

The Impact of Fiscal Support for Agriculture on Economic Development: Evidence from Fujian Province

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Abstract: Since the strategy of rural revitalization was put forward for the first time, it is necessary to deal with the issues related to the "three rural areas" in order to realize socialist modernization, and the government has focused on the financial expenditure on agriculture, so reasonable planning of financial support for agriculture is crucial to stabilize the development of agriculture. Agriculture, one of the most basic industries in the economic development, plays an important role in the growing economy. It has strong externalities, but its vulnerability dictates that it must be supported by government policies. Effective fiscal measures are essential to promote agricultural and economic development. In this sense, this paper collects the data of Fujian Province from 2010 to 2019. Firstly, the paper analyzes the current situation of financial support for agriculture in Fujian Province through the absolute scale and relative scale of financial support for agriculture and the differences in economic development of various cities in the province, and explores the problems of economic growth; secondly, we conduct the trend and correlation analysis of the scale of financial support for agriculture expenditure, and examine the impact of agricultural financial support on economic growth. Finally, we propose some feasible policy recommendations regarding financial support for agriculture to promote economic growth.

Keywords: Fiscal Support for Agriculture, Economic Growth, Fujian Province, Agricultural GDP.

1. Introduction

As the most basic industry for economic development, the development of agriculture effectively contributes to the development process of the whole national economy. The report of the 19th Party Congress emphasizes that the issue of agriculture, rural areas and farmers is a fundamental issue related to national planning and people's livelihood, and we must always make solving the "three rural issues" as the top priority of the work of the whole Party [1].

The development of agriculture needs government support, and the growth of economy can drive the increase of government revenue, while the increase of financial support to agriculture can find the driving effect of financial support to economy[2]. Due to the current shortage of innate natural conditions in Fujian Province, the basic ability to develop the province's economy is relatively weak. Reasonable government support for agriculture can not only ensure that the province's agriculture can effectively achieve economic development, but also contribute to the healthy development of the province's economy and promote sustainable agricultural development[3].

China's agricultural development is largely responsible for the country's socio-economic development. Since the 19th Party Congress, General Secretary Xi has made many remarks on the "three rural issues". At the two sessions of the National People's Congress in 2018, clear goals were set for future agricultural development, and the need to further rationalize the allocation of financial resources, so that the benefits of agricultural support policies can be implemented to more farmers and to modernize public agricultural spending[4]. In the 2019 Central Document No. 1, it is mentioned that priority will be given to the "three rural areas". In the 2019 Central Government No. 1 document, it is mentioned that priority should be given to the "three rural areas", while actively promoting rural construction, comprehensively deepening rural reform and developing and

expanding rural industries.

While the government of Fujian Province is actively providing more demand for national agricultural financial funds, the government of Fujian Province has steadily increased its financial support for agriculture. According to the Fujian Provincial Statistical Yearbook 2019, Fujian Province's fiscal expenditure was 44.206 billion yuan, while Zhejiang Province's fiscal expenditure was 74.424 billion yuan in the same year, a difference of 30.218 billion yuan. Although Fujian's agriculture and rural economy as a whole have made great progress since the reform and opening up, there is still a huge difference between Fujian and its neighboring developed provinces. 2019, the total agricultural output value of Fujian Province was 463.656 billion yuan, accounting for 6.30% of the national total agricultural output value, and the per capita income of rural residents was 19,568 yuan, but the per capita income of rural residents in Zhejiang Province was 29,876 yuan[5], higher than Fujian 10,308 yuan, which shows that the relative backwardness of agricultural development has become an obstacle to the healthy and sustainable economic development of Fujian. Therefore, the government must increase financial support for agriculture to ensure economic growth in agriculture and thus guarantee sustainable and healthy development of agriculture.

However, the problems faced at this stage are the low amount of financial investment in terms of financial support for agriculture in Fujian Province, the lack of reasonable planning in the utilization of funds and the structure system of agricultural support has not yet been formed, etc. Therefore, by studying the scale of financial support for agriculture, the structure of financial support for agriculture and the economic development of each city in Fujian Province, this paper analyzes the allocation problems between policies and funds and the impact in terms of economic growth, and proposes to maximize the The proposal of maximizing the financial investment in agricultural support so as to effectively change the trend growth amount of agricultural production value and

help the economic growth.

2. Status Quo of Agricultural Financial Support Expenditure in Fujian Province

Starting from the current situation of agricultural finance, this paper compares the absolute and relative scale of fiscal support expenditure on agriculture, identifies existing problems and puts forward reflections, and lays the foundation for the study of fiscal support expenditure on economic growth. Regarding the data of statistical indicators involved in this chapter, they are mainly obtained from Fujian Financial Yearbook, Fujian Statistical Yearbook and Plants Financial Yearbook from 2010 to 2019.

2.1. The Absolute Scale of Financial Support for Agriculture in Fujian Province

As shown in Fig.1, the fiscal expenditure of Fujian Province has been on an upward trend since 2010 to 2019, increasing from 16.03355 billion yuan in 2010 to 44.20629 billion yuan in 2019, tripling in ten years, which is mainly due to the spirit of the 12th Five-Year Plan of Fujian Province, which promotes Fujian Province's scientific development of agriculture, towards the goal of economic development to drive farmers' income. The increase in government spending on agricultural support has significantly boosted the growth rate. The left axis of the graph below indicates the financial support expenditure for agriculture; the right axis indicates the growth rate of financial support expenditure for agriculture.

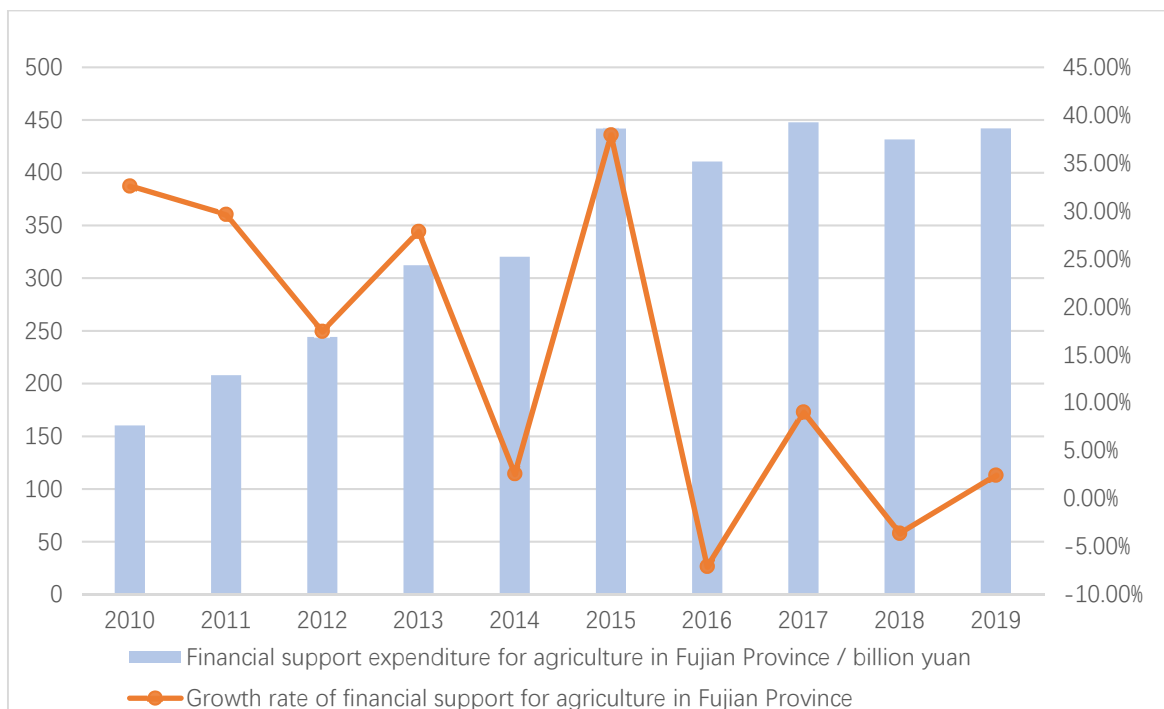


Figure 1. Absolute scale and growth rate of financial support expenditure on agriculture in Fujian Province, 2010-2019
Source: "Fujian Province Statistical Yearbook" and collation

As seen in Figure 1, the growth rate of financial support for agriculture in Fujian Province fluctuated up and down from 2010 to 2019, and the growth rate remained stable until 2014, but as the value peaked in 2015 with an increase of nearly 40%, the funds could not keep pace with the negative growth in 2016.

On the one hand, it can be attributed to the introduction of policies. In 2015, the fiscal policy of Fujian Province focused on the construction of an ecological first demonstration zone with 5.367 billion, increasing funds for ecological protection, soil erosion project management, strengthening direct subsidies for agriculture, afforestation and building more livable environments, etc.; while on the other hand, the government's construction within the planning framework of supporting agricultural systems lacks stability and is not The government's planning framework in support of the agricultural system, on the other hand, lacks stability and regularity. From this analysis, it can be concluded that blindly

increasing fiscal input is not conducive to economic growth, and that only a reasonable long-term planning of the fiscal expenditure structure can maximize the effectiveness of fiscal support to agriculture.

2.2. The Relative Scale of Financial Support for Agriculture in Fujian Province

Although it can be seen from the data that the absolute scale of financial support for agriculture in Fujian Province has been increasing in the past decade, and has exceeded the 44 billion mark in recent years, the relative scale of financial support for agriculture in Fujian Province is unsatisfactory, as shown in Fig.2, where the proportion of financial support for agriculture in Fujian Province to agricultural GDP shows an "inverted U-shape". This indicates that the proportion has been declining in the past ten years.

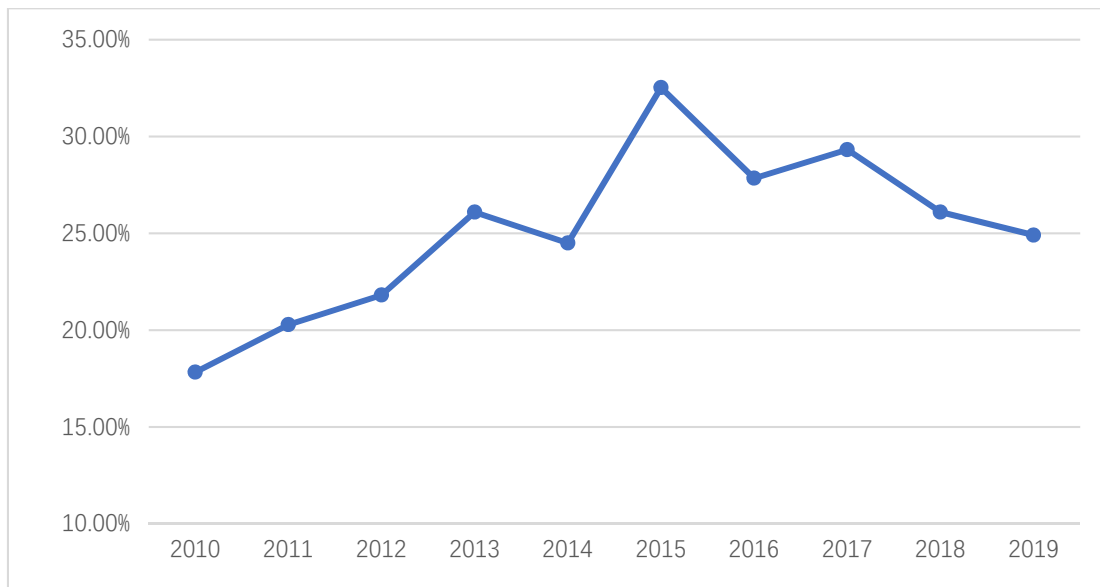


Figure 2. Ratio of fiscal support expenditure on agriculture to agricultural GDP in Fujian Province
Source: "Fujian Province Statistical Yearbook" and collation

The analysis of the magnitude of change of the two dash lines in Fig.3 obtains that the correlation between the two is not strong. The data of the last ten years show that the contribution of agricultural GDP has been on a decreasing trend for ten years, with the highest value being 14.84% in 2010, while the peak of the proportion of fiscal expenditure on agriculture to total fiscal expenditure appeared in 2015 at 11.04%, which is the smallest difference between the two in

the last ten years, with a difference of 1.63%. From the figure, we can find that the proportion of fiscal expenditure on agriculture in Fujian Province has never exceeded the contribution of agricultural GDP in the past ten years, which is very unfavorable to the development of modern agriculture in Fujian Province and a major obstacle for farmers to achieve income growth.

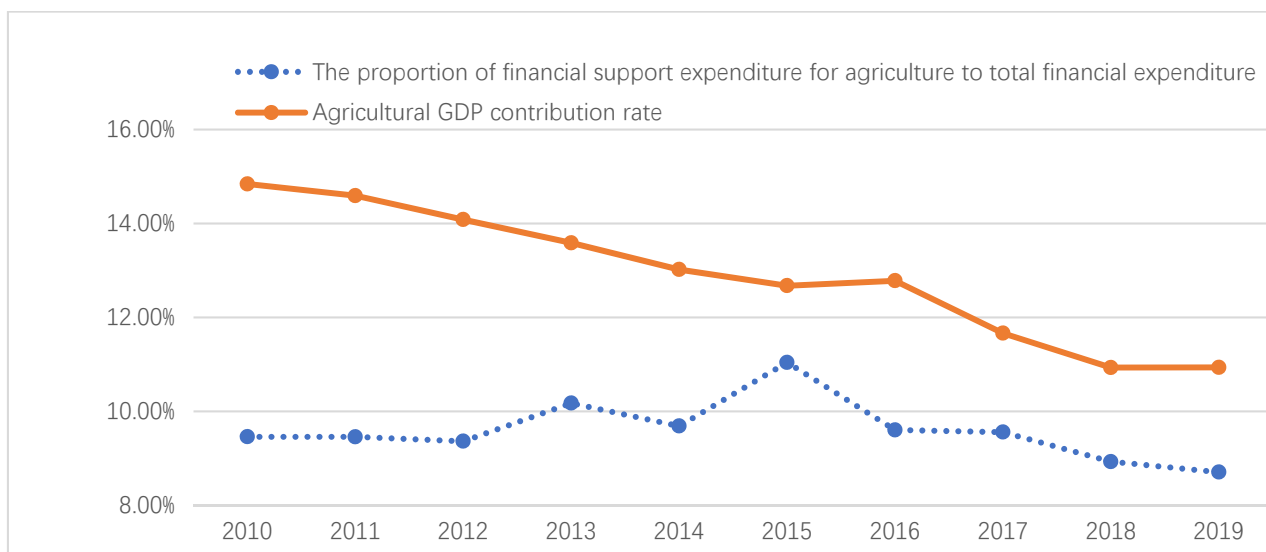


Figure 3. The proportion and contribution rate of fiscal support expenditure on agriculture in Fujian Province (%)
Source: "Fujian Province Statistical Yearbook" and collation

3. Research on the Impact of Financial Support to Agriculture and Economic Growth in Fujian Province

3.1. The Impact of The Scale of Fiscal Support Expenditure on Agriculture on The Growth of Economy

3.1.1. Trend Analysis of The Scale of Financial Support for Agriculture Expenditure and Economic Growth

As shown in Fig.4, the trends of fiscal expenditure on

agriculture and agricultural GDP in Fujian Province from 2010 to 2019 are depicted. Where the left axis indicates the fiscal support expenditure for agriculture; the right axis indicates the total agricultural output value.

In the past decade, the overall trend of fiscal expenditure on agriculture in Fujian Province has increased, including a sharp rise in 2015, mainly due to the optimization of the agricultural industrial structure in Fujian Province in the context of the central government's supply-side reform requirements, and in the long run, fiscal expenditure will benefit from this structural optimization and continue to grow.

The total agricultural output value of Fujian Province has

increased year by year in the past decade, from 89.939 billion yuan in 2010 to 177.477 billion yuan in 2019, an increase of 87.538 billion yuan, with an average annual growth of 8.7538 billion yuan, and the total agricultural output value in 2019 is nearly two times the total agricultural output value in 2010.

From the trend situation of financial support expenditure

for agriculture and value added of agriculture in Fujian Province, the changes of the two tend to be similar, indicating that the two

The two have a strong correlation and there may be some relevant effects.

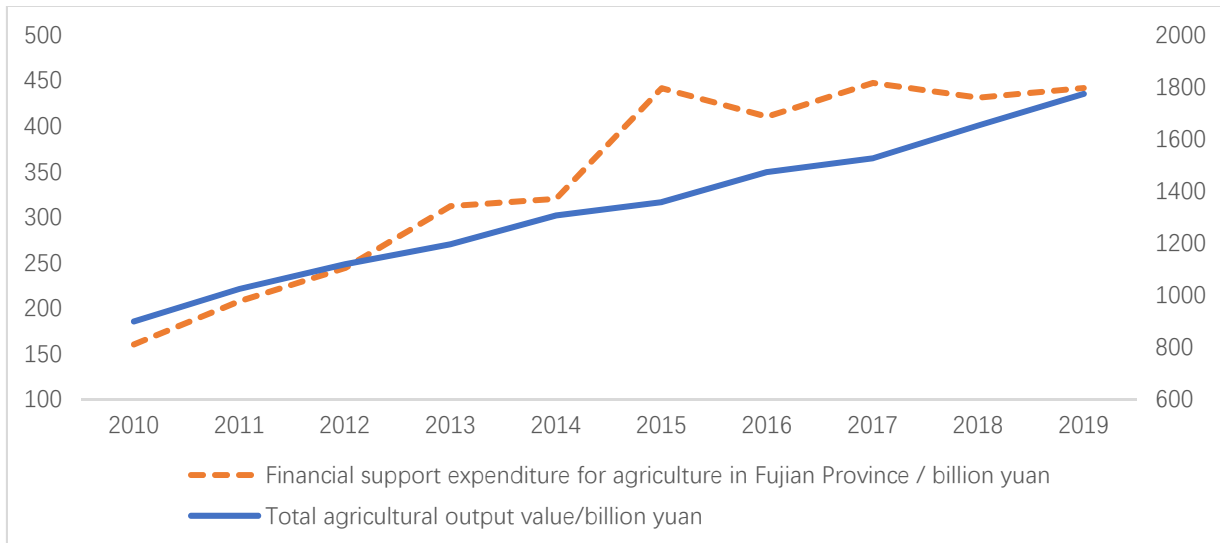


Figure 4. Trend of financial support expenditure and total agricultural output value in Fujian Province, 2010-2019 (billion yuan)

Source: "Fujian Province Statistical Yearbook" and collation

3.1.2. Correlation Analysis of The Scale of Financial Support for Agriculture and Economic Growth of Agriculture

As shown in Fig.5, the correlation degree between fiscal support expenditure on agriculture and agricultural GDP in Fujian Province between 2010 and 2019 is depicted. The horizontal axis indicates the fiscal support expenditure for agriculture, and the vertical axis indicates the total agricultural output value.

It can be seen that the change in the growth of total

agricultural output value with the increase in the number of expenditures before 40 billion yuan is more obvious and the promotion effect is better, but after the amount of financial support for agriculture decreased to 41,057.51 billion yuan in 2016, the amount of total agricultural output value did not increase much due to the instability of the amount of support for agriculture from 2016 to 2019, which indicates that the financial support for agriculture to stimulation of economic growth has slowed down in recent years, and the promotion needs to be further improved.

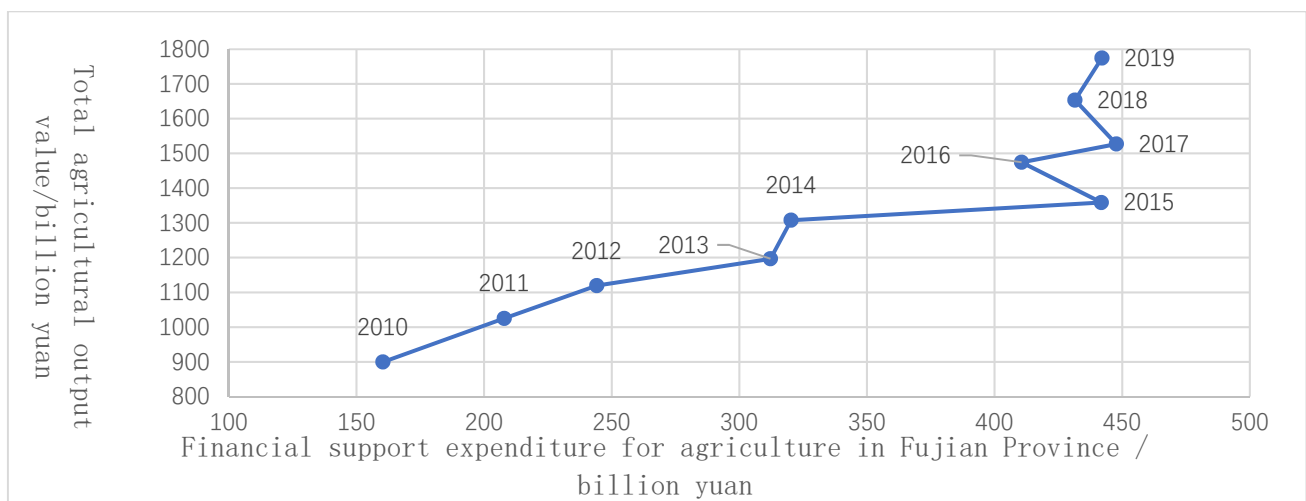


Figure 5. Correlation chart between financial support expenditure on agriculture and total agricultural output value

Source: "Fujian Province Statistical Yearbook" and collation

On the whole, the total agricultural output value increases with the increase of fiscal expenditure on agriculture, and it can be found that there is a positive relationship between the fiscal expenditure on agriculture and the growth of economy in Fujian Province, and increasing the investment of fiscal

funds to support agriculture can be an effective way to promote the development of economy in Fujian Province.

3.2. The Impact of The Structure of Financial Support for Agriculture Expenditure on The Growth of Economy

In accordance with the spirit of the National Five-Year Agricultural Development Support Plan, the Fujian Provincial Government has promulgated a series of measures to develop the economy and increase agricultural inputs.

The current financial support for agriculture is mainly focused on: first, the improvement of rural living conditions, financial support for the construction of agricultural land infrastructure projects, restoration of agricultural land and prevention of pollution of forest land and agricultural land, construction of windbreak forest projects, development of water-saving irrigation technology, and promotion of environmentally friendly agriculture in rural areas; second, the expansion of production channels for farmers to increase income, the introduction of subsidies that can be afforded to farmers to increase Third, to promote the spread of agricultural technology at the grassroots level, to promote the overall development of agriculture, to encourage the creation of "five new" agricultural projects, and to increase support for modern science and technology; fourth, to implement poverty alleviation projects in rural areas, to establish advanced units for rural reform, to distribute subsidies directly to the collective, and to provide preferential Interest on loans.

In terms of the structure of financial support expenditure

for agriculture in Fujian

Province, the expenditure items mainly include: agricultural expenditure, forestry expenditure and water conservancy expenditure, with relatively less expenditure on poverty alleviation and subsidies. From the expenditures of the three agricultural support projects in Fig.6, agricultural expenditures have the largest support funds, increasing from 7,782.95 million yuan to 12,246.38 million yuan in eight years, an increase of 1.57 times, but the average annual growth rate of agricultural expenditures is lower than the average annual growth rate (14.89%) of total financial support expenditures for agriculture in Fujian Province.

The second largest project supported by Fujian Province funds is water conservancy, from 3.442.38 billion yuan in 2010 to 10.472.5 billion yuan in 2018, an increase of 3.04 times, with an average annual growth rate of 103.13% in water conservancy spending higher than the total financial support for agriculture in Fujian Province.

The average annual growth rate of expenditure. This is attributed to the Fujian government's vigorous promotion of the "six waters, six thousand and one configuration" water development goal and the effectiveness of comprehensive soil erosion control, flood mitigation system, and urban and rural water supply integration since the 12th Five-Year Plan. By comparing the slopes of the three lines in Fig.6 from 2014 to 2015, it is found that the government has invested less financial support in forestry.

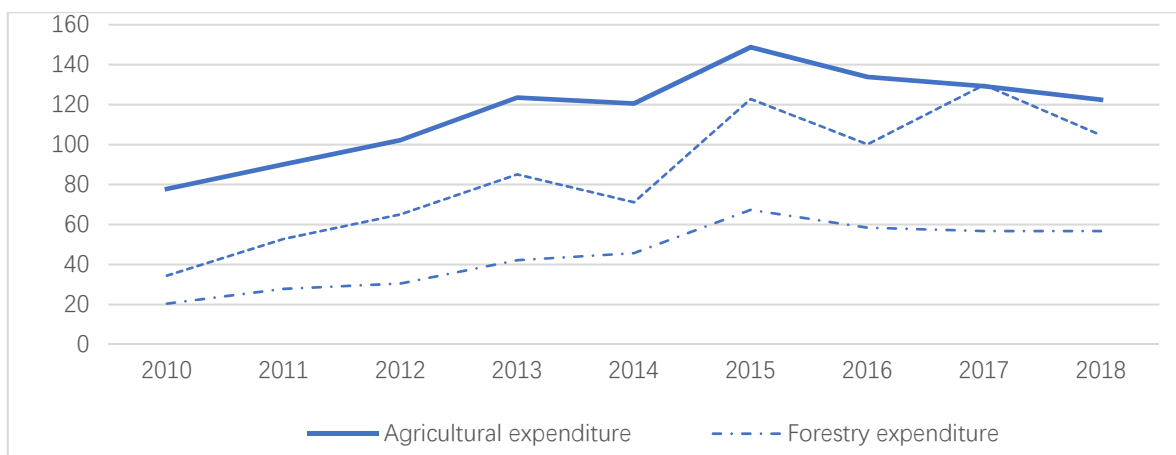


Figure 6. Expenditure on various sub-projects of financial support for agriculture in Fujian Province, 2010-2018
Source: Fujian Provincial Statistical Yearbook and collation

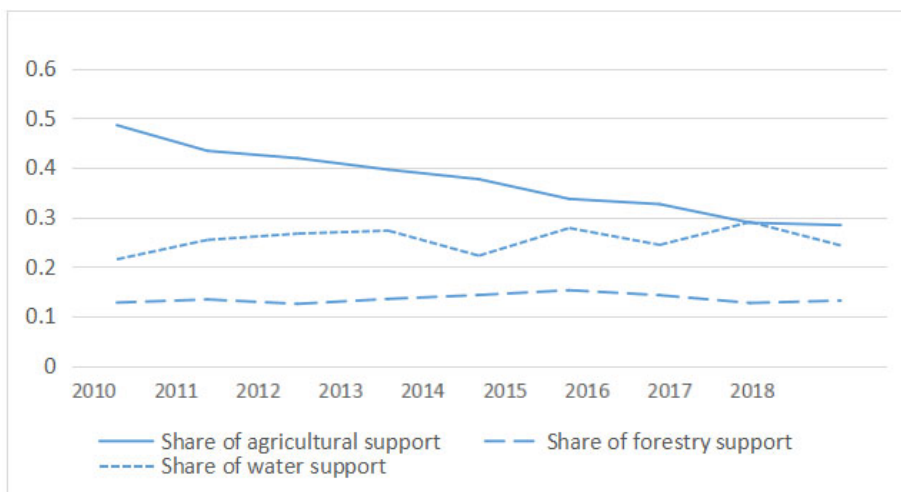


Figure 7. The proportion of financial support expenditure structure for agriculture in Fujian Province
Source: "Fujian Province Statistical Yearbook" and collation

As seen in Fig.7, although the provincial share of agricultural support decreased from 48.54% in 2010 to 28% in 2018, it is still higher than the share of water resources as well as the share of forestry. The share of water support changed significantly between 2013 and 2014 and has been fluctuating since then. The share of forestry support, on the other hand, has remained at around 13% for the eight-year period from 2010 to 2018, with less fluctuation. Possible reasons for these problems are: in 2015, Fujian Province implemented the spirit of the Twelfth Five-Year Plan on water conservation, increased investment in water conservation projects, strengthened the transformation of farmland water conservation, promoted river management, and continued to

develop water supply capacity. From Table 1, we can see that since 2013, the expenditure on inclusive financial development has been increased to implement Xi Jinping's important statement on "building an inclusive financial system". In general, it seems that the financial support for various sub-projects in Fujian Province has been increasing year by year, but the growth rate is different and the distribution of funds is not reasonable. The growth rate of agricultural expenditure tends to decline, the expenditure on water conservancy fluctuates greatly, and the expenditure on forestry basically remains balanced. So it seems that the government has neglected the financial support for ecological protection.

Table 1. Expenditure on other sub-projects of financial support for agriculture in Fujian Province, 2010-2019

Year	Poverty alleviation/billion	Comprehensive Agricultural Development /billion	Comprehensive Rural Reform /billion	Inclusive Financial Development Expenses/billion	Other agriculture, forestry and water affairs expenditure/billion yuan
2010	8.6700	6.3716	9.8676	-	2.7462
2011	10.2162	5.9636	16.3419	-	4.6492
2012	12.4789	6.7054	19.0376	-	8.1346
2013	19.5037	7.4085	23.9733	0.4016	10.1928
2014	26.5409	8.2837	32.7739	0.1659	15.1565
2015	35.1063	8.7061	34.8875	3.8334	20.4847
2016	49.1788	10.6479	37.6994	5.1194	15.5435
2017	56.6887	7.6065	37.0000	7.0395	23.6243
2018	51.8487	12.9161	39.4106	9.3450	30.6494

Source: "Fujian Province Statistical Yearbook" and collation

4. Policy Recommendations Regarding Financial Support for Agriculture to Promote Economic Growth

This paper combines the above phenomena that restrict the economic development of Fujian Province and puts forward several suggestions for improvement, arguing that the government should increase the investment of funds to support agriculture, optimize the allocation of funds, and focus on projects that are effective for economic growth.

4.1. Increasing Financial Support for Agriculture to Maintain A Stable Growth in Financial Support for Agricultural Spending

As the most basic industry for economic development, agriculture is vulnerable to natural and market interventions, and the growth of economy needs to ensure a large amount of financial investment to help the long-term and stable development of economy[6]. At present, the agricultural development mode of Fujian Province is completing the transformation from traditional to modern agriculture, and it is necessary to strengthen the financial support for agriculture to help the "transition period" to complete the transition successfully. In view of the current situation of Fujian's economy, it lags behind the developed agricultural provinces, and it is more important to create sufficient financial conditions for agricultural production when the natural basic conditions are already poor. In addition, the balance of growth rate should be coordinated while increasing agricultural expenditure, otherwise the stability of agricultural production

will be disturbed. According to the provisions of the Agricultural Law, the level of national agricultural input will be steadily increased, and the annual increase of financial resources in the total agricultural output value should be higher than the increase of recurrent financial input[7].

4.2. Coordinating the Allocation of Agricultural Financial Resources to Promote the Sustainable Development of The Economy in All Municipalities

Due to the natural conditions, the agricultural development of 9 cities in Fujian Province (Fuzhou, Zhangzhou, Xiamen, Quanzhou, Nanping, Ningde and Putian) has different differences, the total agricultural output value of Fuzhou and Zhangzhou is leading in the province, but the contribution of Fuzhou's agricultural output value to Fujian's agricultural GDP is not too high. Nanping and Ningde lag behind in terms of agricultural output value, but the contribution of these two cities to the province's agricultural GDP is the largest, which is mainly due to the different agricultural industry structures, in addition to geographical location and weather. Fuzhou and Quanzhou have a more reasonable economic structure and better agricultural development, so the local government's expenditure on agriculture is relatively large compared to other cities. However, in contrast to those cities with less developed economy and smaller agricultural output, the government also invests less in agricultural expenditure such as Xiamen and Putian. Due to different factors such as geography and culture across Fujian, the policies differ, for example, Fuzhou and Zhangzhou have better agricultural economic development, the local government has greater investment in agricultural spending, while Xiamen has a more

homogeneous economic structure, agricultural development is more backward, the local government's investment in agricultural spending is smaller. Xiamen and Putian due to geographical factors, and Xiamen is the earliest open special economic zone and other reasons, resulting in the place of agricultural industry occupies less. This paper argues that Fujian Province should consider the overall situation of the province's economic development and take different attempts to optimize the problem of agricultural financial expenditures in different parts of the province from the direction of the province's agricultural development, adjust the industrial structure of each place, and take a localized approach to develop the advantageous industrial chain in each region[8].

4.3. Continuing to Optimize the Structure of Financial Expenditure, Highlighting the Focus Of Financial Support for Agriculture Expenditure

The low spending efficiency and unreasonable spending structure of allocated fiscal funds in Fujian Province can affect the stable operation of financial support. The small scale of agricultural support in Fujian Province makes it particularly important to optimize the structure of agricultural fiscal expenditures and improve the efficiency of agricultural budget expenditures. Although the structure is already undergoing a transformation, the existence of the problem indicates that optimization still needs to be continued. First, fiscal expenditures should be controlled and managers should be reasonably allocated to avoid wastefulness; second, investments in rural production expenditures and agricultural infrastructure should be maintained, and direct subsidies to farmers should be strengthened, which is essential to increase farmers' motivation to produce, especially in order to respond positively to the "green box policy"[9]. Finally, it is necessary to train farmers with modern technologies, to strengthen the promotion of agricultural innovations in the countryside, to conduct scientific agricultural propaganda, and to continuously introduce new technologies[10].

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