

# Innovation Analysis of Rural Agricultural Economic Management Model in the Context of the Belt and Road Initiative

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**Abstract** [Objectives] To explore innovative strategies for rural agricultural economic development in the context of the Belt and Road Initiative. [Methods] This research adopts the method of literature review and field research, systematically combs the research results related to the Belt and Road Initiative and rural agricultural economic management, and deeply understands the actual situation of rural agricultural economic management. [Results] The research shows that in the context of the Belt and Road Initiative, the rural agricultural economy is facing new development opportunities and challenges, but there are also some problems. In the new period, we should accelerate the innovative development of rural agricultural economy by promoting market-oriented reform, strengthening scientific and technological innovation, optimizing the industrial structure, deepening international cooperation and other measures. The Belt and Road Initiative provides an important opportunity for the innovation of rural agricultural economic management. Rural agricultural economic management should be actively integrated into the Belt and Road construction to improve the level of rural agricultural economic management. [Conclusions] This study provides useful exploration and reference for the innovation of rural agricultural economic management models, which helps to promote the healthy development of rural agricultural economy and achieve the goal of rural revitalization.

**Key words** The Belt and Road Initiative, Rural areas, Agriculture, Economy, Administration

## 1 Introduction

Today, with the continuous advance of globalization, China's the Belt and Road Initiative has brought new development opportunities and challenges to countries and regions along the Belt and Road Initiative. The strategic vision of the Belt and Road Initiative aims to promote trade and investment liberalization and facilitation through deepening regional economic cooperation, so as to promote balanced, inclusive and sustainable development of the global economy. In this context, the management of rural agricultural economy in China has gradually become standardized and scientific, and has achieved significant results. However, the current management of rural agricultural economy in China still faces many problems, such as low degree of marketization, unreasonable industrial structure, and insufficient international cooperation. Therefore, how to make innovation in the rural agricultural economic management model, improve the efficiency and quality of agricultural production, and increase farmers' income in the context of the Belt and Road Initiative has become an urgent problem.

## 2 Impact of the Belt and Road Initiative on rural agricultural economy

**2.1 Promoting international trade and investment cooperation in agricultural products** Research data shows that China has signed over 100 agricultural and fishery cooperation agreements with nearly 90 joint construction countries and international organizations, and the trade volume of agricultural products has reached a relatively high level. This cross-border cooperation

helps to enhance the international competitiveness of Chinese agricultural products, promote the scale, intensification, and modernization of agricultural production. Also, this provides more employment opportunities and sources of income for rural areas.

**2.2 Promoting technological innovation and management level improvement in rural agriculture** In order to cope with the competition and challenges in cross-border markets, rural areas of China need to strengthen technological innovation and management innovation. This includes improving agricultural production technology, promoting modern agricultural equipment, and strengthening the quality and safety management of agricultural products. These measures help to improve agricultural production efficiency and quality, and enhance the market competitiveness of agricultural products.

**2.3 Accelerating the integrated development of rural primary, secondary, and tertiary industries** With the increase in agricultural product exports and the expansion of domestic and foreign markets, rural areas need to further improve the industrial and value chains, and promote the integrated development of the primary, secondary, and tertiary industries. This includes strengthening infrastructure construction such as agricultural product processing, warehousing, and logistics, cultivating and strengthening leading enterprises, and driving farmers to participate in industrial chain construction. This will help to enhance the overall economic strength and competitiveness of rural areas.

## 3 Problems in rural agricultural economic management

**3.1 Backward management mode** Many rural areas have outdated economic management models that cannot meet the needs

of modern agricultural development, seriously restricting the further development of rural agricultural economy. On the one hand, traditional agricultural economic management models often focus too much on the production process, while ignoring key factors in modern agricultural development such as market demand, technological innovation, and brand building. This production-oriented management model leads to a disconnection between agricultural products and market demand, difficulties in selling agricultural products, and difficulty in improving farmers' income. On the other hand, management tools and methods are relatively lagging behind. Some regions still rely on manual management and lack modern and information-based management methods, resulting in low management efficiency and difficulty in dealing with complex agricultural economic problems.

**3.2 Insufficient technological innovation capability** Many rural areas have outdated economic management concepts and lack the introduction and application of new technologies and methods, which affects the efficiency and quality of agricultural economic management. Firstly, the main body of technological innovation is single, with technology talents and funds mainly concentrated in big cities, and rural areas relatively lacking technological support. Therefore, agricultural technological innovation in rural areas lacks necessary resources, which limits the progress of technological innovation. Secondly, due to the lack of market adaptability and economic benefits, some excellent technological innovation achievements are difficult for farmers to accept and apply, resulting in a disconnection between technological innovation and agricultural production practice, and the effectiveness of technological innovation cannot be effectively realized. Finally, the benefits of some technological innovation achievements are difficult to sustain, leading to a lack of confidence in technological innovation among farmers, which further affects the promotion and application of technological innovation.

**3.3 Improper resource allocation** In agricultural production, there is often waste and imbalance in resource allocation, which restricts the healthy development of agricultural production. Firstly, there is uneven distribution of land resources. In some areas, land is too concentrated and there is a problem of large-scale idle land, while in others, due to severe fragmentation of land, large-scale management cannot be achieved, which in turn affects the efficiency of agricultural production. Secondly, the utilization of water resources is unreasonable. Agricultural production has a high demand for water resources, but in many areas, the utilization of water resources is still extensive and wasteful. In addition, the lack of scientific water resource management and allocation mechanisms has led to water scarcity in some areas, which has constrained the sustainable development of agricultural production.

## 4 Innovation of rural agricultural economic management mode in the context of the Belt and Road Initiative

### 4.1 Accelerating innovation and reform of agricultural eco-

**nomic management models** The Belt and Road Initiative has brought opportunities for the development of rural agricultural economy. In order to promote the sustainable development of rural agricultural economy, we must accelerate the innovation and reform of agricultural economic management model. Firstly, introduce modern management concepts. Modern management concepts emphasize efficiency, efficiency, and sustainable development. By introducing modern management concepts such as refined and intelligent management, agricultural management is promoted towards a more scientific and efficient direction. For example, using information technology and intelligent equipment in agricultural production to achieve automation and intelligent control can effectively reduce labor costs and improve the quality of agricultural products. Secondly, it is necessary to introduce modern management methods. Mainly including the application of modern information technologies such as big data, cloud computing, and the Internet of Things, real-time monitoring and management of various links such as agricultural production, processing, and sales are carried out to achieve precise control of the agricultural production process. Furthermore, market demand and trends are better grasped, and more scientific and reasonable business strategies are formulated.

**4.2 Strengthening the ability of technological innovation** In order to enhance the overall competitiveness of rural agricultural economy, it is necessary to enhance the ability of agricultural scientific and technological innovation. Firstly, actively introducing advanced agricultural technologies, equipment, and concepts, committed to improving agricultural production efficiency, reducing production costs, and enhancing the quality and yield of agricultural products. Accelerate the upgrading of agricultural industrial structure through agricultural technological innovation and achieve diversified development of rural economy. Secondly, strengthening the cultivation and introduction of scientific and technological talents, increasing the intensity of talent cultivation, improving the treatment and status of agricultural scientific and technological innovation talents, and attracting more outstanding talents to participate in the agricultural scientific and technological innovation cause, especially those with rich experience and advanced concepts, are necessary for the current development of agricultural economy. Finally, establish a mechanism that combines agricultural scientific and technological innovation with agricultural production practice, strengthen the promotion and application of agricultural scientific and technological achievements, and promote the deep integration of scientific and technological innovation with agricultural production.

**4.3 Optimizing the resource allocation** In the context of the Belt and Road Initiative, optimize resource allocation and ensure efficient utilization of resources according to market demand and agricultural production characteristics. First, conduct in-depth research and analysis on the agricultural resources of countries along the Belt and Road Initiative, and scientifically plan the layout of agricultural production bases according to the resource characteristics and market demand of each region. Besides, in combination

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with the needs of the processing process, optimize resource allocation, form a complete industrial chain, and improve the overall efficiency of agricultural production. Secondly, in the agricultural production process, accelerate the promotion of new technologies such as water-saving irrigation and precision fertilization, reduce the waste of water and fertilizer resources, and improve agricultural production efficiency. It is recommended to accelerate the application of agricultural mechanization and intelligent technology, achieve automation and intelligence in agricultural production processes, reduce labor costs, and improve the quality and efficiency of agricultural production.

## 5 Conclusions

The Belt and Road Initiative provides a valuable opportunity for China's rural agricultural economic management. This paper points out the current problems affecting the healthy development of rural agricultural economy, and puts forward a series of targeted innovative strategies through the research on the innovation of ru-

ral agricultural economic management model in the context of the Belt and Road Initiative. By making innovation in the management model of rural agricultural economy, we aim to promote the sustainable and healthy development of rural agricultural economy, and contribute to the realization of rural revitalization and national economic development.

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