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# CREDIT FLOWING FROM THE POOR TO THE RICH: THE FINANCIAL MARKET AND THE ROLE OF THE GRAMEEN BANK IN RURAL BANGLADESH

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## I. INTRODUCTION

The main purpose of this article is to challenge the conventional view that informal credit in rural Bangladesh flows basically from the rich to the poor. On the contrary, from recent village studies there is evidence indicating a reversed credit flow from the poor to the rich. The reliability of this "surprising" finding will be examined, followed by a discussion of its characteristics and meaning. Here two major points will be discussed. First, an attempt will be made to verify that the phenomenon of reversed credit flow arose basically from the trickle down effects of the Green Revolution, which was strengthened by the development of off-farm job opportunities in rural areas. Second, a challenge will be leveled at the conventional view that innovating micro-credit such as that issued through the Grameen Bank (GB), is (should be) invested in self-employed micro-enterprises so that (weekly) repayments can be made from the labor income and/or profits from that enterprise. Instead, it will be argued like Rutherford (1998) and Itō (1999), that micro-credit plays basically a role of "advances for savings" for the poor, particularly for those with fairly regular income sources. In other words, the rural poor in Bangladesh today can afford (and are willing) to save a large of their income, thus causing the observed reversed credit flow. Furthermore, micro-credit programs can help to alleviate poverty mainly by encouraging such savings behavior by the rural poor. It will also be pointed out that the "poorest of the poor" tend to be excluded not only from the lending poor in the reversed credit flow from the poor to the rich, but also from micro-credit programs, because they have no stable income sources to save from.

This article tries to verify the existence of the reversed credit flow from the study of only two villages, but it should be emphasized that other research results, Suda (1991) and Toyota (1999) are among them,[1] also supporting the findings. Although

[1] Suda was the earliest researcher to point out reversed credit flow in a Comilla village, but his observations were not based on systematically collected data. Toyota verified rigorously the existence of the alleged phenomenon in a village also in Comilla. Using the wealth ranking method, he

more research is necessary to examine this important issue further, my convictions are strong, and if the argument is true, it may have profound implications for more successful implementation of micro-credit (or micro-finance) programs not only in Bangladesh but also in other developing countries where GB-type programs are being introduced.

Section II of this article will present data from an intensive field survey in two villages in Bangladesh which supports the existence of reversed credit flow from the poor to the rich in the rural informal financial market, then a discussion of its robustness, hypothesized causes, and implications follows. Section III analyzes the role of GB intervention in the surveyed villages by identifying the members and how they actually utilized loans from GB. It also illustrates the mechanism used by GB to alleviate poverty and sheds light on possible limitations of GB. Finally, Section IV will summarize the argument and discuss on policy implications.

## II. THE FINANCIAL MARKET

### A. *Characteristics of the Surveyed Villages*

Figure 1 illustrates the locations of two villages where we conducted an intensive survey during 1992–94.[2]

Village D belongs to Kalihati *thana*, Tangail District, while village A is in Sherpur *thana*, Bogra District. It takes two and a half hours by vehicle to reach the entrance point along the main road to village D from Dhaka, the capital city of Bangladesh and six to seven hours[3] to reach the entrance to village A. A thirty-minute walk was necessary to reach village D from the entrance point, while nearly two hours[4] was required to walk into village A.

At the time of the baseline survey conducted from June to August 1992, there were 538 households in village D with a population of 2,665, and 209 households in village A with a population of 906. While village D was located in a vast floodplain, where deepwater *aman*[5] rice and *rabi* crops[6] dominate productions until re-

also emphasized that the extreme poor should be excluded when talking about reversed credit flow, but he did not conduct any in-depth analysis of the structure of informal financial markets.

[2] The survey was conducted under an action research project of the Japan International Cooperation Agency (JICA), the title of which was "Joint Study on Rural Development Experiment" (JSRDE). There were a total of five experimental villages, two of which are dealt with in this article. I would like to express my sincere gratitude to all the personnel involved directly or indirectly in this project.

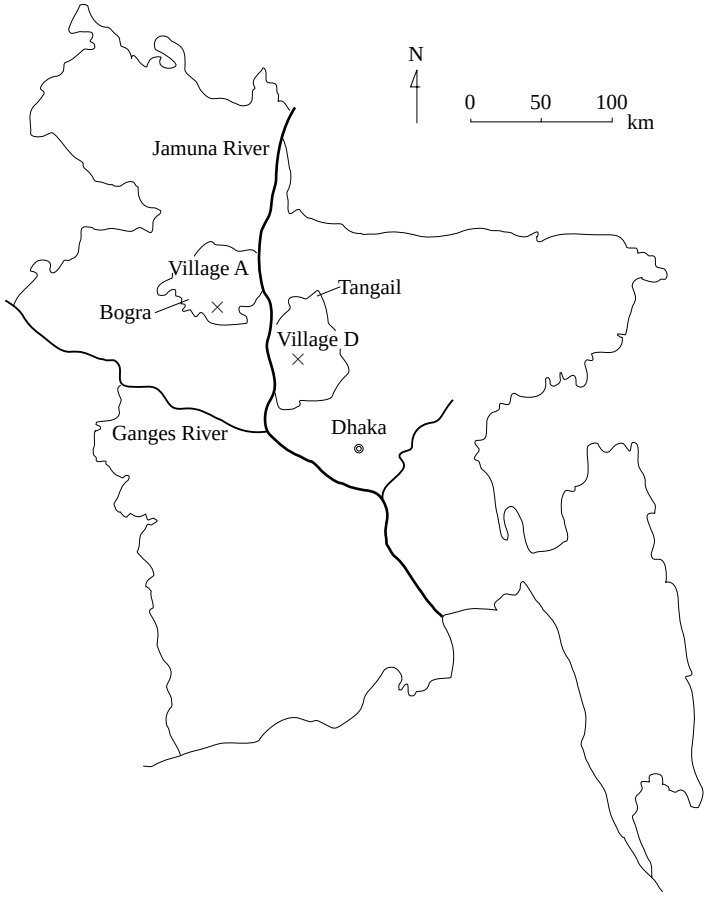
[3] After the completion of the Jamuna Bridge in 1998 the time distance has been shortened to about four hours.

[4] One can ride on a rickshaw only during the dry season. It was very difficult to walk, especially for foreigners, during the rainy season due to the muddy and very slippery access road.

[5] *Aman* is rice grown in later rainy season.

[6] *Rabi* crops are the dry season non-rice crops such as coarse grains, wheat, pulses, oilseeds, and vegetables.

Fig. 1. Map Locating the Villages Surveyed




cently, village A was located on a flood-free plateau, locally referred to as *barind*, where single cropping of transplanted *aman* rice was traditionally dominant. During the 1980s, especially the latter half of that decade, however, a large number of shallow tubewells (STWs) were introduced into both villages. As a minor irrigation facility, STW can irrigate only about 10 acres on average, but due to the fairly large capital outlay it requires, usually only rich farmers can afford it. However, given small farm size in general and extreme fragmentation of plots, sales of water to non–STW owners[7] spread quickly, and the command area could in most cases successfully expand close to its technical limit. Thus the irrigated area in the two vil-

[7] An economic analysis on the water market in village A with special reference to its implications for rural income distribution has been conducted by Fujita and Hossain (1995).

TABLE I

AGRICULTURAL LAND USE IN THE VILLAGES SURVEYED

| Cropping Patterns | | Village D | | Village A | |
|---|---|---|---|---|---|
| Rainy Season | Dry Season | Acreage (Acres) | Share (%) | Acreage (Acres) | Share (%) |
| *Aman-* | *boro* | 99 | (30.8) | 367 | (84.2) |
| *Aman-* | *rabi-boro* | 108 | (33.6) | 4 | (0.9) |
| *Aus*/jute- | *rabi* | 36 | (11.2) | | |
| | *Boro* | 32 | (10.0) | | |
| *Aus- aman-* | *rabi* | | | 14 | (3.2) |
| *Aus- aman-* | *boro* | | | 12 | (2.8) |
| *Aman-* | | 6 | (1.9) | 10 | (2.3) |
| Others | | 40 | (12.5) | 29 | (6.7) |
| Total | | 321 | (100.0) | 436 | (100.0) |

Source: Prepared by the author based on the baseline survey of June–August 1992.
Note: *Aus* = paddy grown in early rainy season, *aman* = paddy grown in later rainy season, *boro* = paddy grown in dry season, *rabi* = non-rice crops grown in dry season.

lages has increased very rapidly. The availability of irrigation water in the dry season drastically changed cropping patterns and raised productivity (see Table I). The percentage of area under *boro* dry season rice cultivation rose from almost null at the end of the 1970s to 74.4 per cent in village D and 87.9 per cent in village A by the time of our survey.

Table II demonstrates the distribution of farmland in the two villages in terms of ownership holdings and operational holdings. Land distribution was highly skewed in both villages. In village D, 65 per cent of the households classified as landless or functionally landless (below 0.5 acres) possessed only 8 per cent of the land, although tenancy and mortgage enabled them to operate 23 per cent. On the other hand, 5 per cent of the households with more than 2.5 acres (= 1 hectare) controlled 43 per cent of the total land. Inequity in land distribution, however, was much larger in village A, where half of the households were landless, while 16 per cent of the households owned more than 2.5 acres occupied nearly 80 per cent of the total farmland. It should also be noted from the table that the land-population ratio was much more unfavorable in village D than village A.

The occupational structure of the household heads in both villages is shown in Tables III and IV. Off-farm job opportunities were much better in village D. In addition to farmers and agricultural laborers, we find there many handloom laborers,[8] petty traders and shopkeepers (business), local traditional cigarette *biri* factory

[8] There were many small handloom factories within the area including village D, where laborers were employed and paid once in a week. In village D, the number of handlooms per factory were;

TABLE II

LAND TENURE IN THE VILLAGES SURVEYED

| Land Owned (Acres) | Village D | | | Village A | | |
|---|---|---|---|---|---|---|
| | No. of HH | Land Owned (Acres) | Land Operated (Acres) | No. of HH | Land Owned (Acres) | Land Operated (Acres) |
| 0 | 206 (38) | 0.0 (0) | 29.6 (9) | 102 (49) | 0.0 (0) | 28.6 (10) |
| 0.01–0.49 | 138 (26) | 29.1 (8) | 47.0 (14) | 34 (16) | 7.2 (3) | 16.7 (6) |
| 0.50–0.99 | 84 (16) | 58.8 (16) | 50.0 (15) | 14 (7) | 9.7 (4) | 21.4 (7) |
| 1.00–2.49 | 78 (14) | 121.4 (33) | 106.4 (32) | 25 (12) | 34.2 (15) | 40.5 (14) |
| 2.50–4.99 | 24 (4) | 83.2 (22) | 49.8 (15) | 17 (8) | 56.8 (25) | 62.2 (22) |
| 5.00– | 8 (1) | 77.7 (21) | 50.0 (15) | 17 (8) | 123.1 (53) | 119.0 (41) |
| Total | 538 (100) | 370.2 (100) | 332.8 (100) | 209 (100) | 231.0 (100) | 288.4 (100) |
| Acres per HH | | 0.69 | 0.62 | | 1.11 | 1.38 |

Source: Prepared by the author based on the baseline survey of June–August 1992.
Notes: 1. Figures in parentheses indicate percentages.
2. HH = households.

laborers,[9] local government officials such as primary/high school teachers and field-workers of various department (service) and the rickshaw pullers (Table III). It should be noted that except for service category, these off-farm employment opportunities were mainly enjoyed by the poorer sections of the village, which may have helped reduce population pressure on limited farmland.[10] In contrast, the occupational structure of village A was more simple, where as high as 80 per cent of the household heads replied that their main occupations were either farming or agricultural labor (Table IV). Lack of off-farm employment and high dependency on agriculture was therefore one of the prominent characteristics of the agrarian structure in village A.

## B. *Reversed Informal Credit Flow*

Data on outstanding debt and credit for every household in the two villages was an item of the baseline survey conducted by well-trained young enumerators living in each village. Data on debt from formal sources, including GB, will be analyzed

16 (one owner), 9 (one owner), 8 (three owners), 6 (one owner), 5 (one owner), 4 (two owners), and 3 (one owner). Thus, if all the handlooms were working, as many as seventy-one laborers could be employed within the village.

[9] These factories were different from the case of the handloom industry, in that they were concentrated in the suburban areas of Tangail City.

[10] The employment opportunities in subcontracting work for women, such as *biri kiri* (making paper tubes for the local cigarettes) and *shuta pathi* (winding thread), were also plentiful and helped the poor to earn additional income.

TABLE III

MAJOR OCCUPATIONS OF HOUSEHOLD HEADS IN VILLAGE D

| Land Owned (Acres) | No. of HH | Major Occupation | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Farming | | Agric. Labor | | Handloom Labor | | Business | | *Biri* Factory Labor | | Service | | Rickshaw Puller | | Others | |
| 0 | 206 | (100) | 11 | (5) | 68 | (33) | 50 | (24) | 22 | (11) | 18 | (9) | 8 | (4) | 10 | (5) | 19 | (9) |
| 0.01–0.49 | 138 | (100) | 23 | (17) | 50 | (36) | 24 | (17) | 17 | (12) | 7 | (5) | 5 | (4) | 4 | (3) | 8 | (6) |
| 0.50–0.99 | 84 | (100) | 50 | (60) | 12 | (14) | 3 | (4) | 7 | (8) | 2 | (2) | 6 | (7) | | | 4 | (5) |
| 1.00–2.49 | 78 | (100) | 66 | (85) | 1 | (1) | 1 | (1) | 1 | (1) | 2 | (3) | 5 | (6) | | | 2 | (3) |
| 2.50–4.99 | 24 | (100) | 19 | (79) | | | 1 | (4) | | | | | 3 | (13) | | | 1 | (4) |
| 5.00– | 8 | (100) | 5 | (63) | | | | | | | | | 3 | (38) | | | | |
| Total | 538 | (100) | 174 | (32) | 131 | (24) | 79 | (15) | 47 | (9) | 29 | (5) | 30 | (6) | 14 | (3) | 34 | (6) |

Source: Prepared by the author based on the baseline survey of June–August 1992.
Notes: 1. Business = shopkeepers and petty traders; service = salaried workers such as school teachers, government officials/workers, and workers in private companies. 2. Figures in parentheses indicate percentages. 3. HH = households.

TABLE IV

MAJOR OCCUPATIONS OF HOUSEHOLD HEADS IN VILLAGE A

| Land Owned (Acres) | No. of HH | Major Occupation | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Farming | | Agric. Labor | | Business | | Service | | Rickshaw Puller | | Others | |
| 0 | 102 | (100) | 18 | (18) | 68 | (67) | 6 | (6) | 1 | (1) | 3 | (3) | 6 | (6) |
| 0.01–0.49 | 34 | (100) | 15 | (44) | 9 | (26) | 4 | (12) | | | | | 6 | (18) |
| 0.50–0.99 | 14 | (100) | 8 | (57) | 4 | (29) | | | | | | | 2 | (14) |
| 1.00–2.49 | 25 | (100) | 18 | (72) | 1 | (4) | 1 | (4) | 2 | (8) | | | 3 | (12) |
| 2.50–4.99 | 17 | (100) | 13 | (76) | | | | | 3 | (18) | | | 1 | (6) |
| 5.00– | 17 | (100) | 14 | (82) | | | | | 2 | (12) | | | 1 | (6) |
| Total | 209 | (100) | 86 | (41) | 82 | (39) | 11 | (5) | 8 | (4) | 3 | (1) | 19 | (9) |

Source: Prepared by the author based on the beseline survey of June–August 1992.
Note: Same as Table III.

later, for here debt and credit from informal sources will be discussed.[11] The collected data includes not only the amount of debt or credit and its terms and conditions, but also the partners in each transaction.[12]

Tables V and VI summarize informal financial transactions in the two villages. Households are classified here according to the amount of land owned. Households are categorized in terms of their credit status into four groups: i.e., pure lender, lender-cum-borrower, pure borrower, and non-lender-cum-non-borrower. Outstanding debt and credit and their balances are also shown. The findings from these tables can be summarized as follows.

First, the informal financial markets in both villages were widely developed, which means that most of the villagers participated in the market either as lenders or as borrowers. Only 21 per cent of the households in village D and 39 per cent in village A were neither lenders nor borrowers. It should be noted here that as high as 45 per cent of the households in village D and 34 per cent in village A were lenders (pure lenders and lender-cum-borrowers). Furthermore, the percentage of lenders was high among the poorer sections of the villages. This reality is far from the conventional view that moneylending is a monopoly business by a few professional moneylenders (*mahajan*), merchants, and/or landlords / wealthy farmers.

Second, reversed credit flow from the poor to the rich can clearly be observed in both of the villages. The debt and credit balance indicates that the lower two strata (landless and functionally landless) were net lenders, while the upper four strata were net borrowers. Needless to say, such a finding also directly challenges the conventional wisdom concerning informal rural financial markets in Bangladesh.[13]

Next, the informal financial markets in both villages were also deeply developed, which means that the amount of credit and debt per household was quite substantial. The average amount per household was more than 8,000 taka in village D and 8,000 to 11,000 taka in village A. Considering the fact that the daily agricultural

[11] Formal credit includes credit from banks, cooperatives, governmental organizations, non-governmental organizations, and all the other institutions. The remainder constitutes to informal credit, the major sources of which in rural contemporary Bangladesh were ordinary villagers irrespective of kinship ties. Professional moneylenders were also present, but were surprisingly scarce. Credit from input dealers, traders, shopkeepers, and so forth, which is usually given free of interest, could not be covered because of the difficulty and time-consuming nature of the work involved. Data on informal credit groups, such as the Accumulating Savings and Credit Association (ASCRA) reported in Toyota (1999) and locally referred to as *shomiti* could not be systematically collected and so has to be excluded from the present discussion.

[12] We are sometimes faced with the problem of inconsistency of data between the borrower and the lender in the same financial transaction, but due to the serious time constraints, we had to abandon resurvey and compile the data adopting the larger amount in the case of discrepancy. Also, if a borrower declared the existence of a transaction while a lender did not, we regarded it as existing. The survey data thus may have some upper bias in terms of both the number and the volume of informal financial transactions.

[13] Of the research in which the rural informal credit flow from the rich to the poor is taken for granted, see, for example, Fuglesang and Chandler (1993), Jansen (1987), and Rahman (1986).

TABLE V

INFORMAL FINANCE IN VILLAGE D

| Land Owned (Acres) | No. of HH | Credit Status | | | | | | | | Outstanding Amount (Taka) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Pure Lender | | Lender-cum-Borrower | | Pure Borrower | | Non-lender-cum-Non-borrower | | Credit | Per HH | Debt | Per HH | Balance |
| 0 | 206 (100) | 69 | (33) | 21 | (10) | 39 | (19) | 77 | (37) | 575,150 | 6,391 | 196,310 | 3,272 | 378,840 |
| 0.01–0.49 | 138 (100) | 38 | (28) | 34 | (25) | 49 | (36) | 17 | (12) | 601,100 | 8,349 | 361,920 | 4,360 | 239,180 |
| 0.50–0.99 | 84 (100) | 11 | (13) | 26 | (31) | 36 | (43) | 11 | (13) | 269,880 | 7,294 | 468,750 | 7,560 | –198,870 |
| 1.00–2.49 | 78 (100) | 9 | (12) | 23 | (29) | 40 | (51) | 6 | (8) | 317,350 | 9,917 | 691,270 | 10,973 | –373,920 |
| 2.50–4.99 | 24 (100) | 2 | (8) | 7 | (29) | 14 | (58) | 1 | (4) | 82,200 | 9,133 | 480,300 | 22,871 | –398,100 |
| 5.00– | 8 (100) | 2 | (25) | 3 | (38) | 2 | (25) | 1 | (13) | 121,220 | 24,244 | 372,200 | 74,440 | –250,980 |
| Total | 538 (100) | 131 | (24) | 114 | (21) | 180 | (33) | 113 | (21) | 1,966,900 | 8,028 | 2,570,750 | 8,744 | –603,850 |

Source: Prepared by the author based on the baseline survey of June–August 1992.
Notes: 1. U.S.$1 = 40 taka (1992). 2. Figures in parentheses indicate percentages. 3. HH = households.

TABLE VI

INFORMAL FINANCE IN VILLAGE A

| Land Owned (Acres) | No. of HH | Credit Status | | | | | | | | Outstanding Amount (Taka) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Pure Lender | | Lender-cum-Borrower | | Pure Borrower | | Non-lender-cum-Non-borrower | | Credit | Per HH | Debt | Per HH | Balance |
| 0 | 102 (100) | 19 | (19) | 7 | (7) | 17 | (17) | 59 | (58) | 199,671 | 7,680 | 43,505 | 1,813 | 156,166 |
| 0.01–0.49 | 34 (100) | 9 | (26) | 5 | (15) | 9 | (26) | 11 | (32) | 134,744 | 9,625 | 34,577 | 2,470 | 100,167 |
| 0.50–0.99 | 14 (100) | 3 | (21) | 3 | (21) | 5 | (36) | 3 | (21) | 36,620 | 6,103 | 51,900 | 6,488 | –15,280 |
| 1.00–2.49 | 25 (100) | 8 | (32) | 3 | (12) | 9 | (36) | 5 | (20) | 71,600 | 6,509 | 104,225 | 8,685 | –32,625 |
| 2.50–4.99 | 17 (100) | 1 | (6) | 6 | (35) | 9 | (53) | 1 | (6) | 170,825 | 24,404 | 176,187 | 11,746 | –5,362 |
| 5.00– | 17 (100) | 4 | (24) | 4 | (24) | 6 | (35) | 3 | (18) | 155,419 | 19,427 | 242,062 | 24,206 | –86,643 |
| Total | 209 (100) | 44 | (21) | 28 | (13) | 55 | (26) | 82 | (39) | 768,879 | 10,679 | 652,456 | 7,861 | 116,423 |

Source: Prepared by the author based on the baseline survey of June–August 1992.
Note: Same as Table V.

wage rate at that time was 30 to 40 taka, one can easily see how big these figures actually are, especially for landless and functionally landless.

Finally, although reversed credit flow was observed on the whole, attention should also be paid to the fact that there were many poor borrowers (including lender-cum-borrower), especially among the functionally landless: 61 per cent in village D and 41 per cent in village A. In addition, many poor, particularly landless, were classified as non-lender-cum-non-borrowers, especially in village A. As will be discussed later, many of the "poorest of the poor" cannot even get informal credit because of their extreme poverty, while they also have no savings to pass on to others.

### C. *The Terms and Conditions of Informal Credit*

We can broadly categorize the terms and conditions of informal credit transactions into the following two types: long-term credit with usufructuary land mortgaging and short-term credit without mortgaging.

The former can be further categorized into the following two types. The first is a contractual arrangement called *bhograhani* (more generally known as *bondhok* in rural Bangladesh) in village D, by which lenders can keep the right to cultivate the mortgaged land without paying rent, until landowner-borrower repay the loans. This contract can in theory continue in perpetuity, but it is usual that borrowers who fail to repay within several years (maximum about ten years) are obliged to sell the mortgaged land for repayment, but usually not to the creditors.[14] Sale of the mortgaged land will result approximately three times as much money as the debt,[15] so full repayment can easily be made.

The second contractual arrangement is called *khaikhalasi* in village A, in which lenders can cultivate the mortgaged land without paying rent, the same as in the *bhograhani* system, but only for a predetermined period (in most cases seven years in village A). After this period the land is returned to the borrower automatically without repayment of the principal.[16] Interestingly (even though the reason was unclear), *bhograhani* was observed only in village D, while *khaikhalasi* was observed only in village A.

Let us estimate the implicit interest rates in these credit transactions. From the viewpoint of lenders, the amount of credit necessary to obtain 1 acre of mortgaged land was 15,000–25,000 taka for *bhograhani* in village D and 10,000–15,000 taka for *khaikhalasi* in village A, in spite of the existence of some variations depending on fertility. Theoretically, land rent equals the interest in the case of *bhograhani*,

[14] The priority of land sale is regulated by custom, so usually close relatives of the landowner will buy it.

[15] This fact indicates land prices are much higher than the present value of future annual revenue (land rent) from the land. It also means that it is much more difficult for the poor to buy land than to obtain it periodically under the mortgage system.

[16] Thus it may be more appropriate to regard *khaikhalasi* as a long-term tenancy arrangement with advanced payment of rent, rather than a credit system with usufructuary land mortgage.

TABLE VII

COST OF CROP PRODUCTIONS IN VILLAGE D

(Taka/acre)

| | *Aman* | | Mustard | | *Boro* | | Total | |
|---|---|---|---|---|---|---|---|---|
| Current inputs | 410 | (8.6) | 1,000 | (23.3) | 1,850 | (23.3) | 3,260 | (19.2) |
| Irrigation | 200 | (4.2) | | | 1,000 | (12.6) | 1,200 | (7.1) |
| Labor | 1,950 | (41.1) | 1,200 | (27.9) | 2,900 | (36.5) | 6,050 | (35.6) |
| Tillage | 600 | (12.6) | 800 | (18.6) | 1,000 | (12.6) | 2,400 | (14.1) |
| Capital | 240 | (5.1) | 220 | (5.1) | 1,370 | (17.2) | 1,830 | (10.8) |
| Interest | 240 | (5.1) | 220 | (5.1) | 460 | (5.8) | 920 | (5.4) |
| Profit for STW owners | | | | | 910 | (11.4) | 910 | (5.4) |
| Land | 2,150 | (45.3) | 1,880 | (43.7) | 1,830 | (23.0) | 5,860 | (34.5) |
| Total | 4,750 | (100.0) | 4,300 | (100.0) | 7,950 | (100.0) | 17,000 | (100.0) |

Source: Prepared by the author based on interviews with farmers in 1992.

Notes: 1. Irrigation = working capital cost for operating STW plus depreciation cost.
Interest = interest on working capital (current inputs and labor), assuming 60 per cent per annum for two months.
Profit for STW owners = gross revenue (one-fourth of harvest) minus irrigation cost (including interest for irrigation working capital).
Land = calculated as residuals.
Based on the following data;
Yield = 20 maund/acre (*aman*), 8 maund/acre (mustard), 40 maund/acre (*boro*).
Price = 220 taka/maund (*aman*), 530 taka/maund (mustard), 190 taka/maund (*boro*).
By-product = 350 taka/acre (*aman* and *boro*), 60 taka/acre (mustard).
2. U.S.$1 = 40 taka (1992).
3. Figures in parentheses indicate percentages.

while present value of land rent for the subsequent seven years discounted by the implicit interest rate equals the principal in the case of *khaikhalasi*. If the annual land rent is known, therefore, we can easily calculate the implicit interest rate. Based on our estimates of the cost of production for the typical cropping pattern in both villages (Tables VII and VIII), the estimated land rent ranged from 3,980 taka (in case of double cropping of *aman-boro*) to 5,860 taka (*aman*-mustard-*boro*) in village D and 6,520 taka (*aman-boro*) in village A. Thus, the interest rate in the long-term informal financial market was estimated to be about 25 per cent in village D[17] and 39–63 per cent in village A.

Next, regarding the short-term credit transactions without usufructuary land mortgage, the terms and conditions were also quite different between the two vil-

[17] Considering the fact that the land price is about three times as high as the cost of mortgaging land, the discount rate in the case of a sales transaction equals about 8 per cent (25 divided by 3). This means that one can only successfully purchase land with bank loans if the interest rate is equal to or less than 8 per cent.

TABLE VIII

COST OF CROP PRODUCTIONS IN VILLAGE A

(Taka/acre)

| | *Aman* | | *Boro* | | Total | |
|---|---|---|---|---|---|---|
| Current inputs | 1,240 | (14.5) | 3,020 | (32.9) | 4,260 | (24.0) |
| Irrigation | 300 | (3.5) | 1,610 | (17.6) | 1,910 | (10.8) |
| Labor | 2,280 | (26.6) | 1,990 | (21.7) | 4,270 | (24.1) |
| Tillage | 1,320 | (15.4) | 620 | (6.8) | 1,940 | (10.9) |
| Capital | 590 | (6.9) | 2,110 | (23.0) | 2,700 | (15.2) |
| Interest | 590 | (6.9) | 810 | (8.8) | 1,400 | (7.9) |
| Profit for STW owners | | | 1,300 | (14.2) | 1,300 | (7.3) |
| Land | 4,470 | (52.1) | 2,050 | (22.4) | 6,520 | (36.7) |
| Total | 8,580 | (100.0) | 9,170 | (100.0) | 17,750 | (100.0) |

Source: Prepared by the author based on interviews with farmers in 1992.

Notes: 1. Irrigation = same as Table VII.
Interest = interest on working capital (current inputs and labor), assuming 100 per cent per annum for two months.
Profit for STW owners = calculated as residuals for *boro*.
Land = calculated as residuals for *aman*, and rent paid under *chaunia* system for *boro*.
Based on the following data;
Yield = 39 maund/acre (*aman*), 40 maund/acre (*boro*).
Price = 210 taka/maund (*aman*), 220 taka/maund (*boro*).
By-product = 390 taka/acre (*aman*), 370 taka/acre (*boro*).
2. U.S.$1 = 40 taka (1992).
3. Figures in parentheses indicate percentages.

lages. In village D loans were typically to be repaid several months later, in cash for the principal and in kind for the interest. Usually 2–3 maunds (1 maund = 37.3 kilograms) of paddy was to be paid as interest per 1, 000 taka of principal. As the farm-gate price of paddy at that time was 200–220 taka per maund, the implicit interest rate in this credit transaction can be estimated to be 50–60 per cent. On the other hand, in village A, loans in most cases were to be repaid in cash for both the principal and interest. Monthly interest rates were usually 8.3–10 per cent (100–120 per cent annually). It should be noted here that even among close relatives and friends, credit transactions without interest (called *haulat*) were very rare in either village. It is also interesting that the interest rate for short-term credit was almost twice that of long-term credit in each village.

Finally, concerning the share of the credit transactions in terms of long-term versus short-term, and intra-village versus inter-village, in both villages the share of transactions occupied by long-term credit (in terms of amount) was very large: 70–75 per cent in village D and 56–80 per cent in village A. The dominance of

TABLE IX

INFORMAL FINANCE OF A WEALTHY FARMER IN VILLAGE D

| Partners' Land Owned (Acres) | Credit | | | Debt | | | |
|---|---|---|---|---|---|---|---|
| | No. of Households | Amount (Taka) | | No. of Households | Amount (Taka) | | |
| | | Short-Term | Total | | *Bhograhani* | Short-Term | Total |
| 0 | | | | 9 | 29,000 | 38,000 | 67,000 |
| 0.01–0.49 | | | | 7 | 18,400 | 11,500 | 29,900 |
| 0.50–0.99 | | | | 2 | 400 | 10,000 | 10,400 |
| 1.00–2.49 | | | | 5 | 9,400 | 27,000 | 36,400 |
| 2.50–4.99 | 1 | 7,000 | 7,000 | 1 | 7,500 | | 7,500 |
| 5.00–Other villages | 3 | 58,000 | 58,000 | 3 | 27,000 | | 27,000 |
| Total | 4 | 65,000 | 65,000 | 27 | 91,700 | 86,500 | 178,200 |

Source: Prepared by the author based on the baseline survey of June–August 1992.
Note: U.S.$1 = 40 taka (1992).

long-term credit is a major reason why the average amount of credit transactions was fairly large even among landless and functionally landless lenders.[18] Second, intra-village credit transactions (also in terms of amount) were dominant: 64–82 per cent in village D and 60–70 per cent in village A.

### D. *Case Study of a Wealthy Farmer*

Now let us briefly examine the case of a wealthy farmer in village D who owned 7.97 acres of land and three STWs for irrigation. Table IX demonstrates that he was in debt to the total sum of 178,200 taka, seeking both long-term (*bhograhani*) and short-term credit. He had to mortgage out 3.85 acres of land to borrow 91,700 taka. In addition, at the time of the survey he had to pay after a few months another short-term debt 86,500 taka as principal and approximately 260 maunds of paddy as interest (3 maunds per 1,000 taka). Since the average yield of *boro* rice in the village was about 40 maunds per acre, he had to pay paddy harvested from 6.5 acres of land, although his actual cultivating area was only 4.12 acres. On the other hand, he sold irrigation water for the right to receive one-fourth of the water buyers' harvest. Assuming that the average command area of a STW is 10 acres, in addition to his 4.12 acres of land to be irrigated, he could sell water to 25.9 acres of land and thus obtain about 260 maunds of paddy in water fees. Therefore, he was able to pay the interests on his loans just with the revenue from his water sales business, but this coincidence seems to be rather accidental, because he also had to repay the principal.

[18] This means that credit with usufructuary land mortgage, which was long regarded as a major way for small and marginal peasants to be alienated from landownership and become landless, now becomes a major route for upward mobility for the landless and functionally landless.

It may be said that this case is rather an extreme case, because he had to borrow a lot of money to pay the medical expenses of a household member who had been serious ill for a long time. However, at the same time we should recognize the fact that for the purpose of operating the STWs, for example, a lot of working capital is required by wealthy farmers, which is usually provided by the savings of the poor people in the village.[19] The phenomenon of reversed credit flow from the poor to the rich may not be very surprising in this case.[20]

### E. *Is the Classification According to Landownership Valid?*

Up to this point, we have adopted the amount of land owned as a criterion for judging each household in villages as rich or poor, but is this criterion valid, especially in village D where off-farm employment opportunities were relatively abundant? In other words, if a fair number of wealthy households were mixed among the landless and/or functionally landless, our contention about a reversed credit flow from the poor to the rich would be weakened.

The problem is that we have no reliable data on household income, since it is very difficult and costly to obtain. So we adopted the ownership of non-land assets as an index of income level. Table X demonstrates the relationship between the size of farmland (ownership) and the holding items from a selected set of eight non-land assets in village D. One point was given for the holding of each asset. Selecting indicative non-land assets, however, was not an easy task, so let us examine what kind of non-land assets were finally selected and how they were suitable in the context of actual rural life in Bangladesh.

First, a cooking shed was selected. In rural Bangladesh a cooking stove (*chula*), which is the symbol of an independent household, is constructed in the ground outside the main house, so without a cooking shed, it becomes very hard to cook during the rainy season and the cold days in winter. The materials used to build a cooking shed usually include piths of jute, leaves of wild sugarcane, rice or wheat straw, etc. The necessary expense ranges from 200–300 to a maximum of 500–700 taka. Not possessing a cooking shed therefore can be regarded as a good indicator of poverty. There were 143 households (27 per cent of the total) in village D that did not possess even a cooking shed. Moreover, among the 158 households (29 per cent of the total) that scored only one point, 119 households owned a cooking shed only.[21]

[19] It was not possible to ascertain how much money he borrowed for the STW enterprise because of the "fungibility" of money, but it seems that most of the short-term credit was borrowed for that.

[20] As will be discussed later, institutional credit can only meet a rather small portion of the demand for credit by wealthier villagers, because (1) there are virtually no long-term credit schemes and (2) transaction costs related to borrowing are not low, even for them.

[21] Among those who scored only one point, twenty-five households (16 per cent) own a bed, while seven households (4 per cent) own a radio.

TABLE X

LANDOWNERSHIP AND POVERTY IN VILLAGE D

| Land Owned (Acres) | No. of House-holds | Points | | | | | | | | | Aver-age Points |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
| 0 | 206 | 97 | 64 | 32 | 10 | 2 | | 1 | | | 0.83 |
| 0.01–0.49 | 138 | 34 | 58 | 24 | 12 | 7 | 3 | | | | 1.34 |
| 0.50–0.99 | 84 | 10 | 20 | 27 | 20 | 5 | | 1 | 1 | | 1.99 |
| 1.00–2.49 | 78 | 2 | 16 | 17 | 17 | 16 | 6 | 3 | | 1 | 2.83 |
| 2.50–4.99 | 24 | | | 3 | 2 | 7 | 5 | 6 | 1 | | 4.50 |
| 5.00– | 8 | | | | | 2 | 1 | 2 | 3 | | 5.75 |
| Total | 538 | 143 | 158 | 103 | 61 | 39 | 15 | 13 | 5 | 1 | 1.67 |
| Share (%) | (100) | (26.6) | (29.4) | (19.1) | (11.3) | (7.2) | (2.8) | (2.4) | (0.9) | (0.2) | |

Source: Prepared by the author based on the baseline survey of June–August 1992.
Note: One point was given for owning one asset from a set of items including a cooking shed, bed, table (or two chairs), guesthouse, radio, bicycle, electric fan, and TV set.

A (wooden) bed was selected next. Without a bed, all the household members must sleep directly on the ground during the cold nights of winter. The expense of building a bed was 300–500 taka. As Table X demonstrates, there were 103 households (19 per cent) that obtained two points, and the largest portion of them, 60 households, had a cooking shed and a bed.[22]

It should be noted here that just three-fourths of total households in the village were already covered up to those with two points. We can easily imagine from this mere fact how poor the villagers were.

Third, a wooden table (or two chairs) was selected. A table can be employed for various purposes, but it is mainly used in the village for children to study. The price of a table was 100–150 taka (about 200 taka for two chairs). Of the sixty-one households (11 per cent) that scored three points, thirty households had a cooking shed, a bed, and a table (or two chairs).[23]

Next, a guesthouse was selected. One cannot build a "moderate" guesthouse without expending 2,000–3,000 taka and using up space in one's homestead land. There were thirty-seven households (7 per cent) that scored four points, and nineteen households of them owned a cooking shed, a bed, a table (or two chairs), and a guesthouse.[24]

Finally, a radio, a bicycle, an electric fan, and a TV set (black-and-white) were

[22] The remaining households scoring two points did so for such combinations as a cooking shed and a table (thirteen households), a cooking shed and a guesthouse (twelve households), and a cooking shed and a radio (eight households).

[23] Other three-point scoring combinations included a cooking shed, a bed, and a guesthouse (eleven households), and a cooking shed, a bed, and a radio (ten households).

[24] Other four-point scoring combinations included a cooking shed, a bed, a table (or two chairs), and a radio (ten households).

selected. Except for the radio, very few households had owned such durable consumer goods.[25]

From Table X we find a very strong positive correlation between the size of farmland and points scored by owning the selected non-land assets, thus leading to the conclusion that the size of farmland is a good indicator for identifying each household's level of poverty.[26] Therefore, our hypothesis of reversed credit flow from the poor to the rich cannot be refuted by claims that who is really poor has been mis-identified. This test only needs to be applied to village D, because village A had much fewer off-farm job opportunities by which to help equalize income distribution.

Finally, we should pay special attention here to the important fact that the poorest of the poor do not in most cases have savings for lending activities. To check this point, we scrutinized more closely the structure of point scoring among landless and functionally landless households by compiling Table XI. It is clear from the table that the poorest of the poor, those who scored the least points, are concentrated in the non-lender-cum-non-borrower category among the landless. The same tendency is also observed in village A from Table VI, in which the poorest of the poor were defined in terms of the ownership of farmland. Therefore, the poorest of the poor, the most typical cases of which were, according to our observation, households headed by women and those whose male household heads were ill or injured, should be excluded from poor lenders when we discuss the existence of reversed credit flow from the poor to the rich.

### F. *Possible Causes of Reversed Credit Flow*

The discussions so far have reached the conclusion that the phenomenon of reversed credit flow from the poor (excepting the poorest of the poor) to the rich in contemporary rural Bangladesh is difficult to refute. However, if reversed credit flow emerged only after the institutional micro-credit programs, like GB, that target the poor were introduced, the policy implications of our findings may change greatly. This is why we should explore how and to what extent, if any, formal credit inflow, including GB, into the villages under study influenced the rural informal financial market.

Let us first look at the case of village D. Table XII shows the distribution of the number of credit beneficiaries from such formal sources as cooperatives, the Dekhi[27] Project, Bangladesh Agricultural Bank (BKB), other commercial banks, and GB.

There were four cooperatives in the village; KSS (farmers' cooperative registered in 1987), MSS (women's cooperative founded in 1987) and two BSS (assetless'

[25] Of the village households 14.5 per cent owned radios, 6.1 per cent bicycles, 2.8 per cent electric fans, and 1.9 per cent TV sets. For reference, the percentages for other selected non-land assets were 62.6 per cent (cooking shed), 40.7 per cent (bed), 22.5 per cent (table or two chairs), 14.5 per cent (guesthouse).

[26] Another argument which supports our conclusion may be found in Ravallion and Sen (1994).

[27] Traditional wooden implement for husking rice by women.

TABLE XI

LANDOWNERSHIP AND POVERTY FOR LANDLESS AND FUNCTIONALLY LANDLESS IN VILLAGE D

| Land Owned (Acres) | Credit Status | No. of House-holds | Points | | | | | | | Aver-age Points |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | |
| 0 | Pure lender | 69 | 30 | 19 | 11 | 8 | | | 1 | 1.03 |
| | | (33.5) | (30.9) | (29.7) | (34.4) | (80.0) | | | (100.0) | |
| | Lender-cum-borrower | 21 | 5 | 7 | 9 | | | | | 1.19 |
| | | (10.2) | (5.2) | (10.9) | (28.1) | | | | | |
| | Pure borrower | 39 | 19 | 13 | 4 | 1 | 2 | | | 0.82 |
| | | (18.9) | (19.6) | (20.3) | (12.5) | (10.0) | (100.0) | | | |
| | Non-lender-cum-non-borrower | 77 | 43 | 25 | 8 | 1 | | | | 0.57 |
| | | (37.4) | (44.3) | (39.1) | (25.0) | (10.0) | | | | |
| | Total | 206 | 97 | 64 | 32 | 10 | 2 | | 1 | 0.83 |
| | | (100.0) | (100.0) | (100.0) | (100.0) | (100.0) | (100.0) | | (100.0) | |
| 0.01–0.49 | Pure lender | 38 | 5 | 23 | 5 | 3 | 1 | 1 | | 1.34 |
| | | (27.5) | (14.7) | (39.7) | (21.7) | (23.1) | (14.3) | (33.3) | | |
| | Lender-cum-borrower | 34 | 7 | 18 | 5 | 3 | | 1 | | 1.24 |
| | | (24.6) | (20.6) | (31.0) | (21.7) | (23.1) | | (33.3) | | |
| | Pure borrower | 49 | 16 | 13 | 10 | 3 | 6 | 1 | | 1.45 |
| | | (35.5) | (47.1) | (22.4) | (43.5) | (23.1) | (85.7) | (33.3) | | |
| | Non-lender-cum-non-borrower | 17 | 6 | 4 | 3 | 4 | | | | 1.29 |
| | | (12.3) | (17.6) | (6.9) | (13.0) | (30.8) | | | | |
| | Total | 138 | 34 | 58 | 23 | 13 | 7 | 3 | | 1.35 |
| | | (100.0) | (100.0) | (100.0) | (100.0) | (100.0) | (100.0) | (100.0) | | |

Source: Prepared by the author based on the baseline survey of June–August 1992.
Note: Same as Table X.

cooperatives founded in 1980 and 1981). Due to some serious problems associated with credit obtained through cooperatives, their impact on the informal credit market was negligible. One problem was an obligation to accumulate shares and savings for at least a few years before getting loans,[28] while another was the small size of each loan: 500–1,500 taka per member.[29] Finally, there was a low repayment problem and the resulting failure to get loans on a continuous basis.[30]

[28] Loans are provided by Sonali Bank, the largest nationalized commercial bank in Bangladesh, through the *thana*-level Federal Association of Cooperatives.

[29] MSS members managed loans fairly well (repayment performance was good), but the loan size was too small to have any notable impact on the informal flow of credit.

[30] Due to this non-repayment problem the two BSS in the village had already become moribund and were so-called paper cooperatives by 1992.

TABLE XII

NUMBER OF HOUSEHOLDS IN VILLAGE D BORROWING FROM FORMAL INSTITUTIONS

| Land Owned (Acres) | No. of House-holds | Cooperatives | | | | Swanirvar | BKB/ CB | Grameen Bank | |
|---|---|---|---|---|---|---|---|---|---|
| | | KSS | MSS | BSS (1) | BSS (2) | | | 1992 | 1994 |
| 0 | 206 | 0 | 4 | 8 | 1 | 11 | 5 | 44 | 88 |
| 0.01–0.49 | 138 | 0 | 2 | 1 | 1 | 2 | 3 | 36 | 51 |
| 0.50–0.99 | 84 | 0 | 2 | 1 | 0 | 8 | 2 | 15 | 25 |
| 1.00–2.49 | 78 | 0 | 0 | 1 | 3 | 4 | 2 | 11 | 17 |
| 2.50–4.99 | 24 | 0 | 2 | 0 | 0 | 0 | 3 | 1 | 2 |
| 5.00– | 8 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| Total | 538 | 0 | 10 | 11 | 5 | 25 | 16 | 107 | 183 |

Source: Prepared by the author based on the baseline survey of June–August 1992. A supplementary survey was conducted in 1994 for the GB members only.
Note: KSS = farmers' cooperative, MSS = women's cooperative, BSS = assetless' cooperative, Swanirvar = an NGO which introduced Dekhi Project, BKB = Bangladesh Agricultural Bank, CB = commercial banks.

The Dekhi Project was launched by an NGO called "Swanirvar" in 1989 to promote the small rice-husking business in village D. Twenty-five (out of forty-two) members received loans of 1,500 taka per each, but the project had already disappeared by 1992.

There were sixteen households (3 per cent) that received loans that were still outstanding from BKB and commercial banks in 1992. Only six households, however, received loans after 1990[31] averaging 5,000 taka, and thus had no power to affect the informal flow of credit.

Finally, there were 108 GB members from 107 households (20 per cent of the total households) in 1992.[32] If they do not drop out, GB members can obtain not only one-year general loans on a continuous basis (with increasing amounts every year), but also other new types of loans, such as seasonal, tubewell (hand tubewell), and housing loans. In 1992 total amount of GB loans obtained by village D was about 470,000 taka, with an average of 4,400 taka per member. Taking into consideration the size of the informal credit provided by landless and functionally landless (about 1.2 million taka, as shown in Table V), GB loans may have had a significant impact on our reversed credit flow.

In order to ascertain this point we tried to compile a table similar to Table V exclusively for non–GB members (Table XIII). It is clear from the table that reversed credit flow from the poor to the rich was still present even if GB members were excluded. Thus it can be concluded that the impact of GB loans on the infor-

[31] This means that default was also a serious problem in commercial bank loans.

[32] GB members increased to 187 members (from 183 households) by 1994, but our discussion will be based on the situation in 1992, when the baseline survey was conducted.

TABLE XIII

INFORMAL FINANCE OF NON–GRAMEEN BANK MEMBERS IN VILLAGE D

| Land Owned (Acres) | No. of Households | Credit (Taka) | Debt (Taka) | Balance (Taka) |
|---|---|---|---|---|
| 0 | 162 | 397,000 | 119,500 | 277,500 |
| 0.01–0.49 | 102 | 473,000 | 247,970 | 225,030 |
| 0.50–0.99 | 68 | 201,900 | 402,850 | –200,950 |
| 1.00–2.49 | 67 | 264,950 | 533,920 | –268,970 |
| 2.50–4.99 | 23 | 60,200 | 458,800 | –398,600 |
| 5.00– | 8 | 121,220 | 372,200 | –250,980 |
| Total | 430 | 1,518,270 | 2,135,240 | –616,970 |

Source: Prepared by the author based on the baseline survey of June-August 1992.
Note: U.S.$1 = 40 taka (1992).

TABLE XIV

NUMBER OF HOUSEHOLDS IN VILLAGE A BORROWING FROM FORMAL INSTITUTIONS

| Land Owned (Acres) | No. of Households | BKB/CB | Grameen Bank |
|---|---|---|---|
| 0 | 102 | 0 | 21 |
| 0.01–0.49 | 34 | 1 | 7 |
| 0.50–0.99 | 14 | 2 | 1 |
| 1.00–2.49 | 25 | 3 | 4 |
| 2.50–4.99 | 17 | 13 | 1 |
| 5.00– | 17 | 8 | 2 |
| Total | 209 | 27 | 36 |

Source: Prepared by the author based on the baseline survey of June–August 1992.
Note: Same as Table XII.

mal financial market was not decisive. Income from off-farm job opportunities by the poor of the village seems to have been much more decisive concerning the reversed flow.

Now let us examine the case of village A, where the inflow of formal credit was relatively simple (see Table XIV). First, twenty-seven households (13 per cent of the total) received loans from BKB and commercial banks, a much larger number than the case of village D. Moreover, most of them had received loans very recently—eleven in 1991 and ten in 1992—and the average loan size was fairly large—a little more than 10,000 taka. These loans may have adversely affected to our reversed credit flow, because loans were made highly in favor of large landowners.

The number of GB members was thirty-six (17 per cent), a number less than that of village D, but the average loan size per member in 1992 was more than 10,000 taka, which may also have some impact on the informal financial market. However,

TABLE XV

INFORMAL FINANCE OF NON–GRAMEEN BANK MEMBERS IN VILLAGE A

| Land Owned (Acres) | No. of Households | Credit (Taka) | Debt (Taka) | Balance (Taka) |
|---|---|---|---|---|
| 0 | 81 | 193,946 | 39,560 | 154,386 |
| 0.01–0.49 | 27 | 125,794 | 30,052 | 95,742 |
| 0.50–0.99 | 13 | 36,620 | 38,250 | −1,630 |
| 1.00–2.49 | 21 | 71,600 | 78,125 | −6,525 |
| 2.50–4.99 | 16 | 170,825 | 152,312 | 18,513 |
| 5.00– | 15 | 155,419 | 174,787 | −19,368 |
| Total | 173 | 754,204 | 513,086 | 241,118 |

Source: Prepared by the author based on the baseline survey of June–August 1992.
Note: U.S.$1 = 40 taka (1992).

TABLE XVI

INFORMAL FINANCE OF STW OWNERS AND NON-OWNERS IN VILLAGE A

(Taka)

| | *Khaikhalasi* | | | Short-Term | | | Total | | |
|---|---|---|---|---|---|---|---|---|---|
| | Credit | Debt | Balance | Credit | Debt | Balance | Credit | Debt | Balance |
| STW owners | 399,923 | 174,300 | 225,623 | 1,940 | 65,725 | –63,785 | 401,863 | 240,025 | 161,838 |
| Non-owners | 344,196 | 355,161 | –10,965 | 22,820 | 57,270 | –34,450 | 367,016 | 412,431 | –45,415 |
| Total | 744,119 | 529,461 | 214,658 | 24,760 | 122,995 | –98,235 | 768,879 | 652,456 | 116,423 |

Source: Prepared by the author based on the baseline survey of June–August 1992.
Note: U.S.$1 = 40 taka (1992).

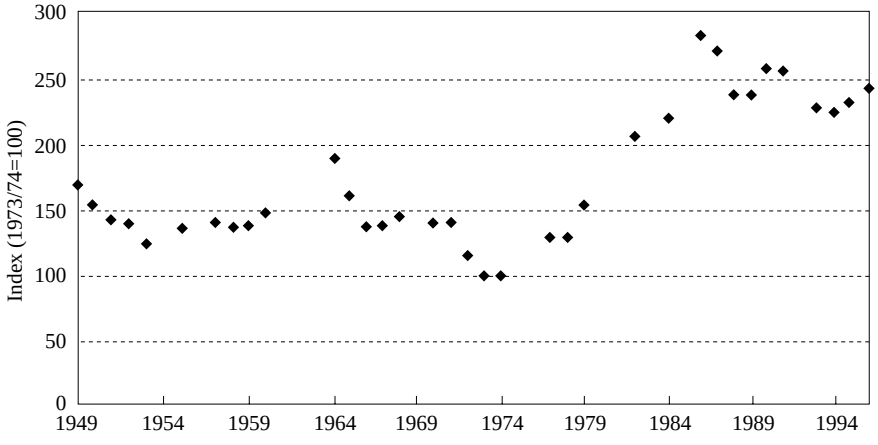
as the case of village D, reversed credit flow did not disappear, even if GB members were excluded (see Table XV).

Thus we can only conclude that reversed credit flow cannot be fully attributed to the effects of GB loans well targeted to the poor; there should be some other explanatory factors. The development of off-farm employment opportunities does not also seem to explain the phenomenon fully, when the case of village A is taken into account. However, compared to village D, reversed credit flow was relatively weak in village A. As shown in Table XVI, when the households in village A are classified according to the ownership of STWs,[33] STW owners, most of whom were large landowners, are found to be net creditors.[34] We may then be able to say that the

[33] The distribution of STWs was highly skewed in village A. Among twenty-nine households with one or more STWs, nineteen households (65.5 per cent) owned more than 2.5 acres of farmland.

[34] It should be noted here that there were many non–STW owners among the wealthy who were large net-debtors, contributing to reversed credit flow on the whole in Table VI.

Fig. 2. Real Agricultural Wages in Bangladesh




Sources: For 1949–1979/80, Azizur Rahman Khan, "Real Wages of Agricultural Workers in Bangladesh," in *Poverty in Rural Asia*, ed. Azizur Rahman Khan and Eddy Lee (Bangkok: International Labour Organisation, Asian Employment Programme, 1984), p. 190. For 1973/74–1995, B. Sen, "Poverty and Policy," in *Growth or Stagnation? A Review of Bangladesh's Development, 1996* (Dhaka: University Press, 1997), p. 152. For 1994/95–1996/97, *Monthly Statistical Bulletin of Bangladesh*, May 1998, p. 8.

power of generating savings among the poor tends to be relatively weak, if irrigation-led agricultural development (the Green Revolution) takes place without development of the non-farm sector. In other words, we can hypothesize that the Green Revolution may be a primary factor[35] causing the emergence of reversed credit flow, but it has to be supplemented by the massive development of off-farm job opportunities for the poor. Figure 2, which shows a rising trend in rural real wages in Bangladesh[36] during the 1980s when the rural economy (including the non-farm sector) experienced a rapid growth, provides evidence supporting our hypothesis.

## III. THE GRAMEEN BANK

### A. *Who Are GB Members?*

Tables XII and XIV have already provided us with some information about who became GB members in the surveyed villages. It can be said that GB well targets

[35] Taniguchi (1987) is another case study of the dynamism of irrigation-led agricultural development and its favorable effects on the poor in northern Bangladesh.

[36] Our estimates are based on the controversy over rural real wages in Bangladesh contained in Boyce and Ravallion (1991), Palmer-Jones (1993, 1994), and Ravallion (1994).

TABLE XVII

COMPARISON OF ASSET-OWNING POINTS BETWEEN GB MEMBERS AND NONMEMBERS IN VILLAGE D

| Land Owned (Acres) | GB | No. of House-holds | Points | | | | | | | | | Aver-age Points |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
| 0 | Members | 44 | 17 | 13 | 10 | 4 | | | | | | 1.02 |
| | (%) | (100.0) | (38.6) | (29.5) | (22.7) | (9.1) | | | | | | |
| | Nonmembers | 162 | 80 | 51 | 22 | 6 | 2 | | 1 | | | 0.78 |
| | (%) | (100.0) | (49.4) | (31.5) | (13.6) | (3.7) | (1.2) | | (0.6) | | | |
| 0.01–0.49 | Members | 36 | 8 | 17 | 7 | 3 | 1 | | | | | 1.22 |
| | (%) | (100.0) | (22.2) | (47.2) | (19.4) | (8.3) | (2.8) | | | | | |
| | Nonmembers | 102 | 26 | 41 | 17 | 9 | 6 | 3 | | | | 1.38 |
| | (%) | (100.0) | (25.5) | (40.2) | (16.7) | (8.8) | (5.9) | (2.9) | | | | |
| 0.50–0.99 | Members | 15 | 3 | 2 | 5 | 4 | 1 | | | | | 1.87 |
| | (%) | (100.0) | (20.0) | (13.3) | (33.3) | (26.7) | (6.7) | | | | | |
| | Nonmembers | 69 | 7 | 18 | 22 | 16 | 4 | | 1 | 1 | | 2.01 |
| | (%) | (100.0) | (10.1) | (26.1) | (31.9) | (23.2) | (5.8) | | (1.4) | (1.4) | | |
| 1.00–2.49 | Members | 11 | | 2 | 2 | 4 | 2 | 1 | | | | 2.82 |
| | (%) | (100.0) | | (18.2) | (18.2) | (36.4) | (18.2) | (9.1) | | | | |
| | Nonmembers | 67 | 2 | 14 | 15 | 13 | 14 | 5 | 3 | | 1 | 2.84 |
| | (%) | (100.0) | (3.0) | (20.9) | (22.4) | (19.4) | (20.9) | (7.5) | (4.5) | | (1.5) | |
| 2.50–4.99 | Members | 1 | | | | | | | 1 | | | 6.00 |
| | Nonmembers | 23 | | | 3 | 2 | 7 | 5 | 5 | 1 | | 4.43 |
| 5.00– | Nonmembers | 8 | | | | | 2 | 1 | 2 | 3 | | 5.75 |

Source: Prepared by the author based on the baseline survey of June–August 1992.
Note: Same as Table X.

the landless and functionally landless households of the villages: whose share was 74.8 per cent in village D and 77.8 per cent in village A. However, to investigate whether GB succeeded in targeting the poorest of the poor is important, not only because GB advertises that it does but also due to our finding that they were largely excluded from the poor lenders in the informal financial market.

Table XVII has been compiled for this purpose, and shows the distribution of asset-owning points scored by GB members compared to non–GB members in village D. From the table we observe that among landless households there is a clear tendency for GB members to score more points than nonmembers. This is mainly due to the fact that the share of those who scored zero points was 49.4 per cent for nonmembers, compared with 38.6 per cent for members. We can conclude, therefore, that the poorest of the poor were largely excluded from GB financing activities.[37]

[37] For further evidence on this point, see, for example, Itō (1999), Hashemi (1997), and Hulme and Mosley (1997).

TABLE XVIII

ACTUAL USE OF GRAMEEN BANK LOANS IN VILLAGE D

| | General Loan | | Seasonal Loan | | Other Loans | | Total | |
|---|---|---|---|---|---|---|---|---|
| | No. of Cases | Amounts (Taka) | No. of Cases | Amounts (Taka) | No. of Cases | Amounts (Taka) | Amounts (Taka) | Share (%) |
| Cultivation | 5 | 12,500 | 18 | 39,000 | | | 51,500 | (7.4) |
| Livestock | 24 | 62,500 | 2 | 5,000 | | | 67,500 | (9.6) |
| Handloom | 3 | 8,000 | | | | | 8,000 | (1.1) |
| Business | 72 | 194,000 | 7 | 15,500 | | | 209,500 | (29.9) |
| Transportation | 3 | 8,000 | | | | | 8,000 | (1.1) |
| Consumption | 10 | 25,500 | 2 | 3,500 | | | 29,000 | (4.1) |
| Marriage | 4 | 12,000 | 2 | 5,000 | | | 17,000 | (2.4) |
| Medical expenses | 2 | 5,000 | | | | | 5,000 | (0.7) |
| House repair | 5.5 | 12,000 | 3 | 7,000 | 1 | 12,000 | 31,000 | (4.4) |
| Hand tubewell | | | 1 | 2,000 | 19 | 41,500 | 43,500 | (6.2) |
| Relending | 52.5 | 136,250 | 10 | 24,000 | | | 160,250 | (22.9) |
| Repayment | 16 | 47,750 | 6 | 14,500 | | | 62,250 | (8.9) |
| Unidentified | 1 | 2,000 | 2 | 5,000 | | | 7,000 | (1.0) |
| Total | 198 | 525,500 | 53 | 120,500 | 20 | 53,500 | 699,500 | (100.0) |

Source: Prepared by the author based on the survey of 1992.
Note: U.S.$1 = 40 taka (1992).

## B. *The Actual Use of GB Loans*

From our close observations of the two villages, a large discrepancy becomes apparent between the stated and actual use of GB loans. Thus, it would be very dangerous, and actually nonsensical, to analyze how GB loans were used based on the "official" data contained in GB's annual reports.

Table XVIII describes the actual use of GB loans from careful interviews conducted in village D among all the members to whom loans were disbursed during two-and-a-half-year period from June 1990 to November 1992, although there may still be some oversights. If the upper five items in the table from "cultivation" to "transportation" can be classified as production purposes, only 49.1 per cent of the loans were used for such purposes.[38] The 10.6 per cent of the loans invested in housing and hand tubewells can also be judged as reasonable. The remaining 40 per cent of the loans were used for non-production purposes, such as consumption (4.1 per cent), marriage (2.4 per cent), medical expenses (0.7 per cent), relending (22.9 per cent), repayment (8.9 per cent). Relending, which draws special attention due

[38] Concerning the investment made in livestock, we also obtained some evidence from the baseline survey: for example, among the landless households the share of GB members who possessed bovines (bulls, oxen, or cows) comes to 20.5 per cent, compared with 7.4 per cent for nonmembers. The same figure among the functionally landless was 27.8 per cent for GB members compared with 22.5 per cent for nonmembers.

TABLE XIX

INFORMAL FINANCE AMONG GB MEMBERS IN VILLAGE D

| Land Owned (Acres) | No. of Households | Credit (Taka) | Debt (Taka) | Balance (Taka) |
|---|---|---|---|---|
| 0 | 44 | 178,150 | 76,810 | 101,340 |
| 0.01–0.49 | 36 | 128,100 | 113,950 | 14,150 |
| 0.50–0.99 | 15 | 67,980 | 65,900 | 2,080 |
| 1.00–2.49 | 11 | 52,400 | 157,350 | –104,950 |
| 2.50–4.99 | 1 | 22,000 | 21,500 | 500 |
| 5.00– | | | | |
| Total | 107 | 448,630 | 435,510 | 13,120 |

Source: Prepared by the author based on the baseline survey of June–August 1992.
Note: U.S.$1 = 40 taka (1992).

to its large share, was nothing more than to lending to others in the informal financial market involving long-term credit with usufructuary land mortgage (*bhograhani*) or short-term credit. Moreover, most of the cases of "repayment" were in fact attempts to recover the land mortgaged in the past. Thus using GB loans to get and/or recover mortgaged land was far from negligible.[39] GB members usually cultivate the mortgaged land themselves, contributing to increased rice self-sufficiency at the household level. They are able to keep land without paying rent until their debtors complete repayment, and even after receiving repayment, they can invest it again for obtaining other farmland for cultivation without paying rent.[40] Through short-term lending, GB members continuously obtain rice for self-consumption, because, as discussed earlier, interest is paid in kind. Table XIX shows that at least some of the credit provided by GB members in the informal financial market was provided by relending GB loans.

It should be emphasized here that we should free ourselves from the fixed idea that the majority of loans from micro-credit programs are (or should be) utilized in some micro-enterprise. The real picture was that less than half of the GB loans were utilized for "production purposes" in the narrow sense.[41] It is only natural for many GB loan recipients not to invest in micro-enterprises when there are apparent limitations on outlet markets for their products.[42]

[39] Todd (1996) also emphasizes the importance of GB loans in relending for acquiring mortgaged land, based on her intensive field survey in Tangail.

[40] It can be said that in this case the de facto function of micro-credit is to implement a kind of land reform program.

[41] Land mortgage can be classified as a production purpose, but theoretically mortgaged land can be rent out to other farmers and the creditor can be a landlord. Moreover, in the case of *bhograhani*, the principal will be returned in the future, so in this sense it is questionable to classify it as a production purpose in a pure sense.

[42] See Osmani (1989). On the low profitability of various traditional micro-enterprises by women, see Hossain (1984).

TABLE XX

INFORMAL FINANCE AMONG MICRO-ENTREPRENEURS AND OTHERS IN VILLAGE D

| | No. of Households | | No. of GB Members | | *Bhograhani* | | | Short-Term | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Credit | Debt | Balance | Credit | Debt | Balance |
| Micro-entrepreneurs | 119 | (22.1) | 29 | (27.1) | 268,200 | 448,800 | –180,600 | 208,970 | 383,250 | –174,280 |
| STW owner | 14 | (2.6) | 1 | (0.9) | 44,100 | 171,700 | –127,600 | 78,800 | 160,150 | –81,350 |
| Shopkeeper | 14 | (2.6) | 4 | (3.7) | 24,600 | 66,000 | –41,400 | 32,420 | 39,500 | –7,080 |
| Handloom owner | 10 | (1.9) | 3 | (2.8) | 37,000 | 5,200 | 31,800 | 18,500 | 36,400 | –17,900 |
| Fishing net business | 21 | (3.9) | 5 | (4.7) | 22,800 | 101,200 | –78,400 | 31,000 | 74,500 | –43,500 |
| Clothes business | 5 | (0.9) | 1 | (0.9) | 3,200 | 13,500 | –10,300 | 0 | 3,600 | –3,600 |
| Paddy/rice business | 22 | (4.1) | 4 | (3.7) | 57,900 | 12,700 | 45,200 | 14,300 | 18,400 | –4,100 |
| Egg/veg./fruit business | 18 | (3.3) | 8 | (7.5) | 41,600 | 34,500 | 7,100 | 15,950 | 39,500 | –23,550 |
| Other business | 15 | (2.8) | 3 | (2.8) | 37,000 | 44,000 | –7,000 | 18,000 | 11,200 | 6,800 |
| Others | 419 | (77.9) | 78 | (72.9) | 1,131,750 | 1,488,200 | –356,450 | 386,480 | 250,500 | 135,980 |
| Total | 538 | (100.0) | 107 | (100.0) | 1,399,950 | 1,937,000 | –537,050 | 595,450 | 633,750 | –38,300 |

Source: Prepared by the author based on the baseline survey of June–August 1992.
Notes: 1. U.S.$1 = 40 taka (1992).
2. Figures in parentheses indicate percentages.

If we call a household, at least one of whose members engage in some "business" a micro-entrepreneur, we find as many as 119 micro-entrepreneurs (22.1 per cent) in village D. Table XX shows that they were the major borrowers in the village's short-term informal financial market. In other words, the demand for working capital was high among these micro-entrepreneurs. The table also shows that there were only 29 micro-entrepreneurs from GB member households (27.1 per cent of total members), only slightly higher than the average (22.1 per cent) in the village.[43] Thus even if we consider the existence of GB members who invested their money in livestock, an activity not included in micro-enterprise defined as in the table, a fair number of GB members did not become micro-entrepreneurs, but in many cases passed on the GB credit they received to other existing micro-entrepreneurs.

Finally, it is also natural for many female GB members in an environment like Bangladesh to entrust the use of their GB loans to some male household member,[44]

[43] It was found from the interview that most of the GB members with micro-enterprises had already engaged in that activity before GB started its activities in the village. In other words, it was rather rare for GB members to start some new micro-enterprise.

[44] See Goetz and Gupta (1996).

TABLE XXI

MAJOR OCCUPATIONS AMONG LANDLESS AND FUNCTIONALLY LANDLESS GB MEMBERS AND NONMEMBERS IN VILLAGE D

| Major Occupation | GB Members | | Non–GB Members | |
|---|---|---|---|---|
| | No. of Households | Share (%) | No. of Households | Share (%) |
| Farming | 9 | (11.3) | 25 | (9.5) |
| Agricultural labor | 21 | (26.3) | 97 | (36.7) |
| Handloom labor | 27 | (33.8) | 47 | (17.8) |
| *Biri* factory labor | 3 | (3.8) | 22 | (8.3) |
| Business | 14 | (17.5) | 25 | (9.5) |
| Rickshaw puller | 3 | (3.8) | 11 | (4.2) |
| Service | 0 | (0.0) | 13 | (4.9) |
| Others | 3 | (3.8) | 24 | (9.1) |
| Total | 80 | (100.0) | 264 | (100.0) |

Source: Prepared by the author based on the baseline survey of June–August 1992.

because even if they invest in some business activity, it is very difficult for female GB members to leave their homesteads for the market in order to buy necessary inputs and/or sell their products.

### C. *GB's Mechanism to Alleviate Poverty*

If the idea that micro-credit is mainly invested in various kinds of micro-enterprises, and thus weekly repayments can be made from the revenues of those enterprises, is unfounded, then how can micro-credit programs alleviate poverty? Let us look into the mechanism by which GB was successful in reducing poverty.[45]

Table XXI shows the distribution of major household head occupations of GB members in comparison with nonmembers. It is clear from the table that more GB members were included among household heads engaged in handloom labor and business than among those engaged in agricultural labor, *biri* factory labor, service, and "others."

Special attention should be paid to handloom laborers whose wives were more inclined to become GB members. According to one informant in the village, handloom laborers, who were paid once in a week, used to go to the cinemas in Tangail City in a group on payday; but after their wives became GB members, they stopped going to town and instead began working longer hours to earn more wages to make weekly repayments to GB owed by their wives.

This observation implies that in the present system of weekly repayment, those who already have some fairly stable income source can more easily become GB

[45] Hossain (1988) has verified, through a well-organized survey, the proposition that GB does contribute to reducing rural poverty.

TABLE XXII

INFORMAL FINANCE AMONG GB MEMBERS IN VILLAGE A

| Land Owned (Acres) | No. of Households | Credit (Taka) | Debt (Taka) | Balance (Taka) |
|---|---|---|---|---|
| 0 | 21 | 5,725 | 3,945 | 1,780 |
| 0.01–0.49 | 7 | 8,950 | 4,525 | 4,425 |
| 0.50–0.99 | 1 | | 13,650 | −13,650 |
| 1.00–2.49 | 4 | | 26,100 | −26,100 |
| 2.50–4.99 | 1 | | 23,875 | −23,875 |
| 5.00– | 2 | | 67,275 | −67,275 |
| Total | 36 | 14,675 | 139,370 | −124,695 |

Source: Prepared by the author based on the baseline survey of June–August 1992.
Note: U.S.$1 = 40 taka (1992).

members. Weekly repayments function here as "forced savings." As Rutherford (1998) and Itō (1999) argue, GB loans can be interpreted in this sense as "advances for savings." So it is not always necessary for GB members to invest their loans in micro-enterprises. They can be "consumed" or passed on to others in the informal financial market because they are advanced savings. Therefore, GB played a role to encourage and/or strengthen such savings behavior among poor people with fairly stable regular income source.

Consider for example, the case of a GB member who borrowed 3,000 taka. Weekly repayment in this case is 60 taka, which can be earned by a skilled handloom laborer in one day. If he "invests" by making loans in the short-term informal financial market, after several months, he will receive 9 maunds of paddy in interest on the principal, in addition to the principal itself. Nine maunds of paddy equal about 230 kilograms of milled rice, or enough to support one and a half adults. It is this way that he can gradually escape poverty.

### D. *Limitations of the Grameen Bank*

If GB loans actually are functioning as "advances for savings," the limitations of GB become readily apparent. First, it is difficult for the rural poor without regular income sources, especially the poorest of the poor, to benefit from micro-credit programs. Second, by the same token, it is difficult for a region without plentiful off-farm job opportunities that provide its poor with fairly stable regular income to benefit from such programs.

The first limitation has been examined in this paper and verified in fact to exist,[46]

[46] A notable tendency towards exclusion of the lower part of the poor through the drop-out process facilitated by increases in loan size is argued by Itō (1999). At the same time, the necessity of providing savings facilities for the poorest of the poor through additional institutional innovations has been emphasized by Wright, Hossain, and Rutherford (1997).

the second limitation need more study. This latter limitation could have been examined from the survey of village A, where the non-farm sector was not very developed, but we could not collect enough data to verify its existence.[47] However, Table XXII shows that at least the GB members in village A were not participating in relending activities on a large scale.

## IV. SUMMARY AND IMPLICATIONS

### A. *Summary*

Let us summarize the major findings of this article.

To begin with, contrary to conventional understanding, the flow of informal credit in contemporary rural Bangladesh basically runs from the poor to the rich, not vice versa. This reversed credit flow was observed not only in a village where off-farm employment opportunities for the poor were plentiful, but also in another village without such plentiful off-farm jobs. It should also be emphasized here that other studies, such as Suda (1991) and Toyota (1999), also support this "surprising" finding, although further research is necessary to confirm it.

We cannot say that reversed credit flow from the poor to the rich in the villages studied here is a disguised phenomenon arising from the problem of mis-identification of the poor. In other words, the classification of village households by the size of the farmland they own is, even in the village blessed with off-farm jobs, effective in identifying the economic status of each household. At the same time, however, the "poorest of the poor" must be differentiated from the "poor" when discussing reversed credit flow. It is also not possible to say that reversed credit flow came about with the influx of credit to the poor from the Grameen Bank.

It can be hypothesized that reversed credit flow arose from the so-called trickle-down effects of the Green Revolution combined with the increase of off-farm job opportunities, on the one hand, and a high propensity to save among the rural poor on the other. However, how and to what extent the Green Revolution was related to the development of off-farm sectors could not be examined in this paper.

The large proportion of credit from the poor to the rich was transacted in the long-term financial market, in which farmland was mortgaged. It is, therefore, possible to say that the function of credit is to redistribute farmland (in the sense of accumulating mortgaged land) and, as a result, secure rice for self-consumption by the poor. Food self-sufficiency at the household level is, of course, a matter of high priority. This may be an important factor why the marginal propensity to save is surprisingly high among the poor (excluding the poorest of the poor) in one of the poorest countries in the world.

[47] We found from sample survey of the use of GB loans in village A that there were some members who had to repay old loans by borrowing new loans. See, about this, also Ask, Wiig, and Sigvaldsen (1995) and Rahman (1999).

The conventional understanding that poverty alleviation by micro-credit programs (such as by the Grameen Bank) is attained through the generation of self-employment opportunities by the poor is not correct, or is at least misleading. The evidence from the villages studied here supports instead the argument of Rutherford (1998) and Itō (1999) that loans are, for the poor with regular income, functioning as "advances for savings." The point is that the weekly repayments of GB loans are, in most cases, afforded by savings from already-established regular income sources and not by labor income (and/or profits) from micro-enterprises financed by micro-credit. The role of such micro-credit institutions as the Grameen Bank, therefore, is to promote hard work and the accumulation of savings by the poor, which were possible by the Green Revolution–induced development of the rural economy in general.[48]

Because of the above-mentioned mechanism by which micro-credit can actually alleviate poverty, it is difficult for the poorest of the poor, who are without fairly stable regular income sources (most typically the households headed by women in rural Bangladesh), to benefit from micro-credit programs. It is plausible, but remain to be studied, that regions with underdeveloped off-farm sectors are hard pressed to benefit from micro-credit programs.

### B. *Policy Implications*

According to Egaitsu (1988), there are two schools of thought on rural credit policy in developing countries. One is the conventional supply-side approach that tries to inject subsidized credit from the outside in order to get rid of moneylenders and modernize the credit market. The other is a new approach advocated mainly by researchers at Ohio State University (such as Professor Dale W. Adams), who emphasize the importance of savings mobilization and the viability of rural credit markets. The latter criticizes on the basis of a resurgence in neoclassical economics government intervention in the rural credit market.

Given the history of rural credit policy and performance in Bangladesh, the conventional supply-side approach, which was adopted from the late 1970s in Bangladesh, totally failed in terms of both efficiency and equity. Subsidized credit through cooperatives and banks was monopolized by wealthier farmers and at the same time programs could not be made sustainable mainly because of "intentional" non-repayment by the beneficiaries.

The existence of large amount of savings in the hand of rural households (especially poorer sections of villages), which is one of the major findings of this study, seems to support the effectiveness of the new approach. The diffusion of the Green

[48] This may be the reason why, as Sobhan (1997) points out, the macro impact of micro-credit cannot be large in spite of its widespread outreach among the poor of Bangladesh (about 7.5 million households, nearly half of the rural poor, are now covered by some micro-credit programs), in spite of ample evidences for poverty alleviation at the beneficiaries' household level.

Revolution and the development of non-farm sectors in rural areas contributed to raising rural income and generating savings. However, due mainly to the high transaction cost of depositing savings in modern financial institutions such as banks, rural savings were being circulated through informal channels and created a very active informal credit market. Policymakers in Bangladesh should recognize this newly emerging tendency and in the long run transform it into a modernized financial market. Measures should be taken to reduce transaction costs and provide more flexible (no restrictions on minimum amount of bank savings accounts, for example) and easy-access savings facilities in the bank and cooperative sector.

On the other hand, the "success" of micro-credit programs like GB shows the effectiveness of the conventional supply-side approach, especially for the rural poor who were excluded from the formal credit market, if appropriate institutional innovations, such as a mobile banking system and the weekly repayment system adopted by GB are introduced.

This study indicates that if we correctly understand the real mechanism of poverty alleviation by micro-credit programs, we can more easily take appropriate measures to cope with their apparent limitations. First, contrary to the conventional idea, less strict supervision for the actual use of micro-credit is desirable, because borrowers know the most efficient method of utilization,[49] especially when we consider the fact that credit is a mere advancement of their future savings. As pointed out by Hossain (1984), rates of return on various traditional micro-enterprises are usually low, and borrowers themselves know this very fact, even if they are not instructed. Second, as recent studies[50] also indicate, more flexible and easy-access micro-savings facilities rather than micro-credit are more effective for the promotion of welfare of the poorest of the poor. Third, for the development of backward rural areas with relatively limited off-farm employment opportunities for the poor, infrastructure development such as the construction of roads, market places, and electrical lines should be implemented before micro-credit programs. It can be said that too many resources are now being directed towards micro-credit programs in Bangladesh (Fujita 1994).

[49] We believe that even relending with usury should be officially permitted, because it not only benefits the targeted poor, but also enables more efficient utilization of money, if it is transferred to real rural entrepreneurs.

[50] See Rutherford (1998) and Wright, Hossain, and Rutherford (1997).

## REFERENCES

Ask, Karin; Arne Wiig; and Erlend Sigvaldsen. 1995. *Repayment of Old Loans through New Loans: Is "Cross-Financing" a Problem for Grameen Bank?* Bergen, Norway: Chr. Michelsen Institute.

Boyce, James K., and Martin Ravallion. 1991. "A Dynamic Econometric Model of Agricul-

tural Wage Determination in Bangladesh." *Oxford Bulletin of Economics and Statistics* 54, no. 4: 361–76.

Egaitsu, Fumio. 1988. "Rural Financial Market: Two Schools of Thought." In *Farm Finance and Agricultural Development*, ed. Asian Productivity Organization. Tokyo: Asian Productivity Organization.

Fuglesang, Andreas, and Dale Chandler. 1993. *Participation as Process: Process as Growth*. Dhaka: Grameen Trust.

Fujita, Kōichi. 1994. "Towards a Long-Term Strategy for Income Generation: Rural Institutions and Resource Mobilization." In *Report of the Workshop on Mid-Term Review of Joint Study on Rural Development Experiment Project 7th and 8th December 1993*, ed. Md. Mazharul Islam, et al. Dhaka: Bangladesh Academy for Rural Development in association with Japan International Cooperation Agency.

Fujita, Kōichi, and Feroz Hossain. 1995. "Role of the Groundwater Market in Agricultural Development and Income Distribution: A Case Study in a Northwest Bangladesh Village." *Developing Economies* 33, no. 4: 442–64.

Goetz, Anne Marie, and Rina Sen Gupta. 1996. "Who Takes the Credit? Gender, Power, and Control Over Loan Use in Rural Credit Programs in Bangladesh." *World Development* 24, no. 1: 45–63.

Hashemi, Syed M. 1997. "Those Left Behind: A Note on Targeting the Hardcore Poor." In *Who Needs Credit? Poverty and Finance in Bangladesh*, ed. Geoffrey D. Wood and Iffath Sharif. Dhaka: University Press.

Hossain, Mahabub. 1984. *Credit for the Rural Poor: The Grameen Bank in Bangladesh*. Dhaka: Bangladesh Institute of Development Studies.

———. 1988. *Credit for Alleviation of Rural Poverty: The Grameen Bank in Bangladesh*. Washington, D.C.: International Food Policy Research Institute.

Hulme, David, and Paul Mosley. 1997. "Finance for the Poor or Poorest? Financial Innovation, Poverty and Vulnerability." In *Who Needs Credit? Poverty and Finance in Bangladesh*, ed. Geoffrey D. Wood and Iffath Sharif. Dhaka: University Press.

Itō, Sanae. 1999. "The Grameen Bank: Rhetoric and Reality." Ph.D. diss., University of Sussex.

Jansen, Eirik G. 1987. *Rural Bangladesh: Competition for Scarce Resources*. Dhaka: University Press.

Osmani, S. R. 1989. "Limits to the Alleviation of Poverty through Nonfarm Credit." *Bangladesh Development Studies* 17, no. 1: 1–19.

Palmer-Jones, R. W. 1993. "Agricultural Wages in Bangladesh: What the Figure Really Show?" *Journal of Development Studies* 29, no. 2: 277–300.

———. 1994. "An Error Corrected? And What the Figures Really Show." *Journal of Development Studies* 31, no. 2: 346–51.

Rahman, Aminur. 1999. *Women and Microcredit in Rural Bangladesh: Anthropological Study of the Rhetoric and Realities of Grameen Bank Lending*. Boulder, Colo.: Westview Press.

Rahman, Atiur. 1986. *Peasants and Classes: A Study in Differentiation in Bangladesh*. Dhaka: University Press.

Ravallion, Martin. 1994. "Agricultural Wages in Bangladesh: What Do the Figures Really Show?" *Journal of Development Studies* 31, no. 2: 334–45.

Ravallion, Martin, and Binayak Sen. 1994. "Impacts on Rural Poverty of Land-Based Targeting: Further Results for Bangladesh." *World Development* 22, no. 6: 823–38.

Rutherford, Stuart. 1998. "The Savings of the Poor: Improving Financial Services in Bangladesh." *Journal of International Development* 10, no. 1: 1–15.

Sobhan, Rehman. 1997. "The Political Economy of Micro Credit." In *Who Needs Credit? Poverty and Finance in Bangladesh*, ed. Geoffrey D. Wood and Iffath Sharif. Dhaka: University Press.

Suda, Toshihiko. 1991. "Banguradeshu no nōson ni okeru keizai kaisō no henka to kaisōsei" [Changes in economic structure and stratification in rural Bangladesh]. Tokyo: Japan International Coopeation Agency JOCV Secretariat.

Taniguchi, Shinkichi. 1987. *Society and Economy of a Rice-Producing Village in Northern Bangladesh*. Studies in Socio-Cultural Change in Rural Villages in Bangladesh, no. 6. Tokyo: Institute for the Study of Languages and Cultures of Asia and Africa.

Todd, Helen. 1996. *Women at the Center: Grameen Bank Borrowers after One Decade*. Dhaka: University Press.

Toyota, Hideo. 1999. "Banguradeshu nōson ni okeru infōmaru kin'yū" [Informal finance in rural Bangladesh: A case study of an ASCRA in the Comilla District]. In *1999 nendo Nihon Nōgyō Keizai Gakkai ronbunshū* [Proceedings of annual conference of the Agricultural Economics Society of Japan, 1999]. Tokyo: Agricultural Economics Society of Japan.

Wright, Graham; Mosharrof Hossain; and Stuart Rutherford. 1997. "Savings: Flexible Financial Services for the Poor." In *Who Needs Credit? Poverty and Finance in Bangladesh*, ed. Geoffrey D. Wood and Iffath Sharif. Dhaka: University Press.