

Research on Evolution and Trends of Inclusive Finance Research in China

Xiao Liu^{1,a,*}, Yan Chen^{1,b}

¹Guangxi Normal University, Guilin, China

^a2945008175@qq.com, ^b1138030037@qq.com

*Corresponding author: 2945008175@qq.com

Abstract: *The article employs a dataset comprising 3,897 Chinese Social Science Citation Index (CSSCI) journals and Peking University Chinese core journals from 2006 to 2023. It utilizes CiteSpace 6.1.R6 bibliometric software to conduct authorship analysis, research institute analysis, keyword co-occurrence analysis, and clustering analysis. Since the introduction of inclusive finance to China, particularly after the Third Plenary Session of the 18th Central Committee, researchers have noted a significant rise in outputs on inclusive finance within the domestic academic community. However, a core group of authors with a consistent presence has yet to emerge, and collaboration among authors of published articles and the institutions they represent remains limited. Scholars engage in intensive research on the inclusive financial system, its effects, and related topics. Financial technology, digital finance, rural finance, rural revitalization, and economic growth stand out as the most prominent areas of inquiry within the field of inclusive finance. In light of these findings, the article presents recommendations and future directions for inclusive finance research.*

Keywords: *financial inclusion; research hotspot; Citespace; knowledge graph*

1. Introduction

It is widely accepted that the concept of financial inclusion has been a prominent topic of discussion within the international community since 2005. This movement began with the United Nations, which called for the establishment of an inclusive financial sector to promote the International Year of Microcredit. Subsequently, the idea of inclusive finance has been introduced to China and has become the subject of ongoing popularization and development (Guo Tianyong and Ding Xiao, 2015)^[1]. The Third Plenary Session of the 18th CPC Central Committee formally proposed the "development of inclusive finance," marking a significant turning point in its development in China. Additionally, research results related to inclusive finance have experienced a remarkable surge in growth (Peng Baoyu et al., 2023)^[2].

Currently, scholars in China have conducted theoretical analyses and empirical research on inclusive finance from various perspectives, including system construction (Jiao Jinpu, 2010; Du Xiaoshan, 2010)^{[3][4]}, utility (Song Xiaoling, 2017)^[5], regional differences (Lu Fengzhi et al., 2017)^[6], and others. These studies have yielded valuable insights and contributed to advancing knowledge in this field. Nevertheless, as research advances—particularly after the integration of inclusive finance and digital technology—this sector has achieved "leapfrog" development. However, recently, small and medium-sized financial institutions have faced risks and ongoing challenges, causing the development of inclusive finance to encounter obstacles once more. It is now essential to conduct a comprehensive review of the existing literature on inclusive finance to gain a clear understanding of its development and current status. In light of this, this paper employs the CiteSpace 6.1.R6 bibliometric tool to visualize and analyze pertinent studies following the introduction of inclusive finance in China. This aims to visualize its research progress and identify current research hotspots through knowledge mapping. The objective is to propose potential future research topics that could inform the ongoing development of inclusive finance research.

2. Analytical methods and data sources

2.1 Methods of analysis

Bibliometrics is a quantitative method that employs statistical and visual analysis techniques to examine the research areas of a specific field at a certain time. It aims to identify the most relevant and evolving research topics within that field and to map the connections between them. When combined with knowledge mapping, bibliometrics provides a comprehensive overview of existing research results within a given field, allowing for the identification of potential future trends (Chen Yue, et al., 2015)^[7]. Given the extensive scope of domestic research on financial inclusion, systematically sorting and summarizing its various topics proves inherently challenging. In light of the tool's ability to facilitate technological processing and provide an intuitive display of textual information, CiteSpace 6.1.R6 was selected as the information visualization tool for this paper.

2.2 Data sources

In this study, the Chinese Social Science Citation Index (CSSCI) journals and Peking University Chinese core journals served as data sources. The subject term "inclusive finance" was used for the search. The concept of "inclusive finance" first appeared during the International Year of Microcredit in 2005 (Jiao Jinpu et al., 2015)^[8]. Thus, we infer that the concept entered China in 2005 or later. Therefore, the publication time range was set from 2005 to 2023, with the search conducted in 2023. The search took place on April 7, 2023, retrieving a total of 3,940 documents. After preliminary data processing, the text data imported into CiteSpace 6.1.R6 for conversion yielded 3,897 valid records. The earliest article appeared in 2006, prompting an extension of the time range to 2006-2023.

3. Statistics and analysis

3.1 Analysis of the temporal distribution of communications

The research on inclusive finance in China has undergone three distinct phases of development: the "starting period", the "accelerating period", and the "high-speed period". The period from 2006 to 2013 represents the inaugural phase of research on inclusive finance in China, during which 177 articles were published. In 2006, Du Xiaoshan's article "Development of Microcredit and Framework of Inclusive Financial System" introduced the concept of inclusive finance to China and outlined the essential elements and prerequisites for developing an inclusive financial system. In that same year, Du's article "The Development of Microfinance and the Framework of Inclusive Financial System" introduced the framework of inclusive finance into the country and proposed the content and requirements for constructing an inclusive financial system. This represents the earliest research result on inclusive finance found in China. The Third Plenary Session of the 18th Central Committee of the Communist Party of China (CPC) explicitly proposed the development of inclusive finance, which initiated a period of accelerated growth in domestic research on this topic. During this phase, the annual average number of publications increased to 188.33, leading to the production of several high-impact articles, including Jiao Jinpu's article "The Development Process and Empirical Research on China's Inclusive Finance", He Dexu and Miao Wenlong's article "Financial Exclusion, Financial Inclusion, and the Construction of China's Inclusive Financial System" and Xing Yan's article "Inclusive Finance: A Fundamental Theoretical Framework". The period from 2017 to the present signifies a phase of rapid growth in research on inclusive finance. This growth aligns with the implementation of the rural revitalization strategy, first introduced at the 19th National Congress, and the issuance of the Guiding Opinions on Financial Services for Rural Revitalization by multiple national departments. During this phase, the number of articles published on this subject increased significantly, averaging 492 articles per year. The annual publication count reached a new peak, with the top three articles having the highest citation frequency all originating from this phase. These include "Measuring the Development of Inclusive Finance in China: Index Compilation and Spatial Characterization" by Guo Feng et al., "Digital Economy, Inclusive Finance and Inclusive Growth" by Zhang Xun et al., and "Can Digital Economy Promote Entrepreneurship? Evidence from China."

3.2 Author-related analysis of publications

A systematic examination of the authors of articles and the collaboration network among them

provides insights into the research ecology of a specific field. By designating the node type as "author", it becomes possible to construct a knowledge graph that represents the co-citation clustering of authors involved in financial inclusion-related research. The number and size of nodes in the knowledge graph indicate the frequency of co-occurrence of core authors, while the number and thickness of links between nodes reflect the nature of cooperative relationships among authors. The knowledge graph of co-citation clustering of authors in financial inclusion-related research includes 536 nodes and 187 connecting lines, with a cooperative network density of 0.0013. Scholars engaged in financial inclusion-related research in China display a relatively dispersed collaboration pattern, with a lack of interdisciplinary connections. Establishing prominent research teams and a recognized leadership structure remains a challenge. Notable authors such as Li Mingxian, Zhou Mengliang, Wen Tao, Zhang Zhengping, and He Guangwen have produced a significant number of publications, generating notable citation bursts that have fostered the creation of relatively stable research teams within a confined geographical area. Guo Feng's team has frequently been referenced for its development of the Digital Financial Inclusion Index and has increasingly become a significant research hub in recent years.

3.3 Issuing agency-related analysis

By designating the node type as "Issuing Institution," one can obtain the knowledge graph for co-citation clustering of issuing institutions engaged in financial inclusion-related research. The nodes and sizes in the graph represent the frequency of co-occurrence of issuing organizations, while the lines between nodes indicate the cooperation status among these entities. The graph comprises 477 nodes and 240 lines, with a density of 0.0021 for the cooperation network. It is evident that collaboration among the issuing institutions is relatively close; however, the degree of collaboration is not substantial, and the distribution appears rather dispersed. There is a lack of widely recognized leading research institutions. Nevertheless, a small core group of institutions displays relatively close cooperation, which includes the School of Economics at Hunan Agricultural University, the School of Finance at Central University of Finance and Economics, the School of Economics and Management at Southwest University, and the Digital Finance Research Center at Peking University. From the perspective of the distribution of issuing institutions, domestic research on inclusive finance primarily focuses on colleges and universities. Notably, although the Digital Finance Research Center at Peking University does not have the highest number of publications, it significantly impacts domestic research in this field. In fact, it has emerged as a research center in recent years, largely due to the influence of the Digital Inclusive Finance Development Index (Guo Feng et al., 2020)^[9], compiled by Guo Feng's team and widely cited.

4. Analysis of research hotspots

4.1 Keyword co-occurrence network analysis

Keywords are succinctly summarized in the main content of the article, and an analysis of the keyword co-occurrence map effectively illustrates the research hotspots and knowledge structure of financial inclusion-related fields. This is a topological network comprising 732 keyword nodes and 2,568 connecting lines, with a density of 0.0096. It is clear that the keywords "financial inclusion," "digital finance," "financial science and technology," "rural revitalization," and "rural finance" rank among the most frequently occurring in financial inclusion-related research, appearing 1,236, 358, 179, 171, and 138 times, respectively. From a temporal perspective, keywords such as "microfinance," "rural finance," and "financial exclusion" emerged relatively early in the field of financial inclusion. In contrast, keywords like "intermediary effect," "heterogeneity," "rural revitalization," and others have only recently gained focus in financial inclusion-related research.

4.2 Keyword clustering analysis

To gain further insight into the knowledge structure of research hotspots related to domestic financial inclusion, researchers clustered and analyzed keywords to create a clustered knowledge map of domestic financial inclusion research. The modularity (Modularity, Q-value) of the keyword clustering topological network is 0.4503, exceeding the threshold of 0.3, thereby demonstrating the effectiveness of the clustering structure. The mean silhouette (Mean Silhouette) of 0.7559 indicates that the clustering exhibits high confidence. The findings show that domestic research on financial inclusion has identified five key clusters: digital finance, financial inclusion, financial technology, credit loans, and microfinance.

Cluster #0: The digital finance cluster consists of three sub-clusters: digital financial inclusion, intermediation effect, and financing constraints. Digital finance compensates for the lack of traditional financial services through technology, data, and innovative financial products. This approach leverages the advantages of "low cost, speed, and wide coverage" to serve the primary beneficiaries of financial inclusion effectively (Huang Yiping and Huang Zhuo, 2018)^[10]. This is the main reason digital inclusive finance has emerged as a solution for financial inclusion in distress. Theoretically and operationally, digital inclusive finance can facilitate regional poverty alleviation through both direct and indirect pathways. Currently, China's approach largely focuses on enhancing financial accessibility directly (Liu Jinyi and Liu Chunyang, 2020)^[11]. Regarding its impact, scholars have conducted rigorous empirical analyses, demonstrating that digital inclusive finance can stimulate income growth by leveraging the mediation effect. Researchers have carried out analyses and empirical tests to verify the role of digital inclusive finance in promoting poverty alleviation via income growth and income distribution (Huang Qian et al., 2020)^[12], as well as in fostering entrepreneurship by increasing the disposable income of urban and rural residents. In 2020, digital inclusive finance was found to narrow the income gap between urban and rural areas, optimize industrial structure, and enhance the level of consumption, thereby improving the consumption structure. Furthermore, a notable degree of heterogeneity exists in the role of digital inclusive finance across regions. This regional heterogeneity is significant (Feng, Yongqi, and Cai, Jiahui, 2020)^[13].

Cluster #1 Inclusive finance includes a range of sub-clusters. These sub-clusters consist of micro and small enterprises, rural finance, internet finance, and rural revitalization. In 2006, Du Xiaoshan presented the fundamental tenets of the World Bank's Poverty Alleviation Group regarding microcredit and service objectives. He also discussed the establishment of an inclusive financial system. This work laid the groundwork for pioneering domestic research on inclusive finance. Additionally, scholars have analyzed the shortcomings of the domestic inclusive financial ecosystem (Meng Fei, 2009)^[14] and emphasized the necessity of developing an inclusive financial system. With respect to the impact of inclusive financial advancement on micro and small enterprises, scholars have conducted extensive research. This research includes an examination of the financing system for micro and small enterprises within the context of inclusive finance (Zheng Zhilai, 2019)^[15]. Scholars have also identified that internet financial innovation financing has emerged as the primary avenue for small and micro enterprise financing (Wang Raoxuan and Wu Ke, 2015)^[16]. Following the surge in interest surrounding P2P lending, it became a prominent research area, yielding several influential articles. However, the nationwide clearance of P2P platforms in 2020 led to a cessation of relevant research. After the introduction of the rural revitalization strategy at the 19th National Congress, scholars expanded their research scope to encompass digital inclusive finance and its role in rural revitalization. This exploration involved mechanisms such as promoting industrial integration and development (He Hongqing, 2020)^[17] and reducing financial exclusion while fostering collaborative innovation (Ge Heping and Qian Ning, 2021)^[18].

Cluster #2 The term "FinTech" includes various sub-clusters, such as financial technology, financial innovation, and all-encompassing financial supervision. The goal of FinTech research is to determine the impact and regulation of FinTech. Nana Meng et al. (2020)^[19] discovered that FinTech development influences competition among commercial banks and has substantial spatial, geographic, and industrial competitive effects. Furthermore, the growth of FinTech can enhance industrial integration, enterprise deleveraging, and boost total factor productivity (Song Min et al., 2021)^[20]. Regarding FinTech regulation, most relevant studies focus on regulatory reform. For example, Shen Wei (2018)^[21] explored the decentralization of FinTech and its regulation within the context of shadow banking, while Meng Nana and Lin Peng (2018) assessed the compatibility of FinTech innovation and regulation in China using a regulatory sandbox approach.

Cluster #3 The credit lending category contains several sub-clusters, including those related to the real economy. The essence of inclusive finance relies on credit loans; therefore, research on credit loans within inclusive finance primarily addresses financing constraints faced by small and medium-sized enterprises and rural areas. Concerning the credit constraints for SMEs, Li Tengfei (2019)^[22] suggests a method for enhancing credit for micro and small enterprises, emphasizing the need for a long-term mechanism for financial inclusion. Regarding factors that impact financing constraints, Liu Manfeng and Zhao Long (2019)^[23] argue that information asymmetry, a significant influencing factor, can be effectively reduced through advancements in financial science and technology. Still, digital finance has the potential to ease financing constraints for micro and small enterprises while also promoting a certain level of path dependence within these businesses (Liang Qi and Lin Aijie, 2020)^[24]. For rural credit constraints, Hu Shihua and Li Weiyi (2006)^[25] assert that the guarantee issue in rural credit can be addressed through third-party guarantees and other strategies. He Mingsheng and Shuai Xu (2008)^[26]

aim to quantify the credit constraints and demand gaps encountered by farmers from a demand-driven perspective. Regarding the underlying reasons for the credit constraints faced by farmers, studies have indicated that (Wang Jing et al., 2014)^[27] gender, education level, social class of family members, and household income are common reasons for financial exclusion.

Cluster #4 The term "microfinance" encompasses a range of sub-clusters, including microfinance, rural finance, and financial poverty alleviation. Domestic research on microcredit also emerged before the advent of inclusive finance. This followed the introduction of the concept of inclusive finance in China by Du Xiaoshan (2006) through the development of microcredit and the establishment of an inclusive financial system. Inclusive finance subsequently replaced the term "microcredit." With the age of the Internet and advances in communication technology, inclusive finance has experienced significant leapfrog development. This change has prompted a shift in focus within domestic research on microfinance, with scholars now examining P2P network lending, exemplified by the "Paipai Loan." This has led to an increase in in-depth research endeavors, including investigations into the operational modes of such lending platforms (Wang Ziwei et al., 2012)^[28], factors influencing loan success rates (Li Yuelei et al., 2013)^[29], and other relevant topics. Scholars have conducted more thorough research on its operational modes and on factors impacting loan success rates, among other subjects. Regarding the contribution of microcredit to poverty reduction, scholars have explored the scale of rural microcredit, influences on risk, and the credit behaviors of impoverished rural households (Lv Dehong and Zhu Ying, 2017; Wang Dingxiang et al., 2011)^{[30][31]}. This research has provided significant insights.

5. Conclusions

This paper employs a data sample comprising 3,897 articles on financial inclusion from CSSCI and Beida core journals, covering the period from 2006 to 2023. The bibliometric visualization analysis uses CiteSpace 6.1.R, and the findings indicate that since the introduction of financial inclusion in 2006, notably after the Third Plenary Session of the 18th Central Committee of the Communist Party of China (CPC), scholars in the country have focused significantly on related topics. Domestic scholars have produced a substantial body of theoretical and empirical papers of notable quality concerning financial inclusion, its impacts, digitalization, spatial effects, heterogeneity, and rural revitalization services. The research is comprehensive in both scope and depth. However, the concept of inclusive finance faces certain limitations. Initially, it underwent a phase of slow development in traditional inclusive finance, followed by rapid growth after the Third Plenary Session of the 18th Central Committee of the CPC. This was succeeded by rapid digitization and high-speed development, driven by advancements in financial technology. Ultimately, it entered a phase of rapid integration with the rural revitalization strategy after the 19th National Congress (NPC). The evolution path of relevant research across different periods shows consistency while also revealing new characteristics intrinsic to this new period. Nonetheless, current domestic financial inclusion has not yet established a relatively stable core group of authors, highlighting the need for further efforts to enhance the systematicity and continuity of the research. Additionally, the current distribution of research institutions and scholars in inclusive finance largely concentrates in "double first-class" universities located in developed regions, such as Beijing. In contrast, research institutions in western regions and smaller cities often demonstrate limited research capabilities in inclusive finance. Importantly, the ability of local universities to research specific inclusive finance topics—leveraging their unique regional advantages—requires significant enhancement. It is crucial that local universities strengthen their capacity to undertake research on particular inclusive finance topics in alignment with their distinct regional advantages. Furthermore, a lack of collaboration and communication exists between authors and research institutions. This highlights the need to strengthen cross-disciplinary research and promote interconnectivity and synergy among related research outcomes. It is clear that further investigation and verification are essential regarding the measurement and risk aspects of inclusive finance, especially in the realm of digital inclusive finance. Although several scholars have constructed an index system for some measurement degree, most studies face constraints stemming from data availability or study scope. This limitation renders the measurement results less widely accepted. The digital financial development index, compiled by Guo Feng's team at Peking University's Center for Digital Finance Research, has garnered wide reference from relevant scholars. However, this index does not encompass the activities of banks and other non-banking financial institutions. In contrast, Anthem's financial services have seen frequent citation by scholars in this field. The Digital Finance Development Index, created by Guo Feng of Peking University's Digital Finance Research Center, has received significant scholarly attention; yet, it falls short in reflecting banking operations or those of other non-bank financial institutions. Additionally, the Ant Financial Services business model presents certain risks.

Conversely, the phenomenon of financial inclusion may introduce a segment of "unqualified users of financial products" into the financial system. Given the current pace of financial innovation, it is crucial to delve deeper into the measurement and control of risks associated with the financial business model itself.

The comprehensive promotion of the rural revitalization strategy has resulted in heightened expectations for research related to digital financial inclusion. In light of these conclusions and analyses, we propose the following outlook and suggestions for financial inclusion research: Firstly, researchers need to reinforce the continuity and systematic nature of financial inclusion studies, accelerate the formation of a core group of authors, enhance communication and cooperation among research teams and institutions, and emphasize multidisciplinary in financial inclusion research. Secondly, it is essential to bolster the cultivation and support of financial inclusion research institutions and scholars in the central and western regions. This support should leverage the regional strengths of local universities, focusing on specific challenges and opportunities within digital financial inclusion services for rural revitalization. This strategy will contribute to the advancement of local economic and social development as well as the broader rural revitalization agenda. It is imperative to reinforce interdisciplinary collaboration and enhance the integration of financial inclusion-related research outcomes. Ultimately, further investigation and validation on the measurement and risk issues surrounding digital inclusive finance are vital. One approach could involve constructing a more scientific, reasonable, and comprehensive evaluation index system for the development level of digital inclusive finance, using data that covers a broader range and compiling a national index for this purpose. Another strategy would entail strengthening research on identifying and controlling risks within the digital inclusive finance business model, and monitoring and managing financial risk concentration in the context of rural revitalization financial services, to prevent a systemic financial crisis.

References

- [1] Guo Tianyong, Ding Xiao. *An international comparative study of financial inclusion - based on the perspective of banking services*[J]. *International Financial Studies*, 2015, No. 334(02): 55-64.
- [2] Peng Baoyu, Zhang Bo, Sun Wei. *Evolution and prospect of financial inclusion research in China from the perspective of financial geography*. *Progress in Geography*, 2023, 42(2): 406-416.
- [3] Jiao Jinpu. *The importance of building a universal financial system*[J]. *China Finance*, 2010, No. 688(10): 12-13.
- [4] Du Xiaoshan. *Microfinance and inclusive financial system*[J]. *China Finance*, 2010, No. 688(10): 14-15.
- [5] Xiaoling S. *Empirical Analysis of Digital Inclusive Finance Bridging the Urban-rural Residents' Income Gap*[J]. *Finance & Economics*, 2017, No. 351(06): 14-25.
- [6] Fengzhi L, Yongxing H, Peng X, et al. *Regional Differences and Influencing Factors of Inclusive Finance in China*[J]. *Financial Economics Research*, 2017, 32(01): 111-120.
- [7] Yue C, Mei C C, Yuan L Z, et al. *The methodology function of Cite Space mapping knowledge domains*[J]. *Studies in Science of Science*, 2015, 33(02): 242-253.
- [8] Jiao Jinpu, Huang Tingting, Wang Tiandu et al. *The development process and empirical research of inclusive finance in China*[J]. *Shanghai Finance*, 2015, No. 417(04): 12-22.
- [9] Guo F, Wang J, Wang F, et al. *Measuring China's digital financial inclusion: Index compilation and spatial characteristics*[J]. *China Economic Quarterly*, 2020, 19(4): 1401-1418.
- [10] Huang Yiping, Huang Zhuo. *Digital financial development in China: present and future*[J]. *Economics(Quarterly)*, 2018, 17(04): 1489-1502.
- [11] Liu Jinyi, Liu Chunyang. *The rural poverty reduction effect of digital inclusive finance: effects and mechanisms*[J]. *Finance and Economics*, 2020, No. 255(01): 43-53.
- [12] Huang Qian, Li Zheng, Xiao Deping. *The poverty reduction effect of digital inclusive finance and its transmission mechanism*[J]. *Reform*, 2019, No. 309(11): 90-101.
- [13] Y.Q. Feng, J.H. Tsai. *Can digital financial inclusion promote the level of entrepreneurship? --An analysis based on inter-provincial data and industrial structure heterogeneity*[J]. *Contemporary Economic Science*, 2021, 43(01): 79-90.
- [14] Fei M. *The Optimization of Inclusive Financial Ecology* [J]. *Shanghai Economic Review*, 2009, No. 249(06): 88-92.
- [15] Zhilai Z. *Financial Structure, Inclusive Finance and the Construction of Financing Systems for Small and Micro Businesses*[J]. *Contemporary Economic Management*, 2019, 41(08): 85-90.
- [16] Wang Raoxuan, WU Ke. *Financing path of small and micro enterprises based on the perspective*

- of inclusive finance*[J]. *Friends of Accounting*,2015,No.517(13):42-46.
- [17] He H Q. *Digital finance propelling integrated development of rural industries: dilemma reflection and road exploration*[J]. *Journal of Northwest A&F University (Social Sciences Edition)*, 2020, 20(03): 118-125.
- [18] Ge Heping, Zhu Huwen. *Research on provincial differences and influencing factors of digital inclusive finance in China*[J]. *New Finance*,2018,No.349(02):47-53.
- [19] Meng Nana,Lin Peng. *Research on the fitness of regulatory sandbox mechanism and China's fintech innovation--Based on the perspective of inclusive regulation*[J]. *Southern Finance*, 2018,No.497(01):42-49.
- [20] Song Min, Zhou Peng, Si Haitao. *Fintech and firms' total factor productivity-A perspective of "empowerment" and credit rationing*[J]. *China Industrial Economy*,2021,No.397(04):138-155.
- [21] Shen W. *Decentralization of FinTech vs. centralization of financial regulation: regulatory logics and analytical dimensions of FinTech*[J]. *Modern Law Science*, 2018, 40(3): 70-93.
- [22] Li Tengfei. *Problems and improvement path of current micro credit business*[J]. *Shanghai Finance*,2019,No.471(10):82-87.
- [23] Manfeng L , Long Z .*Solving the Financing Constraints on Small and Micro Enterprises from the Perspective of Internet Finance*[J].*Management Review*, 2019,31(03):39-49.
- [24] Liang Qi,Lin Aijie. *Research on the impact of digital finance on financing constraints and leverage of micro and small enterprises*[J]. *Journal of Sun Yat-sen University (Social Science Edition)*,2020,60(06):191-202.
- [25] Shihua H ,Li Weiyi.*The Problem of Guarantee Constraint and Counter-measures of Rural Credit in China*[J].*Issues in Agricultural Economy*, 2006, 27(2):68-71.
- [26] He Mingsheng,Shuai Xu. *A study of farmers' credit demand and its gap under financing constraints*[J]. *Financial Research*,2008,No.337(07):66-79.
- [27] Jing W , Hai-Xia W U , Xue-Xi H .*Analysis of Factors Affecting Farmers' Credit Constraints, Financial Exclusion and Financing Predicament*[J].*Journal of Northwest A&F University(Social Science Edition)*, 2014,14(03):62-70+75.
- [28] Wang Ziwei, YUAN Zhonghua, ZHONG Xin. *Research on the operation mode of China's P2P network microcredit--Based on the case study of "Paipai Loan" and "Yinong Loan"*[J]. *New Finance*, 2012,No.276(02):42-45.
- [29] Yuelei Li, Yang G , Wei Z .*An Analysis of Impact Factors on the Loan Performance of P2P Microfinance Market in China*[J].*Journal of Financial Research*, 2013,No.397(07):126-138.
- [30] Dehong L , Ying Z .*Research on the Factors and Hierarchy Difference of Farmer Household Microfinance Risk*[J]. *Management Review*, 2017,29(01):33-41.
- [31] Wang Dingxiang,LIAN Qinggang,LI Lingyi et al. *An empirical study on credit demand and credit behavior of poverty-oriented farmers*[J]. *Financial Research*,2011,No.371(05):124-138.