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Empirical Study on the Will of Farmland Transfer among Different Farmer Groups——A Sampling Survey on 42 Counties and Cities, 64 Towns and 74 Villages in Jiangxi Province

ZENG Heng¹, CHEN Mei-qiu^{2*}, ZHOU Bing-juan²

1. Land Consolidation and Exploitation Center of Jiangxi Province, Nanchang 330002, China; 2. College of Land Resource and Environment, Jiangxi Agriculture University, Nanchang 330045, China

Abstract Taking Jiangxi Province as an example, on the basis of the sampling survey on 42 counties and cities, 64 towns and 74 villages in Jiangxi Province, the will of farmland transfer among different farmer groups with different income levels, different ages, and different educational backgrounds, is analyzed. The research indicates that as for middle-income or high-income groups, leaving home to seek jobs elsewhere is the most principal factor impacting farmland transfer, while as for low-income group, the price of agricultural products is an important factor impacting farmers' land cultivation; permanent urban residence certificate is no longer the principal factor causing farmers' land transfer, and it tends to be rational for farmers to abandon farmland.

Key words Cultivated land transfer, Different farmer groups, Will, Jiangxi Province, China

As the socialist market economic system is gradually established and improved, the contradictions between the household contract responsibility system and market economic development loom increasingly and prominently: land being split into pieces in conflict with the requirements of agricultural modernization, decentralized management being not in line with modern market demand, and so on, which pose unprecedented challenges to household contract responsibility system^[1-2]. By farmland circulation, we are to promote farmland to concentrate among grain-growing experts and big management households, so as to centralize small plots of land and integrate them into a broad stretch for cultivation, and further promote the degree of agricultural mechanization. It is an important way to coordinate household contract responsibility system of land of China and modern agricultural construction under condition of market economy^[3]. The farmer is as the direct main body of farmland production, whose behaviors play an important role in decision-making of farmland circulation^[4]. Various farmer groups with different income levels, different ages, and different educational backgrounds show different state of mind or will towards farmland circulation. On the basis of the sampling survey on 42 counties and cities, 64 towns and 74 villages in Jiangxi Province, we examine and explore the mentality and behavior will of different farmer groups towards farmland circulation, in order to provide reference for formulating relevant pertinent policies, stir the enthusiasm of the farmers on farmland circulation, promote and regulate the farmland circulation behaviors in China, and effectively resolve the contradiction between excessively lax management of farmland at present and agricultural moderniza-

tion construction.

1 Data source and sample grouping

Data are from the special investigation of *The Status Quo of Farmland Circulation in Jiangxi Province* from spring festival to the summer vacation in 2006. In terms of investigation process, we adopt the hierarchical random sampling method, and the levels of social and economic development in rural areas are initially divided into three levels, namely good, middle and poor, according to indices, such as per capita annual net income of rural residents, and per capita GDP of county. We further take into account geographical factors, not only including the villages with good location conditions in urban-rural conjunction areas or trunk line, but also including remote villages with common location conditions, in order to make sample widely distributed, with high representativeness. Finally we determine 10 cities, 42 counties, 64 towns and 74 administrative villages, such as Nanchang, Ganzhou, Xinyu, Yichun, Ji'an, Pingxiang, Shangrao, Jiujiang, Fuzhou, Jingdezhen, and so on, as research objects. Interviewees are farmers who are engaged in long-term farming at home and migrant workers who are engaged in secondary and tertiary industries, so as to ensure the broad representation. A questionnaire-based survey, combined with interviews, small-scale seminars and other forms is under way. The specific content of the questionnaire is divided into three parts. The first part is the basic information of farmers, including family size, the number and distribution status of contracted land, the actual area of cultivated land, household total income and the income from the farmland, and the gender, age, and educational background of people who are investigated; the second part is the investigation on the transfer status of farmers' arable land, and 13 questions are designed in the aggregate, which involve farmland transfer benefit, the fixed number of years of transfer, will of farming and

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* Corresponding author. E-mail: cmq12@263.net.

transfer, reason of transfer and so on; the third part is the investigation on the inflow of farmers' arable land, and 7 questions are designed in the aggregate, which involve cost of growing, will of farming and transfer, reason of farmland inflow and so on. This survey retrieves 1 396 valid questionnaires in the aggregate, including 621 households with no circulation behaviors, accounting for 44. 5% of the total; 775 households with circulation behaviors, accounting for 55. 5% of the total, wherein 439 rural households have outflow behaviors, 323 rural households have inflow behaviors, 13 rural households both have outflow behaviors and inflow behaviors. The study focuses on the will of farmers' outflow in order to conduct analysis, so there are 452 study samples, with 439 rural households

have outflow behaviors, and 13 rural households both have outflow behaviors and inflow behaviors.

On the basis of need of research, respondents are divided into three groups according to education, age, and per capita annual income of household, namely high-income group, middle-income group and low-income group; respondents are divided into three groups according to educational background, namely high-level educational background group, middle-level educational background group, and low-level educational background group; respondents are divided into three groups according to age, namely elderly group, middle-aged group and youth group, which can be seen in Table 1.

Table 1 Grouping of sampling data

Name of group level		Specific connotation	Number of samples
Group of income	Low-income group	Below 3 000 yuan	227
	Middle-income group	3 000 to 5 000 yuan	143
	High-income group	Above 5 000 yuan	82
Group of the educational background	Low-level education	Primary school education or lower	179
	Middle-level education	Secondary school education	201
	High-level education	High school education	72
Group of age	Youth group	Age below 30	80
	Middle-aged group	Age from 30 to 50	250
	Elderly group	Age more than 50	122

In order to examine the farmers' outflow will of farmland and influencing factors, the research group designs two extreme questions, namely " Under what circumstance you are willing to cultivate all your land?" (no circulation), " Under what circumstance you are not willing to cultivate all your land?" (all are circulated), and provides some options accordingly, wherein, as for " Under what circumstance you are willing to cultivate all your land?", 3 options are designed: " A Incapable of leaving home to seek jobs elsewhere", " B The price of agricultural products increases greatly and cultivating farmland is lucrative", and " C Farmland is linked up into a single stretch, conducive to mechanized cultivation"; as for " Under what circumstance you are not willing to cultivate all your land?", 3 options are designed: " A Only obtain permanent urban residence certificate", " B Certain fixed income and permanent urban residence certificate" and " C Support family".

2 Analysis of farmers' will of cultivating contracted land

Table 2 is the statistical data regarding " Under what circumstance you are willing to cultivate all your land?", in farmers' options, leaving home to seek jobs elsewhere is the first choice of the majority of people, and nearly 50% of people choose to cultivate all their farmland under the circumstance of " A Incapable of leaving home to seek jobs elsewhere". Secondly, many people (29.2%) feel that the current low prices of agricultural products make the profit too low, while as for the option of " C Farmland is linked up into a single stretch, conducive to mechanized cultivation", the number of people who choose this option is smallest (24.1%). This is not because

that mechanized farming cannot improve the efficiency, but because that the current farmers generally have a small quantity of land, even if all farmland is connected into a stretch and we adopt mechanized farming, it cannot bring great economic benefits; on the other hand, small quantity of total farmland makes households which own agricultural machinery have a non-economic behavior, while in the busy season of farming, the farmers have to lease agricultural machinery, which further abates the exiguous agricultural profit. In the survey, we found that farmers who choose option C are located in areas with more per capita arable land, which verifies our analysis from another side.

2.1 Analysis of farmers' will of cultivating contracted land according to per capita income of different households

In the process of conducting hierarchical statistics gathering on the survey data, according to per capita income of household, we find that the choosing proportion of all options among low-income group, middle-income group and high-income group is different; the difference of choosing proportion of option A " Incapable of leaving home to seek jobs elsewhere" among low-income group (<3 000), middle-income group (3 000 –5 000) and high-income group (> 5 000) is most prominent, with 29.5% low-income group, 52. 3% middle-income group and 84.1% high-income group in option A. This fully shows that in current rural areas, the main source of income of households with high per capita income is through leaving home to seek jobs elsewhere, and they are willing to accept this way to make money when conditions of rural areas remain unchanged. They may choose to cultivate all their land only under the circumstance that there are incapable of leaving home to seek jobs

elsewhere. This part of the high-income rural group has the weakest will to cultivate their land, and has the strongest will to circulate the farmland. The difference of choosing proportion of option B "The price of agricultural products increases greatly and cultivating farmland is lucrative" among low-income group, middle-income group and high-income group is prominent, with 40.5% of choosing proportion of low-income group, 24.8% of choosing proportion of middle-income group, and merely 6.3% of choosing proportion of high-income group. This shows that the current middle-income and low-income rural households hope to make money through farming in order to increase in-

come, while the high-income rural households with no hope of making money through farming. The choosing proportion of option C "Farmland is linked up into a single stretch, conducive to mechanized cultivation" is 30.1% of low-income group, 22.9% of middle-income group, and 9.5% of high-income group. This shows that low and middle income groups basically have the same wish to realize that the farmland is linked up into a single stretch, conducive to mechanized cultivation, through the measures of farmland circulation, land arrangement and so on, while the high-income group shows little interest at this.

Table 2 Analysis of farmers' will of cultivating contracted land

Item		A Incapable of leaving home to seek jobs elsewhere household//%	B The price of agricultural products increases greatly and cultivating farmland is lucrative household//%	C Farmland is linked up into a single stretch, conducive to mechanized cultivation household//%	Total household %
All		211 (46.7)	132 (29.3)	109 (24.1)	452 (100.0)
Hierarchically gather statistics according to per capita income	Low-income group	67 (29.5)	92 (40.5)	68 (30.1)	227 (100.0)
	Middle-income group	75 (52.3)	35 (24.8)	33 (22.9)	143 (100.0)
	High-income group	69 (84.1)	5 (6.3)	8 (9.5)	82 (100.0)
Hierarchically gather statistics according to educational background	Low-level education	80 (44.5)	61 (34.3)	38 (21.2)	179 (100.0)
	Middle-level education	97 (48.4)	58 (28.8)	46 (22.9)	201 (100.0)
	High-level education	34 (47.3)	13 (18.2)	25 (34.5)	72 (100.0)
Hierarchically gather statistics according to age	Youth group	39 (49.2)	9 (11.5)	32 (39.3)	80 (100.0)
	Middle-aged group	122 (48.7)	76 (30.4)	52 (20.9)	250 (100.0)
	Elderly group	50 (40.9)	47 (38.7)	25 (20.4)	122 (100.0)

2.2 Analysis of farmers' will of cultivating contracted land according to different educational background

By conducting gathering investigation statistics regarding the people who are investigated, the overview of choosing proportion of among three groups, namely low-level education group (primary school education and the below), middle-level education group (secondary school education), and high-level education group (high school education and the above) is as follows. The proportion of low-level education group in choosing option A "Incapable of leaving home to seek jobs elsewhere" is 44.5%; the proportion of middle-level education group in choosing option A "Incapable of leaving home to seek jobs elsewhere" is 48.4%; the proportion of high-level education group in choosing option A "Incapable of leaving home to seek jobs elsewhere" is 47.3%. There is no prominent difference among the three. The proportion of low-level education group in choosing option B "The price of agricultural products increases greatly and cultivating farmland is lucrative" is 34.3%; the proportion of middle-level education group in choosing option B "The price of agricultural products increases greatly and cultivating farmland is lucrative" is 28.8%; the proportion of high-level education group in choosing option B "The price of agricultural products increases greatly and cultivating farmland is lucrative" is 18.2%. There is big difference and it takes on that the lower the level of education, the more they are inclined to hope to increase income by farming and increased prices of agricultural products. The proportion of low-level education group in choosing option C "Farmland is linked up into a single stretch, conducive to

mechanized cultivation" is 21.2%; the proportion of middle-level education group in choosing option C "Farmland is linked up into a single stretch, conducive to mechanized cultivation" is 22.9%; the proportion of high-level education group in choosing option C "Farmland is linked up into a single stretch, conducive to mechanized cultivation" is 34.5%. There is big difference, and the higher the level of education, the more they are inclined to hope to choose mechanized farming. This shows that if the levels of education are different, the ways of farmland circulation and farmland cultivation the farmers choose are different. The higher the education, the more easily they are to accept and master advanced agricultural science and technology, therefore they are more inclined to link up farmland into a single stretch, so as to be conducive to mechanized cultivation. But high-education group doesn't just hope to increase their agricultural income by the increasing price of agricultural products, while low-education group is eager to increase their agricultural income by the increasing price of agricultural products prominently.

2.3 Analysis of farmers' will of cultivating contracted land according to different ages

By gathering statistics hierarchically according to age, from elderly group to youth group, with the increase of age, as for the condition of cultivating all farmland, the proportion of choosing "A Incapable of leaving home to seek jobs elsewhere" and "C Farmland is linked up into a single stretch, conducive to mechanized cultivation" is decreasing while the proportion of choosing "B The price of agricultural products increases greatly and cultivating farmland is

lucrative" is climbing. Clearly, young people first tend to go out to earn money, and in the survey they generally feel that even if they are engaged in agriculture, especially growing grain crops, they cannot get the same benefit in comparison with the benefit they get when working outside. Secondly, young people generally have relatively high educational level and the accepting ability is strong. They are willing to accept promotion and use of agricultural technology and also are able to accept promotion and use of agricultural technology. The proportion of youth group in choosing mechanized farming is higher than that of the elderly group. The elderly group has the stronger will to increase income by increasing prices of agricultural products.

3 Analysis of conditions the farmers need to abandon farmland

Table 3 is the statistics regarding "Under what circumstance you are not willing to cultivate all your land?", only 24 households choose "A Only obtain permanent urban residence certificate", accounting for 5.2%; 224 households choose "B Certain fixed income and permanent urban residence certificate", accounting for 49.6%; 204 households choose "C Support family", accounting for 45.2%. Obviously, the current rural households do not quite emphasize permanent urban residence certificate, which lies in that before the residents with permanent urban residence certificate could get considerable system welfare from country, but now the case is different, and rural income is universally increased. Although many farmers now work in the city, they do not taking obtaining permanent ur-

ban residence certificate as primary purpose, and they feel satisfactory if they earn more money than in the countryside. Most of the respondents said they would not settle in the city, but earn money to go home to build a house and invest in other business.

3.1 Analysis of conditions the farmers need to abandon farmland according to per capita income of different households By gathering investigation statistics hierarchically according to per capita income of household, we find that as for the proportion of choosing each option among low-income group, middle-income group, and high-income group, there is no great difference, and the proportion of choosing "A Only obtain permanent urban residence certificate" among low-income group, middle-income group, and high-income group is all low, but with the increase of per capita income, the proportion of choosing "B Certain fixed income and permanent urban residence certificate" is gradually diminishing, while the proportion of choosing "C Support family" is gradually increased. Among low-income group and middle-income group, the proportion of choosing "B Certain fixed income and permanent urban residence certificate" is the highest, while in high-income group, the proportion of choosing "C Support family" is the highest. This may because that low-income group and middle-income group pursue the stability of source of income, and wish to obtain certain fixed income, while the high-income group has more sources of income, not very worried about the basic living guarantee.

Table 3 Analysis of conditions the farmers need to abandon farmland

Item		A Only obtain permanent urban residence certificate household %	B Certain fixed income and permanent urban residence certificate household %	C Support family household %	Total household %
All		24(5.2)	224(49.6)	204(45.2)	452(100.0)
Hierarchically gather statistics according to per capita income	Low-income group	10(4.6)	119(52.6)	97(42.8)	227(100.0)
	Middle-income group	8(5.5)	70(48.6)	66(45.9)	143(100.0)
	High-income group	6(6.3)	35(42.9)	41(50.8)	82(100.0)
Hierarchically gather statistics according to educational background	Low-level education	12(6.6)	73(40.9)	94(52.6)	179(100.0)
	Middle-level education	9(4.6)	108(53.6)	84(41.8)	201(100.0)
	High-level education	3(3.6)	43(60.0)	26(36.4)	72(100.0)
Hierarchically gather statistics according to age	Youth group	3(3.3)	39(49.2)	38(47.5)	80(100.0)
	Middle-aged group	12(4.7)	127(50.8)	111(44.5)	250(100.0)
	Elderly group	9(7.5)	58(47.3)	55(45.2)	122(100.0)

Note: the signification of Option A, Option B, Option C, and Option D is shown in "1.1".

3.2 Analysis of conditions the farmers need to abandon farmland according to different educational background As can be seen from Table 3, the proportion of choosing each option among low-level educational background group, middle-level educational background group, and high-level educational background group, there is no great difference, and the proportion of choosing "A Only obtain permanent urban residence certificate" among low-level educational background group, middle-level educational background group, and high-level educational

background group is all lowest, but with the elevation of educational level, the proportion of choosing "B Certain fixed income and permanent urban residence certificate" is gradually increasing, while the proportion of choosing "C Support family" is gradually decreased. Among middle-level educational background group and high-level educational background group, the proportion of choosing "B Certain fixed income and permanent urban residence certificate" is the highest, while in low-level educational background group, the proportion of choosing "C

Support family" is the highest. This may because that with the increase of educational levels, farmers have more experiences of living in cities and towns, and increasingly comprehend that multifarious conveniences brought by certain fixed income and permanent urban residence certificate, while the low-level educational background farmers are in the other way around, and they long live in rural areas. As long as the basic needs of family life are answered and they can survive, they can abandon farmland, which indicates that the economic status of arable land in farmers' heart is not high to some extent.

3.3 Analysis of conditions the farmers need to abandon farmland according to different ages As can be seen from Table 3, the proportion of choosing each option among youth group, middle-aged group and elderly group is all similar, and basically there is no difference. The proportion of choosing "A Only obtain permanent urban residence certificate" among youth group, middle-aged group and elderly group is all lowest, and the proportion of choosing "B Certain fixed income and permanent urban residence certificate" among youth group, middle-aged group and elderly group is the highest, which indicates that the impact of age on the farmers' will to abandon all farmland is not significant.

4 Conclusion

By summarizing the different groups of farmers' will of farmland outflow, we get the following conclusion: first, regardless of which group of farmers, leaving home to seek jobs elsewhere is the most principal factor of impacting farmers' farmland outflow, especially for high-income group and middle-income group (these farmers are the biggest potential rural households of farmland outflow), therefore, we has to optimize the policy environment for migrant workers, and accelerate the transfer of rural labor force, in order to promote the outflow of arable land; second, currently, the low price of agricultural products is an important factor impacting the farming of rural households, especially for low-income group. As many as 40.5% of the farmers choose to cultivate all contracted farmland under the condition of "B The price of agricultural products increases greatly and cultivating farmland is lucrative", which indicates from another angle that the relatively low economic benefit of agricultural production is an important reason impacting farmers' expanding the operation scale and strengthening driving force of farmland inflow. Therefore, we should further strengthen the support for agriculture, farmer and countryside, optimize agricultur-

al production environment, reinforce the public input degree for agricultural infrastructure, and share the production costs of land operators; third, the permanent urban residence certificate is no longer the main factor to attract farmers' transfer, and the farmers have begun to become more rational to give up farmland. We should promote the rapid development of rural economy, gradually establish the rural social security system including basic old-age pensions and medical insurance system, subsistence security system, social welfare, social relief, social assistance and other social security undertakings. Only when the farmland is no longer as a kind of social security can it be as a kind of resource to be optimized and revived^[5], so as to promote the circulation of farmland.

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