

On Farmer's Willingness to Small Forest Tenure Mortgage Loans

—A Case Study on Yibin of Sichuan

Xin Cai & Weizhong Zeng

College of Economics and Management, Sichuan Agricultural University

Yaan 625014, Sichuan

E-mail: cx0486@sina.com

The research is financed by Humanities and Social Sciences Planning Funds of Ministry of Education. No. 09YJAZH061

Abstract

Based on the survey data of 364 peasant households in Yibin, Sichuan, this paper analyzes the farmer's willingness to small forest tenure mortgage loans. The result indicates a high willingness up to 74.2%, i.e. the farmers are willing to invest forest tenure mortgage loans into forestry and agricultural production. The influential factors on farmer's willingness to small forest tenure mortgage loans include age, education, forest area, the main source of family income, perception on the policies of forest tenure mortgage loans, social services of forestry, financial institutions, etc. We propose the policy advocacy of forest tenure mortgage loans be enhanced, mortgage loans of different period be designed for different purposes, and discount policy on small mortgage loans be issued.

Keywords: Forest tenure mortgage loans, Householder, Willingness, Influential factor

To meet the financing needs of farmers, to mobilize their enthusiasm for forestry development, the CPC Central Committee and State Council issued "Proposals on promoting comprehensive reform of collective forest tenure system" in 2008, in which they propose to "improve financial discount policy on forestry loans, and develop small forestry loans". Born by forestry tenure system reform, small forest tenure mortgage loans is an important way to finance farmers, which breaks farmers' passive situation without mortgage in long period, and solves farmers' financing "bottleneck". However, current China has a flourishing development of forest tenure mortgage loans facing large forest households and enterprises, but those for millions of small forest households are lagging behind (Wen, 2009). It is difficult to meet the financing needs of farmers. Farmer's effective demand is one of the important foundations for the development of small forest tenure mortgage loans. The existing literatures on farmer's willingness to small forest tenure mortgage loans are comparatively rare. Scholars believe that farmers lending behavior is determined by personal characteristics, family characteristics, socio-economic factors and so on. Under the background of deepening the reform of forest tenure system, the questions like how to develop small forest tenure mortgage loans, how to guide farmers use forest as "green bank", and how to select forest tenure mortgage, attract more attentions and need to be solved. The key to solving these problems is to understand the farmer's attitude to forest tenure mortgage, and make clear their willingness to that. Therefore, this paper is to analyze farmer's attitude and willingness to small forest tenure mortgage loans, the use of small forest tenure mortgage loans, and the influential factors on farmer's willingness to small forest tenure mortgage loans, in order to propose practical theoretical reference and policy recommendations for relevant departments.

1. Basic situation of object area

"Yangtze River City", Yibin, as a key forestry area in southern Sichuan, is the leading and demonstration area of the reform of forest tenure system, which is responsible for building a barrier of the Yangtze River ecological protection. The research selects Cuiping, Gong County and Xingwen County in Yibin City as object areas. Cuiping and Xingwen are the experimental areas of the reform of forest tenure system in Sichuan Province. Gong County, as a big forestry county, can reflect the whole situation of the reform of forest tenure system of Yibin City. By the end of June 2009, Yibin had basically accomplished the reform of forest tenure system of certification of rights. In the coming two to three years, it will emphasize on the reform of forest tenure system on related measures such as forest tenure mortgage loans. In the same year, the Agricultural Bank of Yibin, Rural Credit Cooperatives, Post Saving Banks and other financial institutions issued forest tenure mortgage loans by more than 40 million Yuan, which effectively support the development of forestry.

1.1 Data sources and research methods

The data comes from the questionnaires on Cuiping, Gong County and Xingwen County in Yibin City of Sichuan province, collected by the graduate students of college of economics and management of Sichuan Agricultural universities. The questionnaires mainly involve basic situation of farmer and his family, farmer's willingness and the use of forest tenure mortgage loans, external environment, relevant governmental measures, and so on. During the pre-survey, we found that, although each bureau of forestry, forestry station and governmental department have promoted the policy on forest tenure mortgage loans, most farmers still do not understand it. Therefore, the survey methods (contingent valuing method, CVM) are strengthening information to objects, observing their attitude to forest tenure mortgage loans, and using questionnaires by combining stratified random sampling and ratio sampling. 2-3 towns of each area, and 2-3 villages of each town were selected. The samples are based on whether there are demonstration villages of forestry reform, and whether there are forestry cooperatives, making the samples more representative. There are 395 questionnaires in total, with 364 valid ones, excluding invalid ones, obtaining effective rate of 92%.

1.2 Sample characteristics

The survey objects are mainly householders. Male householders account for 83%, female ones are 17% among the samples. The ratio of age between 30-40, 41-50, 51-60 and over 60 are 33.3%, 29.7%, 26.6% and 10.4% respectively. The samples' education level is low, mainly in middle school, primary school, and lower education level, accounting for 90.4%. 26.1% of householders were trained in forestry technique. Farmers, agriculture and industry households, and non-agriculture households account for 20.2%, 26.2% and 53.6% respectively. This indicates that non-agricultural income has become the major source of family revenue of farmers. The average family forest land area is 16.11.

2. Status of the farmer's willingness to small forest tenure mortgage loans

2.1 High willingness to small forest tenure mortgage loans

Seen from the overall sample's demand for loans, the farmers who are willing for forest tenure mortgage loans account for 74.2%, so the overall willingness is high. However, during the practical investigation, we found there are few farmers with small mortgage loans behavior, only 5 households. The loan willingness is inconsistent with loan behavior. The high willingness can't be satisfied, which surely will reduce the initiative of farmers on forest tenure mortgage loans. The reasons should be that, one hand, the majority of farmers wishes policies being implemented in rural area, which can facilitate their enjoying benefits, so the willingness to forest tenure mortgage loans is quite high; on the other hand, farmers are restricted by natural endowments and loans of financial institutions.

The main reasons why farmers are not willing for forest tenure mortgage loans are, no capital needs currently by 24.7%, incomprehension of policy by 21.2%, high cost of mortgage (interest rate and cost of assessment) by 14%, complex procedures of mortgage loans by 11.6%, and other reasons including non-repayment capacity, small amount of loans, small area of forest, ideas (no willingness of debt or mortgage by grandparents' property), and labor shortage by 13.5%. It shows that the main reason why farmers are not willing for forest tenure mortgage loans is not complex procedures of mortgage loans, but no capital needs currently and incomprehension of policy.

2.2 Farmers are willing to invest forest tenure mortgage loans into forestry and agricultural production

Forest tenure mortgage loans means, in a specific environment, farmers, as a limited rational economic person, combining personal and family circumstances, use preference of loan and motivation, make a rational choice to maximize the effectiveness of the family. According to research data, 28.6% of farmers are willing to invest the loans into reforestation, afforestation and expansion of forest production; 28% of them would like to develop forest economy; 11.2% of them prefer agricultural production; other uses (mainly for living) account for 10.2%. It is obvious that the farmers with forest tenure mortgage loans willingness prefer to invest in forestry or agricultural production to develop forestry.

3. Specific analysis on influential factors on farmer's willingness of forest tenure mortgage loans

According to relevant literature and actual situation of farmers, farmer's willingness of forest tenure mortgage loans is subject to internal and external environment interaction, including the following four aspects.

3.1 Farmer endowment and mortgage willingness

Farmer endowment consists of householder endowment and family endowment. Householder endowment refers to age, education years. Theoretically speaking, for elder farmers, one hand, they are unable to develop the

project with economic potential, and without loan demand and repayment ability due to their age; on the other hand, they are unwilling to carry the loan burden, so their loan willingness is low. Through practical survey, we found that the householders between 30-40 years old have 77.7% of willingness of mortgage loan and the ones 41-50 have 79.8% of that. These two groups have the highest willingness rate. Moreover, the willingness rate of 51-60 and over 60-year-old farmers is lower than that of 30-50-year-old ones. As for education level, the farmers who are willing for mortgage loans have the education level of primary school or below, middle school, senior school, and college or beyond, accounting for 69.5%, 78.5%, 83.3% and 80% respectively. It indicates that the higher education level a farmer has, the more he know about the policy on farmer's willingness of forest tenure mortgage loans, and the more he is willing to try this new approach of mortgage.

Family endowment consists of forest area and the main source of family income. The proportions of willingness for mortgage loan of the farmers with 1-5 mu, 6-10 and over 10 are respectively 15.8%, 30.2% and 54%. Therefore, the more forest a farmer own, the more loans he can obtain through forest land assessment, and the stronger willingness for mortgage loan. As for the main source of family income, the willingness for mortgage loans of the households based on forestry income, the ones based on non-agricultural income, and the ones based on breeding income respectively account for 60.3%, 29.4% and 10.3%. It suggests that the households with forestry as main source of family income need to invest a lot during reforestation and young growth period, so they have higher willingness for mortgage loans. The households based on agricultural breeding income has small scale of production and investment that can be afforded by their own funds, which results in low willingness for mortgage loans. The households relying on non-agricultural income are likely to need funds in other aspects, so they are highly willing to obtain mortgage loans.

3.2 Farmer's awareness on forest tenure mortgage loans and willingness for mortgage loans

A new implementation of preferential agricultural policies needs farmers' participation and all parties' comprehensive understanding of the policies as preconditions. Farmers' awareness on forest tenure mortgage loans will greatly influence their willingness for mortgage loans. Table 1 shows the understanding extent of Yibin's farmers on relevant policies of forest tenure mortgage loans before enhancing information. From the table we can see the majority is lack of understanding of the policies of forest tenure mortgage loans. On the question of understanding ways of the relevant policies of forest tenure mortgage loans, 48.4% of farmers learn it through the promotion by village leaders and forestry station staff, 24.6% on radio and TV, 23% by communication with relatives and friends, and 4% from other ways (forest warrants). It shows the village leaders and forestry station staff failed to work in meeting the prospective effect of promoting the policies of forest tenure mortgage loans. The farmers who "don't understand", "learn some", "well understand" the policies of forest tenure mortgage loans are willing for mortgage loans by 40%, 73% and 81.4% respectively. So we can see, the more the farmers learn about the policies of forest tenure mortgage loans and the benefits given to them, the higher the willingness would be.

After interviews and introducing the procedures of forest tenure mortgage loans to farmers, that is to say, information enhanced the farmer's awareness of forest tenure mortgage loans shows as Table 2. The farmers think the procedures of forest tenure mortgage loans are too complex, and at the same time more concerned about the duration of the loan. As for the convenience of loan, the farmers with highest loan willingness are those think the procedures are convenient, up to 81.2%. The forest tenure mortgage loans have to go through application, review, forest assessment, bank registration, and other procedures for mortgage. However, the majority of farmers are in low education level, so they can't accept too complex loan process, which results in low willingness of those who think it is complex. On attention to loan period, the highest willingness goes to the farmer unconcerned with loan period, up to 76.5%, followed by those with a little attention with 75.8%. While "big attention" accounts for 70%. Currently the longest period of forest tenure mortgage loans in Sichuan is 3 years; however, the forestry growth cycle is longer, so these two terms don't match. The farmers paying attention to loan period will not choose forest tenure mortgage loans with low willingness as the short term of it.

3.3 Forestry social services and mortgage loan willingness

Forest growth cycle is long confronting various unpredictable risks. Forestry social services mainly include participating forestry cooperation and technical training. The forestry cooperatives enable production factors, technology and sales cooperate with each other, fulfill industrial development of forestry management, and reduce the risks during the development. Table 3 is the cross analysis on forestry social services and farmer's willingness to loan in the research area. Seen from the table, the farmers who participated forestry cooperatives and received professional training in forestry technology are more willing to accept mortgage loans. The Flower and Tree Cooperatives of Zhaochang of Cuiping in Yibin City provided the members with forestry technology,

meanwhile, combined forestry tenure and credit loan to create the financing mode with flowers and trees as mortgage, together with rural credit cooperatives. This innovative mode provides loan guarantee for their members, actively coordinates members on credit loans, reduce the cost of mortgage loans, assists financial sectors on repayment work, prevents credit risks, and promote the development of forestry industry.

3.4 Financial institution services and willingness of mortgage loan

Whether farmers can benefit from forest tenure mortgage loans, to great extent, depends on the availability and accessibility of financial services, and interest rate, so loan services provided by financial institutions show even more significant meaning.

3.4.1 Availability and accessibility of financial services and loan willingness

The availability of forest tenure mortgage loans means financial institutions don't limit the scope of guaranty and the interest rate is reasonable. The accessibility refers to guaranteed loans and facilitates access.

Considering loan risks, such as being unable to judge a farmer's moral due to information asymmetry, financial institutions make limitation terms on loans in rural credit business. In forest tenure mortgage loans this represents as discount risks on mortgage by financial institutions. Through practical survey, we found that financial institutions are too restrictive to guaranty, and their loan objects incline to forestry enterprises and big households, ignoring individual farmers' loan demand, which results in fewer benefits available to individual farmers and lower willingness to loan.

According to the statistic data of CBRC's "Chart of distribution of rural finance of China's banking sectors" in 2008, there are 1.54 banking institutions per 10 thousand farmers, and 2868 villages have no financial institutions at all (Shou, 2010). It is lack of network of rural financial institutions, which provide basic and simple financial services. During research survey, we found the rural financial institutions in Yibin only include a post bank and a rural credit cooperative, among which just the post bank has the new product of forest tenure mortgage loans. Many farmers think there are so few rural financial institutions providing loans, so they have no choice, even if they are willing to mortgage loan. Thus, the availability and accessibility of forest tenure mortgage loans influence and limit farmers' loan willingness.

3.4.2 Interest rate and loan willingness

As far as most of farmers are concerned, interest rate is one of the determinants of their loan behavior (Wang et al, 2003). In the survey there are 28% of them thinking the interest rate of forest tenure mortgage loans is too high to be accepted. The ones thinking it is "a little high" and "reasonable" account for 44.5% and 27.5% respectively. This indicates present interest rate of mortgage loans is high for farmers, which becomes an important constraint of forest tenure mortgage loans. On the influence of discount policy on forest tenure mortgage loans, the farmers thinking there is "no influence", "a little influence" and "strong influence" account for 25.5%, 51.9% and 22.5% respectively. It shows that the discount support of forest tenure mortgage loans can greatly reduce the cost of loans and increase their willingness of mortgage loans.

4. Conclusion and policy recommendation

Through the survey on the farmer's willingness to forest tenure mortgage loans in Yibin City, we found they have a high willingness of it. There are many influential factors on their willingness, and preferential policies on forest tenure mortgage loans and services of financial institutions are the most important factors, as well as farmers' own reasons. According to the research result, we propose the following policies on forest tenure mortgage loans, so as to deepen the reform of its measures.

4.1 Increase the propaganda of forest tenure mortgage loans, deepen understanding

Forestry sectors and financial sectors should increase the propaganda of forest tenure mortgage loans. They have to consider farmers' age, education level when implementing forestry technical training, and choose those young and well-educated ones. They also need to enlarge the ways in which farmers can learn about forest tenure mortgage loans, through media like newspaper, magazines and TV, distributing materials and opening consultation windows to answer any question on mortgage loans.

4.2 Scale of business, forestry professional cooperation organizations, and cost reduction

Forestry professional cooperation organizations can provide farmers with guarantee and organize united families loans, which reduce the guarantee cost of forest tenure mortgage loans and simplify loan procedures. Therefore, forestry professional cooperatives should be established based on local characteristics, in order to both large households and small ones.

4.3 Renew financial products and issue discount policy on small mortgage loans based on farmers' different use of loans

The financial institutions should design the mortgage loans of different period according to different uses to attract the farmers with different demands. For the living use, the period could be 1-2 years; for the plants like bamboo and eucalyptus with short growth cycle, it could be 3-5 years; for the timber with 20-year growth cycle, it could be 10 years. Simultaneously, the government should issue and implement the discount policy on small mortgage loans as soon as possible, which can greatly mobilize the enthusiasm of farmers and promote the development of small forest tenure mortgage loans.

References

He, Shasha. (2008). Farm household borrowing behavior and its influencing factors-an example of Huayanxi Village of Hunan. *China Rural Survey*, (1), pp.48-49.

Li Rui and Li Chao. (2007). An econometric analysis on farm household borrowing behavior and preferences. *Chinese Rural Economy*, (8). pp.9-10.

Luo Fang and Li Ping. (2009). Empirical research on farm household borrowing behavior and its influencing factors in Xinjiang. *Technical economy*. 28 (3), pp.89.

Shou, Chengyao and Tang, Xiaodan. (2010). The problems and proposals on rural financing from rural financial institutions perspective. *Knowledge economy*, (11), pp. 36.

Wan, Guanghua, Shi, Qinghua and Tang, Shumei. (2003). Farm household saving behavior in transition economies: empirical research in rural China. *Economic Research*, (5). pp.4.

Wen Qian. (2009). Thinking on small financing in forestry. *Modern commercial industry*, (1), pp. 215.

Xiong, Xueping, Ruan, Hongxin and Wang, Xiaoyin. (2007). An empirical study on farm household financial behavior and financing needs-based on samples of 198 households in Tianmen of Hubei. *Agricultural technology and economy*, (4). pp. 85-94.

Zhou, Xiaobin, Geng Jie and Li, Binglong. (2004). On influential factors on China's farm household demand for credit. *Chinese Rural Economy*, (8). pp26-30.

Table 1. Farmer’s awareness on the policy of forest tenure mortgage loans

Awareness	Number	Percentage (%)
Ignorant	238	65.4
learn some	111	30.5
Very much understand	15	4.1
Total	364	100

Table 2. Farmer’s awareness of the policies of forest tenure mortgage loans and the cross analysis

Degree of willingness	Assessment on loan convenience		Attention to loan period			Total
	convenient	complex	No attention	A little attention	Big attention	
Willingness (%)	81.2	63.7	76.5	75.8	70	74.2
Unwillingness (%)	18.8	36.3	23.5	24.2	30	25.8
Percentage (%)	40.1	59.9	40.9	26.1	33	100

Table 3. The cross analysis on forestry social services and farmer’s willingness to loan

Degree of willingness	A member of cooperatives		Trained on forestry technology		Total
	Yes	No	Yes	No	
Willingness (%)	82.5	72.4	82.1	71.4	74.2
Unwillingness (%)	17.5	27.6	17.9	28.6	25.8
Total	63	301	95	269	364