

# ***Research on the Rule of Law Path of Personal Credit System in the Context of Digital Finance***

**Chengle Shu<sup>1,a,\*</sup>**

<sup>1</sup>*Kunming University of Science and Technology, Kunming, Yunnan Province, 650500, China*

*a. shuchengle@stu.kust.edu.cn*

*\*corresponding author*

**Abstract:** With the continuous development of society, big data, cloud computing, and other financial technologies have been applied to financial credit. Some “algorithmic black box” inherent in big data and other problems have been brought by those technologies to the governance of personal credit systems. At the same time, due to the imperfection of China's current legislation and evaluation standards in the personal credit field, it is difficult to protect the personal credit of citizens. Compare with China, some Western countries, such as the USA have achieved better results in the field of personal credit. Therefore, through drawing lessons from overseas’ successful experiences, and connecting with Chinese real conditions, this paper tries to propose a sound personal credit system by applying the principle of “minimum necessary”, clarifying the boundary between personal privacy and credit information collection, and establishing and improving the remedial and supervisory system of the personal credit system.

**Keywords:** digital finance, personal credit, legal suggestions

## **1. Introduction**

Digital finance, as a new model of financial inclusion, is a combination of digital technology and the financial sector. Digital finance utilizes many digital financial technologies such as big data analysis, virtual reality, and mobile Internet to greatly extend the scope of services in the financial field and make financial services more accessible [1,2]. In financial activities, it is essential to confirm that both parties involved in the transaction have good credit standing. This is one essential part of the core of financial risk valuation. In the era of big data, fin-tech companies use big data analysis and artificial intelligence to redefine credit scoring by establishing credit risk assessment models, which effectively fit the development of digital finance and credit system and greatly enhance the richness of basic data and improve credit quality [3].

There are few studies on personal credit in China so far, and even fewer studies combined with digital finance. The credit system is a basic factor in economic transactions, and the development of the digital economy also depends on the improvement of the credit system. Credit subjects are mainly divided into three categories: individuals, banks, and enterprises. Personal credit refers to a person's behavior of obtaining expected capital or solvency from financial institutions through credit [4]. Personal credit is the credit foundation of the whole country. Not only is it the basis of whether a country can effectively carry out the optimal allocation of resources and promote social consumption fruitfully, but also it is the basic guarantee of the country's economic development. Besides, it is the

premise of promoting good economic development [5]. Corporate credit includes forms such as debits, payments, and payment instruments, and its instruments constitute the majority of products traded in the market [6]. Bank credit refers to the credit provided by banks as financial intermediaries in the form of money for their customers [7]. The existing research that combines credit and digital finance are mostly in the field of bank credit, and the research on enterprise or individual credit is less and more in the exploration stage. What's more, the development of China's personal credit system is not perfect at present, and the relevant legislation is not yet clear, so the protection of personal credit is lacking, and the disciplinary system for personal credit failure also needs to be improved and developed.

This essay uses the personal credit evaluation model and personal credit as two paths of discussion to synthesize the experiences of China and some Western countries such as America on the legal regulation and protection of personal credit system in the context of digital finance and tries to provide feasible suggestions for promoting and improving the development of China's personal credit system.

## **2. Personal Credit Systems in the Digital Finance**

### **2.1. Definition of Personal Credit System**

A personal credit system is a system that centralizes personal credit information scattered among major enterprises, financial institutions, and government departments to form a personal credit file [8]. In the context of digital finance, credit agencies use blockchain, big data, cloud computing, and other technical means, and adopt data crawling and data mining technologies such as "crawlers", which can achieve full coverage of data collection in a short period, effectively avoiding the omission of personal information and providing data support for making an accurate assessment of personal credit. It provides data support for the accurate assessment of personal credit. At the same time, the current personal credit models use reasonable algorithms to evaluate the credit status of individuals or enterprises, which greatly facilitates the credit assessment of individuals by credit agencies. As a result, personal credit models with fin-tech attributes have become an indispensable hardware core of the credit system.

### **2.2. Characteristics of the Personal Credit System in Digital Financial**

The personal credit system in the digital financial era is mainly known for its high technicality and high coverage. In 1958, discriminant analysis was used in the first truly modern commercial credit scoring system, FICO [9]. Subsequently, the KNN algorithm (proximity algorithm) proposed by Cover and Hart in 1967 [10], the decision tree algorithm invented by Breiman et al. in the 1980s [11], the Theory of random forest algorithms proposed by Breiman in 2001, and so on have continuously developed and improved the personal credit model [12]. At the same time, the personal credit system in the era of digital finance gives full play to the data capture and analysis technology of big data and so on to achieve high coverage of personal credit information in a short time. The ZestFinance personal credit scoring model developed by the U.S. fin-tech company extracts 70,000 variables from 3,500 data items and uses 10 predictive analysis models for training and learning to analyze the credit status of consumers [13].

### **3. Existing Problems of the Personal Credit System in Digital Finance**

#### **3.1. The Problem in Technical Aspects**

##### **3.1.1. Risk of Leakage and Tampering of Personal Information Security**

The information data used by big data credit agencies is often widely sourced and unscreened, and there is no way to know whether it contains information that is prohibited or restricted from being collected. At the same time, it is difficult to have authorization for the collective subject. To reduce operating costs and obtain a more accurate credit profile, big data credit agencies often obtain authorization from information owners through hidden format clauses, such as "strong authorization" and "implied authorization," or even through "hacking", private sale and other illegal ways to obtain personal information. This is the reason why private information is easy to let out. Therefore, the massive collection method of this kind of information data itself is a great crowding of the private space of credit subjects, and privacy protection becomes more difficult. What's more, with the development of information technology and the intrinsic relationship of the financial industry becoming closer, personal information data may be leaked and tampered with in the cross-validation between different agencies, as the data storage and protection capabilities of credit agencies vary. This phenomenon is called "all losses" in China when facing hacking and other security threats, which are detrimental to financial stability [14].

##### **3.1.2. Risk of Algorithmic Discrimination in the Digital Credit System**

With the integration of technologies, many time and space barriers have been broken and the financial sector has developed by leaps and bounds. But at the same time, financial technologies bring the threat of network information security and information asymmetry. Here is an example. Big data helps financial institutions or fin-tech companies to form a comprehensive credit profile by using data from users in social software, e-commerce platforms, bank loans, and so on. However, as different factors present different probabilities of good or bad credit, "algorithmic discrimination" arises when data that have little impact on credit factors are input. At the same time, as the algorithm of the personal credit model is only known and understood by the algorithm designer, i.e. "algorithm black box" phenomenon, coupled with the restrictions of commercial confidentiality, the actual authenticity of personal credit information is difficult to be guaranteed.

#### **3.2. Legal Risks**

##### **3.2.1. The Current Scope of Personal Credit Evaluation is Generalized**

At present, the scope of personal credit evaluation in China is uncertain, and laws and regulations or policies do not clearly specify the specific types of information to be included in the collection of credit information. This means credit agencies have great autonomy in collecting personal information, and the protection of personal information is inadequate [15]. Therefore, some credit bureaus often define the scope of personal credit information collection by themselves to obtain a more complete credit portrait of individuals. Besides, they include a variety of information that is actually irrelevant to credit collection to facilitate the analysis and prediction of individuals' credit status by big data or artificial intelligence at the same time. Such behavior often leads to the emergence of the problem of "pan-credit", making it difficult to protect the security of personal information and the situation of "naked" information.

What's more, China's personal evaluation standards are not yet clear, and the legal positioning is unclear now. There is no special law regulating the personal credit industry in China at present, and

most of the legislation on personal credit is local regulations or local government regulations, which are relatively low in legal effect and have limited legal effect, chaotic, and scattered, so it is difficult to play a comprehensive role in adjusting and regulating the personal credit system and the social relations involved. As a result, each credit agency has great autonomy and flexibility in the evaluation of personal credit, often forming its system in the evaluation process, and producing widely different and not very comparable evaluation results, which is not conducive to the promotion of personal credit system nationwide and the convergence with international industry [16].

At present, China's personal credit evaluation standards vary greatly between regions, and there are too many matters linked to credit, resulting in the problem of "generalized credit". Since 2019, some places have also launched their own "local credit score", such as Suqian's "Xichu score" and Hangzhou's "Huixin score", etc. The evaluation criteria of credit scores vary from place to place, and some even include various social performances in the statistics, which are directly linked to school enrollment, employment, social assistance, and so on. During the epidemic, many places in China classified concealing the history of epidemic disease, exposure history, and deliberately not wearing masks in public places as a breach of trust just for social management and collected them in the national credit information platform [17]. It is questionable whether the above-mentioned behaviors can be attributed to breaches of trust, and whether the evaluation criteria of "pan-credit" is an illegal squeeze on the legitimate rights and interests of individuals. Although the above-mentioned regions are trying to optimize the social credit environment, they are not rigorous enough in dealing with personal credit, but subjective and arbitrary enough to make credit management a pocket of social governance. As too many matters are linked to credit, it eventually leads to the problem of "pan-creditization" and squeezes the rights of the public.

### **3.2.2. The Strength of Personal Disciplinary Measures for Breach of Trust is not in line with the Principle of Adaptation of Crime and Punishment**

With the increasing degree of social importance, the disciplinary measures for breach of trust can sometimes reach the standard of administrative punishment or even criminal law. In some special cases, the disciplinary measures even go beyond the scope of administrative law and criminal law, the most typical of which is the blacklisting of defaulters, and travel and consumption will be seriously restricted.

These measures in China do not have strict boundaries for the division of this measure into applicable laws so far. From the perspective of the measures, China's current disciplinary measures for breach of trust are similar to administrative penalties and are more oriented to administrative law at the level of protection of legal interests. However, the current practice of linking disciplinary measures for breach of trust with measures to protect people's livelihood such as restrictions on applying for public office, enrolling children in school, and social assistance in some regions evidently violates the "principle of proportionality" in administrative law. That scope of disciplinary action for breach of trust is not clearly linked to the direct behavior of the perpetrator and does not necessarily become the only measure to punish and the least damage the perpetrator for breach of trust. What's worse, it unreasonably restricts the rights and interests of citizens, causing damage to other rights and interests of citizens. At the same time, the penalty of restricting children's schooling violates the "principle of responsibility" and does not strictly define the person responsible for the violation. There are also some regions to restrict personal freedom into the disciplinary measures for breach of trust, which disciplinary strength is comparable to the criminal law. However, China's criminal law does not make relevant provisions on disciplinary action for breach of trust, to restrict the personal freedom of individuals for breach of trust its punishment is too heavy, and not in line with the "crime and punishment" principle.

### **3.2.3. The Legitimate Rights and Interests of the Defaulters cannot be Effectively Remedied**

From the above discussion, it can be seen that there is no clear legal provision for the disciplinary mechanism of individual breach of trust in China, thus giving rise to the situation that its disciplinary boundaries and strength are unclear. The measures in some regions even make the disciplinary strength of individual breach of trust exceed the strength of penalties in criminal law, which brings a great threat to the human rights protection of individuals. In January 2013, the State Council officially issued the "Regulations on Credit Industry Management". This is not only the first administrative regulation of credit industry in China, but also the most effective law and regulation promulgated in China after the goal of building a social credit system. Article 26 of the Regulations on Credit Industry Management provides that "If an information subject believes that a credit agency or information provider or information user has infringed upon its legitimate rights and interests, it may file a complaint with the agency dispatched by the credit industry supervision and administration department of the State Council in its location." Although the promulgation of the Regulation provided legal protection for some credit rights, it did not protect the relevant rights from the perspective of credit interests. In July 2019, the General Office of the State Council issued the "Guidance on Accelerating the Construction of Social Credit System to Build a New Credit-Based Regulatory Mechanism", which sets out the requirements for building a new credit-based regulatory mechanism. And it is proposed that "if the legitimate rights and interests of a market subject are harmed by the wrong identification of the list of targets for joint disciplinary action for breach of trust or the wrong adoption of joint disciplinary measures for breach of trust, the relevant departments and units shall actively take measures to eliminate the adverse effects." However, due to the lack of widespread social awareness and a considerable number of real-life cases, the protection of credit rights and remedies still remain more at the level of academic research. In the Supreme People's Court's "Judgment Document Network", there are only 116 judgment documents involving credit rights, which is obviously not proportional to the hundreds of millions of credit management activities. Although many laws, regulations and policy documents provide remedies for individuals whose rights and interests related to credit rights have been infringed, there are no specific regulations on the operation of these remedies. Take the Regulations as an example, the avenues of relief they provide include filing objections with credit bureaus, filing complaints with credit industry supervision and administration departments, and filing lawsuits with the people's courts. However, the Regulations only stipulate the time limit for handling objections and complaints, but there are no relevant regulations on the handling process and standards [18]. Thus, it can be seen that the legitimate rights and interests of defaulters are still not sufficiently remedied.

### **3.2.4. Failure to Adequately Regulate Personal Credit Bureaus**

At present, the legal provisions for the supervision of credit agencies in China are unclear, the unified supervision is reasonably insufficient, and the overall financial regulatory system is relatively lagging. Chinese traditional financial regulatory system is based on the mode of sectoral regulation, with each regulator supervising a subdivision of the financial industry or financial products. Due to its strong interconnection and wide coverage, digital finance requires multi-departmental supervision, and a single regulator can no longer meet the need for comprehensive supervision. The existing regulatory policies on digital finance are just a shadow of real development, and there is a certain lag in the regulation of digital finance [16]. While developed countries like the United States have generally established a relatively complete and sound legal system for the supervision and management of credit agencies, China has neither unified and clear legal provisions nor a sound credit management system and lacks an effective mechanism for monitoring and punishing violations by collection

agencies. There is the phenomenon of multi-headed management, which has not formed a regulatory synergy to exercise unified management of the whole industry.

#### **4. Suggestions for the Rule of Law of Personal Credit System in the Context of Digital Finance**

##### **4.1. Clarify the Rules for Collecting Personal Information in the Collection of Credit Information**

In response to the issue of the relationship between personal privacy and credit information, the Gramm-Leach-Bliley Act and its supplemental rules, passed by the U.S. Congress in 1999, specifically addressed privacy issues. The Freedom of Information Act and the Federal Advisory Committee Act regulate the disclosure of government information, and the Privacy Act, the Financial Privacy Rights Act, the Privacy Protection Act, and the Telecommunications Act provide a legal system to protect personal privacy. Germany's Federal Data Protection Act regulates the collection, processing, and use of personal credit information and the use of credit reports by credit bureaus and specifies the legal rights of data subjects such as the right to information, the right to correction, and the right to remedy damages [19].

Based on this, this paper proposes the following recommendations: First, the law should clarify the scope of collection, processing, and use of personal credit information by credit bureaus, not to excessively restrict the scope of credit information collection nor to "generalize" credit information. What's more, it should clarify the boundary between personal privacy and credit information and give individuals the legal rights to decide whether their personal information can be collected, such as the right to informed consent and the right to remedy. Besides, credit bureaus are prohibited from collecting too much information that is not related to the credit evaluation of individuals by force, so as to protect the privacy of individuals. Second, when collecting personal information, credit bureaus should follow the "principle of minimum necessity" and should not excessively collect personal information that is not necessary, especially for private information. In particular, they should fully consult with the right holders and obtain their explicit consent for private information, instead of forcing them through "invisible" format clauses.

##### **4.2. Improve Personal Credit Evaluation System**

Discipline for breach of trust is one of the core elements of the personal credit system, and it is also a high-incidence area of conflict between public power and private rights. The legislation in the field of personal credit should follow the statutory principle, and the standards of disciplinary measures, types of measures, statutory subjects, statutory procedures, and related rights relief mechanisms should be clarified through legislation. In particular, the types, categories, magnitudes, and procedures of disciplinary measures for breach of trust are closely related to the public [20]. The Fair Credit Reporting Act and the Equal Credit Opportunity Act, which are part of the U.S. credit system legislation, specify the rights of consumers in credit activities and the obligations of credit bureaus and credited persons to ensure the truthfulness and validity of the information. In particular, the Equal Credit Opportunity Act provides for possible "algorithmic discrimination" by credit bureaus in the credit granting process. The Act and its supplemental rules not only strictly limit the rights of credit information users to use the information, but also protect consumers' access to equal credit opportunities by imposing civil liability on credit bureaus for consumers whose rights are damaged [21].

Based on this, this paper proposes the following recommendations: First, the Chinese government should accelerate the construction of credit legislation, clarifying the criteria for personal credit evaluation, reducing the problem of "pan-credit" caused by the government's excessive subjectivity

in social governance, clarifying the boundary between public power and personal privacy, and prevent the intrusion of public power into private rights. Second, clarify the principle of proportionality. Disciplinary measures should be taken to minimize the damage to private rights and there is no other way to punish defaulters, limit the infringement of private rights by public power to the maximum extent, and establish a fair and reasonable disciplinary mechanism for default. For those serious or particularly serious breaches of trust, the relevant authorities and organizations can take disciplinary measures for breach of trust with the nature of derogation or restriction of rights according to the law, but they should pay attention to the "principle of proportionality" to prevent the abuse of public power; for those with moderate breach of trust, the relevant departments can take measures to strengthen credit management, increase the frequency of inspection, etc. As for the low-intensity credit management measures to discipline; for minor violations of the breach of trust, the use of its degree of violation of the appropriate admonition, prompting, and other ways to urge the perpetrator of the breach of trust to correct [22].

#### **4.2.1. Strengthen the Protection and Relief of the Legitimate Rights and Interests of Defaulters**

The relief measures for personal credit in China are still not perfect so far. Some credit agencies often over-collect information of the credited persons in order to make a more accurate portrait of the credited persons, and the credited persons are often difficult to recognize or in a passive position to accept the "invisible" format terms listed by the credit agency due to the lack of understanding of the scope of personal credit and the lack of knowledge of relevant laws. The credit agencies are often difficult to recognize or passive to accept the "invisible" format clauses listed by them. At the same time, the remedies for personal credit loss in China are not yet clear, and individuals are prone to fear of public power when seeking remedies, making it impossible for their rights to be protected. The U.S. credit regulators impose severe penalties for violating users' credit information. Here is an example. The Federal Trade Commission (FTC) has imposed huge fines on Experian, Equifax, and TransUnion for not allowing consumers to access their credit information. Although Equifax claimed that it was hacked and took measures such as free inquiries and credit freezes in the first place, the agencies still held it primarily responsible and accepted the fines [15].

Based on this, the following recommendations are made improve the relief system for credit-violated people, provide clear legal provisions for the right relief path after disciplinary action with defaulters, fully protect the legitimate rights of defaulted people, and appropriately limit public power. In addition, the protection of the interests of the infringed person should be implemented in a visible way, such as the establishment of a perfect right remedy and compensation mechanism. In view of the fact that the creditworthiness of an individual presented in the credit report not only has an impact on the amount of benefits an individual receives in financial activities, but also has a certain impact on its acceptance in social life, and the damage is irreversible. The damage is irreversible. The credit default disciplinary action causes not only the economic loss caused by the credit reason in the financial activities, but also the mental loss caused by the infringement on the reputation right, etc. Therefore, China should set up a set of perfect right remedy compensation mechanisms so that the legitimate rights and interests of the infringed person can be reasonably recovered when they are infringed.

#### **4.3. Improve the Regulatory Mechanism of Personal Credit System**

At the moment, China's personal credit system's supervisory mechanism is far from perfect. In this sense, the United States government primarily governs the behavior of each credit participant through legislation and oversees the operation of the credit system through supervisory departments established by various rules. The U.S. does not have a special credit industry regulator, but the federal

government's regulatory authority is dispersed among various departments, and its regulatory functions are given with the development of the credit industry and the formulation of laws, such as the Federal Trade Commission (FTC), the Department of Justice (DOJ), the Federal Reserve System (FRS), etc. When consumers' rights are violated, they can choose to complain to government regulators and seek judicial remedies; in the meantime, the Associated Credit Bureaus, Inc. (ACB), National Association of Credit Management (NACM), and other industry associations work with administrative supervisory departments, which primarily check the compliance of regulated persons and impose punishment for violations, to ensure the financial industry's healthy development in accordance with the law. The EU countries, on the other hand, provide strong protection for personal information through the establishment of special governmental supervisory bodies such as central banks. EU countries require public credit agencies to take appropriate protection measures when handling personal data, disclose their operation process, and be pre-approved or registered [21]. However, such public credit market also has major drawbacks, namely, the database construction required for public credit is extremely demanding in terms of capital and the relatively high cost of maintaining the operation of the system, thus requiring a high level of a country's comprehensive strength. At the same time, countries that build public credit markets pay more attention to national financial security and have stricter financial supervision, having more constraints on commercial credit agencies, so it is difficult to promote the comprehensive development of personal credit market on a large scale, which in turn may affect the development level of a country's credit economy to a certain extent, and then affect the level of economic development of the whole country.

Based on this, this paper proposes the following suggestions: first, to regulate the behavior of each credit card player by law and supervise the operation of the credit card system by regulatory authorities authorized by various laws and regulations. Secondly, we encourage the establishment of third-party credit agencies and decentralize them to form a supervisory synergy with the national financial regulators. Due to the need for national financial security construction, China's financial supervision should take stricter measures, therefore, while decentralizing the third-party credit agencies, they should be subject to the government's prior administrative license.

## 5. Conclusion

As the most extensive credit system compared with the enterprise and bank credit system, the personal credit system is closely related to the public and plays a pivotal role in the development of digital finance. The complete establishment and good regulation of the personal credit system not only helps prevent risks in finance but is also an inevitable requirement for stabilizing the financial order and improving economic development. Accelerating the development of relevant financial technologies, promoting the establishment of scientific and fair personal credit evaluation models and relevant legal regulation, improving the personal credit evaluation system and the regulation and legal remedies for the personal credit system are the inevitable trends for the continuous improvement of the development of the personal credit system in the context of digital finance.

## References

- [1] Gomber P, Kauffman R J, Parker C, et al.: *On the fintech revolution: Interpreting the forces of innovation, disruption, and transformation in financial services*, *Journal of management information systems* 35(1), 220-265 (2018).
- [2] Chen Caiyun, Lin Xiong: *Digital Finance Development and Enterprise Financialization*. *China Journal of Commerce* 876(05), 123-126 (2023).
- [3] Yao Mei.: *A Study on Legal Issues of Global Governance of Fintech*. Shanghai Jiao Tong University (2020).
- [4] Liu Jing.: *Research on the Role of Industry Boom in Enterprise Credit Risk Assessment*. Shandong University (2022).
- [5] Liu Tiegang.: *Research on Customer Credit Evaluation of \*\*County Rural Credit Cooperatives*. Beijing Jiao Tong University (2017).

- [6] Chen Yuan.: *Credit and Capital - A Study of Development Finance*. *New Finance Review* (02), 1-13 (2020).
- [7] Cui Ling.: *Research on Financing Model of Small and Medium Enterprises Based on Financing Efficiency --- Taking Qingdao City as an Example*. *Qingdao University* (2017).
- [8] Yang Aixin.: *Financial Operation Urgently Needs Support from the Social Credit System*. *China Business Daily*, 01(2002).
- [9] FAIR I.: *Demystifies FICO Scores*. *Community Banker* (09), 14 (2000).
- [10] COVER T M, HART P E.: *Nearest Neighbor Pattern Classification*. *IEEE Transactions on Information Theory* 13(1), 21-27 (1967).
- [11] BREIMAN L.: *Bagging predictors*. *Machine Learning* 24(2), 123-140 (1996).
- [12] BREIMAN L.: *Random Forests*. *Machine Learning* 45(1), 5-32 (2001).
- [13] Liu Xinhai, Ding Wei.: *Big Data Credit Reporting Practices of ZestFinance in the United States*. *Credit Reference* 33(8), 27-32 (2015).
- [14] "The Importance of Addressing Cybersecurity Risks in the Financial Sector", <https://www.newyorkfed.org/newsevents/speeches/2015/dah150324>, last accessed 2019/7/23.
- [15] Chen Yuheng.: *On the Criminal Law Regulation of the Infringement on the Personal Credit Reporting Information in the Big Data Era*. *Credit Reference* (04), 36-41 (2019).
- [16] Tian Xiaoli, Li Pengyan, Liu Dai.: *Credit Risk Assessment and Prevention of Digital Finance in the Context of Big Data*. *Hebei Finance* (08), 20-22+33 (2021).
- [17] Wang Juezhe, Pan Ye.: *The Worry of "Basketing" of Breach of Trust*. *Consultative Forum* (08), 38-40 (2020).
- [18] Yu Yin-Tong.: *Research on the Reconstruction and Protection of Credit Rights Based on Social Credit System*. *China Credit* (06), 112-120 (2021).
- [19] Wang Zhipeng.: *Research on China's Personal Credit Market System*. *Hunan University* (2017).
- [20] Wang Wei.: *Research on the Typology of Disciplinary Measures for Breach of Trust---And the Design of Rules for Social Credit Law*, *Academic Journal of Zhongzhou* (05), 48-49 (2019).
- [21] Long Haiming, Wang Zhipeng.: *China's Personal Credit System - Model Selection and Market Operation*, *China Social Sciences Press, China* (2022).
- [22] Wang Wei.: *On the choice of legislative model of social credit law*. *China Legal Science* (01), 228-247 (2021).