The Research on Microfinance Models for BOP Market in Rural Areas of China

SHAO Xi, SU Pingping, and TONG Yunhuan

Abstract: This article studies the financial innovation models for the market of low-income group (BOP, Bottom of the Pyramid) in rural areas of China and aims to find out a new financial innovation path that could reflect the viewpoint of sustainable development and also link the financial institutions’ economic goals with their social responsibilities. Microfinancial business for BOP clients can not only bring economic profit to financial institutions, but also solve the poverty problem of BOP by increasing the purchasing power, smoothing the consumption, and supporting the entrepreneurial activities of BOP to improve their real income. This article explores the innovation models and general principles of microfinancial business for BOP market in rural areas of China from the perspective of BOP theory, and compares the strengths and weaknesses of different microfinance models, and analyzes the model selection strategy for financial institutions to develop the BOP market in rural areas of China.

I Introduction

China’s economy has undergone a rapid growth over the past thirty years, which brings great changes to China. However, millions of Chinese people have not benefited so much from the rapid growth. The poverty problem is still rigorous in China. According to the World Bank, in 2005 almost one fifth of the Chinese (i.e., 2.54 billion people) were living in poverty, earning less than 1.25 dollar a day (PPP) and 90% of them were rural households. Meanwhile, the gap between the rich and the poor is widening, more specifically, China’s gini coefficient is estimated to rise from 0.33 in 1980 to 0.47 in 2007. If the wealth belongs to only a small group of people, while the majority of people living in poverty, the society is instable and the economic growth is not sustainable in the long term. Thus, the poverty problem has become the strategic challenges the government and enterprises have to face. Chinese government has launched some policies to improve the living situation of the poor, such as housing subsidized, home appliances going to the countryside, the establishment of medical insurance system. Though these policies have benefited the poor, it is impossible to solve the poverty problem radically. More approaches are needed to eliminate poverty.

Microfinance, as a tool of poverty alleviation, has been extensive applied since Muhammad Yunus provided small loans to the poor in Bangladesh in 1970s. Lack of access to credit is generally seen as one of the main reasons why many people in developing countries remain poor. Microfinance can offer these recipients the chance to become entrepreneurs and earn sufficiently high income to break themselves free from the cycle of poverty (Sengupta and Aubuchon, 2008). It is widely recognized that providing poor people with effective financial services helps them deal with vulnerability and can thereby help reduce poverty. Some scholars have carried out empirical studies to figure out the impact of microfinance in different regions. Using the data from the joint investigation by the World Bank and the Bangladesh Development Institute, Khandker (2001) has studied the impact of microfinance on poverty reduction and argued that microfinance could
increase consumption, income and net worth. Simanowitz (2002) has conducted a study of microfinance projects in India and stated that three-quarters of the poor’s economic well-being has been greatly improved greatly by microfinance projects, such as the source of income, the ownership of productive assets, housing conditions etc.

Usually, the poor have no access to loans from the banking system, because they cannot put up acceptable collateral or because the costs for banks of screening and monitoring the activities of the poor are too high to make lending to this group profitable (Hermes and Lensink, 2007). Sengupata and Aubuchon (2008) point out that in the opinion of mainstream banks, lending to poor villagers involves a significant credit risk because the poor are believed to be uncreditworthy. That is, they lack the skills or the expertise needed to put the borrowed funds to their best possible use. Consequently, mainstream banks have for the most part denied the poor access to credit. Microfinance seems to offer a viable alternative to traditional moneylending to poor people and small-scale players who have been shut out from the formal banking system.

A microfinance institution is an organization that provides microfinance services, ranging from small non-profit organization to large commercial banks. Less than 10% of microfinance institutions are financially self-sufficient (covering the cost of daily operations as well as the cost of capital at a commercial rate), while 90% are operationally self-sufficient (not covering capital costs) (Roodman and Qureshi, 2006). Most microfinance institutions are self-sufficiency and strive for efficiency and commercial success in rural China.

Therefore, we are interested in why some microfinance institutions succeed in decreasing risks, reducing and covering costs, earning returns and scaling up. We would like to uncover the major innovations in product design and management techniques that have allowed microfinance institutions to offer financial products to a clientele that had been deemed too poor, too risky, and too costly for banks to serve.

Through in-depth investigation, we explore innovation models and general principles of microfinance business for BOP market in rural areas of China from the perspective of BOP theory, and analyze the characteristics, process and mechanism of each microfinance model and compares strengths and weaknesses of these four models. And then we put forward the mode selection strategy for financial institutions to develop the BOP market in rural areas of China.

II Four microfinance models

Based on case study, we find out four main types of microfinance models for BOP market in rural China according to the current rural microfinance practices. The four types of microfinance models are the model of microcredit for rural household, the model of co-guarantee loans for rural household, the model of innovative mortgage loans and the model of third-party involvement loans. The former two types are carried out longer and discussed more in the literature; though the latter two types are widely applied in the practice, fewer literatures focus on them.

A. The model of microcredit for rural household

The model of microcredit for rural household is generally based on the credibility of rural household, and the financial institutions provide the loans to rural household in the approved amount limit and duration without mortgage or security. Generally, the procedure of providing loans in this model is: (1) to propagate microcredit in rural areas; (2) to accept the application of the rural household, and set up credit rating group; (3) to investigate the economic situation of the applier, assess the credit rating of the applier, and create the credit rating file of the applier; (4) to
determine the approved amount limit and issue the microcredit license to the rural resident.

The village leaders are important in the models of microcredit for rural household. In common, they have close relationship with the villager, and know the real situation and the economic state of the villagers. As the members of the credit rating group, the village leaders help the financial institutions to investigate the number of members of the family, the labor number, the health status, the main source of income, total income, net income, whether have their own house, any other bulk property and their conduct in ordinary time. It increases the correct rate of the assessment of the credit rating of the rural household to a great extent, and decreases the lending risk of the financial institutions.

Financial institutions prefer this model to others because it is easy for financial institutions to operate and the term of the loans, principal and interest repayment is flexible so that it suits to the economic condition of rural households. However, without any mortgage or security, financial institutions undertake high lending risk. As a result, it is difficult for rural residents to get approved for their loans and even they get the loans, the credit amount is very low. In this model, the credit amount provided by most financial institutions is no more than RMB 5000 (about $ 730), and few financial institutions could increase the amount limit to RMB 10000 (about $ 1460). The loan amount is too low to meet the rural household’s demand for loans to planting or investment.

Figure 1  The relationship in the model of microcredit for rural household

Arrows:
①: Village leaders introduce small credit loans to farmers
②: Village leaders provide credit information of farmers to Financial Institutions
③: Financial Institutions provide small credit loans to farmers
④: Farmers repay principal and interest to Financial Institutions
B. The model of co-guarantee loans for rural household

The model of co-guarantee loans for rural household is that rural households apply for loans from the rural financial institutions through the establishment of mutual guarantee group, and access to credit under joint and several liabilities amongst team members. Generally, the procedure of providing loans in this model is: (1) to guide rural households to form the mutual guarantee group; (2) to issue the credit certification to the group and sign the contract with the group; (3) to censor the loans when one of the members apply for loans; (4) to sign a lending contract with the applier and provide the loans to him/her; (5) to modify the credit file after the borrower returns the principal and interest.

To decrease the lending risk, there are some requirements for the group: a) the group must be composed voluntarily; b) there must be at least one member in the group with a certain ability to be a head of the group, such as the capacity of organization and coordination, justice, high prestige, strong sense of responsibility; c) one family can only participate in one group and the members of one family cannot co-guarantee for each other; d) the member of the group needs to have a deposit account in financial institutions; e) there must be more than three rural households (including three) whose credit is assessed by the financial institutions.

![Diagram of the model of co-guarantee loans for rural household]

Arrows:
①: Women Leagues or Agriculture Associations introduce co-guarantee loans to farmers and get them connected
②: Women Leagues or Agriculture Associations provide credit information of Mutual Guarantee Group to Financial Institutions
③: Financial Institutions offer co-guarantee loans to farmers
④: Farmers repay principal and interest to Financial Institutions
* Dotted line means it may not happen

Figure 2  The relationship in the model of co-guarantee loans for rural household
In the model, collateral is not required as well as the first model, however, financial institutions are at lower risk than it in the first model. And at the same time, it can solve the difficult for rural low-income group to get approved for their loan to some extent. Because the model of co-guarantee loans for rural household is based on social capital, even though there is no qualified and effective collateral. The rural households are usually living in one fixed area for a long time, and they value the reputation and popularity as an important asset. According to the contact, the members of mutual guarantee group should take the responsibility for guaranteeing each other, if they are willing to join in the group voluntarily, it means that they consider others’ credit is good enough to bear the risk and potential cost. Thus, the financial institutions can select the rural household with good credit and decrease the risk of loans with less cost and effort.

Besides, the repayment of principal and interest is more flexible in this model, in particular the borrowers can return the principal in one time or in several times and repay the interest monthly, quarterly or yearly. As a result, the rural household can choose the appropriate way to repay the principal and interest according to their situation.

### C. The model of innovative mortgage loans

The model of innovative mortgage loans is that financial institutions allow the rural low-income group to provide their economic resources as qualified and effective mortgage, such as forest tenure, coastal land tenure and pigs in vivo. Forest tenure is the most common mortgage in the model of innovative mortgage loans, therefore we take the forest tenure as an example to analysis the model of innovative mortgage loans.

The procedure of providing forest tenure mortgage loans is: (1) the rural household goes to the accounting office of the village with forest tenure certificate and fills in the application documents for the forest tenure mortgage loans; (2) the accountant of the village confirms the contents correct and then signs and seals on the documents; (3) the applier goes to the local forestry station to get the assessment with identity card, forest tenure certificate, household register, marriage certificate and the application documents; (4) the applier submits the application materials to the financial institution, and the financial institution investigates the credit of the applier and sign the lending contract with the applier; (5) the staff of the financial institution and the applier go to the local forestry station to conduct the registration for mortgage; (6) the financial institution opens individual account for the applier and provides the loans to him/her.

In the model of forest tenure mortgage loans, the verification, registration, monitoring and disposal of the forest tenure are very important. If the rural household is default on loans, the financial institution would consign the local village bidding center to auction the guarantied forest tenure, and the obtained money can pay back the principal and interest. If rural households return all the principal and interest under the contract, he/she can apply for the cancellation of the forest tenure as mortgage with the testimony of the financial institution in the local forestry station.

In this model, the financial institution allows the rural households to take their property as the mortgage innovatively. In the past, the rural household rarely had any economic property which can be identified as the collateral by the financial institution. The rural household had the economic resources, such as forest tenure, coastal land tenure or pigs in vivo, however they didn’t have enough money to do business with the economic resources. The financial institution allows
the rural household to provide their economic resources as qualified and effective collateral, which solves the problem that the rural low-income group can not access to the credit, and to some extent meets the demand for credit to do business and increase their income. At the same time, the model of forest tenure mortgage loans greatly decreases the risk of the financial institution and brings new business to it.

Figure 3  The relationship in the model of forest tenure mortgage loans

D. The model of third-party involvement loans

The model of third-party involvement loans is that the third-party entity guarantees the rural household in the loans from financial institutions to rural household, which usually has benefits relationship with the rural household. The third-party company is the most common in this model, particularly the agricultural company exploiting the resources of BOP.

At present, many Chinese enterprises outsource parts of production to the farmers in order to expanse production scale with low cost. Enterprises sell qualified seeds or young animals to farmers and purchase agricultural products or output from farmers at a pre-agreed price. To ensure high quality of the products, enterprises set up strict quality assurance system by providing technical guidance and control management to farmers. It overcomes the weaknesses of traditional
scattered production of farmers, such as the risk of the price fluctuations, the risk of sudden disasters, low quality of products and lack of sales channel, so that it greatly increases farmers’ income.

However, since they hardly access to credit, farmers used to lack of financial support so that they could not engage in the outsourcing. To expand the production scale, these agriculture-related enterprises involve in the microfinancial business, helping farmers to get loans.

We take Suhai Group Co. and Yongji Rural Credit Cooperation Association Society as an example to clarify how the model of third-party involvement loans puts into practice. Suhai is the largest chicken processing enterprise in Shanxi Province which is the main chicken provider for fast-food chain, such as Kentucky Fried Chicken, McDonald’s. Since Suhai has exported products to the market in Japan, Korea, Singapore, Malaysia etc, the chicken raised by Suhai is far from meeting the needs of markets. Therefore, Suhai wants to outsource chicken rising to the farmers in order to scale up the production. However the initial investment of chicken rising for each farmer, taking small production scale as example, 2000 chicken per year, will be 40,000 Yuan, which is not affordable for farmers. Yongji Rural Credit Cooperation Association Society (Yongji) notices the problems the two sides encounter: the company is short of chicken and farmers are short of initial capital. By means of lending money to farmers and relying on company’s guarantee, Yongji, Suhai and farmers joint into a community of interest, solving the problems and bringing great interest to each side.

The process of lending the loans is: (1) with the subsidy from Suhai (the subsidy for a 180 M² coop is 450 Yuan), farmers build up coops according to the requirement of Suhai; (2) Farmers take the technical training provided by Suhai and take an exam after the training, if they pass the exam, they will get the raising certification; (3) Farmers and Suhai sign a acquisition agreement, which requires Suhai to provide the young chicken, fodder, avian medicine, technical direction and purchase the chicken from farmers at a pre-agreed price, and requires farmers to raise the chicken under the unified process, and provide a pre-agreed amount of chicken to the company at the pre-agreed time; (4) farmers should pay 6 Yuan for every young chicken, and if they cannot afford the payment, they can sign a guarantee agreement with Suhai; (5) Farmers apply for loans with the raising certification, the acquisition agreement and guarantee agreement; (6) Yongji investigates the applications of farmers and grants loans to Suhai with the 50%-70% mount of the cost of raising chicken; (7) Suhai establishes an account for every guaranteed farmer and provides the loans as the liquidity for farmers to raise chicken; (8) Suhai returns the principal and interest to Yongji together, and charges farmers for the principal and interest when farmers return back the chicken.

The model of third-party involvement loans is generally regarded as a financial innovation in rural areas, which helps the rural household without mortgage to get loans effectively. The affordability of this model is relatively good, especially if the company can purchase the agricultural production or output from rural household at a pre-agreed price, so that rural household can have certain income in future. Besides, the company can obtain the custom agricultural production at a reasonable price and financial institutions can make profits with low risk. Therefore, all the stakeholders will benefit in this model—— Rural household can improve their living condition and eliminate poverty; Financial institutions and companies can link their economic goals with their social responsibilities.
Based on the practice of these four models, we figure out that the financial institution should obey some rules in order to make the microfinancial business success in the market in rural China.

**A. Ensuring the affordability of microfinance service.** The financial institution should make sure that rural households can afford the microfinance products. CGAP (2004) has pointed out that it is more important that the poor can access to credit continually, rather than they pay higher interest. If the interest rate is not affordable for the poor, the default rate will be increase and the repeat borrowing will be decrease. Most financial institutions are commercial and aim to maximize their profit in China, so that they cannot provide interest-free loans to the poor, rather they must make the profit of microfinancial business, mostly coming from interest, cover the cost. For the rural household, the interest is the largest part of the cost in the loaning. Microfinance interest rate in China, about 10%, is lower than the average level in other countries, such as the microfinance interest rate is about 20% in Grameen Bank. Finance institutions decrease the risk by financial innovation to decrease the interest rate and increase the affordability of the poor in China.

**B. Developing the applicability of microfinance service.** It is necessary for
financial institution to consider the applicability of the microfinance products when they enter into the market in the rural China. Without formal credit history, the rural households usually have little capital accumulation, and their income is relatively low, mainly coming from agricultural production. Besides, lacking of official certification, the economic resources belonging to rural households cannot be accepted as qualified collateral. Thus, financial institutions should develop new applicable microfinance products by taking into the situation of rural households, which can solve the problem that rural households usually cannot access to credit. The model of microcredit for rural household do not need any collateral or formal credit history, and the maturity is generally one year since the loans are used in agricultural production. In the model of co-guarantee loans for rural household, financial institutions accept the social capital of rural households as virtual collateral. In the model of innovative mortgage loans, financial institutions allow the rural low-income group to provide their economic resources as qualified and effective mortgage innovatively. In the model of third-party involvement loans, the third-party entity explores the economic resources of the rural household and is willing to guarantee them in the loans.

C. Making the best use of social capital. Making good use of their social capital can help financial institutions reduce the risk caused by information asymmetry and save transaction costs of microfinance business and provide more affordable and applicable microfinance products. In China, many financial institutions are close to the government for their support and cooperation. In the model of microcredit for rural household, the local government helps financial institutions to propaganda microcredit and assesses the credit rating of rural households. In the model of co-guarantee loans for rural household, the local government guide rural households to form mutual guarantee groups. In the model of innovative mortgage loans, financial institutions contact closely with the local forestry station, which is in charge for verification, registration, monitoring and disposal of the forest tenure. In the model of third-party involvement loans, financial institutions have close relationship with agricultural enterprises, which promotes the microfinance business.

IV Comparison of four microfinance models

In these four models, the model of microcredit for rural household is the most common in rural China and the easiest for rural households to afford. Since the requirement for rural households is rather low, rural households can get the loans as long as they pass the assessment of credit rating. The applicability of this model is fairly good, for example the term of the loans, principal and interest repayment is flexible, which suit to the economic situation of rural households. However, financial institutions are required to know about the situation of appliers in this model, and they usually collect the information through the village leaders who are familiar with the appliers. Since there is no mortgage or security, the lending risk is relatively high so that the credit amount is quite low.

The model of co-guarantee loans for rural household is the second common model in rural China. The affordability of this model is average, for rural households take responsibility to pay others’ loan when other member fails to return the principal and interest in their group, which to some extent increases the cost of borrowing. The applicability of this model is as good as the model of microcredit for rural household, and the term of the loans, principal and interest
restitution is also flexible. The formation of the mutual guarantee group decreases the risk of lending loans so that the credit amount is higher than the first model.

The model of innovative mortgage loans has high restrictive conditions, that rural households are needed to provide their economic resources as qualified and effective mortgage. Rural households usually can afford the cost and the amount of credit is often high. However, the applicability is relatively terrible in these four models, such as the term of the loans, principal and interest repayment is so inflexible that there is little selection for rural households. This model needs the support of local forestry station.

The affordability of the model of third-party involvement loans is quite good, especially if the company can purchase the agricultural production or output from rural household at a pre-agreed price, so that rural household can have certain income in future. The applicability of this model is rather high, because financial institutions know the use of the loans exactly and set up a customized loan program for rural households. The third-party company is important in this model, and financial institutions should have close contact with them.

### Table 1 Comparison of four microfinance models

<table>
<thead>
<tr>
<th>The type of model</th>
<th>Operational requirements</th>
<th>Amount of credit</th>
<th>Affordability</th>
<th>Applicability</th>
<th>Requirements for social capital</th>
</tr>
</thead>
<tbody>
<tr>
<td>The model of microcredit for rural household</td>
<td>Low</td>
<td>Small</td>
<td>Better</td>
<td>Better</td>
<td>More contact with village officers</td>
</tr>
<tr>
<td>The model of co-guarantee loans</td>
<td>Low</td>
<td>Larger</td>
<td>Good</td>
<td>Better</td>
<td>Less contact with Women League or Agriculture Associations</td>
</tr>
<tr>
<td>The model of innovative mortgage loans</td>
<td>High</td>
<td>Larger</td>
<td>Better</td>
<td>Good</td>
<td>More contact with Forestry Station</td>
</tr>
<tr>
<td>The model of third-party involvement loans</td>
<td>Highest</td>
<td>Larger</td>
<td>Excellent</td>
<td>Excellent</td>
<td>Closely linked with company</td>
</tr>
</tbody>
</table>

### V Model selection strategy for financial institutions

Many financial institutions have been developing the BOP market to increase their own profit, improve the living situation of the poor and carry out corporate social responsibility in rural China. The model selection strategy is necessary for financial institutions to enter into the Bop market and make the business successful. Based on the analysis of the rules to carry on microfinancial business in rural China and the comparison of four microfinance models, we put forward a model selection strategy for financial institutions.

Financial institutions are divided into two types according to whether they are familiar with
the local credit information. One type is the financial institution with local credit information that generally carries on business in rural areas for many years, familiar with the local credit environment, and has good relationship with local government. The other type is the financial institution without local credit information that just enters into the market in rural areas, with little social capital, and does not know much about the local credit environment.

The financial institution without local credit information can choose the model of co-guarantee loans to enter into the market in rural China. Because the members of mutual guarantee group should take the responsibility for guaranteeing each other, they tend to join with the rural household with good credit. As a result, financial institutions can select the rural household with good credit without the support from the local government and the credit history. The financial institution without local credit information also can carry out the model of innovative mortgage loans if possible. The model of innovative mortgage loans requires rural households to provide qualified and effective mortgage.

If the financial institution is familiar with the information of local credit, they can take all there four models. Financial institutions can assess the credit rating of rural households rely on village leaders and take the model of microcredit for rural household. The amount of credit in the model of microcredit for rural household is relatively small, while other three models could provide large amount of credit. If there are some companies having business relationship with rural households, financial institutions can take the model of third-party involvement loans. The operational requirement of this model is so high that financial institutions should choose the appropriate company and establish close relationship with it.

**Figure 5** The model selection strategy for financial institutions to develop the BOP market in rural China
VI Conclusion

In this study, we discuss financial innovation models for the market of low-income group (BOP, Bottom of the Pyramid) in rural areas of China and aim to find out a new financial innovation path that could reflect the viewpoint of sustainable development and also link the financial institutions’ economic goals with their social responsibilities.

Based on case study, this article finds out four main types of microfinance models for BOP market in rural China according to the current rural microfinance practices. The four types of microfinance models are the model of microcredit for rural residents, the model of co-guarantee loans for rural residents, the model of innovative mortgage loans and the model of third-party involvement loans.

Through in-depth investigation, this article analyses the characteristics, process and mechanism of each microfinance model. The model of microcredit for rural residents is generally based on the credibility of rural residents, and the financial institutions provide the loans to rural residents in the approved amount limit and duration without mortgage or security. Financial institutions prefer this model to others because it is easy for financial institutions to operate and the term of the loans, principal and interest repayment is flexible so that it suits to the economic condition of rural residents. However, financial institutions usually consider the poor people as bad credit people from the point that poor people can not pay the loan because they can not earn enough money in the future. As a result, it is difficult for rural residents to get approved for their loans and even they get the loans, the credit amount is very low. The model of co-guarantee loans for rural residents is that rural residents apply for loans from the rural financial institutions through the establishment of mutual guarantee group, and access to credit under joint and several liabilities amongst team members. In the model, financial institutions are at lower risk than it in first model. And at the same time, it can solve the difficult for rural low-income group to get approved for their loan to some extent. The model of innovative mortgage loans is that financial institutions allow the rural low-income group to provide their economic resources as qualified and effective mortgage, such as forest tenure, coastal land tenure and pigs in vivo. In this model, the restrictive conditions are higher because the rural residents need to have the property which can become mortgage by innovation. The model of third-party involvement loans is that the third-party entity involves in the loans from financial institutions to rural residents, which has benefits relationship with the rural residents, playing a role in security for rural residents. It is universally regarded as a financial innovation in rural areas, which helps the rural residents without mortgage to get loans effectively. The third-party company is the most common in this model, particularly the agricultural company exploiting the resources of BOP. The affordability of this model is relatively high, especially if the company can purchase the agricultural production or output from rural residents at a pre-agreed price, so that rural residents can have certain income in future. Besides, the company can obtain the custom agricultural production at a reasonable price and financial institutions can make profits with low risk. Therefore, all the stakeholders will benefit in this model—— Rural residents can improve their living condition and eliminate poverty; Financial institutions and companies can link their economic goals with their social responsibilities.

This article presents three principles of microfinance innovation for BOP market in rural
China: (1) Ensuring the affordability of microfinance service. (2) Developing the applicability of microfinance service. (3) Making the best use of the social capital of the financial institutions.

Furthermore, in the comparison of the strengths and weaknesses of these four modes in the environment of financial innovation in rural China, this article explores the microfinance mode strategy for the financial institutions to enter the microfinance market for rural low-income group in China.

Reference


