

Demonstration Analysis of Financial Agricultural Expenditure in Heilongjiang Province of China

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Abstract The financial agricultural expenditure is the main macroeconomic control means for the government to support agriculture and safeguard the income of farmers, since agriculture is the weakest industry. The method of demonstration analysis was utilized to analyze the scale, the structure of financial agricultural expenditure in Heilongjiang Province in the thesis, the conclusion was drawn that the scale of financial agricultural expenditure is insufficient and the structure is unreasonable. Based on that, effective countermeasures and suggestions were put forward.

Key words Financial expenditure; Agricultural expenditure; Elasticity

1 Introduction

In the last few years, a widespread attention to the financial agricultural expenditure has been paid by many domestic scholars, who have made qualitative and quantitative investigations of the scale and the structure of financial agricultural expenditure. (Ke Bingsheng 2003) believed that the proportion of national financial revenue to GDP was far higher than the proportion of financial agricultural expenditure to the agriculture GDP, which indicated that the government spent more financial expenditure on non-agricultural department than on the agricultural department. (Guo Yuqing 2006) discovered that the actual scale of our national financial agricultural investment was smaller than the optimal level. (He Zhenguo 2009) gave out the priority sequence of financial agricultural expenditure. Heilongjiang Province is such a large agricultural province, But domestic and overseas researches on present situation of the scale and structure of financial agricultural expenditure in Heilongjiang Province are limited. This thesis utilized the demonstration analysis method to analyze whether the scale and the structure of financial agricultural expenditure in Heilongjiang Province are reasonable, based on that, effective countermeasures and suggestions were put forward.

2 Evaluation on the Scale of Financial Agricultural Expenditure in Heilongjiang

Three indexes were used in this thesis for the evaluation on the overall scale of financial agricultural expenditure in Heilongjiang Province.

2.1 The small proportion of financial agricultural expenditure to financial expenditure

The total quantity of financial agricultural expenditure in Heilongjiang Province were increasing continually from 2001 to 2008 except 2002. The scale of financial agricultural expenditure in Heilongjiang Province increased from 51.006 hundred million Yuan in 2001 to 148.1514 Yuan in 2008, making a 1.079 times increment, and average annual growth rate being 17.98%. But this can only explained that the overall scale of financial agricultural expenditure in Heilongjiang Province was increasing, whether the overall scale and the rate of growth reasonable or not need to be evaluated by the proportion of financial agricultural expenditure to financial expenditure, the proportion of financial agricultural expenditure to agricultural GDP, and the financial agricultural expenditure elasticity.

According to Table 1, the proportion of financial agricultural expenditure to the financial expenditure in Heilongjiang Province is roughly equal to the proportion of financial agricultural expenditure to the financial expenditure in our nation. But the proportion in our nation is too small, far lower than the proportion of agricultural GDP to GDP. The former is merely 1/2~1/3 of the latter, which is not extremely matching with the status and function of agriculture in national economy. According to the same statistical method, the average proportion of financial agricultural expenditure to financial expenditure in developed countries is approximately 30%~50%, the proportion in developing countries as Pakistan, Thailand, India, Brazil approximately is 10%~20%. Obviously there exists a big disparity of

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the proportion between China and other country. In conclusion, the total scale of financial agricultural expenditure in Heilongjiang Province is insufficient, and should be improved further more.

2.2 The small proportion of agricultural expenditure to agricultural GDP

As a big agricultural province, agriculture is a leading industry in HeiLongjiang province, but According to Table 2, the agricultural expenditure is lower than the average national level in most years. It shows that the scale of financial agricultural expenditure in our province doesn't match with contribution of agriculture to the economy. The research of Zhu Gang etc. showed that the proportion of financial agricultural expenditure to agricultural GDP is more than 25% in the developed countries, such as America, Canada, England, Australia and so on; in Japan and Israel, it is even higher (45%-95%). Even in the developing country such as India, the proportion comes to 16%. In conclusion, the financial agricultural expenditure scale in Heilongjiang Province is smaller than reasonable level.

Table 1 The Proportion of Financial Agricultural Expenditure to Financial Expenditure in Heilongjiang Province and in China
Unit: Hundred million Yuan

year	Nation			Heilongjiang province		
	Financial expenditure (A)	Financial agricultural expenditure(B)	B/A(%)	Financial expenditure (A)	Financial agricultural expenditure (B)	B/A(%)
2001	18902.58	1456.73	7.71	513.4	51.0060	9.93
2002	22053.15	1580.76	7.17	565.9	51.4795	9.10
2003	24649.95	1754.45	7.12	606.2	49.8780	8.23
2004	28486.89	2337.63	8.21	758.5	59.4694	7.84
2005	33930.28	2450.31	7.22	861.4	61.1818	7.10
2006	40422.73	3172.97	7.85	1064.8	86.1897	8.09
2007	49565.40	4318.00	8.71	1325.6	106.0181	7.80
2008	62592.66	4544.01	7.26	15423	148. 1514	9.60

Data Sources: Heilongjiang Statistical Yearbook, China Statistical Yearbook

Table 2 The Proportion of Financial Agricultural Expenditure to Agricultural GDP in Heilongjiang Province and China
Unit: Hundred million Yuan

	Nation			HeiLongjiang Province		
	Agricultural GDP (A)	Financial agricultural expenditure(B)	B/A(%)	Agricultural GDP (A)	Financial agricultural expenditure(B)	B/A(%)
2001	15781.3	1456.73	9.23	435.6	51.0060	11.71
2002	16537.0	1580.76	9.56	474.2	51.4795	10.86
2003	17381.7	1754.45	10.09	504.8	49.8780	9.88
2004	21412.7	2337.63	10.92	593.3	59.4694	10.02
2005	22420.0	2450.31	10.93	684.6	61.1818	8.94
2006	24040.0	3172.97	13.20	737.6	86.1897	11.69
2007	28627.0	4318.00	15.08	915.4	106.0181	11.58
2008	34000.0	4544.01	13.36	1089.1	148. 1514	13.60

2.3 The low financial agricultural expenditure elasticity

The financial agricultural expenditure elasticity reflects the dynamic relationship between financial agriculture expenditure and financial expenditure. The British economist Jane Moliter, after analyzing the relationship of agriculture and the economy development in 88 countries, drew a conclusion: the agricultural expenditure financial agricultural expenditure elasticity should be more than or equal to 1. According to the Table 3, the financial agricultural expenditure elasticity in Heilongjiang Province is 0.091、-0.44、0.76、0.21、1.73 and 0.94 respectively from 2002 to 2007, only in 2006, it is more than 1.

it shows that the scale of financial agricultural expenditure is too small in Heilongjiang Province and the government should further increase the agricultural financial investment.

According to the above analysis, financial agricultural expenditure in Heilongjiang province is relatively in small-scale.

Table 3 Elasticity of Financial Agricultural Expenditure in Heilongjiang Province Unit:%

Year	The financial agricultural expenditure growth rate (%)	the financial expenditure growth rate (%)	elasticity of financial Agricultural Expenditure
2002	0.93	10.2	0.091
2003	-3.11	7.1	-0.44
2004	19.2	25.1	0.76
2005	2.88	13.6	0.21
2006	40.87	23.6	1.73
2007	23.01	24.5	0.94

Note: elasticity of financial Agricultural Expenditure = the growth rate of financial agricultural expenditure / the growth rate of financial expenditure

3 The Analysis of Financial Agricultural Expenditure Structure in Heilongjiang

Two kinds of index were adopted to analyze the internal structure of financial agricultural expenditure in Heilongjiang province in the thesis. The first one is proportion of each kind of financial agricultural expenditure to the whole financial agricultural expenditure, the other one is the expenditure elasticity of all kinds of financial agricultural expenditure.

3.1 Proportion of each kind of financial agricultural expenditure to the whole financial agricultural expenditure

First of all, the proportion of expenditure for administration is oversize.

From 2001 to 2008, the proportion of all kinds of expenditure for administration to the whole financial agricultural expenditure were 25.12%,23.76,22%,23.64%,25.86%,28.43%,30.05%,31.26%. According to the data from Heilongjiang provincial department of finance, the expenditure for administration mainly consists of administrative operation, general administration, the agency service, the general administration expenditure for Agriculture, Forestry , Water Conservancy and poverty alleviation. The high administrative expenses explains extravagance of some government department which make the financial agricultural expenditure run back to the cities and peasants have no benefit.

Secondly, the expenditure for agricultural capital construction is not enough.

The inadequate expenditure for agricultural capital construction has been focus that the government be criticized not to support agriculture industry effectively in our country. Particularly in the past three years, both the total scale of expenditure for agricultural capital construction and the proportion of expenditure for agricultural capital construction to the whole financial agricultural expenditure were declining. The proportion in China is less than the proportion in other country with the same economic development level. According related theory, with the development of economy, the proportion of expenditure for agricultural capital construction to the expenditure for total capital construction gradually approaches the proportion of agricultural GDP to the GDP. But the proportion of expenditure for agricultural capital construction to the expenditure for total capital construction didn't increase with the proportion of agricultural GDP to the GDP in China. The deficiency of the expenditure has led to a poor material foundation in agricultural industry. According to figure 1, from 2001 to 2007, the expenditure for agricultural capital construction were even lower than the national level.

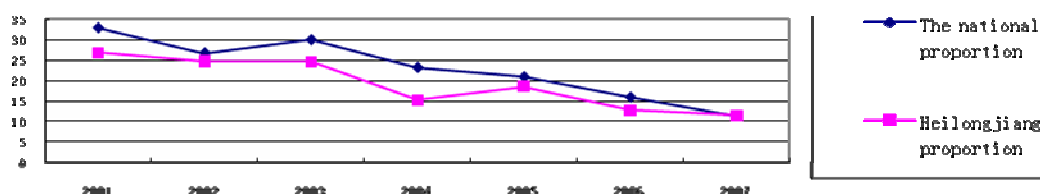


Figure 1 The Proportion of Expenditure for Agricultural Capital Construction to the Financial Agricultural Expenditure in China and Heilongjiang Province

Data Source: China Statistical Yearbook, Calculation of the data from Provincial Department of Finance

Thirdly, the proportion of the expenditure for agricultural science and technology is small.

The investment for the agricultural scientific research from the government is extremely limited in our nation. The proportion of expenditure for agricultural science and technology to the financial agricultural expenditure were 0.71%,0.63%0.71%0.67%0.81%0.68%,which is lower than the proportion of developed country, and even lower than the proportion of many developing countries such as India. But the proportion of agricultural science and technology to the financial agricultural expenditure in Heilongjiang Province from 2001 to 2007 were lower than the proportion of nation(figure 2). It shows that the investment of finance to agricultural scientific research in Heilongjiang Province is too few.

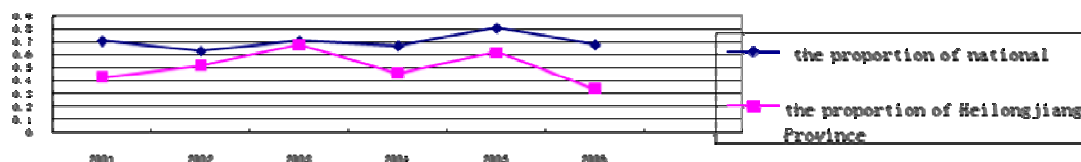


Figure 2 Proportion of Agricultural Science and Technology to the Financial Agricultural Expenditure in China and in Heilongjiang Province

3.2 The elasticity of Each Kind of financial agricultural expenditure

The elasticity of expenditure for administration evaluates the dynamic relationship between the expenditure for administration expenditure and the financial agricultural expenditure. The increasing rate of administration should be faster than the increasing rate of financial agricultural expenditure, in that case the funds could be used for countryside and the farmers, therefore this value should be more than 0, less than 1. According to table 4, the value of each year was more than 1. Especially in 2003 and 2005, the value were 3.32 and 4.35.It indicates that the major share of the financial agricultural expenditure increasing was used for administration.

Table 4 Elasticity of Expenditure for Administration in Heilongjiang Province

Year	increasing rate of expenditure for administration (%)	increasing rate of financial agricultural expenditure (%)	Elasticity
2003	-10.31	-3.11	3.32
2004	28.15	19.2	1.47
2005	12.54	2.88	4.35
2006	54.87	40.87	1.34
2007	31.96	23	1.39
2008	44.77	39.74	1.13

The elasticity of expenditure for agricultural capital construction evaluates the dynamic relationship between the expenditure for agricultural capital construction and the financial agricultural expenditure. According related theory, the elasticity of expenditure for agricultural capital construction should be more than or equal to 1. But from 2003 to 2008, the value were less than 1 in most years, this means that few increasing funds has been used in agricultural infrastructure.

Table 5 Elasticity of Expenditure for Agricultural Capital Construction in Heilongjiang Province

Year	increasing rate of expenditure for agricultural capital construction (%)	increasing rate of financial agricultural expenditure (%)	Elasticity
2003	-3.73	-3.11	1.20
2004	-26.33	19.2	-1.37
2005	25.78	2.88	8.95
2006	-4.14	40.87	-0.10
2007	11.16	23	0.05
2008	22.28	39.74	0.56

The elasticity of expenditure for agricultural science and technology evaluates the dynamic relationship between the expenditure for agricultural science and technology and the financial

agricultural expenditure. Because expenditure for science and technology belongs to the public products, enterprise or individuals generally are unwilling to invest in, moreover, that requires the government to invest more. The increasing rate of expenditure for science and technology should be synchronized with the overall economic growth rate, or slightly faster than economic growth rate, therefore, the value should be more than or equal to 1. According to table 6, except for 2005 and 2007, elasticity of expenditure for agricultural science and technology were more than 1, the rest were less than 1. It can be concluded expenditure for agricultural science and technology in Heilongjiang Province lagged far behind the level of economic development, which can not properly perform the functions of public finance.

Table 6 Elasticity of Expenditure for Agricultural Science and Technology in Heilongjiang Province

Year	increasing rate of expenditure for science and technology (%)	increasing rate of financial agricultural expenditure (%)	Elasticity
2003	26.93	-3.11	-8.66
2004	-19.49	19.2	-1.02
2005	38.65	2.88	13.42
2006	-21.83	40.87	-0.53
2007	46.60	23	2.03
2008	-1.16	39.74	-0.03

4 Conclusions

First, it is required to ensure a steady growth of the scale of financial agricultural expenditure in Heilongjiang Province. According to the previous analysis, the scale of financial agricultural expenditure is below a reasonable level, the government should strictly follow the Agricultural Law to ensure the growth rate of financial agricultural expenditure is faster than the growth rate of regular fiscal budget revenue growth each year.

Second, the structure of financial agricultural expenditure should be optimized in Heilongjiang Province. According to previous results, the expenditure for administration should be decreased, and the expenditure for capital construction and the expenditure for agricultural science and technology should be increased steadily.

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