examiner offices to participate in forensic medicine academic exchanges in China and abroad, conduct unified examinations and assessments of forensic professionals, and issue forensic physician certificates. Formulate professional title evaluation standards for forensic technicians and undertake professional title evaluation.

(3) Formulation of forensic identification system and standards: Formulate and revise various rules and regulations of forensic medicine work as well as necessary forensic identification standards and norms. At present, due to the decentralization of forensic identification management departments, there is no real unified management mechanism. The standards formulated by various departments for unified identification matters are not the same, which seriously affects the authority and efficiency of judicial activities.

(4) Training of forensic talent: Due to the short study time in current five-year undergraduate education of forensic medicine in China and the unreasonable knowledge structure and insufficient technical ability of graduates, the graduates of some colleges and universities cannot adapt well to the needs of forensic judicial practice. The establishment of medical examiner offices can better coordinate forensic talent training mode, provide organizational guaranty for the cultivation of expert-type and business-type talents, and thoroughly solve the bottleneck constraints of forensic medicine in talent cultivation.

## References

- [1] Huo X D. Forensic identification management is the unity of social management and public services [J]. Justice of China, 2011 (9): 94–96. Chinese.
- [2] Chang L. Who is the “gate-keeper” of expert opinions? [J]. Evidence Science, 2010, 18 (5): 618–632. Chinese.
- [3] Judicial Authentication Bureau of the Ministry of Justice. Observation and application of the Judicial Authentication System of the Two Law System [M]. Beijing: China University of Political Science and Law Press, 2008. Chinese.
- [4] Chen R C. The direction and logic of the reform of the forensic authentication management system [J]. Chinese Journal of Law, 2016, 38 (1): 187–208. Chinese.
- [5] Huo X D. Research on unified management mechanism of forensic authentication [M]. Beijing: Law Press, 2017. Chinese.
- [6] Chen Y S. Perspective of China’s criminal misjudgment: Analysis based on 20 criminal wrong cases that shocking the Country [J]. China Legal Science, 2007 (3): 45–61. Chinese.
- [7] Guo H. History and interpretation of the implementation opinions on perfecting the unified judicial authentication management system [J]. Chinese Journal of Forensic Science, 2017 (5): 1–7. Chinese.
- [8] Judicial Authentication Administration of the Ministry of Justice. Brief report about the judicial authentication [R]. Beijing: Judicial Authentication Administration of the Ministry of Justice, 2015. Chinese.
- [9] Dang L Y, Zhang X L. Statistical analysis of national forensic authentication in 2017 [J]. Chinese Journal of Forensic Science, 2018 (3): 96–100.
- [10] National Natural Science Foundation of China. Announcement on the announcement of the evaluation results of the National Natural Science Foundation of China in 2019 [EB/OL]. (2019-08-16) [2019-12-21]. <http://www.nsf.gov.cn/publish/portal0/tab442/info76217.htm>. Chinese.
- [11] National Institute of Justice. National Institute of Justice’s “2019 National Institute of Justice Funding List” [EB/OL]. (2019-12-20) [2020-04-15]. [https://nij.ojp.gov/funding/awards/list?field\\_award\\_status\\_value=All&state=All&field\\_fiscal\\_year\\_value=2019&-combine\\_awards=&awardee=&city=&sort\\_by=field\\_fiscal\\_year\\_value&sort\\_order=DESC](https://nij.ojp.gov/funding/awards/list?field_award_status_value=All&state=All&field_fiscal_year_value=2019&-combine_awards=&awardee=&city=&sort_by=field_fiscal_year_value&sort_order=DESC).
- [12] Wang H J. Thinking about the construction of grassroots public security forensic team [J]. Journal of Forensic Medicine, 2015, 31 (4): 314–316. Chinese.
- [13] Li Y M. Transformation of China’s social governance (1978—2018) [M]. Beijing: Social Science Academic Press, 2018. Chinese.
- [14] Huo X D, Sheng X L. Let science and technology speak for justice [M]. Beijing: Science and Technology of China Press, 2013. Chinese.
- [15] Gu M. 54 forensic authentication agencies in our province were cleaned up for the first time [N]. Xinhua Daily, 2019-11-13, (03). Chinese.
- [16] Fan C Y, Ruan N. Social investigation report of Beijing forensic authentication industry [J]. Justice of China, 2016 (9): 54–59. Chinese.