

# *Analysis of the Influence of Rural Land Stock Cooperative System on Farmers' Income*

—A Case Study of Farmers in Zaozhuang City

Zhang Lin

College of Economics and Management  
Zaozhuang University, Zaozhuang 277100, China  
College of Economics and Management  
China Agricultural University  
Beijing, 100083, China  
1405125579@qq.com

**Abstract**—Basing on the field investigation of the Zaozhuang city in Shandong Province, this paper made an empirical study on the impact of rural land share cooperative system on the income of peasant households. The conclusion is that the rural land stock cooperative can increase peasants' total income, non-agricultural income per capita. The paper also analyzed the problems caused in the operation of rural land stock cooperative system. At the end of the paper, the solution with specific aim is proposed.

**Keywords**—the Land Stock Cooperative System, Influence, Income, Problems, Zaozhuang City

## I. INTRODUCTION

The rural land stock cooperative system which originated in Guangdong area is a product of the specific historical period in China, also is a great choice made by farmers in the process of marketization.[1] In the early 1990s, in order to explore new ways of rural land stock cooperative system reform, with the approval of the Chinese government, the Nanhai city of Guangdong province carried out reform experiments that centered on land. Subsequently, Zhejiang, Jiangsu, Shandong and other coastal areas have begun to appear experimental unit of land stock cooperative system.[2] Although there are differences in the way of the specific operation, but the basic approach is generally similar, set up all kinds of joint stock cooperatives or limited company, carry out unified production or operation, and corporate earnings is allocated according to the stock dividends. As an innovation of the rural land system, the theoretical realm have different opinion about it, generally, the majority hold a positive attitude, think it is a "Pareto improvement" institutional form. To some extent, it overcomes some defects of the household contract system, solve the contradiction between the rural land decentralized management and agricultural modernization, household management and industrialization, small production and big market, etc., not only to improve the economic efficiency of land scale, but also to promote the increase of farmers' income.

At present, because one of the main objectives of the implementation of the rural land stock cooperative system in China is to improve the farmers' income, it is very important to

evaluate the farmer's income effect of the rural land stock cooperative system. It cannot be denied that after the implementation of rural land joint-stock cooperative system, many farmers' income levels are significantly higher than before, [3]But whether this increase is statistically significantly? To what degree that the farmers' income increases result from the effects of the rural land stock cooperative system? In view of this, based on the field survey of farmers in Zaozhuang city of Shandong province, this article expand empirical study on the income effect of the rural land stock cooperative system.

## II. DATA DESCRIPTION

This paper choose Zaozhuang city of Shandong province as a sample region. Zaozhuang city is a prefecture level city in the southern of Shandong province. Latest data show that area of Zaozhuang city is 4563 square kilometers, has five districts, the agricultural population is up to 2.5499 million. In 2008, farmers from the Xu Village of Shanting District of Zaozhuang city established the first land stock cooperatives. In 2010, Zaozhuang government regard joint-stock cooperative system reform as one of the five major reforms began to promote throughout the city. From the perspective of regional development, there are obvious regional differences in the developments and the effectiveness of the land stock cooperative system of Zaozhuang city, land joint stock cooperative system started earlier and evolved rapidly in Tengzhou and Shanting districts, the rest areas are still at the early and imitation stage.

The data of this article based on village farmers questionnaire which was carried out towards rural land joint-stock cooperative system on July 2016. In order to obtain the effect of land stock cooperative system on the income of farmers accurately, the paper selected 5 villages that implement land joint stock cooperative system to distribute 200 questionnaires, recovered 175 effective questionnaires. There are 118 peasant households who took part in the land joint stock cooperative system, 57 peasant household who didn't take part in the land joint stock. (See the table below)

**TABLE I. SAMPLE DISTRIBUTION RURAL LAND JOINT-STOCK COOPERATIVE SYSTEM IN ZAOZHUANG**

Village Investigated	Location	Survey quantity		
		Shares	Non-shares	Total
DongWangZhuang Village	TengZhou District	31	9	40
NanWangZhuang Village		32	8	40
TuShan Village	ShanTing District	23	3	26
HuGou Village		19	16	35
DaXinZhuang Village	ShiZhong District	13	21	34
Total		118	57	175

The survey master the basic characteristics of the family of peasant household, including family population, age of household head, the education level of the head of household, the proportion of family labor, family members as village cadres or not, especially the paper counted the income changes

such as changes in per capita income of shares, changes in per capita farming income, changes in per capita non-agricultural income, changes in other incomes per capita and so on.

In order to achieve scientific integrity, the article also has carried on the investigation to the non - shares peasant households, made a comparative study towards income changes of two groups.

**TABLE II. A LIST OF THE BASIC CHARACTERISTICS OF THE SHAREHOLDER HOUSEHOLD AND NON-SHAREHOLDER HOUSEHOLDS IN ZAOZHUANG**

Data categories	Shareholder household		Non-shareholder household	
	2008	2014	2008	2014
Family population(person)	4.47	4.47	4.45	4.48
Age of household head(year)	49.23	54.2	49.61	54.61
Years of education of household head(year)	6.97	6.97	6.86	6.86
The proportion of family labor(%)	71.46	72.28	72.26	73.21
Whether family members as village cadres 1=YES,0=No	0.23	0.23	0.25	0.25
Per capita arable land area(acre/person)	0.97	0.96	1.03	1.01
Number of samples	141		34	

Through the questionnaire, we find that both 2008 and 2014, there is no obvious difference between shares farmers and non-shareholder farmers on family population, age of household head, education years of head of household, household labor ratio etc. The only obvious difference is the per capita arable land area. Per capita arable land area of share farmers exceed per capita arable land area of non-shareholder farmers, in accordance with previous studies on the greater the per capita arable land area, the higher the willingness of farmers to share. So that the per capita arable land area of

shares farmers is more than non-farmers per capita arable land is normal. Farmer Hong Yuxiang told the author that there are 5 acres of land transferred to cooperatives, 5 members of the family, the annual guaranteed payments of  $500 \times 5 = 2500$ , bonus  $600 \times 5 = 3000$ , the couple worked for cooperatives that can gained annual income of RMB24860, 3kids who work outside gained an annual income of RMB57000, total household income is RMB67486, the average per capita income levels increased by RMB6796.

**TABLE III. LIST OF SHAREHOLDER INCOME GAP BETWEEN SHARE FARMERS AND NON-SHAREHOLDER FARMERS IN 2008 AND 2014 OF ZAOZHUANG**

Farmers Category	Share Farmers			Non-Share Farmers			Difference (3)-(6)
	2008	2014	2014-2008	2008	2014	2014-2008	
Income categories	(1)	(2)	(3)=(2)-(1)	(4)	(5)	(6)=(5)-(4)	
Per capita household income(yuan)	7002.46	18756.23	11753.77	6545.2	8001.34	1456.14	10297.63
Per capita agricultural net income(yuan)	450.5	645.45	194.95	500.67	656.78	156.11	38.84
Per capita planting income(yuan)	516.82	825.56	308.74	502.45	780.89	278.44	30.3
Per capita non-agricultural income(yuan)	6500.9	17285.22	10784.32	6346.67	7589.2	1242.53	9541.79

It is not difficult to see from table 3, whether it is share farmers or non-share farmers, their income levels have risen in varying degrees since 2008, but the growth rate of the shares farmers is significantly more than the income growth rate of non-share farmers, especially non-agricultural income and planting income, opened the income gap between share farmers

and non-share farmers. The main reason is that after share farmers transferred the rural land to cooperatives, they not only gained land revenue but also can go out to be migrant workers. Increase of the income channels will inevitably lead to the increase of household income.

TABLE IV. CHOICE INTENTION OF THE FORM OF RURAL LAND TRANSFER

Farmland transfer form	The first Order	The Second Order	The Third Order	The Forth Order
Subcontract	5.78	4.2	12.5	79.82
Interchange	26.3	24.37	43.1	10.73
Lease	31.2	37.82	19.4	2.58
Joint stock partnership	36.72	33.61	25	6.87

In addition, as shown in table 4, compared with other forms of land circulation, there are 36.72% of the farmers are more willing to participate in land stock cooperative system, this shows that because the land joint-stock cooperative system effectively improve the income of farmers, it obtained the general recognition of farmers. It should be said that the implementation of the land stock cooperative system is the right time.

(3) To some extent, land joint-stock cooperative system increased the management risk of the farmers. There is a possibility that any investment can be a success as well as a failure. It is good that if the land shareholding cooperative enterprises runs smoothly, meet the expected revenue of collectives and farmers, achieve 'win-win'. However, once the investment fails, the land ownership will become lip-service, land dividends cannot be achieved.

### III. ANALYSIS ON THE PROBLEMS OF LAND STOCK COOPERATIVE SYSTEM IN ZAOZHUANG CITY

Because land stock cooperative system is adopted firstly, the laws and regulations to regulate the implementation of it issued secondly, many problems in the actual operation caused.

(1) Land stock cooperative system of regional development is not balanced. The size of cooperatives is different, land shares accounted for relatively large. In this paper, the survey found that there are shares farmers up to 360 households, at least 16 households, the largest land area of 4,500 acres, the smallest is 50 acres which took part in cooperatives, the total share capital ranging from 450,000 Yuan to 10 million Yuan. This shows that the operation scale of land stock cooperative system is different. Theoretically, the shares of land stock cooperative system are mainly divided into two categories: land management right shares and capita (technology) shares. [4] But in the actual operation, the proportion of land management rights shares is great, more than 90%, indicating that equity participation of farmers is very simple.

(2) Because the quality of the operators of the land stock cooperative is not high, corporate profitability is not strong. At present, nearly 50% of the land joint-stock cooperative did not directly engaged in production and business operation activities of the rural land, the cooperatives' income is mainly derived from the collection of land transfer fees. [5] In addition, the education level of over 67% operators of cooperative is high school level or lower, made it difficult to enjoy the excess return of the land scale operation and intensive management. The increase of farmers' income mainly comes from the increase of the salary that gained from non-agricultural industries.

### IV. CONCLUSION

According to the analysis, land stock cooperative system can increase total income and non-agricultural income per capita of the peasant household. If we want to play the long-term income mechanism of the land stock cooperative system, the fundamental solution is to speed up the secondary industry and the tertiary industry in rural region to make more rural labors to shift away from the rural land to realize the sustainable increase of the farmers' income. [6] Besides this, in order to maintain the output efficiency of land stock cooperative system, joint stock cooperative enterprises should seek the appropriate development mode as soon as possible, to develop some high quality agricultural projects with high technology. As a local government, also need to give important support and help in the early development of the rural land stock cooperatives, firstly, the government should create a favorable institutional environment for the development of rural land stock cooperative, including investment promotion, technological guidance, and policy matching and so on. On the other hand, the government should pay more attention to the labor skills training of rural surplus labor, so that they can not only adapt to the needs of the future development of agriculture but also transfer to other industries for employment.

All in all, as a new thing that has no experience to draw lessons from, the rural land stock cooperative system combines the features of cooperative system and joint stock system, focusing on the conflict between land benefit and farmers' rights interests. At the same time, because the relevant supporting policies or laws and regulations have not yet been introduced, make the reform of the land shareholding cooperative system is very complicated.

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