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AGRICULTURAL CREDIT REFORM IN BA NGLADESH: LESSONS LEARNED FROM A PILOT PROJECT[*]

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ABSTRACT

Subsidized interest rate policy has been identified as the major pitfall of the past credit programmes. Findings of a pilot project has been reported to illustrate the viability of charging higher commercial, even if not real, terse of interest and mobilizing private savings in rural financial markets.

INTRODUCTION

Providing access to credit has long been a key component of assistance programmes seeking to modernize agriculture in developing nations. Donors have invested an estimated $5 billion in rural financial market (RFM) projects over the last several decades (Adams and Graham 1981). Developing countries too have committed substantial resources to expanding agricultural credit. Traditionally, these programmes have featured subsidized credit with concessionary interest rates as their basic tenent for encouraging agricultural modernization and confronting the causes of rural poverty. Cheap credit policies have often yielded negative real rates of `interest, undermined the potentials for mobilizing rural savings, and misallocated credit resources (Adams and Graham 1981).

This note reports the results of a pilot rural finance project in Bangladesh that was designed to test the acceptability among farmers of loans with nonsubsidized interest

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...Peripherally, it also measured rural resident response to savings options with higher interest payments. A brief overview of rural credit in Bangladesh is presented in the next section followed by a summary of the outcome of the pilot project. Conclusions and implications of the experience are considered in the final section.

THE CASE OF BANGLADESH

Bangladesh has been subjected to most of the low-cost credit approaches in vogue during the last several decades. Between 1976 and 1982, total disbursements for agricultural credit amounted to an estimated $ 600 million (Antholt and Wennergren 1983). Most of these funds and the related credit programmes have come from donors, led principally by the World Bank, the Asian Development Bank, and the Agency for International Development (AID).

The urgent need to increase agricultural output has motivated this considerable effort. Bangladesh is one of the world's most densely populated countries, with a population of about 92 million, 86 percent of whom reside in rural areas. An annual population growth of about 2.5 percent keeps an incessant pressure on the limited land base and intensifies the demand for greater food production. Farmers are responding with multiple-cropping and are currently cultivating at an average land-use intensity of about 155 percent. Low average per capita incomes and extensive illiteracy and poverty exacerbate an already difficult situation. In addition, Bangladesh is highly dependent on external sources to provide public investment funds. In 1982, donor assistance approximated 68 percent of the amount allocated by the Government of Bangladesh (BDG) to development programmes (Wennergren, Antholt and Whitaker 1984).

The formal agricultural credit system is under the overall guidance of the Bangladesh Bank (BB). Agricultural credit is provided by the Bangladesh Krishi Bank (BKB), six nationalized commercial banks (NCBs), and the Bangladesh Samabaya Bank Limited (BSBL) which serves as an apex federation of sixty three subdivision-based Central Cooperative Banks (CCBs). Additionally, 400 Thana Central Cooperative Associations (TCAAs), which lend through village-based cooperatives are financed by the Sonali Bank, an NCB. In 1982, 4,470 bank branches of all classifications were in operation. New agricultural loans during that year totaled Tk. 4.0 billion (U.S. $180 million) (World Bank 1983). The volume of agricultural loans is a fairly minor part of the total formal credit. Furthermore, the amount of agricultural credit reportedly loaned in 1982 represented only 4 percent of the Gross Domestic Product for agriculture. By comparison, disbursal of new agricultural loans in Honduras was as high as 27 percent of the nation's agricultural product during 1951-79 (USAID 1983).

Past credit programmes in Bangladesh have featured subsidized interest rates as one policy response to stimulate agricultural output. Excess demand has developed for

credit at these low interest rates. Much of the excess demand has come from nonagricultural borrowers who have been able to access the agricultural credit and divert it to nonagricultural investment. Donors have responded with loan restrictions to target the money to agricultural groups within the sector which have simultaneously increased both the administrative complexity of the process and the misallocation of credit resources. Higher loan transaction costs for both lenders and borrowers have limited the availability of credit from agricultural banks, and farmers have continued to turn to informal sources, such as local moneylenders who charge significantly higher rates of interest, rather than accept the long delays and administrative obstructions inherent in formal lending institutions (Church and Adams 1979). Estimates vary, but one survey found that 45 percent of the total amount borrowed by farmers in Bangladesh came from noninstitutional sources and among the smallest farmers who have less than 1.5 acres, as high as 85 percent was borrowed from informal lenders. Annual interest rates from informal sources reported in the survey typically averaged over 100 percent (Ministry of Land Administration 1981).

Perhaps, most importantly, the subsidized credit policies of the BDG have played a major role in rendering the formal agricultural credit system incapable of economic viability. Low loan recovery rates and high administrative costs, in combination with the low interest rates on loans, have contributed to rather widespread insolvency. Continual infusions of funds from the BDG and donors have been needed to insure continuation of the formal credit system. Management and personnel incentive deficiencies have added to the problem by limiting the recovery rates on outstanding loans,

The subsidized credit policy appears to have blunted the mobilizing of domestic resources through savings. The commonly accepted thinking has been that extensive savings cannot be voluntarily generated in rural areas. The underlying assumption is that rural people have no margin to save and will not respond significantly to the earnings potential associated with interest-bearing savings. By maintaining this orientation and policy stance toward rural financial institutions, the BDG has not taken advantage of the forces that drive financial markets. Because subsidy has replaced profitability as a focus, banks have not been motivated to effectively manage their loan portfolios to meet savings, interest obligations and administrative costs. Thus, they obviate the process that would permit private investment to replace public resources as a support for a portion of the nation's development efforts.

THE EXPERIMENTAL PROJECT[1]

In 1977, USAID and the BDG agreed to initiate a pilot Rural Finance Experimental Project (RFEP). The project was for three years at a total cost of about $7.0 million. The purpose of the RFEP was to identify one or more rural financial systems that would satisfy the needs of rural producers not then being met by institutional credit sources.

nine rural banks, testing eight different credit delivery and savings systems, participated in the nationwide project. In all, ninety-eight branch banks throughout the country cooperated. The project focused on a target group defined as rural dwellers owning two acres of land or less with an annual gross cash income of Tk 6,000 or less.[2] A number of policy and organizational variables were tested, but credit interest rates received the greatest emphasis. The organizational models varied among the banks. Interest rates on loans to farmers were set at 12, 18, 24, 30, and 36 percent and corresponding saving rates at 1.0 percent intervals from 11 to 15 percent. Each of the nine banks tested some combination of interest and saving rates by allocating different groupings among their branches. Both interest and saving rates were fixed throughout the project and were not adjusted for the annual inflation rate of about 16 percent.

The anticipated test of savings propensity among rural dwellers was biased somewhat by unforeseen factors in the project. First, bankers were reluctant to accumulate deposits (at high savings rates) so that they could not profitably lend later at lower, non project rates. Secondly, and perhaps of greatest importance, the project design had inadvertently built-in a powerful incentive system via a rediscounting procedure that rewarded banks more for lending and loan recovery than for savings mobilization. Furthermore, the savings rates were less than the rate of inflation and did not reflect a positive real rate of interest. The project, therefore, did not constitute a totally valid test of savings capacities in the rural areas. But the results of the project were, nonetheless, strongly indicative of the potentials for mobilizing rural resources.

PROJECT RESULTS

Field operations of the experimental project ended in March 1982 after producing several results of considerable importance to programmes concerned with rural financial markets in Bangladesh. The results of the pilot study also corroborate many of those reported from a similar project in Peru during 1980-81 (Vogel 1981).

Credit Usage

Within the project, credit reached a substantial portion of the targeted group (Table 1). During the study, 42,219 families (about 51 percent of all target group households) obtained 72,188 loans which represented Tk. 119.0 million. The loans averaged Tk. 1,645 each and Tk. 2,813 per family. Prior to the RFEP, only 4 percent of the households within the target group had received credit from formal institutions. Of the total amount loaned, 85 percent was paid back on time. The range of overdues among banks was from 4 percent to 49 percent. Eight of the nine banks, however, had fewer than 22 percent overdues. The average for these eight banks was about 12 percent. This compares to a normal overdue rate on rural loans which nationally runs as high as 60 percent and averages about 37 percent (World Bank 1981).

TABLE 1. SUMMARY OF RURAL FINANCE EXPERIMENTAL PROJECT 1978-81, BANGLADESH

Name of Bank	Out-lets[1] (No.)	Loans (No.)	Bor-rowers (No.)	Borrowers to Total Target Group Households[2] (%)	Total Taka Loaned (000)	Total Taka Saving (000)	Savings to Loan Outstanding (%)	Admin. Cost per Loan Disburse-ment[3] (Taka)	Overdues as of Due Date (%)	Profit or Loss[4] (%)
KRISHI	16	24,794	15,648	65	43,939	3,809	14	75	11	8
SONALI	10	10,384	6,932	67	20,493	1,442	11	50	19	5
JANATA	12	4,129	2,467	43	7,744	1,101	22	99	15	(3)
AGRANI	11	9,264	4,216	43	12,543	1,645	35	79	4	3
PUBALI	4	4,420	2,429	40	6,578	134	4	179	21	(8)
RUPALI	7	4,744	2,799	48	7,354	1,251	29	110	6	7
UTTARA	5	1,380	917	47	1,727	90	12	469	12	(14)
IRDP	14	8,703	5,569	61	9,239	483	11	43	10	5
BSBL	19	4,370	3,232	24	9,175	177	3	130	49	(9)
Total/Average	98	72,188	42,219	51	118,782	10,132	15	83	15	3

SOURCE : Public Service Administration (1982) : "Rural Finance Experimental Project--Terminal Evaluation Report." Agency for International Development, Dhaka, August.

NOTE : The average exchange rate for the period was about Tk. 16.0=U. S. $ 1.00.

1. Data are based on ninety-eight outlets; however, ten outlets have been dropped, leaving eighty-eight active outlets as of March 31, 1983. Dropped outlets are : Krishi—1, Janata—1, Agrani—2, and BSBL—6.
2. All operating outlets only.
3. For the twelve months 4/81 through 3/82.
4. IRDP= Integrated Rural Development Programme (cooperative) ; BSBL=Bangladesh Samabaya Bank Limited.

There are some dangers in "before" and "after" comparisons of this type, since variables that might contribute to changes were not controlled. Some changes may have occurred during the four years of the project even without its stimulas. Still, the results are sufficiently impressive to give confidence that the project outcomes exceeded the normal level of change. For example, the low default level on loans recorded during the project was likely influenced a great deal by the requirement that entitlement to additional loans was predicated on repayment of prior loans. The ratio of number-of-loans-to-borrowers was 1.7, which suggests that about 30,000 borrowers took more than one loan. Since an estimated 85 percent of the loans went to the targeted group, this means that those with less than Tk. 6,000 annual cash income or two acres of land borrowed and repaid most of their loan obligations, even at the higher rates of interest. Of the borrowers, 4 percent were women. About 50 percent of the women were repeat borrowers.

Active borrowing and lending occurred for all levels of interest charged during the project (Table 2). The percentage of loan funds utilized by agriculturalists decreased slightly as interest rates increased. Still, more funds went to agricultural than to nonagricultural uses up to the 30 percent interest level. At 36 percent interest, nonagricultural loans prevailed. Within agriculture, the majority of funds were used for noncrop items

TABLE 2. PERCENTAGE OF BORROWING BY STATED LOAN PURPOSE AT VARIOUS RATES OF INTEREST, 1978-81, BANGLADESH

Rate of Interest	Agriculture			Total Non-agriculture	Total Loans
	Crops	Others	Total		
			Percentage		
12	19	50	69	31	100
18	25	43	67	33	100
24	24	42	66	34	100
30	28	28	57	43	100
36	16	21	37	63	100
Average	23	38	61	39	100

Source : Public Service Administration (1982) : "Rural Fianance Experimental Project—Terminal Evaluation Report." Agency for International Development, Dhaka, August.

at all levels of interest. The most common uses cited on loan applications were for animal draft power, beef fattening, rice husking, transplant aman rice, HYV boro rice, milk cows, small grocery trading, broadcast aus rice, rickshaws, and goat/sheep rearing. Among women borrowers, about 90 percent of the loans were for agricultural postharvest purposes, mostly for purchasing paddy rice for husking and, in some cases, for subsequent processing into puffed rice. A high degree of fungibility was likely as loan funds were often added to the families' resources and managed to meet a variety of needs, which might not always have been those indicated on the loan applications.

Group Lending

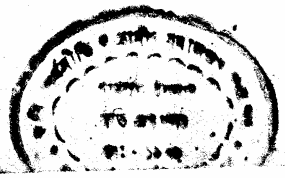
Lending to groups was tested for its potential as a means to reduce lender loan transaction costs and increase loan officer and overall administrative productivity. The results were not as expected. Group lending was less effective than individual loans in reaching the target group and did not lead to higher loan officer productivity. Furthermore, loan administration for groups had costs that averaged 16 percent per borrower higher than for individuals, and required considerably more time in arranging credit for borrowers. The group approach produced a poorer repayment performance, and it did not lead to higher savings rates. The principal drawback with group lending revolved around the difficulty of developing cohesive, homogeneous loan groups. The fact that individualism and not group organization most commonly prevail as a way of life in Bangladesh may explain much of this aversion to group action in borrowing. Other important deterrents, however, included inadequately trained bank staffs to deal with the special needs of group lending, and the generally negative attitude of the bank staff toward this approach.

Bank Profitability

The administrative costs of participating banks in the RFEP varied from Tk. 43 to Tk. 469 per loan (Table 1). When these costs were combined with those of capital and reserves for bad debts, the interest rates necessary to meet all operational costs ranged between 14 and 41 percent among banks. Five of the banks, however, met their total expenses with 24 percent interest, and only one of the banks was unable to recover all of its operational costs at 36 percent. The profitable banks were identified with high loan volumes and low overdues which, traditionally, are sings of good bank management.

Savings Mobilization

Despite the failure of the RFEP to emphasize savings mobilization, rural residents did respond to the higher interest offered at the banks (Table 1). In total, Tk. 10.0 million were placed in savings during the project which averaged 15 percent of outstanding loans. Across banks, the ratio of savings to loans ranged from 3 percent to 35 percent.



The Agrani Bank had 35 percent of its outstanding loans in deposits, while Rupali Bank had 29 percent and Janata Bank 22 percent. In one instance, 70 percent of the outstanding loans of three older branches of the Rupali Bank were financed by savings and without any type of savings promotion activities. The only savings promotion exerted by any bank during the project was by the Krishi Bank about midway through the project, and it produced impressive results. Krishi ended the project with savings more than double those of any other bank, even though its ratio of savings to loans was reduced due to a large increase in loan volume.

A majority of the savings came from nontarget groups in the project area. But it is significant that 42 percent of the total savings were mobilized from the target families. The average size of deposits by nontarget savers was Tk. 1,058, while the target group averaged only Tk. 125. Overall, it was estimated that 42 percent of the target group households made savings deposits during the project, while 44 percent of the nontarget households within the project area did likewise. Before the RFEP, only 11 percent of target group households and 32 percent of the nontargeted households had bank savings. Since savings options at lower rates of interest were available prior to the RFEP and since there were no significant improvements in per capita income during the project, it seems most likely that the higher savings were mostly a response to the more favourable savings options. The greater participation by the nontarget groups points to the higher potential for mobilizing credit [illegible] especially when slightly more than 50 percent of the group, who did not save during the [illegible] eligible prospects for future credit mobilization efforts.

It also is noteworthy that among the target group, savers were not particularly sensitive to the small differences in savings interest rates paid on their small deposits. More savings were mobilized at 11 percent than at the higher rates. However, among nontarget savers, the size of deposits was, on average, four times larger at 14 to 15 percent interest than at 11 to 12 percent. It should be noted too that with a general inflation trend of around 16 percent, none of the savings rates were positive real rates of interest.

Transaction Costs

One other interesting result from the RFEP was the implicit demonstration that transaction costs for borrowers could be reduced by easing the administrative process. It has been argued elsewhere that transaction costs to individuals interact with interest levels on loans in determining both borrower preferences and credit market shares between formal and informal lenders (Ladman 1981). Unfortunately, the RFEP provided no preproject baseline from which to assess changes in transaction costs. However, as suggested earlier, there has been widespread criticism of BDG credit institutions for the inordinate delays associated with loan processing. By comparison with such qualitative characterizations, the record of the RFEP was impressive. Loans were obtained

by 68 percent of the individual applicants in one week or less, and 84 percent received loans within two weeks. As high as 74 percent received their loans by making no more than two trips to the bank. Those seeking group loans, however, experienced much greater delays. Only about 30 percent of group loans were completed in less than two weeks. Reduction in the transaction costs was attributable in significant part to the decentralization of loan approval authority to branch officials and to simplifying the application form and making it available free of charge.

IMPLICATIONS AND CONCLUSIONS

While some problems existed in the design and implementation of the RFEP, our conclusion is that its results provide additional evidence to the growing developmental literature worldwide that is calling into question the past subsidized agricultural credit policies in LDCs. Bangladesh is among the poorest nations of the world, yet the pilot test has illustrated the viability of charging higher commercial (even if not real) rates of interest and mobilizing private savings in rural financial markets. Credit was demanded and generally repaid at relatively higher interest rates than has normally been found in agricultural credit programmes, implying that access to credit at these rates was advantageous when compared with the options offered by informal credit sources. Savings were generated at all levels of interest offered, and administrative reforms cut transaction costs to borrowers. Furthermore, many of the individual bank branches became financially viable when given the chance to operate within reasonable commercial options. These results occurred despite substantial builtin disincentives for bank managers to encourage individual savings and virtually no promotion efforts to bring the merits of the savings option to the attention of rural residents. We strongly believe that the RFEP has exposed only a portion of the private resource potential that could be mobilized in rural areas by more enlightened public awareness and interest rate policies in Bangladesh. Also, the potential impact of a viable credit system that is free of BDG subsidy, that prices credit more nearly at its scarcity value in production, and that makes credit available to producers at interest rates below those of informal markets is seen as highly complementary to the overall strategy to modernize agriculture.

Notes

1. The following description of the project and the reporting of project results are taken exclusively from the Terminal Evaluation Report (Public Administration Service 1982). Specific footnote references for individual findings are not provided.

2. Figures are quoted throughout the study in Taka. The exchange rate from 1978-1981 averaged about Tk. 16.0 per U.S. $ 1, although the rate was rising slightly throughout the period.

REFERENCES

Dale W., and Douglas H. Graham (1981) : "A Critique of Traditional Agricultural Credit Projects and Policies". *Journal of Development Economics*, 8.

Charles H., and E. Boyd Wennergren (1983) : "Fertilizer Marketing in Bangladesh : Toward Privatization." Paper presented for Workshop on the Private Sector in the Developing World, Washington, D.C., April.

Phillip E., and Gary D. Adams (1979) : "Experimental Approaches to Rural Credit", in *Problems and Issues of Agricultural Credit and Rural Finance*. Dhaka : Bangladesh Bank, September.

Jerry R. (1981) : "Loan Transaction Costs, Credit Rationing, and Market Structure : The Case of Bolivia." Discussion Paper No. 7—revised version. *Colloquium on Rural Finance* (September 1-3). Washington, D.C. : World Bank.

Ministry of Land Administration and Land Reforms (1981) : *The Study for the Development of Future Land Policy and Land Reform Measures in Bangladesh*, 1978-79. Dhaka : Government of Bangladesh, November.

Public Administration Service (1982) : *Rural Finance Experimental Project—Terminal Evaluation Report*. Dhaka : USAID, August.

USAID (1983) : *Project Paper, Rural Finance Project*. Dhaka : Bangladesh, April.

Vogel, Robert C. (1981) : "Savings Mobilization : The Forgotten Half of Rural Finance." Discussion Paper No. 6. *Colloquium on Rural Finance* (September 1-3). Washington, D.C. : World Bank.

Wennergren, E. Boyd, Charles H. Antholt, and Morris D. Whitaker (1984) : *Agricultural Development in Bangladesh*. Boulder, Colorado : Westview Press.

World Bank (1981) : *Agricultural Credit in Bangladesh*. Report No. 3309-BD. Dhaka : September 29,

(1983) : *Recent Economic Trends and Medium-Term Development Issues*. Report No. 7277-BD. Dhaka : March 4.