

Study on the Application of Financial Technology in Rural Financial Reform in the Context of Rural Revitalization Strategy

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Abstract: Financial technology application is the focus of China's rural financial reform and an important means to promote rural revitalization strategy. This paper compares the current situation and problems of fintech application in rural financial reform, and puts forward four optimized countermeasures and suggestions in four aspects: continuously promoting the construction of digital countryside, strengthening the cultivation of compound talents, enhancing the financial technology literacy of rural residents and improving the fintech regulatory system.

Keywords: Rural revitalization, Financial technology, Rural financial reform.

1. Introduction

At present, China is at an important stage of comprehensively promoting rural revitalization. With the continuous deepening of rural financial reform, a series of policy supports such as incentives for incremental loans related to agriculture, interest rate subsidies and relevant subsidies and tax relief preferences will strengthen and stimulate the role of rural financial institutions as the main financial force in the county economy, thus playing a positive role in promoting the development of inclusive financial work and rural revitalization.

China has always attached great importance to the solution of the "three rural issues". In order to realize the comprehensive revitalization of rural areas and establish a modern agricultural system, financial technology will play an important role in this process. However, there are a series of inherent drawbacks in traditional finance, such as information asymmetry and moral risks, which restrict the application of financial technology in rural revitalization, and it is difficult to meet the financing needs of some agricultural-related business entities. In order to better promote and practice the rural revitalization strategy, it is urgent to accelerate the application of financial technology in rural financial reform.

2. The Current Situation of the Application of Financial Technology in Rural Financial Reform

"Since the introduction of the Opinions of the State Council of the Central Committee of the Communist Party of China on the Implementation of Rural Revitalization Strategy and related policies, the role of financial services in rural revitalization has been indispensable. In recent years, through the implementation of the Rural Revitalization Strategic Plan (2018-2022), with the joint assistance of the government, market and society, as well as the coordination and promotion of financial services for rural revitalization by financial regulators[1], fintech has carried out many useful explorations in serving rural revitalization, and has made certain achievements in practice.

First, increase the policy support for the application of agriculture-related fintech. In recent years, financial regulators have attached great importance to financial services in rural revitalization and actively supported the innovative application of financial technology in the field of agriculture-related finance. In April 2021, seven departments, including the People's Bank of China, launched a demonstration project of financial technology to empower rural revitalization in nine provinces[2], including Anhui Province, and piloted in nine provinces to create applicable financial technology in inclusive finance through big data, blockchain and other information technology. In March 2022, the Financial Technology Committee of the People's Bank of China proposed in its meeting to implement in-depth the demonstration project of financial technology empowering rural revitalization to narrow the digital divide between groups, institutions and urban and rural areas[3].

Second, the application scenarios of digital technology in rural finance are gradually deepening. Through the experience gained in the fintech innovation regulatory pilot, the fintech innovation regulatory tool will be fully implemented in 2021 to encourage financial institutions to propose reasonable solutions for fintech innovation business and technology under the premise of safeguarding against laws and regulations and risk prevention and control. As of January 2022, 8 of the 136 projects that have been included in the FinTech Innovation Regulatory Tool are agriculture-related financial services and technology projects[4].

Third, upgrade the rural digital financial infrastructure. By the end of 2021, the total number of broadband users nationwide basically covered urban and rural areas, and the credit information infrastructure reached 158 million households[5], with 5.9 million 4G base stations and 1.425 million 5G base stations. Collecting data and information of "three rural groups" to establish credit information system is indispensable for future financial technology to serve rural revitalization.

3. Analysis of the Application of Financial Technology in Rural Financial Reform

3.1. Slow process of building agriculture-related data

Because of the slow progress in the promotion of rural financial technology, rural small and medium-sized financial institutions for the application of financial technology is not close to the needs of rural people's daily life and agricultural production needs, lack of substantial innovation, it is difficult to solve the fundamental problems of rural finance. The development of financial technology needs technical facilities as a backing, and the lack of financial technology infrastructure will limit the development of rural finance. On the one hand, network signals from base stations in some areas cannot cover the rural areas, and stable broadband services are not available to meet the development requirements of FinTech. On the other hand, because rural financial institutions have fewer and scattered offline outlets, the relevant hardware facilities required for FinTech are very lacking, and there are limitations in technical support and operating environment. At the same time, because one branch needs to undertake the business of several villages, the collection of data costs more and there is a lag and uncertainty[6], which causes problems for subsequent data analysis.

3.2. Insufficient rural financial technology compound talents

Financial technology to promote the development of rural industries is a complex project, rural financial technology personnel need to know both finance and science and technology, but also need to be familiar with the development of agriculture and rural areas, so the composite talent in the field of rural financial technology is essential. At this stage, most of the service personnel in financial institutions are not fully financial technology talents, some of them only know financial knowledge but not information technology, and some only know information technology but not much about financial business. Although the state encourages professional financial technology talents to go to rural areas[7], due to factors such as lower level of regional economic development than first-tier cities and lower income treatment, most financial technology talents are mainly concentrated in large commercial banks, and it is difficult for financial institutions in county and township areas to retain professional technology talents, and the lack of rural financial technology talents brings a series of obstacles to the innovation and application of financial technology. For example, there is a lack of daily technical maintenance personnel or facilities maintenance is not timely; innovative research and development and application are difficult to be done independently, thus leading to insufficient innovation power of financial technology products and services. Therefore, if we want to maximize the effect of financial services in rural revitalization, we have to solve the existing problem of lack of rural fintech talents.

3.3. The "digital divide" is an obstacle to the development of fintech

The "digital divide" refers to the current situation that while technological progress brings convenience to most people, the

rights and interests of a few disadvantaged groups in rural areas are violated due to their little understanding of the application and use of electronic products. On the one hand, the population in rural areas is more mobile, most people go out to work, the age structure of the resident population is relatively old, the education level is relatively low, the ability to accept new technology is lower, especially when it comes to money, funds, etc. will be more cautious. On the other hand, although Internet finance in rural areas has been popularized at a faster pace, and some financial institutions have provided convenient and safe services to the majority of farmers around rural e-commerce and payment and settlement business, modern technology tools such as big data, cloud computing and blockchain are not widely applied in the field of rural finance. Some farmers are still accustomed to handling business through traditional counters and have a rejection of new financial products, so the promotion of online financial services in rural areas is very difficult.

3.4. Difficulty in regulating fintech risks

Although fintech can use information technology to obtain more, better and more comprehensive information about farmers and improve the efficiency of resource utilization, it also makes supervision more difficult[8]. At this stage, for the development of fintech, laws and regulations tend to lag behind the development of digital products, so that the construction of laws and regulations is not comprehensive, the use of fintech lacks the protection of corresponding laws and regulations, and the respective interests of financial institutions as well as enterprises and agriculture are not protected, which can easily lead to disputes over interests or cause economic losses. In addition, formal financial institutions often increase the verification process of products and services in order to prevent risks, but the overly complicated verification procedures affect the customer experience to a certain extent and objectively increase the difficulty of business supervision.

4. Analysis of the Causes of the Application of Financial Technology in Rural Financial Reform

4.1. Incomplete service configuration mechanism

First of all, there is a lack of property rights norms for rural elements. China's rural property rights relationship is complex, the progress of the confirmation of rights around the inconsistent, asset transactions are small-scale, which restricts the efficiency of transactions. In particular, the lack of standardization of property rights of rural elements has brought a lot of problems to the development of rural economy[9]. For example, the unclear proof of assets of agricultural business entities leads to the difficulty of financial products that rely on collateral to play a real role, and the problem of financing arises. The unregulated property rights of rural factors restrict the development of rural financial technology. Second is the imperfect rural credit system. At present, due to the lack of unified standards and related information collection, it is difficult to collect information on farmers, and a large number of farmers lack credit records, which greatly limits their enjoyment of the right to all financial services. In addition, the poor credit environment in rural areas is reflected in the inadequate

sanctions for breach of trust, which makes credit risks spread continuously. The imperfection of the rural credit system restricts the application of rural financial technology[10].

4.2. Limitations of financial institutions themselves

The realistic contradiction between "profit maximization" and "support for agriculture and small-scale". The business activities of financial institutions are aimed at maximizing profits, and it is the responsibility of financial institutions to respond to the strategy of rural revitalization, but this conflicts with their commercial nature. According to the survey, financial institutions generally reflect that in order to maximize the effectiveness of financial technology in supporting rural revitalization, credit assessment of farmers is a top priority[11]. This reflects the demands and aspirations of financial institutions that provide technology to serve the countryside. In addition, financial institutions involved in agriculture are facing the situation of shrinking network. The countryside is relatively lacking in intelligent and remote financial service means, and rural financial services have to rely on physical outlets. But because of the development of financial technology, commercial banks have faced the trend of shrinking the number and scale of outlets in recent years, to the extent that the layout of commercial banks in less developed regions is not enough to sink the outlets.

4.3. Limitations of rural financing subject

First, the subjects with demand for financing are too scattered. Unlike large urban enterprises, rural inclusive groups are generally more scattered, their business scale is generally smaller, and their presence in the financial market is generally lower, which creates great difficulties for banks to take the initiative to provide financial services. The customer base is too scattered, making it more difficult to promote financial technology services. Secondly, the short, frequent and urgent demand for funds has led to the limited services that financial institutions can provide. Since small and micro enterprises and rural individual industrial and commercial households are the main financing groups for rural revitalization[12], their demand for funds has such characteristics as short financing period, small amount and frequent times, which greatly increases the cost of financial institutions in loan business. The difference in cost between small loans and large loans is very small, but the income received by the institutions is very different, which makes the motivation of financial institutions in serving rural revitalization greatly lacking.

5. Suggestions for Optimizing the Application of Financial Technology In Rural Financial Reform

5.1. Continuously promote the construction of digital village

First, realize the digitalization of the countryside. Strengthen the construction of network infrastructure in rural areas, strengthen the construction of 5G base stations, promote the construction and renovation and upgrading of traditional financial technology infrastructure in rural areas, and make up for the shortcomings of financial infrastructure in rural areas, while facilitating the further extension of the scope of financial services. Second, realize the digitization of

agriculture. Promote the technical integration of agriculture + finance + e-commerce tripartite, explore a variety of distinctive application scenarios, realize the digitization of production information, expand the conditions for the integration of financial technology in agriculture, promote more realistic and reliable credit assessment information, and facilitate dynamic risk monitoring. Third, realize the digitization of farmers. Accelerate the construction of rural credit system, strengthen the collection and accumulation of credit data of farmers, while timely update the application for change of information of farmers and enterprises, make the data collection timely and dynamic, integrate the collected data and information of farmers and enterprises and organize and build files through the way of government promotion and participation of financial institutions, build a digital, networked and standardized rural credit database, and improve the financial technology The ability to continuously and effectively serve the rural financial market. Emphasis on infrastructure construction can better guarantee network and information security, and can effectively guarantee the stable operation of the financial technology system. Having a sound infrastructure construction is the only way to truly play the role of financial technology empowerment and achieve good results. The digitalization of rural information is the foundation of financial technology, and only by paying attention to the construction of digital countryside can we better promote the development of financial technology in rural finance.

5.2. Strengthen the cultivation of compound talents

The development of financial technology is a huge system, and in the context of rural revitalization reform, the cultivation of financial technology professional-type talents needs the support of various parties such as government, schools and financial institutions. In particular, compound talents with multiple knowledge of finance and information technology will provide core competence for the construction of rural financial services. First, strengthen the integration of industry, academia, research and application. Taking the needs of rural fintech positions as the guide, and based on cross-disciplinary education, enhance the practical ability of financial talents. Second, improve the training of management skills of financial technology talents. Through the cooperation between schools and enterprises to launch targeted talent training programs, to achieve a win-win mechanism for both schools and enterprises, to mobilize the work potential of financial science and technology talents, to stimulate the innovative motivation of scientific and technological talents, to increase the financial investment in rural financial science and technology talents, and to provide space and opportunities for the progress of financial science and technology talents. Third, the innovation of rural financial science and technology talent selection and use mechanism. On the basis of adequate investigation and exercise, support high-level rural financial science and technology talents to be promoted or to take up positions in important positions on an exceptional basis. At the same time, deepen the level of awareness and mastery of financial professional knowledge and practical skills, modern information frontiers and risk management to further enhance professionalism and business ability to engage in FinTech.

5.3. Improve financial technology literacy of rural residents

To solve the problem of "digital divide", it is necessary to strengthen the dissemination of basic knowledge of financial and information technology. In rural areas, the level of financial literacy of the elderly is relatively low compared to other groups, so financial knowledge promotion groups can be organized to promote financial technology knowledge to the elderly in an easy-to-understand manner through various channels to improve their awareness of self-prevention and their ability to use financial technology. Tap the market demand of the elderly and encourage financial institutions to develop relevant financial technology products applicable to the elderly. For the farmers with low education level, short videos on financial knowledge propaganda can be filmed and uploaded to short video platforms and scrolled in gathering places; propaganda paintings or cartoons can be used to reduce the difficulty of understanding and attract farmers to read with vivid and interesting images to better popularize financial technology knowledge. It is also possible to carry out promotional meetings with lucky draws to train a group of farmers to learn to use financial technology products and to let them understand some common online businesses, such as the common online businesses of e-banking. Afterwards, through some activities, farmers who have learned can drive other farmers to use them together, so as to achieve the purpose of promoting the popularity of financial products and services and making the promotion of financial technology smoother.

5.4. Improve the regulatory system of financial technology

The application and innovation of financial technology is always accompanied by risks, and in order to prevent financial crises caused by financial speculation, it is necessary to limit financial innovation to a reasonable financial regulatory system. This is not only to establish a long-term effective regulatory system, but also to achieve a change in regulatory philosophy, to achieve a balance between innovation and safety, and to fully coordinate the system. First, to establish a long-term effective regulatory system so as to prevent financial risks in advance. For the majority of farmers, although their income has improved compared to the previous, but the ability to resist high risks is still very poor, and need a long-term effective regulatory system to help them prevent risks. Second, digital information technology should be used to accurately and efficiently assess credit information and capital flows, and to improve risk identification and prevention capabilities. Financial institutions providing rural services are subject to enhanced supervision, while fintech companies involved in rural revitalization require information disclosure. Third, strict enforcement of digital technology supervision standards. An indexed regulatory standard is needed to assess the efficiency of regulation. Emerging

technologies such as big data, AI, IoT and blockchain are developing rapidly, but many institutions cannot fully follow the relevant technical standards in the relevant practical operation, which is yet to be further strengthened, so the national digital technology standards need to hit the pain points of rural areas and be strictly enforced.

To sum up, the development of fintech has become an important aspect to enhance the development of rural finance in China, and gradually become an important support to further revitalize the countryside. In order to effectively promote the application of fintech in rural financial reform, we should continue to promote the construction of digital countryside, strengthen the training of complex talents, enhance the financial technology literacy of rural residents and improve the fintech regulatory system.

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