

Analysis on the Willingness of Farmers to Continue Participating in the New Round of Project for Conversion of Cropland to Forest and its Influencing Factors

—Coming from the Data of Heqing County in Dali Prefecture and Zhijin County in Guiyang City

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ABSTRACT

Farmers are the main participants of the Project for Conversion of Cropland to Forest and studying their participation willingness or decision-making behavior is one of the important tasks given by the sustainable development of the project. Taking Heqing County in Dali Prefecture and Zhijin County in Guiyang City as examples, 284 effective samples were obtained through the tracking survey of farmers, and the influential factors of farmers' willingness to continue participating in the new round of the Project for Conversion of Cropland to Forest were analyzed by using the orderly multi-classification Logistic regression method. The results showed that per capita arable land area of family, non-agricultural income accounting for the proportion of total household income, quality of trees, forest grassland labor input proportion of the total labor, necessity of the Project for Conversion of Cropland to Forest , understand the content of the policy of the project and satisfaction of farmers to the compensation standard in the new round of the project have a significant effect on the willingness of continuing participating. The paper put forward the proposal on this.

Keywords: Farmers, the Project for Conversion of Cropland to Forest, Farmer' willingness of participating in project, Orderly multi-classification Logistic regression, Influencing factors.

1. INTRODUCTION

After two years of pilot projects, the previous round of Project for Conversion of Cropland to Forest was officially launched in 2001, and the new round of the project also kicked off in 2014. Since the implementation of the project of returning farmland to forest for more than 20 years, it is the highest and most extensive among the key forestry projects in terms of investment and mass participation. In the report of the 19th National Congress of the Communist Party of China, it was proposed to strengthen ecosystem protection and expand the return of farmland to forest and grassland. The Project for Conversion of Cropland to Forest is the important measures to coordinate the harmonious development

between man and nature, build ecological civilization, adhere to green development and implement the strategy of Rural Revitalization.

Farmers are the main body of the implementation of the project. Their attitude is related to the sustainable development of the project, and their willingness to participate or decision-making behavior is the most direct embodiment of their attitude. Therefore, the willingness and influencing factors of farmers to return farmland or participate in returning farmland to forest have attracted the attention of scholars for many years. The willingness or decision-making behavior of farmers to participate in the conversion of farmland to forest has become one of the contents of the project in different periods.

From the perspective of theoretical analysis framework construction or index system construction framework, there are mainly two kinds of frameworks: the balance between cost and benefit of farmers' participation, and the discrimination of influencing factors of farmers' decision-making or behavior. [1-2] Among them, the discrimination framework of influencing factors of farmers' decision-making or behavior includes: the 2-factor framework of setting specific index system in several sub layers under widely used internal and external factors, [3-7] the 5-factor framework of livelihood capital,[8] the 6-factor framework of basic demand and livelihood capital,[9] and the 4-factor framework of preset.[10] From the perspective of research methods, the author applies the methods of cost-benefit analysis,[1-2] binomial logistic regression,[3-5,8] cluster analysis,[6] fuzzy mathematics, [6] principal component logistic regression analysis[7] and multiple ordered logit model[10] to study the participation intention and influencing factors of farmers in the Project for Conversion of Cropland to Forest. The research results provide decision-making reference for the government to effectively promote the Project for Conversion of Cropland to Forest. However, the literature on tracking and investigating farmers data is still relatively weak, and the existing research can not meet the needs of the practical development of the project of returning farmland to forest. The farmers in the follow-up survey are the implementers and witnesses of the previous round of returning farmland to forests project, which lasted nearly 20 years. Studying their willingness or decision-making behavior to continue to participate in returning farmland to forests is an inevitable requirement to improve the returning farmland to forests policy, consolidate the results of returning farmland to forests and promote a new round of Project for Conversion of Cropland to Forest. This paper takes the follow-up survey farmers (referred to as farmers returning farmland for short) as the research object, combined with the dynamic survey data, selects several explanatory variables from four levels under the framework of internal and external two factors, and applies the ordered multi classification logistic regression model to study the willingness and influencing factors of farmers to continue to participate in the new round of Project for Conversion of Cropland to Forest, so as to make some beneficial exploration in continuously promoting the project.

2. DATA, VARIABLES AND HYPOTHESIS

2.1. DATA

Based on the two rounds of research in 2006 and 2012, the research group conducted the third round of field follow-up research in Heqing County, Dali Prefecture and Zhijin County, Guiyang City in January and June 2016 and April 2017. Following the typical sampling principle and random sampling method determined by

the research group in 2006 [11], selected farmers returning farmland by random sampling for investigation. In this round of survey, there are 321 farmers returning farmland to forest, involving 12 townships and 42 village committees. After data screening, 284 valid questionnaires meet the research data requirements, and the effective questionnaire rate is 88.47%.

Among the surveyed farmers, men accounted for 80.36%; The average age was 53.39 years old. The proportion of primary school and below and junior middle school education was 55.63% and 38.03% respectively. The vast majority of respondents are heads of households. The average area of farmland conversion per household is 0.496hm².

2.2. INDICATORS

The study selected the willingness (y) of farmers to continue to participate in the new round of Project for Conversion of Cropland to Forest as the explanatory variable, and set "completely unwilling" = 0, "not willing" = 1, "general" = 2, "more willing" = 3, "very willing" = 4. After descriptive statistics on the willingness to participate, it is found that the mean value of farmers' willingness to continue to participate in the new round of Project for Conversion of Cropland to Forest is 2.84 and the standard deviation is 1.23.

Combined with the existing literature research results [4-6,10,11-13] and the needs of research problems, firstly, this study selects sixteen factors such as respondents age, education level and per capita family income as explanatory variables, and classifies them into four characteristic variables, namely respondents personal characteristic variables, family characteristic variables, forest land production characteristic variables and policy characteristic variables. Secondly, virtual variables are set according to villages and towns, and geographical characteristic variables are considered.

The personal characteristic variables of respondents include: x1 respondents age, x2 respondents educational level, x3 whether they have served as village cadres. Family characteristic variables include: the number of labor force of x4 family, the per capita income of x5 family, the per capita cultivated land (non retreated cultivated land) area of x6 family, the proportion of x7 forest and grassland income in the total family income, and the proportion of x8 non-agricultural income in the total family income. Forest land production characteristic variables include: x9 forest quality, x10 proportion of forest and grassland investment in total household investment, and whether x11 has participated in forestry technology training. Policy characteristic variables include: whether x12 knows that the new round of returning farmland to forests will be restarted in 2014, whether x13 the Project for Conversion of Cropland to Forest is necessary to continue to be implemented,

whether x14 knows the policy content of Project for Conversion of Cropland to Forest, and x15 is satisfied with the compensation standard for returning farmland to forests, and x16 farmers' evaluation of the implementation of returning farmland to forests policy.

2.3. VARIABLES AND HYPOTHESIS

2.3.1. Variables of Individual Characteristics

(1) The respondent age is x1. Statistics by actual age of respondents. The older the age is, the ability to accept new things is relatively limited, and there are relatively few opportunities for them to go out to work. Therefore, the willingness of farmers to participate in returning farmland to forest will become weaker, which is negatively correlated with the explained variable.

(2) The educational level of the respondents is x2. Set "illiteracy"=0, "primary School"=1, "junior high school"=2, "high School and above"=3. The higher the education level of the respondents, the higher the education level, the better understanding and support of the new policy, and the stronger the willingness to participate in the conversion of farmland to forest, which is positively correlated with the explained variable.

(3) Have you ever served as a village cadre x3. Set "no" = 0, "yes" = 1. The cadres who have served in the village have a better understanding than the general masses, and they must have a better understanding than the general masses. They must have a better understanding of the problems related to the retirement from the village than the general masses.

2.3.2 Variables of Family characteristics

(4) Number of household labor force x4. Statistics by actual number of farm household labourers. The household contract responsibility system is implemented in rural land. The labor force contained in the existing cultivated land is limited. The more labor force families have, the stronger the ability to open up wasteland and cultivate land. Returning farmland to forest reduces agricultural cultivated land and forbids steep slope reclamation. The phenomenon of idle labor force becomes more and more prominent in families with more labor force. Therefore, the willingness of farmers to participate in returning farmland to forest is relatively weak, which is negatively correlated with the explained variable.

(5) The annual per capita income of the family is x5. Statistics by real value of per capita household income ($\text{¥}10^4$). The higher the annual per capita income of households, the weaker the dependence of farmers on their cultivated land, and the stronger the willingness of farmers to participate in returning farmland to forest, which is positively correlated with the explained variable.

(6) Per capita cultivated land area of households (non returned cultivated land) x6. Statistics by actual value of arable land (not fallow land) per household (hm^2). The larger the per capita cultivated land area of the family, it shows that the more resources the family can use for returning farmland to forest, and the willingness of farmers to participate in returning farmland to forest will become stronger, which is positively correlated with the explained variable.

(7) Proportion of forest and grassland income in total household income of farmers x7. Statistics by actual proportion of total household income from forestry and grass farming. The higher the proportion, the stronger the dependence of family income on forest and grassland, and enjoy the benefits of returning farmland to forest and grassland to increase family income. Therefore, their willingness to participate in returning farmland to forest will become stronger, which is positively correlated with the explained variable.

(8) The proportion of non-agricultural income in total household income of farmers x8. Statistics by actual proportion of non-farm income to total household income of farmers. The higher the proportion, the more extensive the income sources of their families, the stronger the willingness of farmers to participate in returning farmland to forest, which is positively correlated with the explained variables.

2.3.3 Variables of Forest Land Production Characteristic

(9) Forest quality x9. Set "poor" = 0, "general" = 1, "good" = 2. The poorer the forest quality, the weaker the willingness of farmers to participate in returning farmland to forest, which is positively correlated with the explained variables.

(10) Proportion of forest and grassland industry in total household investment x10. Statistics by actual proportion of forestry and grassland labour input to total household labour input. The smaller the proportion, the less energy farmers are willing to invest in forest and grassland, the lower the expectation of stand quality and future income, and the weaker the willingness of farmers to participate in returning farmland to forest, which is positively correlated with the explained variable.

(11) Have you participated in forestry technical training x11. Set "no" = 0, "yes" = 1. If you have received forestry technology training and use the learned knowledge to manage the trees scientifically, the benefits of returning farmland to forest will be improved, and farmers are more willing to participate in returning farmland to forest, which is positively correlated with the explained variables.

2.3.4 Variables of Policy Characteristics

(12) Do you know that the new round of returning farmland to forest will restart x12 in 2014. Generally speaking, Set "don't know" = 0, "know" = 1. If farmers know the news of the restart of the new round of returning farmland to forest, they will understand the content of the compensation policy to varying degrees, so the willingness to participate in returning farmland to forest will also increase, which is positively correlated with the explained variable.

(13) Whether it is necessary to continue to implement x13. Set "not at all necessary" = 1, "less. necessary" = 2, "general" = 3, "necessary" = 4, "very necessary" = 5. This indicator reflects whether the implementation of the relevant policies of returning farmland to forest has been recognized by farmers from one side. If farmers recognize the relevant policies of returning farmland to forests, their willingness to participate in returning farmland to forests will also increase, which is positively correlated with the explained variables.

(14) Whether you know the policy content of the project x14. Set "no understanding" = 1, "not much understanding" = 2, "general" = 3, "more understanding" = 4, "very well understood" = 5. Generally speaking, if farmers understand the new round of compensation policy for returning farmland to forest, they will realize the benefits that the compensation policy can bring to them to varying degrees, so their willingness to participate in returning farmland to forest will increase, which is positively correlated with the explained variables.

(15) Whether they are satisfied with the compensation standard for returning farmland to forest x15. Generally speaking, Set "very dissatisfied" = 1, "less satisfied" = 2, "general" = 3, "more satisfied" = 4, "very satisfied" = 5. If farmers are satisfied with the compensation standard for returning farmland to forest, their willingness to participate in returning farmland to forest will also increase, which is positively correlated with the explained variable.

(16) Farmers' Evaluation on the implementation of the policy of returning farmland to forest x16. Set "very pool" = 1, "less pool" = 2, "general" = 3, "more good" = 4, "very good" = 5. The implementation of the policy of returning farmland to forests involves the timely payment or full payment of compensation for returning farmland to forests. Generally speaking, if farmers & apos; evaluation of the implementation of the policy of returning farmland to forest is better, their willingness to participate in returning farmland to forest is stronger, which is positively correlated with the explained variable.

2.3.5 Geographic Variables

Set dummy variables by township.

3. METHOD AND ECONOMETRIC ANALYSIS

3.1 METHOD

If the explanatory variables are simply combined into "willing" and "unwilling", using binary logistic regression analysis will lose some statistical information and reduce the accuracy of research conclusions. Ordered multi classification logistic regression model provides a good way to solve this kind of problem. Therefore, this paper uses ordered multi classification logistic regression model for analysis.

The general form of ordered multi classification logistic regression model can be written as:

$$\text{logit} \frac{p_0}{1 - p_0} = \text{logit} \frac{p_0}{p_1 + p_2 + p_3 + p_4} = -\alpha_1 + \beta_1 x_1 + \dots + \beta_n x_n \quad (1)$$

$$\text{logit} \frac{p_0 + p_1}{1 - (p_0 + p_1)} = \text{logit} \frac{p_0 + p_1}{p_2 + p_3 + p_4} = -\alpha_2 + \beta_1 x_1 + \dots + \beta_n x_n \quad (2)$$

$$\text{logit} \frac{p_0 + p_1 + p_2}{1 - (p_0 + p_1 + p_2)} = \text{logit} \frac{p_0 + p_1 + p_2}{p_3 + p_4} = -\alpha_3 + \beta_1 x_1 + \dots + \beta_n x_n \quad (3)$$

$$\text{logit} \frac{p_0 + p_1 + p_2 + p_3}{1 - (p_0 + p_1 + p_2 + p_3)} = \text{logit} \frac{p_0 + p_1 + p_2 + p_3}{p_4} = -\alpha_4 + \beta_1 x_1 + \dots + \beta_n x_n \quad (4)$$

In the above formula, P0 is the probability that the dependent variable y is 0, and 1-P0 is the probability that the value is not 0. Similarly, P1, P2, P3 and P4 are the probability that the value is 1, 2, 3 and 4 respectively, α is a constant term, β is the coefficient. Compared with the binary logistic regression, the dependent variable of multiple ordered logistic regression is the accumulation probability of ordered value level. In the study, the values of the explained variables are 0, 1, 2, 3 and 4 respectively. Because farmers are completely unwilling to be the control group of dependent variables, the correlation coefficient is 0, so logit (P0) = 0, so the paper gives the above four models.

3.2 ECONOMETRIC RESULTS

Adopt stata14, the results show that the regression model has pseudor2 = 0.2221, LR chi2 (27) = 133.27, prob > chi2 = 0, and log likelihood is -298.40732. The statistical test results show that the overall fitting effect of the model is good.

3.2.1 Analysis of Influencing Factors

There are seven significant variables that affect the willingness of farmers to participate in the new round of Project for Conversion of Cropland to Forest (Table 1):

per capita cultivated land area of households x6, the proportion of non-agricultural income in total household income x8, forest quality x9, the proportion of forest and grassland investment in total household investment x10, whether it is necessary to continue the implementation of Project for Conversion of Cropland to Forest x13, whether they understand the policy content of Project for Conversion of Cropland to Forest x14, whether they are satisfied with the compensation standard of returning farmland to forests x15, Other indicators are non significant variables.

3.2.2 Analysis of Significant Variables

First, the per capita cultivated land (non retreated cultivated land) area of families is significantly positively correlated with the explained variables. The non farmland conversion land of farmers is also the remaining cultivated land area after the first round of farmland conversion, which means that the more the per capita remaining cultivated land area of families, the more the area available for farmland conversion, and the stronger their willingness to participate in the new round of Project for Conversion of Cropland to Forest.

Second, the proportion of non-agricultural income is significantly related to the total household income. Generally speaking, the higher the non-agricultural income, the wider the income channel of farmers and the weaker their dependence on land. Therefore, the stronger the willingness of farmers to participate in the new round of Project for Conversion of Cropland to Forest.

Third, forest quality is positively correlated with the explained variables. The forest quality of the land for conversion depends on the farmers' dream of future forest income. The better the forest quality, the higher the farmers' expectation of future forest income. Therefore, the stronger their willingness to participate in the new round of land for conversion to forests project.

Fourth, the proportion of forest and grassland workers in the total workers is negatively significantly correlated with the explained variables. It means that the lower the proportion of forest and grassland investment in the total household investment, the more willing farmers are to participate in the new round of Project for Conversion of Cropland to Forest, which is contrary to the original hypothesis. One of the reasons is that in the first round of returning farmland to forests project, the ratio of ecological forest to economic forest is required to be 8:2, and the ratio of ecological forest (including dual-use forest) in the two case counties is more than 95%. When the labor force of families is surplus, they are more inclined to go out to work, so they can obtain much higher income than those obtained from forestry production activities in the current period, so they invest less energy in forestry and grassland industry. The survey results of sample farmers show that the average proportion of forest and grassland investment in the total investment is only

8%. The second reason is that although there is no limit on the proportion of forest species in the country for the new round of Project for Conversion of Cropland to Forest, Heqing County is in the implementation of the plot during the reporting period, while Zhijin County explores a new mode of Project for Conversion of Cropland to Forest. On the basis of advocating appropriate scale returning farmland, farmers who have returned farmland in the first three years of the project have received subsidies for returning farmland, leading enterprises or farmers' cooperatives have been introduced for afforestation and management and protection, and some farmers can participate in afforestation and management and protection in the form of labor services. Obtain additional labor income, which also greatly reduces the investment of some single peasant households with a new round of returning farmland to forest in Zhijin County. Therefore, in the model, the proportion of forest and grassland investment in the total household investment is negatively correlated with the willingness of farmers to participate in the new round of Project for Conversion of Cropland to Forest.

Fifthly, whether it is necessary to continue the implementation of the project is positively and significantly correlated with the explained variables. It means that farmers who believe that it is necessary to continue the implementation of the farmland to forest project are more willing to participate in a new round of farmland to forest project.

Sixth, whether to understand the policy content of the project is positively correlated with the explained variables. It means that the more farmers understand the policy content of the project, the more willing they are to participate in a new round of the project.

Seventh, whether the compensation standard for returning farmland to forest is satisfied is negatively significantly correlated with the explained variables, which is contrary to the original hypothesis. It means that the more dissatisfied farmers are with the compensation standard for returning farmland to forest, the more willing they are to participate in a new round of Project for Conversion of Cropland to Forest. The model analysis results are different from the research assumptions. First, with the gradual reduction of direct subsidy standards for returning farmland, the gradual increase of indirect compensation for capacity-building and the diversification of farmers' income structure, the proportion of returning farmland subsidies in family income may be less and less. In 2016 after returning farmland, the non-agricultural income of sample farmers in two case counties accounted for more than 60% of the total family income, of which the proportion of returning farmland subsidies in the total income was only about 1%. In 2006 after returning farmland. The non-agricultural income of the sample farmers in the two case counties accounts for about 55% of the total household

income, of which the return of farmland subsidy accounts for more than 10% of the total income. It can be seen that with the weakening of the dependence of household income on the direct subsidy for return of farmland, the level of compensation standard for return of farmland to forest is not the main factor for farmers to consider whether they are willing to participate in the new round of return of farmland to forest project. Second, with the intensification of various agricultural subsidy policies and the acceleration of urbanization, there is a growing gap between the opportunity cost of returning farmland to forest land and the existing compensation standard for returning farmland to forest. It is almost unrealistic for returning farmland farmers to know that the state direct compensation reaches the level of opportunity cost. Third, the new round of returning farmland to forests policy has abolished the restriction on the proportion of ecological forests and economic forests. Although farmers are not satisfied with the current compensation standard for returning farmland to forests, they can use the compensation for returning farmland to forests to plant the remaining sloping farmland into economic forests, hoping to obtain a certain income from forestry and fruit industry in the future, so they are willing to participate in the returning farmland to forests project. On the contrary, although farmers are satisfied with the current compensation standard for returning farmland to forest, they may think that the compensation period is limited and are unwilling to participate in the project. Therefore, this variable has a negative significant correlation with the explained variable and is contrary to the original hypothesis.

4. CONCLUSIONS

The above empirical research results show that there are seven significant variables that affect the willingness of farmers to participate in the new round of Project for Conversion of Cropland to Forest (Table 1). Among them, the five variables are positively correlated with the explained variables and same to the expected direction.: the per capita non-agricultural land area x_6 , the proportion of non-agricultural income in household income x_8 , the quality of trees x_9 , whether the Project for Conversion of Cropland to Forest is necessary to continue to implement x_{13} , and whether they understand the policy content of the Project for Conversion of Cropland to Forest x_{14} , The proportion of forest and grassland workers in the total household workers x_{10} and whether they are satisfied with the compensation standard for returning farmland to forest x_{15} are negatively correlated with the explained variables and opposite to the expected direction.

5. SUGGESTIONS

(1) Strengthen the adjustment of industrial structure and expand farmers' income channels.

Empirical analysis shows that the per capita cultivated land area and the proportion of non-agricultural income in family income are positively correlated with the explained variables. Therefore, while improving the quality of rural labor force, we should stabilize and increase non-agricultural income, improve farmers' willingness to participate in returning farmland to forests, and consolidate the achievements of returning farmland to forests.

(2) Pay attention to the development of follow-up industries and increase the proportion of forestry income.

The empirical analysis shows that the satisfaction of the compensation standard for returning farmland to forest is negatively significantly correlated with the explained variables. It shows that with the reduction of the proportion of direct subsidies for returning farmland and the increase of the opportunity cost of returning farmland to forest, the forestry economic benefits of farmers returning farmland to forest are expected to increase. However, the survey results show that in the past 20 years since the implementation of the first round of Project for Conversion of Cropland to Forest, the proportion of forest and grassland income of the sample farmers in the total household income is only 3%. It is difficult to prosper the forest and enrich the people, which increases the uncertainty of the Project for Conversion of Cropland to Forest. When the new round of Project for Conversion of Cropland to Forest is implemented, we must face up to the problem that the policy effect in the consolidation stage of returning farmland to forest does not meet the expectations, adjust the policy tools in time and strengthen the efficiency of indirect compensation. Pay attention to the development of follow-up industries, adopt the financing mode of cooperation between the government and social capital (PPP mode), effectively solve the problem of insufficient forestry investment, improve the scientific and technological content of the project of returning farmland to forests, reasonably allocate high-quality, high-yield and efficient tree species, strengthen forest management, improve the quality of trees, and improve the proportion of forestry income, so as to enable farmers to realize their long cherished wish of turning green mountains into silver mountains.

(3) Scientific planning and rational layout, and strengthen the construction of the main business body of forestry ecological engineering

The empirical analysis shows that the forest quality is positively and significantly correlated with the explained variable, and the proportion of forest and grass industry investment in the total household investment is negatively and significantly correlated with the explained variable, which means that the better the forest quality and the smaller the proportion of forest and grass industry investment in the total household investment, the more

willing farmers are to participate in the Project for Conversion of Cropland to Forest. This is a group of seemingly contradictory results, reflecting the dilemma faced by the Project for Conversion of Cropland to Forest in the market economy environment.

Therefore, the project of returning farmland to forests should adhere to scientific planning, rational layout, three-dimensional utilization of resources, correctly coordinate the relationship between ecological restoration, industrial development and increasing income, sublate the traditional inefficient management mode of decentralized management. We will continue to increase indirect compensation for capacity-building and strengthen the construction of business entities of forestry ecological projects. By optimizing the allocation of resources, supporting, cultivating and developing leading enterprises or capable people or large households in the construction of forestry ecological engineering, we will strengthen the construction of the main body of forestry ecological engineering management.

(4) Strengthen the publicity of the policy of returning farmland to forests and improve the compensation policy for public welfare forests

Empirical analysis shows that whether it is necessary to continue the implementation of the project and whether we understand the policy content of the project are positively and significantly correlated with the explained variables. Therefore, the management

organization of returning farmland to forest should make use of both traditional media and new media to continuously strengthen the publicity of the policy of Project for Conversion of Cropland to Forest. At the same time, with the development of paperless Rural E-government and the increasing intensity and scope of the national policy of strengthening and benefiting agriculture, agricultural financial institutions shall elaborate the description of the name of the one card payment project of agricultural benefit funds. Farmers' awareness and participation in the project will be enhanced.

Starting from 2017, the subsidy period of the previous round of returning farmland to ecological forest will gradually expire, they will gradually be included in the compensation scope of central and local forest ecological benefits respectively. Therefore, we should strengthen the scientificity of the formulation of ecological compensation standards for public welfare forests, strengthen the dynamic management of the ecological compensation level of public welfare forests, reform the ecological compensation mode of public welfare forests, strictly enforce the supervision and management system of ecological compensation for public welfare forests, continuously improve the compensation policies for public welfare forests through various measures, improve the enthusiasm of farmers to participate in the project of returning farmland to forests, and promote the sustainable development of the project.

Table 1. Regression model results of influencing factors of farmers' willingness to continue to participate in the new round of Project for Conversion of Cropland to Forest

variable	coefficient	SE	z	P> z	95% CI	
Respondent age x1	-0.003	0.011453	-0.26	0.793	-0.025	0.019
Education level of respondents x2	0.029	0.191409	0.15	0.879	-0.346	0.404
Has the interviewee ever served as a village cadre x3	0.225	0.437819	0.51	0.608	-0.633	1.083
Household labor force x4	-0.004	0.092276	-0.04	0.965	-0.185	0.177
Per capita household income x5	0.045	0.038751	1.17	0.241	-0.030	0.121
Per capita cultivated land area of households (non returned cultivated land) x6	0.178	0.096966	1.83	0.067*	-0.012	0.368
Proportion of forest and grassland income in total household income of farmers x7	2.944	1.956479	1.50	0.132	-0.891	6.779
Proportion of non-agricultural income in total household income of farmers x8	0.949	0.556445	1.70	0.088*	-0.142	2.039
Forest quality x9	0.467	0.206558	2.26	0.024**	0.062	0.872
Proportion of forest and grassland workers in total household workers x10	-0.887	0.530448	-1.67	0.095*	-1.926	0.153

Have you participated in forestry technical training x11	0.103	0.420085	0.25	0.806	-0.720	0.927
Do you know that the new round of returning farmland to forest will restart x12 in 2014	-0.203	0.295084	-0.69	0.491	-0.781	0.375
Is it necessary to continue to implement x13 in the Project for Conversion of Cropland to Forest	1.363	0.206560	6.60	0.000***	0.958	1.768
Do you know the policy contents of the project x14	0.241	0.145553	1.65	0.098*	-0.044	0.526
Are you satisfied with the compensation standard for returning farmland to forest x15	-0.261	0.152379	-1.71	0.086*	-0.560	0.037
Evaluation of farmers' implementation of the policy of returning farmland to forest x16	0.216	0.165591	1.30	0.192	-0.109	0.540

Note: ① *** , ** , * respectively indicate significant at the level of 1%, 5% and 10%; ② The regression model controls the fixed effect of villages and towns.

AUTHORS' CONTRIBUTIONS

This paper analyzes the data of tracking farmers, and obtains two new findings different from the existing research, that is: the proportion of forest and grassland investment in the total household investment x10, whether they are satisfied with the compensation standard for returning farmland to forest x15. The two variables are negatively correlated with the explained variables and opposite to the expected direction. The above conclusions show that this paper has important research value, expands the new perspective of researchers, and provides strong support for more scientific and systematic follow-up policy decision-making, so as to meet the needs of the dynamic development of the project.

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