

# *Research on the Path of Promoting Rural Revitalization with Financial Technology*

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**Abstract:** The application of financial technology in rural areas has promoted the improvement of the level of agricultural trade, the optimal allocation of rural factor resources, and the actual income of farmers. The application of financial technology inevitably has the risk of rural strategic planning and agricultural management. To promote rural revitalization with financial technology, we must develop rural financial business with big data technology as the guidance, develop smart agriculture with artificial intelligence technology as the opportunity, and build a new development model of block agriculture with blockchain technology as the basis.

## **1. Introduction**

Financial technology (FINTEC) is a comprehensive standard system of industrial development technology and industrial financial standards developed on the basis of big data, cloud algorithm, blockchain, artificial intelligence, space technology and micro world technology, aiming at financial product design, financial resource supply, financial risk control, financial management innovation and financial service improvement. In recent years, with the implementation of the national rural revitalization strategy, a variety of emerging technologies have been gradually applied to the optimization and allocation of rural resources, gradually forming a new pattern of science and technology boosting agricultural development, and thus casting a new era of rural financial changes.

## **2. Development Opportunities Brought by Financial Technology to Rural Revitalization**

### **2.1 Promoting the Improvement of Agricultural Products Trade Level**

The traditional trade of agricultural products generally adopts the transaction mode of non electronic currency as the intermediary. This transaction mode first affirms the sovereign regulation of paper currency or “hard currency”, but it brings many inconveniences in the process of agricultural products transaction, such as the loss risk of force majeure of paper currency, the risk of carrying cash, the choice cost of transaction location, transaction time and space liquidity cost and so on. However, in the era of rapid development of Internet technology, the above-mentioned transaction risks of agricultural products can be mitigated under various e-payment modes, such as

“benefiting-agriculture e-loan, benefiting-agriculture e-payment and benefiting-agriculture e-business” mode based on cloud algorithm, which not only omits the cumbersome payment procedures, but also greatly saves the transaction time cost and space cost. It also benefits rural economic entities and reduces the transaction cost cost of ordinary farmers. [1]

## **2.2 Promoting the Optimal Allocation of Rural Factor Resources**

Since the beginning of the 21st century, developed scientific and technological means have greatly promoted the optimization and upgrading of rural factor resource allocation mode, such as the construction of rural land trading platform based on Internet of Things technology, which has greatly promoted the increase of rural land circulation scale and frequency; the rural labor occupation information search platform based on cloud algorithm technology has found a suitable platform for tens of millions of migrant workers. All kinds of e-ecology practical app based on the ecological environment assessment greatly promote the purification and improvement of rural ecological environment, and so on. The realization of all these scientific and technological means is inseparable from the support of virtual financial capital and real financial capital. It is under the joint promotion of various financial capital and scientific and technological innovation that China's new rural construction has made remarkable achievements, and the socialist rural revitalization strategy can be steadily promoted.

## **2.3 Increasing Farmers' Real Income**

In recent years, with the implementation of the strategies of “village e-commerce”, “big data of the Internet of Things” and “agricultural mechanization”, the “avenue” of promoting agricultural financial technology through institutional reform has been opened, and the rudiment of beautiful village has been basically established. For example, small and medium-sized and micro enterprises in rural areas have rapidly gathered initial funds for enterprise innovation through various financial technology payment modes; large-scale scientific and technological innovation enterprises in rural areas have achieved the dual goals of GEM Listing and stock market financing through financial technology means; farmers have raised the start-up funds for land circulation and labor transfer through various “network crowd-funding” modes, and so on. [2] It can be said that the developed financial technology model has effectively improved the actual income of farmers, and is bringing great development opportunities to the implementation of rural revitalization strategy.

## **3. Challenges Brought by Financial Technology to Rural Revitalization**

### **3.1 Strategic Risk**

The so-called “strategic risk” refers to the risk caused by the difference of the choice of the combination point between the financial technology strategy and the rural revitalization strategy, such as the leakage of rural e-commerce information, farmers' personal information, the “sales base price” of agricultural products, as well as the risk caused by the lack of dispute and settlement mechanism of agricultural products online transaction. These problems not only endanger the balance of agricultural industrial structure, the visible income of farmers, the industrialization of agricultural science and technology, but also threaten the stability of rural society in a certain sense. Therefore, we must attach great importance to the negative evaluation of “science and technology” and the stigmatization of science and technology in the implementation of Internet finance in the incomplete rural factor resource market. Otherwise, financial technology means not only can not promote the smooth implementation of rural revitalization strategy, but also hinder the pace of rural

modernization.

### **3.2 Managing Risk**

There are many kinds of management risks, which are as follows: moral hazard caused by the quality difference of financial technology product developers, “collusion risk” caused by the collusion between internal personnel and external stakeholders in financial technology department, “wasteful risk of agricultural land” caused by the rent-seeking of scientific and technological power” and “agricultural risk” caused by financial fraud. There are many risks, such as diminishing property income risk of village labor force, abuse risk of agricultural science and technology caused by financial supervision department's mistakes, science and technology fracture risk caused by force majeure, arbitrage risk of agricultural products caused by regulatory loopholes and so on. These risks are not caused by the “error” of the data itself, but by the alienation of human factors, so they belong to the “management risk”. [3]

## **4. Path Analysis of Financial Technology to Boost Rural Revitalization**

### **4.1 To Develop Rural Financial Business with Big Data Technology as the Guidance**

For China, a country with a large population, agriculture and poverty alleviation, it is of practical significance to accelerate the promotion of big data technology. For example, the “No.1 Project” of Internet financial services for agriculture, rural areas and farmers developed by Agricultural Bank of China not only realizes the organic integration of Tencent version of agricultural products logistics and we-chat version of agricultural resources trading, but also greatly promotes the technical cooperation between excellent Internet enterprises and financial technology companies, and strongly promotes the implementation of financial poverty alleviation strategy. So far, it has successfully realized the deep integration of “last mile” innovation mode, O2O trading mode, “E-Chain” trading mode and cloud poverty alleviation mode. Among them, we-chat mall and Tencent logistics park have been approved by the national financial department and entered the demonstration stage.

### **4.2 To Take Artificial Intelligence Technology as an Opportunity to Vigorously Develop Smart Agriculture**

The so-called “smart agriculture” refers to a new pattern of agricultural development based on electronic signal system and optical cable wireless transmission system. In today's era of rapid development of artificial intelligence, only highly automated and mechanized agriculture is a promising agriculture. Therefore, we must vigorously develop highly mechanized agricultural equipment, vigorously promote the large-scale operation of rural industry, vigorously promote the urbanization process of rural labor force, and vigorously develop all kinds of UAV fire fighting, service, entertainment, monitoring and other technologies. We should make use of the domestic “BeiDou Navigation Satellite Technology” to develop various technologies such as intelligent breeding, intelligent fertilization, intelligent spraying, intelligent spraying and intelligent transportation. [4] It can be said that only with the support of agricultural intelligence, China's agricultural modernization can achieve great success in the context of rural revitalization.

### **4.3 To Build a New Model of Block Agriculture Development Based on Blockchain Technology**

The so-called “agricultural blockchain” refers to the blockchain structure system and efficiency

system developed on the basis of encryption algorithm and data superposition technology, including agricultural product development, sales, logistics, rural land transaction, labor transfer, scientific and technological research and development. Under the new historical conditions, we must speed up the establishment of agricultural product price blockchain, so as to directly increase farmers' income; establish a new mode of wide area financing block of agricultural products, so that all rural elements can realize complete marketization; promote the implementation of the strategy of “same right and same price”, so that rural homestead can realize “paperless” block sales; promote the block of forestry resources and pasture resources, so as to make herdsmen and forest people enjoy the huge dividend of reform and opening up; accelerate the construction of “land bank” and “family bank”, so that the majority of farmers can obtain urban-rural comparative income from land, and complete the optimal allocation decision of land resources and labor resources from families; develop the inter regional block chain of agricultural resources, and let foreign capital get involved in China's rural poverty alleviation and development and research work, so as to realize the “global” sharing and topological spillover of financial technology means.

## References

- [1] *Blockchain provides new ideas and possibilities for agricultural finance* [EB/OL] [www.financialnews.com.cn](http://www.financialnews.com.cn) 2018-04-16.
- [2] Li Yingliang. *When finance meets science and technology -- report on the development trend of global financial science and technology* [R]. *Science and Technology and Finance*, 2019 (06): 42-49
- [3] Liu Liange. *Financial technology leads the new pattern of global financial industry* [J]. *International Finance*, 2019 (12): 34
- [4] Liu Xiaoqian. *Research on Internet use and its impact on income of rural residents in China* [D]. *Doctoral Dissertation of China Agricultural University*, 2018 (05): 56