

EVALUATION OF SMALL FARMER CREDIT PROGRAMME;
THE BANGLADESH CASE

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Why Small Farmer Credit?

The credit programme for the small farmer originated from the observation that lack of liquidity is a principal constraint to agricultural development. Over and above that needed for family consumption, the small farmer has very little surplus production which he can sell in the market for the purchase of agricultural inputs. Research at the micro-level shows that funds could be borrowed from informal lenders, but they charge usurious rates of interest.^{1/} Loans are also available from informal sources, against advanced sale of crops at prices much below the level prevailing in the market during the harvest. Payments for interest charges on such loans involve a major part of the current income of the small farmer, which depress his standard of living, make him perpetually indebted, and in some cases leading to alienation of land, which in turn contributes to growing landlessness (Jabbar et al, 1980). It is assumed that a well-designed credit programme providing low interest credit could drive away other informal lenders, and thus reduce rural poverty.

A second line of reasoning is that the highly skewed land distribution pattern prevents equitable distribution of the benefits of agricultural growth which is appropriated mostly by the rich. The 'trickling down' of the benefits to the poor through normal market mechanisms, experienced by present day developed countries, would either be insignificant or too slow to be politically acceptable considering the vast magnitude of absolute poverty and the urgency to reverse its upward trend (Ahmad, 1984). On the other hand, the farm management research undertaken in the Indian subcontinent since the late fifties shows that the small farmer produces more per acre of land than the large farmer. Obviously, if the small farmer could be supported by a cheap credit programme, the higher productivity on his farm would be transformed into increased income and greater purchasing power. In this sense small farmer credit is seen as an instrument of direct attack on rural poverty.

More recently, with the introduction of 'green revolution' technology, institutional credit has come to be recognised as an indispensable input for crop production. On traditional crops, the farmer used to supply most of the inputs from his family. The new crop varieties require large amounts of investment on purchased inputs, such as hybrid seeds bred on government farms, chemical fertilizers and controlled irrigation.^{2/} The small farmer cannot afford such large investments and hence cannot participate in the diffusion of the new technology as much as the large farmer. Thus, unless the small farmer is supported by cheap credit, the

^{1/} For Bangladesh the rate of interest is commonly reported at about 10 percent per month from such lenders.

^{2/} An estimate for Bangladesh for 1982/83 shows that the cost of production of high yielding rice is about Tk 4,000 per acre of land, compared to only Tk 1,200 for the main traditional rice crop. The difference in costs on account of modern agricultural inputs was even larger, Tk 2,100 per acre for the new crop compared to only Tk 550 for the traditional variety. (Hossain, 1985).

availability of new technology would gradually widen rural income disparity. Under the new technology, even the medium and large farmers would need institutional credit for making medium and long term investments in lumpy irrigation equipment and agricultural machinery, to exploit the full potentials of the new technology.

A recent phenomenon noted in many densely-populated LDCs is the growing involvement of the landless and near-landless in non-farm rural activities. Landlessness has been growing due to the increased pressure of population on the limited land and the sluggish growth of agricultural production. Unable to find employment on the land, the landless try to eke out a living by self-employing themselves in the processing, trading and service sectors. Since the new technology is limited mostly to the production of rice and wheat, the diffusion of the new technology has led to specialisation in agricultural production and consequently to an increase in the demand for trading and transport services.^{1/} More so than the rich, it is the landless and the small farmer who come forward to provide the trade and transport services, because of the inherent disadvantages of organising such activities on a large scale under circumstances of underdeveloped infrastructural facilities. Owing to the lack of resources, the poor non-farm operator also has to depend on the rural moneylenders for working capital, the interest on which involves a large proportion of potential income. Provision of institutional loans at reasonable terms and conditions to the land-poor could then support the growth of non-farm rural employment and improve their economic conditions.

Methodology of Evaluation

Considering the objectives of organising the small farmer credit programme mentioned above, the success of the programme should be evaluated by its impact on the growth of agricultural production and incomes on the small farms. In most LDCs, however, production accounts at the national level are not maintained separately by groups of farms, nor are the figures for the amount of credit disbursed. So, from the national levels statistics, it is difficult to measure the growth of output on small farms and more so to relate the growth to the supply of agricultural credit.

Some studies attempt to measure the impact of credit by using time series data relating the level of agricultural production to the supply of agricultural credit for the nation as a whole. Since both production and the supply of credit (particularly at the initial stage of development of the formal credit programme) grow with time, such studies often fail to (disassociate) the trend effect, producing spurious correlation. One may take a production function approach, taking credit as one of the major inputs into agricultural production and measuring the independent effect of credit, holding the contribution of other inputs constant. This

^{1/} The 1981 census of Bangladesh has shown an absolute decline in the agricultural labour force owing to rapid urbanisation, and nearly 10 percent per annum rate of growth of rural non-agricultural labour force.

approach would suffer from the problem of multicollinearity, since the provision of credit is meant to augment the supply of key agricultural inputs such as fertilizers and irrigation. One may use the time series data to relate the diffusion of modern agricultural inputs to the supply of credit. But the problem of spurious correlation would remain as it would be difficult to establish whether the same rate of growth of inputs would have been achieved without the supply of credit.

Owing to the above problems of assessing the impact of credit from macro-level data, evaluators often resort to micro-studies, looking at the access of the small farmers to the credit institutions and their share of total disbursements. Such studies also investigate the pattern of utilisation of credit to measure the extent to which the credit is utilised for the purpose it was provided for. But for small farms, producing mainly for subsistence, one can hardly distinguish between the effect of production and consumption loans. For example, if the small farmer had not received consumption loans to cover deficits in the family budget, he could have offered some family labour for sale in the market instead of applying it on his own farm, which would have had some negative effect on production.

The impact of credit could also be assessed through farm surveys, by comparing activities involving organisation of agricultural production for a sample of borrowers with that of the non-borrowers. A critique of this approach is that the farmers go through a selection process when they receive loans and hence the borrowers are not a random sample of all farmers. The recipients of credit may do better than the non-recipients, not because they have taken credit, but because they are innovative farmers, a measure of which is that they have come forward to take loans from the bank.

A proper assessment of the impact of credit can only be made through a carefully conducted farm survey of both borrower and non-borrower households, taking detailed information of their socio-economic background and the amount of land, labour and capital used and the output produced, and then measuring the contribution of credit using the production function approach. Such an exercise would, however, be very costly and time consuming.

In view of the weaknesses of the impact evaluation mentioned above, the rural finance experts often advise process evaluation, focussing more on the delivery mechanism of the credit programme and analysing the determinants of its success or failures (Adams, 1984). The investigation of the process can also shed light on why a credit programme performs poorly, which could lead to useful insights on remedial measures needed for improving its performance or, in the case of a successful programme, the conditions for its replication. The following are some of the major factors which influence the success or failure of a credit programme (Bathrick, 1981), and as such should be subjected to thorough investigation in evaluation research.

The effectiveness of the delivery system may partly depend on the institutional forms. To reach the small farmer efficiently, one may need to have a specialised credit institution to provide credit to groups or cooperatives rather than to individuals, and to have a decentralised

delivery system to avoid excessive paper work which lead to bureaucracy and untimely approval of loans or release of funds. In view of limited transport facilities, even a rural branch tends to be distant from the small farmer. The credit institutions should be sufficiently flexible to send its personnel to the village or even to the small farmer to make the necessary contacts.

The success of a credit programme may also depend on the leadership and the quality of personnel. The urban-bred highly educated may have limited ability or even willingness to serve the small farmer participants. So employment of such personnel may lead to the channeling of credit to large farmers with whom they feel at home. They may also find the work with large farmers easier because of the large size of individual loans. Credit institutions which employ rural-based and relatively less educated workers, recruited from the areas of operation of the project and trained on-the-job, may perform better in reaching the small farmer.

The organisational aspects, such as the procedures followed for approval of loans; communication and coordination with other agricultural development agencies; provision of extension service to the loanees regarding input deliveries and marketing of produce; nature and extent of participation of farmers in preparation of production plans for determining the credit needs; the mode of payment (payment in cash or kind, delivery at the branch or to the farmer, etc); and collection of repayments; development of the information system for constant monitoring of progress, may also be important determinants of the performance of a credit programme.

The capacity of a credit institution to expand would depend on the cost of operations, the interest rates charged on loans, and the promotion of rural savings through deposit mobilisation schemes. The transaction costs of credit for both the lender and the borrower would be partly determined by the organisational aspects mentioned above, but would also depend on the repayment performance. A common problem with agricultural credit programmes in the LCDCs is a very poor record of repayment and a high risk of bad debt which increases the cost of credit operations. The rate of repayment itself may depend on the organisational aspects. Duplicated loan disbursement procedures and centralised decision-making may be responsible for untimely distribution of credit, leading to its diversion to non-productive uses. The productive use of loans would depend on the extension service, the linkage of the credit programme with other agricultural support services and the mode of payment. Farmer participation with the credit institutions in preparing production plans could make follow-up supervision of repayment easier and maintenance of a strict repayment discipline. Close contact between the credit official and the loanee could dispel the popular notion that government loans are not for repayment or that it could be ultimately written-off.

While the cost of administrating small farmer credit is high, the governments of LDCs often follow a generally inflexible low interest rate policy for providing subsidies to the farmers through the credit programme, which may in turn be responsible for its poor performance (Adams, 1984). The low interest rate makes it difficult for the banks to cover their operating costs which induces them to reduce costs by making more

advances to a small number of large borrowers (large farmers) and distribution loan portfolios in favour of those who need less supervision, or even to divert loans to other high interest-earning portfolios. The availability of cheap credit may attract even financially solvent people to the credit institutions, who have the necessary influence and power to elbow out the needy small farmers.

The low interest rates may also adversely affect mobilisation of private savings with the result that rural financial institutions have to rely on government and foreign donors for loanable funds. It is argued that the availability of foreign aid on easy terms tends to depress the efforts to mobilise domestic resources. The same may be the case with the supply of undue cheap institutional credit. If the real rate of interest turn out to be negative, even the large farmer will turn to credit institutions to finance his investments, while spending the additional income on conspicuous consumption or for the acquisition of consumer durables. The small farmer who cannot afford to save will suffer in the process, since additional claims on the loanable fund on the part of the large farmer will reduce his share. The evaluation of a small farmer credit programme thus must look into the appropriateness of the rate of interest, from the point of view of both the lender (the cost of servicing the loan) and the loanee (the rate of return from investment).

The Bangladesh Experience with Agricultural Credit

Credit Institutions

Provision of institutional credit is a relatively recent phenomenon in Bangladesh. At times of natural calamities, such as floods, cyclones and droughts, the government distributes taccavi loans among farmers at a nominal rate of interest. These loans were aimed at basically providing relief and, as such, were largely unrecovered. The taccavi loans were discontinued in 1974 (Jamal, 1984).

The Bangladesh Samabaya Bank Limited (BSBL) set up for the development of the cooperative movement during British rule, is the oldest agency in charge of the distribution of credit to primary cooperative societies. The Bangladesh Krishi Bank (BKB) was established in 1961 as a specialised credit institution to support agricultural development programmes in the country. The next development in this field was in 1971, when the Integrated Rural Development Programme (IRDP) was undertaken to replicate the Comilla model of agricultural development throughout the country. The IRDP, presently known as the Bangladesh Rural Development Board (BRDB), distributes credit to affiliated cooperatives societies through the Thana Central Cooperative Association (TCCA). The Nationalised Commercial Banks (NCBs) also took up the responsibility of distributing agricultural credit when they started expanding operations in rural areas beginning in the early seventies. They have stepped-up their agricultural lending programme considerably since 1977, when a Special Agricultural Credit Programme (SACP) was introduced by the government. In 1983, the Grameen Bank was established as a specialised credit institution to provide loans to the rural poor.

About 3,224 rural branches of these banks were in operation during 1983/84 for providing credit, serving on the average about 20 villages per

branch (Rahman, 1984). The BKB, however, remains the major lending agency, providing about 58 percent of the total loans disbursed in 1980/81, followed by the NCBs which distributed 26 percent (GOB/IDA, 1983).

Organisation of Credit

Agricultural lending is carried out under two separate programmes:

- (i) the normal programme, which provides all types of credit - short, medium and long term - and covers all rural sectors; and
- (ii) the Special Agricultural Credit Programme (SACP) introduced in 1977 for providing short-term crop loans. Short-term credit now accounts for more than three-fourths of total institutional loans (GOB/IDA, 1983).

During the period 1980-83, short-term crop production loans were given at an interest rate of 12 percent per annum (Jamal, 1984). For other loans, the rate of interest varied from 13 to 14.5 percent per annum depending on purpose. The IRDP charges an additional 5.5 percent per annum to its members for servicing the loan. In 1983, the rate of interest was raised to 15 percent following the recommendations of the joint review by the Government of Bangladesh and the World Bank (GOB/DA, 1983).

Credit is generally advanced against the security of land. Recently the security requirement for agricultural credit has been rationalised. Short term loans are now extended to farmers against hypothecation of crops. SCAP credit is extended on the recommendation of a local government leader serving as a guarantee. This has facilitated the extension of credit services to sharecroppers who own little land. The BKB now provides part of the loan in kind in the form of fertilizers.

Trend in Supply

The trend in the supply of institutional credit over period 1970/71 to 1983/84 can be seen from Table 1. The supply was insignificant before Independence, but within three years it increased threefold and the rate of growth has accelerated since the mid-seventies. Over the period 1977-84, the supply of credit increased by about 36 percent per annum in nominal terms and about 20 percent in real terms, after discounting the increase in the price of agricultural inputs. The real value of credit at 1975/76 constant prices, increased from Tk 40 per acre of cropped land in 1977/78 to Tk 114 in 1983/84. However, the supply of credit may still be considered low in relation to needs. The disbursement per acre in 1982/83 was only about 12 percent of production costs of cereals, and about 40 percent of the cost of material inputs. (Hossain, 1985).

Impact on production

No indepth evaluation of the impact of the credit programme on agricultural production is available for Bangladesh. An attempt was made

Table 1

Trend in the Supply of Agricultural Credit from
Institutional Sources, 1970-84

Period	Amount of Credit Disbursed (million Tk)		Real Value of Credit (At 1975/76 Prices)	
	At Current Prices	At Constant 1975/76 Prices	Per Acre of Sown Area	Per Acre of HYV Area
1970-71	153	414	13	364
1973-74	307	435	15	112
1975-76	467	467	15	114
1977-78	1569	1257	40	300
1979-80	2821	1616	51	271
1980-81	3734	1797	55	263
1981-82	4238	1815	56	259
1982-83	6788	2792	85	371
1983-84	10087	3772	114	484

Sources: M. Hossain (1985), Table 13.

by the author (Hossain, 1984) to estimate the impact on foodgrain production by fitting a regression equation of the following form on the time series data for 1969/70 to 1983/84 period: ^{1/}

$$Y = (A, I, F, C)$$

where Y = Production of foodgrains ('000 tons)

A = Cropped area under foodgrains ('000 acres)

I = Area under modern irrigation ('000 acres)

F = Sale of fertilizer ('000 tons)

C = Disbursement of credit (million Tk at constant 1975/76 prices).

^{1/} The weakness of this methodology has been mentioned in the previous section.

An important production determinant would be the supply of labour, but owing to the lack of information, this variable could not be incorporated in the equation. Their results are the following:

$$(i) \quad Y = 10064 + 0.811A + 0.283I + 2.38F - .0763 C$$

(4.9) (0.69) (2.08) (-0.41)

$$(ii) \quad Y = 12320 + 0.913A + 0.643I + 0.203C$$

(5.0) (1.5) (0.97)

$$R^2 = 0.95 \quad F = 69.4$$

The figures within parentheses are estimated 't' values. Since the impact of credit on production would come through its effect on the use of inputs, equation (ii) is more appropriate for the present purpose. The regression coefficient in this equation shows a positive relationship between the supply of credit and foodgrain production, but the coefficient is not statistically significant, indicating a weak relationship.

The impact of credit on growth of fertilizer consumption is shown by the following relationship estimated from the same data:

$$F + 159 + .0873 C + 46.3 T \quad R^2 = 0.95$$

(2.12) (4.61) F = 98.9

where T is time and F and C are fertilizer consumption and supply of credit, measures as before. The coefficient of credit is found positive and statistically significant. The value of the coefficient, however, indicates that Tk 1,000 additional disbursement of credit leads to an increase in fertilizer consumption by .087 tons, valued at Tk 126 at 1975/76 prices. This means that only about 13 percent of the credit is used for purchasing fertilizers.

The limited contribution of credit on the growth of fertilizer consumption and foodgrain output is also supported by the findings of a comprehensive farm survey jointly conducted by the Bangladesh Agricultural Research Council and the International Fertilizer Development Center (BARC/IFDC: 1982, 1984). The survey covered 2,400 sample farms in 117 villages from 20 upazillas scattered throughout the country in 16 of 21 districts (old) for the period 1979/80 to 1981/82. The survey found that only 14 percent of households received credit during 1979/80, and the proportion fell to 11 percent in 1981/82. The amount of credit received per acre of land, however, increased from Tk 102 to Tk 141, indicating a trend towards the concentration of credit in few hands. Another micro-survey conducted by the BIDS in two villages in the Dhaka districts (Quasem 1979, Hossain 1985) found that about a fourth of the cost of agricultural production on account of fertilizers was financed with institutional credit in 1977/78 and that it fell to 15 percent in 1983/84.

The findings of various micro-surveys also indicate that the contribution of credit in raising production on small farms is even less. All these studies show very little access of small farmers to the credit institutions. The IFCS/BARC survey, for example, noted that during the 1981/82 boro season, only 1.2 percent of farmers owning up to 1.0 acres of

land received credit from institutional sources, compared to 7.7 and 7.2 percent for the medium (owning 2.5 - 5.0 acres) and large (over 5.0 acres) farmers. The amount of credit received per acre of land was Tk 13 for the first group, compared to Tk 91 and Tk 84 for the medium and large farms. There was a similar picture for other crop seasons. The joint review of agricultural credit conducted by the Government of Bangladesh and the World Bank also notes that most of the benefits of agricultural credit go to farmers owning three to nine acres of land. The share of different groups of farmers in the loans disbursed by the BKB, according to the BKJB's own records, will be seen from Table 2. The small farmers comprised 60 percent of BKBN's borrowers during 1975/76, but their number fell to 56 percent by 1980/81; their share of total credit fell even faster, from 55 percent in 1975/76 to 32 percent in 1980/81. On the other hand, the share of farmers with holdings about 12.5 acres increased from 5 percent in 1975/76 to about 20 percent in 1980/81. These figures also show that agricultural credit is being increasingly concentrated in the hands of the large farmers.

Table 2

The Pattern of Distribution of BKJB Credit,
by Size of Farms, 1975/76 - 1980/81

(Figures in % of total)

Size of Holding (acres)	Percent of Credit Recipients			Percent Share of Total Credit		
	1975/76	1978/79	1980/81	1975/76	1978/79	1980/81
0.5-2.5	60.4	52.2	56.0	54.7	42.7	32.1
2.51-7.5	29.9	36.8	33.7	27.6	30.3	31.3
7.54-12.5	7.9	9.3	8.7	13.1	13.8	16.5
12.51 & above	1.8	1.7	1.6	4.6	13.2	20.1

Source: Bangladesh Bureau of Statistics: Statistical Year-book 1981

Factors Behind the Poor Performance

An important feature of the agricultural credit programme in Bangladesh, as in many other LDCs, is a very poor recovery performance. The findings of the joint GOB/IDA credit review on the recover/demand ratios for agricultural lending for the 1979/80 to 1981/82 period are reported in Table 3. The recovery ratio is better for credit disbursed under the Normal Programme (NP) than for short-term crop loans distributed under the SACP. But even under the NP, the recovery ratio never exceeded 74 percent. For the SACP, the highest recovery ratio is found at 38 percent. The figures also show that the recovery performance deteriorated over time for both credit programmes.

Table 3

Loan Recovery Performance, by Institution and Programme
1979/80 to 1981/82

(Recovery as % of Demand)

<u>Normal Programme</u>	<u>Krishi Bank</u>	<u>Commercial Banks</u>
1979/80	49	74
1980/81	68	61
1981/82	68	41
<u>Special Agricultural Credit Programme (Crop Loan)</u>		
1979/80	36	38
1980/81	32	32
1981/82	30	35

Source: Joint GOB/IDA Credit Review, Annex III, p. 12.

An age analysis of the overdue loans is shown in Table 4. It will be noted that about 32 percent of the overdue loans under the normal programme remained unpaid for more than five years, and thus may be regarded as irrecoverable. For the SACP crop loans, which were started late (1977), about one-fourth of the amount in 1981/82 was overdue for more than three years.

Table 4

An Age Analysis of Overdue Loans, by Programme 1981/82
(Figures in percent of total overdue loans)

<u>Age of Overdue</u>	<u>Normal Programme Credit</u>	<u>SACP Crop Loans</u>
Up to 1 year	21	22
1-2 years	25	36
2-3 years	12	18
3-5 years	11	18
over 5 years	31	6

Source: Joint GOB/IDA Agricultural Credit Review, Annex III
p. 14

The poor recovery performance not only reduces the availability of loanable funds for expansion of credit, but leads to the practice of loan rescheduling, known as papar transactions. In order to hide the poor recovery record, credit officials often issue a new loan, equivalent to the amount of principal and the interest due against the old loan. Thus, part of the loans disbursed every year are in fact used for repayment of old loans, thereby reducing the effectiveness of credit in financing investments.

A major factor behind the low recovery rate is reported to be the complicated loan sanction procedures and the excessive time taken between filing of a loan application and its actual disbursement (GOB/IDA, 1983). This problem is due to the lack of decentralisation in the loan sanction process and low limits on the authority of field staff to approve loans. It creates problems, particularly for the short-term crop loans, which are often disbursed late when investments in fertilizer, irrigation, etc., for the crop have already been made. This leads to the diversion of credit to non-agricultural investment or even to consumption activities, depressing the repayment capacity of the loanee.

The local bank official in Bangladesh often claims an illegal 'service charge' on the loan, the current rates vary between 10-15 percent of the loan amount. The loanee agrees to provide the charge because its payment helps reduce bureaucracy which lowers his transaction cost of the loan, estimated by some at about 18 percent (Jamal, 1984). Payment of the bribe, however, gives the impression to the loanee that the loan is not to be repaid, and hence leads to laxity in the credit discipline.

The multi-agency credit system is also partly responsible for the poor recovery of loans. A number of lending agencies often work in the same area without proper coordination among themselves. This induces high default rates, because when there is pressure on the loanee to repay the loan he can take credit from one institution to repay the loan to the other.

The low real rate of interest is often held responsible, particularly by international aid agencies, for the poor recovery performance as well as for the failure of the lending agencies to reach the small farmer. Until recently, the rate of interest varied between 12-13 percent, against a rate of inflation of about 10 percent per annum, and the cost of servicing credit at about 19 percent for small size loans (GOB/IDA, 1983). The loss on the part of the lender provides incentives to give loans to a few large borrowers so that the service cost is reduced. The low effective rates of interest attract even the financially solvent large farmers to the credit institutions, thereby reducing the share of the small farmers. The low rate of interest also encourages diversion of loans to unproductive ventures. It also indirectly contributes to the payment of illegal service charges. The USAID have recently conducted an experiment with the credit delivery mechanism, distributing credit through different agencies at varying rates of interest. The results show that the disbursement and recovery

of credit was better under the high interest (30-35 percent per annum) delivery system (Bangladesh Bank/USAID, 1982).

The Government and most development thinkers in Bangladesh, however, support the low-interest rate policy. They view it as one of the rare means of providing subsidies to the small farmers and reducing the rural-urban disparity created by the urban-bias in the resource allocation pattern.

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