



# Health Work Strategy from the Perspective of Big Data and Rural Revitalization

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**Abstract.** Entering the 21st century, China's rural social and economic development and the effectiveness of rural infrastructure construction have begun to take shape, but problems such as unbalanced rural development and inadequate rural development are still very prominent. In particular, health and sanitation, which is closely related to people's livelihood in rural areas, still a weak link in rural development. At the same time, the rapid development of the digital economy has become the main driving force for the overall development of the economy and society, and the role of digital technology in promoting health care has become increasingly apparent. This article analyzes the theoretical mechanism of the digital economy empowering rural revitalization, and explains the interaction mechanism between health work and rural revitalization. Through in-depth analysis and careful research, it starts from the establishment and improvement of health file management, the strengthening of health news publicity, and the continuous deepening of medical research. Starting from the three dimensions of health system reform, the development strategy of health work is further proposed.

**Keywords:** big data · rural revitalization · health

## 1 Introduction

Promoting healthy rural areas is the key to realizing a moderately prosperous society, and it is also the key to promoting “green development” in rural areas. “Vigorously develop healthy rural areas” is an important content of the “Opinions on Implementing the Rural Revitalization Strategy” issued by the Central Committee of the Communist Party of China and the State Council. Therefore, under the general environment of rural revitalization and the direction of healthy rural construction, it aims to provide a certain political reference for the development of rural health construction and rural revitalization [1].

## 2 The Mechanism of Health Work and Rural Revitalization

- (1) Accelerating rural industrialization and promoting the revitalization of rural industries

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P. Qi and Z. Chen (Eds.): ICBDIE 2023, AISR 178, pp. 150–158, 2024.

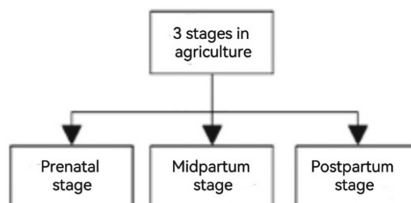
[https://doi.org/10.2991/978-94-6463-238-5\\_20](https://doi.org/10.2991/978-94-6463-238-5_20)

The prosperity of industries and all industries are the foundation of rural development and the top priority of rural development. The development of industry should be the main focus. At present, my country's rural areas are still in a major stage of development, but they still face problems such as low density, low efficiency, and waste of factor resources, and cannot adapt to traditional agricultural production methods. Due to the incomplete information equivalence in the rural areas of our country, the supply and demand of agricultural products in our country are unbalanced. On the basis of big data, with the help of cloud computing, Internet of Things and other technologies, the use efficiency and productivity of agricultural products can be effectively improved, thereby promoting the transformation of agriculture to intensification and scale. To effectively solve the quality and safety of food, a food quality system has been constructed. Traceability system can build a complete agricultural product information system, guide the precise planting of agriculture, adjust agricultural production and planning, and solve the current supply and demand relationship in my country's agricultural product supply and demand relationship, promote the adjustment of my country's agricultural supply structure, and promote my country's agricultural development. "Agriculture + big data" can accurately meet the requirements of agricultural production. The combination of big data and agricultural machinery realizes the automation of agricultural production, saves labor costs, and greatly improves the accuracy of production; Status and other data are fed back in time and adjusted according to the feedback information to realize the visualization of the agricultural production process, which is not only conducive to intensive production, but also conducive to the achievement of efficiency. In short, the application prospect of big data in agriculture is getting wider and wider.

As we all know, agriculture is divided into three stages, as shown in Fig. 1.

#### Prenatal stage

Artificial intelligence technology can monitor the agricultural production environment, monitor the water volume through big data, meet the basic conditions of agricultural production, and help increase production. In addition, seeds are a prerequisite for agricultural production. The application of artificial intelligence technology and big data technology not only improves the efficiency of seed identification, but also does not cause damage to seeds during the identification process. Therefore, big data has great advantages in the prenatal stage [2].



**Fig. 1.** 3 stages in agriculture

Midpartum stage

Big data is used for crop picking, improving picking efficiency and quality. As we all know, agricultural intelligence has become a trend, and the application of big data will greatly reduce labor costs and improve efficiency.

Postpartum stage

Using big data, agricultural production can be automated.

(2) Improving ecological and environmental benefits and promoting rural ecological revitalization

With the development of our country’s rural areas, ecological environment problems are becoming more and more prominent, which is an important issue related to people’s lives. Agriculture is an important part of the ecological environment, and the application of big data technology can optimize the use of land and monitor water resources. First, use big data technology to realize integrated monitoring of water, forest, lake, grass, and sand systems. From the perspective of data and ecosystems, design all elements, systems, and processes of beautiful villages, and combine rural human settlements The development of the environment and the characteristics of spatial distribution have realized the visual display, remote monitoring and regular inspection of the “Toilet Revolution”, “Four Beautiful Villages”, and rural comprehensive cultural service institutions. Secondly, using big data technology and Internet of Things technology to build a water resource environment monitoring system will help the effective use and management of water resources, thereby promoting the development and utilization of water resources. The water quality status detection of the main rivers and rivers is shown in Fig. 2. The data collection system of the main rivers uses different water quality sensors to monitor different water bodies. The gateway node is responsible for the data transmitted from each water quality collection point, and then transmits the data to the data server of the data processing station via the 5G network. The data bitter server mainly receives the data of each network node, and stores a large amount of data in the database, and then performs data processing, data statistics, data mining and other work to achieve the purpose of data early warning, and then sends relevant data from PC and mobile phone The supervisor (river chief) issued a warning [3].

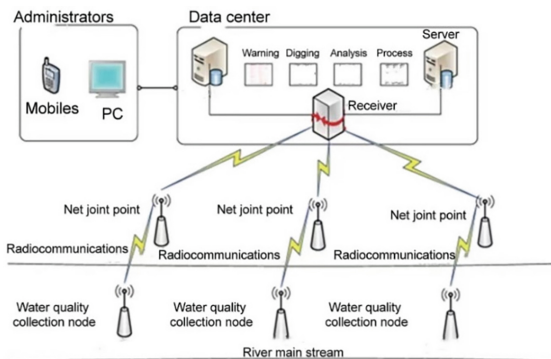


Fig. 2. Water environment monitoring system

### 3 Theoretical Mechanism of Digital Economy Empowering Rural Revitalization

#### (1) Incorporate data elements into agricultural production

Combining Internet of Things technology, big data technology and Internet technology, an intelligent crop production system is constructed, as shown in Fig. 3. Applying Internet technology, the entire production process of crop production is monitored for disaster monitoring and early warning, automatic water supply, intelligent fertilization and other information, and on this basis, manual intervention is carried out to achieve the purpose of intelligent cultivation and increased production.

At the same time, use the “bridge” role of agricultural information technology in agricultural production to establish information platforms such as agricultural logistics distribution, market supply and demand information, and trade information to keep abreast of agricultural product supply and demand and price dynamics, solve the imbalance between agricultural product supply and demand, and promote agricultural products. Transformation to realize the docking of agricultural product production and sales.

In terms of rural tourism, big data technology is used to monitor and evaluate the “beautiful new countryside” in real time, and to monitor and evaluate the protection and improvement of the agricultural ecological environment, so that consumers can understand the growth environment of animals and plants, thereby improving the quality of agricultural brands.

#### (2) Integration of digital products and services into farmers’ lives

In the context of big data, we need to combine cloud storage technology and Internet technology to build a high-quality digital cultural cloud system, as shown in Fig. 4, so that people can better understand and inherit these excellent cultures. First of all, digitize excellent culture, establish digital cultures such as digital libraries, digital museums, and digital memorial halls, store them in the cloud, and use the convenience of the Internet to promote them, so that Chinese culture can be further inherited and developed. Secondly, teachers can be invited to make micro-classes and MOOCs, and build a huge treasure

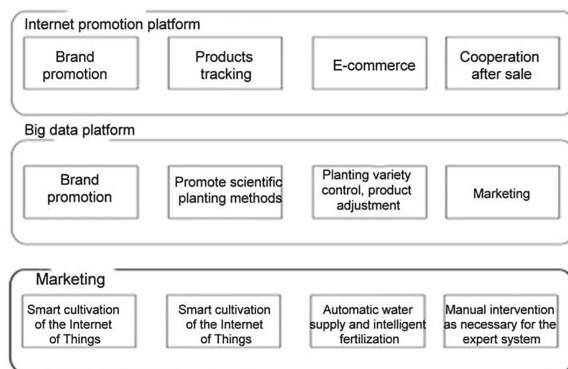
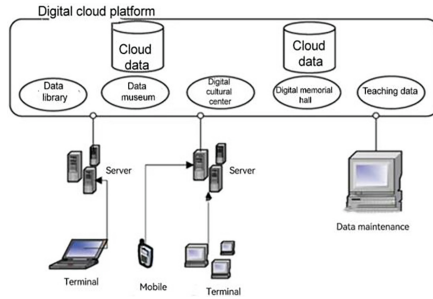


Fig. 3. Crop planting intelligence platform



**Fig. 4.** Excellent cultural digital cloud system

trove of resources, so that teachers can enter schools, especially in rural areas, so that children can learn better, thereby reducing the educational gap between urban and rural areas. resource gap. The construction of the cultural digital cloud platform is undertaken by the Publicity Department of the Municipal Party Committee, Education Bureau, Culture, Radio, Television and Tourism Bureau. After completion, it will be open to the public for free visits to promote cultural development and cultural prosperity [4].

### (3) Integrating digital thinking into rural government services

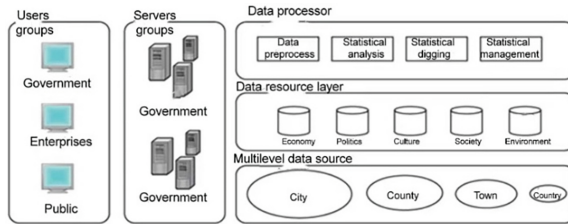
China's agriculture and society are shifting from traditional simplification to modernization. With the process of urbanization in our country, the development of digitalization not only provides a powerful force for the rapid development of my country's rural economy and society, but also brings my country's urban and rural development to a new rapid development momentum.

Use big data technology to build a multi-level interactive government big data platform, build a multi-level linkage big data government architecture platform (as shown in Fig. 5), and create a sunny government, which is conducive to the supervision of grassroots organizations by superior departments and is also conducive to mobilization enthusiasm for the participation of the broad masses of the people and the active role of the masses in rural revitalization. Based on massive data, using technologies such as the Internet and the Internet of Things to collect, analyze, integrate, and store data, and to integrate and store government agencies' data on economics, politics, culture, society, and ecological civilization, can effectively improve government's working ability and efficiency, strengthen supervision, and promote social development. Improving the transparency of government work will help create a good social atmosphere and provide high-quality public services for the people.

## 4 Health Strategies

### 4.1 Establish and Improve the Management of Health Records

The rapid development of health big data is mainly due to the rapid development of medical and health big data. The health information obtained in daily life can make smart health management a job closely related to human health.



**Fig. 5.** Multi-level linkage government big data platform

The focus of health management is the management of health records and risk prediction. Health record management is a method of collecting personal phone and wearable device data, evaluating the patient's physical condition, and then formulating a scientific health care plan based on the patient's medical records. Risk prediction refers to predicting and identifying potential dangers by analyzing the patient's physical condition and based on past medical records, so as to formulate corresponding preventive countermeasures.

Health management plays a key role in the treatment of chronic diseases. The treatment of chronic diseases is served by the patient's own health status and the daily care of the physician. However, the current medical institutions are facing the problem of insufficient medical resources and difficulty in timely monitoring. In response to this problem, big data can realize real-time monitoring of patients, obtain the patient's physical condition, and use big data to make statistics on the patient's physical condition, so as to make decisions for the patient's medication reminder, diet structure and risk assessment.

## 4.2 Effectively Strengthen Health News Publicity

It can improve people's awareness of health, enrich people's health and safety knowledge, and let people pay attention to their bodies and minds in their daily work. After decades of development of traditional health care publicity methods, although some contents are relatively lagging behind, many contents can still be used for reference, such as publicity ideas, publicity content, publicity models, etc. These have established a strong reputation in the vast areas of China.

To carry out health education in the context of big data, new media cannot be placed in the mainstream position, and the two should be placed at the same level to meet their needs. With the help of big data, it can be further deepened and improved on the premise of retaining the advantages of the original health care advertisement, so that it can regain its vitality in the new period [5].

## 4.3 Continue to Deepen the Reform of the Medical and Health System

Use big data to establish a healthy rural health management model, so that the resources of medical services can be optimized to the greatest extent, so that the health needs of farmers can be improved to the greatest extent, so as to achieve coordinated development with rural industries. Therefore, a health management system of "five regions and one



**Fig. 6.** Model of health system reform

core” should be established with “healthy people as the core, creation of a healthy ecology as the prerequisite, health care services as the basis, health culture as the bridge, and the health industry as the breakthrough”, such as Fig. 6 shows.

## 5 Implementation of Health Work Strategies Under the Perspective of Big Data

### (1) Using big data technology to analyze health resources

With the continuous development of social informatization, people’s demand for health information is increasing, and the role of big data technology in health services is becoming more and more obvious. The first is to use the Internet, television and other media to collect data related to user behavior and physical condition. By analyzing these data, we can understand the characteristics of users and what kind of disease they need or the age group of the disease; at the same time, we can also know the health information of the type of lifestyle or learning activity that the user may have, so as to provide decision makers Accurate and effective references and suggestions. The second is to use big data technology to analyze users’ health information, including gender, age group and health status. Through the integration of these data, we can understand which factors affect the user’s physical and behavioral characteristics; the third is to generate a large number of massive medical resources in the process of collecting health services.

### (2) Requirements for health work under the perspective of big data

The development of health work in the era of big data is people-oriented, through the collection of a large amount of information, so as to achieve efficient analysis and provide people with convenient and efficient services. In this situation, we are required to change the traditional thinking mode.

1. Change the original concept: With the continuous progress and innovation of social and economic level and science and technology, as well as the emergence of new

media forms such as Internet technology, a new concept has been brought - the era of big data has come; A stage that must exist in the development process and be popularized rapidly is not only an important factor affecting the quality of medical services, but also related to the health of the people.

2. Improving services: In the context of the big data era, my country's health sector is facing a series of problems. Such as the poor environment for patients to see a doctor and the poor communication between doctors and patients; the chaotic and serious loopholes in the internal management system of the hospital, etc. are one of the important factors hindering the development of medical work. These require us to change the traditional concept and establish a new management system. To promote the development of my country's health care.
3. Improve quality: In the era of big data, health work must not only increase in quantity, but also improve in quality. This means that we must strengthen the construction of the medical service system; secondly, change the concept: the hospital management system under the traditional medical model is no longer suitable for the current social development.

## 6 Conclusion

The use of big data technology to promote product innovation and the application of information technology has promoted the rapid development of the rural economy, promote the application of modern agricultural information, transform traditional agriculture into digital and intelligent, and further improve the efficiency of agricultural output. The organic combination of big data, poverty alleviation, and the transformation of the "two major strategies" is an indispensable and important force for promoting the "Digital China" strategy, consolidating the poverty alleviation strategy, and realizing the "rural revitalization strategy". Only by constructing and improving a long-term management system and providing value-added services through big data with multi-dimensional and wide-angle big data can we provide new support for China's poverty alleviation and rural revitalization, and provide new supporting solutions for the "three rural" issues.

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