

# Research on Informatization of Rural Financial Management in the Era of Big Data

Yi Liu, Jiaxuan Du, Zi Ye

Anhui University of Finance and Economics, Bengbu, 233030, China

## Abstract

As an important part of rural economic development, rural financial management seriously affects the orderly and healthy development of rural economy and the harmony and stability of rural society. Under the background of big data era, financial management informatization construction has become a major development trend in the field of financial management. However, due to the weak concept of informatization, backward management ideas and lack of professionals in rural areas, rural financial management informatization still exists at a low level. This paper first expounds the significance of rural financial management informatization, then analyzes the opportunities and challenges of rural financial management under big data, and finally puts forward the informatization construction of rural financial management in the era of big data, with a view to providing some help for promoting the informatization construction of rural financial management in the era of big data.

## Keywords

Big Data; Rural Areas; Financial Management; Informatization.

## 1. Introduction

In the era of big data, rural areas should strengthen the effective application of advanced technologies, accelerate the pace of rural development, and continuously narrow the economic gap with cities. In this process, it is very important to promote the informatization construction of rural financial management. We should combine the actual situation of rural development, uphold the concept of modern financial management, promote the organic integration of rural financial management and advanced technology based on the characteristics of rural collective economy, build a financial management system on this basis, and carry out financial management with the help of advanced technology to improve the efficiency of rural financial management, which can not only promote the orderly development of rural economy, but also maintain the harmony and stability of rural society. Based on this, this paper will study and analyze the informationization of rural financial management in the era of big data.

## 2. The Significance of Rural Financial Management Informatization

### 2.1. Help Standardize Rural Financial Management

For a long time, rural financial management is not only complicated, but also lacks effective attention to financial management in some rural areas, resulting in a series of problems in financial management, including untimely accounting, financial confusion, heavy debts and so on[1]. By promoting the informatization development of rural financial management, establishing and perfecting a series of rules and regulations can not only significantly improve the efficiency of financial management, but also solve various financial management problems, and effectively promote the transformation from traditional management to scientific management. Informatization of rural financial management is helpful to standardize rural financial management, which is manifested as follows: firstly, it is helpful to standardize

financial accounting. Relying on the rural financial information management system, the complicated accounting subjects and financial general ledger can be transformed into unified subject codes, and then combined with relevant laws and regulations, the supporting operating procedures can be formulated. In this way, the problems caused by manual accounting in the past can be effectively avoided. Secondly, it helps to standardize the financial management workflow. Under the informationization of rural financial management, we can effectively prevent the work deviation caused by human factors by formulating corresponding operational procedures for various financial management work and requiring accountants to strictly follow the operational procedures to carry out all work. Finally, it helps to improve the efficiency of financial management. Under the informationization of rural financial management, rural accountants input relevant data and information into the computer, and all other work is automatically completed by the computer, which can significantly improve the efficiency of rural financial management[2].

## **2.2. Help to Improve the Level of Financial Management**

Rural economy is an indispensable part of China's national economy. In recent years, China has continuously increased its emphasis on developing rural economy. In order to realize the rural economic development, it is very important to carry out the information transformation of the whole rural economic system management, including the information transformation of rural financial management. Informatization of rural financial management is helpful to improve the level of financial management, which is manifested as follows: firstly, it is helpful to improve the level of informatization management of rural financial management. Limited by the objective conditions in the past, rural financial management shows some problems such as imperfect financial management system, distorted financial management information and complicated manual bookkeeping. Under the informationization of rural financial management, the introduction of advanced computers can effectively reduce the workload of accountants, so that they can enjoy more time and energy to devote to other financial work, and can also help governments at all levels to grasp rural economic information more effectively and timely, and provide a strong basis for them to make management decisions. Secondly, it helps to ensure the orderly and healthy development of rural economy. By promoting the informatization construction of rural financial management, it can effectively help rural collectives to carry out collective fund management, carry out production and operation, continuously explore sources of production funds, rationally integrate existing resources in rural areas, enhance the income of various production, operation and management services, and further lay a good foundation for the development of rural society, the improvement of farmers' living standards and the orderly and healthy development of rural economy[3].

## **2.3. Help to Promote Rural Financial Disclosure**

The publicity of rural finance means clearly informing the peasants of the responsibilities and obligations of village committees, handing over rural financial treatment policies to the peasants, telling the peasants of the financial treatment process and results, and guiding the peasants to participate in the discussion and decision of rural collective assets and financial revenue and expenditure[4]. The openness of rural finance can promote the level of democratic supervision and management at the grass-roots level and effectively safeguard the fundamental interests of the broad masses of peasants. However, as far as various practices have been concerned for a long time, there are many problems in rural financial disclosure, such as the violation of relevant regulations, untimely financial disclosure, unreasonable disclosure procedures and so on. Under the informatization of rural financial management, computers can automatically compile financial information tables based on the receipts and payments input by rural accountants every month, and make them public in time, so that the broad masses of farmers can know the financial receipts and payments of their villages at the first time through

various terminals, so as to ensure the transparency of rural financial management, prevent the untimely and irregular financial disclosure, effectively guarantee the effective implementation of various policies to benefit farmers, safeguard the fundamental interests of farmers and improve the quality and effect of rural financial disclosure[5].

#### **2.4. Help to Promote Rural Industrial Revitalization**

In recent years, with the orderly implementation of rural revitalization strategy and the promulgation and implementation of policies such as rural reform, agricultural modernization and urban-rural integration development, rural areas have received more and more powerful financial support, which has promoted the rural living environment, rural infrastructure construction level and rural economic development level. In the revitalization and development of rural industries, more stringent requirements are put forward for the development and transformation of rural financial management and the improvement of financial management level[6]. In view of this situation, promoting the informatization construction of rural financial management can not only significantly improve the efficiency of rural financial management, but also effectively ensure the timeliness of information acquisition in rural financial supervision by virtue of efficient transmission, sorting, storage and verification systems, thus promoting the interconnection between different departments, realizing the multi-head leadership mechanism and mass participation mechanism of rural financial management, and finding the problems existing in rural financial management in time and solving them effectively and timely[7]. At the same time, the revitalization of rural industries should effectively grasp the market development and transformation. With the support of rural financial management informationization, we can conduct a comprehensive and in-depth analysis of market data, evaluate the development of rural industries and market development trends, further determine the reasonable direction of industrial investment, and enhance the level of rural industrial investment. In addition, the development of rural industries depends on comprehensive financial management methods, and promoting the information management of assets can ensure the benign turnover of rural industrial funds[8].

### **3. Opportunities and Challenges of Rural Financial Management under Big Data**

#### **3.1. Opportunities for Rural Financial Management under Big Data**

First of all, based on the advantages and key technologies of big data, relying on reliable data information processing software, the collected data information can be effectively and timely analyzed, processed and transmitted, so that accountants can extract valuable and important information from huge data and provide strong data support for governments at all levels to make management decisions. Secondly, rural accountants can find out the adverse effects on rural economic development by collecting, analyzing and processing massive data with big data technology, and then take effective measures to prevent financial management risks and promote the orderly and healthy development of rural economy[9]. Thirdly, big data technology can provide reliable financial analysis tools for rural financial management, so that rural financial management is no longer limited to simple manual accounting. With the rapid development of big data technology in recent years, it has created a good opportunity for rural financial management. Through a series of data analysis, rural accountants can provide governments at all levels with the actual situation of rural development, so that rural financial management plays an increasingly important role in rural development. Then, big data technology can also help rural areas to establish an internal control and risk management system, so that accountants can better carry out data collection and analysis, and this system

can also carry out comprehensive monitoring of rural financial management to achieve pre-control, in-process control and post-event management of various sharing[10].

### **3.2. Challenges of Rural Financial Management under Big Data**

First, data security challenges. In the era of big data, network information technology is developing rapidly. The application of various network information technologies in rural financial management can get rid of the shackles of traditional time and space. The process of rural financial management can be completed completely through computer networks. In view of the openness and sharing of computer networks, it will face various security problems. Under this background, relevant data information in rural financial management will also be threatened to some extent[11]. Second, the application challenges of big data technology. Big data shows remarkable characteristics such as huge amount of data and various types, and there is no small technical difficulty in data collection, analysis and storage. In addition, the information infrastructure in rural areas of China is weak, which greatly limits the advantages of big data, and the application of big data technology also poses certain challenges to the comprehensive quality of rural accountants.

## **4. Information Construction of Rural Financial Management in the Era of Big Data**

### **4.1. Improve the Ideological Level of Rural Financial Management**

First of all, improve ideological understanding and adjust government management methods. In the information construction of rural financial management, it needs the strong support of the government's scientific management. In view of this, we should gradually improve the government's ideological understanding of information management and adjust its traditional financial management methods[12]. On the one hand, relevant government departments should make use of various publicity media to increase publicity on the importance of rural financial management informatization, especially the important role that financial management informatization can play in standardizing rural financial management, improving rural financial management level and promoting rural financial disclosure, effectively change the backward working ideas of management departments at all levels ideologically, and provide necessary support in terms of manpower, material resources and financial resources to further lay a good foundation for rural financial management informatization construction. On the other hand, relevant departments should reasonably adjust their own functions, rely on the comprehensive integration of departments, financial accounting, data and information, simplify management processes, and make all responsibilities clear to departments and individuals. For example, in rural finance, relying on simplifying the processing flow, improving work efficiency, and publishing the recent rural financial statements in real time with the help of the information platform to ensure the transparency of rural financial management. Secondly, deepen ideological understanding and carry out overall planning of financial management. Local governments should deeply understand the far-reaching influence of financial management informatization on rural economic development, which is a systematic project related to all aspects of rural areas and farmers. Scientific and complete planning and organization and coordination are the most important factors to determine its effectiveness. Therefore, in order to ensure the orderly construction of rural financial management informatization, relevant departments should effectively play their leading role, comprehensively coordinate the construction of rural financial management informatization, improve the efficiency of information resource allocation, prevent redundant construction and low-level development, and then effectively improve the level of rural financial management informatization[13]. In addition, local governments should also follow the principles of unified

planning, divided construction and information sharing, and take the informatization construction of rural financial management as an important content in the local government information network system, so as to recommend financial data exchange and sharing among departments at all levels and prevent data islands.

#### **4.2. Application of Internet Technology to Enhance Convenience**

Nowadays, there are still many outstanding problems in rural financial management. Therefore, advanced internet technology can be introduced to solve the related problems affecting rural financial management. First of all, improve the efficiency of rural financial management and improve the timeliness of business processing with the help of mobile terminals. The mobile terminal can mainly realize the functions of approval, reimbursement, inquiry and message release, which is convenient for users to carry around, query in real time and use conveniently. At the same time, the mobile terminal can also provide data information such as financial statement information, public announcement information and supervision and management information to realize one-stop mobile office. Secondly, in rural financial management, bills, as an important basis of various businesses, involve complicated paper bills in reimbursement, and bills are often lost. In order to promote the unified management of bills, we can build an electronic bill center with the help of the cloud platform, take photos of all kinds of bills, and store them in the cloud server, so as to realize long-term storage of electronic bills and convenient retrospective viewing of all kinds of bills. On the basis of unified management of electronic bills, OCR technology can also be used to automatically identify electronic bill images, so as to effectively improve the efficiency of rural financial management. Then it can be effectively connected with the electronic invoice system, which can not only judge the authenticity of the bill and prevent the discovery of false invoice reimbursement, but also facilitate accountants to directly access the electronic bill to the rural financial management cloud platform by providing the invoice number in the process of reimbursement, thus ensuring the orderly progress of rural financial management. Thirdly, supervision design has long been an important and difficult content in rural financial management. In actual supervision, the advantages of cloud platform can also be brought into play, and comprehensive supervision before, during and after the event can replace the previous post-event supervision. At the same time, with the support of the information processing capacity of the cloud platform, the statistical reports issued by various departments can be compared and analyzed, and the supervision work can be carried out in real time. With the help of mobile technology, the early warning and abnormal information can be transmitted to higher authorities and regulatory agencies, so as to reduce the risk of rural financial management as much as possible.

#### **4.3. Establish a Financial Management Big Data System**

In the era of big data, informatization and networking have made great progress. In order to meet the requirements of social informatization development and promote the informatization construction of rural financial management, we should pay attention to establishing and improving the big data system of financial management. In this process, we should not only create a good network information environment and unify the financial system, but also build a platform for financial big data center. Specifically: First, create a good network information environment. In the informatization construction of rural financial management, in order to create a good network information environment, not only the internal situation, but also the development and transformation of the external environment should be considered; In addition, relevant factors such as national policies, human resources and material resources should be comprehensively considered. Second, unify the financial system. The implementation of a unified financial system can effectively control rural collective assets and fiscal revenue and expenditure, improve the efficiency of fund operation management, ensure the safety and integrity of funds, and effectively prevent the dispersion and weakening of financial rights.

Third, build a financial big data center platform. By introducing big data technology, rural financial management actively builds a financial big data center platform. With the help of key technologies such as data mining and data analysis, valuable information can be extracted from massive data to provide reliable data support for rural financial management, thus promoting the orderly development of rural financial management and preventing potential risks faced by rural financial management.

#### **4.4. Building a Team of Big Data Financial Management Talents**

Based on the support of big data technology, rural accountants can effectively improve their financial management level and provide assistance for rural economic development. With the continuous development and maturity of big data technology and the continuous advancement of rural economic development, more stringent requirements are put forward for the comprehensive quality of rural accountants, and accountants are constantly transforming from accounting professionals to business generalists. The informatization construction of rural financial management in the era of big data requires rural accountants not only to master the theoretical knowledge of accounting, financial management and other professional fields, but also to form a certain understanding of computer science, statistics and other related fields, and form a good comprehensive quality ability, so as to better introduce big data technology into the informatization construction of rural financial management. However, at this stage, there is a widespread shortage of financial management talents in rural areas, and the comprehensive quality of existing accountants is uneven, so it is difficult to effectively mine and analyze financial big data, which affects the smooth progress of rural financial management. Therefore, in the era of big data, with the continuous development of network information technology, rural areas should strengthen the construction of big data financial management talents, pay attention to training accountants to learn and master diversified information technology systems and related business knowledge, and effectively improve the comprehensive quality of accountants, so that rural development can effectively apply big data technology to collect, analyze and sort out financial resources, and further ensure the orderly development of rural financial management.

### **5. Concluding Remarks**

In a word, in the era of big data, rural financial management should adjust the traditional management mode, make clear the opportunities and challenges faced by rural financial management under big data, pay close attention to the dynamic information of the country, combine the advantages of rural local resources, promote the organic integration of advanced technology and rural financial management, establish a financial management big data system, build a big data financial management talent team, actively promote the orderly development of rural financial management informatization, and provide assistance for the sustainable and healthy development of rural economy.

### **References**

- [1] Tian Yanqin. "internet plus" in the context of rural financial management problems and countermeasures [J]. *Agricultural Development and Equipment*, 2022(08):65-67.
- [2] Zhang Chi. Rural financial management problems and countermeasures under the rural revitalization strategy [J]. *Shanxi Agricultural Economics*, 2022 (15): 126-128. Doi: 10.16675/j.cnki.cn14-1065/f.2022.15.040.
- [3] Tian Liyuan. Strengthening rural financial audit to promote agricultural economic development [J]. *Rural Economy and Technology*, 2022,33(08):210-212.

- [4] Chen Feng, Hu Tingting, Li Kang, Liu Yi. Intelligent financial services for the high-quality development of rural collective economy under the background of big data [J]. Rural Economy and Technology, 2022,33(08):219-221.
- [5] Yu Zhang. Rural financial management under the background of rural revitalization era [J]. Time-honored brand marketing, 2022(08):110-112.
- [6] Liu Qinggang, Guo Chunyu. Rural financial audit and supervision under the background of big data era [J]. China Township Enterprise Accounting, 2021(12):148-149.
- [7] Liang Min. Probe into the new mode of rural financial management under the background of informationization [J]. Accounting Learning, 2021(33):25-27.
- [8] Meng Tian. Research on the dilemma and countermeasures of rural financial audit under the background of big data [J]. Shanxi Agricultural Economics, 2021 (18): 136-138. DOI: 10.16675/j.cnki. cn14-1065/f.2021.18.058.
- [9] Gu Liangsha. Realistic Bottleneck and Relief Path of Financial Auditing in Rural Areas [J]. Auditing and Financial Management, 2021 (08): 38-40. DOI: 10.19419/j.cnki.36-1264/f.2021.08.019.
- [10] Jiang Wei. Analysis of internet plus era rural financial information management model [J]. Agricultural Development and Equipment, 2021(07):59-60.
- [11] Liang Liang. Research on the promotion path of rural financial work in the era of "great wisdom moves the cloud" [J]. Agricultural Economy, 2021(05):51-53.
- [12] Sheng Jialei, Qi Lei, Qiao Nana. Building a big data platform for rural financial management [J]. Rural Financial Accounting, 2020(10):32-33.
- [13] Tang Hongying. Exploring the new mode of rural financial management in internet plus era [J]. Inner Mongolia Coal Economy, 2020 (10): 82-83. DOI: 10.13487/j.cnki.imce.017483.