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# Can Farmers' Culture Level Eliminate Poverty under the Rural Revitalization Strategy?

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#### Abstract:

Solving the relative poverty of current development capacity is of great significance to the realization of the goal of Rural Revitalization in China. Based on the micro survey data of 20 poverty-stricken villages in Anhui Province, this paper empirically analyzes the impact of farmers' culture years and culture level on income through logarithmic model and logit model, and whether culture will eliminate poverty? The empirical results show that farmers' culture years can significantly increase their income, and the rate of return on culture is gradually increasing with the improvement of farmers' culture level; The culture level of farmers also has a significant impact on poverty eradication. The improvement of culture level can significantly reduce the probability of farmers' families falling into poverty. The culture level at different stages has different effects on poverty eradication. The higher the culture level of farmers, the greater the contribution to anti-poverty. By studying the impact of farmers' culture on income and poverty eradication, it has important reference significance for the governance of relative poverty in the post poverty alleviation era.

**Keywords**: Rural Revitalization, Relative poverty, Logit Model.

#### I. INTRODUCTION

As poverty is a common problem facing the world and a key factor limiting social harmony and human development, poverty eradication has become an important goal of sustainable poverty reduction in rural areas under the rural revitalization strategy. By 2020, 98.99 million rural poor people have been lifted out of poverty, 832 poor counties and 128,000 poor villages have been listed out under the current standard in China, which marked that regional overall poverty had been solved and the arduous task of eliminating absolute poverty had been completed. After achieving the goal of eliminating absolute poverty, China has also entered the post-poverty alleviation era, that is, rural poverty has changed from absolute poverty to relative poverty of asset poverty, social poverty and ecological poverty [1]. After 2020, the absolute poverty situation in rural areas has been basically solved, which means that China's targeted poverty alleviation work has started a new journey.

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At present, eliminating rural poverty in developing countries is an important development issue [2]. However, the impact of education level on household income and poverty eradication is always the focus in the research field of poverty eradication in rural areas. A more consistent view is that education is within the scope of human capital, which first affects the labor efficiency of educators, and then acts on poverty and family income, thus eliminating poverty and increasing the per capita income of farmers' families [3]. According to the theory of human capital (Becker, 1975), education has a strong spillover effect, which will not only improve the productivity of family members, but also improve the labor productivity of educated people [4]. On the whole, relevant literature and research results all agree that education plays an important role in promoting the eradication of poverty and improving the per capita income of peasant households. Kurosaki and Khan(2001) based on the empirical research of Pakistan's rural survey data from 1999 to 2000, believed that education can play an important role in eliminating poverty and overcoming the bottom income by improving the non-agricultural employment opportunities of the rural poor households [5]. Lopez and Valdes (2000) also found that the contribution of education in increasing non-agricultural income and improving the labor efficiency of rural poor households is very significant using the empirical test done by the Latin American rural survey data. [6] Cheng et al. (2002) analyzed the poverty alleviation effect of various public investments through the survey data in China, and concluded that the targeted poverty alleviation effect of education investment is the most obvious among all kinds of government investments [7]. Xu Qiuyan (2018) used quantile regression method to verify the influence of family education level on family per capita income level, and concluded that the absolute return brought by the improvement of family education level to families with high scores was higher than that of families with low scores. However, there are some references that draw different conclusions, that is, the education level has no significant impact on the rural poverty eradication and the improvement of the per capita income of farmers' families. Teal's empirical results from macro data and survey data of poor rural households in Ghana show that except for female workers, education level has no significant impact on the improvement of potential income of others. Similarly, some scholars have found using the analysis data of Tanzania that when comprehensively considering the related factors outside the education system, the effect of education level on the poverty eradication of rural poor households is not significant [9]. Yang Guotao et al. used the survey data of 720 farmers in Xihaigu, Ningxia to empirically test the influencing factors of farmers' poverty. The results showed that the education level failed the significance test, so it was difficult to judge the direction and degree of its influence on farmers' poverty.

To sum up, domestic and foreign academic circles have basically reached a consensus on the theoretical research of education in improving farmers' income and eliminating poverty, but the empirical research has not yet reached a consistent conclusion, mainly due to differences in data selection, research variable selection, model establishment and research methods. In this paper, the research is carried out from the following aspects: first, the logarithmic model was used to study the impact of farmers' education years and education level on income; second, the Logit model was used to study how farmers' education years and education level can eliminate poverty. Compared with the previous literature, the innovation of this paper is manifested in the following aspects: first, the absolute poverty of economic poverty was expanded to the relative poverty of education, health status, labor and other multidimensional poverty; second, the education status was divided into education years and education level for separate study, and

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their education return rates were studied separately, further refining the impact of education on family income and farmers' poverty. This paper analyzes the impact of education on the poverty reduction of the rural poor households in the new era from the micro-social perspective, aiming at finding a poverty reduction path in line with the post-poverty reduction era and providing reference for the poverty reduction work under the rural revitalization strategy.

#### II. LITERATURE REVIEW AND RESEARCH HYPOTHESES

#### 2.1 Literature Research on Education and Income Level

As the governance and generation of poverty have always been the hot and difficult issues concerned by governments, a large number of literature studies have sought the generation mechanism of poverty from different angles. Human capital theory holds that income level is positively correlated with education level, that is, the higher education level, the higher education level; the low income of poor rural households has a great relationship with their education level. For individuals, the income level increases with the increase of education level. Schultz (1960) believed that the income of individuals largely depends on the level of human capital, and education plays a vital role in the formation of human capital [10]. Becker (1975) showed in his research that the overall average educational level and educational distribution of the population will both affect income distribution <sup>[4]</sup>. Sen (2001) pointed out that the true meaning of poverty is capacity poverty, that is, the poverty of the poor people's ability to create income, and the low income of the poor is due to the low level of human capital caused by the lack of income creation ability [11]. Raffo (2009) believed that poverty and the educational level of the poor were related [12]. Tilak (2007) indicated, based on the analysis of Indian data, that apart from basic education, the development of secondary and higher education is also conducive to poverty reduction [13]. Barham (1995) used an inter-generational model of education to study and found that children of poor families are difficult to receive adequate education under credit constraints, which is likely to lead to intergenerational transmission of poverty [14]. Cheng Mingwang et al. (2015) concluded that the human capital embodied in basic education has a comprehensive impact on the income gap of farmers based on time series data analysis [15]. Based on the above literature studies, the following hypotheses were made in this paper:

H1a: The education years of farmers have a significant positive impact on family per capita income.

H1b: The education level of farmers has a significant positive impact on the per capita income of families.

# 2.2 Literature Research on Education and Poverty Theory

The influence of individual education level on rural poverty has always been a global key research topic in the study of rural poverty. According to the theory of human capital, education plays a positive role in eliminating poverty. Some people think that education level can effectively reduce the probability of poverty. Liu Xiuyan believed that education is in the category of human resources, which will first affect

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the production efficiency of the educated, thus affecting the per capita income of the rural poor households and eliminating rural poverty [16]. Wang Jinying believed that the education level of family members has a significant impact on family poverty, but it is endogenous [17]. However, according to the survey data of 720 poor rural households in Xihaigu, Ningxia, some scholars found that the education level failed the significance test, which made it difficult to judge the direction and degree of the impact on farmers' poverty. Song Yulan et al. found through their research that vocational education and junior high school education had no significant impact on the income of rural poor families of ethnic minorities in the west, while senior high school education had a positive correlation with income growth [18]. Based on the above literature studies, the following hypotheses were made in this paper:

H2a: The education years of farmers have a significant positive impact on poverty eradication.

H2b: The education level of farmers has a significant positive impact on poverty eradication.

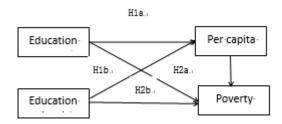


Fig 1: Hypothesis model

#### III. RESEARCH DESIGN

# 3.1 Sample and Data

The data in this paper were derived from the micro-survey data obtained by the research group from the field survey of 20 poor villages in Anhui Province. A total of 1,380 questionnaires were distributed this time, and 1,300 questionnaires were recovered after excluding unreasonable answers, with a recovery rate of 94.20%, which meets the requirements of questionnaire survey samples. This survey was conducted on a household-by-household basis in the form of random household interviews. The sample data information included the basic information of the head of the household, the basic information of the household and the economic status of the household surveyed. The data collection and collation process received strong support from the local poverty relief office.

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TABLE I. Definition and description of variables

Variables	Name	Value	Symbols
Explained	Household incomes per capita	Continuous numerical value	Inc
variables	Whether poverty or not	Poverty =0, non-poverty=1	Pov
Explanatory	Education years	Actual schooling years	Edu1
variables	Education level	Illiteracy = 1; primary school = 2; junior high school = 3; senior high school and above =4	Edu2
	Gender of head of household	Male = 1; Female =2	Gen
	Age of head of household	Continuous numerical value	Age
	Marital status of head of household	ital status of head of Others (unmarried or widowed) = 0; Married =1	
Control	Number of labor force in the family	Continuous numerical value	Lab
variables	Health status of family members	Disability = 1; Illness = 2; Normal =3	Hea
	Location of family residence	Remote mountain areas =1, hills =2, plains =3, surrounding towns =4	Pos
	Per capita cultivated land	Continuous numerical value	Lan

#### 3.2 Variable Description

Based on the above documents and questionnaires, the factors that may eliminate the poverty of the farmers were selected in this paper, and the per capita income of the households and whether they are poor were explanatory variables, among which the per capita income of the households was a continuous variable, whether they are poor was a binary variable, poverty was 0, and non-poverty was 1. The education level of the head of household was selected as an explanatory variable, because the education level was divided into education years and education level, in which the education years were the actual schooling years, and the education level was divided into illiteracy, primary school, junior high school, senior high school and above. Indicators such as the gender of the head of household, the age of the head of household, the marital status of the head of household, the number of household workers, the health status of family members, the geographical location of family residence and the per capita arable land were selected as control variables, where the marital status of the head of household was divided into married and other, the health status of family members was divided into disability, illness and normal, and the location of family residence was divided into remote mountainous areas, hills, plains and the surrounding cities and towns. The values and descriptions of each variable were shown in Table I.

# 3.3 Modeling

#### 3.3.1 Influence of Education Level on Farmers' Income

According to the Mincer income equation, the household income of farmers is related to the human capital level of the labor force, and also to the health status of the labor force <sup>[19]</sup>. At the same time, household characteristics such as gender, age and marital status of the head of the household, and family characteristics such as the number of labor force, the health status of family members, the geographical location of the family, and the per capita arable land will also affect the income of farmers to a large extent. Since the income variable was normally distributed, the logarithmic model was adopted. The explained variable was the logarithm of per capita income of farmers, the explained variable was educational level, and the rest were control variables. Among them, education level was divided into education years and education level. Model 1 and Model 2 were used to test the effect of education years and education level on farmers' income.

$$In(Inc_k) = \alpha_0 + \alpha_1 Edu_k + \alpha_2(Controls_k) + \alpha_3$$
 (1)

$$In(Inc_i) = \alpha_0 + \alpha_1 Pri_i + \alpha_2 Jun_i + \alpha_3 Sen_i + \alpha_4 (controls_i) + \alpha_5$$
 (2)

Where.

 $Inc_k$  = the household per capita income of farmer k;

Edu<sub>k</sub> = the actual years of education of farmer k;

Controls<sub>k</sub> =the control variable of farmer K.

In model 1, the explained variable is the logarithm of farmer J's household per capita income, and  $Pri_j$ ,  $Jun_j$ , and  $Sen_j$  are dummy variables. When the average education level of household labor force is primary school,  $Pri_j = 1$ ; otherwise, it is 0; when the average education level of family labor force is junior high school,  $Jun_j = 1$ , otherwise it is 0; when the average education level of family labor force is senior high school or above,  $Sen_j = 1$ , otherwise it is 0;  $Controls_j$  is the control variable of farmer j..

# 3.3.2 The Influence of Education Level on Farmer Household Poverty

Referring to the research of Li Xiaojia (2015), considering the impact of education level on poverty of farmers is reflected by determining whether farmers are poor [20]. Whether farmers are poor or not is related to the level of labor human capital, and the characteristics of household head and family also greatly affect farmers' income. Because whether farmers are poor or not was a binary variable and was

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reflected by the logarithm of the probability ratio of poverty, Logit model was adopted. The distribution function of the Logit model obeys the logistic cumulative distribution function, which is a widely used discrete selection model at present, because it can not only analyze the impact of education on farmers' poverty, but also comprehensively consider the impact of other factors on farmers' poverty. The explained variable was whether farmers are poor or not, the explained variable was the education level of farmers, and the rest were control variables.

$$Pov_k = \alpha_0 + \alpha_1 Edu_k + \alpha_2 (Controls_k) + \alpha_3$$
 (3)

$$Pov_{i} = \alpha_{0} + \alpha_{1} Pri_{i} + \alpha_{2} Jun_{i} + \alpha_{3} Sen_{i} + \alpha_{4} (controls_{i}) + \alpha_{5}$$

$$(4)$$

In models 3 and 4, the explained variables  $Pov_k$  and  $Pov_j$  respectively indicate whether farmers K and j are poor, and the remaining explained variables and control variables are as shown in models 1 and 2.

# IV. RESULTS OF EMPIRICAL ANALYSIS

# 4.1 Descriptive Statistics and Correlation Analysis

The following table shows the mean, standard deviation, minimum and maximum values of the poverty sample and the non-poverty sample for descriptive statistical analysis, of which 228 are poor and 1,072 are non-poor. The specific descriptive results are as follows:

TABLE II. Descriptive statistical analysis of each variable

Var –		Poverty				Non-poverty			
	Mean	Std. Dev	Min	Max	Mean	Std. Dev	Min	Max	
Gen	1.13	0.33	1	2	1.15	0.36	1	2	
Age	56.07	12.81	21	90	55.72	11.38	25	87	
Edu	1.47	0.69	1	4	2.10	0.73	1	4	
Mar	1.45	0.50	1	2	1.42	0.49	1	2	
Lab	1.03	0.86	0	3	1.58	1.01	0	5	
Inc	8.56	0.42	7.31	9.94	8.99	0.44	8.07	11.51	
Hea	1.90	0.63	1	3	2.25	0.80	1	3	
Pos	1.55	0.85	1	4	2.32	1.20	1	4	
Lan	0.82	0.84	0	5.2	2.27	5.65	0	5.45	

The Table II shows that the average gender of non-poor householders (1.15) was slightly higher than that of poor householders (1.13), the age of non-poor householders (55.72) was slightly higher than that of poor householders (55.65), and the average marital status of non-poor householders (1.42) was slightly

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lower than that of poor householders (1.45), indicating that the above variables had no significant influence on poverty alleviation. The average education level of non-poor households (2.12) was greater than that of poor households (1.35), indicating that the education levels of non-poor households were mostly in primary schools, while those in poverty were mostly illiterate. The average number of workers from non-poor households (1.58) was greater than that of poor households (1.03), indicating that the number of workers had an impact on poverty eradication; the per capita income of non-poor families was 8,990 yuan, which was more than 8,560 yuan for poor families. The number of healthy non-poor family members (2.25) was higher than that of poor ones (1.90); the mean geographical location of non-poor households was larger (2.32) than that of poor households (1.55), indicating that non-poor households lived closer to the town; The average value of non-poor per capita arable land (2.27) was much larger than that of poor per capita (0.82), indicating that per capita arable land had a significant impact on poverty alleviation.

# 4.2 Model Fitting Test

When studying the relationship between education level and family per capita income, education level and poverty, the overall fitting effect of the model should be tested first. The specific fitting information of the model is shown in Table III:

	Number of obs	Prob > F	R-squared	TSS	Prob > chi2	Pseudo R2	Log likelihood
Equation 1	1300	0.000	0.1299	279.783			
Equation 2	1300	0.000	0.1363	279.784			
Equation 3	1300				0.000	0.3515	-391.445
Equation 4	1300				0.000	0.3590	-386.899
Equation 5	1300				0.000	0.4091	-356.703

**TABLE III. Model fitting information** 

As shown in Table III above, the regression equations of Equation 1–Equation 5 models all passed the significance test, and the significance level was 0.000, all of which was at the confidence level of 1%, indicating that the relationship between the explained variable and the explanatory variables was significant. As shown in Equation 1–Equation 2, R-squared values were 0.1299 and 0.1363, and TSS values were 279.783 and 279.784, all of which were gradually increasing, indicating that the explanation of the equation was stronger. Judging from Equation 3- Equation 5, Pseudo R2 was 0.3515, 0.3590, 0.4091, and Log likelihood value was -391.445, -386.899, -356.703, which all were increasing gradually, indicating that the explanation of the equation was stronger. The above model fitting test shows that education level and family per capita income, education level and poverty were suitable for empirical analysis.

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# 4.3 Analysis on Regression Results

# 4.3.1 Influence of Education Level on Family Per Capita Income

Table IV shows the result of the influence of the education years and the education level on the per capita income of families by using Model 1 and Model 2. According to model 1, the average return rate on education of farmers in poor areas was 13.3%, i.e. the return rate on education of farmers increased by 13.3% for each additional year of education, H1a was true. According to model 2, the improvement of farmers' education level had a significant increase in their income. Under the condition that other variables remained unchanged, the income of farmers who had received primary education would be 15.8% higher than that of illiterate farmers, the income of farmers who had received primary education would be 24.5% higher, and the income of farmers who had received secondary and higher education would be 42.2% higher. In comparison with the relative marginal rate of return at all levels of education, the rate of return on education at the primary level was 15.8 % compared with the level of illiteracy; The rate of return on education at the lower secondary level was 8.7% compared to the primary level; Compared with the junior high school level, the rate of return to education of senior high school and above was 17.4%, and the relative marginal rate of return of senior high school and above was the highest. From the average rate of return of all levels of education, the average annual rate of return was 2.63% in primary school, 2.9% in junior high school and 5.8% in senior high school and above, H1b was true. The above data show that the return to education of primary and junior high schools were relatively close, because the popularization of nine-year compulsory education enables most farmers to have primary or junior high school education level, but the contribution to the income of rural farmers was not obvious due to the small difference in their cultural knowledge. However, with the continuous improvement of farmers' education level, their return to education was also increasing, indicating that raising farmers' education level to senior high school or above is more conducive to increasing their income.

TABLE IV. Influence of education level on family per capita income

I n(Ina)	Mode	11	Mode	Model 2		
Ln(Inc)	Coefficient	t value	Coefficient	t value		
Edu	0.133***	7.27				
Pri			0.158***	5.18		
Jun			0.245***	6.17		
Sen			0.422***	4.37		
Gen	0.014	0.38	0.018	0.50		
Age	$0.003^{*}$	2.45	$0.003^{*}$	2.56		
Mar	0.143***	5.00	0.139***	4.84		
Lab	0.107***	7.86	$0.102^{***}$	7.45		
Hea	$0.050^{**}$	3.22	$0.043^{**}$	2.72		
Pos	$0.029^{**}$	2.86	$0.027^{**}$	2.61		

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Lan	$0.005^*$	2.08	$0.005^{*}$	1.99
cons	7.921***	71.37	7.989***	75.52

Note: \* \* \*, \* \* and \* indicate passing the significance level tests of 1%, 5%, and 10%, respectively.

In addition, judging from Table IV, the factors affecting the per capita income of households in poverty-stricken areas are the age and marital status of the head of the household, the number of household workers, the health status of family members, the geographical location of the family residence, and the per capita arable land, all of which passed the significance test and the coefficient was positive, indicating that the above variables had a positive impact on the per capita income of households in poverty-stricken areas. The gender coefficient of the head of household was positive but failed to pass the statistical significance test, probably because although the male head of household has more labor force, they may choose to go out for work because of higher income and easier to get rid of poverty. However, in the process of targeted poverty alleviation, the female head of household can also give full play to her advantages, and can raise her income through manual preparation, poultry feeding, and work in a village processing factory, etc. in order to get rid of poverty. Therefore, gender had little relation to poverty eradication.

TABLE V. The impact of education on poverty eradication

Pov	Mode	13	Mode	el 4
100	Coefficient	t value	Coefficient	t value
Edu	1.464***	9.50		
Pri			1.918***	8.75
Jun			2.646***	8.31
Sen			3.481**	3.20
Gen	-0.186	-0.64	-0.189	-0.65
Age	0.047***	5.48	$0.046^{***}$	5.29
Mar	0.931***	4.09	0.951***	4.12
Lab	0.736***	6.35	0.716***	6.11
Hea	$0.353^{**}$	2.90	$0.356^{**}$	2.90
Pos	0.554***	5.96	0.534***	5.69
Lan	$0.946^{***}$	8.79	$0.949^{***}$	8.75
cons	-8.757***	-9.66	-7.345 <sup>***</sup>	-8.87
Pseudo R <sup>2</sup>	0.3515	_*** )	0.3590	O***

Note: \* \* \*, \* \* and \* indicate passing the significance level tests of 1%, 5%, and 10%, respectively.

#### 4.3.2 Influence of Education Level on Poverty Eradication

Table V shows the influence of farmers' education level on poverty eradication using Model 3 and Model 4. Model 3 shows that the coefficient of education and poverty eradication of farmers in poor areas

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was 1.464, which was significant at the level of 1%, indicating that the poverty reduction rate of farmers increased by 146.4% for every additional year of education, H2a was true. According to model 4, the education level at different stages had a significant impact on poverty eradication, and improving the education level of farmers could effectively reduce the incidence of poverty. Compared with illiterate farmers, the poverty eradication rate of farmers whose education level was primary school was 191.8% higher, that of farmers whose education level was junior high school was 264.6% higher, and that of farmers whose education level was senior high school or above was 348.1% higher, H2b was true. On the basis of the above data, education level of senior high school or above is more obvious for poverty eradication, indicating that those with senior high school education or above have the greatest contribution to anti-poverty and can reduce rural poverty to the greatest extent.

In addition, Table V shows that the head of household and family characteristics also have an impact on poverty eradication. Every one-year increase in the age of the head of household can reduce poverty by 4.7%; Married heads of households are more likely to get out of poverty, and for every increase in labor force, 73.6% of poverty can be eliminated; Family members who are healthy are more likely to get rid of poverty; Family location and per capita cultivated land area also have significant positive effects on poverty eradication, and both of them have passed the 1% significance test.

TABLE VI. Empirical analysis of the influence of education level on per capita income of farmers and poverty eradication

Var	Model 5		Mode	Model 6		Model 7		Model 8	
var	Coefficient	t value	Coefficient	t value	Coefficient	t value	Coefficient	t value	
Mir	0.522***	3.52	2.288***	8.80					
Edu					$0.124^{***}$	6.12	1.316***	7.88	
Gen	0.009	0.24	-3.622	-1.27	-0.016	-0.40	-0.250	-0.78	
Age	0.001	0.13	0.009	1.31	$0.003^{*}$	2.53	$0.047^{***}$	5.08	
Mar	0.121***	4.16	$0.461^{*}$	2.12	$0.117^{***}$	3.75	$0.817^{***}$	3.34	
Lab	$0.110^{***}$	7.96	$0.549^{***}$	4.72	$0.105^{***}$	6.96	$0.7136^{***}$	5.70	
Hea	$0.052^{**}$	3.23	0.344**	2.86	$0.053^{**}$	3.04	$0.425^{**}$	3.12	
Pos	$0.037^{***}$	3.57	$0.609^{***}$	6.43	0.010	0.81	$0.330^{**}$	3.21	
Lan	$0.006^{**}$	2.34	$0.900^{***}$	8.20	0.037***	4.95	$0.900^{***}$	7.88	
cons	8.247***	82.54	-23.009***	-9.78	7.941***	64.89	-7.947***	-8.20	

Note: \* \* \*, \* \* and \* indicate passing the significance level tests of 1%, 5%, and 10%, respectively.

# 4.4 Stability Test

In order to test the validity and stability of the data, this paper intends to test its stability from the following aspects. First, Table IV and Table V show that under the condition that the explanatory variables remained unchanged, the explanatory variables were household per capita income and poverty respectively, and their coefficient direction and significance basically remained unchanged. Second, by changing the

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explanatory variables and increasing an explanatory variable of going out as migrant workers, the impact of going out as migrant workers on the per capita income of farmers and the eradication of poverty in poor areas was studied. From Model 5 and Model 6, coefficient of going out as migrant workers was positive both for the per capita income of families and the eradication of poverty, and it passed the 1% significance test, while the direction and significance of the remaining variables remained basically unchanged. Thirdly, after narrowing the sample interval and using 1,000 sample data to test the influence of education level on household per capita income and poverty eradication, the results as shown in Model 7 and Model 8 show that the direction and significance of the coefficients remained basically unchanged, H1a, H1b, H2a and H2b were all true. Thus, the data and model structure of this paper were stable.

#### V. CONCLUSIONS

#### 5.1 Conclusions

In this paper, the focus was put on the research on the impact of farmers' education years and education level on per capita household income in poor areas and whether education level will eliminate poverty. First, as for the influence of the education years of farmers in poverty-stricken areas on the per capita income of families, the average educational rate of farmers was 13.3%, indicating that receiving education could significantly improve their income level. Secondly, as for the influence of education level of farmers in poverty-stricken areas on household per capita income, the improvement of education level had a significant increase in farmers' income. Under the condition that other variables remained unchanged, compared with illiterate people, the income of farmers who had received education in primary school, junior high school, senior high school and above would be 15.8%, 24.5% and 42.2% higher. From the average rate of return of all levels of education, the average annual rate of return in primary school, junior high school and above was 2.63%, 2.9% and 5.8% respectively. With the continuous improvement of farmers' education level, farmers' educational return rate was also increasing, indicating that improving farmers' education level to high school or above was more conducive to increase their income. Thirdly, as for the influence of farmers' education level on poverty eradication, the coefficient of farmers' education years and poverty eradication in poverty-stricken areas was positive, indicating that the increase of education years could significantly reduce the incidence of poverty. Different levels of education had different effects on poverty eradication. Compared with farmers who were illiterate, the poverty eradication rates of farmers whose education levels were primary school, junior high school, senior high school and above were 191.8%, 264.6% and 348.1% respectively, indicating that higher education level makes greater contribution to poverty eradication.

# 5.2 Limitations and Future Research

In this paper, the main research is the impact of education level on family per capita income and poverty eradication, but there are still some research deficiencies. 1) Single study variable. In this paper, only the explanatory variable of education level was studied, rather than the influence of other influencing factors. Although the variable of going out as migrant workers was added in the final stability test, the

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analysis was relatively simple and could not be carried out. In the later stage, the focus will be on the influence of factors other than education level on poverty. 2) No classified comparison. In this paper, only micro-survey data obtained from field investigation in 20 poverty-stricken villages in Anhui Province were collected. There was no poverty data collected from other provinces due to the limited ability to collect data, so neither comparison between Anhui Province and other provinces, nor comparison between Anhui Province and other provinces in terms of per capita household income and poverty eradication was made. In the later stage, the focus will be on collecting poverty data from other provinces.

#### **REFERENCES**

- [1] Deng DS, Wu ZY, Yang J (2019) The practical dilemma and path optimization of China's rural poverty alleviation policy-also on the convergence of rural poverty alleviation and minimum living security system. Journal of Suzhou University (Philosophy and Social Sciences Edition) (05): 93-102
- [2] World Bank. (2000) World Development Report 2000/2001: Attacking Poverty. World Bank: Washington DC
- [3] Behrman JR (1990) The Action of Human Resources and Poverty on One Another: What We Have yet to Learn, Living Standards Measurement Study Working Paper. WorldBank: Washington DC, 1990.
- [4] Becker GS (1975) Human Capital: A Theoretical and Empirical Analysis with Special Reference to Education. Chicago: University of Chicago Press
- [5] Kurosaki T, Khan H (2001) Human Capital and Elimination of Rural Poverty: A Case Study of the NorthWest Frontier Province, Pakistan, IER Discussion Paper. Series B, Hitotsubashi University, 25
- [6] Lopez R, Valdes A (2000) Rural Poverty in Latin America: New Evidence of the Effects of Education, Demographics and Access to Land, Economic Development and Cultural Chang-e, 49: 197-212
- [7] Cheng F, Zhang XB, Fan SG (2002) Emergence of Urban Poverty and Inequality in China: Evidence from Household Survey, China Economic Review, 13: 430-443
- [8] Xu QY, Zhang QW (2018) Family education level, health level and income level-An empirical analysis based on Chinese family tracking survey. The World of Survey and Research 2018(08): 19-28
- [9] Wedgwood R (2007) Education and poverty reduction in Tanzania. International Journal of Educational Development. 27(04): 383-396
- [10] Schultz TW (1960) Capital Formation by Education. Journal of Political Economy 68(6): 571-583
- [11] Amartya S (2001) Development as freedom. Oxford: Oxford University Press 2001: 112-123
- [12] Carlo R, Alan D, Helen G, Dave H, Lisa J, Afroditi K (2009) Education and poverty: mapping the terrain and making the links to educational policy. International Journal of Inclusive Education 13(4):341-358
- [13] Tilak, Jandhyala BG (2007) Post-elementary education, poverty and development in India. International Journal of Educational Development 27(4): 435-445
- [14] Vicky B, Robin B, Maurice M, Pierre P (1995) Education and the Poverty Trap. European Economics Review 39(7): 1257-1275
- [15] Cheng MM, Shi QH (2015) Farmers' income gap and its root: model and demonstration. Management World (7): 17-28

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Article History: Received: 08 February 2022, Revised: 10 March 2022, Accepted: 02 April 2022, Publication: 30 April 2022

- [16] Liu XY, Zhang Y (2007) Education and eliminating rural poverty: an empirical study based on the survey data of Shanghai farmers. Chinese Rural Economy 2007(10): 61-68
- [17] Wang JY (2015) Education level, going out and family economic development of family members in rural poverty-stricken areas—Based on the investigation of Yanshan-Taihang Mountain and Heilonggang Valley in Hebei Province. Population Journal 2015(5): 42-51
- [18] Song YL, Zhang MX, Fan H (2017) The effect of education hierarchy in contiguous poverty-stricken minority areas on farmers' income growth-based on a case study of three southern Xinjiang. Population & Economics 2017(2): 90-96
- [19] Wan GH (2004) Accounting for income inequality in rural China: a regression based approach. Econometrica 32(2): 348-363
- [20] Li XJ (2015) Can education promote poverty alleviation?-An empirical study based on CFPS farmer data. Peking University Education Review (10): 110-122