

# The role of training in reducing poverty: the case of agricultural workers receiving microcredit in Bangladesh

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*The policy of providing microcredit and skill training to poor agricultural workers in developing countries is well-established. In this study, an attempt has been made to assess the effectiveness of the training part of that policy. BRAC (formerly the Bangladesh Rural Advancement Committee), the largest non-governmental organization in Bangladesh, is making efforts to alleviate poverty by providing microcredit and relevant training to landless and marginal borrowers, who have less than 1.5 acres of land, in order to enhance their standard of living. The study aims to assess the effects of BRAC's training programs on the recipients' total household expenditure. Primary data were collected from female borrowers who participated in the microcredit programs of BRAC and these data reflect the key role women play in agricultural work and the lack of research on their status. The study shows that the training provided to the borrowers failed to create any significant impact on their household expenditure because only a small percentage of borrowers received training and the duration of the training was limited (on average three days per person). Moreover, many of those who received training experienced only a modest income effect. The findings are important*

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*not just for the practical purpose of influencing policies for reducing poverty in Bangladesh but also for their contribution to the understanding of the effectiveness of training. The existing literature is concerned mainly with the effectiveness of training in the context of business and other organizations in developed countries. Research on the effectiveness of training in developing countries, particularly in alleviating poverty, is less evident. Moreover, the present research is also exceptional as it focuses only on female trainees.*

## Introduction

### The agricultural economy of Bangladesh

The economy of Bangladesh is predominantly based on agriculture (Mahmud *et al.*, 2007, 2010), which consists of four sectors: crops, fishery, livestock and forestry (Mahmud *et al.*, 2010). Agriculture plays a crucial role in the economy of Bangladesh and its contribution to the country's gross domestic product (GDP) was 13.09 per cent in the fiscal year 2012/13 (Ministry of Finance, 2014). In spite of being an agriculture-based country, however, total agricultural production in Bangladesh is relatively low. This is because poverty, lack of modern technology and infrastructure development, and inadequate credit facilities result in low productivity. A large proportion of the people in Bangladesh – 47.5 per cent of the labor force – are involved in the agricultural sector for their livelihood (Ministry of Finance, 2014). One of the important features of the Bangladesh agricultural sector is that men make up a higher proportion of the labor force than women. In the latest Labor Force Survey (conducted in 2010) the number of men and women in the sector's labour force were 15.22 million and 10.50 million, respectively (Bangladesh Bureau of Statistics, 2011). Mahmud (2011) reports that due to the conservative attitude found in rural society, women's economic activities are limited to those within the homestead areas and their mobility outside the home is much restricted. According to Mahmud (2011), rural women are mainly involved in activities such as homestead gardening, poultry and livestock rearing, fish-culture, horticulture and handicrafts, whereas men have a wider range of roles. The poor, whether male or female, have a low level of education, training and financial capability to pursue their economic activities. Due to lack of access to institutional credit facilities, they depend on rural money lenders who charge a very high interest rate with unfavorable terms and conditions (Mahmud, 2011). Conventional banks require collateral which the poor cannot provide (Mahmud, 2010, 2011; Mahmud *et al.*, 2010). Microcredit provides them with a credit facility without collateral and adds skill-building training to enhance their income-generating activities (IGAs), in order to improve their quality of life.

### The role of BRAC

BRAC (formerly the Bangladesh Rural Advancement Committee) is the largest non-governmental organization in Bangladesh and has been working for poverty alleviation since 1972 by operating microcredit programs in order to improve the living standard of the poor in Bangladesh. The major tasks of BRAC are: (1) to provide a microcredit facility to the poor for alleviating their poverty, (2) to enhance women's empowerment through social development, (3) to provide training facilities to employees and borrowers in order to increase their skills, (4) to conduct socioeconomic research on development issues, (5) to advocate the human and legal rights of citizens, and (6) to implement various development programs in line with national development policies and in collaboration with the government and donor agencies.

BRAC has been implementing its programs covering all districts of Bangladesh by providing microcredit support to millions of poor borrowers and has succeeded in maintaining a high repayment rate. The borrowers to which the present study relates

Table 1: Particulars of BRAC's microcredit program

Particulars	2011	2012	2013
Male borrowers (number)	467,392	455,596	566,503
Female borrowers (number)	6,302,946	5,380,265	5,074,181
Disbursement (million BDT)	86,270	104,220	121,150
Repayment (million BDT)	77,270	96,900	109,660

Source: Ministry of Finance, 2014.

1 USD = 77.75 BDT in 2014 (BDT indicates Bangladesh currency).

are either the landless (who own under half an acre of land) or the marginal (who own half an acre of land, but not more than 1.49 acres). Some details of BRAC's microcredit programs are presented in Table 1 from which it can be seen that BRAC provided most of its credit support to women.

BRAC offers a wide range of training for the poor of Bangladesh. This includes agricultural programs (crop cultivation, poultry, livestock, fishery, agribusiness and so on) and non-agricultural programs (microcredit, health, non-formal primary education, community empowerment, human and legal rights, gender, environment and climate change, non-agricultural business and so on). BRAC has also been implementing development programs in countries other than Bangladesh such as Afghanistan, Sri Lanka, Uganda, Tanzania, Philippines, Pakistan, South Sudan, Sierra Leone, and Liberia.

### Problem statement and objective of the study

There is no doubt that as a result of BRAC's programs taken as a whole, many poor borrowers have become successful in escaping from poverty, but the specific impact of the microcredit programs in improving the living standard of the poor seems to be limited. For instance, Ahmed (2009) noted that microcredit-based interventions which were implemented by BRAC were not sufficient to effectively reach the 'ultra' poor. Similarly, Mahmud (2011) reported that microcredit programs in Bangladesh were unsuccessful in completely eradicating poverty among the rural poor. The small amounts of credit and the inadequacies or ineffectiveness of skill-building programs might be causes of such failure. Therefore, the following question can be raised: Is the training program for borrowers of microcredit effective in improving the living standard of borrowers' households? The present study focuses on assessing the effectiveness of BRAC's training program by determining the borrower's total household expenditure. Apart from the practical concern of whether the training in the study led to increased household income, the research also aims to add to existing knowledge of the more general relationship between training and the reduction of poverty in developing nations.

### The effectiveness of training

There is a substantial literature on training effectiveness although little is devoted to training's role in reducing poverty in developing countries. In Bangladesh, Mahmud *et al.* (2012) conducted a study on fishermen who were provided with fishery-related training. The authors found that the training program increased their income. According to the authors, family size and possession of fishing equipment were the key determinants of household income. Mahmud *et al.* (2007) conducted a study on female borrowers who were agricultural workers and found that training played a positive role in improving their economic well-being. Jothilakshmi *et al.* (2009) reported that a training program had played a vital role in improving the competency level of women in India in pursuing their farming activities. The authors also indicated that training

increased the adoption of technology among the women. Rosholm *et al.* (2007) reported that, in the African context, training programs assisted employees in being productive and assisted companies by enabling them to recoup their training investment cost. Ahmed (2009) conducted a study in Bangladesh on participants of a BRAC program who were deemed 'ultra poor'. The author found that asset-grant and skill training assisted these ultra poor people in having access to and building productive assets. After reviewing the literature, Nilsson (2010) concluded that vocational training played a significant role in improving the productivity of enterprises. The author considered vocational training as one of the major tools for enhancing economic growth and social inclusion. The author also added that vocational training had the potential to create greater opportunity for unemployed young people to have the access to the labor market.

Although previous studies provide the evidence that training can play a positive role in employee's productivity and enterprise growth, there has been little study of the relationship between capacity building (including training) in farming communities and their living standard. Since most of the borrowers in the present study were poor and had a low level of skills due to lack of any training facility, BRAC took the initiative in providing training, expecting that their skills in pursuing IGAs would increase, resulting in a higher income and expenditure for their households. Thus, the present study focuses on exploring the effectiveness of training in reducing rural poverty in a developing country, specifically in relation to women. Few studies of this type have been conducted.

### Conceptual framework of improving borrowers' skills

An effective training program assists borrowers in better analyzing critical socio-economic activities, in understanding the demand for their products or services and enabling them to take appropriate business decisions. Training increases awareness and helps borrowers become technically sound, increases their skills in diversifying their agricultural activities and leads them to render efficient services to their family and wider society. In fact, household expenditure has many facets and it depends on a number of factors. Therefore, training should not be considered as the only influencing factor for accelerating household expenditure. The influence of other factors (such as access to credit, labor availability, family size, education status of the household, possession of assets, and infrastructural facility) should be analyzed critically. Figure 1 shows the conceptual framework for improving living standard through training.

The conceptual framework has been adapted and modified from Mahmud *et al.* (2010, 2012) and Mahmud (2011).

### Methodology

A full list of the borrowers was collected from the branch offices of BRAC using the following criteria:

- Borrowers must have taken a loan from BRAC.
- Borrowers must not have participated in any other program.
- Borrowers must be permanent residents of their village.
- They must be a current borrower with at least one loan paid in full.
- They must have been members of the BRAC program for at least a year.

At the very beginning of the survey, 70 branches of BRAC were selected using simple random sampling (SRS) from the total of 1875 branches. Afterwards, based on these selected branches, a comprehensive borrower list was prepared. Finally, from the compressive list of 6728 borrowers, 1984 borrowers were randomly selected as the sample for the study. Primary data were collected through face-to-face interview from April 2013 to July 2013. Borrowers were asked to provide information about their socio-demographic profile, information about their training, an opinion about their training program, and details of their household income and expenditure. In this study,

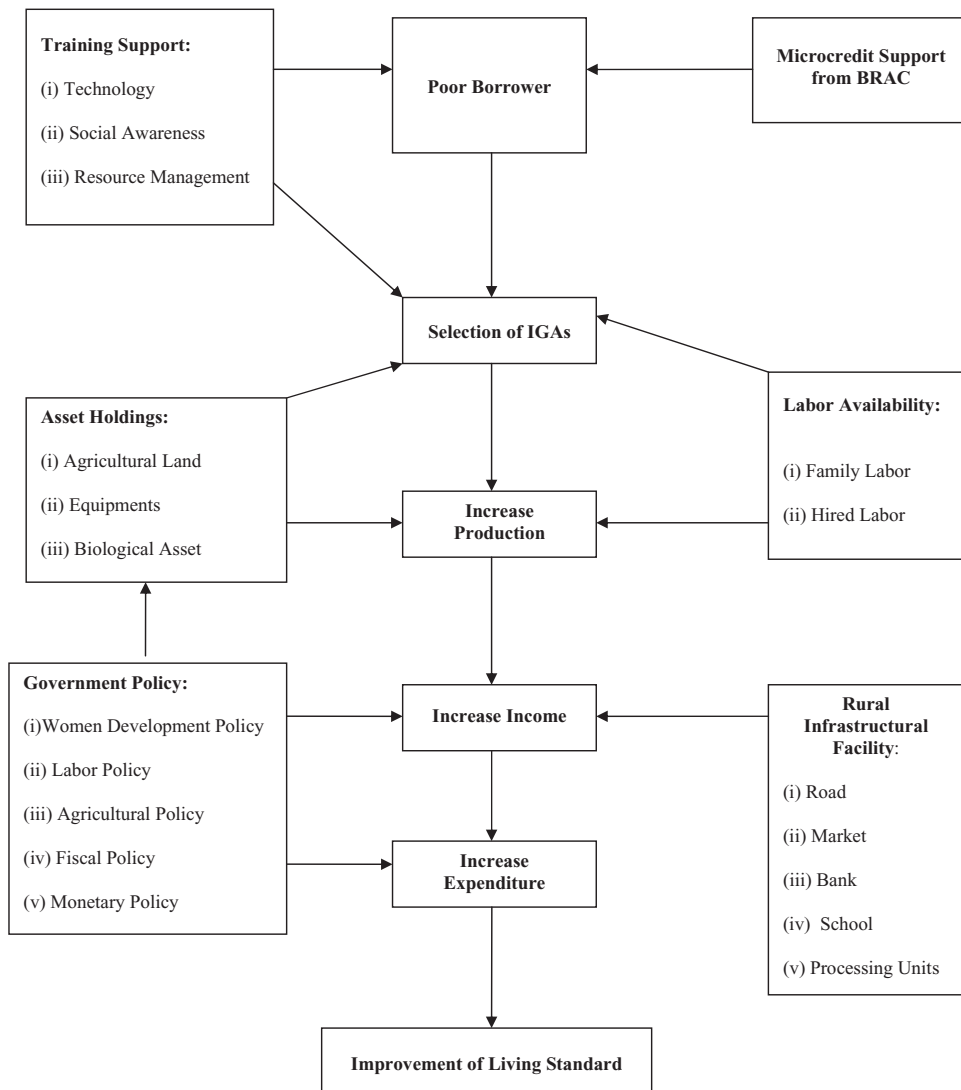


Figure 1: Conceptual framework of poverty alleviation through training.

the Breusch-Pagan test was conducted and no heteroscedasticity problem was found. The Ordinary Least Square technique was used to assess the effect of training on the total expenditure of the borrower's household. Specifically, the model can be written as:

$$TE = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \mu \quad (1)$$

where:

TE = Total expenditure of the household in 2011 (BDT)

$\beta_0$  = constant

$X_1$  = Age of the borrower (year)

$X_2$  = Number of years of schooling of the borrowers

$X_3$  = Total land possessed by the household (decimal)

$X_4$  = Total value of the household asset (BDT)

$X_5$  = Amount of credit received by borrowers from BRAC in 2011 (BDT)

$X_6$  = Training received by borrowers from BRAC in 2011 (dummy)

$X_7$  = Family size of the borrower's household (number)

$\beta_i$  = Coefficient to be estimated

$\mu$  = Error term

## Results and discussions

### Types of training received by the borrowers

BRAC provided training to the borrowers for both agricultural and non-agricultural activities (Table 2). It can be seen that out of 1984, only 278 borrowers received training. The borrowers received training mostly on agricultural activities rather than non-agricultural activities. The majority of the borrowers received training on cow-rearing followed by disaster management (Table 2).

### Determinants of household expenditure

Several variables, such as (1) age of the borrowers, (2) educational status of the borrowers, (3) total value of assets, (4) total land possessed by household, (5) amount of credit received by the household, (6) training received by the borrowers (dummy), and (7) family size, were considered as independent variables (Table 3). The dependent variable was the household's total expenditure. The findings show that apart from age, training, and possession of land, all other variables had significant influence on the total expenditure of the household. The significant variables were: (1) education, (2) credit, (3) value of household assets, and (4) family size (Table 3).

Education is closely related to human knowledge. Education can help people in improving people's skills through increasing their capacity to adopt modern technology and also assist them in taking appropriate decisions at crucial time in pursuing their IGAs. It also plays a central role in improving negotiation and risk-bearing ability of people who are engaging themselves in economic activities. It can be assumed that a person with a higher level of education would be economically better-off than a person with a low level of education. The findings of this study show that education has a positive and significant influence on the dependent variable. It indicates that borrowers would be able to spend more, leading to a higher standard of living, as the years of schooling increase.

Table 2: Training received by borrowers from BRAC in 2011

Types of training	Number attending	Percentage
<b>1. Agricultural training</b>	<b>170</b>	<b>61.16</b>
1.1 Crop cultivation	7	2.52
1.2 Poultry rearing	38	13.67
1.3 Goat rearing	4	1.44
1.4 Cow rearing	116	41.73
1.5 Tree plantation and forestry	5	1.80
<b>2. Non-agricultural training</b>	<b>108</b>	<b>38.84</b>
2.1 Disaster management	60	21.58
2.2 Health care	24	8.63
2.3 Legal rights	8	2.86
2.4 Child marriage	9	3.25
2.5 Sewing	2	0.72
2.6 Rural social system	5	1.80
<b>Total</b>	<b>278</b>	<b>100</b>

Source: Authors' survey 2012.

Table 3: Factors influencing household expenditure

Variable	Coefficient	t-value	Significance
Constant	8.251766	49.75	0.000
Age of the borrower (years)	0.0079081	0.26	0.793
Number of years of schooling of borrower	0.0358904	4.73	0.000
Total land possessed by household (decimal)	-0.0005622	-0.08	0.932
Total value of the household asset (BDT)	0.1216744	14.56	0.000
Amount of credit taken (BDT)	0.115721	9.19	0.000
Training received (dummy)	0.0171055	0.71	0.477
Family size (number)	0.1118197	22.15	0.000
R-square: 0.4116			

Source: Author's Survey 2012.

As mentioned earlier, the majority of the households were poor with low level of investment ability which resulted in lower income and expenditure. Households having more assets are in a better position compared with those having few assets. Household assets might be used as collateral for getting more loans to fulfill their capital needs. They can also play a crucial role in improving the negotiation and risk-bearing capacity of poor households. It can be hypothesized that an increase in the value of assets would increase borrowers' income which would in turn increase their capacity to spend more. This study shows that value of household assets has a significant and positive influence on household expenditure.

Due to poverty, households had to struggle to invest properly in IGAs. Many of them did not have the opportunity to start IGAs. BRAC provided a microcredit facility to them so that they could get involved in economic activities. It was expected that borrowers would use this loan for the assigned purpose properly and would improve their living standard. This study shows that any amount of credit received by the household is positively and significantly related to the dependent variable 'household total expenditure'. It indicates that borrower's household expenditure would increase as the amount of loan increases.

In the context of rural Bangladesh, the number of members in the family is an important source of earning and labor supply, and it is also related to household expenditure. Farm activities are poorly mechanized in Bangladesh, and therefore, farming activities are operated by manual labor. The majority of the rural households in Bangladesh depend on family-supplied labor for farming since hiring labor is expensive. Thus, a family having a large number of members involved in economic activities would be in an advantageous position in income generation which would ultimately lead to higher level of expenditure than a small family with few members. This study shows that family size is positively and significantly related to the dependent variable. However, it can also be argued that increasing the number of unemployed and dependent members in the family would increase the likelihood of falling into poverty, causing the family to cut down their household expenditure.

## Conclusion

### Factors influencing the borrowers' standard of living

The study results show that education, amount of credit, possession of assets and family size were the significant determinants of household expenditure. If training is to be effective, it is likely that it will need to be part of an integrated credit policy that embraces all of these factors. Thus, emphasis should be given to provide a credit facility in accordance with the need and the nature of the IGAs pursued by the household. The

credit disbursement procedure should be easy, and credit should reach the borrowers in time. Provision should be made for taking multiple loans at a time by the borrowers. Steps should be taken to establish agro-based industries in rural areas so that more employment opportunities can be created. It is also important to focus on agrarian reform related to land rights, conservation of biodiversity, and the use of integrated farming systems by encouraging community participation.

### The role of education

Although training itself is not a significant variable in this study, education level is significant. Steps should be taken to provide educational support to the borrowers in both formal and informal ways. Establishing schools and libraries in rural areas would encourage the borrowers to participate in the education program. Necessary educational materials should be provided free of cost to the borrowers. Subject matter should be focused on the demands of the borrowers. It is also important to strengthen the awareness-building campaign among rural people so that they can be encouraged to send their family members to participate in educational activities. Creating partnerships with the government and donor agencies would be useful strategies in promoting educational facilities among the borrowers.

### The need to make training effective

BRAC sought to improve the living standard of the borrowers in terms of household expenditure by providing microcredit and through skill-development training. It was expected that due to participation in the training program, the borrowers would be able to increase their living standard. However, the findings of this study show that training does not have a significant influence on the living standard of the borrowers in terms of expenditure. The major cause of failure was that only a small proportion of the borrowers received training and the training was also of short duration, but the literature suggests training can be effective in these sorts of context. Indeed, the vast majority of those who received training in the present survey thought that their income had increased, although virtually their income was not much.

In order to make training programs effective for the borrowers of microcredit in the context of a poor person, mostly in female agricultural workforce, policy-makers should consider the following points raised by the recipients of training in this study.

1. It is important to increase the number of trained persons and the length of training, and it should be based on the specific needs of the borrowers.
2. Steps are also required to establish adequate training centers in rural areas as near the borrowers' homes as possible, with a view to supplying necessary training materials at a nominal price.
3. Furthermore, timing for training sessions should be flexible as the majority of the borrowers are women.

More broadly, it is suggested that the role of training in reducing poverty may need to be seen in its specific context – here, poor female agricultural workforce – while recognizing that training is only one of a number of variables influencing the situation. The lesson for policy-makers is that effective policy might require a composite intervention, only part of which involves training, but all components need to be effective.

### References

- Ahmed, S. M. (2009), 'Capability development among the ultra-poor in Bangladesh: a case study', *Journal of Health, Population, and Nutrition*, 27, 4, 528–35.
- Bangladesh Bureau of Statistics (2011), 'Report on Labor Force Survey 2010', Statistics Division, Ministry of Planning, Government of the People's Republic of Bangladesh.
- Jothilakshmi, M., Krishnaraj, R. and Sudeepkumar, N. K. (2009), 'Empowering the members of women SHGs in livestock farming through need-based trainings', *Asia-Pacific Journal of Rural Development*, 19, 2, 17–30.



- Mahmud, K. T. (2010), 'Does microcredit really matter to women borrowers of Bangladesh? A case of BRAC's agribusiness program', *The Global Journal of Finance and Economics*, **7**, 2, 111–21.
- Mahmud, K. T. (2011) *Small Credit for Big Hope: A Case Study on Bangladesh* (Saarbrücken: Lambert Academic Publishing).
- Mahmud, K. T., Mohamed, Z. A., Ismail, M. M., Shamsudin, M. N. and Hilton, D. (2007), 'Perception and attitude of microcredit borrowers towards effectiveness of agricultural diversification and intensification project in Bangladesh', *Asia-Pacific Journal of Rural Development*, **17**, 2, 67–83.
- Mahmud, K. T., Mohammed, Z. A., Sambasivan, M. and Khan, S. I. (2010), 'Opinion of fishermen towards their well-being under agricultural diversification and intensification project (ADIP) in Bangladesh', *International Journal of Economics and Management*, **4**, 1, 45–60.
- Mahmud, K. T., Kabir, G. M. S., Islam, M. T. and Hilton, D. (2012), 'Impact of fishery training program on the living-standard of the fishers: a case of community based fishery management project in Bangladesh', *Asia-Pacific Journal of Rural Development*, **22**, 2, 23–34.
- Ministry of Finance (2014), 'Bangladesh Economic Review (Bengali version)', Government of the People's Republic of Bangladesh. Available at [http://www.mof.gov.bd/en/index.php?option=com\\_content&view=article&id=285&Itemid=1](http://www.mof.gov.bd/en/index.php?option=com_content&view=article&id=285&Itemid=1) (accessed 25 May 2014).
- Nilsson, A. (2010), 'Vocational education and training – an engine for economic growth and a vehicle for social inclusion?', *International Journal of Training and Development*, **14**, 4, 251–72.
- Rosholm, M., Nielsen, H. S. and Dabalén, A. (2007), 'Evaluation of training in African enterprises', *Journal of Development Economics*, **84**, 310–29.

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