

Evaluation and Spatial Correlation of Agricultural Green Investment Efficiency in China

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Abstract: Green agriculture is one of the development directions of modern agriculture, and now the development of green agriculture needs the support of capital and technology. Under the background that China attaches great importance to the development of green agriculture, the government has introduced a series of relevant policies. Therefore, by exploring the problem of investment efficiency in the development of green agriculture in our country, optimizing the investment direction, and constantly promoting the development of green agriculture, there is no doubt that it has important practical significance. Through normative analysis and empirical analysis methods, this paper conducted in-depth research on the efficiency of green investment in agricultural science and technology, the development prospect of agricultural green industrial structure, and the impact of green agricultural economy on green investment, analyzed several key impacts of improving the efficiency of agricultural green investment on the development of agricultural industry, and then elaborated the reaction of agricultural green investment on the entire economic development. This paper also innovatively explores from the Angle of entry and analysis methods, and continuously analyzes the investment effect of "high investment efficiency, low investment level and high overall income growth" formed by the gradual improvement of green technology investment efficiency, the continuous decline of green investment level and the continuous reduction of green investment cost.

Keywords: Agriculture; Green Investment.

1. Research Background and Significance

1.1. Research Background

The "14th Five-Year Plan" points out that advocating the concept of green low-carbon, and continuously enhancing the ability of sustainable development of agriculture is the internal driving force to actively promote the development of green agriculture, as China's carbon peak critical period and window period, to achieve carbon peak carbon neutrality is an inevitable requirement to promote the high-quality development of agriculture. The Fifth Plenary Session of the 19th CPC Central Committee emphasized that increasing green investment in agriculture is a major strategic deployment to comprehensively promote rural revitalization. Therefore, it is very important to increase the efficiency of agricultural green investment to promote rural economic development and achieve the double carbon goal.

1.2. Research Significance

At present, the study of green investment in agriculture has important theoretical significance as follows: First, there are few studies on green investment in agriculture at home and abroad, and green investment in agriculture still lacks sufficient theoretical basis. Domestic and foreign literatures pay more attention to green agriculture, and pay less attention to green investment in agriculture. Compared with other industries, agriculture itself has the characteristics of environmental dependence and weak quality, which makes the formation mechanism, development stage and effect play of green investment in agriculture unique. It will affect the feasibility and scientificity of the research results. Second, China's agricultural green development is in a period of exploration, how to rationally promote agricultural green investment to maximize its effect, to achieve agricultural

output growth, agricultural product quality improvement, rural environment friendly, urgent theoretical guidance. Therefore, this paper's research on the impact of agricultural and green investment evaluation on agricultural green development can fill this theoretical gap to a certain extent.

The practical significance of this paper is as follows: First, the analysis of the efficiency of agricultural green investment is conducive to improving the ability of green development of China's agriculture, although China's agriculture has made great development in the 40 years of reform and opening up, but still faces many shortcomings, the ecological environment is deteriorating, the level of agricultural economic development is relatively low, and the production and management mode of extensive problems are becoming increasingly prominent, so we must comply with the situation and achieve green development of agriculture. By analyzing the impact of agricultural green investment on agricultural green development, it can guide the rational and optimal utilization of agricultural resources, give play to the resource endowment and location advantages of various regions, continuously optimize resource allocation, improve traditional production technology, and continuously improve agricultural green production efficiency on the basis of continuously improving agricultural output and strengthening the prevention and control of agricultural non-point source pollution. To achieve more ideal results. Second, to provide theoretical and policy basis for the government to promote the green development of agriculture, so as to effectively improve the effect of policy implementation. Since the new development concept was put forward at the 18th National Congress, governments at all levels in China have realized the importance of green agricultural development and the important role of green investment in improving agricultural production efficiency and promoting green agricultural development. However, the lack of scientific and clear theoretical research and policy guidance in the practical work

of the government may lead to a certain degree of blindness. This paper focuses on the mechanism and channel of the impact of agricultural green investment on agricultural green development, further analyzes the heterogeneity of this impact effect in different regions, and puts forward corresponding policy suggestions to provide certain theoretical guidance for the government to formulate relevant policies and strategies.

1.3. Research Status at Home and Abroad

Foreign research: As far as the existing literature is concerned, there is no clear definition of "agricultural green investment" in foreign academic circles, and most studies are carried out from the perspectives of "green investment" and "green agriculture", mainly including the following aspects:

Lysa Olena (2022) pointed out that green investment plays a driving role in the competition and development of agricultural enterprises, which can facilitate agricultural enterprises to quickly adapt to changes in the external environment and make the best use of agricultural enterprises' resources. Rokhmawati Andewi (2021) While green investment reduces costs from inefficiencies, It can reduce carbon emissions and promote greenhouse gas emission reduction. The construction of scientific and technological talents at Pasquale Mar can enhance the strength of agricultural scientific and technological innovation. The construction and improvement of a number of key laboratories, technology centers and test bases can promote the formation of agricultural science and technology innovation platforms. Guo Ying (2005) believes that green agriculture is a new type of modern agricultural system, and its development cannot be separated from scientific and technological innovation investment. cello Falcone (2020) believes that green investment can play a key role in accelerating the transformation between traditional economy and green economy, thus creating conditions to ensure equal competition between traditional economy and green economy.

Domestic research: (1) Investment prospects of green agricultural science and technology. Feng Shuguang (2009) pointed out that the increase of investment in green agricultural science and technology can promote the construction of scientific and technological innovation platform and provide an important support and guarantee for the development of green agriculture.

(2) Current demand for green agricultural products. Deng Fang and Guo Xin (2022) believe that consumers' demand for green agricultural products is increasing day by day, and green consumption has become the main trend of agricultural products market. At the same time, relying on the support of the state and the government's green agriculture investment allocation, the demand for green agricultural products has developed by leaps and bounds. Yuan Ziyun (2019) proposed that China's food consumption tends to be healthier green agricultural products, and the green agricultural products market has great investment value and development space. The development of green agricultural products will enter a new stage, which requires joint investment by the government and enterprises.

(3) The industrialization of green agriculture. Liu Haihong and Wang Houjun (2009) pointed out that at present, China's green agriculture is still in its infancy, and the industrialization of green agriculture is not paid much attention to. Less investment in green agriculture can not further promote the industrialization of green agriculture.

Zhai Yadong (2020) believes that the industrialization of green agriculture is an important means to improve agricultural production efficiency, increase the added value of agricultural products, and promote farmers' income, as well as an important way to promote the high-quality development of green agriculture in China.

Throughout the existing literature, domestic and foreign scholars have carried out a large number of studies on green agriculture and green investment from different perspectives, laying a foundation for further research in related fields. However, it can be seen from the above research review that there are still some deficiencies in the existing literature, which are worthy of further study.

2. Research Objectives and Main Contents

2.1. Research Objectives

2.1.1. Explore the Efficiency of Green Investment in Agricultural Science and Technology

Through literature analysis and empirical analysis, the current situation of agricultural green investment was understood, and the main factors affecting the efficiency of agricultural green investment were summarized. It lays the theoretical foundation and data foundation for the next model construction.

2.1.2. To predict the Development Prospect of Agricultural Green Industrial Structure

Based on the data obtained from objective 1 and taking technological progress, policy support and consumer willingness as influencing factors, the agricultural industry development prospect assessment model is constructed. After the historical data is substituted to test its accuracy, the agricultural industry development prospect assessment is carried out.

2.1.3. Analyze the Impact of Green Agricultural Economy on Green Investment

After establishing a model based on literature analysis and market orientation and other factors and drawing corresponding conclusions, a series of policy opinions are proposed in terms of enterprise green investment direction, agricultural supply-side structural reform, government and enterprise technical support and public awareness, so as to promote the long-term development of green agriculture

2.2. Main Content

This paper is divided into five parts, each part of the research content is as follows:

2.2.1. The First Part Mainly Introduces the Project Background and Research Significance

This part focuses on the realization of the goal of "double carbon" and the need of constructing ecological civilization, and expounds the significance of promoting green agriculture. This paper summarizes the impact of the development of agricultural green investment on green agriculture and green finance, sorts out green agricultural resources at home and abroad, and points out the research object of this paper.

2.2.2. The Second Part Analyzes the Development Status of Agricultural Green Investment by Quoting Domestic and Foreign Literatures

Firstly, by summarizing relevant literature, the current status of green investment in green agriculture is introduced, and empirical analysis is carried out based on the data

obtained from the field investigation of some green agricultural enterprises.

2.2.3. The Third Part Elaborates the Research Objectives.

Through the analysis of factors affecting the efficiency of agricultural green investment, it explores the relationship between the influence of agricultural science and technology, the development of agricultural green industrial structure on agricultural green investment and the reaction of green agricultural economy on green investment. The analysis is based on theoretical reading and field research, and the data obtained is applied according to economic benefits. The green investment benefit evaluation index system established by the three dimensions of environmental benefit and social benefit is systematically analyzed and studied, and the influence mechanism and effect of each factor are deeply analyzed.

2.2.4. The Fourth Part Elaborates the Innovation and Creativity of the Research Through Literature Analysis, and Predicts the Development Prospect of Green Agriculture Investment

This paper introduces the construction process of green agricultural development prospect assessment model, and puts historical data into operation to test its accuracy, and then carries out industrial development prospect assessment.

2.2.5. The Fifth Part Puts Forward Policy Recommendations Based on Model Analysis and Research Conclusions

On the basis of literature analysis and analysis of the efficiency of agricultural green investment, feasible policy suggestions were put forward from the aspects of improving the relevant policies of green agriculture and public awareness, so as to promote the efficiency of green investment in green agriculture.

3. Innovation Points and Project Characteristics

The innovation of this paper mainly includes the following two aspects:

First, this paper studies the sustainable development of green agriculture from the perspective of agricultural green investment. However, in the new era, China mainly realizes the goal of "carbon peaking and carbon neutrality" by adjusting oil and gas, and there are few studies on the environmental protection and carbon reduction of green agriculture. This project innovatively combines the green development of agriculture with the double carbon goal, looks forward to its development prospects and puts forward suggestions, so as to help realize the double carbon goal and promote the green development of agriculture.

Second, empirical analysis is used to analyze the correlation between agricultural green investment and green agriculture. Domestic and foreign scholars rarely start from the perspective of agricultural green investment when studying the development of green agriculture, and most of the existing literature focuses on normative research without empirical analysis. By using panel data of several cities, combined with measurement methods such as dynamic panel model and spatial panel model, this paper quantitatively

studies whether China's agricultural green investment has played a due effect on the development of green agriculture in theoretical analysis, which is innovative.

4. Research Ideas

4.1. Research Ideas

First of all, this paper defines the basic concept of agricultural green investment, and on this basis, a large number of domestic and foreign research results on agricultural green are comprehensively sorted out, summarized and commented. Further, this paper probes into the current situation of agricultural green investment efficiency, predicts the development prospect of agricultural green industry structure, and summarizes the current situation of green agricultural product industry investment. Through normative analysis and empirical analysis, several key influences of supporting the development of agricultural science and technology, promoting the adjustment of agricultural green industry structure, and increasing the investment in green agricultural products industry on the efficiency of agricultural green investment were further expounded. At the same time, explore the counter-effect of green agricultural economy on green investment, and finally realize the comprehensive layout of green agricultural science and technology research and development, respond to the call of the state and strive to balance economic development and green transformation simultaneously, promote the long-term development of low-carbon economy, and promote the sustainable and healthy development of green agriculture.

5. Research Conclusion

This paper mainly studies and analyzes the investment efficiency and spatial correlation of green agriculture, and then puts forward effective suggestions on green investment development. In response to the call of the state, efforts should be made to combine economic development and green transformation simultaneously, promote the long-term development of low-carbon economy, and promote the core goal of sustainable and healthy development of green agriculture.

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