

MICRO FINANCING SCHEME BASED ON OPTIMIZATION OF NETWORK (MFS-ON): A PROPOSED IMPROVEMENT ON CURRENT PRACTICES

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Abstract

One important method in reducing poverty was through finance. The poor were lack of qualification and capacity to borrow from formal financial sector. Therefore they should resort their financing needs to informal sources albeit very high cost implication. This dependency in turn would disrupt their productive capacities since the interest was very high. We focus on special segment of the productive poor. We reviewed various financing scheme that widely practiced both domestically and globally. We perceived that existing schemes were inadequate from several perspectives: (1) partial nature, (2) substandard business practices, (3) lack of cooperation and (4) limited coverage. We proposed an alternative financing scheme. The spirit of the approach emphasized the critical role of self-sufficiency of Microfinance Institution (MFI). Through self sufficiency, MFI could develop a healthy business with reasonable rate of return. In addition to self sufficiency, first, the proposal also included financing from private sector through mobilization of Corporate Social Responsibility (CSR) funds. The funding sources became broad and economics scale could be achieved. Second, the proposal improved risk sharing mechanism by introducing the regional government banks as well as insurers. Third, the proposal made the distribution channel optimum by involvement of society elements.

Key words: *micro finance, poverty elimination, network optimization, productive poor*

One purpose of economic development (growth) is reducing poverty. Indeed there has been a consensus that growth would lose its meaning if it fails to improve the standard of living of majority of the society (Ray, 1997 and Bardhan & Udry, 2000). In this regard there have been a tremendous effort (both practical and scientific) to search the most effective way to improve the living quality for those in the bottom of society.

Economic literature has long recognized the role of financial vulnerability of the poor as the

major force of inavoidance of poverty vicious circle. Most of the poor do not have adequate income and collateral to access to formal financial sector. Therefore they often turn to informal sector (like relatives, friend and money lender) to meet the financial needs. Informal sectors like money lenders (loan shark) often charge inexorbitant rate for the service. It is not surprising that the poor find themselves in difficult position to pay the debt. They offer any assets left or taking loan from another informal sector player (ponzi game), thus sustaining the poverty circle (Barman, *et al.* 2009).

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To break the spell, various micro financing schemes has been experimented in various countries. The schemes ranging from outright grant to the poor (cash transfers), cooperatives, village financing unit run by the state (or regional government) and society empowerment programme run by non governmental organization (NGO). Thus far there does not seem to be a convergent result. An experiment succeeded in a region, might yield a poor result when applied in another.

One of major break through in micro finance occurred in 1976 by the commencement of Grameen Bank. Yunus, a Bangladesh nationals and an American trained economist, troubled by chronic poverty in his environment conducted an experiment. In his experiment, he lent money to a group of five women to finance a small handy craft business. Unlike standard terms, the loan is given to all the group member in a condition should one fail to pay its debt all the member would suffer the consequences (that is have to return the money immediately and be denied from future loan). He required no collateral for the loan. His experiment succeeded and evolved to a business that attract the attention of the government. The government agree to finance his experiment therefore established the Grameen Bank. The Bank enjoys a fine return: 25%+Return On Equity and 98% repayment rate (Morduch, 1999).

Table 1. Evolution of MFIs

End of Year	Total Numbers of Institutions	Total Number of Clients Reached (millions)	Number of "Poorest" Clients Reported (millions)
1997	655	16.5	9.0
1998	705	18.7	10.7
1999	964	21.8	13.0
2000	1,477	38.2	21.6
2001	2,033	57.3	29.5
2002	2,334	67.8	41.6
2003	2,577	81.3	55.0
2004	2,814	99.7	72.7
2005	3,056	135.2	96.2
2006	3,244	138.7	96.2
2007	3,352	154.8	106.6

Source: Dale & Harris (2009)

Micro finance institutions (MFIs) has grown significantly especially since the new millenium. From 1997, number of MFIs have increased from 655 to 3352 with clients expanded from 16.5 millions to 154.8 millions. Still this number is far from satisfactory since it is predicted that 30% of global population (around 2.5 billions) lives below poverty. Therefore the coverage of MFIs financial service is far from adequate. Nevertheless 16% annual growth is very encouraging.

Table 2. Distribution of Microfinance Institutions

	% of institutions	% of assets	% of borrowers	% of female borrowers	% subsidized funds
Bank	10	55	25	6	18
Nongovernmental Organization (NGO)	45	21	51	73	61
Nonbank Financial Institution (NBFi)	30	19	17	16	18
Credit Union	10	4	6	4	3
Rural Bank	5	1	1	1	0
	100	100	100	100	100
Numbers Total	346 Institutions	\$28.3 billion	18 million	12 million	\$2.6 billion

Source: Microfinance Information Exchange (MIX) from sample survey 2002-2004

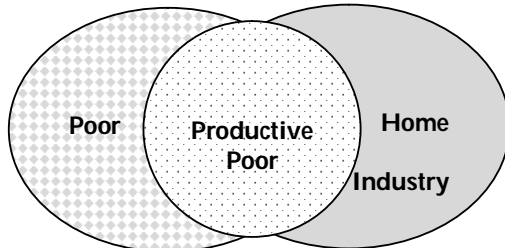
To our knowledge a reliable global database on microfinance figures is not available yet. Data on MFIs mostly is gathered on separate basis or through survey. There are few institutions that collecting data and doing microfinance analysis, one of the most notable is Microfinance Information Exchange (MIX). One of recent survey conducted by MIX provide an interesting picture on the state of MFIs (see Table 1). NGO and Non Bank Financial Institution (NBFi) are major players in microfinance business (with shares around 75%). However in terms of business acquisition, they are still significantly below banks (whose share is around 55%).

One feature of microfinance that makes it special is the nature of object: the productive poor. We could view the productive poor as an intersection of two different populations: the poor and home industry. The poor contains elements such as handicapped persons, malnourished and extreme poor

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(expenditure less than USD 2 per day). This group is extremely vulnerable and difficult to empower thus subject to state care through social safety net.



On the other hand, there is a group who is also poor but with a markedly significant economic capacity. Elements in this group are willing and able to improve their economic and social status. A part of this group might be well endowed that enable it to access market/commercial source of financing by its own. We call this segment as home industry. There is also a part that is unable to obtain commercial source due to lack of skill and insufficient collateral. This part is the main target of our proposed financing scheme.

Despite its young age, there is considerable huge amount of literature in micro finance. The thinking evolution covers paradigm, belief, theories and practices. Nevertheless, the school of thought is still far from maturity. Our investigation to existing literature offers some opportunities for scientific efforts. (1) There is conflicting paradigm on the role of MFI. One strand argue for emphasizing on business motive and another focus on social business. We take a stand and argue for the superiority of business motive. (2) Most schemes are based on either state funding or private funding. We argue a better funding base would be obtained if we could combine both source. Here we outline how that could possibly done. With larger funding base, better performance in terms of sustainability and outreach could be reached. (3) The conventional practices based on a standard risk pricing hence imply a still consider-

ably high rate to micro customers. Better scheme could be proposed to improve the risk sharing mechanism that will result in cheaper credit.

The standard channel could be expanded to include various parties like village elders, suppliers, shops, etc. Developing the product channel would increase efficiency and coverage of microfinance.

In this study we depart on an intensive literature study on the field of microfinance. Specifically we focus our attention on the issue of self sufficiency (sustainability) and review of existing practices. We take a stand on one of the two competing paradigm in micro finance, namely sustainability. We strongly agree on the idea that in order to achieve its objective effectively, MFIs should adhere to the conventional business practices principles: maximizing profit subject to resources constraint. That is in Prahalad (2010) famous jargon: doing well by doing good.

We also review various existing practices, not only in Indonesia but also global. We take a note to each strengths and weaknesses. The institutional, sociological and cultural feature have also been our interest. The findings then are related to Indonesian set up. Our objectives is to propose a business model of micro finance that would work best in local environment.

To this end, the exposition is divided to five sections. The first section summarizes the evolution of thinking in micro finance. This part would open the way to the discussion of various existing micro finance products and practices. The third section will give a picture on current state of micro finance in Indonesia that would give suggestion on how a best scheme could be structured. In the next section we will combine the various findings obtained from the literature study and propose (hopefully) optimal and workable scheme (called MFS-ON). The exposition is concluded in section five.

Perspectives in Micro Finance

Micro finance evolves as a unique discipline following a break through on intermediation practice introduced by Yunus: The Grameen Bank. Though economists have long recognized the pivotal role of empowerment financial aspects of the poor, no systematic and coherent framework has been applied to address this issue.

Basically micro finance talk about delivering financial services to lower end segment of society with the aim to reduce poverty and increase living standard (Ledgerwood, 1999; Robinson, 2000; Aghion & Morduch, 2010). Yunus experiment has opened substantial interest to new way of making loan: group lending. This successful innovation subsequently open various endeavour to lending practice such as involving elders, application of social sanction and family lending (Khavul, 2010).

From academics perspectives micro finance has evolved mainly around two interests: the existence and debate of sustainability vs outreach (Hermes & Lensink, 2007). On the question of existence, academics try to answer how and why microfinance exist. This strand is mainly theoretical with applies standard optimization tools in microeconomics (Basu, 1997 and Bardhan & Udry, 2000). In earlier phase, the school of thought is dominated by issue of equilibrium credit rationing of Mac Kinon & Shaw (1963) and its causes. Various theories like adverse selection (Stiglitz & Weiss, 1981), moral hazard (Bester, *et al.* 1987), costly state verification (Williamson, 1987) and segmented market (Basu, 1997) are offered to explain the phenomenon.

Later on the strand focus on more to institutional set up and environment of micro finance. Stiglitz (1991) propose the first theoretical exposition on group lending, a practice popularized by Yunus. He shows that group lending practice (known also joint liability) could circumvent adverse selection and moral hazard, two major hazards in standard individual lending. His theoretical work sparks more interest and subsequently followed by major

works, most notable are the role of social capital (Besley, *et al.*, 1995), peer monitoring (Banarjee, *et al.*, 1994) and family ties (Sharma, *et al.*, 1997).

Second issue that draw much interest on microfinance is the debate of sustainability vs outreach (Robinson, 2001). Microfinance aims to reduce poverty by providing capital (loanable fund) at sufficient quantity and attainable cost. Nevertheless it is admitted that microfinancing is expensive due to transaction and information cost (Hermes, *et al.*, 2007). Therefore the field again face with standard economic problem, maximizing the amount of poverty reduction subject to available funds. The proponents of sustainability and outreach are disagree with how to cope with this resource constraint.

The sustainability school of thought (also know as financial system approach, Hulme, *et al.*, 1996) argue that in order to meet the objective, MFI should rely on self sufficiency. The term self sufficiency means that MFIs could obtain adequate return to cover all cost: operational, investment and return to shareholders (Aghion & Morduch, 2010). In this regard, the ultimate objective of Microfinance: poverty reduction could be reached in sustained basis.

One critical argument underlying the financial system paradigm is the scale of poverty (Cull, *et al.*, 2009). Poverty is of a massive scale in most of the countries that no state run (public) program could be credibly run in an efficient and accountable manner. Here, a self help program is much better through providing capital and other financial access (Beck, *et al.*, 2007). However the study by Hulme, *et al.* (1996), Khandker (2005), Cull, *et al.* (2009) and Parameshwar, *et al.* (2010) find the evidence that more subsidy reliant entities (such as NGOs) are showing inferior performance than conventional MFIs (such as rural banks). Figure 2 presents a somewhat contrasting performance between the not for profit organization and standard profit maximizing entities. We could also add corruption, bureaucracy inefficiency and abuse by community (intended non repayment) to the problem of (subsidized) micro lending (Ray, 1997).

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The sustainability approach to micro lending prove to be more appealing and business friendly. One most cited example of successful MFI is Banco Compartamos in Mexico (Rosenberg, 2007 and Malkin, 2008). The bank offers 30% of its shares worth of USD 1.6 billion to public in April 2007. The initial public offering was successful in which the shares sales was oversubscribed by 13 times.

The poverty lending approach on the other hand emphasize the importance of coverage and outreach of microfinance program (Aghion & Morduch, 2004). Proponents of this paradigm argue that the ultimate goal micro finance: alleviating poverty could only be effectively reached by providing credit with subsidized interest rate (Hermes, *et al.* 2007).

The heated debate between financial system and poverty lending center around the goal to provide cheap fund to the poor. In this regard, the proponents of poverty lending distance themselves to financial system by criticizing the latter as formalization of money lender (Yunus, 2007). Yunus himself stress the role of microfinance as a "social business" in which the rate should not be far from the cost of funding (Malkin, 2008). We are not pursuing this topic further, interest reader could refer to Fernando (2006) and Aghion & Morduch, (2010).

Micro Finance Practices and Products

Micro finance is not a new business venture. However most of the scheme is standard. The loan is given based on individual basis with own capi-

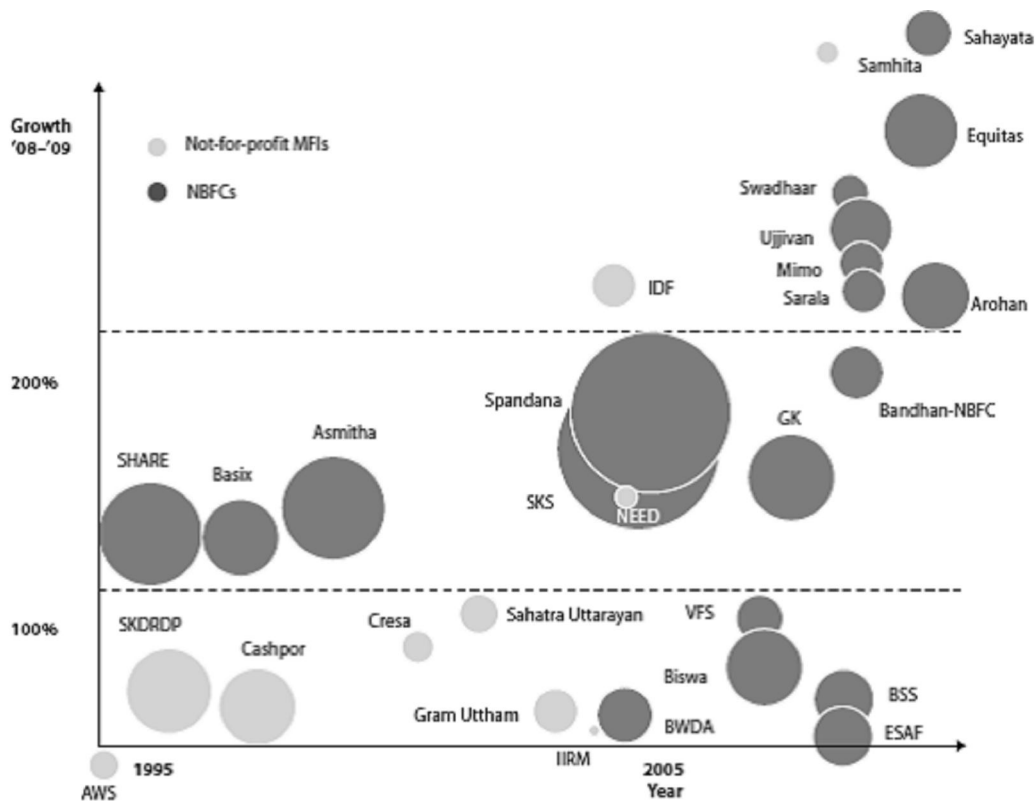


Figure 2. Performance MFI in India
Source: Parameshwar, et al. (2010)

tal. The practice resembles the conventional bank in many ways. In addition to this traditional approach, there are several other schemes. In this section we will outline some important development and focus on their characteristics.

Several types of micro financing scheme conducted in Indonesia include: (a) Partnership and Environment Development Program (Program Kemitraan dan Bina Lingkungan; PKBL). PKBL is a certain form of corporate social responsibility (CSR) program owned by the state-owned enterprises (SOEs) with the vision of pro poor, pro jobs and progrowth. The scheme is conducted based on Law No.19 year 2003 and Minister of SOE decree No. 05/MBU/2007. In this scheme, state-owned companies provide credit directly to MSMEs, or sometimes using cooperatives as channeling agents. (b) Communal Micro Loan (Kredit Usaha Rakyat; KUR). KUR is one of government programs to support the development of MSMEs in Indonesia based on Presidential Directive No. 6 dated June 8, 2007. Currently KUR is distributed via six authorized banks: Bank Negara Indonesia (BNI), Bank Rakyat Indonesia (BRI), Bank Mandiri, Bank Tabungan Negara (BTN), Bank Bukopin and Bank Syariah Mandiri (BSM). In this funding scheme, government grants funds to the designated banks, which subsequently disbursed loans to MSMEs and cooperatives in accordance with the requirements that are owned by the bank. Funds disbursed by banks to MSMEs and cooperatives are guaranteed by the two companies that have been appointed by the government, namely Perum Sarana Business Development (Perum SPU) and PT.Credit Insurance Indonesia (PT.Askrindo) with a particular scheme (Mulia, 2010). (a) Channeling funds through the Regional Development Bank (Bank Pembangunan Daerah; BPD). In this scheme, the fund is originated from Regional Governments (from approved budget allocation). The fund is placed on BPD to finance MSMEs. BPD could ask for assistance and input from MSMEs empowering team or other agencies in assessing the feasibility of MSMEs and other-

technical matters. (b) Community empowerment program. Recently several community empowerment programs emerge in various regions in Indonesia. One of the most notable is Village Credit Institution (Lembaga Kredit Pedesaan: LPD) in Bali. This is largely a self help group in which a community decide to set up a fund that could be used to finance productive activities. Usually no or minimum collateral is needed and repayment (credit quality) is enforced by elders or village influential individuals. There are two types of common scheme: individual based lending and group lending. MFIs could take various forms, both formal and informal. Formal institutions usually take a form of separate entity and exclusively incorporated and run as profit seeking unit. On the other hand, informal institutions usually operate in casual manner. The units are not exclusively set up for financing purpose. Some might provide as side service and other as complement to main activities. Table 3 provide common MFIs found in Indonesia.

Table 3. Types of MFIs in Indonesia

Formal MFIs	Informal MFIs
Branches of Commercial Bank	Families, Relatives and Friends
Community Loan Bank	Non Governmental
Cooperatives	Organization Money Lender
Pawnshop	Supplier
Venture Capital	Corporate Social Responsibility
Multi Finance Firms	Program

Source: Arsyad (2008)

In addition to state run (or supported) micro finance program like described above, there are several notable funding scheme undertaken abroad, among others: (a) Grameen Bank. Started in 1976 by Muhammad Yunus who has a goal to change the bad cycles, “small income, little savings, and investing their small”, lend funds so as to make a good cycle, “a big investment, large income, and huge savings”. Funding is done through a bank branch of the Grameen Bank in disadvantaged areas. Selection is then performed on several villages that are considered disadvantaged and selected a group of people that show its commitment to doing business. Not

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everyone in the group could acquire funding from the Grameen Bank, only the first two people who attained their first eligible, then the next person must wait until the loan from the first two men had been paid off. Pressure from peer group will make the first acquiring parties to comply with the credit requirement. In addition, Grameen Bank gives leeway to the credit receiver to start his first interest payment after 6 weeks of running. Grameen Bank is also implementing regulations for the saving of some of the benefits that can be used as an additional credit to the group. (b) Branchless Banking (Chaia, *et al.*, 2010). Branchless Banking is a new distribution model that allows financial institutions and non-financial institutions other than banks to provide financial services. Using this model will be more efficient compared to opening a branch. There are two models of the application of Branchless Banking through other institutions outside the banks, namely The Bank-Led model and the Nonbank-Led Model. The Bank-Led Model is distribution through other financial institutions. While the nonbank-Led Model is distribution through non-financial institutions as agents, such as mobile phones. Branchless Banking has been implemented in several countries, including Brazil, India, South Africa, the Philippines, and Kenya. Each country has its unique characteristics in applying this model. (c) Correspondent Banking (Chaia, *et al.* 2010). Correspondent Banking has become one of the promising strategies in financial service provision in developing countries. This model works by cooperating with some form of non-banking businesses, such as gas stations, post offices, and others, to serve the financial services. This approach is very effective in serving the community because it minimizes the operating costs. There are four principles to assist organizations in applying the strategy of good correspondence, among others: (1) move quickly to catch the earliest possible opportunity, (2) build relationships with colleagues vigorously, (3) offers a wide range of services; (4) held a service that can be implemented quickly and can be updated regularly.

MFIs have gone beyond traditional lending business. The micro financial products could be classified into 3 forms (Rhyne, *et al.*, 2006 and Steiger, *et al.*, 2007). They are: (1) Credits: various types of loans both for productive and consumption purpose including credit card. (2) Savings: mostly in form of savings deposit and time deposits. (3) Payment and Remittance: the need to transfer fund/cash to other place including cash collection. (4) Insurance: the need of protection from cyclical production process and contingent situation (disaster, calamity, disease, etc). (5) Auxiliaries: various types of complementary services like training, marketing and partnership.

Eventhough MFIs have moved to a wide spectrum of product, credits remain the backbone of the business.

METHOD

The study is largely a literature review and conceptual work. We study intensively theoretical and empirical literature on micro finance. Observation and analysis are conducted on various existing micro finance scheme to find a common link. We seek to combine aspects of the various micro financing scheme to arrive at an ideal scheme. In so doing, we also pay attention to Indonesia domestic characteristic (economic, sociological and cultural). The scheme should not only be ideal but more important should be applicable. To our knowledge, this kind of scientific endeavour is still rarely conducted (see Prahalad, 2010 for example).

By observing the various Micro Finance programs that have been implemented at home and abroad, we could deliver several critics. They are: (1) The micro finance program is still partial. The program has not involved all relevant parties. We have either the state run the program or the private but not the mixture. Though recently government has provided capital injection to private run entities (like the one experimented in Riau), we still regard the scheme as suboptimal. (2) The cooperation that ex-

ists is still not optimal. It should be realized that micro finance is a complex process. They are many parties involved in the business. Optimal performance in term of superior quantity and price could only be delivered if every party exerts significant cooperation. (3) Substandard business practices. Many parties involved still think that micro finance is kind of charity. Poor marketing and risk management practices are performed. Even worse when the fund is obtained from the government, both the lenders and borrowers consider this fund as a form of grant that does not require accountability. (4) Poor coverage. The World Bank and CGAP report (2009) shows that financial access to the lower part of society is inadequate. Based on an extensive survey in Indonesia it is estimated that only 60% of population has access to loanable funds and around 43% obtained from informal institutions. The same survey also shows that only 68% population saves, with 18% saves in informal units.

Conceptual idea is built from a heuristic and comprehensive point of view. In this regard, we identify major parties involved in micro financing scheme. We study the connections and relationships among the parties and contemplate how they could be improved. In line with the above critics, we aim to improve the microfinance scheme along the following aspects: (1) increased quantity of available funds; (2) reduced cost to customers (lower interest rate and other expenses); (3) Greater business coverage; (4) Sound business practice and corporate governance

After considerable literature study and observing microfinance practices, we try to construct an (hopefully) ideal scheme. We expect the scheme could satisfy the required improvements above and also could be implementable (with reasonable cost).

RESULT

Figure 3 below presents our proposed micro finance scheme called Microfinance Scheme Based on Optimization of Network (MFS-ON). There are 7 parties involved: government, corpo-

rations (through CSR programs), commercial banks, credit insurance, MFIs, distribution channels and productive poor.

There are 5 business phases in the scheme, namely: (1) Funding. Funding is initiated by government and corporation (through their CSR programs). The fund is combined with commercial banks deposits so as to produce larger quantities pool at a cost that is still relatively low. Contribution (the percentage amount of funds) can be determined in negotiations between all parties. By mixing the fund with bank deposits, it is expected that accountability could increase. (2) Channeling to the MFIs. MFIs have expertise and networks among the productive poor and their distribution channel, making it more effective compared with (standard) banks branches/outlet. (3) Risk sharing. Negotiation is conducted to distribute risk premiums among commercial banks, MFIs, and the government. In this regard, the residual premiums borne by the MFI will be lower, which affects the price of credit to the customer. (4) Endorsement. Governments guarantee to credit insurance is indispensable. With the guarantee, it will produce a sense of security to the lenders, commercial banks and MFIs thus lowering overall risk premium. (5) Distribution. These are marketing channels of MFIs. It can be conducted through community groups that stand out in the area (such as farmer groups), companies which are the suppliers of raw materials, the companies which are the purchaser of products, or directly to the productive poor themselves.

We will present an illustration to further clarify the scheme. Suppose that all parties involved agree to construct microfinance fund (The MFS-ON). Thirty percent of the fund comes from government with interest rate of 4%, 20% from CSR with interest rate of 0% and 50% from commercial banks deposits at an interest rate of 6%. By combining these three sources, the fund has become larger in value with still relatively low interest rate, at 4.2% (based on weighted average).

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A separate entity might not be needed to manage the fund. Government and corporation could set up a contract with the appointed commercial banks. The contract includes among other: (1) amount of the funds and share of each parties (government, corporation and commercial banks). (2) Purpose and specification of the loan (target debtors, type of loans, maturities, interest rate and

requirements). (3) Channeling MFI (list and characteristics). (4) Duration of the contract. (5) Other terms and condition (rights, obligations, penalties, conditionals and contingencies)

Credit insurance companies, commercial banks, MFIs, and the government could negotiate for the distribution of risk premiums. In this regards the eventual interest rate to debtors can be

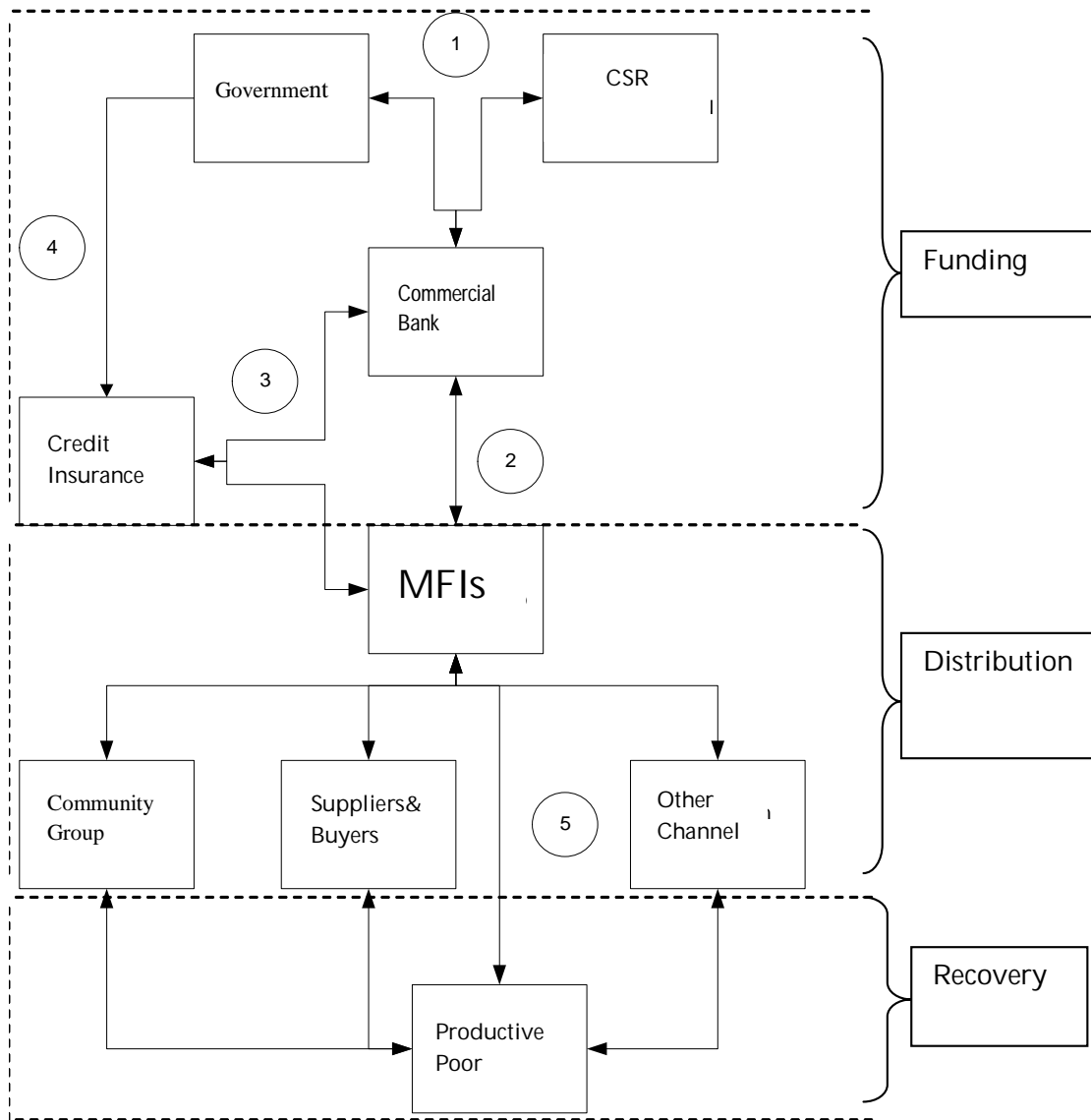


Figure 3. Microfinance Scheme Based on Optimization of Network: MFS-ON

kept lowered, because of the risk premium is not borne only by one party. In standard practice, banks charge credit risk premium amounts up to 6% depending on collateral and business prospects. In MFS-ON, other parties also bear the risk premium hence a significantly lower residual risk charge is attained.

Not all commercial banks could receive the fund, only commercial banks that have linkages to MFIs could. The MFIs should also be selected based on availability and capacity to perform extensive network and good relationship to the productive poor. The network can be constructed by the bank with a variety of existing MFIs, such as village credit institution, community loan bank, cooperatives, and others. Owned network must consider the circumstances of local communities and do not forget the regulations carefully. In addition, support from the surrounding environment is also indispensable.

DISCUSSION

We try to design alternative scheme to resolve the critics on current practices. To do this, first we have to include the business spirit. We are inspired by a prominent managerial book entitled "The Fortune at the Bottom of the Pyramid" authored by C. K. Prahalad (first published in 2004). This landmark shifting book put forward an idea of the need for a paradigm shift from a donation-based business into profit-oriented business (Making profit from eliminating poverty; doing well by doing good).

There are a large number of reasons why to rely on profit oriented principle in running micro finance scheme (Putterman, 1987; Hulme, *et al.* 1998; Fernando, 2006 and Schmidt, 2008). They are: (1) increased sustainability since profit gathering and capital preservation become the center piece of business activity. (2) Better governance due to management of principal-agent problem. (3) Vigilant adaptation to changes from environment and

market. (4) Greater expansion orientation due to "animal" business spirit. (5) High quality product due to innovation drive. (6) Cheaper price and product offering due to competition. (7) Efficiency and accountability to cope with market pressure.

Nevertheless too much emphasize on profit motive also results in several drawbacks (Fernando, 2006 and Yunus, 2007): (1) market domination due to imperfect competition which could result in higher price. (2) Social controversy: taking profit from the poor. (3) Lack drive to maximize coverage, as long as maximum profit already reached.

Prahalad (2010) argues for the need of comprehensive perspective, so one can identify the role of various parties involved, making network and optimize the linkage between them. There are a wide range of (potential) parties involved in micro financing: governments (central and regional), central bank, credit insurance, MFIs, private and state enterprises, productive poor and related business chain members and community. Each party could contribute in improving the overall performance of microfinancing. By performance we refer to quantity, price and asset quality.

Like a standard intermediation firm, micro finance operates mainly through 3 phases (Freixas, *et al.*, 2008 and Mishkin, 2008). They are: (1) Funding collection. MFIs gather the necessary loanable funds. There are 3 options of funding: internal (equity), external and mixture. (2) Managing risks. There are 2 types of the most common risk (a) liquidity risk, matching the pattern of cash inflow and outflow and (b) credit risk, screening viable debtors and maintaining repayment. (3) Product distribution. Managing the channel in which MFIs mostly distribute the product. This is a rather complicated process considering demographic profile of the customers (Bikbaeva, *et al.* 2009).

We could note three critical stages in the scheme that needs further explanation. First, mobilization of funding, the process of getting mul-

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tiple sources of cheap funds so as to produce a large funding pool. The success in creating the pool depends on cooperation and the availability of formal binding among government, commercial bank and corporation. Government plays a pivotal role in this process by arranging and enforcing regulations and other institutional set up: agreement and standard operating procedure.

Funding process could be improved by active contribution of credit insurance. Credit insurance could make an arrangement by which risk premium on loanable fund could be allocated to government, commercial bank and MFIs. The price of credit could be significantly reduced if government and commercial bank could offer substantial coverage.

Second, fund distribution: the process to channel the loan to productive poor. Demographic and socio-cultural unique profile of this segment warrants a distinctive approach (Mas, 2010). Conventional practice by opening offices is believed to have limited impact. We think that non conventional approach by using community group, close parties (like supplier or buyers) and other channel (like families and friends) could be more effective. Many empirical studies show that personal touch are better in reaching this segment of society (Hermes & Lensink, 2007).

The last critical stage is recovery, that is getting back the money that has been lent. Standard banking practice like restructuring could not be workable (Epstein, *et al.* 2010). Instead, MFIs should resort to (again) more personal approach. MFIs could optimize the prevailing social capital like cultural and religious profile, social sanctions, family ties, inheritance and group lending to enforce the credit contract (Aghion & Morduch, 2010).

According to Thompson, *et al.* (2005) Linkage-network or who is often called a strategic alliance is very important in business. To understand this, remember again the character of the loan or credit. Credit has two elements forming the price,

namely the interest and non-interest components. Interest consists of the cost of funds and the risk premium, while non-interest consists of collateral and procedures. The presence of linkage and the network is intended to ease the burden posed by these four components. Existing practices still focus on interest component, so that the problems are solved partially.

Linkage and the network will resolve the credit problems: providing sufficient funding while keeping interest rates cheap, as well as affordable collateral and friendly procedures (Barman, *et al.*, 2009). For example, a venture capital firm can provide training for community groups on business feasibility study which is a requirement in credit application. In its application cannot be forgotten other supporting factors, such as regulatory adjustment to the situation of the targeted (locality), socialization thoroughly on all parties involved, and changes in credit-oriented paradigm of social funds into a business orientation.

The application of this funding scheme will involve all stakeholders in the development of living standard of productive poor, resulting in more available funds with low interest rate while in the same time retain sound business principles. Nevertheless the implementation of this scheme is not without pitfalls. Thomson, *et al.* (2005) identify two major threats to this network optimization framework: (1) the possibility of friction and conflict and (2) free rider problem.

Possibility of friction could be seen from the scheme heavy reliance to cooperation. MFS-ON involves parties with different (and sometimes conflicting) interest. Government aims to cover as many as possible productive poor, presumably for political motive. Corporations want to maximize a kind of return to social investment. We suppose this could lead to efficacy of the program: successful fund recipients. Banks and MFIs are of course more interested in profit obtained.

Reconciling these interest is not an easy task in this regard an additional party could also be involved. This party should have minimum interest and has role as a negotiator and deal maker. In addition, this party could also take a role of supervisor. In our opinion this party suit best for academic institution.

Other problem with cooperation game like this is free rider. In this situation, contribution of each party is less than optimum. In some cases, a particular party could even refrain from contributing and instead free riding (Redondo, 2003) resulting in overall suboptimal performance. To cope with the problem we must resort the mechanism design (Colel, *et al.* 1999). The contract should obey participation and self selection constraint.

CONCLUSION

From the analysis and discussion above, we could draw several conclusions: financial vulnerability of the poor is a major force behind the poverty vicious circle. The poor often do not have adequate income and collateral to access formal financial sector. As a result they often have to resort to informal sector with much higher interest rate that subsequently deteriorate their wealth and productive capacity.

Providing sufficient and reasonable priced financial access could be seen as a way to reduce poverty. This could be done through microfinance.

Following the breakthrough by Grameen Bank in 1976, interest on microfinance rises sharply both in practical and academical perspective. Microfinance discourse mainly evolves around existence and debate of sustainability versus outreach.

There are serious weaknesses in current MSMEs financing (Micro finance program). They are: (1) partial nature; (2) lack of cooperation; (3) substandard business practices; and (4) poor coverage. We have proposed a scheme to improve

existing practices. The proposal is based on network optimization Micro Finance scheme based on Optimization of Network (MFS-ON).

Some important things to consider in the application of alternative funding schemes include: the need for extensive negotiations among all parties concerned to avoid friction and conflict and the regulations in accordance with the environment.

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