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## Poverty alleviation and broiler raising programs of BKB and BRDB in selected areas of Bangladesh - An impact study

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### Abstract

The study attempted to analyze impact of broiler raising programs of Bangladesh Krishi Bank and Bangladesh Rural Development Board for poverty alleviation in selected areas of Mymensingh, Dhaka, Gajipur, Munshigonj and Narayangonj districts. For this study 73 participants under broiler raising of BKB and 84 participants of BRDB were selected purposively. The impact was assessed through selected indicators like employment generation, income earning, increasing savings, landholdings, productive assets and non-productive assets. Mainly head count ratio, poverty gap and test of mean difference were used to assess the impact over five years. The study revealed that 410 and 268 man days of employment opportunity were created per farm per year under BKB and BRDB. Average annual income per household under BKB and BRDB increased from Tk.48758 and Tk.28815 (187%) to Tk.140065 and Tk.73437 (155%) respectively over five years. Average amount of savings per household increased from Tk.1280 and Tk.497 (12 times) to Tk.16805 and Tk.8291 (16times). Per household average net gain over landholdings were 6 decimals and 8 decimals for BKB and BRDB participants. Household productive assets increased more than 2 and 3 times and non-productive assets increased by 6 and 4 times for BKB and BRDB participants. About 63% and 83% of total households under BKB and BRDB enabled to overcome the poverty situation raising. The rest of households have to increase their income by 26% and 8% to overcome the poverty. The broiler-farming households with limited institutional facilities developed their economic status towards poverty reduction within a short time. The institutional facilities with enhanced loan ceiling on easy terms and conditions should be ensured for tackling the major problems of unemployment and poverty in rural Bangladesh.

**Keywords:** Head Count Ratio, Poverty Gap, Productive Assets, Non-productive Assets, and Operating Capital

### Introduction

Poverty alleviation is a challenge for a developing country like Bangladesh due to her high population growth rate, low literacy, high unemployment and limited access in resources. Bangladesh means rural Bangladesh where more than half of all rural households are landless, pressured in a continuous reduction of average size of farms over the past several decades resulting in severe poverty in rural households. The scenario reveals that the number of population below the lower and upper income poverty line were about 33.7% and 49.8% of her total population, based on cost of basic need (MoF, 2004). In 1999-2000, about 4.8% labor force remained absolute unemployed of which about 66.7% was rural labor force (BBS, 2003). The unemployment situation aggravated poverty reduction and became the matter of great concern to the government and development partners. Poverty alleviation has become the 'top objective' of government and global institutions. At present, foreign aided 'poverty alleviation' projects are in abundance but the poverty scenario has hardly changed (Muhammad, 2005).

The landless people living in the rural areas are illiterate and unskilled. They have no alternative source of earning their livelihood but to sell their labor at low wage rate. They employ themselves among others in raising poultry only on whatever small portion of their homestead land they have as poultry production unlike crop is not seasonal and requires less land and capital. Moreover, poultry have a short life cycle and can be produced whatever the number producer can do.

In Bangladesh, there are about 16.40 million households, out of which about 13.80 million are scattered in rural areas. Of the total 8.20 million hectares of cultivable land, approximately 0.45 million hectares or 5 percent are homestead land (BBS, 1984). Besides, more than 60 % people in the country are landless, who generally possess homestead land only. They can easily produce and improve their financial conditions by raising poultry in their homestead land.

Considering the issues, BKB and BRDB have launched poultry development programs for the poor and resourceless people for addressing the poverty for their participants. The institutions are empowered for providing their participants a small amount of credit along with training for this purpose. Their programs put a substantial impact on rural masses in reducing poverty. An assessment of the impact of their programs was felt necessary for which the present study was conducted with the objectives of determining the extent of employment and income generation through which they have been able to bring changes in their position of savings, landholdings, productive and non-productive assets towards crushing their poverty traps.

## Materials and Methods

The sample for the present study was those participants whose main occupations were broiler rearing under BKB and BRDB supporting programs. Data were collected purposively from 73 BKB and 84 BRDB program participants at Mymensingh, Dhaka, Gajipur, Munshigonj and Narayanganj districts purposively where there was a good concentration of small broiler farms. The respondents were interviewed separately through a structured and pre-tested interview schedule. Descriptive technique of analysis including percentage and average was used. In measuring poverty, national level upper poverty line income was considered. This was Tk.573.72 per person per month in the year 2003 (MoF, 2004).

The households were categorized according to their years of farming experience. The households gathered one year farming experience was called category I. The households who gathered 2, 3, 4 and 5 years experience were called category II, category III, category IV and category V respectively. Thus out of the total 157 farm households, 23 (15%), 40 (25%), 66 (42%), 24 (15%) and 4 (3%) farm households were brought under category I, II, III, IV and V for the convenience of interpreting results. Any positive change in any variable indicated the household's strict involvement in poultry farming activities. Other techniques used were as follows:

**T-test:** T-test was used to measure the impact of experience in poultry farming. The t - value expressed the significance of mean difference between two sets of observations of a selected variable, eg., income of two categories of households.

The formula used for this was;  $t = \frac{\bar{X}_1 - \bar{X}_2}{S \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$  with  $(n_1 + n_2 - 2)$  df (Shil and Debnath, 1999).

Where,

$\bar{X}_1$  = mean of the first set of observations of a selected variable of first category of households;

$\bar{X}_2$  = mean of the second set of observations of the same variable of second category of households;

$n_1$  = number of observations in the first set;

$n_2$  = number of observations in the second set;

S = Combined standard deviation;

df = degrees of freedom;

The value of S was calculated by using the following formula

$$S = \sqrt{\frac{(n_1 - 1)S_1^2 + (n_2 - 1)S_2^2}{n_1 + n_2 - 2}} \quad (\text{Shil and Debnath, 1999})$$

At the chosen level of significance the calculated values of 't' were compared with the tabulated values in making decision on explanatory variables of income, savings, landholdings, productive assets and non-productive household assets.

### Head Count Ratio

The method measured the number of people below the poverty line in the households. The formula used for this was:

$$H_p = P_b / TN_p;$$

Where,  $H_p$  = Head count ratio;

$P_b$  = Set of population below the poverty line and

$TN_p$  = Total number of population.

### Poverty Gap (PG)

This method was used to measure aggregate income deficit in overcoming poverty i.e. to measure the depth of poverty where the income shortfall of households was expressed in percentage. The formula used for this was:

$$\text{Poverty Gap (PG)} = ; \frac{1}{TN^H} \sum_{i=1}^{TN^H} \frac{PLI^H - Y_i^H}{PLI^H}$$

Where, PG = Poverty Gap;

$PLI^H$  = Monthly mean poverty line income of household,

$TN^H$  = Total number of household;

$Y_i^H$  = Monthly income of the poor household

## Results and Discussion

### Input flows of farms

The BKB participants received credit only once in five years. Per farm average amount of loan was Tk.47164. The participants of BRDB received fresh credit after repayment of each year's installed amount. The size of credit increased year to year as they repaid their previous amount. A participant received Tk.8381 on an average in the year 2003. The participants of the both institutions complained that the amount of credit provided with them was not sufficient for rearing a sufficient number of broilers. Therefore, they were bound to collect fund from other sources, like commercial banks, moneylenders, relatives, friends and NGOs. The participants increased their capital from their own sources up to 66% and 38% of their total requirement for rearing broilers. The BKB participants were of comparatively better off position. So, they could invest a substantial amount in this business. The capital accumulation capacity of BRDB participants was not good at initial stage as they were landless and resourceless. The households under the two institutions had to face difficulty while accumulating capital in the 1<sup>st</sup> and 2<sup>nd</sup> year's broiler raising operations because the size of credit was too small and their access in both formal and informal credit market was very limited. After two or three years of rearing poultry, their access in both the credit markets became easier than that in the previous years. The dependency on moneylenders for fulfilling the quick demand of capital decreased significantly. The dependency on them rested by 5% and 4% for all the participants in the year 2003 (Table 1).

**Table 1. Sources of capital of households under BKB and BRDB in 2003**

| Institute | BKB and BRDB (Tk.) | Other banks (Tk.) | Own sources (Tk.) | Money lender (Tk.) | Relatives (Tk.) | Friends (Tk.) | NGOs (Tk.)   | Total (Tk.)    |
|-----------|--------------------|-------------------|-------------------|--------------------|-----------------|---------------|--------------|----------------|
| BKB       | -                  | 5865<br>(9)       | 44480<br>(66)     | 3545<br>(5)        | 3257<br>(5)     | 4582<br>(7)   | 5264<br>(8)  | 66993<br>(100) |
| BRDB      | 8381<br>(28)       | 860<br>(3)        | 11529<br>(38)     | 1350<br>(4)        | 2340<br>(8)     | 2431<br>(8)   | 3548<br>(11) | 30439<br>(100) |

Figures in parentheses indicate percentages of total  
Source: Field survey, 2004

### Output flows of farms

The batch and the number of broiler production per farm per year were different. Net profit as well as income was also different in different years. Per farm annual net profit earned by rearing 6.5 batches of broiler was Tk.103275 under BKB households and per farm annual net profit earned by rearing 6 batches of broiler was Tk.43728 in the year 2003 for BRDB households (Table 2). Per unit cost of production and net profit were different for each farm of these two institutions. The difference was because of spatial price variations of production inputs and birds and variations of price due to time of production inputs and availability of day old chicks. The annual net profit was higher for households of BKB as they sold more poultry per batch than for households of BRDB (Table 2).

### Impact on employment generation

One important aim of supporting poultry farming by government was to create wide-ranging employment opportunities, especially, for the poor people in the rural areas of Bangladesh. Poultry (broiler and layer) rearing has fulfilled the purpose intensively. About 410 and 268

man days' per farm employment opportunity was created by broiler farming under BKB and BRDB in a year of which about 195 and 113 man days were family supplied labor (Table 3). Per year total employment opportunity creation was higher under BKB households than those under BRDB. This was possible as because per farm per batch number of broiler was higher for them (Table 3).

**Table 2. Per farm production cost and profit from selling broiler under two institutions in 2003**

| Institution | No. of batch | No. of broiler reared per batch <sup>1</sup> | Per batch total production cost (Tk.) | Per broiler production cost (Tk.) | Per batch gross return (Tk.) | Per broiler selling price (Tk.) | Net profit per batch (Tk.) | Per year net profit (Tk.) |
|-------------|--------------|--|---------------------------------------|-----------------------------------|------------------------------|---------------------------------|----------------------------|---------------------------|
| BKB         | 6.5          | 935  | 66993                                 | 71.65                             | 82878                        | 88.64                           | 15888                      | 103275                    |
| BRDB        | 6.0          | 411  | 30439                                 | 74.06                             | 37730                        | 91.79                           | 7288                       | 43728                     |

<sup>1</sup>After deducting the mortality rate of poultry 10 percent per batch

Source: Field survey, 2004

**Table 3. Per farm per year employment opportunity created by rearing broiler in 2003**

| Institution | Per batch per day labor requirement | Per batch per day family supplied labor | Per batch total man day requirement | No. of batch reared per year | Total no. of man days created by rearing broiler in a year | Total family supplied labor in a year |
|-------------|-------------------------------------|---|-------------------------------------|------------------------------|--|---------------------------------------|
| BKB         | 1.91                                | 0.91                                    | 33                                  | 6.5                          | 410  | 195                                   |
| BRDB        | 1.49                                | 0.63                                    | 31                                  | 5.8                          | 268  | 113                                   |

Source: Field survey, 2004

### Impact on income

Broiler rearing was the top priority source of earning income of the participants. About 74% and 60% income of the farm households in the year 2003 was earned from broiler farming. Before the main source of income was petty business (38%) of BKB participants and rickshaw pulling (29%) of BRDB participants (Table 4). This was a remarkable improvement of the participating households over 5 years of broiler production. The income earned from petty business decreased by about 51% for households under BKB as their income from broiler farming increased. They concentrated all their efforts in broiler farming and agriculture, as they possessed a significant area of arable land. For BRDB households, the income earned from petty business increased by about 711% as they stopped day laboring and rickshaw pulling. The households had less amount of land property for more agricultural activities. So, they continued petty business and broiler farming simultaneously. They remained strict to these businesses only as they were getting increased income. The income from other sources decreased by about 64% and 23% in all the households under BKB and BRDB because they invested their capital in such a few enterprises reaching to a certain level of economic status where they thought they would be able to maintain their household expenditure satisfactorily. At the level when sufficient amount of capital for investing for earning subsistence amount of income, the households tried to maximize their income by investing their limited capital in various income sources. The households under the institutions could run their businesses in this situation and consequently, their income from other sources decreased and the sources of their income were concentrated in few enterprises. The total income of households under BKB and BRDB increased by about 187% and 155% respectively after starting broiler farming.

Table 4. Before-after average annual income status of households under two institutions

| Sources of income of households | BKB            |                 |                | BRDB           |                |                |
|---------------------------------|----------------|-----------------|----------------|----------------|----------------|----------------|
|                                 | Before (Tk)    | After (Tk)      | Net change (%) | Before (Tk)    | After (Tk)     | Net change (%) |
| Broiler farming                 | -              | 103275<br>(74)  | Infinitive     | -              | 43729<br>(60)  | Infinitive     |
| Agriculture                     | 13681<br>(28)  | 14918<br>(11)   | 9.04           | 3970<br>(14)   | 6238<br>(8)    | 57.13          |
| Service                         | 7536<br>(16)   | 9973<br>(7)     | 32.34          | 4356<br>(15)   | 11155<br>(15)  | 156.08         |
| Petty business                  | 18604<br>(38)  | 9055<br>(6)     | -51.33         | 1285<br>(4)    | 10417<br>(14)  | 710.66         |
| Day laboring                    | 1085<br>(2)    | -               | -100           | 8500<br>(30)   | -              | -100           |
| Rickshaw pulling                | -              | -               | -              | 8254<br>(29)   | -              | -100           |
| Others                          | 7852<br>(16)   | 2844<br>(2)     | -63.78         | 2450<br>(8)    | 1898<br>(3)    | -22.53         |
| Total                           | 48758<br>(100) | 140065<br>(100) | 187.27         | 28815<br>(100) | 73437<br>(100) | 154.86         |

Figures in the parentheses indicate percentages of total  
Source: Field survey, 2004

### Savings status

Savings status of an individual household indicates the strength of its crisis coping capacity both in the short and long run over the year (Husain, 1998). The broiler rearing farms under these two institutions also earned a substantial amount of savings in 5 years (Table 5). Most part of the savings of 62% and 50% of all households was as cash kept in hand. They did so as they sometimes were in sudden need of money mainly for purchasing feed for broiler. Their mental strength remained very good when they hold a handsome amount of money in their hand to cope with crisis. Whatever small amount of money they did not like to go to the bank for savings. Saved up money with bank was higher for the households under BKB than those of BRDB. Most of the participants under BKB had to complete their collateral agreement for getting loan. The BRDB participants saved their money before with NGO (about 54%). After starting broiler farming, this came down to 25%. No household lent out money before but they achieved this ability with some extent after starting broiler farming. The overall net changes in savings were about 12 times for BKB participants and 16 times for BRDB after starting broiler farming.

### Landholding status

The landholding of a household is both an input and output variable indicating the eligibility of his membership of BRDB and of getting loan from BKB. A household was eligible for BRDB membership when it possessed land up to 0.50 acre and the head of household sold at least 100 man-days of wage labor in a year. The landholding status of a household also increased the strength of coping crisis. Per household average net gain on landholding since starting poultry rearing were 6 and 8 decimals which were about 5 and 19 in terms of percentage for households under BKB and BRDB respectively. Each household of BKB gained 6 decimals (7%) arable land. Average gain per household under BRDB was 1 decimal (7%) of homestead land and 7 decimals (29%) of arable land. Every household increased mostly arable land for ensuring food security for all the year round.

**Table 5. Per household before-after average savings status under two institutions**

| Savings heads | BKB             |                |                   | BRDB            |                |                   |
|---------------|-----------------|----------------|-------------------|-----------------|----------------|-------------------|
|               | Before<br>(Tk.) | After<br>(Tk.) | Net change<br>(%) | Before<br>(Tk.) | After<br>(Tk.) | Net change<br>(%) |
| In hand       | 130<br>(10)     | 10435<br>(62)  | 7926.92           | 48<br>(10)      | 4124<br>(50)   | 8491.67           |
| At Bank       | 1014<br>(79)    | 5870<br>(35)   | 478.90            | 179<br>(36)     | 1380<br>(16)   | 670.95            |
| At NGO        | 136<br>(11)     | 199<br>(1)     | 46.32             | 270<br>(54)     | 2038<br>(25)   | 654.81            |
| Lenting out   | -               | 301<br>(2)     | Infinitive        | -               | 749<br>(9)     | Infinitive        |
| Total         | 1280<br>(100)   | 16805<br>(100) | 1212.89           | 497<br>(100)    | 8291<br>(100)  | 1568.21           |

Figures in parentheses indicate percentages of total  
Source: Field survey, 2004

### Productive assets

Everything that a household owns and has a money value is classified as an asset (Husain, 1998). The small and substantial poultry rearing farmers under the two institutions possessed assets which provided them some amount of income. Cow rearing was a common culture added more than 50% value of productive assets and the rest part of income was provided with them other four items of productive assets (Table 7). Almost all the households were habituated to rear cow mostly to have availed of their family labor. The aggregate value of cow as a productive asset was increased by about 48% and 126% for the households under two institutions. The value of their total productive assets increased by about 137% and 244% in households after starting poultry farming.

**Table 6. Per household landholding position under two institutions in 2003**

| Type of land | BKB              |                 |                   | BRDB             |                 |                   |
|--------------|------------------|-----------------|-------------------|------------------|-----------------|-------------------|
|              | Before<br>(acre) | After<br>(acre) | Net change<br>(%) | Before<br>(acre) | After<br>(acre) | Net change<br>(%) |
| Homestead    | 0.21<br>(17)     | 0.21<br>(16)    | 0                 | 0.14<br>(33)     | 0.15<br>(29)    | 7.14              |
| Arable land  | 0.90<br>(74)     | 0.96<br>(75)    | 6.67              | 0.24<br>(56)     | 0.31<br>(61)    | 29.17             |
| Garden       | 0.02<br>(2)      | 0.02<br>(2)     | 0                 | 0.04<br>(9)      | 0.04<br>(8)     | 0                 |
| Pond         | 0.09<br>(7)      | 0.09<br>(7)     | 0                 | 0.01<br>(2)      | 0.01<br>(2)     | 0                 |
| Total        | 1.22<br>(100)    | 1.28<br>(100)   | 4.92              | 0.43<br>(100)    | 0.51<br>(100)   | 18.60             |

Figures in parentheses indicate percentages of total  
Source: Field survey, 2004



Table 7. Average value of productive assets per household under two institutions

| Productive assets   | BKB           |                |                | BRDB          |               |                |
|---------------------|---------------|----------------|----------------|---------------|---------------|----------------|
|                     | Before (Tk)   | After (Tk)     | Net change (%) | Before (Tk)   | After (Tk)    | Net change (%) |
| Rickshaw            | 727<br>(14)   | 2024<br>(17)   | 178.40         | 203<br>(9)    | 572<br>(7)    | 181.77         |
| Van                 | 280<br>(6)    | 1845<br>(15)   | 558.93         | -             | -             | -              |
| Goat                | 562<br>(11)   | 1227<br>(10)   | 118.33         | -             | 1505<br>(19)  | Infinitive     |
| Cow                 | 3545<br>(69)  | 5246<br>(43)   | 47.98          | 2130<br>(91)  | 4820<br>(60)  | 126.29         |
| Machinery equipment | -             | 1768<br>(15)   | Infinitive     | -             | 1120<br>(14)  | Infinitive     |
| Total               | 5114<br>(100) | 12110<br>(100) | 136.80         | 2333<br>(100) | 8017<br>(100) | 243.63         |

Figures in parentheses indicate percentages of total  
Source: Field survey, 2004

### Non-productive assets

Noticeable changes occurred in the households' possession of luxury items viz. TV, furniture, jewelry and crockery. This was a general tendency like all other people in all other areas of Bangladesh. The value of each item of non-productive assets increased significantly. The value of bicycle and jewelry under BKB respondents were remarkable. The net changes in these cases were 10 and 19 times more. For BRDB households, the remarkable changes were in the possession of bicycle and crockery. These were about 4 and 3 times more than before. The total value of non-productive assets was about 6 times more for BKB and 4 times for BRDB participants after starting broiler farming.

### Results of test of significance

Whether the length of membership affecting the changes of income, savings, landholdings, productive and non-productive assets of households was examined by test of significance. The results showed that the household income, savings, landholdings, productive and non-productive assets increased with increasing the length of experiences of broiler farming households because households of category I reared broiler only one year before while households of category V reared broiler from 5 years before. Consequently, there was a significant difference in their net profit as well as income earned from the broiler farming that put an impact on the five indicators (income, savings, landholdings, productive assets and non-productive assets) of these two farming experience categories of households. It also indicated no significant mean difference between two consecutive categories because their experience of broiler farming was very low (only one year). Results revealed that length of membership influenced of lifting individual economic status positively.

### Poverty reduction status

Both a significant number of households and population were able to crush poverty situation in five years of broiler farming. Total number of poor households under BKB and BRDB reduced from 27% and 42% to 10% and 7% of the households within 5 years. Under these households about 26% and 46% population were poor which decreased to 10% and 12%

respectively. The poverty reduction status for households of BKB and BRDB were 63% and 83% over 5 years of broiler farming. Poverty reduction status of population was 62% and 74% over the 5 years of broiler farming. Thus, the poverty situation reduced within the sample households after participation of member in broiler farming programs.

Poverty gaps of households under BKB and BRDB were 0.26 and 0.08, which means that per household average income shortfall from upper poverty line of the total poor households under BKB and BRDB were 26% and 8%. In other words, the poor households under BKB and BRDB stayed at the position of upper poverty line income where they would be able overcome poverty if their households' income could be increased by 26% and 8% more. Therefore, if the population of respective households and the upper poverty line income of national level remain unchanged, the respective households had to increase 26% and 8% of their income for alleviating poverty.

**Table 8. Average value of non-productive assets per household under two institutions in 2003**

| Non-productive assets | BKB           |                |                | BRDB          |               |                |
|-----------------------|---------------|----------------|----------------|---------------|---------------|----------------|
|                       | Before (Tk)   | After (Tk)     | Net change (%) | Before (Tk)   | After (Tk)    | Net change (%) |
| TV                    | 384<br>(15)   | 3550<br>(20)   | 824.48         | -             | 1563<br>(18)  | Infinitive     |
| Cassette player       | 136<br>(5)    | 850<br>(5)     | 525.00         | 156<br>(8)    | 265<br>(3)    | 69.87          |
| Furniture             | 1550<br>(53)  | 4656<br>(26)   | 200.39         | 805<br>(38)   | 3045<br>(35)  | 278.26         |
| Jewelry               | 245<br>(9)    | 4958<br>(28)   | 1923.67        | 752<br>(36)   | 1750<br>(20)  | 132.71         |
| By-cycle              | 128<br>(4)    | 1455<br>(8)    | 1036.72        | 250<br>(12)   | 1362<br>(16)  | 444.80         |
| Crockery              | 406<br>(14)   | 2560<br>(13)   | 530.54         | 133<br>(6)    | 647<br>(8)    | 386.47         |
| Total                 | 2849<br>(100) | 18029<br>(100) | 532.82         | 2096<br>(100) | 8632<br>(100) | 311.83         |

Figures in parentheses indicate percentages of total  
Source: field survey, 2004

**Table 9. T-values of five indicators according to farming experience categories of the households**

| Indicators                           | Farming experience category |       |       |        |        | T- values between |         |        |         |         |
|--------------------------------------|-----------------------------|-------|-------|--------|--------|-------------------|---------|--------|---------|---------|
|                                      | I                           | II    | III   | IV     | V      | I-II              | II-III  | III-IV | IV-V    | V-I     |
| Average income in Tk.                | 58158                       | 75064 | 90253 | 113530 | 138045 | 2.10***           | 1.95*   | 1.98*  | 1.23*   | 5.26*** |
| Average savings position in Tk.      | 6356                        | 8483  | 10520 | 11618  | 16525  | 2.55***           | 2.48*** | 1.08*  | 4.48*** | 9.46*** |
| Average landholdings in acre         | 0.54                        | 0.53  | 0.70  | 0.93   | 2.69   | 0.06*             | 1.44*   | 1.02*  | 1.99*   | 2.56*** |
| Average productive assets in Tk.     | 5208                        | 6234  | 7075  | 9312   | 23150  | 0.89*             | 0.83*   | 1.27*  | 1.06*   | 1.34*   |
| Average non-productive assets in Tk. | 6454                        | 10144 | 13501 | 15967  | 16375  | 1.40*             | 1.19*   | 0.50*  | 0.08*   | 3.14*** |

\* indicates insignificant

\*\*\* indicates highly significant at 1% level

Source: field survey, 2004

**Table 10. Poor and non-poor households under two institutions before-after situation of broiler farming**

| Situation     | Institutions in total situation | Total number of households | Total no. of population under sample households | Poor households         |                      | Non-poor households     |                  |
|---------------|---------------------------------|----------------------------|---|-------------------------|----------------------|-------------------------|------------------|
|               |                                 |                            |   | Total No. of households | Total population (H) | Total No. of households | Total population |
| Before (1999) | BKB                             | 73 (46)                    | 357 (49)  | 20 (27)                 | 94 (26)              | 53 (73)                 | 263 (74)         |
|               | BRDB                            | 84 (54)                    | 376 (51)  | 35 (42)                 | 172 (46)             | 49 (58)                 | 204 (52)         |
|               | Total                           | 157 (100)                  | 733 (100)                                       | 55 (35)                 | 266 (36)             | 102 (65)                | 467 (64)         |
| After (2003)  | BKB                             | 73 (46)                    | 380 (49)  | 7 (10)                  | 37 (10)              | 66 (90)                 | 343 (90)         |
|               | BRDB                            | 84 (54)                    | 397 (51)  | 6 (7)                   | 49 (12)              | 78 (93)                 | 348 (88)         |
|               | Total                           | 157 (100)                  | 777 (100)                                       | 13 (8)                  | 86 (11)              | 144 (92)                | 691 (89)         |

Figures in the parentheses indicate percentages of total  
Source: field survey, 2004

**Table 11. Poverty Gap (PG) of households under two institutions according to lower poverty line income at Tk.495.19**

| Name of institution | TN <sup>H</sup> | $(PLI^H - Y_i^H) / PLI^H$ | PG   |
|---------------------|-----------------|---------------------------|------|
| BKB                 | 5               | 1.28                      | 0.26 |
| BRDB                | 6               | 0.48                      | 0.08 |

Note: PG = Poverty Gap,  $PLI^H$  = Monthly mean poverty line income of household,  $TN^H$  = Total number of household,  $Y_i^H$  = Monthly income of the poor household  
Source: field survey, 2004

## Recommendations

Government aided poultry development programs, with an enhanced loan ceiling on easy terms and conditions might be a major strategy of tackling the twin problems of unemployment and poverty in rural Bangladesh. The programs should associate among others, with modern training facilities on broiler production technologies for skill development, consciousness raising, increasing the responsibilities of properly loan utilization and so on shall have to be ensured for rural poor men and women to improve their capability. Success cases are recommended to be replicated in other areas and such programs should be included in the PRSP as rural poverty reduction model in Bangladesh.

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