

Micro-Credit and Rural Poverty

An Analysis of Empirical Evidence

This paper reviews empirical evidence on NGO-led micro-credit programmes in several developing countries, and compares them with state-led poverty alleviation schemes in India. The study shows that micro-credit programmes have been able to bring about a marginal improvement in the beneficiaries' income. However, the beneficiaries have not gained much by way of technological improvements, given the emphasis on 'survival skill'. Also, in Bangladesh the practice of repayment of Grameen Bank loans by making fresh loans from moneylenders has resulted in the creation of 'debt cycles'.

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If we can come up with a system which allows everybody access to credit while ensuring excellent repayment – I can give you a guarantee that poverty will not last long.

Muhammad Yunus (1994)

This summit is to celebrate the success of millions of determined women who have transformed their lives from extreme poverty to dignified self-sufficiency through micro-credit programmes... This summit is about creating a process that will send poverty to the museum... We will create a poverty-free world.

Muhammad Yunus, speaking at the Micro-credit Summit, Washington, February 1997; reproduced in Yunus (1999: 245-46)

This paper is an enquiry into the claim that NGO-led micro-credit is an effective and financially viable alternative to the existing methods of addressing rural poverty through the provision of credit. The emergence of micro-credit as an alternative in recent years has questioned the fundamentals of the rural credit system in developing countries for channelling credit to the poor. Following this, transformation – even substitution – of the existing rural credit system with a micro-credit-based system is being recommended and followed. In this paper, we review the performance of the NGO-led micro-credit system on the basis of a set of selected indicators. These indicators are: targeting the poor, increase in earnings and asset holding of the poor, employment

generation and skill improvement, and financial viability.

We are aware that given the multi-dimensional nature of poverty, an attempt to understand the impact of any programme or institution on poverty would require a study of a number of indicators. However, in the literature on micro-credit, poverty mainly refers to income poverty. We have followed the same connotation in this paper and have chosen the performance indicators accordingly. We have also incorporated the indicator of financial viability. The issue of financial viability has been a matter of wide criticism in recent years in the context of state-led credit institutions. Hence we feel that it is important to analyse it in the case of NGO-led micro-credit institutions, which are being recommended as the alternative to state-led institutions in several developing countries.

For analysing these indicators, we use the available empirical evidence on a set of selected NGO-led micro-credit-based programmes and institutions being implemented across several developing countries. We place this evidence in a comparative perspective with the available evidence on some of the existing state-led and credit-based poverty alleviation programmes and institutions in India. We are aware that state-led institutions aimed at channelling credit to the poor do not function on the same lines as the micro-credit institutions. However, there are similarities in their objectives and certain operational features, such as the nature of activities supported and size of loans provided, for undertaking a meaningful comparison.

The paper is divided into four sections. In Section I, we bring out the context in which the NGO-led micro-credit alternative has emerged in the literature and in policy making. In Section II, we discuss the concept and features of micro-credit institutions, beginning with Grameen Bank. In Section III, we review the available empirical evidence on micro-credit programmes and institutions in comparison with state-led credit-based poverty alleviation programmes and institutions in India based on the selected indicators. We also discuss the issues involved in the expansion and replication of Grameen-type programmes and institutions across various countries. Finally, in Section IV, we provide a summary of the findings from the review.

I Introduction

Credit is important in the lives of the rural poor in a developing economy. As the distribution of land in the countryside remains skewed, the majority of the rural population is left with an inadequate resource base for production. Faced with a weak social security system to fall back upon, this section of landless or near-landless rural population is forced to depend upon credit for its livelihood. It was this understanding that led various developing countries to make credit an integral part of their poverty alleviation programmes. The conception and implementation of such programmes were often based on the broad principles of social banking in several developing countries including India.

Social banking can be described as “the elevation of the entitlements of previously disadvantaged groups to formal credit even if this may entail a weakening of the conventional banking practices” [Copestake et al 1984].¹ Under this policy, the initiative and direct involvement of the state was central to the development of the banking system. In India, this policy led to nationalisation of major commercial banks in 1969, adoption of the directed lending programme, development of credit institutions such as Regional Rural Banks (RRBs), and implementation of the Integrated Rural Development Programme (IRDP), a credit-based poverty alleviation programme implemented through commercial banks. These policy measures resulted in widening the “geographical spread and functional reach” of commercial banks in rural areas in the period that followed the nationalisation of banks [Shetty 1997: 253]. Further, there was also some improvement in the access of rural poor – consisting largely of marginal and small peasants and the landless rural labour force – to bank credit at concessional rates [Chavan 2001].

In the process of pursuing the broader objectives of social banking, however, certain weaknesses crept into the system of banking in general and rural banking in particular. First, it was argued that though the efforts were aimed at improving the distribution of formal credit among the landless and near-landless rural population through schemes such as IRDP, bank credit largely remained concentrated in the hands of the landed population [Nagaraj 1981]. Secondly, it was argued that the banking system could not fully adapt to the task of poverty alleviation on account of the lack of provision of consumption credit.² Finally, the system of directed lending was criticised as it resulted in the creation of non-profit making assets on account of poor repayment of loans [RBI 1991].

This is not the place to probe into the reasons behind these weaknesses. However, they had a certain bearing on the fact that development of the banking system remained isolated and was not made part of a broader socio-economic transformation in the countryside. Land reform, for example, was the most important step needed for such a transformation. Land remained inequitably distributed, and inequities in the access to credit followed the inequities in land distribution. This was because borrowers needed land as

collateral in order to secure access to credit [Swami 1979]. Further, in the absence of decentralised planning and administration of poverty alleviation programmes through institutions such as the panchayats, there were problems in targeting the poor beneficiaries [RBI 1990, Osmani 1989, Swaminathan 1990].³

With increasing criticism of the state-led formal credit system and its utilisation for poverty alleviation, in recent years countries have moved towards new mechanisms of lending such as micro-credit. Micro-credit has been claimed to be a solution to most of the problems that originated out of the state’s efforts to alleviate poverty using the instrument of credit [Yunus 1999].

I Micro-Credit: Concept and Features

The implementation of any formal lending programme directed towards the poor is often beset by three important difficulties.⁴ The first is the problem of exact targeting, which would ensure that there are no type I or type II errors⁵ [Cornia and Stewart 1991]. Secondly, it faces the screening problem of distinguishing the good (creditworthy) from the bad (not-so-creditworthy) borrowers. This is because the poor borrowers do not generally maintain any accounts of their past business activity or furnish any documented business plan for which they are seeking loan. Thirdly, these agencies may not be able to monitor and ensure productive usage of the loans. Further, if the loan repayment runs into a problem, they may not be able to take legal action against the borrowers, often on account of the absence of any collateral. Here, the problem is of enforcing the repayment of loans. Costs incurred to take care of the last two problems mainly comprise the ‘transactions costs’ of lending. On account of a high level of transactions costs incurred in lending to the poor, formal lending agencies often leave the poor unbanked [Yunus 1999]. The scheme of micro-credit that has emerged with the establishment of Grameen Bank has aimed at addressing these problems in certain innovative ways.⁶

Micro-credit, as defined by Grameen Bank, symbolises small loans extended to the poor for undertaking self-employment projects that would generate income and enable them to provide for themselves and

their families.⁷ The defining criteria used are thus the size of loans⁸ and the targeted population comprising micro-entrepreneurs, particularly women micro-entrepreneurs, from low-income households. These loans are generally offered without any collateral.

The scheme of micro-credit as conceived by Grameen Bank has been based on innovative financial practices. It attempts to resolve the problem of targeting mentioned earlier either directly by specifying the member’s eligibility requirement on the basis of asset ownership or indirectly by making the loan amount small and laying down other conditions, such as attendance at the weekly member meetings, so that the non-poor are discouraged from borrowing [Hulme and Mosley 1996a].⁹

It attempts to overcome the screening problem through group formation.¹⁰ The concept of group borrowing is driven by the idea that solidarity among like-minded people living in similar social and economic conditions is crucial to the success of this programme. This group can be used to understand the character and proposed loan use of each of the members. Moreover, the loans are given only for activities that cannot go wrong in terms of repayment of the loan or it turning into a bad investment [Hulme and Mosley 1996a]. These are activities such as poultry raising, paddy husking, cattle fattening, rice and other seasonal crop trading, handloom weaving and grocery shop keeping.

Finally, the problem of monitoring the loan usage and enforcement is taken care of individually as well as through the group.¹¹ The bank insists on putting the loan to the use specified by the borrower strictly within a period of seven days. Further, it follows a system of weekly repayment of small amounts. This is done as “parting with large amount of cash at the end of a loan period is often psychologically trying for the borrowers” [Yunus 1999: 61].

With such innovative practices, Grameen Bank has risen to fame for its performance in targeting and repayment rates. Following its example, several other institutions have been set up for providing micro-credit in Bangladesh and in many developing countries. Apart from the state-controlled Bank Rakyat Indonesia and Badan Kredit Kecamatan in Indonesia, all such institutions, such as BRAC (Bangladesh), Banco Sol (Bolivia), SANASA (Sri Lanka) and Muzdi Fund

(Malawi), are non-governmental in nature (NGOs) and depend for funding on international donors such as IFAD, SIDA, OECF, OXFAM and CARE.

I Evaluation

In this section, we attempt to review the performance of a selected set of NGO-led micro-credit programmes and institutions that provide credit for poverty alleviation in developing countries. As mentioned earlier, we adopt a comparative approach for analysing the performance of these micro-credit programmes and institutions vis-à-vis the state-led programmes and institutions in India.

For this analysis, we have selected Grameen Bank, BRAC, and TRDEP of Bangladesh, BancoSol of Bolivia, PTCCS of Sri Lanka, the Muzdi Fund and SACA of Malawi and the KREP Juhudi Scheme and KIE-ISP of Kenya. The state-led poverty alleviation programmes and institutions chosen for comparison from India are the Integrated Rural Development Programme (IRDP)¹² and regional rural banks (RRBs)¹³.

An important constraint in such an analysis has been the limited number of studies that evaluate the actual impact of the NGO-led micro-credit programmes on the earnings and employment of the beneficiaries. Most of the available studies narrowly focus on their "programmatic success" [Rahman 1999: 67], where the principal variables studied are the number of beneficiaries, amount of credit disbursed, recovery rate, and profit flows among others.

The performance indicators used in this review are discussed below.

Targeting the poor: As we shall show in this section, micro-credit programmes and institutions have generally performed better than the state-led institutions for credit provision in reaching the targeted poor population.

The performance of IRDP in targeting has been found to be strikingly poor [Dreze 1990, Swaminathan 1990, Kurian 1987, Nabard 1984 and GoI 1985, cited in Guhan 1986]. An expert committee of the Reserve Bank of India (RBI) on IRDP found that, in many states, even the necessary preliminary surveys of the families below the poverty line had not been conducted [RBI 1993]. It also found that the attendance at village assemblies, where the

beneficiaries were selected, was extremely poor. Independent evaluations by Nabard and the Planning Commission estimated that on an average, the percentage of ineligible beneficiaries in IRDP were about 15-26 per cent; in some places it was even estimated to be between 40 per cent and 50 per cent [Nabard 1984, GoI 1985, cited in Guhan 1986]. Dreze (1990) argued that only one among the eight households in the poorest decile (the 'unambiguously poor' population) received any benefit from IRDP. The average beneficiary income in his study village was twice as high as the cut-off income specified under the programme. He also found that none of the landless households in the village received any benefit through IRDP.

Swaminathan's (1990) study villages were in two states, West Bengal and Tamil Nadu. She found significant differences in the targeting efficiency of IRDP in these states. In West Bengal, only 7.5 per cent of the sampled beneficiaries were not eligible for assistance. By contrast, in Tamil Nadu, 24-27 per cent of the beneficiaries were not eligible for assistance. Under some specific categories, this leakage extended even up to 50 per cent in Tamil Nadu.

By absolute contrast, Grameen Bank has reported high success in reaching its targeted population. According to Hossain (1988), only 4.2 per cent of borrowers in the Grameen Bank were outside the target group (those with less than 0.5 acres of land). Osmani (1991), after a review of studies, pointed out that most of the beneficiaries belonged to the bottom 40 per cent of the income scale. About 95 per cent of the loans from Grameen Bank reached the target group and only 5 per cent went to non-target groups. Another important achievement in targeting for Grameen Bank was the high percentage of women among the borrowers. In 1998, women consti-

tuted 94 per cent of the bank's borrowers [Yunus 1999].

Mosley and Hulme (1998), in their cross-country analysis, found that success in targeting varied significantly between different programmes (Table 1). They examined the impact on poverty of 13 major credit provision programmes and institutions across seven countries, including RRBs from India. Among those programmes that had a declared policy of targeting, all had achieved a poor to non-poor ratio of over 90 per cent, except RRBs in India, which had a ratio of only 38 per cent.¹⁴

Notwithstanding its success in targeting, an 'exclusion problem' has been reported even in the case of Grameen Bank [Osmani 1989]. As per the findings of the Bangladesh Agricultural Survey, in 1983-84 about 66 per cent of households with less than 0.5 acres of land (the declared target group for Grameen Bank) in Bangladesh were primarily agricultural labour households (ibid.). This proportion should have reflected in their share among the beneficiaries of Grameen Bank. However, Hossain (1988) found that only 20 per cent of beneficiaries had agricultural labour as their principal/secondary occupation before they joined the bank. Among these, only 8.4 per cent had agricultural labour as their principal occupation.

Increase in earnings and asset holdings of the poor: There are several methodological problems in handling the issue of earnings. Any study about earnings and assets is beset with several difficulties, such as under-reporting, recall bias in recording incomes from previous years and inaccurate evaluation of earnings in kind. In the absence of properly maintained accounts in the case of small household enterprises, commonly observed in rural areas, the problem of income measurement is likely to be more acute.

Table 1: Proportion of Poor among Beneficiaries, Selected Credit Programmes and Institutions, 1992

| Agency | Number of Borrowers | Percentage of Borrowers below Poverty Line |
|--------------------------|---------------------|--|
| Bolivia: BancoSol | 51,000 | 29 |
| Bangladesh: Grameen Bank | 1,050,000 | 95+ |
| Bangladesh: BRAC | 598,000 | 95+ |
| Bangladesh: TRDEP | 25,000 | 90+ |
| Sri Lanka: PTCCS | 702,000 | 52 |
| India: RRBs | 12,000,000 | 44 |
| Kenya: KREP Juhudi | 2,400 | - |
| Kenya: KIE-ISP | 1,700 | 0 |
| Malawi: SACA | 400,062 | 7 |
| Malawi: Mudzi Fund | 223 | - |

Source: Compiled from Mosley and Hulme (1998), Table 1.

It has been pointed out by Swaminathan (1990) that the methodology of calculating income changes requires accurate estimates of base year as well as final year incomes. A reliable method can be to calculate income mobility of households given that one has income data collected during the two corresponding years. We found that only Swaminathan's study adopted such a methodology. Using panel data set for a village in Tamil Nadu between 1977 (before IRDP) and 1985 (after IRDP), she found that the overall share of productive assets in total wealth remained unchanged over the period. There was no difference in the patterns of income mobility between beneficiaries and non-beneficiaries between 1977 and 1985. She concluded that the income impact of IRDP loans on the beneficiaries was only marginally positive.¹⁵

Other studies, following mostly the recall methods for past-income calculations, have found that there was only a marginal rise in income for IRDP beneficiaries. Kurian (1987), reporting results from a country-wide survey of IRDP beneficiaries, found that about 84 per cent of the households enjoyed a positive increment in income after a period of two years. Within these, about 38 per cent of the households enjoyed an increase in income of about 50 per cent.¹⁶ In another review of IRDP, Guhan (1986: 32) reached the conclusion that IRDP "channelled funds on a hitherto unprecedented scale for creating supplementary incomes amongst the relatively poor in rural areas all over India". However, he pointed out that it "failed to generate incomes to the expected levels" (ibid p 31).

Studies on Grameen Bank have, in general, shown a positive change in the income of the beneficiaries [Hossain 1988, Hulme and Mosley 1996a, Todd 1996, Khandkar and Chowdhary 1996]. However, all these studies use the recall method and therefore, their results are likely to suffer from memory bias. Further, unlike studies on IRDP, studies on Grameen Bank have not attempted to isolate the income flows from assets acquired through loans. On account of the second problem, we have relied more on studies that have compared beneficiary income with a control group income, rather than its own income at an earlier period.

Based on his field survey, Hossain (1988) found that Grameen Bank borrowers in the 'project villages' had higher income than the target group (those owning less than

0.5 acres of land) in the 'control villages' by about 43 per cent.¹⁷ Further, their income level was higher by 28 per cent than target group members in the 'project villages' who did not borrow from Grameen Bank. The difference was highest for the absolutely landless beneficiaries followed by the marginal landowners. In another study, Todd (1996) reported a positive income impact on the women borrowers from her study area.

Apart from the gains in income, studies from Bangladesh found that there was smoothing of income and consumption for borrower households due to micro-credit [Morduch 1998, Zaman 1999, Khandkar 1998, cited in FAO 2000]. While Khandkar found that increase in and smoothing of consumption occurred together, in Morduch's study, smoothing of consumption was not accompanied by an increase.

The period of retaining assets was longer for Grameen Bank participants than for IRDP beneficiaries [Kurian 1987, Rath 1985, Hossain 1988]. In the case of IRDP, the share of households not keeping assets gained through IRDP for more than two years varied from 25 per cent to 50 per cent [Kurian 1987, Rath 1985]. However, in the case of Grameen Bank, Hossain (1988) found that there was a threefold increase within a period of 27 months in the amount of working capital employed by members' enterprises started with Grameen loans. Further, it was also found that the number of cattle owned by the members increased by 26 per cent every year (ibid).

The literature on the impact of RRB loans on the income of the borrowers is relatively limited. The only available estimate used for the present analysis has been obtained from a study by Hulme and Mosley (1996a, 1996b) and Mosley and

Hulme (1998). They undertook a comparison of income 'before and after' taking loans from RRBs. They compared income levels of a borrower group of 100 with a control group of 50 for each credit institution.¹⁸

From these two studies, we have presented in Table 2 the figures of average annual change in family income¹⁹ of borrowers and the control sample. Among the programmes that they studied, beneficiaries of RRBs recorded the highest annual change in family income during 1988-92.²⁰ When compared with the percentage change in income of borrowers from the control group, RRB beneficiaries recorded a rise of 191 per cent. Table 2 also gives information regarding the change in income over the previous year (as a percentage of the control group) for all borrowers and for borrowers below the poverty line. We find that the increase in incomes for those below the poverty line was one of the highest for RRBs at 133 per cent with only BRAC exceeding it.

However, the increase in incomes for the poorest beneficiaries of RRBs was not impressive. Mosley (1996a) studied the impact of RRBs on different income classes of beneficiaries. He found that though "the difference between the income change of beneficiaries (of RRB) and the control group is positive,...amongst borrowers below the poverty line it is on an average negative" (pp 260-61). About 34 per cent of the poor borrowers in his sample "crossed the poverty line"²¹ in a period of one year, which accounted for about 12 per cent of the whole sample.

Based on the studies reviewed, we conclude that both NGO-led micro-credit and state-led credit institutions have led

Table 2: Impact of Loans on Family Incomes of Beneficiaries

| Agency | Annual Average Change in Family Income, 1988-92 (in Per Cent) | | Change in Income of Borrowers to Control Sample (in Per Cent) | Average Rise in Income in the Year Prior to Survey (as Per Cent of Control Group) | |
|--------------------------|---|----------------|---|---|------------------------|
| | Borrowers | Control Sample | | All Borrowers | Borrowers Poverty Line |
| | (1) | (2) | (3) | (4) = (2/3) | (5) |
| Bolivia: BancoSol | 28.1 | 14.5 | 193 | 270 | 101 |
| Bangladesh: Grameen Bank | - | - | - | 131 | 126 |
| Bangladesh: BRAC | 19.8 | 13.8 | 143 | 143 | 134 |
| Bangladesh: TRDEP | 38.7 | 30.6 | 126 | 138 | 133 |
| Sri Lanka: PTCCS | 15.6 | 9.9 | 157 | 157 | 123 |
| India: RRBs | 46.0 | 24.0 | 191 | 202 | 133 |
| Kenya: KREP Juhudi | 1.5 | 1.1 | 133 | 133 | 103 |
| Kenya: KIE-ISP | 0.5 | 0.4 | 125 | 125 | - |
| Malawi: SACA | 2.8 | 1.6 | 175 | 175 | - |
| Malawi: Mudzi Fund | 1.4 | 1.2 | 117 | 117 | 101 |

Source: Hulme and Mosley (1996a), Table 4.1 and Table 8.1.

to positive but only marginal increases in the earnings of their beneficiaries. However, given the methodological problems associated with studies on income changes, more empirical evidence is required in order to substantiate such a conclusion. *Employment generation and skill improvement*: Before examining the question of employment generation, it would be useful to consider the debates about the benefits of generating self-employment and wage employment. Scholars have taken two extreme positions on this issue. Dandekar (1986), Rath (1985) and Dreze (1990) have argued that the generation of wage employment through large-scale public works is the most effective strategy for the alleviation of poverty. Contrary to this, others like Dantwala (1986) have supported the strategy of generating self-employment opportunities towards achieving this aim. While the latter school focuses on rationales, such as self-reliance, the former school has pointed out that market uncertainty and heavy debts can erode the self-reliance of poor entrepreneurs as well as their entitlement to employment [Dreze 1990].

Osmani (1989) has taken a more balanced position on this issue. He has argued that the choice between self- and wage-employment is contingent on the previous character of employment of the beneficiaries. He has cited studies on Grameen Bank, which have found that most of the borrowers after taking loans have followed their pre-loan occupations. This is largely in line with the Grameen Bank philosophy that people can do those activities better, which they have been accustomed to before taking the loans. Thus it follows that borrowers who have some entrepreneurial experience can handle self-employment ventures better than others and would succeed in raising their income levels. Rightly enough, studies on Grameen beneficiaries have shown that relatively successful borrowers have had some prior knowledge of the market [Hossain 1988]. Conversely, those who have no experience in self-employment, such as agricultural labourers, are likely to be benefited less by this system of credit. Hence there will be need for promoting wage-employment programmes for this section of the rural population.

The focus of Grameen Bank, as noted earlier, has been on the generation of self-family-employment. Studies indicated that the number of days of family employment increased slightly for micro-credit benefi-

ciaries after receiving the loans [Hossain 1988, Mosley 1996b, Montgomery and Bhattacharya 1996]. Hossain (1988) found that 20 per cent of the borrowers of the bank were earlier unemployed. There was a small movement away from agricultural labour towards vocations like poultry farming, livestock raising, processing and manufacturing, trading and shopkeeping. On average, the number of days of family-employment per month went up by 11 to 15 days.²² In the case of BancoSol in Bolivia, only 38 per cent of the borrowers experienced an increase in employment days after taking the loans [Mosley 1996b]. The remaining 62 per cent of the borrowers either experienced a decrease or no change in employment days. Further, a majority of those who got more employment were from the higher income classes [Mosley 1996b]. For SANASA in Sri Lanka, Hulme, Montgomery and Bhattacharya (1996) found that for non-agricultural loans, the increase in family employment was only 0.7 persons per enterprise. However, there was an increase in employment of four persons per household in the case of paddy loans (ibid).

Studies indicated that micro-enterprises completely failed in generating non-family employment. From their cross-country studies, Hulme and Mosley (1996a) report that between the borrowers and the control group of non-borrowers, there was a difference of only one employee per enterprise. In the case of SANASA, only 8 per cent of the borrowers reported increase in the number of paid employees in their activity [Hulme, Montgomery and Bhattacharya 1996]. The average increase in employment was one employee per enterprise for non-farm loans and 4.5 employees per household for crop loans. Buckley (1996), reporting a study on KREP Juhudi credit scheme in Kenya, found that the increase in employment from these schemes was less than 0.5 employees per enterprise. In the case of RRB loans in India, the average increase was reported to be only 0.6 employees per enterprise [Mosley 1996a].

This takes us to the issue of technology used in these enterprises. Hulme and Mosley (1996a) found that the percentage of borrowers who invested in new technology was only 33 per cent in their "high impact schemes" and 7.5 per cent in "low impact schemes".²³ In the case of RRBs, 12 per cent of the borrowers invested in new technology, while in BRAC and BancoSol, this proportion was 8 per cent

and 26 per cent respectively. Those who adopted new technology were found to reap higher benefits than others under all schemes. In Kenya, under the Juhudi-supported enterprises, a majority of the borrowers sought credit solely for working capital to undertake "what they knew best" [Buckley 1996: 325]. From these studies, it appears that the number of borrowers adopting new technology under the micro-credit schemes have been few in number.

One important reason for the poor adoption of new technology is the absence of any skilled training to borrowers under the micro-credit schemes. Imparting skills is crucial for undertaking new investments and adopting new technology. The philosophy guiding Grameen Bank is that the poor do not need to be given any skill to utilise the loans as they have an inherent skill, which Mohammed Yunus calls "survival skill" [Yunus 1999: 140]. It is the presence of this inherent skill that "keeps them alive even when they are poor" (ibid). Hence it is believed that the provision of credit per se would transform the borrowers into able entrepreneurs. In our opinion, this repudiates the importance of modern skills and technology. Credit provided by micro-credit programmes on this principle may provide temporary income relief to the beneficiaries but would keep them in a perpetual state of technological backwardness. It is only through a sustained transfer of modern technology along with credit that such programmes can be of help in dealing with the problem of poverty.

Financial viability: Of the various factors that determine the financial viability of a credit institution, we have selected three factors for the present analysis. They are costs of default, administrative costs and dependence on subsidies.

Costs of Default

Minimising the costs of default is crucial for the sustainability of any credit provision programme or institution. The default rates of IRDP and RRB loans in India have been very high. In the case of IRDP, the default rate on advances granted by public sector banks as a percentage of demand increased from 58.7 per cent as in 1991 to 69.1 per cent in 1993 [RBI 1993]. In her field study in West Bengal (in 1988-89), Swaminathan (1990) found that the local bank branch reported a default rate on IRDP loans of 45 per cent.

About 75 per cent of borrowers in the village did not have any overdue at the time of survey. In her field study in Tamil Nadu (in 1985), she found that only 12.5 per cent of the borrowers had fully repaid the loans (ibid).

The default rate among the respondent borrowers of Grameen Bank was only 3.3 per cent in 1985 [Hossain 1988]. This level was maintained during the nineties [Yunus 1999].

Mosley (1996a) analysed default rates for RRB loans and found that during 1983-91, the average default rate was 47.5 per cent. The six-month arrears rate of RRBs in 1992 was the highest among the 13 institutions that Mosley and Hulme (1998) examined across different countries (Table 3).²⁴ While RRBs had a six-month arrears rate of 42 per cent, the same for Grameen Bank was 4.5 per cent and for BRAC 3 per cent. In the case of RRBs, between 1982 and 1992, there was a fall in the overdue rates, from 50.0 per cent to 32.9 per cent of total lending (ibid).

However, there have been two major arguments against low default rates on Grameen Bank loans. First, sizewise decomposition of the repayment rates indicates that low default rates have been confined to loans of very small size [Hossain 1988]. Default rates tended to increase with the increase in the loan size (ibid). Default rates among the first-time and the second-time borrowers were 0.4 and 1.2 per cent respectively. For the third-time borrowers, this rate increased to 6.6 per cent and in the case of fourth-time borrowers, it further rose to 9.5 per cent (ibid). The number of people with no overdue installments decreased from 96.7 per cent for the first-time borrowers to 61.0 per cent for the third-time borrowers and 32.9 per cent for the fourth-timer borrowers (ibid).

Secondly, studies have found that the prompt and regular repayment of loan installments has largely occurred through cross-financing from other informal sources of credit and not through the returns from the investment undertaken with the loan. There are two important studies that bring out this aspect of the operation of Grameen Bank. Rahman (1999), in a study in Tangail district, has pointed out that most of the timely repayments were not made out of incomes flowing from assets gained, but through further borrowing from private moneylenders. Many borrowers in Rahman's village repaid Grameen Bank

loans through short-term loans from moneylenders "with a promise to the lender that the borrower will return the amount (usually with interest) after receiving the new loan from the Grameen Bank" (ibid, p 78). This meant that the borrowers began a new Grameen loan "with a deficit on the capital". This, according to Rahman, led to the creation of "debt cycles" for the borrowers (ibid).

In another important study in Madhupur thana in northern Bangladesh, Sinha and Matin (1998) found that 94 per cent of micro-credit borrowing households in their village were also indebted to informal sources of credit. Target group households (with less than 0.5 acres of land) depended on one informal sector loan every 10 weeks, while the frequency was 12 weeks in the case of non-target group households. They noted that "most of the informal loans repaid with Grameen loans were taken to repay earlier Grameen loans" (ibid, p 70-71). Among the target group households, 45 per cent of the amount of informal sector loans was utilised for repaying loans taken from micro-credit institutions, including Grameen Bank. Among the non-target group households, this share was 15 per cent. Sinha and Matin concluded that,

High levels of cross-financing deplete the capital of the loan, and reduce the value of the new loan that is used to repay or service the old. The process turns into a 'vicious cycle' as smaller investments into directly productive enterprises yield less returns, thus requiring even higher loans the next time to repay the original loan. It erodes the profitability of any enterprise, especially if a high interest loan is taken from the informal market [Sinha and Matin 1998: 72].

Administrative Costs

Information about the administrative costs²⁵ incurred by credit institutions is provided by Hulme and Mosley (1996a) (Table 4). During 1988-92, the administrative costs (as a percentage of total portfolio) were the lowest for RRBs (on average 8.1 per cent per annum). For Grameen Bank and BRAC, they were 12.3 per cent and 40.0 per cent respectively for the same period. Over the years, the administrative costs for Grameen Bank appeared to have increased. Total administrative costs increased from 4 per cent of total liability to about 7 per cent between 1984 and 1986 [Hossain 1988]. As a share of the portfolio or the amount of loans, it

Table 3: Default Rate, Cost of Credit and Subsidy Dependence Index

| Agency | 6-Month Arrears Rate (Per Cent) | Real Interest Rates (Per Cent) | SDI (1988-92 Average) |
|--------------------------|---------------------------------|--------------------------------|-----------------------|
| Bolivia: BancoSol | 0.6 | 45 | 135 |
| Bangladesh: Grameen Bank | 4.5 | 15 | 142 |
| Bangladesh: BRAC | 3.0 | 11 | 199 |
| Bangladesh: TRDEP | 0.0 | - | 199 |
| Sri Lanka: PTCCS | 4.0 | 11 | 226 |
| India: RRBs | 42.0 | 3 | 133 |
| Kenya: KREP Juhudi | 8.9 | 9 | 217 |
| Kenya: KIE-ISP | 20.2 | -1 | 267 |
| Malawi: SACA | 27.8 | 7 | 398 |
| Malawi: Mudzi Fund | 43.4 | 8 | 1884 |

Source: Compiled from Mosley and Hulme (1998), Table 1.

Table 4: Components of Cost Structure
(average levels as percentage of total portfolio, per annum)

| Agency | Cost Components | | | | | | |
|--------------------------|-----------------|----------|-----------------------|-----------------------|-----------------------|-----------------------|----------|
| | <i>i</i> | <i>a</i> | <i>a</i> ₁ | <i>a</i> ₂ | <i>a</i> ₃ | <i>a</i> ₄ | <i>p</i> |
| Bolivia: BancoSol | 8 | 28 | 17 | 4.5 | 4 | 3 | 1 |
| Bangladesh: Grameen Bank | 3.5 | 12.3 | 4.3 | 6 | 2 | 1 | 5 |
| Bangladesh: BRAC | 0 | 40 | 16 | 5 | 2 | 14 | 3 |
| Bangladesh: TRDEP | 0 | 100 | 16 | 5 | 2 | 77 | - |
| Sri Lanka: PTCCS | 1 | 17 | - | - | - | - | 4 |
| India: RRBs | 9.7 | 8.1 | 6 | - | - | 2 | 42 |
| Kenya: KREP Juhudi | 0 | 33 | 19 | 3 | 9 | 2 | 9 |
| Kenya: KIE-ISP | 0 | 27 | 9 | - | 6 | 12 | 20 |
| Malawi: SACA | 0 | 11 | 8 | - | - | 3 | 28 |
| Malawi: Mudzi Fund | 0 | 722 | 238 | 1.5 | 67 | 415 | 43 |

Notes: *i* - Borrowing interest rate; *a* - Total administrative costs; *a*₁ - Loan supervision costs; *a*₂ - Insurance costs; *a*₃ - Research, training and support of other institutions; *a*₄ - Other costs; *p* - Costs of default; *a*₁, *a*₂, *a*₃ and *a*₄ are components of *a*.

Source: Hulme and Mosley (1996a), Table 3.2.

increased from 8.6 per cent to 18.1 per cent during the same period.²⁶

Comparison of administrative costs with costs of default for various financial institutions indicated that these two moved in inverse direction. High rates of repayment helped these banks achieve higher profit levels every year. However, in order to maintain such high rates of repayment, these banks had to invest considerable resources in administering the loans. The existence of high administrative costs of micro-credit institutions has been noted in many studies [Bhat and Tang 1998].²⁷ What might appear paradoxical has been the co-existence of high administrative costs and high levels of profit. The answer to this paradox can be found in the fixation of interest rates by these institutions. Interest rates for micro-credit were fixed high in order to compensate for high transaction costs or cuts in subsidies. The nominal interest rate on the loans from Grameen Bank was kept stable at 16 per cent per annum till 1991. It was subsequently raised to 20 per cent. This was 8 per cent higher than the market rate in Bangladesh [Rahman 1999].

The real rate of interest on Grameen loans, as noted by Osmani (1989), was about 18 per cent compared with 12-15 per cent charged by the state agencies in the 1980s. In their study, Mosley and Hulme (1998) also found that the real rates of interest for micro-credit institutions were generally higher than those charged by the state-sponsored programmes and institutions (Table 3). During 1992, the real interest rate on Grameen Bank loans was 15 per cent, while for RRBs it was only 3 per cent.

We argue that high rate of interest on loans is effectively a burden on the incomes of the poor. Further, given the low capital intensity of investments made through micro-credit and the resultant low profit margins, high rates of interest dampen the possibility of any significant savings on the part of the poor borrowers. As the poor largely borrow for meeting consumption-related requirements, the burden of high interest rates is felt even more strongly by them. Among Grameen Bank borrowers in their study village, Sinha and Matin (1998) noted that 34 per cent of the loans from micro-credit institutions were spent for household food consumption and 32 per cent in repaying other micro-credit loans. Such a high levy, in our opinion, is a barrier for poor households

in raising their income levels and being able to save.

Rahman argued that high costs of credit amounted to transferring high administrative costs onto the poor borrowers [Rahman 1999]. He identified this shift as the major cause for the existence of "debt cycles", which were discussed in the last sub-section. Rahman also pointed out that whenever Grameen Bank increased the salary of its staff, the increase in cost was shifted to the borrowers through raising interest rates (ibid).

Subsidy Dependence

Most of the rural credit programmes and institutions are subsidised. In the case of state-led programmes, this subsidy is borne by the government while in the case of NGO-led institutions, it is mainly borne by domestic and international private donors. We have compared these lending institutions on the basis of their dependence on subsidies; the dependence has been captured by an index called the Subsidy Dependence Index (SDI), developed by Yaron (1992). SDI represents the percentage increase required in the on-lending rate such that the dependence on subsidies can be completely eliminated for a given institution.²⁸

The SDI calculated by Hulme and Mosley (1996a) for credit institutions is given in Table 3. As seen from the table, SDI was over 100 per cent for all institutions. Among other institutions, RRBs had the least SDI of 133 per cent. For Grameen Bank, this was higher at 142 per cent (ibid).

High dependence on subsidies has been another route – other than increasing interest rates – through which micro-credit agencies have been able to evade the negative impact of high administrative costs. During the late 1980s, if subsidies had been removed, Grameen Bank would have incurred losses [Hossain 1988]. In 1986, the loss thus incurred on credit operations was 5.7 per cent of the outstanding loans. The SDI of Grameen Bank has risen over the years [Khandker et al 1995]. Moreover, the periods that have witnessed a decline in SDI have been the periods of increasing rates of interest (ibid). In other words, heavy dependence on subsidies has been an intrinsic feature of the micro-credit institutions.²⁹ Based on the foregoing analysis, it can be concluded that the financial viability of micro-credit institutions has been fragile in nature.

Grameen-Type Models: Some Issues in Expansion and Replication

In relation to the expansion and replication of NGO-led micro-credit institutions, two questions need to be answered. First, is the model of micro-credit set by Grameen Bank viable in Bangladesh itself after it expands its operation? In other words, can Grameen Bank, once expanded into a macro-level programme, avoid the drawbacks of a large-scale credit-based poverty alleviation programme like IRDP and institutionalise itself into a sustainable scheme for poverty alleviation? As Osmani (1989: 2) has put it, "the issue is not how well the Grameen Bank has done so far ... [it] is how well this strategy is likely to work as a major anti-poverty programme, once its scale is expanded many times...". Secondly, is this model replicable in other countries, like India, as an effective programme for credit-based poverty alleviation? Let us attempt to probe into these questions.

First, we argue that the relatively smaller scale of operation of Grameen Bank has been its greatest advantage in evading the problems encountered in a large-scale credit provision programme or institution. A comparison of the magnitude of operations of Grameen Bank and state-led credit institutions in India reveals the limited scale of operation of the former. In 1992, Grameen Bank had just 1.05 million borrowers. In the case of RRBs, the number of borrowers was 12 million in 1992 [Mosley and Hulme 1998].³⁰ In the 1990s, Grameen Bank expanded its operations – in terms of the number of beneficiaries and disbursement of credit – in Bangladesh. By November 2000, it had branches in 40,212 villages, which spread across 46.7 per cent of the total villages in Bangladesh.³¹ The number of borrowers of Grameen Bank had increased to 2.4 million by November 2000. By contrast, by March 2000, the borrowers from RRBs numbered 11.8 million [RBI 2000a: 9]. In other words, the number of borrowers of Grameen Bank formed only about 20 per cent of the borrowers of RRBs.

Regarding the amount disbursed, till April 2000, Grameen Bank had disbursed a cumulative amount (for a period of 25 years) of taka 1,36,986 million (equivalent to about \$ 3,228 million).³² If we consider the year 1987-88, when the IRDP advances peaked, we find that advances during that

single year were around Rs 17,790 million at current prices (roughly equivalent to \$ 1,271 million). This formed around 39 per cent of the cumulative amount disbursed by Grameen Bank till 2000.³³ The data presented here need not be used for a strict comparison of the two programmes. We have presented these figures only to indicate the scale of operation of Grameen Bank vis-à-vis the state-led credit programmes in India. Evidently, the scale of operation of Grameen Bank has been smaller than the state-led programmes and institutions.

The implementation of a poverty alleviation programme is commonly beset with certain “mismatches” [Osmani 1991].³⁴ The drawbacks encountered in the case of IRDP also had a bearing on such mismatches among other factors [Osmani 1991, Swaminathan 1990, Nagaraj 1999]. One way to reduce the mismatches is the adoption of local level planning in the implementation and monitoring of the poverty alleviation programmes [Nagaraj 1999, RBI 1990]. Local-level planning can be described as the identification, mobilisation and allocation of all the resources at the local level. In this context, it may be noted that a relatively better performance of IRDP was observed in West Bengal, where the programme was implemented through panchayats [Swaminathan 1990].

We argue that the small scale of operation of Grameen Bank has acted in its favour, helping to keep any mismatch of supply and demand at a lower level. An institution such as Grameen Bank, by virtue of being an NGO, is more likely to function in an uncoordinated fashion with other institutions involved in the provision of credit as well as institutions constituted for planning of other resources in the rural economy. Hence local-level planning, as defined earlier, may be difficult to implement in a social security system built on the basis of NGOs such as Grameen Bank. As a result, the kind of mismatches observed for IRDP may be difficult to avoid for micro-credit programmes and institutions, such as Grameen Bank, once they expand their scale of operation.

Secondly, as noted earlier, the financial viability of Grameen Bank has been fragile even at a smaller scale of operation. An expansion in scale is likely to result in a rise in transaction costs leading to an increase in its reliance on subsidies.

IV Conclusions

This paper reviewed the available empirical evidence on NGO-led micro-credit programmes and institutions implemented across various developing countries. The objective was to judge the performance of these programmes and institutions on the basis of a set of four indicators in comparison with the state-led credit-based poverty alleviation programmes and institutions, such as, the IRDP and RRBs in India.

The review indicated that NGO-led micro-credit programmes and institutions, such as Grameen Bank, have been successful in reaching their target groups of poor more effectively than the state-led programmes and institutions. However, even these have not been free of the “exclusion problem” in targeting. With due recognition of the methodological problems involved in accounting income change, the study led to the conclusion that micro-credit programmes and institutions have generated a positive change in the incomes of beneficiaries, but this change has only been marginal. A similar result has been noted in the case of IRDP and RRBs in India.

Micro-credit programmes and institutions have generated a positive impact on the number of days of family employment. However, their performance in the generation of wage employment has been poor. Further, given the principle of “survival skill” that has driven institutions, such as Grameen Bank, there has not been any discernible contribution to the improvement of skills and technology adopted by the beneficiaries. Hence the available evidence indicates that Grameen-type credit programmes and institutions, at their currently small scale of operation, have made a ‘minimalist impact on the earnings and employment generation for the rural poor.

The micro-credit programmes and institutions have been operating profitably on account of remarkably high repayment rates on loans. The repayment rate in the case of Grameen Bank, for example, was as high as 97 per cent in 1998. Such repayment has been made possible by incurring high administrative costs. The negative effect of these costs on the profit levels has been counterbalanced, first by raising interest rates on loans, and second, by relying more on subsidies. This exposes the fragile financial health of such programmes and institutions.

We conclude that NGO-led micro-credit programmes and institutions given their small scale of operation have been successful in targeting and generating profits. With an increase in their scale, however, they may experience similar constraints in targeting as large-scale poverty alleviation programmes like IRDP. Further, on account of an increase in their costs of operation, their dependence on subsidies is likely to grow, weakening their financial viability. However, claims such as these need to be substantiated with the help of carefully obtained empirical evidence on micro-credit programmes and institutions in the years to come.

This is not to say that credit is the sole means of addressing the problem of rural poverty. An improvement in the living conditions of the rural poor requires among other things, agrarian reforms, democratic decentralisation, public action towards better educational and health facilities and the maintenance of a public food distribution network for the poor.

A Note on Micro-Credit Policy in India

There are certain fundamental differences between the current policy on micro-credit in India and that in other developing countries, such as Bangladesh.

Table 5: Number of Self-Help Groups Formed by Public Banks and Loans Provided, India, 1992-93 to 2000-01

| Year | Number of SHGs | Bank Loans Provided (Rs Crore) | Refinance (Rs Crore) |
|---------|----------------|-----------------------------------|-------------------------|
| 1992-93 | 255 | 0.29 | 0.27 |
| 1993-94 | 620 | 0.65 | 0.46 |
| 1994-95 | 2122 | 2.44 | 2.13 |
| 1995-96 | 4757 | 6.06 | 5.66 |
| 1996-97 | 8598 | 11.84 | 10.65 |
| 1997-98 | 14317 | 23.70 | 21.39 |
| 1998-99 | 32995 | 57.07 | 52.09 |
| 1999-00 | 94645 | 192.98 | 150.13 |
| 2000-01 | 213213 | 480.87 | 400.74 |

Source: Annual Report, 2000-01, Table 7.1, Nabard, Mumbai.

Contrary to the Grameen-type models tried out in other countries, Indian banking policy has attempted to involve the public banking network in the provision of micro-credit to the poor through self help groups (SHG). A paper by Nabard has referred to the Indian policy on micro-credit as “relationship banking”, against “parallel banking” in other countries [Jayaraman 2001: 18]. Public banks adopt the approach of group lending and peer monitoring for lending to the SHGs. Such a policy has three variants that differ in the mode of linkage between the banks and borrowers; all three have been encouraged by Nabard for the provision of rural credit in India (ibid).

In variant I, the public bank acts as a self help group promoting institution (SHPI), “takes initiatives in forming the groups, nurtures them over a period of time and then provides credit to them after satisfying itself about their maturity to absorb credit”.³⁵ In variant II, public banks and borrowers (SHGs) are linked through facilitating agencies, which are either NGOs working locally or government agencies.³⁶ It differs from variant I as the formation and nurturing of the SHGs is the responsibility of the facilitating agency. Direct loans are provided to the group after the banks gain confidence about the viability of lending to the group. In variant III, both the facilitating and intermediating functions are played by the NGOs. The functions of forming groups, nurturing them and providing credit to them are performed by NGOs, while banks confine themselves to providing credit to NGOs. According to Nabard, this variant is practised in regions where the banks “are not in a position to even finance SHGs promoted and nurtured by other agencies”.³⁷

Data on SHGs show that the number of SHGs formed through public banks has grown rapidly in the 1990s; their number has risen sharply in the second half of the last decade (Table 5). Among the three variants, variant II has been the most numerous [Puhazhendi and Satyasai 2000]. Nearly 70 per cent of all the SHGs were of the kind of variant II, while 16 per cent and 14 per cent of the groups belonged to variants III and I respectively. Nevertheless, an evaluation paper by Nabard makes the case that variant III “is likely to be found more convenient by banks for credit linkage in the coming years, when very large number of SHGs would be required to be linked by small sized branches of banks” (ibid, p 17).

In the light of the above approach to the supply of micro-credit in India, certain issues need to be discussed. First, the supply of micro-credit takes place through the vast institutional network of rural banking in the country built during the post-bank nationalisation period. The utilisation of this network for experimenting in an innovative method of lending needs to be appreciated.

Secondly, studies indicate that adopting the method of group lending through SHGs could reduce the lending and supervision costs of public banks [Puhazhendi 1995] and raise repayment rates [Karmakar 1999, Puhazhendi and Satyasai 2000]. However, as the available studies till date are limited in number, more field studies are required to pass any judgment on the outcome of the SHG experiment.

Thirdly, the utilisation of the public banking network for the supply of micro-credit does not necessarily mean the continuation of public regulation or accountability in its operations. It has been pointed out that it is “desirable and appropriate to support evolution of a self-regulatory mechanism for micro-finance institutions, such as NGOs (MFIs), which would prescribe codes of conduct and ground rules” [RBI, 2001: 307]. Hence the degree of accountability of NGO-led micro-credit institutions in India still remains unclear.

Fourthly, the supply of credit through public banks may not ensure that the interest rates in SHG loans will not exceed the ceiling fixed by the RBI for small loans. In fact, RBI’s Monetary and Credit Policy for 1999-2000 has stated that “while small loans directly given by banks will continue to be subject to the interest rate ceiling as prescribed by the RBI from time to time, interest rates applicable to loans given by banks to micro-credit organisations or by these organisations to their members/beneficiaries will be left to their discretion” [RBI 1999a: 13]. Interest rates are fixed in such a manner that they provide a margin to the banks as well as to the NGOs. The empirical evidence has shown that these rates have been higher than the rates charged on loans directly taken from banks [Karmakar 1999, Puhazhendi and Satyasai 2000]. **EW**

Notes

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- 1 The conventional bank practices are aimed at high recovery rates, caution in lending decisions, commercial stability through deposit mobilisation [Copestake et al, 1984, Wiggins and Rajendran 1987].
- 2 We are grateful to S L Shetty for pointing this out to us during discussions.
- 3 Shetty (1997) has argued that some of the weaknesses, such as the poor profitability under the banking system was not purely on account of directed lending, as often argued, but had a bearing also on the defaults on loans taken by bigger borrowers. He has also argued that in order to overcome the weaknesses in the development of public sector banking, “periodic evaluation” and adoption of corrective steps were required. Though a number of committees were set up to review the operation of the banking system in the period following bank nationalisation in India, their recommendations were often not followed up as desired (ibid p 254).
- 4 For a detailed discussion of these difficulties, see Hulme and Mosley (1996a).
- 5 This implies that under no circumstances are the poor excluded from the benefits of the programme (Type I) while the non-poor can become its beneficiaries (Type II).
- 6 Grameen Bank is a statutory financial institution established in Bangladesh in 1983. In 1999, the government and the borrowers held 12 and 88 per cent of its paid-up capital respectively [Karmakar 1999].
- 7 Source: <<http://www.grameenfoundation.org>>
- 8 The smallness of the size of loans differs from country to country. In India, for example, a ceiling of Rs 25,000 has been fixed for defining micro-credit [RBI 1999].
- 9 The asset eligibility criterion of the bank specifies that the member should be from a household having less than half an acre of cultivated land or assets of the value equivalent to less than one acre of medium quality land [Hossain 1988].
- 10 In order to seek loans from Grameen Bank, borrowers have to approach the bank in a group consisting of five members. Of the five, only two are given loans at the first stage. After monitoring the repayment behaviour of these two for some time (generally, a month), the next two are provided loans and finally the last person, who is the chairperson of the group, gets his/her loan. Thus the behaviour of every member of the group is monitored rigorously at every stage by the bank staff [Yunus 1999].
- 11 The group helps in monitoring and enforcing repayment from each of the members. If any member defaults he/she faces penalty in the form of ostracism and loss of social standing. Thus it is evident that though the loans are offered without any personal collateral, they involve social collateral [Hulme and Mosley 1996a]. Further, a repeat loan is not sanctioned till the accounts of all the group members are settled [Hossain 1988].
- 12 IRDP has been the most important poverty alleviation programme of the government of

- India, which was initiated in 1980. It provides a combination of loan and subsidy to rural families (an identified target group of rural poor belonging to families below poverty line) for acquiring suitable income generating assets and self-employment opportunities to enable them to cross the poverty line. In terms of magnitude, this has been one of the largest programmes of its type in the world for the alleviation of poverty [GoI, Ninth Plan 1997].
- 13 RRBs are state owned banks in India, established in 1975, functioning exclusively in the rural areas to provide credit to small and marginal farmers, agricultural labourers, artisans and small entrepreneurs at cheap interest rates (RRB Act, 1976, cited in Maheswari, 1995).
 - 14 Those who achieved more than 90 per cent targeting were Grameen Bank, BRAC, TRDEP and Malawi Mudzi Fund. Mosley's survey was conducted in 1992, before it was declared by the government that RRBs could give 40 per cent of their loans to the non-poor.
 - 15 Jean Dreze (1990) pointed out that the size of loans from IRDP was not high enough to ensure a high income gain. After calculating the possible gains from IRDP loans, Dreze found that even if one assumed a high marginal productivity of capital for the assets, the resultant increase in income for the beneficiaries was only marginal.
 - 16 This finding, however, has been disputed by Osmani (1989) on two grounds. Firstly, Kurian calculated income levels without netting the loan amount borrowed (liable to be repaid) and secondly, it was not clear if he adjusted the income figures into constant prices before comparing between the two periods. Osmani has argued that if simple adjustments were made for these two factors, the increase in income might remain an illusion.
 - 17 Hossain conducted a census-type survey of 15 villages, which had Grameen branches in 1985. These villages were divided into 'project villages' and 'control villages'. 'Project villages' were villages with Grameen Bank branches that were more than three years old. 'Control villages' were those with Grameen Bank branches that were less than three years old. 'Control villages' were selected such that they were similar to 'project villages' in land distribution and occupational structure [Hossain 1988: 14].
 - 18 The control group in Hulme and Mosley (1996a, p 11) were "selected to be as similar as possible to the borrower group except for the characteristic of not having received a loan from a case study institution".
 - 19 These incomes are real incomes, deflated by the difference in inflation rates between the national currency and the US dollar [Hulme and Mosley 1996a].
 - 20 However, this figure needs to be interpreted with caution because, as can be seen from Table 2, the same was also observed in case of the control group during this period.
 - 21 Mosley used the poverty line as suggested by Dutt and Ravallion (1994, cited in Mosley 1996a).
 - 22 These figures should be interpreted with caution because, as Hossain (1988) admits, it is difficult to calculate the number of days of employment without undertaking a survey of regular employment.
 - 23 'High impact' schemes were those for which the growth in the income of borrowers was more than 50 per cent of that of the control group [Hulme and Mosley 1996a].
 - 24 Six month arrears rate has been defined as the value of loans, which are six months or more in arrears, as a proportion of total value of loan portfolio [Hulme and Mosley, 1996a, p 43, 82].
 - 25 Administrative costs constitute a major portion of total transaction costs of a credit institution. Transaction costs include costs of information, negotiations, monitoring and enforcement of contracts [Bardhan 1989].
 - 26 To a certain extent, this was due to the salary increase effected for the Grameen Bank staff in 1985. However, a major part of this cost, as noted by Hossain (1988), was due to expansion activities of the bank, such as opening of new branches.
 - 27 Bhat and Tang (1998) argued that the inability to reduce administrative costs lied at the root of Grameen Bank and other micro-credit institutions failing to grow into financially self-sufficient lending organisations. Rahman (1999) drew attention to how Grameen Bank incurred high administrative costs to ensure high repayment rates: "...the loan operation policy emphasises a strong supervisory measure to ensure borrower's use of their loans for income generation and to pay instalments from their earned incomes. In this system, the group chairperson and the bank's centre chiefs were obliged to supervise the loan use immediately after the loan was disbursed. Upon their satisfactory investigation, they reported it to the bank worker. The bank worker then had to inspect the investment and verified the report of the group with a written description of the investment to the branch manager. In addition, the investment of the borrower was further supervised by the responsible branch manager and programme officer from the area office" (p 75).
 - 28 SDI has a lower bound of -100 per cent, but no upper bound [Yaron 1992]. SDI of zero indicates full self-sustainability for an institution. SDI of 100 indicates that a doubling of lending rate is required for a complete elimination of subsidies (ibid).
 - 29 Though not related to the issue of financial viability, an important matter associated with the dependence on subsidies is the role of donor agencies. The preferences of such agencies are likely to exert a strong influence on the operation of the micro-credit agencies. It is pointed out that in order to ensure aid from its donors, these agencies are likely to adopt measures that may pay off in the short run [Petras 1997]. If the aim is to institutionalise the social security net, such as establishing institutions providing finance against poverty, long-term planning is called for. NGOs with their dependence on aid from external agencies may not be suitable towards achieving this end.
 - 30 In the long list of "replications of Grameen Bank" given in et al (1995), none could boast a membership of over 14,000 (see Appendix C in the original).
 - 31 See <http://www.grameen-info.org/bank/updates.html> for the data on Grameen Bank.
- The data for the total number of villages in Bangladesh (86,038) was obtained from a Web site of the government of Bangladesh http://www.bangladeshgov.org/reb/about_reb.htm.
- 32 Cumulative amount disbursed refers to the cumulative amount disbursed by the bank for all the years of its operation from 1976, when the bank started off by lending \$27 to 42 people in a village in Bangladesh. See <http://www.grameen-info.org/bank/lookbs.html>.
 - 33 During the 1990s, the advances through IRDP have fallen in India as a consequence of the financial liberalisation measures [Ramachandran and Swaminathan 2000, Chavan 2001]. For the sake of comparison, if we take the advances through IRDP in 1998-99, it was Rs 21,730 million at current prices (roughly equivalent to \$ 517 million), which formed about 16 per cent of the cumulative amount disbursed by Grameen Bank till 2000.
 - 34 Tracing common links from different countries, Osmani (1991) has highlighted the neglect of three types of matching that underlie the "basic economics of a massive self-employment programme". They are (1) matching between the structure of output and the existing or prospective pattern of demand for that output, produced by the supply of an asset; (2) matching between the structure and quantum of assets acquired by the household and its existing or prospective supply of assets; and (2) matching between the type of assets and the pre-existing resources of a household. The empirical evidence of such mismatches in implementation can be found in Swaminathan (1990). Regarding the first mismatch, she found that in West Bengal, IRDP schemes supplied too many cycle-rickshaws for the beneficiaries, while there existed an insufficient demand for their services. The IRDP schemes' failure to supply a sufficient number of high-yielding and cross-bred milch cattle to all, leading to supply of low quality breeds was an example of the second mismatch. As an example for the third mismatch, she found that households were given cattle and sheep, when they did not own or have access to any grazing land.
 - 35 See <http://www.nabard.org/roles/mcid/shglinkbank.htm>.
 - 36 Some examples of government agencies acting as a facilitator for the formation of SHGs are the District Rural Development Agency (DRDA) in Andhra Pradesh, by the District Women Development Agency (DWDA) in Rajasthan and zilla parishads in Karnataka. For details, see Jayaraman (2001, p 31-32).
 - 37 See <http://www.nabard.org/roles/mcid/shglinkbank.htm>.

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