

# Research on the Implementation Effect and Influencing Factors of Financial Poverty Alleviation Policy--Based on 877 Research Data of Farmers In Wenzhou City

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## Abstract

The formal financial supply in rural China has been seriously insufficient, which has promoted the innovation of rural spontaneous finance. In order to explore the implementation effect of financial poverty alleviation policy and its influencing factors, this paper selected 877 households in Wenzhou city as the sample, and surveyed on the credit behavior of farmers. The study found that family characteristics, family assets and policy publicity are the main influencing factors affecting financial poverty alleviation policies. The empirical results show that, among family characteristics, type of work, total income, and being low-income farmer have a significant impact on different financial poverty alleviation policies; in terms of assets, land area, existing housing situation, and the village collective asset right certificate has a significant impact on the choice of poverty alleviation loans; the publicity of policy publicity and the simultaneous selection of multiple financial poverty alleviation policies have been significant correlation.

## Keywords

Financial policy; poverty alleviation; multinomial logit model.

## 1. Introduction

In the past 30 years of reform and opening up, although China's national economic development has made great progress, the rural economy is still severely constrained by the shortage of funds. Many farmers, especially poor farmers, are facing serious credit rationing. The traditional formal financial supply cannot solve the problem of financing difficulties for poor farmers.

In this context, China government has introduced a series of policies to promote rural financial reform, and has continuously explored innovative models of rural finance. After 2000, in order to explore new mechanisms and new models for the management of the use of financial poverty alleviation funds, the Central Document No. 1 proposed a poverty alleviation microfinance policy tailored for rural poor households to obtain development funds. In 2006, the model of microfinance in Bangladesh was used to provide small loans free of property mortgages to farmers through mutual fund-sharing cooperation. With the help of these policies, the financing activities of farmers and economic organizations in rural areas have been gradually regulated. Among them, rural mutual funds assistance and poverty alleviation and small interest subsidy credit have become a new model of rural financing.

However, what are the effects of the financial poverty alleviation policy, and what factors affect the farmers' choice of poverty alleviation credit? Can the financial poverty alleviation policy fundamentally solve the above problems? Based on this, this paper will use the farmers in Pingyang County of Wenzhou as the research object, and conduct an empirical study on the basic economic characteristics, credit behavior, farmers' participation and cognition of

financial poverty alleviation policies and the factors affecting credit preference. According to the research conclusions, this paper proposes relevant policy recommendations.

## 2. Literature Review

Financial poverty alleviation refers to the use of financial products to support and help poor people. Generally speaking, credit is mainly provided to the poor people, and other parties gain income by participating in financing, investment, funds, and equity participation, helping the poor to get rid of poverty as soon as possible. Financial poverty alleviation is one of the important components of poverty alleviation and development in China. There are two main forms of distribution: one is the distribution of small-scale poverty alleviation loans to households; the other is poverty alleviation secured loans issued to leading enterprises and infrastructure construction.

With regard to financial poverty alleviation policies, the main research of scholars at home and abroad mainly focused on the formal financial market, but the rural credit market in developing countries has a typical dual structure, lacking collateral, underdeveloped supplemental mechanisms and co-mutation risks (Besley, 1995). Qin et al. (2011) believe that informal finance has become the main channel for rural household financing. Cheng and Liu (2010) believe that micro-finance can effectively alleviate the problem of quantity distribution and transaction cost allocation of formal finance faced by farmers. Li and He (2011) used the fuzzy comprehensive evaluation method to measure the welfare status of 756 customer families in micro-finance institutions. The results show that with the increase in the number of micro-finance loans, the welfare of farmers' families has improved significantly.

However, Wang (2012) believes that despite the continuous expansion of rural financial institutions' coverage and the increasing amount of credit, the service sector is single; the credit structure is continuously optimized, and the financial innovation capability is enhanced, but rural financial exclusion is serious. As a result, the effect of poverty alleviation is not obvious, and it has not brought about a significant increase in the income of residents, nor has it narrowed the income gap between regions, between urban and rural areas, and between industries. Tan and Guo(2017) believes that the rural inclusive financial poverty alleviation resources supply is insufficient, the financial institutions are single, the demand for financial services in rural areas is not high, the awareness is not strong, and the risk awareness and risk acceptance level are lacking. Shu (2018) believes that the effect of financial poverty alleviation has the opposite effect: lack of rural credit mechanism, high non-performing loan ratio, financial lending makes most farmers indirectly poor, some farmers directly lead to poverty, many farmers even fall into permanent poverty.

Based on the above analysis, the financial poverty alleviation policy has greatly increased the welfare of farmers' families. The rural households are closely connected. The financial poverty alleviation policies can provide convenient and fast financial services for members. However, some documents have found that the effect of financial poverty alleviation is counterproductive. Most of the existing literature examine the financial needs characteristics and credit preferences of the overall farmers. There are few literatures on how to implement the financial poverty alleviation policies and the specific influencing factors. This paper intends to study the implementation effect and influencing factors of financial poverty alleviation policies from the aspects of family characteristics, family assets and publicity policies of the affected households.

## 3. Data Sources and Analysis

This paper survey the households in Pingyang County, Wenzhou City, Zhejiang Province, which is the financial reform experimental area. In March and July 2018, a questionnaire survey was conducted among 43 villages in 9 towns including Kunyang, Meixi and Shanmen, which are

subordinate to Pingyang County. A total of 910 valid samples were obtained, and 877 samples were actually used. The survey included basic information on farmers' families, participation and satisfaction of financial poverty alleviation policies, the basic household conditions of farmers are as following. The poverty-stricken households with an annual per capita income of less than 4,600 yuan account for 18%, and the low-income households with an annual per capita income of less than 5,500 yuan account for 17%; the proportion of household income depends on the management of agriculture; The total family size of 3-7 people is close to 50%, while the labor force ranks 75% in 2 or less, and 94 of them have a family labor force of 0, accounting for 10.7%. Contracted land and homesteads have been confirmed to have a license of about 70%, but the village collective assets are quantified to less than 50% of the people's equity certificates; the contracted land transfer accounts for 18%, and the village collective assets circulation accounted for 19%, and the homestead circulation accounted for only 16%. The situation of participation in financial poverty alleviation policy shows that the proportion of respondents who have participated in the land contractual management right loan is only 24%; that of the homestead base loan is about 23%; and that of the shareholdings of collective assets are 28%; that of Poverty alleviation funds mutual aid loan (mural loan) is about 16% and poverty alleviation subsidized microloan (microloan) reached a maximum of 31%. In general, the proportion of borrowing funds from unsecured loan(mutual loan and microloan) is almost proportion of secured loans (land contractual management mortgage, homestead mortgage and collective asset equity mortgage), indicating that financial poverty alleviation policy play a certain role in rural economy.

As for satisfaction with government policies. Among the respondents, 87% believe that the government attaches importance to poverty alleviation in rural areas, 82% believe that poverty alleviation policies are of great help to poor farmers, satisfaction with poverty alleviation policies is 85%, and 94% of people are out of poverty. Getting rich is very confident; 65% of farmers know the slogan of eliminating "4600", and nearly 70% of farmers are more concerned about the publicity of financial poverty alleviation policies. The above data shows that the government alone attaches importance to poverty alleviation, and the financial poverty alleviation policy has a certain effect, which has enhanced farmers' confidence in poverty alleviation.

## 4. Empirical Research

### 4.1. Model

Through the analysis of the above questionnaire data, a preliminary understanding of Pingyang County's financial poverty alleviation policy has been made. In order to further examine the internal mechanism and implementation effect of the participation in financial poverty alleviation policies, this paper constructs a number of logit models to estimate the impact of farmers' family characteristics, assets and financial poverty alleviation policies on the choice of financial poverty alleviation policies.

The hypothesis of obtaining multiple logit models in combination with the survey is as follows. Farmers make choices for multiple financial poverty alleviation policy loans. One of them is used as a reference group, and the probability of farmers i choosing financial poverty alleviation policy loans j is:

$$P(y_i = j | x) = \exp(x'_i \beta_j) / \sum_{k=1}^J \exp(x'_i \beta_k) \quad (1)$$

Where  $j = 0, 1, 2, 3$ , according to different poverty alleviation policy choices, virtual values are assigned to their options. For example, choosing unsecured loans,  $j=1$ ; choose secured loans

(land contractual management mortgage, homestead mortgage and collective asset equity mortgage),  $j=2$ ; selecting unsecured and secured loans,  $j=3$ , and the others (no loan),  $j=0$ .  $x_i$  Is the exogenous factor that affects the type of loan selected by the farmers?  $\beta_j$  Is the parameter to be estimated?  $\exp(\beta_j)$  Is the relative risk ratio (Relative Risk Ratio). The multiple logit model is subject to the Independence of Irrelevant Alternative (IIA), which means that any choice is independent and has nothing to do with others.

## 4.2. Variables

The tendency of farmers to choose financial policies has been influenced by multiple factors. Referring to the previous literature and surveys, this paper selects the factors that may affect the policy preferences of farmers from three aspects: Family characteristics, farmers' assets and the publicity of financial poverty alleviation policies. The family characteristics mainly refer to the number of family members, the number of students in school, the total annual income, job type, and the poverty alleviation standards refer to low-income farmers whose per capita annual income is less than 5,500; The asset situation mainly includes the contracted land area, the existing housing situation and whether the village collective assets are quantified to the people and the equity certificate is issued. The policy publicity will be measured by whether the poverty alleviation information will be publicized. The specific definition of each variable and the expected impact direction are shown in Table1:

**Table 1.** Summary of Variables

Variables	Definition	Mean	S.D.	Expected direction
Member	Number of family members (person)	3.739	1.693	+
Income	Ln(Income of 2017)	10.978	0.990	-
Job	Type of job(1= only agriculture;2=mainly agriculture;3=mainly non-agriculture;4=only non-agricultural)	2.983	1.083	-
Lowic	Whether to be the low-income farmer ,whose per capita annual income is less than 5,500 (1=Yes 2=No)	1.819	0.386	+
Land	The contracted area of farmers in 2017 (mu)	2.485	3.379	+
House	Existing housing situation (1 = hardcover building;2=general decoration building;3 = bungalow;4=dangerous old house)	2.587	0.878	-
Casset	Whether the village collective assets are quantified to people and issue the equity certificates (1=Yes 2=No)	1.509	0.500	+/-
Publicity	How often poverty alleviation policy will be publicized (1 = often 2 = occasionally 3 = never 4 = not known)	1.604	1.028	+

## 4.3. Empirical Analysis

1) Research on the influencing factors of secured and unsecured financial poverty alleviation policy: The Hausman test results, which assumed by the IIA, accept the null hypothesis, indicating that the probability of a comparative advantage in making a credit choice  $j$  for a farmer  $i$  will not change due to the absence of any scheme. The result of multiple logit empirical analysis in Tables 2.

According to Table 3, the family characteristics, such as job, income, and lowic have significant influence on different credit choices. First, farmers who are engaged in non-agricultural jobs may not need credit assistance from financial poverty alleviation policy loans. It can be seen from the rural economic situation in recent years that the proportion of rural migrant workers is rising, relying more on wage or business, and rising non-agricultural income will reduce the demand for loans (Huang et al., 2009). Due to the cyclical and seasonal characters of agriculture,

only agriculture and mainly agricultural farmers have made their participation in financial poverty alleviation credit policies significantly stronger than those engaged in non-agricultural farmers. Second, income has a negative impact on the simultaneous selection of two policy loans. As incomes increase, the propensity to choose financial poverty alleviation policies declines, while low-income households maintain a high level of enthusiasm for secured and unsecured financial poverty alleviation policies.(Zhao et al., 2013).Third, farmers above the poverty alleviation standards have a significant positive correlation with the choice of both credit policies, indicating that the implementation of poverty alleviation policies has not effectively helped poor farmers to ease credit constraints and achieve productive income. According to the relative risk ratio (RRR), lowic is more likely to affect the 'both' options, which is 4.49 times that of the loan group that did not participate in the financial poverty alleviation policy.

**Table 2.** Results of multiple logit model (1)

Variables	(1) Unsecured		(2) Secured		(3) Both	
	Coeff.	RRR	Coeff.	RRR	Coeff.	RRR
Member	-0.058	0.944	-0.0145	0.986	-0.004	0.996
	(-0.576)		(-0.234)		(-0.032)	
Job#						
Mainly agriculture	-0.786*	0.456	0.534	1.706	-0.047	0.954
	(-1.683)		(1.568)		(-0.069)	
Mainly non-agriculture	-0.708*	0.493	0.298	1.348	-0.969	0.379
	(-1.749)		(0.907)		(-1.373)	
Only non-agricultural	-0.848**	0.428	0.130	1.138	-0.169	0.845
	(-2.335)		(0.416)		(-0.300)	
Lowic	-0.304	0.738	0.149	1.161	1.501*	4.486
	(-0.846)		(0.580)		(1.929)	
Income	0.212	1.236	-0.0911	0.913	-0.476**	0.621
	(1.260)		(-0.798)		(-2.023)	
Land	-0.0631	0.939	0.0556**	1.057	0.0342	1.035
	(-0.857)		(2.272)		(0.532)	
Casset	-0.412	0.662	-0.308*	0.735	-1.367***	0.255
	(-1.44)		(-1.672)		(-3.085)	
House	0.155	1.167	0.180*	1.197	-0.157	0.855
	(0.957)		(1.668)		(-0.602)	
Publicity	-0.096	1.101	-0.040	0.96	-0.274*	1.315
	(-0.726)		(-0.429)		(-1.676)	
Constant	-3.040	0.048	-0.913	0.401	1.326	3.767
	(-1.566)		(-0.693)		(0.451)	

Note: (1) # indicates that the only agriculture is the reference option; (2) the model test result: Pseudo R2 = 0.0340, LR = -690.302, Log likelihood = 48.66; (3) Select "not selected financial poverty alleviation policy credit" Samples were used as reference groups, and other schemes were compared based on reference groups; (4) \*,\*\*,and\*\*\* represent 1%, 5%, and 10% significance levels, and the values in parentheses are z values.

In terms of assets, land is significantly positively correlated with the secured credit, indicating that big households with large land and assets may not be satisfied with their own capital, but also need mortgage financing and easier access to policy credit. House also has a significant effect on the choice of secured loans. The housing situation of farmers is positively correlated with the economic level. The worse the housing situation of farmers will increase the possibility

of choosing poverty alleviation loans. Casset are negatively correlated with the secured credit, indicating that the quantitative warrants of collective assets can help farmers get loans. Publicity is positively correlated with selected both loans. The more frequent the publicity of government publicity, indicating that the village committee pays more attention to poverty alleviation, and farmers are more likely to understand the financial poverty alleviation policy. As for RRR, Publicity has a 1.32 times higher impact on farmers' choice of both loans than the reference group who do not choose the financial poverty alleviation policy.

2) Research on the influencing factors of unsecured financial poverty alleviation policy: Poverty alleviation funds mutual aid loan (Mural loan) and poverty alleviation subsidized microloan (Microloan) are unsecured financial poverty alleviation policies loans that do not require secured mortgages. Both are small-scale loans that are not relief-oriented for poverty alleviation, with the sources of government funds for financial poverty alleviation. Therefore, this paper also use multiple logit model to study the impact of factors on the choice of mural loan and microloan. The Hausman test is carried out according to the assumption of IIA and result accepts the null hypothesis

**Table 3.** Results of multiple logit model (2)

Variables	(1) Mutual loan		(2) Microloan		(3) Both	
	Coeff.	RRR	Coeff.	RRR	Coeff.	RRR
Member	0.011 (0.123)	1.011	0.0708 (1.035)	1.073	-0.092 (-0.354)	0.912
Income	0.324* (1.915)	1.383	-0.035 (-0.270)	0.966	-0.867* (-1.842)	0.420
Job	0.022 (0.172)	1.022	-0.107 (-1.106)	0.898	0.132 (0.357)	1.141
Lowic	0.068 (0.167)	1.07	0.162 (0.539)	1.175	0.841 (0.709)	2.318
Land	0.0587* (1.925)	1.060	0.0472* (1.671)	1.048	0.0918* (1.708)	1.096*
House	-0.0557 (-0.328)	0.946	0.225* (1.842)	1.252	-0.650 (-1.122)	0.522
Publicity	-0.776*** (-2.945)	0.460	-0.178* (-1.893)	1.195	-1.157 (-1.323)	0.315
Cons	-5.211*** (-2.597)	0.00546	-2.757* (-1.886)	0.0635	5.950 (1.071)	383.6

Note: (1)Pseudo R2 = 0.058, LR = -566.382, Log likelihood = 69.905;(2)Select the sample of "not selected financial poverty alleviation non-mortgage policy loan" as the reference group, and other schemes based on the reference group Comparison;(3)\*, \*\*, \*\*\*represent the 1%, 5%, and 10% significance levels, and the values in parentheses are z values.

In Table 4, income has a significant positive impact on the choice of mutual loan, indicating that farmers with high incomes have greater demand for borrowing funds and tend to choose mutual loans. Income was significantly negatively correlated with 'both' option, indicating that low-income farmers have significant loan willingness to both types of unsecured loans. Unsecured loans are more inclined to poverty alleviation and focus on low-income farmers. As for RRR, the income impacts on mutual loans is 1.383 times of the reference group, and impact on the both selected loans programs is smaller, only 0.42 times that of the reference group.

Land area has a significant positive impact on the three loan options. It can be seen that farmers with large land require more loans. The housing situation has a significant impact on the choice

of microloan, which is the same as that in the previous results (Table 2). Compared with the farmers with good housing conditions, the farmers with poor housing conditions are more likely to borrow from the poverty alleviation loans, and they prefer microloans. According to RRR, the probability of housing for microloans is 1.25 times that of reference group.

Policy publicity is negatively related to the choice of mutual loan and microloan, indicating that the more frequently the policy publicity and microloan, the easier it is for farmers to choose mutual loan .As for RRR, the frequency of policy publicity affects farmers' choice of mutual loans and microloan by 0.46 times and 1.20 times of the reference group.

## 5. Conclusion

This paper takes the fieldwork in Pingyang County, Zhejiang province as an example. First, through data analysis, it is found that farmers with different characteristics participate in a variety of different financial poverty alleviation policies. Subsequently, multiple logit models were established to empirical study the effects and influencing factors of selection on financial poverty alleviation policies loans. It is found that the type of job and households' income have a significant relationship with unsecured loans such as mutual loans and microloans for poverty alleviation, and land, homestead and ownership of village collective assets have a significant relationship with the secured loans. To some extent, financial poverty alleviation policies can meet the financial needs of farmers.

From the financial poverty alleviation in Pingyang County, the participation rate of farmers surveyed is not high. On the one hand, secured loans are less popular because they are large sum and risky. The rural homesteads, village collective assets equity and contracted land management rights as collateral, but the lack of relevant supporting policies, there is still a higher risk of default for financial institutions. On the other hand, the lending and small-amount discount loans of the aid-the-poor fund mutual-aid association, with reference to market principles, neglected the credit needs of low-income farmers. Therefore, in order to promote the implementation of financial poverty alleviation policies at the grassroots level, develop inclusive finance and achieve targeted poverty alleviation, the following measures are needed. First of all, we should establish a rural mortgage credit risk compensation and sharing mechanism, decentralize the credit risk of rural financial institutions, ensure the confirmation and issuance of farmers' assets, and establish a perfect rural mortgage loan market. Second, we should properly manage credit organizations for poverty alleviation, effectively increase the participation rate of poor farmers, and implement targeted poverty alleviation efforts. Third, intensify publicity of financial poverty alleviation policies, improve the efficiency of examination and approval of relevant departments, and promote the healthy development of rural finance.

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