Research on the Fiscal and Tax Policies for the Development of Smart Agriculture

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Abstract: Based on the prospect of the development of smart agriculture, this paper introduces the development status and problems of smart agriculture in China, and analyzes the application of fiscal and taxation policies in the development of smart agriculture in China. Based on the problems existing in the fiscal and taxation policies of smart agriculture in China, this paper discusses the overall thinking of further supporting the development of smart agriculture in China's fiscal and taxation policies, and puts forward suggestions.

1. Introduction

Intelligent agriculture is profoundly changing the mode of agricultural production and becoming the general trend of agricultural development in the future. Intelligent agriculture, as a fundamental industry related to the national economy and people's livelihood, is bound to be supported by the government's fiscal and taxation policies. Among the policies supporting smart agriculture, fiscal and taxation policies, as an important means of macro-control on behalf of the state, have special significance. Therefore, the establishment of a scientific and effective fiscal and taxation policy system in support of smart agriculture is conducive to promoting the development of smart agriculture and promoting the process of agricultural and rural modernization.

2. The Connotation and Development of Smart Agriculture

2.1 Connotation of Smart Agriculture

Academician Zhao Chunjiang defined smart agriculture as follows: smart agriculture is a brand-new agricultural production format that takes information and knowledge as production factors, and deeply integrates agriculture with modern information technologies such as Internet, Internet of things, cloud computing, big data, intelligent equipment, etc.

2.2 Development Status of Smart Agriculture in China

2.2.1 Development Trend of Smart Agriculture in China

"Smart agriculture" is changing the backward traditional agricultural production and management system, promoting the transformation of traditional agriculture and driving the development of agricultural industry chain to a higher level, which is the inevitable trend of agricultural modernization.

Policy support. The party and the state attach great importance to the development of "intelligent agriculture". In a number of policy documents, all of them have proposed the development of intelligent agriculture and related technologies, especially the central policy document No. 1, which highlights the priority development of agriculture and rural areas. In recent years, with the promotion of national policies, more and more Internet giants and agricultural enterprises began to explore the field of intelligent agriculture.

Smart agriculture market is booming. With the development of artificial intelligence, Internet of things, big data and other modern information technology, the deep integration of modern information technology and agriculture has profoundly changed the development mode of Chinese traditional agriculture. According to the data, the potential market scale of China's smart agriculture has reached 20.306 billion yuan in 2018. It is predicted that the potential market scale of China's smart agriculture will reach 26.761 billion yuan by 2020.

2.2.2 Problems in the Development of Smart Agriculture in China

With the vigorous development of smart agriculture, we should also realize that there is still a gap between China's smart agriculture and developed countries, and there are still many shortcomings in many aspects.

There is a lack of high-quality agricultural production management personnel. At present, the loss of high-quality human capital in China's rural areas is serious, the age, culture and gender structure of left behind farmers are not coordinated, their age is high, their cultural level is generally low, their understanding and application of Internet information technology are less, and their awareness of modern agricultural production is relatively weak.

The scientific research system of smart agriculture is not perfect. At present, China's intelligent agricultural research system is still not perfect, and the ability of scientific research achievements to transform productivity is insufficient. Compared with developed countries, China's investment in agricultural technology and scientific research is relatively low.

The infrastructure of smart agriculture is backward. Agricultural infrastructure is still backward, large-scale modern agricultural machinery equipment is less, and government subsidies for agricultural machinery are less, which makes scattered small and micro agricultural producers unable to buy. The information infrastructure in rural areas is weak and the investment is relatively small.

3. The Application of Fiscal and Tax Policies for Smart Agriculture in China

3.1 Overview of China's Fiscal and Tax Policies Supporting Smart Agriculture

From 2004 to 2020, No.1 central document focused on agriculture, rural areas and farmers for 17 years, and made arrangements for agricultural development. Since the 18th National Congress of the Communist Party of China, the Central Committee has put forward guiding opinions on agricultural modernization, supply side structural reform, Rural Revitalization and poverty alleviation. Through combing the No. 1 central document of the party since the eighteen big party, the fiscal and tax policies supporting the development of intelligent agriculture can be roughly divided into four parts: intelligent agriculture support and protection policy, wisdom agriculture science and technology innovation policy, wisdom agriculture industrialization guidance policy, and intelligent agriculture green development policy.

3.1.1 Support and Protection Policies for Smart Agriculture

The support and protection policies for smart agriculture are mainly reflected in the use of financial investment and subsidy policies to support the application of modern agricultural machinery and other agricultural technology and equipment and infrastructure construction. From 2012 to 2018, the central government invested 151.7 billion yuan to support 2017 million farmers to

purchase 26.39 million sets of agricultural machinery, which greatly improved the level of agricultural material technology and equipment, and effectively promoted the rapid development of China's agricultural mechanization and agricultural machinery equipment industry. In recent years, the Ministry of agriculture and rural areas has played a guiding role in agricultural machinery purchase subsidy policy, actively promoting the application of Internet of animals technology in the field of agricultural machinery, and the local government is also exploring subsidies for the construction of smart agriculture.

3.1.2 Science and Technology Innovation Policy of Smart Agriculture

In recent years, the state has continued to increase investment in agricultural infrastructure and agricultural science and technology, giving play to the leading role of the government in agricultural science and technology investment. Agricultural R & D investment, such as agricultural and non-staple food processing industry research and experimental development expenditure, is growing.

In terms of tax policy, the technology transfer, technology development and related technical consultation and service provided by taxpayers are exempted from value-added tax; the income from technology transfer is exempted from enterprise income tax. For high-tech enterprises that need special support from the state, the enterprise income tax shall be levied at a reduced rate of 15%. The proportion of enterprise R & D expenses plus deduction increased to 75%, and the policy was expanded from small and medium-sized technology-based enterprises to all enterprises.

3.1.3 Guiding Policy of Intelligent Agriculture Industrialization

The state plans to vigorously build modern agricultural industrial parks, and the central government allocates part of the subsidy funds that meet the requirements for the establishment. From 2017 to 2019, the Ministry of agriculture and rural areas and the Ministry of Finance approved the establishment of 92 national modern agricultural industrial parks. Provinces and cities have also invested in the development of smart agriculture.

3.1.4 Green Development Policy of Smart Agriculture

In recent years, the Ministry of agriculture and rural actively strive for policy and financial support to accelerate the popularization and application of green prevention and control measures such as biological pesticides. At the same time, local governments actively strive for local financial support and implement green prevention and control subsidy policies. In terms of tax policy, China has continued to reduce the value-added tax rate, and the pesticide tax rate has been reduced from 13% to 9%.

3.2 Problems of Fiscal and Tax Policies Supporting the Development of Smart Agriculture in China

The proportion of agricultural research investment is small. Agricultural developed countries have realized the layout of smart agriculture by investing in agricultural technology research and development. Agricultural research funds in developed countries account for about 2.2% of GDP. In contrast, China's agricultural research investment proportion is small, and in 2017, agricultural research expenditure only accounted for 0.47% of the total agricultural output value.

The preferential range of Finance and taxation for smart agriculture is small and the policies are scattered. The fiscal and tax policies for smart agriculture are scattered and small in scope. The preferential policies and measures related to smart agriculture tax are relatively single, and the scope of preferential objects is relatively narrow and imperfect.

It is urgent to adjust the expenditure structure to support the development of agricultural modernization. The investment in agricultural science and technology promotion, agricultural

market information service, rural modern logistics, standardized production of agricultural products and quality and safety of agricultural products is still very limited.

The market mechanism of agricultural products needs to be improved. At present, China is in the process of market economic system reform, and various systems and systems are not perfect. Now the most important thing is to solve the problem of market chaos and protect the benefits of farmers.

4. Financial and Tax Policy Suggestions for the Development of Smart Agriculture

Integrate the development of intelligent agriculture related agricultural Internet of things, agricultural big data, intelligent agricultural machinery equipment R & D and manufacturing into the overall national development strategy, and promote the level of agricultural intellectualization and modernization with positive fiscal and tax policies.

Improve policies to guide the development of smart agriculture. Introduce and implement policies and programs to support the development of smart agriculture, guide the development of smart agriculture, improve the financial budget allocation system, and make it clear in the form of laws and regulations, so as to provide a good policy environment and financial support for the development of smart agriculture.

Increase financial investment in agriculture. Research and formulate relevant supporting policies, encourage enterprises to actively participate in the construction of smart agriculture, develop multiple financing channels, and guide domestic and foreign capital from all walks of life to invest in the field of smart agriculture.

Promote the industrialization of smart agriculture. Increase the investment of funds, materials and talents in agricultural scientific research system, encourage the industrialization of smart agriculture, and formulate corresponding preferential policies of tax and fee reduction.

Formulate relevant subsidy policies. It is suggested that relevant departments should formulate subsidy policies according to the basic situation of China's industry, give policy subsidies to intelligent agricultural technology products and application subjects, and encourage farmers to actively use modern agricultural machinery and equipment.

5. Conclusion

This paper discusses and analyzes the current situation and existing problems of smart agriculture in China since the 13th five year plan, and the fiscal and taxation policies and development strategies supporting the development of smart agriculture in China. Smart agriculture represents the advanced stage of modern agricultural development and is an important support to promote agricultural modernization. As a large agricultural country and a market economy country, China should constantly learn from and learn from the advanced fiscal and Tax Policy Governance Experience of supporting the development of smart agriculture. Based on the shortcomings of China's smart agriculture fiscal and taxation policies, we should formulate fiscal and tax policies in line with China's national conditions to support the development of smart agriculture.

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