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# The Bangladesh Rural Advancement Committee's Credit Programs

## Performance and Sustainability

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Shahidur R. Khandker  
Baqui Khalily

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Shahidur R. Khandker  
Baqi Khalily

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## CONTENTS

Foreword . . . . .	v
Acknowledgments . . . . .	vi
Abstract . . . . .	vii
Executive Summary . . . . .	ix
Chapter 1 Rural development and the emergence of the Bangladesh Rural Advancement Committee as a development organization . . . . .	1
Overview of report . . . . .	4
Chapter 2 What is the BRAC? . . . . .	9
The BRAC's development strategy . . . . .	10
The BRAC's operational model . . . . .	12
The BRAC's credit delivery model . . . . .	15
The BRAC's approach to financial intermediation . . . . .	17
The BRAC's social development model . . . . .	18
Chapter 3 Organization, funding, and beneficiaries . . . . .	23
Administrative structure and organizational expansion . . . . .	23
Employee expansion . . . . .	24
Village organization, membership growth, and gender coverage . . . . .	25
Financing BRAC activities: sources of funds . . . . .	26
Savings mobilization . . . . .	27
Lending and portfolio mix . . . . .	29
Achievement of social development programs . . . . .	32
BRAC's support to sectoral development . . . . .	33
Chapter 4 Sustainability and subsidy . . . . .	37
A concept of program sustainability . . . . .	38
Institutional development . . . . .	40
Financial and economic viability . . . . .	41
Borrowers' viability . . . . .	44
Economic viability of the BRAC: subsidy dependence . . . . .	45
Chapter 5 Institutional viability . . . . .	51
Leadership, decentralization, monitoring, and evaluation . . . . .	52
Management style: staff training, incentives, and performance . . . . .	54
Managers' pay: determinants and returns to education and experience . . . . .	57
What determines the BRAC program placements? . . . . .	59

<b>Chapter 6 Financial and economic viability . . . . .</b>	<b>63</b>
Analysis of program level viability . . . . .	63
Assets and financial structure . . . . .	64
Revenue and cost structure . . . . .	66
Financial margin, interest rate policy and profitability . . . . .	70
Subsidy dependence . . . . .	72
Are BRAC credit and development programs cost-effective? . . . . .	75
<b>Chapter 7 Borrowers' viability . . . . .</b>	<b>79</b>
Group viability: BRAC members' drop-out behavior . . . . .	79
Determinants of loan-repayment behavior . . . . .	82
The impact of BRAC on rural wages . . . . .	84
Subsidy and savings per member . . . . .	85
<b>Chapter 8 Conclusions and policy implications . . . . .</b>	<b>87</b>
The BRAC's achievements . . . . .	88
The BRAC's potential . . . . .	91
The BRAC's constraints . . . . .	92
<b>Tables . . . . .</b>	<b>95</b>
<b>Appendix A: The seventeen promises . . . . .</b>	<b>139</b>
<b>Appendix B: Financial sustainability of the RDP . . . . .</b>	<b>141</b>
<b>Bibliography . . . . .</b>	<b>147</b>

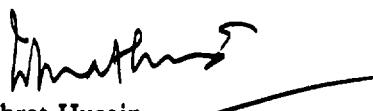
## FOREWORD

Providing credit to the rural poor and developing viable credit institutions within the broader objectives of poverty alleviation is a well established development policy, but there are few good studies of effects and sustainability. The research project RPO 676-59 "Credit Programs for the Poor: Household and Intrahousehold Impacts and Program Sustainability" was designed with appropriate research methods to examine these important issues. Bangladesh was selected as a suitable location to apply such methods because it has a number of micro-credit programs with varying designs, including the BRAC, the Grameen Bank, and the BRDB's RD-12 operated by the government and non-government organizations.

The objective of this research was to develop a methodology to estimate the costs and benefits of group-based credit programs. It included the identification of program effects on household and individual outcomes as well as the analysis of the participation of women in these credit programs and the ensuing effects on household and intrahousehold outcomes by gender.

Another objective was to analyze the financial and economic efficiency of the credit programs, which depend on resource-intensive group formation and monitoring. While peer monitoring reduces the transaction costs of lending to the poor, group formation and monitoring is costly and group members may not be able to bear the full costs of a program. The aim was to estimate the cost structures of the programs and examine how the programs operate and whether and under what conditions such group-based credit programs are sustainable.

This paper is one of several papers produced as a research output under this research project. It discusses how the BRAC's credit programs provide credit and ancillary services to the rural poor, especially women, and at what costs, its organization, and whether it is sustainable. It provides evidence concerning the viability of such donor-funded micro-credit programs, and the sustainability of group-based mechanisms for financial and social intermediation with the poor. The major findings of this paper are that non-governmental organizations with donor funding (both seed capital and on-lending money) can make a headway toward building a sustainable organization that exclusively works with and for the poor, but in doing so it needs to build in concerns of self-sustainability in program design and implementation. The recent "Consultative Group to Assist the Poorest (CGAP) - A Microfinance Program" initiative is indicative of the Bank's interest in sponsoring micro-credit programs, for which the findings of this discussion paper on the BRAC are relevant.



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## **ABSTRACT**

Alternative institutions, most notably non-governmental organizations (NGOs), have evolved in many countries in response to the shortcomings of the state and the market in providing various social development inputs and credit to the poor. The Bangladesh Rural Advancement Committee (BRAC) was established nearly 25 years ago as a relief organization and is now the largest NGO in that country. It has attracted worldwide attention with its innovative anti-poverty programs which provide credit, as well as health, non-formal education and skills training to the rural poor. This study examines the performance and sustainability of two BRAC programs: The Rural Development Program (RDP) and the Rural Credit program (RCP). In 1994, the 195 branches of these two programs covered over one million members, of whom 88 percent were women, and disbursed \$55.2 million in small loans of which 75 percent were borrowed by women. There has been a shift towards loans for rural non-farm activities, with trading, food processing and livestock comprising about 70 percent of all loans in 1994. The BRAC had mobilized about \$11.7 million as savings with \$37.5 million in loans outstanding by 1994, with women accounting for more than 85 percent of both. In addition to credit, these programs also provide training and education to its members. Given its current levels of operations, the RDP and RCP of the BRAC together are not financially viable. Although the loan recovery rate has remained high and RCP branches are financially viable, estimates indicate that the two programs together required 18 percent subsidy per unit loan outstanding. Given the present growth trend, all RCP branches will become self-sustainable in 2001, while both RCP and RDP will be free of economic subsidy by 2010. Through expansions in membership and loan disbursement, these BRAC programs can reduce their subsidy dependencies and become sustainable programs for the rural poor.



## **EXECUTIVE SUMMARY**

The development experience of the past few decades suggests that economic growth policies have not generated adequate income-earning opportunities for the poor. The poor, especially women and other disadvantaged groups, do not have the access to credit, education, health care and other social services that they need. The experience of the Bangladesh Rural Advancement Committee (BRAC) suggests that when poverty is rooted mainly in the basic social and economic structures producing conditions of economic dependency to local exploitative forces, targeted measures are necessary to reach the poor.

Poverty is multidimensional, so poverty alleviation efforts require multifaceted interventions. Government efforts to curb poverty are often inadequate when poverty is severe among a large section of the population. An effective poverty alleviation strategy requires innovative measures, outreach programs, experimentation, and donor funds are required for the design and implementation of a successful program. The BRAC has been generously funded by donors to develop appropriate strategies for poverty alleviation and rural development in Bangladesh.

The BRAC began as a relief organization in 1972 and grew to be the largest non-governmental organization (NGO) in Bangladesh by the 1990s. Over the years it has learned a number of lessons while experimenting with different models of rural development. The BRAC has designed a number of programs for the poor, including social, health, and educational development programs. It also offers credit and other financial services. The BRAC has been extensively evaluated by researchers both inside and outside Bangladesh, although its development model and its sustainability have not been thoroughly examined. The BRAC is a huge organization with different programs and commercial

enterprises; the major programs targeted to the poor are the Rural Development Program (RDP) and the Rural Credit Program (RCP). The purpose of this report is to understand what these two programs are, what they do, how, for whom, and at what cost they function, and whether they are sustainable. This report evaluates only these two programs (RDP and RCP), and not the BRAC as a whole.

### **What are the RDP and RCP programs?**

The BRAC's development thesis is that economic dependency, disempowerment, and the lack of access to credit are the major causes of rural poverty. Due to low levels of education and other forms of human capital, the poor are not fully aware of the state and causes of their poverty and thus require social and human development inputs to reduce their dependency on exploitative rural economic and social structures. The poor must have their own organization to become empowered, achieving their own goals through self-help. The BRAC provides organizational support to the poor by forming village organizations. It also provides consciousness-raising training to instruct the poor on how to avoid the exploitative forces of their economic environment, how to properly utilize their meager resources, including labor, to increase income, and how to take advantage of existing government programs to improve their welfare. The BRAC also provides skill-development training in order to improve the productivity and income-earning potential of the poor, and offers programs to improve health, literacy, and education.

The BRAC's experience is that interventions to improve literacy, awareness, skills, and health cannot by themselves sustain the income-earning capabilities of the poor; credit and other financial

services are also needed. The BRAC, however, emphasizes social and human development over the latter. The BRAC believes that providing credit and other financial services to the poor generates employment and income to only a limited extent given the state of production technology and traditional activities. The BRAC thus developed extensive training programs in key economic activities, such as farming, fisheries, livestock, poultry, and sericulture, that are major sources of employment but require technological know-how in order to improve productivity and the rate of return on investment.

The rural development program (RDP) and the rural credit program (RCP) are two wings of the BRAC's development program. Mobilizing, organizing, and training the rural poor begins under the RDP. Although the RDP provides credit if needed, it emphasizes human resources and social development. After the RDP provides subsidized inputs for human and social development to these mobilized groups for four years, the groups fall under the authority of the RCP, which, like any commercial bank, provides credit and other financial services to the poor. Self-sustainability guides the operation of the RCP but this is not at all a criterion for the operation of the RDP. An RDP project begins with village surveys. The program officer of an RDP branch identifies target households and encourages them to form small groups, generally called solidarity groups, of between five and seven members. No men's group is allowed to be formed without a comparable women's group. A village organization, which consists of forty-five to fifty-five members, is formed separately for men and women.

Each member has to complete a functional education course that includes both social awareness and literacy. Members participate in the village organization's weekly meetings where they contribute 2 taka (Tk) to an individual savings fund. Credit is generally provided about three to six months after a village organization is formed. Loans are provided at an interest rate of 20 percent per year. The loans are short-term, usually for one year, and are repayable in 50 weekly installments. In addition to the 20 percent interest rate, the borrowers are required to surrender 10 percent of the principal for different purposes. Out of this 10 percent, 5 percent goes to individual savings, 1 percent to a group insurance fund, and 4 percent to a group fund. The BRAC offers 9 percent interest to the individual and group savings fund. The purpose of mobilizing savings is to strengthen the financial security of the poor, which also furthers the BRAC's own financial self-sustainability. The insurance fund, on the other hand, protects the BRAC from willful or unintentional defaults and also provides security to borrower families in case of the sudden death of an active BRAC member. Participants are not required to put up physical collateral, but the village organizations must monitor and enforce the loan contract, and hence act as social collateral for the BRAC's loans.

### **BRAC coverage and expansion**

As of December 1994, the BRAC served more than fifty percent of the 68,000 villages in Bangladesh. However, its rural development program (RDP) and rural credit project (RCP), the main focus of this paper, covered only 13,224 villages with its 195 branches. By 1994, under the RDP and the RCP, the BRAC had mobilized 1,036,254 members, of which 88 percent were women. Membership does not necessarily mean immediate access to credit, since members must complete

training before they can apply for loans. In 1994, 71 percent of the members were borrowers, while the percentage of borrowers among women was 72 percent. By 1994 the BRAC's total loans outstanding were Tk 1,499.7 million (or \$37.5 million), of which women received about 85 percent. The BRAC lends for both individual and collective projects; the majority of its loans are individual loans as the proportion of lending on collective projects has declined slightly over time. For example, the percentage of total loans given to collective projects was 8.4 percent in 1989 and 5.4 percent in 1994. In 1994 the BRAC disbursed Tk 2,209.97 million (or \$55.2 million) which was about 43 percent more than the amount disbursed in 1993. Women received more than 75 percent of these loans.

By December 1994 the BRAC had mobilized Tk 468.1 million (or \$11.7 million) as savings and deposits from the poor, and women contributed 87 percent of these savings. These figures show that women are the major beneficiaries of BRAC expansion and coverage. Trading, food processing, and livestock accounted for about 70 percent of the total loans disbursed in 1994, with the highest share in trading (34 percent) followed by food processing (25 percent) and livestock (8 percent). These three categories of activities accounted for more than 78 percent of the total loans disbursed in 1990, the highest being in livestock (29 percent) followed by food processing (25 percent) and trading (24 percent). Thus there has been a shift of loans toward rural off-farm enterprises and away from traditional activities, such as livestock.

Financial services are only one product of the BRAC's multifaceted approach. The BRAC provides educational services and training in various areas. The nonformal primary education

programs (a program for primary school-aged children) and the primary education program for older children together had 28,274 schools in 1994, of which 79 percent were nonformal primary schools. The total number of students enrolled in BRAC schools was 896,385 in 1994 of which 79 percent were in nonformal primary schools. In 1994 the BRAC financed 635 tubewell projects as part of its effort to increase agricultural production. In the same year, to improve productivity in poultry and livestock production, the BRAC trained 33,652 poultry workers, 638,110 poultry rearers, and 51,198 livestock rearers. To raise fish production, 37,589 ponds were made into fisheries by 1994. About 18 million trees were planted during 1988-94 to increase silk production.

### **Sustainability of RDP and RCP programs**

The issue of program sustainability is related to institutional viability, financial viability, and the viability of program beneficiaries. Institutional viability is measured by its ability to deliver services on a sustained basis. The BRAC's management structure is highly decentralized. Although it is centered around the leadership of its founder, Mr. F.H. Abed, it has an effective procedure for management succession so that it does not depend too much on the leadership of one person. The BRAC has gained such a good reputation that the government seeks its help in project design and implementation.

A program is financially viable if it can equalize the cost per dollar lent with the price it charges for lending to its borrowers. At its current level of operation, the BRAC's two programs (RDP and RCP) are not jointly financially viable. Although the loan recovery rate has been consistently

around 90 percent, the transaction costs of delivering social and human development inputs are quite high. Nevertheless, the BRAC's strategy of providing self-sustaining bank services for the poor is built into its program design, as evidenced by the creation of the RCP. The RCP branches, which comprised 42 percent of the BRAC's operation in 1993, are financially viable. But if the opportunity cost of the subsidized funds is included in the calculation, the RCP enjoys economic subsidy, if not financial subsidy. Estimates indicate that the RDP and the RCP together have enjoyed about an eighteen percent subsidy per dollar lent to the poor in 1994. If the RCP has to be self-sustainable (that is, based on market sources of funds), it needs to increase its lending rate from 20 percent to 32 percent in order to eliminate the economic subsidy it enjoys. On the other hand, if the objective is to cross-subsidize RDP with RCP profits, and to make both programs self-sustainable, it is necessary to increase the lending rate from 20 percent to 45 percent. The BRAC's objective is not to cross-subsidize the RDP with RCP profits, but to convert all RDP branches into RCP after four years of operation. The BRAC's projection is that all the RDP branches, with the last RDP branch to be opened in 1997, would be converted into RCP branches by 2001. Economies of scale exist in branch level operations; the BRAC, therefore, can reduce its economic subsidy dependence by increasing both membership and the loan amount per borrower. Estimates show that the BRAC needs almost to double its lending to eliminate economic subsidy of the RCP provided that the additional on-lending funds are procured from market sources. At the present average growth rate of lending (about 32 percent per year), this means the RCP branches will be self-sustainable by 2001, while both the RDP and RCP branches will be economic-subsidy-free by 2010.

Increasing the membership and lending per borrower depends on the profitability of projects the BRAC finances. This gives rise to the issue of borrowers' viability, which depends on whether the benefits accrued from projects meet the cost of borrowing. Although the profitability calculation requires household survey data that are beyond the scope of this report, the program level data show that the membership dropout rate is only 5 percent, while the loan repayment rate is more than 90 percent. In other words, the borrowers' benefits must be high; otherwise the members' dropout rate would have been high or the loan recovery rate would have been low. The BRAC's plan is to open the last RDP offices in 1997; four years later, by 2001, about 330 RCP branches will operate in rural Bangladesh serving some 2 million members. If this goes as planned, the ultimate objective of the BRAC is to transfer all RCP branches under the BRAC Bank when it receives its license. In other words, the BRAC envisages operating RCP branches under the strict condition of financial and economic self-sustainability.

#### **BRAC's constraints to expansion and self-sustainability**

Presently the BRAC's RDP and RCP programs reach only about 25 percent of the target population. This low coverage may be a result of both demand and supply constraints. It appears that the problem lies not so much with per borrower lending as with the numbers of borrowers among the members. During 1991-93 the percentage of borrowers fell from 69 percent to 64 percent compared with a near doubling of lending per borrower, from Tk 1,459 to Tk 2,770. In 1994, the percentage of borrowers' loans increased to 71 percent. The BRAC's problem is how to increase the number of borrowers among members. Do members not *want* to borrow, or do they not *need* to borrow? On the

other hand, does the BRAC lack on-lending funds to meet the demand for credit, or is the extensive length of training (about three to six months) holding back growth in borrowership? The BRAC should investigate reasons for the low coverage of target households and the low percentage of borrowers among members.

The other constraint on the self-sustainability of the BRAC's programs is the high cost of delivering credit to the poor. Estimates based on branch-level cost data, which do not include the head-office expenses, show that the cost of lending an additional \$100 is \$10. Although this is less than the additional income (\$20) that this loan would generate in one year, it is high if the BRAC were to depend on market resources to attain self-sustainability. Attaining cost efficiency is necessary for program viability as well as borrowers' viability.

Borrowers' viability depends on changes in the loan portfolio toward more growth-oriented activities where the rate of return is high. If this is not attained, the demand for credit and other BRAC services and similar programs will fall as more and more people join the program. However, providing more loans for growth-oriented activities depends on whether borrowers can absorb the increased volume of credit and whether skill development and market opportunities would permit such growth in lending. The BRAC is helping the poor diversify income-earning activities toward dynamic off-farm activities. It may then play a critical role in promoting growth through demand-induced technical change and production.



## **CHAPTER ONE**

### **Rural development and the emergence of the Bangladesh Rural Advancement Committee as a development organization**

The Bangladesh Rural Advancement Committee (BRAC) is the largest nongovernmental organization (NGO) in rural Bangladesh. Its mission to alleviate poverty includes multi-sectoral strategies for poverty reduction such as promoting education, health, income and employment generation, skill development, a social safety net, financial and institutional intermediation, and technology development, adaptation, and dissemination in key economic sectors.

The BRAC was founded in 1972 as a relief agency but developed into an integrated community development program. Over the years, its leadership realized that neither relief provision nor a homogenous community-based approach could enhance the income and employment opportunities of the poor. After several years of experimenting with a village-based development approach, the BRAC adopted a targeted approach.

The BRAC found that the poor were not aware of the state and causes of their poverty and had to be taught to free themselves from poverty. However, the poor needed economic and social support in order to do so. The BRAC provides organizational help by forming village organizations for the poor, defined as those who own less than 50 decimals of land and who have at least one family member working for wages. The BRAC also provides awareness-raising training to teach members to avoid exploitative economic forces, to properly use their assets, including labor, for increasing income and consumption, and to take advantage of existing government programs (such as the food-for-work program). To achieve these goals, the BRAC has introduced skill-development programs to improve the poor's productivity and

income-earning potential. Additionally, it has introduced health and education programs to improve health and sanitation practices, adult literacy, and children's education.

The BRAC also found that such interventions were not by themselves adequate to sustain the income-earning abilities of the poor. It began to provide credit and other financial services to the poor, along with other ancillary inputs. To facilitate this, it developed a credit delivery mechanism that could handle the asymmetric information problems of an imperfect capital market. Although the BRAC initially provided credit to the village organizations and made them responsible for loan repayment, it ultimately gave loans to individuals and relied on small groups within the village organization to ensure repayment.

The BRAC's third discovery was that traditional income-earning activities, such as farming, fisheries, livestock, and poultry, required technological innovation to improve productivity and the return on investment. Providing credit, which can generate income and employment opportunities, was not sufficient to help the poor given the state of production technology. Therefore, the BRAC selected a few basic economic activities, such as poultry, livestock, sericulture, fishing and fish culture, and farming, and developed ways to improve productivity in these key sectors.

The BRAC's development strategies for the poor are implemented through four major programs: the rural development program (RDP), which groups the poor into men's and women's village organizations and uses these village organizations for consciousness-raising, credit provision, health, education, and other social interventions; the rural credit project (RCP), which is a self-sustaining bank network designed for the village organizations that are four years old; health programs, which focus on women and children, provide preventive health care services, and assist the government rural health

system; and the nonformal primary education (NFPE) program, which is designed for children who have never attended school (Lovell 1992).

The BRAC is recognized as a model for rural development because of its poverty alleviation programs, its program for economically emancipating the poor, and its contribution to social, health, and educational development. The BRAC has been evaluated extensively by researchers both inside and outside Bangladesh (Lovell 1992; Korten 1987, 1989; Chowdhury 1990; Ahmad 1991). However, its development model and the sustainability of the RDP and RCP have not been thoroughly examined. The BRAC's search for a model to alleviate rural poverty and its development of a self-sustaining banking service for the poor living above the poverty level are some of the areas that need further research in order to identify their potential and constraints.

This report will not evaluate the BRAC as a whole, but only its two major programs--the RDP and the RCP. The purpose of this study is, therefore, to understand what the RDP and RCP are, what they do, how they function, who they serve and at what cost, and whether they are sustainable. The analysis is based on aggregate data collected from the BRAC's Dhaka office and a selected sample of its branches. The aggregate data cover 1986-94. The panel data taken from 121 branches for 1986-91 have been complemented by annual thana-level data on rainfall, roads, electrification, and schools, and agroclimate and locational factors. Although the BRAC's household-level impacts are analyzed separately using household-survey data, this report does examine some macroeconomic effects, such as the impact of BRAC program placement on rural wages. The data on wages and other relevant variables were collected in three rounds during 1991-92 from eighty-seven villages covered by the household survey; these village-level data have been used to document the impact of the BRAC on rural poverty. The key finding of this

study is that targeted programs that provide credit and noncredit services can effectively reach the poor, but they require subsidized funds to develop an appropriate delivery mechanism.

Given the economic dependency, disempowerment, and lack of access to credit that are the major causes of rural poverty, the BRAC supplies the poor with social and human development inputs in order to decrease their dependency on exploitative rural economic and social structures. The poor also need credit to improve their productive means but, like any development finance institution, the BRAC faces incomplete information and imperfect enforcement problems, which undermine its financial viability.

### **Overview of report**

Chapter Two discusses how the BRAC has adopted an innovative program design to overcome market imperfections and economic dependency. Unlike development finance institutions and other organizations, the RDP and RCP programs of the BRAC have explicitly targeted the rural poor who do not have access to formal lenders or government development organizations. The BRAC provides organizational support and teaches discipline by forming village organizations. Since the rural poor generally lack both financial discipline and social and human capital, the BRAC also provides social and human development inputs (through the village organizations) before disbursing credit. The BRAC replaced the conventional requirement of material collateral with group responsibility, where group performance is the key to continued access to credit. Also, members themselves, not the BRAC, are responsible for monitoring each other's activities. Finally, unlike other development finance institutions, savings mobilization has been an integral part of the BRAC's lending.

Providing both social and human development inputs and credit and other financial services to the poor is a high-cost activity, particularly since the borrowers are not likely to be able to bear the full costs. As such, grants and subsidized funds were necessary for the BRAC's institutional development and expansion. Chapter Three discusses the amount of subsidized funds and grants the BRAC has received from international sources since its establishment. It also discusses how the BRAC has expanded to cover 16 percent of Bangladesh's villages. In 1994 the BRAC mobilized more than one million members, disbursed some US \$53.4 million in individual loans and US \$1.7 million in collective loans and recorded loans outstanding of US \$37.5 million. In the same year the BRAC mobilized US \$11.7 million as savings and deposits. In 1994 women made up 88 percent of the BRAC's membership, received 78 percent of the loans disbursed, and contributed 87 percent of total savings. This chapter also discusses how the BRAC's portfolio mix and its human development inputs have changed over time.

Chapter Four presents a framework for analyzing the sustainability of the BRAC's RDP and RCP. Sustainability is dependent on institutional viability, financial viability, and the viability of the program participants. By *institutional viability*, we mean that the program is able to deliver services on a sustained basis. In particular, a sustainable institution must have effective procedures for management succession. *Financial viability* means that the program can equalize the cost per dollar lent with the price it charges for lending to its borrowers. *Borrowers' viability* means that the benefits from the projects funded by the program meet the borrowers' cost of borrowing and that the borrowers have an incentive to repay the loan. These three aspects of sustainability are interrelated and important. While institutional development and financial viability promote stability, the BRAC's overall sustainability depends on the viability of its members. If the benefits accruing to the borrowers are not sustainable, loan repayments will become irregular, and the program's existence will be at stake. This chapter describes several measures of program sustainability and how the subsidy and a subsidy dependence ratio can be calculated.

Chapter Five focuses on the BRAC's institutional development. The BRAC has been led by its founder, Mr. F. H. Abed, since its inception in 1972. While his leadership has been instrumental to its growth and institutional development, a decentralized system was developed from the outset. This system is fully accountable and run by a motivated staff. This chapter discusses the incentives in the BRAC's pay structure and their determinants. It also examines whether the BRAC's program placement is determined by unchanging area and agroclimate characteristics that influence production risk. The BRAC ultimately aims to create a sustainable banking network for the poor, the development of which must be based on viable premises. For example, profit-maximizing financial institutions always attempt to avoid risky environments (Binswanger and Rosenzweig 1986). However, the BRAC may place its branches in areas with characteristics that contribute to poverty and hence involve financial risk for a lender. Thus, the BRAC's behavior with respect to other commercial banks and development financial institution may reveal its underlying objectives. These results may have important implications for the institutional viability of a poverty-oriented organization.

Chapter Six presents the estimates of financial viability and subsidy for the BRAC's RDP and RCP. Financial subsidy is required if a program cannot meet its costs with its revenue. Both branch- and program-level data are used to calculate the break-even interest rates, defined as the rate at which revenue equals the cost per unit of principal lent. As the cost structures of the RDP and the RCP differ, the break-even interest rates are expected to differ. We find that the RCP is profitable, while the RDP is not. This finding is not surprising since the RDP provides mostly the social and human development inputs while the RCP provides mostly the financial services.

Both the RCP and the RDP use subsidized funds for on-lending (either grants or inexpensive funds); thus the programs enjoy economic subsidy. The economic subsidy is the difference between the actual cost and the opportunity cost of these funds, evaluated at the market interest rate. This chapter then calculates the economic subsidy that the RCP and RDP programs have received. The average subsidy (both economic and financial) of lending under the RCP was 18 percent in 1994, and it was 17 percent for the RDP. Our analysis suggests that the on-lending interest rate must increase from 20 percent to 32 percent in order to eliminate all forms of subsidy enjoyed by the RCP in 1994.

Chapter Seven discusses the viability of BRAC borrowers. Borrowers' viability indicates whether the accrued benefits are sustainable and the extent of potential constraints on BRAC expansion. Borrowers' viability is measured by dropout rates, repayment rates, and the impact of benefits on borrowers' income. Although household-survey data are necessary to precisely measure borrowers' viability, program- and branch-level data can be used to calculate the members' dropout and repayment rates, while the village-level aggregate wage data can be used to quantify the impact of the BRAC on rural poverty. In 1994 an average of 6 percent of the BRAC's membership dropped out, and the average loan repayment rate was 97 percent. These rates indicate a high degree of viability for BRAC members. However, the village-level study suggests that the BRAC's impact on rural poverty is not pronounced because it places its programs in depressed areas where the induced benefits of program placement are not significant enough to make a dent in rural poverty.

Chapter Eight presents the report's conclusions and discusses policy direction, including the possible expansion of the RDP and the RCP. In particular, it addresses the constraints that an NGO such as the BRAC faces in alleviating poverty. To find innovative ways to alleviate poverty, NGOs are able to experiment with different strategies because of their size and independence. The government may learn

from NGOs' experiences and use them as partners in development. However, experimenting with or institutionalizing an innovative program design requires donor funding, whereas once implemented, the program can only expand if it is profitable. In other words, a program cannot be sustainable if it relies only on subsidized funds from donors.

## **CHAPTER TWO**

### **What is the BRAC?**

The Bangladesh Rural Advancement Committee, the largest nongovernmental organization in Bangladesh, seeks to improve the economic and social status of the rural poor. It targets households "that own less than 0.50 decimals of land, own no implements of production, and in which the principal worker has had to sell at least 100 days of labor over the past year in order to subsist" (Lovell 1992, p.33).

The BRAC was initially established in 1972 as a charitable organization under the leadership of its founder, Mr. F. H. Abed, to help resettle the households in the Shulla, Sylhet district, displaced during the liberation war. Mr. Abed soon realized that relief simply maintained the status quo; it was not enough to alleviate poverty. However, the relief experience was helpful in understanding the causes of rural poverty and in developing a framework for poverty alleviation. The BRAC presently delivers both credit and social services to its members through its two major programs, the rural development program and the rural credit program. The RDP was started in 1986, the RCP in 1990. Both programs have evolved over time through the process of learning by doing.

The BRAC believes that disempowerment and lack of access to credit are two major causes of rural poverty. These observations have led the BRAC to develop programs that provide access to credit and contribute to socioeconomic empowerment through training and consciousness-raising. Thus, social development and credit services are inseparable elements of the development programs. The BRAC's social development programs are quite exhaustive and directly benefit its members. In addition, the BRAC

collaborates with the government to provide health and education services, helping government organizations work more efficiently.

### **The BRAC's development strategy**

The BRAC's development strategy addresses both the social and economic dimensions of rural life. Because the rural power base has remained constant, the basic structure of rural society has not changed, even though modernization has influenced the traditional behavior and lifestyle of rural households. As revealed in many anthropological studies (Chowdhury 1978, 1982; Islam 1974), landholding and command of financial resources are still the major determinants of rural social. The wealthiest households are dominant. However, the rural poor, lacking access to resources and awareness of their situation, maintain the dominance of each faction by associating themselves with a particular one for protection and security. As a result, the poor remain poor. The BRAC believes that the rural poor can be economically active and can improve their economic situation if they are given access to credit and made aware of their status in society.

Women make up about 50 percent of the total population in Bangladesh, and the BRAC believes that a comprehensive and sustainable development program requires their active participation. This will augment family income and women's decisionmaking power in the family as well as in the society. Poor women are more socially repressed than men, and more often neglected than wealthy women. They spend more hours working for the family business, yet do not have any role in family decisionmaking (Farouk 1977).

Poverty and empowerment are two core elements of the BRAC's development strategy. In fact, they are considered "inseparable and mutually reinforcing aspects of BRAC's strategy" (BRAC 1993). Both poverty alleviation and empowerment can be achieved by mobilizing target households and forming organizations, improving social awareness, and enhancing income and productivity by providing credit, social education, and skill development training.

The BRAC's development strategy is not based on a "supply-leading finance" strategy (Patrick 1966). The BRAC is aware of the failure of supply-led credit programs in many developing countries, including Bangladesh. The supply-led strategy did not address the sustainability of the credit agency and the market pricing of credit. Consequently, the social cost of maintaining supply-led credit programs has been extremely high. The BRAC believes that the long-run sustainability of both lenders and borrowers is the most important characteristic of a successful credit program. A sustainable credit program leads to allocative efficiency by encouraging borrowers to select economic activities that are likely to generate optimum return, given technology constraints. The BRAC believes that borrowers should pay for the resource and transaction costs of services. This belief is reflected in its pricing policy.

One of the major concerns about small credit programs is the possibility of demand-side constraints arising because of the type of economic activities borrowers are engaged in. This concern is legitimate if the skills of rural households are not upgraded and diversified. The BRAC believes that skill development training and innovations in enterprise development are necessary for diversifying economic activities and producing large sum loans to achieve scale effects on productivity and growth.

Education and health programs are an integral part of the BRAC's development strategy. The BRAC maintains that education is an important tool for raising awareness and empowering the rural poor. However, the failure of public sector primary schools to provide education to poor children has induced the BRAC to develop an appropriate school model. The BRAC has also established seventeen decisions that its members are obligated to follow (Appendix). These decisions underscore the crucial role of education, health, and nutrition in the BRAC's development strategy.

The BRAC's strategy thus calls for both direct and indirect interventions. Direct interventions include providing functional education, skill development training, and credit to the rural poor. Indirect interventions include providing primary education for the children of target households and regulating the behavior of the members in accordance with the seventeen decisions that are recited in weekly meetings.

### **The BRAC's operational model**

The BRAC's operational model integrates credit provision, social programs, and group organization. The RDP combined two previous village development programs, the rural credit and training program and the outreach program. The outreach program began in 1980, designed to test the ability of the poor to mobilize local resources from the existing system and self-finance their activities. The BRAC provided training, consciousness raising, and functional education so that members of the outreach program would know where and how to get inputs from government agencies. The rural credit training program, which provided credit, also had elements of the outreach program. By 1984 the BRAC's management had realized that the two programs were not really separable alternatives for improving the economic conditions of the poor (Lovell 1992). Therefore, in 1986 the two programs were merged into the rural development

program. The RDP mobilizes and organizes rural targeted households. In addition to providing credit to members, it emphasizes human resource and social development. Each RDP office, an area office, generally houses an area manager, three program organizers, and nine gram sheboks (village assistants). The program officers and gram sheboks organize target rural households and monitor the services delivered to members. Achieving sustainability has been part of the BRAC's development strategy. As such, in 1990 the BRAC developed a rural credit program offering only credit services to its members. The RCP is an offshoot of the rural development program. All profitable and sustainable RDP branches, generally more than four years old, have been transferred to the RCP. The branches under the RCP are expected to operate as a commercial bank without any support from the head office.

The mobilization of target households is the first step in the BRAC's operational model. The process of mobilizing poor households begins with identifying target households. The program organizer then discusses the causes of poverty with these households, motivating them to form small, cohesive, self-selected groups, generally called solidarity groups, of five to seven members. Groups are formed separately for men and women, although no men's group can be formed without a counterpart women's group. Each village organization is formed separately for women and men, and should have between forty-five and fifty-five members. The solidarity group members meet weekly to mobilize savings and pay loan installments, and to discuss other group-related issues. Loan applications are forwarded to the village organization.

Each small group elects a secretary general for two years. The secretary general's basic responsibilities include initiating loan proposals at the monthly village organization meeting, monitoring loan operations, and conducting the village organization meeting. Each village organization is run by a

managing committee of seven to ten members selected from the secretaries of the small groups. The committee has a chairperson, a secretary, and a cashier. The managing committee is responsible for the overall management of the village organization and its programs, including reviewing loan applications and monitoring loans and other noneconomic services. Until 1988 members of the managing committee earned financial interest.

Before 1989 the lending decisionmaking process was decentralized at the village organization level. The branch, instead of making individual loans, made bulk loans at an interest rate of 15 percent to the village organization, which was responsible for making and monitoring individual loans, charging an interest rate of up to 23 percent. Of the eight percent margin, the managing committee earned three percent. However, in 1989 the system was abolished to ensure effective monitoring and financial discipline at the branch level; the members of the managing committee now have no monetary incentives. There are generally 120 village organizations under each branch or area office with an average membership of 6,000 (BRAC 1991a).

The operation of the branch lending and noncredit services requires the in-depth participation of the program organizers and gram sheboks. The branch-level employees include one manager, three to four program organizers, two accountants, and ten gram sheboks. Generally, each program organizer supervises the work of three gram sheboks. The responsibilities of the gram sheboks include supervising members' economic activities and two village organizations each day, collecting savings, reviewing loan proposals, and recovering loans that are due. In addition, the gram sheboks also attend meetings of both the solidarity groups and the village organizations. The program organizers attend village organization meetings whenever there is a loan application discussed. The program organizers' responsibilities include

mobilizing and forming target groups, participating in loan proposal reviews and loan monitoring, and supervising the activities of gram sheboks. Two additional program organizers work at branches where nonformal primary education programs are offered. Also, in twenty of the branches two additional program organizers run health and paralegal programs. A branch or an area office offering all of the BRAC's services, that is, credit, nonformal primary education, and health and paralegal programs, would have six to seven program organizers.

All group members are required to complete a functional education course before they can receive BRAC loans (BRAC 1992). One of the basic objectives of functional education is to increase the members' social awareness and to motivate them to use their abilities through an environment of mutual and self help (Lovell 1992). The functional education course consists of two parts: social awareness and literacy.

### **The BRAC's credit delivery model**

In addition to completing the functional education course, members must contribute two taka in savings every week. Credit is generally disbursed between three and six months after a village organization is formed, providing sufficient time for new members "to complete their functional education class, to establish solidarity, to gain a sense of their own efficacy, and to establish a savings discipline" (Lovell 1992, p. 40).

The BRAC's lending process begins with the small solidarity group. Members of the group review loan applications in a meeting chaired by the secretary general. In the second step, the secretary general of each solidarity group makes recommendations in the weekly village organization meeting. Three factors

generally enter into the decisionmaking process: economic profitability, social acceptability, and the applicant's management ability. These aspects are evaluated by the management committee and the program organizer. In the third step, the program organizer makes a recommendation to the area or branch manager at the branch-level meeting (every Thursday). If branch managers are not satisfied with the financial or economic viability of the proposed loan project, they may personally contact the loan applicant or ask the program organizer to further analyze the proposal. The regional manager makes the final decision in fifteen to thirty days.

Until 1989 bulk loans were offered at an interest rate of 15 percent to the village organization, which in turn made individual and collective loans at an interest rate of 23 percent. Three of the 8 percent margin was given to managing committees and the other 5 percent was contributed to group funds to cover default costs. However, in 1989 area or branch offices began making loans directly to loan applicants at an interest rate of 20 percent. As a result, branch managers can now closely monitor loan performance through the program officers and gram sheboks.

Savings mobilization is an integral part of the lending process. In addition to depositing two taka per week as individual savings, borrowers must pay deductibles of 10 percent of the principal loan amount.

Of this percentage, 5 percent is transformed into individual savings, 1 percent is devoted to a group insurance fund, and 4 percent is given to a group fund.<sup>1</sup> The basic objective of the group insurance scheme is to provide financial support, a maximum of Tk 5,000, to the family of the deceased member so that the

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<sup>1</sup>BRAC introduced a group trust fund in June 1989. This fund can be used, after mutual agreement, for the following purposes: at the end of each year 50 percent of the total group fund is distributed among village organization members in accordance with their savings ratio; if a loanee dies before the loan is paid, the group fund can be used to repay this loan; and the group fund is also used to rehabilitate members in cases of calamities.

family is not displaced and does not suffer financial hardship. The BRAC pays 9 percent interest on both individual savings and group funds. This rate is higher than that offered by commercial banks.

### **The BRAC's approach to financial intermediation**

In the past, alleviating poverty through financial intermediation was thought to be impossible because the poor lacked collateral and lending involved high transaction costs. In addition, rural lending was considered risky due to the moral hazard. Essentially, this perception was based on the assumption that the rural poor lacked assets and they could not save because of their low incomes. However, research on rural financial markets in developing countries showed that the poor could save when appropriate financial instruments were available (Vogel 1984; Adams, Graham, and Von Pischke 1984; Khalily, Meyer, and Hushak 1987). In fact, the rural poor are very hardworking; they remain poor because they lack access to financial resources (Farouk 1977).

Traditional commercial banks have been reluctant to lend to rural households because of the problems stemming from incomplete information and the inability to enforce loan contracts. Moreover, both lenders and borrowers are subject to the same production risks. A viable financial system must address production and other risks (Binswanger and Rosenzweig 1986). The BRAC's credit programs have some innovative features that tackle the problems of incomplete information, inability to enforce loan contracts, and other risks.

The group approach in the BRAC model addresses the problems of asymmetric information and incomplete enforcement. The self-selected cohesive groups enable lenders and members to communicate

with each other in weekly meetings where information is readily available. In addition, loan applications are screened at both the group and village organization meetings where all members, who tend to know each other, are present.

Savings mobilization is necessary for improving the viability of both borrowers and lenders (Meyer 1986; Khalily and Meyer 1992; Gonzalez-Vega 1993). On the one hand, it increases members' financial resources; on the other hand, it forces lenders to allocate resources efficiently because they must make interest and savings deposit payments to members. It also reduces lenders' dependency on donor funds.

The BRAC's lending and savings interest rates are higher than those in formal financial markets. Generally, it is argued that credit programs for the poor should always be subsidized because of their high transaction costs. However, the higher lending interest rate partly covers this high cost. In fact, it allows financial intermediation to become viable.

### **The BRAC's social development model**

The BRAC introduces interventions that are directed at increasing the awareness and empowerment of the rural poor; it believes that empowerment through access to credit and consciousness-raising training can reduce poverty. In addition, it believes that target households cannot become self-reliant without educating their children and without having any control over the means of production in the rural economy.

The BRAC's social development programs are oriented partly toward alleviating poverty and partly toward supporting government organizations. It also emphasizes the role of women in development by

mobilizing more women than men. It has helped improve women's social status by increasing their economic role in the family. In recent years, particularly in 1991 and 1992, women members have received a large proportion of BRAC loans.

The BRAC intervenes in education, health care, legal activities, vulnerable group development, and skill development. It is known for its nonformal primary education program and its oral rehydration therapy program.

Education is one of the powerful tools used for developing skills, increasing social awareness and consciousness, widening the scope of economic opportunities, and improving social status. Unfortunately, the rural poor tended to consider education for their children a wasteful luxury. Given the failure of the public primary education system to attract and retain students from the poor households, the BRAC has developed two primary school models, the nonformal primary education program and the primary education for older children program. In addition, the BRAC assists the government in expanding primary education throughout the country. The BRAC's primary education models aim to reduce mass illiteracy, ensure women's education, and involve communities in their own socioeconomic development (BRAC 1992).

The nonformal primary education program, begun in 1985, is a three-year program for eight to ten-year-olds. These children, who have never attended school, are enrolled in the fifth grade of the formal primary school system after completing this program. The primary education for older children (or Kishore and Kishori) program, begun in 1988, is a three-year program for eleven- to sixteen-year-olds who have never attended school.

One of the innovative features of the BRAC primary education model is its nonformal approach and structured curriculum. A group of thirty to thirty-three students is taught by a trained teacher for three years near the students' homes. Every three years a new class is formed. The schooling, including books and other materials, is free. The BRAC develops all curricula. Generally, classes are held for six days per week with two-and-a-half hours of class per day. Unlike public primary educational institutions, students are periodically evaluated. Given the informal relationship between the students and the teacher, the dropout rate is extremely low.

New nonformal primary education program schools are opened after a survey of potential students is conducted, students are selected and teachers are recruited. Teachers are given a thirteen-day training course at the training and resource center.

The BRAC also agreed to improve the formal primary education system in 1988 (Lovell 1992). Initially, the facilitation assistance program on education was set up jointly by the nonformal primary education program and the government in 165 schools. The program seeks to raise enrollment, reduce dropout rates, improve daily attendance rates for teachers and students, and ensure community participation. In order to achieve these objectives, the BRAC organizes training programs for teachers, government education officials, and management committee members, and meets with parents to make them aware of the need for education. The program is still new, but the initial results show higher enrollment rates and lower dropout rates (Lovell 1992).

A lack of legal awareness among poor women perpetuates poverty (BRAC 1992); they are unable to protect themselves and are often victims of socially powerful groups. To address this problem, the BRAC introduced a paralegal program on an experimental basis in 1986. The program is headed by a lawyer in Dhaka. Under this program, paralegal workers are trained intensively for three days on citizen's rights, land law, and Muslim family law and inheritance law. The participating members pay for the course. The program was formally introduced at the branch level in 1989. Each program organizer must coordinate the paralegal program for three branch or area offices.

The BRAC introduces direct interventions to achieve socioeconomic development, collaborating with the government. In addition to working with the government in health and education, the BRAC also helps improve the income-earning potential of destitute women who are dependent on government relief. Such relief provision is an ad-hoc arrangement; the government requested that the BRAC develop ways to help destitute women after they leave government ration and relief programs. The BRAC thus developed the income generation for vulnerable group development (IGVGD) program and, working with the government, provides organization, work training, and other supports to enable women to leave the program after two years. It is a collaborative project of the World Food Program, the Directorate of Relief and Rehabilitation, and the BRAC.

The BRAC organized the IGVGD program as part of its poultry program under the RDP. The members of the IGVGD in each administrative local government unit (union) are trained. The BRAC shows them their income-generating potential and trains them to be poultry workers, key workers, and chick researchers. Income generation for vulnerable group development program cardholders who intend to become poultry workers are given a five-day training course on poultry management, basic treatment of

disease, and vaccination. A poultry worker charges 0.25 taka per young bird (aged less than 2 months) and 0.50 taka per adult bird. Similarly, key rearers are required to complete three days of training on the ideal methods of poultry rearing. Each key rearing generally has one HYV cock and ten hens. The Directorate of Livestock's poultry farms supply the day-old chicks, which are raised by the chick-rearers for two months and then sold to the key workers. Poultry feed is sold at centers. In addition to supplying credit, the IGVGD program encourages cardholders to open an account and deposit 25 taka every month.

The BRAC social development program also provides indirect interventions, involving motivational activities. BRAC members are required to recite the seventeen decisions, and social development policies and programs contribute directly to the poor's economic emancipation.

## **CHAPTER THREE**

### **Organization, funding, and beneficiaries**

Over time, the BRAC has evolved into a large organization in pursuing its goal of providing credit and noncredit services to target households. These services are oriented toward improving economic independence and empowering target groups. The effective and cost-efficient delivery of services depends on a well-designed, vertically- and horizontally-expanded organization and the availability of funds. During the past four years, loan output has increased enormously, as have the flow of donor funds and the mobilization of savings.

#### **Administrative structure and organizational expansion**

Since the BRAC is a multidimensional organization, this report's discussion of its administrative structure and organizational growth is limited to its credit programs and other noncredit services delivered through area or branch offices. The BRAC's credit program has a three-tier administrative structure, with its head office at the apex and the area or branch offices at the bottom. Regional offices are at the intermediate stage of the structure.

The head office, located in Dhaka, is led by an executive director. The credit and noncredit programs delivered through the area or branch offices are run by four different program coordinators for the rural development program, the rural credit program, the health program, and the nonformal primary education program. Generally, each regional office oversees ten area or branch offices, which are at the bottom of the administrative hierarchy. They are the field offices that make loans and offer noncredit

services to members. A typical branch supervises about 125 village organizations and has an average membership of over 5,000. The branches have expanded from 60 in 1986 to 195 in 1994 (Table 3.1). The BRAC has opened an average of twenty new branches every year.

### **Employee expansion**

During 1986-94, the number of employees in head office and regional offices has grown from 10 to 107, which is about 3 percent of the total employees (Table 3.2). About 80 percent of them are officers. The number of employees at regional offices varies with the number of branches. There are twelve regional offices with more than fifty employees; each regional office has an average of 4.3 employees.

Until 1989 the branch employees' share of the total was more than 99 percent (Table 3.2). A major employee increase took place at the regional and head office level in 1990, but branch employees remained about 97 percent of the total in 1994. Each branch usually has one manager, three to four program organizers, nine to ten gram sheboks, two accountants, and an additional staff member. The total number of branch-level employees increased by over six times during 1986-94, from 540 in 1986 to 3,357 in 1994. The increase in the number of branch-level employees is also reflected in the average number of employees per branch, which increased from eleven in 1988 to seventeen in 1994.

### **Village organization, membership growth, and gender coverage**

This growth in the branching network has contributed to the program's wide coverage. The number of village organizations has increased from 4,648 in 1988 to 24,859 in 1994, with an average annual growth rate of more than 30 percent (Table 3.1). The number of households covered has also increased monotonically during 1988-94, from 145,861 to 935,426 averaging about thirty-eight households per village organization. Generally, each village has two village organizations, one for men and one for women. In 1994 the BRAC had 13,224 villages under its RDP and RCP, roughly 20 percent of the total number of villages in Bangladesh.<sup>1</sup> On average, each branch covers about 4,800 households. The BRAC's slow rate of expansion is probably a result of the process of learning by doing and the availability of funds.

The BRAC emphasizes women's empowerment, and this is reflected in their coverage. The share of women's village organizations has increased monotonically over 1989-94 (see Table 3.1). Only 55.8 percent of the organizations were female in 1989, compared with 85.9 percent in 1994. The increased representation of women since 1993 was the result of a dip in the number of men's village organizations and an increase in the number of women's village organizations.

The increase in the number of village organizations contributed to the increase in membership. Until 1991 the average membership per branch steadily increased from 4,693.5 in 1988 to 4,984.4 in 1991. In 1992 it declined to 4,637.7 but increased to 5,314.1 in 1994. Total membership increased from

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<sup>1</sup>BRAC covers more than 50 percent of Bangladesh with its nonformal primary education program and other programs.

251,668 in 1988 to 1,036,254 in 1994 (see Table 3.1). The proportion of women members has increased from 58.2 percent in 1988 to 87.7 percent in 1994, with the number increasing from 146,339 in 1988 to 908,547 in 1994. By contrast, the number of male members grew by less than 22 percent during the same period. Initially male membership increased from 105,329 in 1988 to 192,151 in 1991, and then decreased to 127,707 in next two years. This decline is a result of the dissolution of 171 men's village organizations, as well as continuous dropout during that period.

#### **Financing BRAC activities: sources of funds**

Like any other nongovernmental organization, the BRAC's credit and noncredit programs are dependent on donor funds, which are essentially grants. The BRAC does not borrow from commercial banks nor from the Bangladesh Bank (the country's central bank). It is financed by a group of ten international agencies: the Aga Khan Foundation, the Canadian International Development Agency (CIDA), the Swedish International Development Agency (SIDA), the British Overseas Development Agency (ODA), the Netherlands Organization for International Development Corporation (NOVIB), EZE of Germany, the Royal Norwegian Embassy Development Cooperation (NORAD), the Ford Foundation (FF), DANIDA, and Commission of European Communities (CEC).

BRAC activities during its first phase (1986-89) were mostly financed by EZE, NORAD, and NOVIB. During this period the BRAC received 340.4 million taka, of which Tk 211.5 million were contributed by NOVIB and Tk 79.6 million by EZE (Table 3.3). The balance was provided by NORAD and SIDA.

One of the BRAC's major objectives is to develop a sustainable long-term organization. In 1989 the BRAC decided to create a BRAC bank (presently known as the rural credit program) by upgrading the profitable branches of the RDP. However, given the demand for funds from the two programs, NOVIB could not finance the whole program (Lovell 1992). As a result, the programs under the second phase (1990-92) were financed by a consortium of nine international agencies. During 1990-92, the BRAC received Tk 1,691.2 million, about five times the amount received during the first phase. NOVIB was the major sponsor, contributing Tk 464.8 million (27.5 percent), followed by ODA, which contributed Tk 440.3 million (26 percent). In addition, during 1990-92 the BRAC received Tk 215.4 million from AKF/CIDA, Tk 180.8 million from SIDA, Tk 160.5 million from DANIDA, Tk 109.4 million from NORAD, and Tk 108.9 million from EZE. After 1992 EZE did not continue, but a new donor, CEC, came with a significant contribution in 1994 (Tk 233.1 million which is 21 percent of the total). Among others, ODA (Tk 325.3 million) and NOVID (Tk 200.7 million) remained to be the major contributors to a total of Tk 1,095.9 million. These funds were instrumental in expanding the activities undertaken by the RDP and the RCP.

### **Savings mobilization**

All BRAC members are required to contribute two taka at every weekly meeting of the village organizations, and all borrowers are required to contribute five percent of their principal to individual savings. One percent of these savings is devoted to a group insurance premium and 4 percent to group funds. The BRAC offers 9 percent interest on members' savings.

During 1988-94 total savings increased more than eightfold, from Tk 55.5 million in 1988 to Tk 468.1 million in 1994 (Table 3.4) . The group fund's share in total savings increased from 11.1 percent in 1989 to 27.2 percent in 1994, implying a higher rate of increase in loan disbursements than in individual savings. The total amount of individual savings also increased nearly fivefold, from Tk 55.5 million in 1988 to Tk 266.9 million in 1994. The individual savings increased each year at an average rate of 41 percent during 1988-93, after which it dropped by 12.6 percent. The group funds, on the other hand, increased continuously at an average rate of 72 percent during 1989-94.

An analysis of savings by gender shows that the share of women's individual savings has increased monotonically during 1988-94, from 59.7 percent in 1988 to 88 percent in 1994. The expanding share of women's savings may be a result of the relatively larger increase in female than male members over the years. A similar pattern is also observed for the group fund. The share of women's contributions increased steadily, from 67.1 percent in 1989 to 82 percent in 1994. This implies that the growth of savings is higher for women than for men. The average savings per member has increased by 105 percent, from Tk 220 in 1988 to Tk 452 in 1994. Women saved more than men for the years 1988-91, after which men saved more. This reversal may have been caused by a decline in the number of male members in 1992-94, while their savings did not decline.

## **Lending and portfolio mix**

Until 1990 less than sixty percent of the BRAC's members were borrowers. This rate increased gradually during 1991-94 to 71.4 percent (Table 3.5). As envisaged in the organizational goals, women borrowers outnumbered men. More than three-fourths of all borrowers were women in 1994. The number of female borrowers increased by more than five times during 1989-94, from 124,198 to 650,891, while the number of male borrowers increased by only 8 percent, given declines in 1992 and 1994.

The BRAC makes both individual and collective loans. Collective loans are shared jointly by the BRAC and its borrowers, as in the case of deep tubewell irrigation. In 1989, the BRAC made Tk 473 million in loans, of which 91 percent were individual loans. This share increased to 95 percent in 1994. The volume of collective loans has been increasing, though at a decreasing rate. It increased over seven times during 1989-94, from Tk 43.6 million to Tk 331.4 million. The volume of individual loans increased almost fourteen times during this period, from Tk 429.9 million to Tk 5,813.9 million. The lower priority placed on collective loans may be the result of a poor recovery rate and a complicated disbursement and monitoring process.

The volume of loan disbursement also varies by gender (Table 3.6). The share of all loans made to men has declined from 46.6 percent in 1989 to 22.1 percent in 1994, despite an increase in the loan amount from Tk 220.6 million to Tk 1,360.7 million. Side-by-side comparison indicates that the volume of men's loans each year has increased at a rate lower than that of women's loans. The volume of loans made to women has increased by nearly nineteen times, from Tk 252.9 million in 1989 to Tk 4,784.7

million in 1994. The pattern is similar for individual loans, but for collective loans the increase is about twelvefold.

The volume of loans disbursed does not provide complete information about the borrowers' selection of loan portfolios. A discussion of the BRAC's loan portfolios could explain the loan recovery performance and would indicate demand constraints that prevent the BRAC from being successful.

Individual loans, though diversified, are concentrated in five groups: trading, food processing, livestock, irrigation, and agriculture, (Table 3.7). Trading is by far the largest loan type, with the largest share of individual loans. In 1994 trading loans accounted for about 39 percent of total individual loans, followed by food processing (21.8 percent), livestock (10.8 percent), agriculture (9 percent) and irrigation (5.1 percent). The composition of loan portfolios varies by gender. Women's loans (relative to men's) were concentrated in livestock (12.2 percent), rural trading (36.4 percent), food processing (26.2 percent), agriculture (9 percent) and rural industry (4.4 percent) in 1994. By contrast, men's loans were concentrated in rural trading (47.6 percent), rural transportation (9.5 percent), agriculture (9.5 percent), and irrigation (10.6 percent).

However, the composition of annual individual loan portfolios changed during 1990-94 (Table 3.8). In 1990 livestock accounted for about 30 percent of individual loans. This figure steadily declined during 1991-92 to 6.5 percent. However, it increased to about 8 percent in 1994. Similarly, the annual disbursement of rural transportation loans declined from 7.4 percent in 1990 to 2.5 percent in 1993, but rose to 3.8 percent in 1994. However, lending for agricultural production, rural trading, food processing, fisheries, and rural industry increased. Agricultural production loans, for example, increased from Tk 5.3

million in 1990 to Tk 274.8 million in 1994. It constituted about 13 percent of total individual loans disbursed in 1994. Similarly, fishery loans increased from Tk 2 million (0.51 percent) in 1990 to Tk 84.5 million (about 4 percent) in 1994. The sharpest increases were in rural trading and food processing. Rural trading loans increased from Tk 93 million (23.7 percent) in 1990 to Tk 731.6 million (34.2 percent) in 1994. Similarly, food processing loans increased from Tk 97.4 million (24.8 percent) in 1990 to Tk 540.6 million (25.3 percent) in 1994.

The loan portfolio mix of collective loans is different from that of individual loans (Table 3.9). Collective loans consist of four groups: irrigation, rural industry, fisheries and rural transportation. The BRAC disbursed Tk 331.4 million by the end of 1994, more than seven times the 1989 figure. Irrigation, including all methods, is the largest loan type. The share of irrigation loans in total collective loans increased from Tk 32.6 million (74.8 percent) in 1989 to Tk 303.8 million (91.7 percent) in 1994. The BRAC emphasizes irrigation investment where its target households provide irrigation services to the agricultural producers. In addition, by developing irrigation facilities in rural areas, the BRAC helps increase agricultural production. Generally, the BRAC invests jointly with the target borrowers (individual irrigation loans declined during 1990-92, while collective irrigation loans increased significantly). The BRAC also provides more loans to women's groups. The share of collective loans made to women increased from 33.9 percent in 1989 to 54.9 percent in 1994.

Several important findings emerge from the portfolio analysis. First, most of the individual loans are made for trading and food processing, although agricultural production and fishery loans show an increasing trend. These activities are considered traditional in the context of local markets. This result implies that, until members' skills are diversified, individual borrowers will operate in traditional sectors.

Thus, demand constraints may hinder economic development. Second, livestock and rural industry loans show a declining trend, suggesting that they may have a low return. Third, the shift in the loan portfolio mix during 1989-94 may indicate that the BRAC has made efforts to select portfolios with relatively higher returns. Finally, the greater emphasis on collective irrigation loans may result from their relatively low risk and the accumulation of physical assets that could provide security against default.

An increase in loans disbursed is likely to increase loans outstanding. The amount of loans outstanding increased over 1990-94 (Table 3.10). However, loans outstanding as percentage of total loans disbursed declined from 42.5 percent in 1990 to 25.8 percent in 1994. This trend may suggest that recovery rates have improved. The volume of loans outstanding could not be categorized by term structure and activity due to a lack of adequate data. However, the percentage distribution of loans outstanding by activity type shows that fisheries, agriculture, and food processing together made up 38.8 percent of the total individual loans outstanding by the end of 1994. Agriculture and fisheries increased during 1990-94, possibly indicating low loan recovery rates. Similarly, about 19 percent of the loans made in irrigation, livestock, and rural industry were outstanding in 1994. Higher recovery rates would lead to greater multiplier effects, which, in turn, would improve the BRAC's viability.

### **Achievement of social development programs**

In addition to providing financial services, the BRAC runs several social development programs, and is well known for its nonformal primary education program for the children of target households. The BRAC developed two primary education models, and by 1994 had opened 28,274 schools and educated 896,385 students (Table 3.11). More than three-fourths of the schools and students are under

NPFE. The number of NPFE schools increased from 153 in 1986 to 22,329 in 1994. The first Kishore-Kishori school was started in 1987 and since then their numbers have significantly increased, reaching close to 6,000 by the end of 1994.

Enhancing the social awareness of target households is a necessary condition for social development and justice. The BRAC, by making the poor socially aware and providing paralegal services, empowers the poor to protect themselves from exploitation. The BRAC also provides training for human and skill development, offering programs in functional education, consciousness raising, project planning and management, leadership development, and legal awareness.

Table 3.12 shows the number of members trained in human development and skill development. Each year an increasing number of members were trained in human development until 1992, when more than 80 percent of all members received training. This percentage for female members was consistently higher than that of male members. After 1992, however, BRAC virtually discontinued these programs and within two years participation dropped to an insignificant number. On the other hand, training in skill development (given only in poultry and livestock) grew by more than eighteen times during 1988-94 in terms of participation, from 21,708 to 397,094. Also, this training was meant for women, which is reflected by their overwhelming majority (more than 99 percent).

#### **BRAC's support to sectoral development**

The BRAC intervenes indirectly in the development process by financing members' economic activities. On the other hand, it contributes directly by providing inputs for sustainable development.

Direct interventions include developing the skills required for sectoral and subsectoral development. This development, in turn, creates additional employment in the rural economy. By the end of 1994, as Table 3.13 shows, the BRAC provided training in poultry, livestock, sericulture, social forestry, fisheries, and agriculture. The BRAC trains the borrowers that own the means of production and contributes to employment by training other members to offer technical services to these enterprises.

The BRAC installed 635 deep tube-wells by the end of 1994 through joint ventures with borrowers. Individual irrigation loans decreased, while collective irrigation loans increased enormously during 1989-94. The BRAC operates on the assumption that if members own the means of production, social exploitation will decrease and agricultural production will grow.

The BRAC finances borrowers' poultry and livestock projects and creates appropriate institutions and expertise-service facilities. It trains members as poultry workers, poultry rearers and chick rearers. Poultry workers provide technical services to poultry and chick rearers. By the end of 1994, 33,652 members were trained as poultry workers, an increase of over fifteen times from 1988, while about 648,000 received training as poultry- and chick-rearers.

The BRAC livestock development strategy involves rearing livestock and providing technical services through para-vets. In addition, the BRAC has established artificial insemination centers to enhance livestock production. More than 70,000 members were trained as livestock rearers in 1992, about ten times more than in 1988; in 1994, 51,198 received such training. The number of para-vets increased from 268 in 1988 to 1,756 in 1994. Similarly, the number of artificial insemination centers grew from two in 1988 to sixty-seven in 1992 with no increases in the following two years (Table 3.13).

The BRAC may be the only NGO that has attempted to develop the poultry and livestock subsector systematically. The BRAC also emphasizes the need for social forestry development and has engaged in sericulture cultivation. By the end of 1994, it had trained about 10,500 members to be silkworm rearers, 1,474 to be chowki rearers, and 364 to be reeling workers. Nearly eighteen million trees were planted during 1988-94 (Table 3.13). On the other hand, as a part of its social forestry development strategy, about 1,800 nurseries were established during 1988-94, producing 31.6 million seedlings. The BRAC has also contributed to fishery development by leasing 37,589 ponds by the end of 1994.

The IGVGD coverage expanded significantly during 1990-94. Over 312,000 cardholders received training in poultry (Table 3.13). About 92 percent of the cardholders were trained as poultry rearers. The BRAC also provided expertise service in poultry under the constant supervision of gram sheboks trained in poultry.



## **CHAPTER FOUR**

### **Sustainability and subsidy**

High administrative costs are involved in forming groups and disbursing group-based credit and ancillary socioeconomic inputs. The BRAC has been providing small loans to a large number of poor people, who require sustained access to formal credit for generating employment and income. Despite the fact that organizational discipline, skill development, and training are likely to promote proper loan use and high loan recovery, it is unlikely that the BRAC could have generated sufficient revenue in the early years of its operation to support these costs. On the other hand, it is also unlikely that the rural poor could have borne the full cost of BRAC activities.

Given its high loan recovery rates and low default costs, the cost of the BRAC's operations depends to a large extent on the availability and sources of funds for lending and other program activities. Foreign sources have provided funds at concessionary rates that have been instrumental to the expansion and institutional development of the BRAC. Reliance on these funds raises serious questions about the BRAC's sustainability: Would it remain viable without these subsidized funds? What impact would a nonsubsidized operation have on the poor? If subsidy is unavoidable, then how much is required to sustain such a banking operation; and for how long? Can it be sustained, and is it worth continuing?

Two types of subsidy are involved: financial and economic. If BRAC credit programs are not cost-effective, the program will need financial subsidies to continue operating. In addition, if the cost

of funding for on-lending is less than the opportunity cost of these funds, the program enjoys an economic subsidy.<sup>1</sup> The BRAC receives both types of subsidy, calling into question its long-run viability.

The BRAC's financial and economic viability depends on the extent of the subsidies it requires. This can be measured using available cost and revenue information and market interest rates. The BRAC's long-term sustainability depends on whether its credit programs are institutionally sound and whether it can continue to provide benefits to its members. In other words, the sustainability of BRAC programs depends both on the benefits that accrue to participants and on how and at what cost it delivers inputs.

Four interrelated concepts of sustainability are used for this evaluation: financial viability, economic viability, institutional viability, and borrowers' viability. This chapter explores these concepts and discusses how they can be measured and estimated. The same procedures are then used in later chapters to examine the BRAC's performance.

### **A concept of program sustainability**

The term *program sustainability* means the ability of a program to continuously carry out its activities and services in pursuit of its objectives. With respect to the BRAC, sustainability means the ability to continue operating as an intermediary for the poor. Since the BRAC uses loanable funds from various sources to finance productive activities, it can only sustain its operations if it remains financially

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<sup>1</sup>This type of subsidy may also be termed social subsidy because the subsidized funds are made available to the program to lend to the poor with the objective that such lending will reduce poverty.

sound. On the other hand, since the BRAC is an organization for the poor, it cannot sustain its operation unless the benefits received from program participation reduce poverty and are sustainable.

To ensure sustainability, the BRAC furthers its institutional development, operates efficiently given its program design and institutional framework, and helps to generate sustainable benefits for the poor to meet the cost of program participation and reduce poverty. In short, the BRAC works to promote its own institutional, financial and economical viability as well as that of its clients.

The BRAC's program is defined as financially viable if it can at least equalize the cost per taka lent with the price (that is, the interest rate) it charges its borrowers. The BRAC is defined as economically viable if it can meet the economic cost of funds (the opportunity cost) utilized in credit and other operations with the income it generates from lending. The BRAC can only be institutionally viable if it has institutionalized and effective procedures for ensuring management succession, so that it is not dependent on the leadership of a particular person. The management and decision-making structure can be a measure of this. Moreover, because staff development and incentives contribute to productivity, the BRAC should allocate resources for optimal internal and cost efficiency.

However, institutional viability cannot be attained unless the benefits from the projects funded by the program meet the members' cost of borrowing. This is shown by the high collinearity between the viability of borrowers and the viability of the lender, which depend on the same environmental and production risks. Whether the benefits from an activity will equal the costs of borrowing is a function of the entrepreneurial ability of the borrowers to select and manage the projects financed, given market and other constraints. The viability of the borrowers is therefore crucial to the overall viability of the

BRAC. The success or failure of a program should also be judged on how far the program has gone to help borrowers sustain their gains and develop a viable organization for the poor.

### **Institutional development**

To ensure its own financial and economic viability and that of its borrowers, the BRAC must become a sustainable institution in terms of its program organization and management structure. A sustainable BRAC should positively influence its employees and borrowers to perform efficiently. Given a proper incentive structure, employees will naturally be motivated to improve the organization's delivery and recovery mechanisms. Understanding the BRAC's institutional development requires an examination of management-structure incentives for its staff to improve productivity, of the structure of the incentive system, and of the employee turnover or dropout rate.

Program placement, as determined by the management, is an important aspect of institutional development. The BRAC provides several financial and other services as part of its poverty alleviation strategy. However, to be financially viable and sustainable, the BRAC may have to avoid, or at least consider, material (agroclimate and locational) risk in selecting program placement. It is much more difficult to create a viable financial intermediation system in an area that is flood-prone, where seasonality is pronounced, or that is far from urban centers and lacks the infrastructure to support transport to those urban centers (Binswanger and Rosenzweig 1986). However, the BRAC may need to offer services in areas subject to material risk when that risk is a source of poverty. Therefore, by examining its program placement in light of invariant area and agroclimate characteristics, we may infer whether the BRAC has responded to favorable agroclimate conditions in program placement.

## **Financial and economic viability**

A direct way to evaluate financial viability is to quantify an institution's cost structure and examine whether the cost per unit of principal lent is equal to the rate of interest that borrowers are charged. This method is known as the financial criterion of efficiency.

The financial criterion does not, however, take into account the possibility that the program may not satisfy the criterion during a single time period, but still remain financially viable over time. It also does not allow an estimation of the economic subsidy or an identification of subsidy recipients. The combined successes or (failures) of individual branches determine whether a program is a success (or failure), in addition to its ability to meet the cost per unit of principal lent at the market interest rate. To analyze the dynamics of sustainability, we will examine the branch-level performance of the BRAC in terms of cost structures, loan recovery, and profits or losses.

In order to examine how a program's cost components and innovative schemes influence its cost structures over time, the deviation of the cost functions must include all relevant (control and other) variables. Estimating a cost function at the branch level provides additional information: it may help to identify whether the branch-level operation can break even over the long run and whether BRAC branches are profit-maximizing units.<sup>2</sup> Also, such a branch-level analysis can highlight whether the BRAC is economically viable.

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<sup>2</sup>The cost function is not estimated for the program as whole. Rather, given that the BRAC head office supports all the training costs of its members and staff, it is tested to see whether the branches minimize their cost of production, which justifies the estimation of a cost function at the branchlevel.

A branch, given its mandate to reach as many of the rural poor as possible within a designated area, can expand credit disbursement either by expanding membership or by increasing the volume of lending per member.<sup>3</sup> Expansion in either direction involves additional labor and capital costs. The objective of a profit-maximizing branch is thus assumed to be at least the minimization of the costs of attaining a targeted membership and credit disbursement. Moreover, unlike other development finance institutions, BRAC branches mobilize savings from members and thus may seek to minimize the cost of attaining a targeted savings level. Mobilizing and training new members involve large administrative costs, as do lending and savings.

There is an extensive literature on the estimation of cost functions to measure both the operational efficiency and economic viability of a financial program.<sup>4</sup> A cost function relates the cost of the program to the predetermined quantities of output, the exogenous prices of labor and capital, and a number of control variables that influence cost. The translog specification is a flexible form for estimating a cost function that does not have the restrictive properties of the widely used Cobb-Douglas function. Moreover, it can help measure a branch's scale and scope economies as well as the effect of product mix on its cost.<sup>5</sup> The conditional cost function (conditional on the level of outputs) takes the following form:

$$(4.1) \quad \ln TC_{jt} = a_0 + a_1 \ln S_{jt} + 1/2[a_2 \ln S_{jt}^2] + a_3 \ln W_{jt} + 1/2[a_4 \ln W_{jt}^2] + \\ a_5 \ln N_{jt} + 1/2[a_6 \ln N_{jt}^2] + 1/2[a_7 \ln S_{jt} \ln W_{jt}] +$$

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<sup>3</sup>Also, to the extent that the loan absorptive capacity may be influenced by the entrepreneurial ability of the borrower, the BRAC can increase this capacity through imparting training and other skill development inputs.

<sup>4</sup>For example, Kolari and Zardkoohi 1987; Clark 1984; Benston and Smith 1976; and Srinivasan 1988.

<sup>5</sup>Economies of scale are said to exist if the unit production costs decrease as output expands. Economies of scope are said to exist if a credit program produces joint outputs, such as lending and savings mobilization, at a lower cost than producing only one output, such as lending.

$$1/2[a_8 \ln S_{jt} N_{jt}] + 1/2[a_9 \ln W_{jt} \ln N_{jt}] + IF_{jt} + d_j + e_{jt},$$

where  $TC_{jt}$  is the cost of  $j$ th branch of a program in period  $t$ ;  $S$  is a vector of membership, lending, and savings;  $N$  is the fixed unit cost of lending (measured by the sum of rents paid and depreciation of equipment divided by the value of all loans); and  $W$  is the price of labor (defined as the annual average salary plus benefits, paid to program workers divided by the total number of workers);  $IF$  is a vector of control variables including infrastructure (such as roads, schools, commercial banks and health facilities) and  $d_j$  is a vector of area-specific fixed endowments (such as flood potential and soil moisture).

Estimation of (4.1) enables us to test whether a branch exhibits economies of scale. If it does, the branch can expand its membership and increase lending and savings per member to reduce its overhead and attain its target. An important objective of the study is to find out where existing branches are located along the cost function, and whether economies of scale exist and can be captured by intensifying their operations.

The economic viability of a credit program may also be measured by estimating a set of reduced-form equations for loan recovery, membership, total lending, input uses, and other indicators of program performance. This helps identify the role of various factors, both program and area-level, in a program's performance over time. More formally,

$$(4.2) \quad PF_{jt} = b_0 + b_1 PR_{jt} + b_2 IF_{jt} + b_3 S_{jt} + d_j + e_{jt},$$

where  $PF$  is a vector of performance indicators,  $PR$  is a vector of input prices, including wages,  $IF$  is a vector of control variables, and  $d_j$  is defined as before.

Both the cost equation and the performance equation use branch-level panel data, and may consequently suffer from bias due to unobserved heterogeneity among different branches. A fixed-effects technique will be used to control for the area-specific heterogeneity.<sup>6</sup>

### **Borrowers' viability**

An alternative way to view the sustainability of a program is to estimate whether its borrowers have achieved a higher income flow over time. This implies that the borrowers increased their incomes and consequently were able to repay their loans. It may also mean that borrowers have accumulated capital so that they no longer require help from a targeted credit program, or that they have switched to more remunerative sources of income as a result of program participation. The income and occupational mobility of borrowers are therefore important indicators of borrowers' viability. Also, by examining the dropout rate from a targeted credit program, the factors that induced participants to leave the program can be identified. Panel data are required to examine the income and occupational mobility of participants, but are costly to collect. It may be possible to collate dropout and/or income information from the program's records in order to analyze the program's sustainability.

Another way to examine borrowers' viability is to measure how effectively capital is used at the household level. This is done by calculating the rates of return on their investments, which can indicate whether the cost per unit of principal lent is covered by the investment. Cross-sectional household survey data on the net income generated from credit-supported projects would be sufficient to estimate these rates

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<sup>6</sup>The problem of area-specific heterogeneity makes Ordinary Least Squares (OLS) estimates inconsistent (For econometric issues see, Maddala 1987). The problem arises because branches may not be randomly distributed across space. The BRAC may decide to place its branches depending on unobserved (to econometricians) area characteristics. If these unobserved area characteristics are time-invariant, specific to each branch location, and enter additively into the equation, then a fixed-effects estimation technique is appropriate.

of return across activities and across programs. The average borrower's net increase in income can be compared in absolute terms with some quantitative measure of the expected gain from a targeted credit program. These would provide a uniform assessment of credit use.

A final way to assess borrowers' viability is to examine the effect of program placement on rural wages. BRAC operations may benefit rural wage workers if their induced benefits make a dent in rural poverty. BRAC placement in a given area has both a positive supply effect (because it withdraws labor from the market, enabling workers to self-employ) and a positive demand effect (through an induced income effect) on rural wages. We would, therefore, expect an increase in rural wages following program placement in a given area.

#### **Economic viability of the BRAC: subsidy dependence**

The branch-level cost function estimation sheds light on whether the BRAC is economically viable. However, branch-level economic viability does not imply that the BRAC program as a whole is economically viable. Although there is no direct way of estimating the economic viability of the program as a whole, it is possible to evaluate whether BRAC can operate without low-cost subsidized funds. The extent of economic subsidy must be identified in terms of the opportunity cost of the subsidized funds the BRAC has received. This will then help to determine whether the BRAC can withstand the withdrawal of economic subsidy and, if not, what needs to be done.

As defined earlier, the two sources of subsidy for the BRAC are the financial subsidy, given if the program cannot break even, and the economic subsidy, given if lending is supported by grants or funds obtained at interest rates lower than the market rate.

Following Yaron (1992), the economic subsidy may be defined as the amount of benefits the BRAC derives from the given amount of inexpensive funds and grants due to the difference between the actual interest rate and the opportunity cost of these funds. Comparing the opportunity cost of funds with the actual interest rate will reveal the economic cost of maintaining BRAC operations.

As stated in Chapter Three, foreign grants and member savings are the only sources of funds. Given this, and given the interest rate structure, the economic subsidy for the BRAC is essentially interest subsidy (or financial cost subsidy). The interest subsidy is defined as the benefits derived from receiving borrowing and grants from national and international agencies because of the difference between the market interest rate and the confessional interest rate. Mathematically, it is represented as:

$$(4.3) \quad FCS = A(m - c)$$

where  $FCS$  is the financial cost subsidy,  $A$  is total annual concessionary borrowed funds (outstanding),

$m$  is the market interest rate of the concessionary funds, and  $c$  is the average concessionary interest rate.

Note that for grants,  $c=0$ , and the financial cost subsidy is equal to  $Am$ .

Net subsidy ( $NS$ ) is the economic subsidy less profit ( $P$ ) and is defined as:

$$(4.4) \quad NS = A(m - c) - P$$

Note that net subsidy can be positive, negative, or zero. If profit is greater than the economic subsidy, then the BRAC receives no net subsidy and the net economic cost for continuing BRAC operations is zero. By contrast, if the BRAC needs financial subsidy (a negative profit), it increases its economic

subsidy. In this case, the program requires not only subsidized funds but also financial subsidy for its survival. The subsidy calculation depends on how one defines the opportunity cost of the subsidized funds received by a development finance institution. Yaron (1992) suggested the fixed-deposit interest rate as the reference rate for calculating the subsidy. Since equation (4.4) does not provide any information about how dependent a program is on subsidy for its sustainability, Yaron (1992) evaluated the subsidy dependence of a program against interest earned on its loan portfolio, the major activity of a DFI:

$$(4.5) \quad SDI = \frac{NS}{LP * i}$$

where  $SDI$  is the subsidy dependence index (SDI),  $NS$  is the annual (net) subsidy received by the BRAC,  $LP$  is the average annual outstanding loan portfolio, and  $i$  is the average weighted on-lending interest rate paid on that portfolio.

The above financial ratio helps measure the percentage increase in the average on-lending interest rate required to eliminate subsidy in a given year, while keeping its return on equity equal to the approximate non-concessionary borrowing cost. A zero  $SDI$  implies that profit equals the social cost of operation and hence that the BRAC has achieved full self-sustainability. By contrast, a positive SDI indicates that the economic cost exceeds the profit, in which case the on-lending interest rate must increase by the amount of SDI to eliminate the amount of (net) subsidy. For example, an SDI of 100 percent indicates a need to double the on-lending interest rate in order to eliminate subsidy.

The subsidy and subsidy dependence index (SDI) are sensitive to the accounting profit ( $P$ ) reported in the annual report of a program. Profit ( $P$ ) can be generated not only from on-lending, but also through investment in government securities and other forms of financial instruments. Although SDI is evaluated in terms of lending only (to the poor), the SDI calculation does not require knowledge of how profit is generated, or how the financial resources are allocated. This is justified to the extent that the donor funds are given only for on-lending to the poor. However, as part of a prudent risk-reducing policy, a program such as the BRAC may diversify financial resources to maximize the expected return and profit. This consideration needs to be taken into account while calculating the SDI. Otherwise, even if everything remains the same, a portfolio mix can yield a higher profit for a program that diversifies resources than for a program that only lends. Consequently, SDI differs by program.

Assume that the BRAC invests a part of its financial resources ( $F$ ) in investments with an average return ( $m$ ) so that its profit  $P$  is defined as:

$$(4.6) \quad P = [\rho(i - c) + (1 - \rho)(m - c) - \mu] F$$

where  $\rho$  = proportion of total resources ( $F$ ) that is lent out;

$(1 - \rho)$  = proportion of resources that is invested; and

$\mu$  = operating cost of the program per unit of financial resource.

We define the subsidy dependence ratio (SDR) that evaluates subsidy dependence of a program in terms of income earned against both lending and investment.

$$(4.7) \quad SDR = \frac{A(m-c) - [\rho(i-c) + (1-\rho)(m-c) - \mu] F}{[i\rho + m(1-\rho)] F}$$

If the BRAC allocates its entire financial resources to on-lending such that  $F$  is equal to loan outstanding ( $LP$ ) and  $\rho=1$ , we get

$$(4.8) \quad SDR = \frac{A(m-c) - [(i-c) - \mu] LP}{i * LP} = \frac{A(m-c) - P}{i * LP} = SDI$$

where

$$P = (i-c) - \mu$$

Therefore, while the SDI evaluates subsidy dependence against interest income only, the SDR evaluates subsidy dependence against income earned from both lending and investment. To the extent that a program always minimizes its income risk through portfolio diversification, the SDR appears more consistent than the SDI with such a practice. Although the SDI takes care of portfolio diversification through profit, the SDI's across financial institutions appear incomparable if they do not behave in the same way in terms of financial resource allocation. That means if a program has a lower SDI than another program, it is not clear whether the lower SDI is due to better program management and less reliance on subsidized resources or simply to portfolio diversification between lending and investment. The SDI is also not comparable for a program over time if its portfolio allocation varies by year and hence affects the profit ( $P$ ) and net subsidy ( $NS$ ). For these reasons, we will present both the SDI and SDR measures for comparison.



## **CHAPTER FIVE**

### **Institutional viability**

The BRAC's sustainability depends to a large extent on its institutional development and viability. Although the BRAC has expanded from a charitable organization to a modern development organization, it is based on a non-hierarchic "organic" organizational structure and relies on "self-coordination" among its structures. Mr. Abed, the BRAC's founder and leader, has been instrumental in the BRAC's growth. Since the BRAC is more than an NGO, its institutional development must be based on modern concepts of organizational and management structure.

Effective management has been identified as the key to the BRAC's success. Its innovative management structure and program design have attracted admiration from both inside and outside Bangladesh. The BRAC has used management techniques that are comparable to international standards (Wils, Pastoors, and Van Leeuwin 1988). Having institutionalized its decentralized management style, emphasizing monitoring, evaluation and adaptability in decision making, the BRAC has been able to replicate its innovative processes at all operational levels and in all activities. In addition, the BRAC provides extensive field-level training for new recruits and older staff and has thus created a cadre of professionals dedicated to helping the poor.

## **Leadership, decentralization, monitoring, and evaluation**

The BRAC's development into a major NGO serving nearly 1 million people has centered around the leadership of its founder, Mr. F.H. Abed. The successful evolution of the BRAC's credit and rural development programs and operational system was mainly due to the ideas and organizational capabilities of Mr. Abed and his executives. However, in turning the BRAC into a viable institution, its administration was decentralized and the management has become increasingly professional over the last decade.

Initially, the BRAC consisted of only the head office and the branches. As the organization grew, decentralization became necessary to ensure that efficient decisions were made at all operational levels. The regional offices were created when the number of branches and regions served expanded.

The leadership gradually delegated more decisionmaking authority to these intermediate administrative units, as the head office became less able to handle the volume and variety of issues involved. As such, the BRAC did not have to deliberately decentralize; it did so naturally as it grew. The field office managers are now expected to plan, organize, and implement BRAC activities with little supervision from the head office in Dhaka. The delegation of decision-making responsibility and the flexibility of branch operations enable the head office to focus on broader issues of policy and development.

The board of directors is responsible for guiding the BRAC in planning, designing, implementing, monitoring, and evaluating its various programs and activities. The BRAC requires its managers to promote the development pursuits of its members, who must participate in planning, implementing,

monitoring, and evaluating their own activities. A manager must promote the development and environment that enables people to improve their lives. Managing an "enabling environment" is extremely demanding and often requires making day-to-day decisions. Hence, managers must be entrepreneurial and willing to experiment. The BRAC's management system, in turn, must be responsive to the changing development pursuits of its field-level managers. Unlike many governmental and nongovernmental organizations that follow hierarchic and mechanistic organizational structures, the BRAC follows few mechanistic procedures and there are only a few intermediate levels between top management and field-level management.

The BRAC is registered under the Societies Regulation Act and the Foreign Donations Act of the government of Bangladesh. The BRAC's ultimate authority rests with the general body, composed of nine members. Seven of these nine members are elected to the governing body, which appoints the executive director. The BRAC's organizational structure is based on the following mandates: encourage and enable staff participation in decision making, minimize hierarchy, enable accountability, decentralize decision making, maximize feedback opportunities, and maximize flexibility (Lovell 1992). These principles are reflected in the BRAC's flat and decentralized structure. For example, the rural development program is the largest of the BRAC's programs, serving more than 7,000 village organizations and growing at a rate of 2,000 village organizations per year. Yet the RDP operates with less than twenty-five head office staff, ensuring accountability by relying on a well-developed computerized management information system.

Most of the decentralized decisionmaking functions are monitored and evaluated using field-level information that is collected, analyzed, and disseminated by a central monitoring and evaluation unit. Monitoring and evaluation are critical in that they provide continuous feedback from different operational

and financial reports. Information on the flow of funds, disbursement, repayment, and defaults are monitored daily by branch managers who prepare statements for the head office. These reports, which are analyzed by the monitoring and evaluation unit, make it possible to keep track of each branch's performance and compare it with the aggregate data gathered at the head office. Such comprehensive information and reporting form the basis for the process of learning and innovation that is reflected in the BRAC's decisionmaking and policies.

#### **Management style: staff training, incentives, and performance**

An important component of institutional viability is the professionalization of management. The BRAC's management style has evolved from its efforts to provide a whole range of financial and social services to the rural poor. It combines learning, innovation, and flexibility at all levels (see Lovell 1992 for details). The BRAC chooses its managers based on their field experience and motivation to alleviate poverty.

The BRAC's management style is developed by its in-house-training and resource centers and is rooted in its innovative approach to training, which includes a structured learning process based on trial and error and continuous fine-tuning.

Entry-level personnel are program organizers. They must be university graduates and are selected only after a careful screening process that includes written and oral examinations. Most of the BRAC's managers start out as program organizers. New program organizers receiving introductory training on rural development spend a probationary year in the field. Training for new staff is mainly hands-on; they spend most of the year at branch offices. The new program organizers work directly with

villagers, leading and participating in discussions at regular group meetings. In addition to understanding the BRAC's development and credit program, trainees are required to familiarize themselves with local conditions and prepare detailed case studies of borrowers. They are given open-ended guidelines and are expected to act self-reliantly and flexibly. The training process is difficult, and one-third of the trainees are not suited for the task. In fact, about half of the new recruits resign during their first probationary year (Lovell 1992).

Almost all managerial staff assigned to the head office and the regional offices have worked for long periods at the branch level. As such, branch-level training and field experience is crucial for guiding BRAC's policies and decision making. Managers' backgrounds and the performances of their units play an important role in determining their salaries.

Although half of the village organizers are women, only few women program organizers have actually been posted in the field. However, the BRAC is looking for ways to recruit more women program organizers. An advisory committee on women was set up in early 1991 to promote the recruitment of women and to reduce women's dropout rates. Among the various efforts made in this direction, the BRAC has revised some of its recruiting and training procedures. For example, although interviews of men are conducted in the Dhaka office, women are interviewed in regional offices so that they need not travel to Dhaka. For similar reasons, women are assigned to branches closer to their homes. Furthermore, to involve more women in program design and implementation, the BRAC has appointed two women to its seven-member executive board. Because of these measures the female dropout rate has fallen in recent years. (Table 5.1).

Between 1990 and 1994, the total number of recruits increased from 449 to 1,044. The dropout rate among the staff was 7 percent in 1990 and 4 percent in 1994, with the highest dropout rate recorded in 1991 (11 percent). The decline in the dropout rate is primarily due to the decline in the female dropout rate. In 1990 the latter was 18.5 percent, while it was only 6 percent in 1994.

The considerable importance the BRAC attaches to staff training is revealed by the large share of training costs in salary expenses (Table 5.2). Training costs accounted for about 4 percent of salary expenditures in 1990, 7 percent in 1992, and 4 percent in 1993. In terms of total BRAC expenditure, staff training costs amounted to only 1.2 percent in 1990 but gradually rose to 1.6 percent in 1993.

Overall, total expenditure on staff training (all of which is incurred by the head office) increased by 63 percent between 1990 and 1991, by 136.9 percent between 1991 and 1992, and by 10.5 percent between 1992 and 1993 (see Table 5.2). The reduced growth in staff training cost in 1993 resulted from a reduction in staff recruitment. In 1992 staff recruitment increased by 167.3 percent, but declined by 16.4 percent in 1993.

## **Managers' pay: determinants and returns to education and experience**

The BRAC's staff and employee turnover may be influenced by the pay structure, incentive scheme, and the nature of the job. The BRAC has a very competitive pay structure, comparable to those of other DFIs and commercial banks in Bangladesh. However, unlike DFIs and commercial bank staff, BRAC employees must mobilize the rural poor and help make them creditworthy and productive. Moreover, because their goal is poverty alleviation, the majority of BRAC staff are located in remote rural areas where modern amenities are seldom available. As such, BRAC employees may be influenced by factors other than the pay structure and incentive scheme.

Nevertheless, the employees must be given proper incentives to be more productive. The staff salary structure is a strong indicator of the BRAC's incentive scheme. Typically, most managers are university graduates and have had field-level experience. Similarly, most of the program organizers are university graduates and are paid competitive wages based on their qualifications and experience. Data on the salary and personal characteristics of ninety-seven branch managers and ninety-five POs for 1993 were used to examine the BRAC's incentive structure. Either a junior or senior officer was eligible to be a branch manager. Hence, without knowing their grade level, it may be difficult to compare their wages. In fact, without controlling for their grades, the regression results based on personal characteristics may bias the wage estimates of particular groups belonging to a particular grade. This bias may be evident for women managers, who are mostly junior officers. Given this risk, we estimate a wage function to see whether wages are responsive to experience and education.

A Mincerian log-wage function showing the rate of return on education with respect to BRAC experience was estimated.<sup>1</sup> Both branch managers and program organizers have an average of fifteen years of education, but managers are more experienced (averaging seven years of BRAC experience, with program organizers averaging only three years). Managers also tend to be older (thirty-three years) than program organizers (twenty-nine years). Only 6 percent of branch managers are women, while 18 percent of POs are women. The estimates suggest that education, experience, and gender explain about 66 percent of the variation in branch manager salaries, while the same characteristics explain 55 percent of the variation in salaries of randomly selected program organizers. Both education and experience are statistically significant. Both managers and program organizers earn slightly higher returns on education than on experience. However, the return on experience is less for program organizers; this may reflect possible immobility among the program organizers. Branch managers, on the other hand, have better promotion prospects. Although female and male managers have similar wages, female POs receive lower wages than their male counterparts. This is shown by the positive sign of the coefficient on the gender dummy.<sup>2</sup>

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<sup>1</sup>In the Mincerian approach, the log of salaries is regressed against education, age, and years of experience to highlight the role of human capital in determining earnings (Mincer 1974).

<sup>2</sup>However, this could be explained by the fact that most of the women POs are health POs who were transferred from the Oral Therapy Extension Project and have only secondary and higher secondary school certificates. Therefore, they were hired with lower qualifications and given lower starting salary. In addition, staff, especially women who were recruited earlier without written and oral tests, were given lower starting salaries. This might also affect the averages. Note, however, that the recruitment policy has since been standardized.

## **What determines the BRAC program placements?**

BRAC branches are located in nearly one-fifth of all villages in Bangladesh. The decision to establish and operate a branch in a particular area may be based on certain area characteristics and on survival concerns. It is more difficult to establish a viable financial system in an area that is largely flood-prone, where seasonality is pronounced, and where there is poor infrastructure (Binswanger and Rosenzweig 1986). Since the BRAC ultimately aims to establish profitable banks, it must consider the risks stemming from agroclimate and locational characteristics.

However, unlike other DFIs or commercial banks, the BRAC's overriding goal is poverty alleviation. This objective may lead the BRAC to operate branches in areas where conditions are unfavorable. The BRAC's response to these conditions can be contrasted with those of commercial banks, DFIs, and government infrastructural investment decisions in order to test this proposition.

To measure the impact of agroclimate endowments on BRAC program placement, data on agroclimate and locational characteristics were collected from 225 thanas, randomly selected from the 480 thanas housing branches of the BRAC, the Grameen Bank, or the BRDB RD-12. In 1991 about 45 percent of these thanas had BRAC branches, and only 3 percent had commercial bank branches. About 10 percent of the thanas had a branch of the Krishi (agricultural) Bank, a major DFI in Bangladesh. As for the government's infrastructural investments, about 12 percent had electricity, 38 percent had primary schools, 9 percent had secondary schools, and 11 percent had roads and highways.<sup>3</sup>

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<sup>3</sup>These data are normalized by the area of a thana in square kilometers.

The location variable is measured by the distance of a thana from the (old) district headquarters. This variable may capture the transaction costs of program placement, implying that the greater the distance, the higher the cost of program placement. The agroclimatic endowments are measured by moisture availability and flood potential. Moisture availability is defined as the moisture content of the soil (millimeters/meter), and thanas are ranked between 0 and 4. The lower the ranking, the better the moisture availability and thus the better the agroclimatic conditions. At the same time, each thana is also ranked according to how flood-prone it is, depending on its altitude above sea level. The larger the proportion of higher-altitude areas, the lower the thana's ranking (between 1 and 5).<sup>4</sup>

The agroclimate and locational factors account for about 14 percent of the variation in BRAC program placement and 24 percent of the variation in the government's secondary school placement. BRAC program placement responds somewhat to agroclimate and locational factors since some variables, such as flood potential, are statistically significant. Similarly, both government and commercial banks respond positively to better agroclimate and locational conditions. For example, both commercial and Krishi banks locate their branches in thanas that are closer to district headquarters. Although the BRAC's decision to open branches in a certain area is not conditioned by its proximity to administrative centers, its program placement decision is partially affected by agroclimatic factors. This finding suggests that the BRAC's behavior is somewhat similar to that of commercial banks and DFIs. However, since its objective is poverty alleviation, the BRAC may place branches in riskier areas even if this contravenes profit-making.

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<sup>4</sup>These data have been collected from the Water Resources Planning Organization of Bangladesh.

This finding that the BRAC responds to unchanging agroclimate conditions is consistent with the hypothesis of nonrandom program placement. This has an important implication for the branch-level cost analysis. If the BRAC's program placement is not random, the cross-sectional branch data cannot measure the causal impact of program inputs on branch efficiency, because the allocation of program inputs may be correlated with the error structures. We must test whether time-varying regressors are correlated with the error terms that might include unobserved time-invariant agroclimate factors. This test will determine if the fixed- or random-effects method should be used to consistently estimate branch-level efficiency.



## **CHAPTER SIX**

### **Financial and economic viability**

The objective of this chapter is to determine the viability of the BRAC, particularly the Rural Development Program and the Rural Credit Program. We introduce the concepts of financial and economic viability to understand the implications of subsidy and operational efficiency on the BRAC's viability. BRAC programs are financially viable if they are profitable and are economically viable if they are able to pay for financial subsidy, defined as the savings gained by receiving cheap funds from donors or the government. The programs are thus financially viable if they are profitable, but are only economically viable if the profits generated cover the economic costs of subsidized funds. BRAC programs are financed by cheap funds and savings mobilized from village organization members as well as grants from donors. The head office receives these grants and transfers them to the branch offices to finance various programs. At the same time, the head office pays for training and research. Therefore, the BRAC's financial and economic viability must be evaluated at both the aggregate and branch levels.

#### **Analysis of program level viability**

The program level viability is evaluated in terms of its profitability and its subsidy dependency index. A credit program can be profitable if it minimizes costs or maximizes revenue. However, since the BRAC finances its lending and economic activities largely with grants, its profitability is also determined by the contribution these cheap funds make to cost savings.

Cost minimization is largely determined by the composition of funds. On the other hand, revenue maximization is dependent upon the lending interest rate structure. Therefore, the profitability analysis should contain an analysis of the financial structure, the revenue and cost structures, and the interest rate structure.

### **Assets and financial structure**

The BRAC credit and development programs assets have grown from Tk 680.3 million in 1990 to Tk 2,400.3 million in 1993 and to Tk 2306.5 million in 1994 (Table 6.1). In 1994, earning assets constituted more than 75 percent of total assets. Loans to members constituted 58.6 percent of assets in 1994, while the investment accounted for about 20.2 percent. Capital funds have grown enormously from Tk 481.3 million in 1990 to Tk 1,790 million in 1993, but decreased to Tk 1,639.5 million in 1994. However, the financial structures of the RCP and the RDP are different.

The RDP's total assets have increased by more than 60 percent during 1990-94. Most of this expansion took place in 1991, jumping from Tk 481.8 million to Tk 700.5 million. Since 1991, total assets have remained more or less same with little increase in 1994. The growth rate fell because RDP branches aged more than four years were transferred to the RCP. Consequently, the total volume of assets has grown enormously for the RCP, from Tk 198.5 million in 1990 to Tk 1,694.5 million in 1993 followed by a decrease in 1994. The number of RCP branches has grown from ten in 1990 to ninety in 1994. By contrast, the RDP had 80 branches in 1990 and 105 in 1994.

BRAC credit programs have not emerged as separate entities with equity capital. As a result, capital is defined as the excess of current liabilities over assets. This excess essentially consists of donor-provided grants. BRAC treats donor funds as a part of total income, as does the rural development program, but the rural credit program does not. The amount of capital funds in the RDP during 1990-93 increased from Tk 316.8 million to Tk 536.8 million. The increase in capital funds between 1991 and 1992 was largely a result of receiving more grants from donors. The RCP's share of capital funds in total liabilities is slightly higher in 1994 (72 percent to 69 percent), though it was much higher (82 percent to 56 percent) in the year before. It increased from Tk 164.4 million in 1990 to Tk 1,395.7 million in 1993, again followed by a drop to Tk 1,102.9 million in 1994. This growth was a result of an increase in donor funds, the volume of profit, and the number of branches.

Group savings and trust funds constitute one of the major finding sources for the BRAC credit programs. The share of group funds in the RDP has declined from 26.2 percent in 1990 to 16.3 percent in 1992, although it rose to 21.2 percent in 1994. The RCP figure also increased during 1990-94. In 1990, the share of RCP members' savings was estimated to be 14.8 percent, and it rose to 19.4 percent in 1994. The amount of group savings for RDP increased only by 37 percent during 1990-94, while for RCP it increased by ten times during the same period (from Tk 29.3 million to Tk 297.1 million).

Like the structure of liabilities, the structure of assets changed during 1990-94 for both the RDP and the RCP. The RDP's asset structure differs from the RCP's in terms of its share of earning (investment and loans) and non-earning assets. In the RDP, fixed assets constitute more than 21 percent of total assets, while they are less than twelve percent for the RCP. This is essentially because the programs have different objectives: the RDP offers both credit and non credit programs, while the RCP

offers only credit programs. More than 80 percent of the RCP's total assets are earning assets, while this figure is about 74 percent for the RDP. Further, all of the RDP's earning assets are outstanding loans. These loans have increased steadily during 1990-94, from Tk 268.9 million to Tk 578.2 million. On the other hand, the RCP loaned Tk 81.7 million in 1990 and Tk 774.1 million in 1994. The average branch loan outstanding for RDP was estimated to be Tk 5.5 million in 1994; for the RCP it was Tk 8.6 million. Investment is following an upward trend for the RCP. It increased by more than 100 percent during 1991-93, from Tk 289.2 million to Tk 599.3 million, but dropped to Tk 466.2 million in 1994.

The structure of assets and liabilities has changed significantly for both of the programs. The financial strength of the RCP has increased by a greater amount in the past four years.

#### **Revenue and cost structure**

Although the RCP was introduced as an offshoot of the RDP, intended to make it financially and economically viable, the RCP is expected to become viable itself. The RDP and the RCP are not expected to be equally profitable because they have different products and objectives. An analysis of the revenue and cost structure will reveal why the financial performance of one program differs from that of the other.

Table 6.2 shows the income and expenditure of BRAC, which include Head Office expenditure. The BRAC has two major revenue sources: loans and investments. Loans are the only source of revenue for the RDP. However, the BRAC also receives (donor funds) and distributes internal resource and training income. Since donations are not revenue and internal resources are essentially transfers from one

activity to another, revenue was defined as interest and training revenue for the RDP and interest and investment revenue for the RCP. The total revenue of both the RDP and the RCP has increased during 1990-94. However, revenue has grown more slowly for the RDP than for the RCP. Total RDP income increased from Tk 32.8 million in 1990 to Tk 78.4 million in 1994, while that of the RCP grew from Tk 10.5 million to Tk 201.4 million. This large increase is a result of increases in outstanding loans, the number of branches, and the lending interest rate from 16 to 20 percent. However, the effect of the number of branches in each program can be controlled for if we estimate branch revenue. The RDP's average branch revenue increased from Tk 0.4 million in 1990 to 0.75 million in 1994 (Table 6.5). By contrast, it increased from Tk 1.1 million to Tk 1.8 million in the RCP during this period. This difference suggests that the loan output of the average branch in 1994 was higher for the RCP than for the RDP.

The RCP's investment income generated from fixed deposits and treasury bills is substantial. The share of investment income in total income increased from 17.1 percent in 1990 to 32.2 percent in 1993, but it dropped to 21 percent in 1994. The RDP branches do not earn investment income because investment and training income is generated by the head office.

The RDP's cost structure is different from that of the RCP because the RCP does not provide non-credit services. In 1994, however, BRAC has separated credit and non-credit expenses for RDP. As a result, RDP expenditure has declined in general. Total RDP operating and development expenditures increased threefold during 1990-1993, from Tk 181.1 million to Tk 512.5 million, and then it dropped to Tk 183.1 million in 1994. The same figure increased from Tk 15.6 million in 1990 to Tk 150.3 million in 1994 for the RCP. The average RDP branch expenditure increased from Tk 1.5 million in 1990 to Tk 1.9 million in 1993 before dropping to Tk 1.6 million in 1994. During the same time the average RCP

branch expenditure only increased from Tk 1 million to Tk 1.5 million in 1994. Aggregate total expenditure of both programs increased from Tk 196.6 million to Tk 641.8 million during 1990-93, but dropped to Tk 333.4 million because of the sharp drop in RDP expenditure. Salary expenses constituted 45.7 percent of aggregate total expenditure and 38.4 percent for the RDP and 54.5 percent for the RCP. The cost for training for RDP increased from Tk 36.5 million in 1990 to Tk 115.9 million in 1993. Training expenses for the RDP include only staff training, but this involves costs for VO training, staff development training, and skill development training. RDP discontinued this training programs after 1993. The RCP does not incur any training expenses for non-staff development, which is consistently a very small share in RCP's expenditure, only 1.2 percent in 1994. However, the RCP also incurs interest expenses, amounting to about 10.6 percent of total expenditure in 1994 (See Table 6.2).

Table 6.3 shows similar income and expenditure but it excludes head office expenses. Here also, salary is the major contributor to total operating costs. In 1994, 54.5 percent of total RCP operating expenses were salary payments, rising from 51.8 percent in 1990. The percentage in the RDP has increased from 29.5 percent in 1990 to 39 percent in 1994. Interest expenses are very low, particularly for the RDP, compared with other components of total expenditures. Although the RDP's interest expenses have steadily increased in absolute terms, from Tk 7.1 million in 1990 to Tk 9.2 million in 1993, it dropped to zero in 1994. On the other hand, the RCP's share of interest expenses in total expenditure was highest in 1992 (22.8 percent), before gradually dropping to 11.6 percent in 1994. The RDP did not incur borrowing costs until 1992. The head office transferred funds to the RDP branches interest-free, while the RCP branches had to pay four percent interest. Since the BRAC receives free funds, the programs do not need to borrow from local financial markets.

Total operating expenses, including salaries and benefits, traveling and transportation, rent and utilities, printing and stationery, maintenance and general expenses, depreciation, interest, and research and evaluation, increased from Tk 77.5 million in 1990 to Tk 152.6 million in 1993, but fell to Tk 108.7 million in 1994 (Table 6.4). This figure increased more than threefold, from Tk 20.2 million in 1990 to Tk 61.2 million in 1993 at the head-office level, before falling to Tk 13.4 million. The share of operating expenses as percentage of total expenditures at the head-office level also fell during 1990-94, from 11.2 percent to 7.3 percent.<sup>1</sup> By contrast, operating expenses at the branch level increased by 57 percent, from Tk 57.3 million to Tk 89.7 million, during this period.

The RDP is made up of credit and non-credit services. Non-credit services include institution building and sector development programs, the non-formal primary education program, the vulnerable group development program, the management development program, and the family planning and health program. Most of these programs' expenses were paid by the head office. However, in 1994 everything except for credit, institution building and loan loss provision was excluded from RDP and also expense for institutional building was transferred totally to the branches. As such, that component jumped from Tk 1.96 million to Tk 41.47 million during 1993-94 and head office expenditure dropped from 66 percent to 25.3 percent of the total expenditure.

Table 6.5 shows some selected branch level characteristics. Both total expenditure and operating expenditure declined during 1993-94 for both RDP and RCP, specially for RDP the drop in total expenditure was considerable (68 percent). Head office operating cost also recorded a sharp decrease for

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<sup>1</sup> This estimate of operating expenses as percentage of total expenditures at the head office level is underestimated as noncredit operating expenses are not included. This may, however, be treated as operating cost of RDP lending at the head-office level.

RDP (from 66 percent to 10 percent), though it increased little bit for RCP (from 7 percent to 9 percent). Total revenue was also lower in 1994 than it was in 1993. Because of these declines the RDP recovered greatly from its increasing losses in earlier years and was able to limit its loss to Tk 1 million in 1994. But RCP, a profitable organization, recorded a decline in profits in 1994 (from Tk 0.46 million to Tk 0.10 million), because the drop in revenue is more than the rise in expenditure.

#### **Financial margin, interest rate policy and profitability**

The profitability of a credit program is a necessary but not a sufficient condition for long-run sustainability. The BRAC's program development also suggests that it is concerned with long-run sustainability. As such, the RCP takes over the operation of RDP branches after four years. The RCP operates as a profit maximizer.

Financial margin is defined as the difference between interest revenue and interest expenses (expressed as a percentage of average assets). If a firm can cover its operating costs with its financial margin, then it is profitable. The RDP and RCP have different financial margins (Table 6.6). The RDP's financial margin increased during 1991-94, from 5.2 percent to 10.1 percent. This rise resulted from an increase in the interest rate. RCP's financial margin was consistently above 10 percent until 1993, although it declined from 12.6 percent in 1992 to 10.3 percent in 1993. In 1994, however, it dropped to below 10 percent mark.

The RDP's interest expenses were only 1.4 percent of average assets in 1991, and fell over 1991-94 to zero. As the BRAC is fully financed by donor grants, interest expenses are only incurred on

deposits. Although branches pay interest on funds borrowed from the head office, these payments amount to a transfer of funds and do not appear on the expenditure statement. Initially, the BRAC paid 9 percent interest on member savings, but in 1994 this rate was lowered to six percent. Also in 1994, the interest rate charged by the head office on borrowed funds rose from 4 to 6 percent.

The rural development program incurred losses during 1991-94 (See Table 6.6), although in 1994 financial losses dropped to Tk 104.8 million from Tk 439.1 million in 1993. However, the amount of loss falls if branch revenues and expenditures are aggregated (see Table 6.3). By contrast, the RCP earned increasing profits during 1991-94 with the exception of 1993 when it dropped by 24 percent. Profits were Tk 51.1 million in 1994, up from Tk 32 million in 1993.

When profit is aggregated, information is provided on the need for and the extent of cross-subsidization (between the RDP and the RCP). The program as a whole is not profitable; that is, the RDP branches' losses are not compensated by the RCP branch profits, given the existing ratio of an RCP and RDP branch. However, aggregate losses dropped significantly during 1993-94, from Tk 407.1 million to Tk 53.7 million.

The trend in profit is more accurately described when profit is classified by branch age (Table 6.7). The average loss for branches less than four years old first increased and then began to decline as they aged. However, the average loss per branch decreased over time. For example, the four-year-old branches had an average loss of Tk 1.2 million in 1990, which fell to Tk 0.7 million in 1994. Until 1992 all branches under five years old were unprofitable. Since branches that are more than four years old are run by the RCP, the RCP appears to be profitable. In addition, the RDP's financial performance

improved significantly during 1991-94, particularly in 1994. The profitability of BRAC branches may be determined by their financial characteristics. Three characteristics were chosen: loans outstanding, member savings, and program development costs (See Table 6.8). Loans outstanding and member savings were higher for the older branches, although branches in the highest age group showed a decrease in savings from those in preceding group. Branches that were equal to or more four years old did not incur program development costs. Given that older branches are profitable, make more loans and collect more savings, the major determinants of profitability are loan-program-development costs, loan volume and member savings. The profitability of younger branches would probably improve if the program development costs were undertaken by other agencies.

The profitability of the RDP and the RCP is overestimated, as it does not account for the grants received from donor agencies. This must be evaluated to determine BRAC's long-run financial sustainability.

### **Subsidy dependence**

The BRAC has two sources of funds: group savings and grants. Group savings are those mobilized from the village organization members, while grants (converted into capital funds) are the foreign funds received in a given year. Sources of subsidy are linked with the sources of financing. Therefore, the BRAC's subsidy is derived from grants (capital funds) and group savings whenever the predetermined interest rate is less than the effective market interest rate. The subsidy per unit of financial resources is therefore defined as the difference between the concessional interest rate and the effective market interest rate. As noted in chapter 4, if there is no interest payment associated with any financial

resources then the subsidy per unit of that financial resource is equal to the effective market interest rate. This is the case with grants the BRAC receives.

The economic subsidy is the benefit lost if the cheap funds were used for alternative purposes. In essence, every dollar the BRAC receives as a grant or as savings is subsidized. The reference interest rate for estimating the economic subsidy was the long-term-deposit interest rate (more than thirty-six months).

The RDP's gross economic subsidy increased from Tk 99.5 million in 1991 to Tk 112.3 million in 1993, followed by a drop to Tk 99.4 million in 1994 (see table 6.9). Similarly, subsidy for the RCP increased from Tk 51.2 million to Tk 147 million during 1991-93, followed by a decline to Tk 142.9 million in 1994. The net subsidy (gross subsidy less profit) shows a similar pattern, and it was estimated to be Tk 204.1 million for the RDP and only Tk 91.8 million for the RCP in 1994.

The subsidy dependence ratio (SDR) and the subsidy dependence index (SDI) were calculated using the subsidy estimates. The SDR is the additional rate of return on total funds required to eliminate subsidy and the SDI is the required increase in the lending interest rate required to eliminate subsidy (Table 6.9). The SDR or SDI was not estimated for the RDP because non-credit services constitute about 70 percent of its total expenditure; covering such high non-credit costs by increasing the lending interest rate is neither practical nor socially feasible.

The SDI for the RCP fell from 0.8 percent in 1991 to 0.6 percent in 1994 after rising to 1.1 percent in 1993. The 1994 SDI estimate suggests that the lending interest rate should be increased by 58 percent from its present level of 20 to 32 percent to eliminate the economic subsidy it enjoyed. This

estimate is based on the assumption that the loan portfolio squares with financial resources. The SDR for the RCP fell from 0.54 in 1991 to 0.45 in 1994 after increasing to 0.71 in 1993. The 1994 SDR estimate suggests that the RCP should increase its interest rate by 45 percent to eliminate economic subsidy. This translates into an increase from 20 to 29 percent. Although it is meaningless to calculate the SDI or SDR for the RDP since the RDP is essentially a subsidized program, it is an interesting exercise if we calculate the SDI and SDR for both the RCP and RDP. Such an exercise will show the extent to which cross-subsidization is possible.

The SDI for both the RDP and RCP programs combined decreased from 2.40 in 1991 to 1.25 in 1994, after rising to 2.01 in 1993. The 1994 SDI estimate suggests that the lending interest rate should be increased to 45 percent if both the RDP and RCP programs are free of economic subsidy. That means if the RCP generates a negative economic subsidy, equal to the RDP's positive net economic subsidy, then both programs will be financially and economically sustainable. The calculation of subsidy dependence is different when it is based on the total funds used in lending and investment. The SDR fell from 1.84 in 1991 to 1.06 in 1994. The 1994 SDR figure suggests that the interest rate should be increased by 106 percent, from 20 percent to 41 percent.

Alternatively, the BRAC can achieve sustainability by increasing its loan disbursement without increasing the lending rate. For example, in 1993, the BRAC could have eliminated the RCP's subsidy dependence by increasing loans outstanding from Tk 552.5 million to Tk 944.8 million, provided the additional funds were raised through market sources and did not involve any subsidy. Moreover, as the ratio of RCP branches to RDP branches increases, the lower number of RDP branches can be subsidized by the new RCP branches. In 1992 only 28 percent of the BRAC's branches were under RCP control.

This ratio increased to 42 percent by 1993. The BRAC's projection is that by 2001 all the RDP branches, with the last RDP branch to be opened in 1997, would be converted into RCP branches.<sup>2</sup> Our projection is that if the current growth in loans outstanding (about 32 percent) is maintained and amount of net subsidy does not change, the RCP branches will be subsidy free by 2001 at the existing on-lending interest rate, while both the RDP and RCP branches will be economic-subsidy-free by 2010. This is contingent upon the additional funds required to support additional lending coming from market sources.

### **Are BRAC credit and development programs cost-effective?**

The analysis of program level sustainability using aggregate data, as done in the previous section, does not provide information on branch-level cost effectiveness. A translog cost function was estimated using membership, loan disbursement, and savings as the joint output. Like other poverty-alleviating credit programs, loans are made only after members are mobilized and trained. The BRAC mobilizes target households and establishes village organizations, provides consciousness-raising training and skill development, and disburses loans to the trained members. A member can qualify for a loan only after about six months of training. In contrast, savings are mobilized from the outset.

In addition to output variables, the cost function also included wage, agro-climatic, and age variables. Until 1989 the BRAC disbursed funds to the managing committee of the village organization which, in turn, made loans to individual members. In 1989 the BRAC decided to lend directly to individual members. A dummy variable was introduced in the model to capture this policy shift.

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<sup>2</sup> The BRAC's own projection on the sustainabilities of RDP operation is shown in Appendix B.

The fixed-effect cost estimates of joint outputs reveals that the model explains about 98 percent of the variation in branch level costs (Table 6.10). The estimates shown in the table may, however, suffer from simultaneous bias as the three outputs may be jointly produced and correlated with errors.

The nonlinear relationship between branch age and costs is not confirmed by the cost estimates. Since the age variable has a positive sign and the age squared variable has a negative sign, the operational cost should fall as a branch ages. However, neither coefficient is statistically significant. Staff training cost, by increasing productivity, was expected to contribute to cost reduction. However, this hypothesis was rejected; the parameter estimate for staff training cost was positive and statistically significant. The structural shift (measured by Year-89 dummy) in the lending system was negative and significant, suggesting that the decision to lend directly to individual members contributed to lowering operational costs.

Based on the estimates, the marginal cost of membership, loans disbursed, and savings mobilized were computed. These estimates indicated that only the marginal cost of loan disbursement was statistically significant. In other words, the marginal cost of mobilizing a new member is zero, while the marginal cost of lending an additional amount, say, Tk 4,000, is Tk 404. If the cost of mobilizing funds was negligible, as shown by the estimates of the marginal cost of savings, then the cost of mobilizing an additional member and making an additional Tk 4,000 loan would be Tk 404. On the other hand, it generates Tk 800 in additional revenue at the 20 percent interest rate. Thus, the BRAC is not operating at the optimum level, where the marginal cost of making an additional loan equals the marginal revenue earned. This result indicates that BRAC branches exhibit economies of scale. The BRAC may therefore achieve sustainability by increasing loan disbursement, membership, and savings. The presence of

economies of scale in branch operations is confirmed by the economies of scale estimate, 0.558, which is significantly different from 1 (constant returns to scale).

This analysis suggests that the performance of the BRAC's credit programs has improved significantly during 1990-94. However, they are not yet financially and economically sustainable, although the RCP has achieved financial sustainability. The BRAC can achieve sustainability for both programs by expanding the volume of lending, increasing the interest rate, and relying on cross subsidization. The cost function estimates point to the existence of economies of scale. Therefore, the expansion of BRAC operations will contribute to its profitability and financial viability.



## **CHAPTER SEVEN**

### **Borrowers' viability**

The BRAC's sustainability ultimately depends on the viability of its borrowers. This can be judged through members' economic and social welfare, their loan repayment performance and their dropout behavior. Given its financial viability and institutional development, the BRAC generates benefits for its borrowers that are aimed at alleviating poverty. If members perceive these benefits to be sustainable, the member dropout and default rates should be lower. If the members' savings grow significantly and if their net worth has increased, the BRAC's benefits may be considered sustainable.

The dropout rate indicates whether members have benefited from program participation. The factors that may influence dropout rates include the perceived costs and benefits of program participation, which is based on individual, branch, and area characteristics.

Loan repayment behavior is also influenced by these characteristics. The effect of BRAC program placement on poverty alleviation can be measured by its impact on rural wages. Borrower viability can also be examined by comparing savings (benefits) and subsidies (costs) over time.

#### **Group viability: BRAC members' drop-out behavior**

The BRAC is a village-level group-based organization. Its self-selected groups are federated into a village organization, which is a forum for financial, social, and institutional intermediation. Individuals only have access to credit and other inputs if they are members of a village organization. The village organization's viability ensures that an individual has continued access to the BRAC's resources and,

therefore, improves the borrowers' viability. At the same time, the viability of village organizations is also important for the BRAC's overall viability.

However, village organization viability depends on the willingness of its members to adhere to the BRAC's rules and regulations. Members' willingness to stay in a village organization depends in turn on the benefits and costs of group participation. The benefits of group participation are: access to credit at a lending rate lower than the informal sector rate, access to training and organizational inputs that promote trade-specific and managerial skills, and access to social inputs that promote social and financial discipline.

Participating in a village organization involves several costs, such as the time cost. The time cost depends on the alternative opportunities available to individuals. Although members of the BRAC are landless, they may have alternative wage earning opportunities (especially the men). For women, the opportunity costs may include the nonmarket income foregone in household production. For certain village organization members participation may provide "psychic" benefits and costs. For example, the village organizations may provide a sense of accomplishment and solidarity among the poor. However, they may also create costs if family members or even village elites don't approve of their participation. This may hinder women in particular.

Members may be pushed out by other village organization members for willfully defaulting. Some members may also drop out after "graduating" (in that they no longer need the BRAC's services). This may only occur after several years of membership. However, it is not possible to distinguish graduates from dropouts with aggregate data.

The dropout rate of BRAC members has increased monotonically from less than 1 percent in 1985 to 15.8 percent in 1992 and then declined to 6.3 percent in 1994 (Table 7.1) . The abrupt rise in 1992 was because of the high dropout rate of male members (37.6 percent). In fact, dropout rate has been consistently higher for men than for women and this difference is much in magnitude during 1992-94. BRAC explains this phenomenon by the fact that from 1992 onward it adopted a policy of keeping only one member from a target household, and members who defaulted in their loan repayment or could not keep up with the organizational disciplines either left or were expelled. More males than females were found to have disqualified. In addition, BRAC also formally allowed its members to resign if they wished. The average annual growth rate of members' dropout rate during 1985-94 was 30.4 percent overall, 19.2 percent for women, and 53.6 percent for men. This is estimated based on a regression where the log of members' dropouts is regressed against time. The coefficient of time measures the growth rate.

The factors determining the possible costs and benefits of borrowers participation in the BRAC influence the dropout rate. For example, rural electrification and road length may determine whether alternative income-earning opportunities are available for members. The presence of these variables may encourage members to drop out. At the same time infrastructural investments may enhance opportunities for credit recipients, and thus these variables can also improve borrowers' viability and reduce the dropout rate. However, if the benefits are great enough, they may graduate. The BRAC's management style may also influence the drop-out rate as happened in 1992-94. Since the marginal cost of membership is high, the dropout rate is higher, and the cost of operating the BRAC is also higher. Therefore, the BRAC could attempt to reduce this cost by, for example, training members and staff.

The branch age is also an important factor in determining members' dropout rates, at least for men (Table 7.2). Relatively new branches have a higher dropout rate. Improved education and infrastructure increase women's dropout rates possibly because women with more education may find better employment alternatives. Rural electrification accelerates women's dropout rates as well. This might suggest that the more developed the local economy becomes, the more alternative opportunities BRAC members face and they more readily leave the BRAC. Road density, on the other hand, reduces the dropout rate among women. Likewise, the increased cost of training for skill development reduces the dropout rate, although training on how to enhance income and employment increases it.

### **Determinants of loan-repayment behavior**

Group viability also depends on whether or not members regularly repay their loans. As each member's regular loan repayment determines the availability of loans for other members, a borrower's loan repayment record is another indicator of viability. The loan recovery rate is defined as the percentage of the loan repaid given the amount due. Overall, this rate was consistently above 90 percent (Table 7.3). However, loan recovery rates vary across sectors, which, in turn, vary by year. For example, in 1994 the loan recovery rate was the lowest (94 percent) in service activities, while it was the lowest (88 percent) in rural transports in 1993. The loan recovery rate is different for men and women; during some years and for certain activities the loan recovery rate has been much higher for women than for men.

Although the aggregate loan default rate is low, it is not clear whether this behavior is determined by program design rather than by local production conditions. Estimates show that higher loan recovery rates do not result entirely from program design; factors indicating branch-level efficiency or local

production conditions jointly explain 45 percent of the variation in the loan recovery rate of women involved in small trading (or business) and 99 percent of those involved with transportation and collective irrigation projects (Table 7.4).

The longer a branch operates in an area, the higher is the women's loan default rate in the case of transportation. An increase in rainfall (a substitute for irrigation) reduces the loan recovery rate, while erratic rainfall increases the loan recovery rate in irrigation projects run by men. Rural electrification increases the loan recovery rates in the agriculture, fishery, and transport sectors. Increased primary school density raises the loan recovery rate in transportation, small trading, and fishery projects. On the other hand, increased secondary school density improves the men's loan recovery rate in agriculture. Increased road density raises the loan recovery rate in fisheries and transportation projects, but reduces the loan recovery rate in women's collective irrigation projects. The existence of alternative formal credit facilities improves women's loan recovery rates in collective irrigation projects.

More staff training (in terms of higher staff training costs) lowers the loan default rate of men undertaking agriculture and collective irrigation projects and women involved in transportation projects. However, it lowers the recovery rate of women running collective fisheries projects. In contrast, increasing member training raises loan recovery rates in irrigation and transportation projects, but reduces men's loan recovery rates in livestock projects. The shift dummy for 1989 (which captures the shift in BRAC policy from giving loans to village organizations to giving loans directly to individuals) suggests that this shift improved loan recovery rates in transportation and collective irrigation projects.

## **The impact of BRAC on rural wages**

An aggregate-level (that is, village-level) analysis is used to determine how viable the BRAC's benefits are and whether these benefits are sustainable enough to have an impact on the local rural economy.

Given that the rural wage is an indicator of rural poverty, we can identify whether the BRAC alleviates poverty by looking at its effect on village-level wages. BRAC program placement should reduce the wage-labor supply and thus increase the wage rate, given the local demand for labor. Whether this initial wage increase will endure depends on the households' labor-supply behavior and on how well BRAC-financed projects are increasing borrowers' income. If the project's benefits are sustainable, the wage-labor market would shrink permanently and the demand for food and other local produce would increase. This increase may spur an additional demand for hired labor, further raising the wage rate. Thus, the longer the program placement remains in an area, the more pronounced will be the wage effect of the BRAC.

A sample of eighty-seven villages were randomly drawn from twenty-nine thanas in Bangladesh for a household survey documenting the impact of the BRAC and other programs. This survey was complemented by a village survey that collected wage data by labor type: men, women, and children (under the age of 15). Among these eighty-seven villages, twenty-four housed a BRAC brands for at least three years prior to the survey period (1991-92). The average wages of BRAC and non-BRAC villages are compared, after controlling for differences in village characteristics. Ideally, we would compare wages before and after program interventions; however, we do not have appropriate data to estimate the wage effect this way.

The village-level wage is the mean of all labor categories--formal, informal, and agricultural, men, women and children. The village wage is influenced by BRAC placement as well as other factors that determine production relations and infrastructure.

About 28 percent of the villages have a paved (pucca) road. Only 10 percent of the villages have a commercial bank branch. About 51 percent of the villages are electrified. The average distance of the village from Thana headquarters is 8.5 km. About 54 percent of the villages have programs other than the BRAC, BRDB, or Grameen Bank.

Three regressions are estimated for each labor category. The first is an ordinary least squares (OLS) regression. The second is the OLS approach, where we correct for heteroskedascity using White's method. Both results suggest the wage impacts of BRAC program placement are not significant for men's, women's or children's wages. The BRAC placed its program in villages where 78 percent of the households belonged to target groups compared with 52 percent in non-BRAC villages. This result suggests that the BRAC has not yet made any headway in affecting the rural wage market.

### **Subsidy and savings per member**

In chapter 6, the subsidy of the RDP and the RCP was found to be about Tk 242 million in 1994. In addition to this subsidy dependency analysis, we also must determine who the ultimate recipients of the BRAC subsidy are, what the subsidy is used for and how it affects the recipients.

The BRAC augments the income and productivity of the rural poor through its training institutions. It uses cheap funds or grants to support its training programs and provide other ancillary inputs to its borrowers. Given its cost structure and level of institutional development, some grants or concessionary funds are necessary for the BRAC to continue offering noncredit services. The BRAC received about 18 percent subsidy for each taka it lent to the poor in 1994 (Table 7.6). The subsidy rate was 17 percent for the RDP and 18 percent for the RCP in the same year. The aggregate per taka loan subsidy was 20 percent in 1991 which increased to 26 percent in 1992, and fell to 18 percent in 1994.

The ultimate beneficiaries of this subsidy are the rural poor. On average, each borrower received a subsidy of Tk 401 in 1993 compared with Tk 280 in 1991, but it fell to Tk 327 in 1994. BRAC members receive this subsidy in the form of training and organizational help to improve their productive means. Unlike a targeted transfer program, such as the Food for Work program, which increases transitory income, credit programs improve the long-term productivity, income, and savings of the poor. A direct measure of this long-run process is participants' asset accumulation over time. This analysis is beyond the scope of this paper.

Instead, we can look at the growth rate of member savings. Savings growth can be treated as an indirect measure of program sustainability. In 1991 per capita member savings was Tk 428. This amount was larger than the subsidy each program participant received that year. In 1993 the per capita member savings increased to Tk 480 before falling to Tk 452 in 1994. We see savings is consistently higher than the subsidy received by members that year. This finding suggests that the benefits generated by the BRAC are more than the costs required to provide services to the poor.

## **CHAPTER EIGHT**

### **Conclusions and policy implications**

The development experience of the past few decades suggests that the economic policies pursued by many developing countries did not generate income-earning opportunities for the poor (World Bank 1992). In order to reduce poverty, the poor must have better access to education, health care, and other social services as well as credit and income-earning opportunities. However, despite increasing government and donor efforts, the poor still do not have access to needed public resources. The BRAC's experience reveals that when poverty is rooted in basic social structures that produce economic dependency, the homogeneous, community-based development approach is insufficient. Targeted measures are necessary in such circumstances to help the rural poor improve their human and productive means.

The BRAC has four major programs designed to improve the poor's access to education, credit, health care, and other social services. The RDP helps the rural poor to reduce their economic dependency and avoid exploitative forces by improving their health, education, sanitation, and income earning potential. The BRAC emphasizes that poverty alleviation cannot be sustainable unless the poor become economically self-sustainable. The BRAC is aware of the possibility that the poor may become dependent on BRAC inputs as intervention continues. This dependency poses a threat to beneficiaries' long-run viability as well as that of the BRAC. The RCP promotes self-reliance by withdrawing social and human development support after the fourth year of membership.

The BRAC has developed nonformal primary education for children who have never attended a formal school because of poverty, and whose education in the formal school system would anyway be inadequate. This program has attracted the attention of policymakers both inside and outside Bangladesh.

Similarly, the BRAC has developed a primary health care system for the poor, emphasizing preventive rather than curative measures, and it collaborates with the government in an attempt to improve the public health delivery system.

### **The BRAC's achievements**

Although the BRAC is a multi-purpose organization equally emphasizing education, health, and income, its existence and continued success depends on the success of the RDP and the RCP. Reaching the rural poor, especially women, through the RDP and the RCP is its major achievement. The BRAC began as a relief organization in the 1970s and by the 1980s emerged as the largest NGO in the country. As of December 1994, the RDP and the RCP covered 20 percent of the villages of Bangladesh and had more than a million members, 88 percent of whom were women. The BRAC has designed a package of interventions, promoting consciousness-raising, skill development, literacy, basic education, health, and credit. But, credit is given only if it is needed and only after individuals complete a training course.

In promoting consciousness-raising, literacy, and skill development, the BRAC has developed a market niche among the poor who see it as a place to learn a source of empowerment, a plan to receive credit and an accessible bank to save with. Hence the BRAC's viability is more tenuous than that of an organization that provides only credit. However, it may have a long-run impact on the sustainability of its beneficiaries. The dropout rate among BRAC members is only about 5 percent per year and the loan

recovery rate is consistently over 90 percent. These figures indicate that the benefits from program participation must be higher than the cost of participating. The benefits accruing to BRAC members are also large, since they save about 21 percent of the loans disbursed.

About 85 percent of the BRAC's budget is financed by donor grants, and the remaining 15 percent by profits from its commercialized enterprises (Lovell 1992). Given its cost of operation and sources of funding, the BRAC must become financially viable to sustain its operation without help from donors. The largest component of the BRAC's costs is administrative (salaries and training expenses), accounting for more than 55 percent of total costs, 57 percent for the RDP and 53 percent for the RCP.

Grants have been instrumental in operating and expanding the BRAC from the outset. Although RCP branches are profitable, RDPs are incurring larger losses. Our estimates show that the BRAC has been enjoying a 18 percent subsidy (both financial and economic) for each loan given to the poor. Since its branches exhibit significant economies of scale, the BRAC could eliminate the subsidy if it expands both membership and lending levels per branch. In 1994, branch membership averaged 5,314 individuals, less than 25 percent of the target population. It is not clear whether this low coverage derives from demand- or supply-side constraints.

The average loan per member is only about Tk 1,800, which should be increased to make the branches profitable. This, however, depends on the branches' loan capacity and the borrowers' absorptive capacity. In other words, a low figure may indicate constraints on both the supply and demand sides. On the supply side, the BRAC may not be able to expand lending per member because it lacks adequate funds and requires a minimum period of membership. Only 64 percent of BRAC members were borrowers in 1993 compared with 59 percent in 1989. This percentage increased to 71 in 1994. It is not

clear whether the small percentage increase in the number of borrowers is a result of program design, which requires participants to be members for a certain length of time before they can apply for credit, or a lack of on-lending funds, or because a large percentage of members do not need credit. Although it is also possible that borrowers are not able to increase their loan use because of market constraints, this is unlikely since the loan volume per borrower increased from Tk 1,459 in 1991 to Tk 2,770 in 1993. Our estimates show that the BRAC can eliminate subsidy and attain self-sustainability by increasing the loan outstanding per borrower from Tk 1752 to Tk 14,611. Given the average rate of growth in outstanding loans with fixed membership, we find that both the RDP and the RCP can attain self-sustainability by 2010. If we can consider only the RCP's sustainability, the BRAC can attain sustainability of RCP branches by 2001.

Another way to eliminate the subsidy is to raise the lending rate. Our analysis showed that in order for the RCP to be economically viable, the BRAC must raise the lending rate from 20 percent to 32 percent. If the objective is to make both the RCP and the RDP self-sustainable, the interest rate must increase from 20 percent to 45 percent.

The other alternative for reducing subsidy dependence is to reduce the management costs of the RDP and the RCP. At present, self-selection and group monitoring reduce the BRAC's transaction costs, but the BRAC has high administrative costs. Our estimates show that it costs the BRAC about Tk 10 to disburse an additional Tk 100. Currently, donors absorb operational costs. However, BRAC borrowers do not receive any interest subsidy and are paying more than richer households who borrow from commercial banks or DFIs. Thus it is unlikely that the BRAC will be able to raise its lending rates significantly unless the rates of return on the projects it finances also rise. Given the production technology and constraints on market demand, these returns are not likely to increase by much in the short

run. However, investment in technology and market promotion can increase economic returns in the long run. The BRAC still must be cost effective to provide affordable credit and other services to the poor. It should aim to minimize its operational costs in addition to improving production and market efficiency.

### **The BRAC's potential**

The BRAC must mobilize more members and expand lending per member in order to be more cost effective, especially when it will have to rely on market resources, rather than donor funds to finance its activities. The returns on activities financed by the BRAC and other targeted credit programs would fall, given market demand, as the programs attract more members who undertake similar productive activities. Thus, expanding the BRAC may threaten its viability. As such, the BRAC must make more growth-oriented loans and attempt to become cost-efficient.

More loans can only be made for more growth-oriented activities if borrowers can absorb an increased volume of credit and if skill development and market opportunities promote growth. This condition, in turn, depends on borrowers' entrepreneurial ability and the market opportunities that they encounter. Since borrowers have little education and few modern skills, they need introduction to and training in new production techniques. The BRAC has designed appropriate training based on new production methods and actively promote growth through demand-induced technical change.

The BRAC's interventions in key economic sectors such as irrigation, livestock, sericulture, poultry, and fish culture can potentially promote rapid growth in a rural economy. The rate of return on these traditional activities is generally low (Hossain 1988; Rahman 1988). If the rates of returns are not improved, these activities will become unattractive and the demand for BRAC services will fall. Thus the

BRAC's effort to increase the economic returns to these activities through training, input supply, and marketing is a move in the right direction. Nevertheless, as agriculture cannot be the sole source of income and employment in the long run, the BRAC and similar programs must help rural people diversify into more dynamic off-farm activities that have strong linkages with the rest of the economy.

The BRAC has an important role to play in this regard. The BRAC's experimentation in different social and economic sectors has established it as a leading rural development organization. The government has successfully replicated the BRAC's programs. Since the BRAC is an NGO, it has the freedom to experiment, unlike a government program. However, its innovative models can be replicated through government organizations.

### **The BRAC's constraints**

Some question whether NGOs should be allowed to experiment or deliver inputs such as credit. Government policymakers often argue that the BRAC and other NGOs should only organize, provide consciousness-raising training and promote literacy (Lovell 1992). The government is also concerned that the NGOs may be seen as alternative sources of government services, and because NGOs are more effective, donors may channel more resources through them than through the government.

But, because of their small size and administrative constraints, the BRAC and other NGOs cannot serve the entire country and should not be seen as competitors with the government for promoting growth and development. Relying too heavily on NGOs may even make the government less responsive to the needs of the poor. However, given the formidable tasks of controlling the population, promoting literacy and better health, and providing income and employment opportunities to an increasing population,

government efforts are inadequate and often, because of bureaucratic impediments, insensitive to the needs of the poor. NGOs may sensitize the government and find innovative ways to tackle problems through their problem-solving exercises. The government can then replicate the NGOs' activities in different fields. On the other hand, the competition that NGOs provide may increase government efficiency. Our evaluation of a government targeted credit program, which drew upon the experience of the BRAC and the Grameen Bank, revealed that this is in fact occurring (Khandker, Khan, and Khalily 1994). Clearly, the government should make the rules. However, the Bangladesh government has adopted the NGOs, including the BRAC, as partners in development and has increasingly relied on their expertise.

The major constraint to the BRAC's expansion or continuation is its donor dependency. The BRAC must increase its income and design development programs that are self-sustainable. The RCP is an effort in this direction. Full self-sustainability may not be achieved in the short-run because of the BRAC's investment in social and human development. It must deliver inputs in a cost-effective way, and include full self-sustainability as a longer-run objective.

Attaining cost efficiency will depend, in part, on members' viability, which in turn, depends on the profitability of their projects. The profitability of many projects that the BRAC finances is low because they involve mostly traditional activities. The BRAC's efforts to improve skills and production techniques would increase the returns on these traditional activities. However, program participants would benefit more if they diversified their pursuits into off-farm activities. For this to happen, borrowers may need a larger amount of credit than they currently borrow from the BRAC, in addition to skill training, marketing help, and book-keeping and entrepreneurial knowledge. Providing these inputs is challenging, but that is precisely the goal of the BRAC and other NGOs that pursue sustainable development.



**Table 3.1**  
**Expansion of BRAC: village organization, membership, and branches, 1988-94**  
(year ending on December 31)

Year	Village organization				Membership				Villages covered	Average villages per branch	Households covered	Number of branches	Average membership per branch
	Men	Women	Women's VO as percent of total	Total	Men	Women	Women members as a percent of total	Total					
1988	-	-	-	4,648	105,329	146,339	58.15	251,668	2,449	40.82	145,861	60	4,693.48
1989	2,844 (0)	3,590 (0)	55.80	6,434 (38.43)	136,739 (29.82)	215,530 (47.28)	61.18	352,269 (39.97)	3,307 (35.03)	40.83	200,864 (37.70)	81 (35.0)	4,349.0
1990	3,274 (15.12)	4,989 (38.97)	60.38	8,263 (28.43)	164,151 (20.05)	296,613 (37.62)	64.37	460,764 (30.80)	4,238 (28.15)	42.38	294,280 (46.51)	100 (23.46)	4,607.0
1991	3,910 (19.43)	7,481 (49.95)	65.67	11,391 (37.86)	192,151 (17.06)	405,974 (36.87)	67.87	598,125 (29.81)	5,337 (23.93)	44.48	378,869 (28.74)	120 (20.00)	4,984.38
1992	3,831 (-2.02)	10,136 (35.49)	72.57	13,967 (22.61)	167,260 (-12.95)	482,014 (18.73)	74.24	649,274 (8.55)	6,878 (28.87)	49.13	513,688 (35.58)	140 (16.67)	4,637.67
1993	3,739 (-2.40)	16,402 (61.82)	81.43	20,141 (44.20)	146,729 (-12.74)	679,061 (40.88)	82.23	825,790 (27.19)	10,379 (50.91)	62.90	721,888 (40.53)	165 (17.86)	5,004.79
1994	3,504 (-6.29)	21,355 (30.20)	85.90	24,859 (23.42)	127,707 (-12.96)	908,547 (33.79)	87.68	1,036,254 (25.49)	13,224 (27.41)	67.81	935,426 (29.58)	195 (18.18)	5,314.12

*Note:* Figures in parentheses represent growth rate over the preceding year.

*Source:* Statistical Report, RDP and RCP, 1989-92, BRAC.

Table 3.2  
BRAC: expansion and growth of RDP and RCP employees, 1986-94  
(year ending on December 31)

Year	Head and regional office level			Branch level			Total			Average branch employees
	Officer	Staff	Percentage of total employees	Officer	Staff	Percentage of total employees	Officer	Staff	Total	
1986	9	1	1.82	180	360	98.18	189	361	550	12.00
1987	11 (22.22)	1 (0)	1.89	208 (15.55)	416 (15.55)	98.11	219 (15.87)	417 (15.51)	636 (15.64)	12.00 (0)
1988	11 (0)	1 (0)	1.75	224 (7.69)	448 (7.69)	98.25	235 (7.31)	449 (7.67)	684 (7.55)	11.20 (-6.67)
1989	14 (27.27)	1 (0)	1.24	324 (44.64)	891 (98.88)	98.76	338 (43.83)	892 (98.66)	1,216 (77.78)	15.00 (33.93)
1990	57 (307.14)	10 (900.00)	4.02	500 (54.32)	1,110 (23.46)	95.98	557 (64.79)	1,110 (24.44)	1,667 (37.09)	16.10 (7.33)
1991	65 (14.04)	12 (20.00)	3.89	600 (20.00)	1,300 (15.38)	96.11	665 (19.39)	1,321 (130.18)	1,977 (75.42)	15.83 (-1.68)
1992	68 (4.62)	15 (20.0)	3.13	750 (25.0)	1,820 (40.0)	96.87	818 (23.01)	1,835 (13.91)	2,653 (34.19)	18.36 (15.98)
1993	80 (17.65)	17 (13.33)	3.16	825 (10.0)	2,145 (17.86)	96.84	905 (10.64)	2,162 (17.82)	3,067 (15.60)	18.00 (-1.96)
1994	85 (6.25)	22 (29.41)	3.09	902 (9.33)	2,455 (14.45)	96.91	987 (9.06)	2,477 (14.57)	3,464 (12.94)	17.76 (-1.33)

Note: Figures in parentheses represent growth rate over the preceding year.

Source: BRAC.

Table 3.3  
Amount of funds received by sources, 1986-92  
(year ending on December 31)

(million taka)

Year	AKF/ CIDA	DANIDA	EZE	FF	NORAD	NOVIB	ODA	SIDA	CEC	Total	Growth rate
1986	-	-	13.79	-	1.00	38.74	-	-	-	53.53	-
1987	-	-	38.01	-	5.06	37.81	-	-	-	80.88	51.09
1988	-	-	10.20	-	6.60	50.45	-	-	-	67.25	-16.85
1989	-	-	17.61	-	13.04	84.46	-	23.60	-	138.71	106.26
1990	-	78.74	25.23	3.56	30.00	141.02	126.77	32.52	-	437.84	215.65
1991	91.59	37.77	50.27	3.57	37.80	208.58	191.93	119.62	-	741.13	69.27
1992	123.77	44.00	33.43	3.89	41.60	115.16	121.63	28.70	-	512.18	-30.89
1993	103.18	108.00	-	3.97	35.65	168.76	15.80	6.90	-	442.26	-13.65
1994	136.21	97.24	-	11.98	34.60	200.65	325.29	56.79	233.12	1,095.88	147.79
Total	454.75 (12.74)	365.75 (10.25)	188.54 (5.28)	26.97 (0.76)	205.35 (5.75)	1,045.63 (29.29)	781.42 (21.89)	268.13 (7.51)	233.12 (6.53)	3,569.66 (100.00)	-

Notes: Figures in parentheses represent percentages of row total.

AKF - Aga Khan Foundation

CIDA - Canadian International Development Agency

DANIDA - Danish International Development Agency

FF - Ford Fondation

EZE - Evangelische Zentralstelle für Entwicklungshilfe, Germany

ODA - British Overseas Development Agency

SIDA - Swedish International Development Agency

NOVIB - Netherlands Organization for International Development Cooperation

NORAD - Royal Norwegian Embassy Development Cooperation

CEC - Commission of the European Communities

Source: BRAC.

Table 3.4  
Trends in savings mobilization, 1988-94  
(year ending on December 31)

Year	Individual savings (million taka)				Group fund <sup>a</sup> (million taka)				Total savings (million taka)				Share of group fund in total savings	Average savings per member (taka)		
	Men	Women	% of women's savings	Total	Men	Women	% of women's savings	Total	Men	Women	% of women's savings	Total		Men	Women	Total
1988	22.36	33.13	59.70	55.49	-	-		-	22.36	33.13	59.70	55.49	-	212	226	220
1989	21.29 (-5.01)	47.35 (42.92)	68.78	68.64 (23.74)	2.80	5.72	67.14	8.52	24.09 (7.74)	53.06 (60.16)	68.78	77.15 (39.08)	11.09	176 (-16.98)	246 (-8.85)	219 (-0.45)
1990	39.61 (86.05)	87.57 (84.94)	68.86	127.18 (85.29)	8.32 (197.50)	17.52 (207.37)	67.80	25.85 (204.00)	47.94 (99.38)	105.09 (98.06)	68.67	153.03 (98.35)	16.89	292 (65.90)	354 (43.90)	332 (51.63)
1991	60.76 (53.39)	144.75 (65.30)	70.43	205.51 (61.59)	15.65 (87.88)	35.06 (100.11)	69.14	50.71 (96.25)	76.41 (59.39)	179.81 (71.10)	70.18	256.22 (67.43)	19.79	398 (36.30)	443 (25.14)	428 (28.92)
1992	61.45 (1.14)	163.43 (12.91)	72.63	224.88 (9.43)	18.87 (20.58)	52.75 (50.46)	73.65	71.62 (41.23)	80.32 (5.12)	216.18 (20.23)	72.91	296.50 (15.72)	24.15	480 (20.60)	448 (1.13)	457 (6.78)
1993	54.48 (-11.34)	250.80 (53.46)	82.15	305.28 (35.75)	20.98 (11.18)	70.22 (33.12)	77.00	91.20 (27.34)	75.46 (-6.05)	321.02 (48.50)	80.97	396.48 (33.72)	23.00	514 (7.08)	473 (5.58)	480 (5.03)
1994	32.38 (-40.57)	234.55 (-6.48)	87.87	266.93 (-12.56)	22.33 (6.43)	105.12 (49.70)	82.48	127.45 (39.75)	59.50 (-21.15)	408.56 (27.27)	87.29	468.06 (18.05)	27.23	466 (-9.34)	450 (-4.86)	452 (-5.83)

Notes: Figures in parentheses represent growth rates over the preceding year.

<sup>a</sup>Group fund was introduced in April 1989 with a compulsory deduction of 5 percent of disbursement.

Source: Statistical Report RDP, and RCP, 1989-92, BRAC.

Table 3.5  
 Percentage of borrowers by gender, 1989-1994  
 (year ending on December 31)

Year	Membership			Number of borrowers			Percentage of borrowers		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
1989	136,739	215,530	352,269	81,932	124,198	206,130	59.92	57.62	58.52
1990	164,151	296,613	460,764	82,955	163,301	246,256	50.54	55.06	53.45
1991	192,151	405,974	598,125	142,152	272,189	414,341	73.98	67.05	69.28
1992	167,260	480,014	649,274	115,694	315,462	431,156	69.17	65.45	66.41
1993	146,729	679,061	825,790	137,724	391,983	529,707	93.86	57.72	64.15
1994	127,707	908,544	1,036,254	88,687	650,891	739,578	69.38	71.64	71.37

Source: BRAC.

**Table 3.6**  
**BRAC: cumulative loan disbursement by individual and collective loans, 1989-1994**  
(year ending on December 31)

(million taka)

Year	Individual loans			Collective loans			Total loans		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
1989	191.79	238.11	429.90	28.80	14.76	43.56	220.59	252.87	473.46
1990	291.52	499.11	790.63	42.98	33.29	76.27	334.50	532.40	866.90
	(52.00)	(109.61)	(83.91)	(49.24)	(125.54)	(75.09)	(51.64)	(110.54)	(83.10)
1991	436.46	898.39	1,334.85	74.53	62.09	136.62	510.99	960.48	1,471.47
	(49.72)	(80.00)	(68.83)	(73.41)	(86.51)	(79.13)	(52.76)	(80.41)	(69.74)
1992	587.68	1,431.62	2,019.30	94.70	90.88	185.58	682.38	1,522.50	2,204.88
	(34.65)	(59.35)	(51.28)	(27.06)	(46.37)	(35.84)	(33.54)	(58.51)	(49.84)
1993	950.36	2,721.83	3,672.19	123.66	139.56	263.22	1,074.02	2,861.39	3,935.41
	(61.71)	(90.12)	(81.85)	(30.58)	(53.57)	(41.84)	(57.39)	(87.94)	(78.49)
1994	1,211.26	4,602.68	5,813.94	149.47	181.97	331.44	1,360.73	4,784.65	6,145.38
	(27.45)	(69.10)	(58.32)	(20.87)	(30.39)	(25.92)	(26.70)	(67.21)	(56.16)

*Note:* Figures in parentheses indicate annual growth rate for each loan type.

*Source:* Statistical Reports, BRAC, 1989-1992.

Table 3.7  
Cumulative disbursement of individual loans by type and gender, 1988-94  
(year ending on December 31)

(million taka)

Loan type	1989			1990			1991			1992			1993			1994			Portfolio mix (total) (percent)						
	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	1989	1990	1991	1992	1993	1994	
Agriculture	45.87	11.46	57.33	47.59 (+4.97)	18.99 (65.71)	66.58	38.72	55.23	73.95	58.97	57.85	116.82	86.02	168.97	254.99	114.47	415.34	529.81	12.11	7.22	5.03	5.30	6.94	9.12	
Irrigation	22.66	11.38	34.04	36.25 (59.97)	27.00 (137.26)	63.25	66.38	59.64	126.02	84.56	80.84	165.40	111.54	126.78	238.32	128.62	165.84	294.46	7.19	7.30	8.56	7.50	6.49	5.07	
Industries	4.15	6.6	1.81	5.60 (34.94)	1.21 (83.33)	6.81	10.55	2.47	13.02	14.88	5.30	20.18	22.66	17.82	40.48	52.17	76.73	128.90	1.02	0.79	0.88	0.92	1.10	2.22	
Livestock	27.93	54.07	82.00	44.02 (57.61)	153.90 (184.63)	197.92	47.62	230.74	278.36	50.81	275.07	325.88	57.28	399.26	456.51	64.05	560.95	525.00	17.32	22.83	18.92	14.78	12.43	10.75	
Services	-	-	-	-	-	-	-	-	-	8.17 (0)	10.25 (0)	18.42 (23.75)	10.11 (23.75)	13.06 (25.79)	23.17	12.24	16.14	28.38	-	-	-	-	0.81	0.63	0.48
Rural industry	10.98	15.16	26.15	16.07 (46.36)	31.12 (105.28)	47.19	20.85	48.81	69.66	25.51 (22.40)	66.16 (35.58)	91.67 (31.59)	37.10	119.92 (45.43)	157.32 (81.26)	50.28 (71.62)	202.91 (69.20)	253.19 (60.93)	5.52	5.44	3.72	4.16	4.28	4.35	
Rural transportation	13.72	1.51	15.22	37.82 (175.66)	6.57 (335.10)	44.39	62.34	7.62	69.96	76.24 (22.30)	10.38 (36.22)	86.62 (23.81)	93.46 (22.59)	26.55 (155.78)	120.01 (38.55)	114.80 (22.83)	105.53 (297.47)	220.33 (83.59)	3.21	5.12	4.75	3.93	3.27	3.78	
Rural trading	94.74	158.34	253.08	146.22 (54.34)	199.90 (26.25)	346.12	246.54	462.16	708.70	335.98 (104.76)	688.80 (36.26)	3,024.74 (49.04)	461.16 (44.59)	1,075.32 (37.42)	1,536.48 (56.12)	576.90 (49.94)	1,675.04 (25.09)	2,251.94 (55.77)	53.45	39.93	48.16	46.48	41.84	38.74	
Food processing	-	-	-	4.27 (0)	93.17 (0)	97.44	6.70 (0)	121.86 (56.91)	128.56 (31.93)	24.43 (264.63)	321.50 (163.83)	345.93 (169.08)	44.67 (82.85)	687.27 (113.77)	731.94 (111.59)	62.15 (39.13)	1,207.76 (75.73)	269.91 (23.49)	-	31.24	8.74	15.69	19.93	21.84	
Health	-	-	-	.06 (0)	.29 (0)	.35	.19 (0)	.81 (126.67)	1.00 (179.31)	76 (185.71)	1.86 (139.63)	2.62 (162.00)	0.99 (10.26)	2.83 (18.80)	3.82 (45.80)	1.21 (12.22)	3.86 (36.39)	5.07 (132.72)	-	0.04	0.07	0.12	0.10	0.08	
Miscellaneous	.53	.29	.82	61 (15.09)	24 (-17.24)	.85	1.11 (3.66)	1.15 (81.97)	2.26 (379.17)	2.11 (165.88)	4.50 (90.09)	6.61 (291.30)	25.10 <sup>a</sup> (192.48)	84.04 <sup>a</sup> (1089.57)	109.14 <sup>a</sup> (1767.56)	34.37 (1551.13)	172.58 <sup>a</sup> (36.93)	206.95 <sup>a</sup> (105.35)	0.17	0.10	0.15	0.30	2.92	3.57	
Total	220.58	252.87	473.45	334.51 (51.65)	532.39 (110.54)	866.90 (83.10)	511.00 (52.76)	960.49 (80.41)	1,471.49 (69.74)	682.38 (33.54)	1,522.51 (58.51)	2,204.89 (49.84)	950.36 (39.27)	2,721.83 (78.77)	3,672.19 (66.55)	1,211.26	4,602.68	5,813.94	100	100	100	100	100	100	

Note: Figures in parentheses represent growth rate over the preceding year.

Source: Statistical Report, RDP and RCP, 1988-92, BRAC.

**Table 3.8**  
**BRAC: annual individual loans disbursed, 1990-94**  
(year ending on December 31)

(million taka)

Type	1990	1991	1992	1993	1994
Agriculture	5.25 (1.33)	11.36 (1.88)	42.88 (5.86)	128.77 (9.71)	274.77 (12.85)
Irrigation	29.20 (7.42)	62.78 (10.38)	39.37 (5.38)	70.41 (5.31)	55.69 (2.61)
Fisheries	2.00 (0.51)	6.21 (1.03)	7.16 (0.98)	18.78 (1.42)	84.50 (3.95)
Livestock	115.92 (29.46)	80.44 (13.30)	47.53 (6.50)	128.65 (9.70)	168.70 (7.89)
Services	-	-	18.42 (2.52)	3.74 (0.28)	5.39 (0.25)
Rural industry	21.04 (5.37)	22.47 (3.42)	22.01 (3.01)	63.84 (4.81)	94.55 (4.42)
Rural transportation	29.17 (7.41)	25.57 (4.23)	16.66 (2.28)	33.04 (2.49)	80.64 (3.77)
Rural trading	93.04 (23.65)	362.58 (59.97)	316.03 (43.21)	485.94 (36.65)	731.59 (34.23)
Food processing	97.43 (24.76)	31.13 (5.15)	216.37 (29.58)	379.75 (28.64)	540.62 (25.29)
Health	0.35 (0.09)	0.65 (0.11)	1.62 (0.22)	1.12 (0.08)	1.20 (0.06)
Miscellaneous	0.03 (0.00)	1.40 (0.23)	3.36 (0.46)	11.92 (0.89)	99.99 (4.68)
Total	393.43 (100)	604.59 (100)	731.41 (100)	1,325.96 (100)	2,137.55 (100)

*Notes:* Figures in parentheses indicate percentages of column total.  
Percentages may not sum to 100 because of rounding.

*Source:* Statistical Reports, BRAC, 1990-92.

**Table 3.9**  
**Cumulative disbursement of collective loans, 1989-94**  
(year ending December 31)

(million taka)

Year	Irrigation	Rural industry	Fisheries	Rural transportation	Miscellaneous	Grand total
<b>1989</b>						
Male	21.22 (65.15)	3.09 (58.75)	3.96 (85.71)	-	0.53 (47.75)	28.8 (66.12)
Female	11.35 (34.85)	2.17 (41.25)	0.66 (14.29)	-	0.58 (52.25)	14.76 (33.88)
Total	32.57 (100)	5.26 (100)	4.62 (100)	-	1.11 (100)	43.56 (100)
% of total	74.77	12.08	10.60	-	2.55	100
<b>1990</b>						
Male	36.25 (57.31)	2.13 (29.66)	4.32 (79.85)	-	0.28 (13.53)	42.98 (56.48)
Female	27.00 (42.69)	3.24 (60.34)	1.09 (20.15)	-	1.79 (86.47)	33.12 (43.52)
Total	63.25 (100)	5.37 (100)	5.41 (100)	-	2.07 (100)	76.1 (100)
% of total	83.11	7.06	7.11	-	2.72	100
<b>1991</b>						
Male	66.38 (52.67)	0.27 (45)	7.99 (77.90)	-	0.39 (30)	74.53 (54.23)
Female	59.64 (47.33)	0.33	2.03 (22.10)	-	0.91 (70)	62.91 (45.77)
Total	126.02 (100)	0.6 (100)	10.02 (100)	-	1.3 (100)	137.94 (100)
% of total	91.36	0.44	7.26	-	0.94	100
<b>1992</b>						
Male	90.34 (51.89)	2.22 (54.69)	1.64 (66.44)	0.01 (100)	0.50 (81.97)	94.71 (51.03)
Female	85.78 (48.71)	4.18 (65.31)	0.81 (33.06)	-	0.11 (18.03)	90.88 (48.97)
Total	176.12 (100)	6.4 (100)	2.45 (100)	0.01 (100)	0.61 (100)	185.59 (100)
% of total	94.90	3.45	1.32	0.01	0.33	100

Table 3.9 (continued)  
 Cumulative disbursement of collective loans, 1989-94  
 (year ending December 31)

(million taka)

Year	Irrigation	Rural industry	Fisheries	Rural transportation	Miscellaneous	Grand total
<b>1993</b>						
Male	116.58 (46.89)	2.76 (31.51)	3.42 (78.44)	0.01 (50.0)	0.88 (65.19)	123.65 (46.98)
Female	132.11 (53.11)	6.00 (68.49)	0.97 (21.56)	0.01 (50.0)	0.47 (34.81)	139.56 (53.02)
Total	248.69 (100)	8.76 (100)	4.36 (100)	0.02 (100)	1.35 (100)	263.21 (100)
% of total	94.48	3.33	1.66	0.01	0.51	100
<b>1994</b>						
Male	132.83 (43.73)	2.85 (24.36)	12.43 (89.81)	0.26 (54.17)	1.09 (65.27)	149.46 (45.09)
Female	170.92 (56.27)	8.85 (75.64)	1.41 (10.19)	0.22 (45.83)	0.58 (34.73)	181.98 (54.91)
Total	303.75 (100)	11.7 (100)	13.84 (100)	0.48 (100)	1.67 (100)	331.44 (100)
% of total	91.65	3.53	4.18	0.14	0.50	100

*Notes:* Cumulative disbursement of collective loans was re-estimated based on the data reported in the Statistical Reports.

Figures in the parentheses represent percentages of the total for each category.

Percentages of grand total may not sum to 100 because of rounding.

*Source:* Statistical Reports, 1989-94, BRAC.

**Table 3.10**  
**Loan outstanding by type and gender, 1990-94**  
(year ending on December 31)

(million taka)

Type	1990				1991				1992				1993				1994			
	Men	Women	Total	% of total individual loans disbursed	Men	Women	Total	% of total individual loans disbursed	Men	Women	Total	% of total individual loans disbursed	Men	Women	Total	% of total individual loans disbursed	Men	Women	Total	% of total individual loans disbursed
Agriculture	9.99	9.04	19.03	30.39	11.67 (16.82)	9.57 (5.86)	21.24 (11.61)	28.73 (32.31)	15.44 (186.94)	27.46 (101.98)	42.90 (101.98)	36.72 (15.35)	17.81 (182.67)	77.62 (122.45)	95.43 (111.29)	37.42 (33.91)	23.85 (111.29)	164.01 (96.86)	187.86 (96.86)	35.45
Irrigation	25.33	17.18	42.51	67.24	44.75 (76.67)	45.64 (165.52)	90.39 (112.59)	71.73 (22.64)	34.62 (24.78)	34.33 (23.73)	68.95 (65.13)	41.69 (-37.23)	21.73 (5.10)	36.08 (16.16)	57.81 (104.69)	24.26 (30.92)	28.45 (58.18)	57.07 (47.93)	85.52 (205.29)	29.04
Fishery	2.43	1.03	3.46	50.66	5.35 (120.16)	1.36 (32.04)	6.71 (94.49)	51.54 (119.85)	8.09 (51.21)	2.99 (119.85)	11.08 (65.13)	54.91 (48.95)	12.05 (255.52)	10.62 (104.69)	22.68 (124.65)	56.03 (296.17)	27.07 (205.29)	42.17 (205.29)	69.24 (205.29)	53.71
Livestock	12.05	101.76	113.81	57.50	18.50 (53.53)	113.03 (11.08)	131.53 (15.57)	47.07 (-20.90)	17.18 (-7.14)	89.41 (-18.65)	106.59 (-18.65)	32.71 (-24.10)	13.04 (23.13)	110.69 (15.52)	123.13 (15.52)	26.97 (11.94)	10.29 (11.94)	123.91 (8.99)	134.20 (8.99)	21.47
Services	-	-	-	-	-	-	-	-	1.57 (0)	1.15 (0)	2.72 (0)	6.24 (-10.19)	1.41 (53.91)	1.77 (16.91)	3.18 (16.91)	13.72 (-26.95)	1.03 (42.94)	2.53 (11.95)	3.56	12.54
Rural industry	2.74	15.65	18.39	38.97	6.67 (143.43)	20.17 (28.88)	26.84 (45.95)	38.53 (38.23)	9.22 (1.14)	20.40 (10.36)	29.62 (10.36)	32.31 (-1.30)	9.10 (71.42)	34.97 (48.78)	44.07 (14.51)	28.01 (46.47)	10.42 (46.47)	51.22 (46.47)	61.64 (39.87)	24.34
Rural transportation	21.62	2.90	24.52	55.24	27.34 (26.46)	2.11 (-27.24)	29.45 (20.11)	42.10 (-17.30)	22.61 (20.85)	2.55 (-14.57)	25.16 (-17.62)	29.05 (-17.62)	17.84 (-21.10)	11.82 (363.53)	29.66 (17.89)	24.71 (14.12)	13.86 (75.37)	41.08 (51.79)	54.94 (247.55)	24.93
Rural trading	41.59	84.57	126.16	36.45	86.35 (107.62)	176.63 (108.86)	262.99 (108.45)	37.11 (-3.39)	83.42 (-24.57)	133.23 (-17.62)	216.64 (-17.62)	21.14 (-17.62)	95.20 (14.12)	233.64 (51.79)	328.84 (51.79)	21.40 (-12.23)	83.56 (57.01)	366.83 (36.96)	450.39 (36.96)	20.00
Food processing	1.06	18.87	19.93	20.46	2.15 (102.83)	33.65 (78.33)	35.80 (79.63)	27.85 (918.60)	21.90 (388.62)	164.42 (420.45)	186.32 (420.45)	53.86 (-21.51)	17.19 (42.91)	234.97 (35.33)	252.16 (35.33)	34.45 (-22.28)	13.36 (32.23)	310.70 (28.51)	324.06 (28.51)	25.51

Table 3.10 (continued)  
**Loan outstanding by type and gender, 1990-94**  
 (year ending on December 31)

Type	1990			1991			1992			1993			1994						
	Men	Women	Total	% of total individual loans disbursed	Men	Women	Total	% of total individual loans disbursed	Men	Women	Total	% of total individual loans disbursed	Men	Women	Total	% of total individual loans disbursed			
Health	0.14	0.26	0.30	85.71 (2.25)	0.13	0.48	0.61 (84.62)	61.00 (103.33)	0.13	0.27	0.40 (7.69)	15.27 (196.30)	0.12 (127.50)	0.80 (1.96)	0.91 (2.82)	23.82 (-25.00)	0.09 (-42.50)	0.46 (-39.50)	0.55 (10.84)
Miscellaneous	0.09	0.05	0.14	17.64 (41.11)	0.46	0.91	1.37 (1720.00)	60.89 (878.57)	0.19	0.33	0.52 (-58.70)	7.87 (63.74)	12.93 (6,705.2)	33.44 (10,033.3)	46.37 (8,817.3)	42.48 (55.61)	107.58 (219.80)	127.70 (175.30)	61.70 (17.30)
Total	116.94	251.31	368.25	42.50 (73.91)	203.37	403.55	606.95 (60.57)	41.25 (64.81)	214.37 (5.41)	476.54 (18.09)	690.92 (13.84)	31.34 (1.90)	218.44 (1.90)	745.83 (64.90)	1084.27 (45.55)	27.35 (6.25)	232.10 (61.30)	1267.56 (49.33)	1499.66 (25.79)
Outstanding as % of total disbursement	34.96	47.21	42.50	-	39.80	42.02	41.25	-	31.42	31.30	31.34	-	22.98	28.87	27.35	-	19.16	27.54	25.79

Note: Figures in parentheses represent growth rates over preceding year; percentages may not add to 100 because of rounding.

Source: Statistical Report RDP and RCP, 1989-93, BRAC.

Table 3.11  
Cumulative number of schools and students enrolled, 1986-94  
(year ending on December 31)

Year	NFPE <sup>a</sup>				KK <sup>b</sup>				Grand total	
	No. of schools	% of total	Students enrolled	% of total	No. of schools	% of total	Students enrolled	% of total	No. of schools	Students enrolled
1986	153	100	4,576	100	0	0	0	0	153	4,576
1987	545 (256.21)	99.82	16,343 (257.15)	99.82	1 (0)	.18	30 (0)	.18	546 (256.86)	16,373 (257.80)
1988	545 (0)	71.15	16,343 (0)	71.14	221 (22,000)	28.85	6,630 (22,000)	28.86	766 (40.29)	22,973 (40.31)
1989	1,405 (157.80)	60.77	42,143 (157.87)	60.77	907 (310.41)	39.23	27,210 (310.41)	39.23	2,312 (201.83)	69,353 (201.89)
1990	2,214 (57.58)	53.07	68,860 (63.35)	54.00	1,933 (113.12)	46.93	58,113 (113.57)	46.00	4,147 (79.37)	136,953 (83.05)
1991	3,024 (36.59)	57.25	93,168 (35.34)	57.86	2,463 (27.42)	42.75	74,013 (27.36)	42.14	5,487 (39.83)	167,180 (38.99)
1992	6,895 (128.01)	62.07	208,964 (128.29)	62.52	4,213 (71.05)	37.93	125,283 (69.27)	37.48	11,108 (102.44)	334,147 (99.87)
1993	15,459 (124.21)	77.24	492,345 (135.61)	77.37	4,555 (8.12)	22.76	143,985 (14.93)	22.63	20,014 (80.18)	636,830 (90.58)
1994	22,329 (44.44)	78.97	706,374 (43.47)	78.80	5,945 (30.51)	21.03	190,011 (31.96)	21.20	28,274 (41.27)	896,385 (40.75)

**Notes:** Figures in parentheses represent growth rates over the preceding year.

<sup>a</sup>Nonformal Primary Education Programme.

<sup>b</sup>Kishore Kishori or Primary Education for Older Children.

**Source:** Statistical Report, RDP and RCP, 1989-92, BRAC.

Table 3.12  
Number of members trained by type and gender, 1988-94  
(year ending on December 31)

Year	1988	1989			1990			1991			1992			1993			1994		
Type	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total
<i>Human Development and Training</i>																			
Functional education	3,541 (1.30)	1,179 (.86)	3,001 (1.39)	4,180	48,957 (29.82)	134,797 (45.45)	183,754 (39.88)	88,699 (46.16)	244,358 (60.19)	333,057 (55.68)	101,256 (60.54)	317,168 (65.80)	418,242 (64.44)	1,713 (1.17)	4,102 (0.60)	5,815 (0.70)	36 (0.03)	541 (0.06)	577 (0.06)
Consciousness raising	11,316 (4.31)	7,352 (5.38)	11,030 (5.12)	18,382 (5.22)	8,873 (5.41)	14,505 (4.89)	23,378 (5.07)	9,855 (5.13)	21,585 (5.32)	31,440 (5.26)	10,159 (6.07)	25,622 (5.32)	35,781 (5.51)	10,159 (6.92)	25,622 (3.77)	3,578 (4.33)	38 (0.03)	46 (0.01)	84 (0.01)
Project planning and management	2,259 (.86)	1,770 (1.29)	2,206 (1.02)	3,976 (1.13)	2,817 (1.72)	3,630 (1.22)	6,447 (1.40)	8,548 (4.45)	19,669 (4.84)	28,218 (4.72)	8,964 (5.36)	25,206 (5.23)	34,170 (5.26)	4,892 (3.33)	25,822 (3.80)	30,582 (3.70)	199 (0.16)	297 (0.03)	496 (0.05)
Leadership development	5,911 (2.25)	3,460 (2.53)	5,234 (2.43)	8,694 (2.47)	4,502 (2.74)	7,334 (2.47)	11,836 (2.57)	-	-	-	-	-	-	6,718 (4.58)	27,837 (4.10)	34,555 (4.18)	54 (0.04)	8,440 (0.93)	8,494 (0.82)
Legal awareness	-	1,627 (1.19)	2,442 (1.13)	4,069 (1.16)	1,890 (1.15)	3,039 (1.02)	4,929 (1.07)	5,039 (2.62)	20,164 (4.97)	25,203 (4.21)	7,115 (4.25)	37,116 (7.70)	44,231 (6.81)	14,151 (9.64)	70,955 (10.45)	85,106 (10.31)	166 (0.13)	899 (0.10)	1,065 (0.10)
Total	23,027 (9.15)	15,388 (11.25)	23,913 (11.09)	39,310 (11.16)	67,039 (40.84)	163,308 (55.06)	230,344 (49.99)	112,141 (58.36)	315,776 (77.78)	417,917 (69.87)	127,495 (76.23)	405,115 (84.05)	532,606 (82.03)	37,633 (25.65)	154,338 (22.73)	191,971 (23.25)	493 (0.39)	10,223 (1.13)	10,716 (1.03)
<i>Skill Development and Training</i>																			
Poultry and livestock	21,708 (8.63)	227 (.17)	49,327 (22.89)	49,554 (14.07)	314 (.19)	68,891 (23.23)	69,205 (15.02)	2,647 (1.38)	160,293 (39.48)	162,940 (27.24)	497 (.30)	266,812 (55.35)	267,309 (41.17)	2,852 (1.94)	363,416 (53.52)	366,268 (44.35)	404 (0.32)	396,690 (43.66)	397,094 (38.32)

Note: Figures in parentheses represent percentage of membership.

Source: Statistical Report, RDP and RCP, 1989-93, BRAC.

Table 3.13  
Institutional support in sectoral development, 1988-94  
(year ending on December 31)

	1988	1989	1990	1991	1992	1993	1994
<b>Irrigation</b>							
Deep tubewell	48	145 (222.22)	136 (-6.21)	626 (348.53)	665 (9.02)	592 (-10.98)	635 (7.26)
<b>Poultry</b>							
Chick rearers	245	246 (.41)	650 (164.23)	1,106 (70.15)	1,952 (76.49)	5,836 (198.98)	9,822 (68.30)
Poultry rearers	25,547	40,910 (60.14)	56,664 (38.51)	105,051 (85.39)	191,457 (82.25)	455,441 (137.88)	638,110 (40.11)
Poultry workers	2,153	3,156 (46.59)	3,841 (21.70)	5,000 (30.17)	7,504 (50.00)	22,788 (203.68)	33,652 (47.67)
<b>Livestock</b>							
Rearers (cow and goat)	6,280	12,250 (29.64)	26,882 (38.20)	63,192 (135.60)	70,054 (10.86)	41,726 (-40.44)	51,198 (22.70)
Para-vets	268	637 (137.69)	877 (37.68)	1,117 (27.39)	1,296 (16.03)	1,397 (7.79)	1,756 (25.70)
Artificial insemination center	2	34 (1600.00)	58 (70.59)	58 (0)	67 (15.52)	67 (0)	67 (0)
<b>Sericulture</b>							
Silkworm rearers	n.a.	1,014	1,667 (64.40)	2,141 (28.43)	2,359 (10.18)	5,997 (154.22)	10,511 (75.27)
Chowki rearers	n.a.	10	47 (370.00)	94 (100.00)	183 (94.68)	804 (339.34)	1,474 (83.33)
Reeling workers	n.a.	12	128 (966.6)	195 (52.34)	211 (8.21)	192 (-9.00)	364 (89.58)
Trees planted (millions)	n.a.	.3	1.6 (433.33)	3.4 (112.50)	6.1 (79.41)	11.20 (83.61)	17.90 (59.82)
<b>Social Forestry</b>							
Number of nurseries	n.a.	n.a.	225	319 (41.78)	884 (177.12)	1,398 (58.14)	1,799 (28.68)
Seedlings produced (millions)	n.a.	n.a.	1.3	5.3 (307.69)	9.2 (73.58)	18.46 (100.65)	31.62 (71.29)
<b>Fisheries</b>							
Number of ponds	n.a.	827	1,313 (58.77)	3,634 (176.77)	10,333 (184.34)	25,981 (151.44)	37,589 (44.68)

Table 3.13 (continued)  
 Institutional support in sectoral development, 1988-94  
 (year ending on December 31)

	1988	1989	1990	1991	1992	1993	1994
<b>IGVGD<sup>a</sup></b>							
Number of thanas covered	20	32 (60.00)	36 (12.50)	36 (0)	83 (130.56)	84 (1.20)	74 (-11.90)
Cardholders (trained)	14,544	41,625 (186.20)	58,500 (40.54)	57,929 <sup>b</sup> (-0.98)	126,605 (118.55)	204,161 (61.26)	312,945 (53.28)
Poultry workers	3,308	4,778 (44.44)	6,390 (33.74)	5,867 <sup>b</sup> (-8.18)	6,893 (17.49)	13,515 (96.07)	19,053 (40.98)
Poultry key rearers	11,236	19,839 (76.57)	34,4334 (73.57)	54,684 (58.81)	117,674 (115.19)	187,544 (59.38)	288,581 (53.87)
Chick rearers	222	234 (116.22)	450 (-6.25)	609 (35.33)	1,919 (215.11)	2,545 (32.62)	4,501 (76.86)

*Notes:* Figures in parentheses represent growth rates over the preceding year.

n.a. Not available.

<sup>a</sup>All IGVGD figures shown under 1992 represent only 1990-1992.

<sup>b</sup>This is due to transfer of 571 cardholders and 523 workers to RDP areas.

*Source:* BRAC.

Table 5.1  
Staff dropout rates, 1990-94

Year	Men				Women				Total			
	Total	Recruitment	Dropout	Dropout rate	Total	Recruitment	Dropout	Dropout rate	Total	Recruitment	Dropout	Dropout rate
1990	1,622	266	77	4.53	246	183	56	18.54	1,868	449	133	6.66
1991	2,649 (63.32)	210 (-21.05)	297 (285.71)	10.08	197 (-19.92)	114 (-37.71)	54 (-3.57)	21.15	2,846 (52.36)	324 (-27.84)	351 (163.91)	10.98
1992	4,429 (67.72)	663 (215.71)	211 (-28.96)	4.55	443 (124.87)	203 (78.07)	80 (48.15)	15.30	4,872 (71.19)	866 (167.28)	291 (-17.09)	5.64
1993	5,675 (28.13)	668 (75)	219 (3.79)	3.72	587 (32.51)	56 (-72.41)	45 (-43.75)	7.12	6,262 (28.53)	724 (-16.40)	264 (-9.28)	4.05
1994	5,668 (-0.12)	937 (40.27)	225 (2.74)	3.82	622 (5.96)	107 (91.07)	40 (-11.11)	6.04	6,290 (0.45)	1,044 (44.20)	265 (0.38)	4.04

*Note:* Figures in parentheses represent the growth rate over preceding year.

*Source:* BRAC.

**Table 5.2**  
**Staff development training costs, 1990-93**  
 (year ending on December 31)

Year	RDP (million taka)	RCP (million taka)	Total (million taka)	Training cost as a % of salary expense	Training cost per staff (taka)
1990	2.24	0.14	2.38	3.89	1,193.00
1991	3.18 (41.96)	0.71 (407.14)	3.88 (63.03)	4.26	1,215.14
1992	6.84 (115.09)	2.35 (230.99)	9.19 (136.86)	7.11	1,779.86
1993	6.58 (-3.80)	3.57 (51.92)	10.15 (10.45)	4.17	1,555.91

*Note:* Figures in the parentheses represent the growth rate over preceding year.

**Table 5.3**  
**Determinants of program organizers' and managers' pay**

Explanatory variable	Program organizers		Managers	
	Coefficient (t-statistics)	Mean (standard deviation)	Coefficients (t-statistics)	Mean (standard deviation)
Age (years)	-.082 (-1.392)	29.205 (2.258)	0.005 (.321)	33.365 (4.187)
Age squared	0.001 (1.494)		-.0001 (-.329)	
Gender (1=male, 0=female)	0.010 (4.374)	.821 (.385)	.039 (.881)	0.938 (0.242)
Education (years)	0.066 (6.270)	15.632 (.968)	.063 (5.909)	15.381 (.918)
Experience (years)	0.058 (6.466)	2.750 (8.582)	.060 (2.736)	6.651 (2.589)
Experience squared	-0.001 (-6.437)		-.001 (-.861)	
Intercept	8.096 (10.003)		7.144 (22.776)	
R <sup>2</sup>	0.546		.661	
F-statistics	17.60		29.20	
Number of observations	95	95	97	97

Source: BRAC, 1993.

**Table 5.4**  
**Impact of agroclimate endowments and location on BRAC program placement**

Variables	BRAC <sup>a</sup>	ELECDEN <sup>a</sup>	PRYDEN <sup>a</sup>	SECDEN <sup>a</sup>	RDHDEN <sup>a</sup>	RCOMKRA <sup>a</sup>	RCBKA	RKBKA	MEAN <sup>b</sup>
Distance to old district HQ	-0.001 (-0.693)	-0.001 (-2.394)	-0.007 (-2.367)	-0.000 (-5.129)	-0.000 (-0.619)	-0.000 (-3.632)	-0.000 (-3.532)	-0.000 (-1.634)	60.87 (41.88)
Flood prone area 1	-0.747 (-4.167)	.075 (1.226)	.173 (3.002)	.014 (.864)	-0.023 (-0.688)	.004 (.311)	.001 (.089)	.003 (1.145)	.491 (.278)
Flood prone area 2	-0.211 (-0.668)	.271 (2.453)	.270 (2.589)	.028 (.978)	.022 (.347)	.010 (.477)	.03 (.173)	.006 (1.591)	.161 (.137)
Flood prone area 3	-0.488 (-1.543)	-0.208 (-1.885)	.098 (.940)	.049 (-1.726)	-0.017 (-0.287)	-0.004 (-0.206)	.003 (.135)	-0.007 (-1.681)	.093 (.149)
Flood prone area 4	-0.130 (-0.172)	.311 (1.169)	-0.146 (-0.581)	-0.035 (-0.510)	-0.136 (-0.928)	.021 (.672)	.004 (.096)	.017 (1.689)	.012 (.052)
Moisture content type 0	-1.903 (-1.196)	.039 (.075)	.414 (.838)	.072 (.533)	.458 (1.592)	-0.069 (-0.714)	-0.086 (-0.950)	.018 (.888)	.008 (.036)
Moisture content type 1	.222 (0.169)	-0.026 (-0.059)	.143 (.349)	.025 (.225)	.337 (1.408)	-0.005 (-0.066)	-0.018 (-0.243)	.014 (.817)	.139 (.186)
Moisture content type 2	.042 (.033)	.028 (.065)	.163 (.404)	.029 (.260)	.357 (1.518)	-0.020 (-0.250)	-0.031 (-0.416)	.011 (.702)	.430 (.205)
Moisture content type 3	-0.225 (-0.171)	-0.038 (-0.086)	.009 (.023)	.008 (.076)	.313 (1.310)	-0.022 (-0.272)	-0.032 (-0.422)	.010 (.627)	.416 (.258)
Constant	.979 (.756)	.103 (.242)	.187 (.462)	.088 (.798)	-0.205 (-0.869)	.068 (.855)	.070 (.940)	-0.002 (-0.130)	-
Mean <sup>b</sup>	.452 (.499)	.118 (.159)	.379 (.156)	.090 (.045)	.112 (.085)	.040 (.029)	.030 (.027)	.010 (.006)	

**Table 5.4 (continued)**  
**Impact of agroclimate endowments and location on BRAC program placement**

Variables	BRAC <sup>a</sup>	ELECDEN <sup>a</sup>	PRYDEN <sup>a</sup>	SECDEN <sup>a</sup>	RDHDEN <sup>a</sup>	RCOMKRA <sup>a</sup>	RCBKA	RKBKA	MEAN <sup>b</sup>
R <sup>2</sup>	.140	.147	.173	.243	.048	.092	.085	.079	
Adjusted R <sup>2</sup>	.103	.059	.131	.204	-0.001	.046	.038	.030	
Number of observations	217	185	185	185	185	185	185	185	185

*Notes:* <sup>a</sup>Figures in parentheses represent t-statistics.

<sup>b</sup>Figures in parentheses represent standard deviations.

*Source:* Household survey, 1991-92.

Table 6.1  
Balance sheet of BRAC credit programs, 1990-94  
(year ending on December 31)

(million taka)

	Rural development program					Rural credit program					Aggregate				
	1990	1991	1992	1993	1994	1990	1991	1992	1993	1994	1990	1991	1992	1993	1994
<b>ASSETS</b>	481.79	700.52	707.17	705.80	778.09	198.50	681.34	1035.32	1694.51	1528.44	680.29	1381.86	1742.49	2400.31	2306.53
Fixed assets	107.15 (22.14)	183.58 (26.21)	279.37 (39.51)	250.04 (36.56)	163.40 (21.00)	11.43 (5.76)	34.26 (5.03)	61.31 (5.92)	133.63 (7.89)	185.18 (12.12)	118.58 (17.53)	217.84 (15.76)	340.68 (19.55)	383.67 (15.98)	348.58 (15.11)
Loans to members	268.92 (55.82)	305.85 (43.66)	251.90 (35.62)	375.65 (53.22)	578.20 (74.31)	81.67 (41.14)	272.44 (39.99)	394.00 (38.06)	552.47 (32.60)	774.14 (50.65)	350.59 (51.54)	578.29 (41.85)	645.90 (37.08)	928.12 (38.67)	1352.34 (58.63)
Investments	-	-	-	-	-	0.76 (0.38)	289.24 (42.45)	550.54 (53.18)	599.34 (35.37)	466.24 (30.50)	0.76 (0.11)	289.24 (20.93)	550.54 (31.60)	599.34 (24.97)	466.24 (20.21)
Advances and deposits	11.78 (2.45)	24.66 (3.52)	31.63 (4.47)	17.48 (2.48)	6.10 (0.78)	1.74 (0.88)	7.67 (1.13)	17.17 (1.66)	10.89 (0.64)	10.20 (0.67)	13.52 (1.99)	32.33 (2.34)	48.80 (0.28)	28.37 (1.18)	16.30 (0.71)
Cash in hands	18.36 (3.81)	14.57 (2.08)	2.20 (0.31)	11.67 (1.65)	11.63 (1.49)	2.26 (1.14)	2.93 (0.43)	2.41 (0.23)	6.88 (0.41)	44.67 (2.92)	20.62 (3.03)	17.50 (0.13)	4.61 (0.27)	18.55 (0.77)	56.30 (2.44)
Other assets	75.58 (15.69)	171.81 (24.53)	142.07 (20.09)	42.96 (6.09)	18.76 (2.41)	100.64 (50.70)	74.80 (10.98)	9.89 (0.96)	391.30 (23.09)	48.01 (3.14)	176.22 (25.90)	246.61 (17.85)	151.96 (8.72)	434.26 (18.09)	66.77 (2.89)
<b>LIABILITIES</b>	481.79	700.52	707.17	705.80	778.09	198.50	681.34	1035.32	1694.51	1528.44	680.29	1381.86	1742.49	2400.31	2306.53
Capital fund	316.84 (67.76)	510.86 (72.93)	557.45 (78.83)	394.43 (55.88)	536.60 (68.96)	164.44 (82.84)	541.21 (79.34)	808.09 (78.05)	1395.67 (82.36)	1102.89 (72.16)	481.28 (70.75)	1052.07 (76.13)	1365.54 (78.37)	1790.10 (74.58)	1639.49 (71.08)
Group savings	126.11 (26.18)	136.93 (19.55)	115.55 (16.28)	149.03 (21.12)	172.49 (22.17)	29.34 (14.78)	121.86 (17.89)	181.33 (17.52)	248.07 (14.64)	297.05 (19.43)	155.45 (22.85)	258.79 (18.73)	296.48 (17.02)	397.10 (16.54)	469.54 (20.36)
Loan revolving fund	13.66 (2.84)	14.89 (2.12)	7.70 (1.09)	7.70 (1.09)	-	-	-	-	-	-	13.66 (2.01)	14.87 (1.08)	7.70 (0.44)	7.70 (0.32)	-
Other liabilities	25.18 (5.23)	37.86 (5.40)	26.87 (3.80)	154.64 (21.91)	69.00 (8.87)	4.73 (2.38)	18.27 (2.68)	45.90 (4.43)	50.77 (3.00)	128.50 (8.41)	29.90 (4.40)	56.13 (4.06)	72.77 (4.18)	205.41 (8.56)	197.50 (8.56)

*Note:* Figures in parentheses are percentages of respective category in total assets or liabilities.

*Source:* Auditor's Report and Financial Statements, 1990-92 and BRAC Accounts Department for 1993 unpublished statements.

Table 6.2  
Income and expenditure statement of BRAC credit programs, 1990-94  
(year ending on December 31)

(million taka)

	Rural development program					Rural credit program					Aggregate				
	1990	1991	1992	1993	1994	1990	1991	1992	1993	1994	1990	1991	1992	1993	1994
<b>INCOME:</b>	<b>32.83</b>	<b>40.87</b>	<b>60.12</b>	<b>73.37</b>	<b>78.37</b>	<b>10.51</b>	<b>61.33</b>	<b>127.03</b>	<b>161.33</b>	<b>201.36</b>	<b>43.34</b>	<b>102.20</b>	<b>187.15</b>	<b>234.70</b>	<b>279.73</b>
Interest on loans	27.97 (85.20)	39.00 (95.42)	45.86 (76.28)	66.03 (90.00)	78.37 (100)	8.71 (82.87)	40.05 (65.30)	89.70 (70.61)	109.46 (67.85)	159.15 (79.04)	36.68 (84.63)	79.05 (77.35)	135.56 (72.44)	175.49 (74.77)	237.52 (84.91)
Investment income	-	-	-	-	-	1.80 (17.13)	21.28 (34.70)	37.33 (29.33)	51.87 (32.15)	42.21 (20.96)	1.80 (4.15)	21.28 (20.82)	37.33 (19.95)	51.87 (22.10)	42.21 (15.09)
Other income	4.86 (14.80)	1.87 (4.58)	4.26 (23.72)	7.34 (10.00)	-	-	-	-	-	-	4.86 (11.21)	1.87 (1.83)	4.26 (2.28)	7.34 (3.13)	-
<b>EXPENDITURES :</b>	<b>181.06</b>	<b>228.20</b>	<b>299.82</b>	<b>512.47</b>	<b>183.12</b>	<b>15.58</b>	<b>43.39</b>	<b>85.10</b>	<b>129.29</b>	<b>150.27</b>	<b>196.64</b>	<b>271.59</b>	<b>384.92</b>	<b>641.76</b>	<b>333.39</b>
Salaries	55.17 (30.47)	70.77 (31.01)	87.77 (29.27)	176.48 (34.44)	70.27 (38.37)	6.06 (38.90)	20.26 (46.69)	41.47 (49.73)	66.78 (51.65)	81.96 (54.54)	61.23 (931.14)	91.03 (33.52)	129.24 (33.58)	243.26 (37.91)	152.23 (45.66)
Training expenses	36.51 (20.16)	56.79 (24.89)	96.82 (32.29)	115.85 (22.61)	0 (0.00)	0.14 (0.90)	0.71 (1.64)	2.34 (2.75)	3.57 (2.76)	1.77 (1.18)	36.65 (18.64)	57.50 (21.17)	99.16 (25.76)	119.42 (18.61)	1.77 (0.53)
Maintenance and general expenditure	18.37 (10.51)	4.22 (91.85)	4.81 (1.60)	5.97 (1.16)	4.48 (2.45)	0.28 (1.80)	1.62 (3.73)	0.51 (0.60)	4.74 (3.67)	6.41 (4.27)	18.65 (9.48)	5.84 (2.15)	5.32 (1.38)	10.71 (1.67)	10.89 (3.27)
Utilities	1.02 (0.56)	1.31 (0.57)	2.24 (0.75)	3.28 (0.64)	6.47 (3.53)	0.29 (1.86)	0.54 (1.24)	1.05 (1.23)	2.04 (1.58)	2.83 (1.88)	1.31 (0.67)	1.85 (0.68)	3.29 (0.86)	5.32 (0.83)	9.30 (2.79)
Stationeries	5.03 (2.78)	5.42 (2.38)	6.68 (2.23)	5.03 (0.98)	4.04 (2.21)	0.86 (5.52)	1.85 (4.26)	3.73 (4.38)	2.62 (2.03)	1.01 (0.67)	5.89 (2.99)	7.27 (2.68)	10.41 (2.71)	7.65 (1.19)	5.05 (1.51)
Interest expenditure	7.10 (3.92)	8.27 (3.62)	8.31 (2.77)	9.19 (1.79)	0 (0.00)	4.23 (27.15)	8.04 (18.53)	18.78 (22.07)	21.19 (16.39)	15.88 (10.57)	11.33 (5.76)	16.31 (6.01)	27.09 (7.04)	30.38 (4.73)	15.88 (4.76)
Depreciation	4.55 (2.51)	6.46 (2.84)	9.07 (3.03)	11.13 (2.17)	6.62 (3.62)	0.60 (3.85)	1.60 (3.69)	3.10 (3.64)	4.36 (3.37)	5.81 (3.87)	5.15 (2.62)	8.06 (2.97)	12.17 (3.16)	15.49 (2.41)	12.43 (3.73)
Bad debt	5.99 (3.31)	7.15 (3.13)	6.80 (2.27)	10.78 (2.10)	32.93 (17.98)	1.63 (10.46)	4.96 (11.43)	7.93 (9.32)	15.38 (11.90)	24.33 (16.19)	7.62 (3.88)	12.11 (4.46)	14.73 (3.83)	26.16 (4.08)	57.26 (17.18)
Other expenses	22.17 (12.24)	32.44 (14.22)	31.78 (10.60)	130.94 (25.55)	16.84 (9.20)	1.49 (9.56)	3.81 (8.78)	6.19 (7.27)	8.61 (6.66)	10.27 (6.83)	23.66 (12.03)	36.25 (13.35)	37.99 (9.87)	139.55 (21.75)	27.11 (8.13)

**Table 6.2 (continued)**  
**Income and expenditure statement of BRAC credit programs, 1990-94**  
 (year ending on December 31)

(million taka)

	Rural development program					Rural credit program					Aggregate				
	1990	1991	1992	1993	1994	1990	1991	1992	1993	1994	1990	1991	1992	1993	1994
<b>Head office logistics</b>	25.15 (13.89)	35.37 (15.50)	45.54 (15.19)	43.82 (8.55)	41.47 (22.65)	-	-	-	-	-	25.15 (12.79)	35.37 (13.02)	45.54 (11.83)	43.82 (6.83)	41.47 (12.44)
<b>Profit/loss</b>	-148.23	-187.33	-239.70	-439.10	-104.75	-5.07	17.94	41.93	32.04	51.09	-153.30	-169.39	-197.77	-407.06	-53.66

**Note:** Figures in parentheses are percentages of respective category in total income or expenditure.

**Source:** BRAC.

**Table 6.3**  
**Aggregate income and expenditures statement of BRAC branches by credit programs, 1990-94**  
(year ending on December 31)

(million taka)

	Rural development program					Rural credit program					Aggregate				
	1990	1991	1992	1993	1994	1990	1991	1992	1993	1994	1990	1991	1992	1993	1994
<b>INCOME:</b>															
Interest	27.74	38.55	47.12	56.43	78.37	8.71	40.05	89.70	109.46	159.15	36.45	78.50	136.82	165.89	237.52
<b>EXPENDITURES:</b>															
Salaries	34.69 (29.48)	40.23 (28.94)	52.19 (29.08)	60.87 (34.98)	64.02 (39.01)	5.38 (51.83)	18.49 (47.30)	35.58 (50.41)	62.08 (51.73)	74.66 (54.48)	40.07 (31.30)	58.72 (32.97)	87.77 (35.72)	122.95 (41.82)	138.68 (46.05)
Interest expenses	7.10 (6.03)	8.27 (5.95)	8.31 (4.91)	9.19 (5.28)	0 (0.00)	1.51 (14.54)	8.04 (20.57)	17.43 (22.77)	21.19 (17.66)	15.88 (11.59)	8.61 (6.73)	16.31 (9.16)	25.74 (10.48)	30.38 (10.33)	15.88 (5.27)
Rent and utilities	2.13 (1.81)	3.00 (2.16)	3.58 (2.12)	3.58 (2.06)	4.26 (2.60)	0.36 (3.47)	0.35 (0.90)	0.80 (1.05)	1.55 (91.29)	2.13 (1.55)	2.49 (1.94)	3.35 (1.88)	4.38 (1.78)	5.13 (1.74)	6.39 (2.12)
Stationeries	2.81 (2.39)	5.00 (3.60)	1.98 (1.17)	3.24 (1.86)	1.50 (0.91)	0.68 (6.55)	1.67 (4.27)	1.31 (1.71)	2.75 (92.29)	1.60 (1.17)	3.49 (2.73)	6.67 (3.75)	3.29 (1.34)	5.99 (2.04)	3.10 (1.03)
General expenses and maintenance	2.74 (2.33)	2.45 (1.76)	3.09 (1.83)	3.38 (1.94)	3.60 (2.19)	0.17 (1.64)	1.05 (2.69)	1.93 (2.50)	3.38 (2.82)	5.82 (4.25)	2.91 (2.27)	3.50 (1.97)	5.02 (2.04)	6.76 (2.29)	9.42 (3.13)
Depreciation	2.34 (1.99)	2.22 (1.60)	3.26 (1.93)	3.97 (2.28)	4.26 (2.60)	0.28 (2.70)	1.04 (2.66)	1.90 (2.48)	3.13 (2.61)	4.40 (3.21)	2.62 (2.05)	3.26 (1.83)	5.16 (2.10)	7.10 (2.42)	8.66 (2.88)
Bad debt provision	-	-	-	-	32.93 (20.06)	1.07 (10.31)	4.96 (12.69)	7.93 (10.36)	15.38 (12.82)	24.33 (17.75)	1.07 (0.84)	4.96 (2.79)	7.93 (3.23)	15.38 (5.23)	57.26 (19.01)
Other expenses	5.49 (4.67)	9.01 (6.48)	7.99 (4.72)	7.10 (4.08)	12.08 (7.36)	0.93 (8.96)	3.49 (8.93)	6.66 (8.70)	10.54 (8.78)	8.23 (6.01)	6.42 (5.01)	12.50 (7.01)	14.65 (5.96)	17.64 (6.00)	20.31 (6.74)
Nonformal primary education dev. cost	23.17 (19.69)	27.59 (19.84)	45.86 (27.11)	5.87 (3.37)	-	-	-	-	-	-	23.17 (18.10)	27.59 (15.49)	45.86 (18.67)	5.87 (2.00)	-
Program dev. cost	37.19 (31.61)	41.26 (29.68)	45.89 (27.13)	76.83 (44.15)	-	-	-	-	-	-	37.19 (29.05)	41.26 (23.16)	45.89 (18.68)	76.83 (26.13)	-
Profit/Loss	-89.92	-100.48	-122.03	-117.60	-85.75	-1.67	0.96	13.16	-10.54	22.1	-91.59	-99.52	-108.87	-128.14	-63.65

*Note:* Head Office expenditures are not included.

Figures in parentheses are percentages of respective category in total expenditure.

*Source:* BRAC.

Table 6.4  
Breakdown of RDP total expenditures of the head office and branch level, 1990-94

(million taka)

Expenditure	1990			1991			1992			1993			1994		
	Branch	Head office	Total	Branch	Head office	Total	Branch	Head office	Total	Branch	Head office	Total	Branch	Head office	Total
Operating expenses <sup>a</sup>	57.30 (31.65)	20.20 (11.16)	77.50 (42.81)	70.18 (30.75)	13.71 (10.40)	93.89 (41.15)	77.40 (25.81)	28.14 (9.39)	105.54 (35.20)	91.34 (17.82)	61.22 (11.95)	152.56 (29.77)	89.71 (48.99)	13.40 (7.32)	108.71 (59.37)
Institutional building	9.16 (5.06)	1.51 (0.83)	10.67 (5.89)	14.54 (6.37)	3.15 (1.38)	17.69 (7.75)	12.65 (4.22)	5.92 (2.04)	18.77 (6.26)	1.96 (3.89)	16.06 (3.14)	36.02 (7.03)	41.47 (22.65)	-	41.47 (22.65)
Sector program cost <sup>b</sup>	28.03 (15.48)	-2.18 (-1.19)	25.87 (14.29)	26.72 (11.71)	6.78 (2.97)	33.50 (14.68)	33.24 (11.09)	23.00 (6.67)	56.24 (18.76)	52.27 (10.20)	67.68 (13.20)	119.95 (23.41)	-	-	-
Nonformal primary education	23.17 (12.80)	25.31 (13.97)	48.48 (26.77)	27.59 (12.09)	31.99 (14.02)	59.58 (26.11)	45.86 (15.29)	49.44 (16.50)	95.30 (31.79)	5.87 (1.14)	160.49 (31.32)	166.36 (32.46)	-	-	-
Vulnerable group development program	-	11.33 (6.26)	11.33 (6.26)	-	13.38 (5.86)	13.38 (5.86)	-	13.59 (4.53)	13.59 (4.53)	-	18.24 (3.56)	18.24 (3.56)	-	-	-
Management development program	-	1.22 (0.68)	1.22 (0.68)	-	3.02 (1.34)	3.02 (1.34)	-	3.56 (1.19)	3.56 (1.19)	-	-	-	-	-	-
Loan loss provision	-	5.99 (3.30)	5.99 (3.30)	-	7.15 (3.10)	7.15 (3.10)	-	6.80 (2.27)	6.80 (2.27)	-	10.18 (2.10)	10.78 (2.10)	-	32.93 (17.98)	32.93 (17.98)
Family planning/ health	-	-	-	-	-	-	-	-	-	-	8.56 (1.67)	8.56 (1.67)	-	-	-
Total	117.66 (64.98)	63.40 (35.02)	181.06 (100)	139.03 (60.93)	99.17 (39.07)	228.20 (100.00)	169.15 (56.42)	130.67 (43.58)	299.82 (100)	174.03 (33.96)	338.44 (66.04)	512.47 (100)	131.18 (71.64)	46.33 (25.30)	183.11 (100.00)

Notes: Figures in parentheses are percentages of grand total.

Head office expenses include all expenses not accounted for at the branch level, including expenses also related to regional office.

<sup>a</sup>Operating expenses, as defined by BRAC, include salaries and benefits, travelling and transportation, rent and utilities, printing and stationeries, maintenance and general expenses, depreciation, interest expenses, and research and evaluation.

<sup>b</sup>Sector program cost includes training costs, staff costs and program-development costs.

Table 6.5  
Selected parameters of average branch, 1990-94  
(year ending on December 31)

(million taka)

Parameters	Rural development program					Rural credit program					Aggregate				
	1990	1991	1992	1993	1994	1990	1991	1992	1993	1994	1990	1991	1992	1993	1994
Average total expenditures (including head office expenses) per branch	2.26	2.56	3.33	5.45	1.74	1.56	1.45	1.70	1.85	1.67	1.97	2.26	2.75	3.89	1.71
Average branch operating expenditure	1.47	1.56	1.88	1.85	1.56	1.04	1.30	1.53	1.71	1.52	1.28	1.48	1.76	1.78	1.54
Head office operating costs as % of total expenditures	35%	39%	44%	66%	10%	33%	10%	11%	7%	9%	35%	35%	36%	54%	10%
Average branch total revenue	0.41	0.46	0.67	0.78	0.75	1.05	2.04	2.54	2.31	1.77	0.37	0.65	0.98	1.01	1.22
Average branch profit based on total expenditures (including head office)	-1.85	-2.10	-2.66	-4.67	-0.99	-0.51	0.59	0.84	0.46	0.10	-1.60	-1.61	-1.77	-2.88	-0.49
Average branch profit based on operating expenditures	-1.06	-1.10	-1.21	-1.07	-0.81	0.01	0.74	1.01	0.60	0.25	-0.91	-0.83	-0.78	-0.77	-0.32

**Table 6.6**  
**Financial margin and the level of profitability, 1991-94**

(million taka)

	Rural development program				Rural credit program				Aggregate			
	1991	1992	1993	1994	1991	1992	1993	1994	1991	1992	1993	1994
<b>As percentage of average assets:</b>												
Interest revenue	6.60	6.52	9.35	10.07	13.94	14.80	11.82	10.41	7.67	8.68	8.47	10.30
Interest expenses	1.40	1.18	1.30	0.0	1.83	2.19	1.55	1.04	1.58	1.73	1.46	0.69
Operating expenses	38.60	42.60	72.54	13.97	8.03	7.72	7.92	9.83	24.76	22.91	29.52	11.23
Salaries	11.97	12.47	24.98	9.03	4.61	4.83	4.89	5.36	8.83	8.27	11.74	6.60
Training	9.61	13.76	16.40	0.0	0.16	0.27	0.26	0.12	5.58	6.35	5.77	0.08
Other costs	17.02	16.37	31.16	4.94	3.26	2.62	2.77	4.35	10.35	8.29	12.01	4.55
Financial margin	5.20	5.34	8.05	10.07	12.11	12.61	10.27	9.37	6.09	6.95	7.01	9.61
Profitability: reported profit	-187.33	-239.70	-439.10	-104.75	17.94	41.93	32.04	51.09	-169.39	-197.77	-407.06	-53.66

(million taka)

Table 6.7  
Profitability level of BRAC credit programs by branch age, 1990-94  
(year ending on December 31)

Branch age (years)	1990			1991			1992			1993			1994		
	Profit	No. of branches	Average branch profit	Profit	No. of branches	Average branch profit	Profit	No. of branches	Average branch profit	Profit	No. of branches	Average branch profit	Profit	No. of branches	Average branch profit
1	-14.33	20	-0.72	-18.33	29	-0.63	-16.08	20	0.80	-14.27	19	-0.75	-28.58	31	-0.92
2	-24.03	20	-1.20	-29.57	20	-1.48	-42.97	30	-1.43	-20.02	25	-0.80	-21.63	24	-0.90
3	-27.58	20	-1.38	-29.12	20	1.46	-34.84	20	-1.74	-16.84	30	-0.56	-15.48	20	-0.77
4	-23.98	20	-1.20	-23.46	20	-1.17	-20.76	20	-1.04	-7.47	20	-0.37	-20.26	30	-0.68
5	-2.03	10	-0.20	-1.72	20	-0.09	2.57	20	0.13	-6.85	20	-0.34	2.76	21	0.13
6				2.69	10	0.27	3.55	20	0.18	-1.72	20	-0.09	2.08	19	0.11
7							7.03	10	0.70	-2.36	20	-0.12	5.14	20	0.26
8										0.41	10	0.04	8.62	20	0.43
9													3.5	10	0.35

123

Note: Estimated from the Audited Reports, 1990-92 and information for 1993-94 provided by Accounts Department of BRAC.

Table 6.8  
Financial characteristics by branch age, 1990-92  
(year ending on December 31)

(million taka)

Branch age (years)	1990			1991			1992		
	Loans outstanding	Members' savings	Program dev. cost	Loans outstanding	Members' savings	Program dev. cost	Loans outstanding	Members' savings	Program dev. cost
1	12.29	4.71	6.99	11.55	4.20	9.29	6.75	3.30	6.80
2	53.87	24.06	15.57	53.81	19.43	13.50	56.53	20.48	34.72
3	93.23	34.19	20.47	103.73	35.42	22.98	84.87	31.41	30.14
4	122.86	41.90	17.66	151.41	51.51	19.83	117.69	35.05	21.57
5	82.24	29.34		165.03	78.32		144.68	66.37	
6				107.41	43.55		155.58	78.84	
7							93.74	36.10	

*Note:* Estimated from financial data from BRAC.

*Source:* BRAC.

Table 6.9  
BRAC: Subsidy dependency index, 1991-94  
(year ending on December 31)

(million taka)

Source of subsidy	Rural development program				Rural credit program				Aggregate			
	1991	1992	1993	1994	1991	1992	1993	1994	1991	1992	1993	1994
Economic subsidy:												
Interest subsidy:												
Capital fund	91.32	97.20	105.99	96.15	47.63	83.81	138.44	137.42	90.09	132.97	173.56	233.48
Revolving fund	1.96	1.47	1.00	-	-	-	-	-	1.68	1.24	0.85	-
Group savings	6.25	5.04	5.28	3.21	3.59	6.06	8.59	5.45	24.34	30.54	38.15	8.66
Total:	99.53	103.71	112.27	99.36	51.22	89.87	147.03	142.87	116.11	164.75	212.56	242.14
Less profit*	-128.07	-76.17	-111.73	-104.75	17.94	41.93	32.04	51.09	-71.93	-63.01	-122.27	-53.66
Net subsidy	227.60	179.88	224.00	204.11	33.28	47.94	114.99	91.78	188.04	227.76	334.83	296.80
SDR	-	-	-	-	0.54	0.38	0.71	0.45	1.84	1.22	1.43	1.06
SDI	-	-	-	-	0.83	0.53	1.05	0.58	2.40	1.67	2.01	1.25

Note: \*Estimate excludes all costs of NFPE, IGVGD and MDP.

Source: BRAC.

Table 6.10  
Fixed-effect estimates of translog cost function

Variables	Coefficients (t-statistics)	Mean (standard deviation)
Log disbursements	.098 (0.091)	8.021 (1.105)
Log savings	1.247 (1.097)	6.766 (.997)
Log membership	-1.788 (-1.194)	8.447 (.379)
Log fixed cost	-.114 (-0.135)	-4.068 (.885)
Log wage	2.022 (1.918)	3.113 (.547)
Log disbursement squared	.245 (2.507)	19.57 (4.79)
Log savings squared	.056 (0.661)	16.83 (3.14)
Log membership squared	.424 (1.636)	26.46 (3.02)
Log fixed cost squared	.135 (2.273)	8.29 (10.34)
Log wage squared	-.141 (-2.899)	4.73 (0.85)
Log savings * log disbursement	-.079 (-1.169)	36.11 (7.18)
Log disbursement * log fixed cost	.171 (2.229)	-17.46 (20.33)
Log disbursement * log wage	.131 (1.490)	18.98 (2.71)
Log savings * log fixed cost	.045 (0.842)	-16.05 (18.36)
Log savings * log wage	-.106 (-1.545)	17.69 (2.36)
Log wage * log fixed cost	-.078 (-1.360)	-8.26 (9.26)
Log membership * log saving	-.049 (-0.313)	42.13 (6.08)
Log membership * log disbursement	-.106 (-0.667)	45.25 (7.37)
Log membership * log fixed cost	-.056 (-0.461)	-19.81 (22.46)

Table 6.10 (continued)  
Fixed-effect estimates of translog cost function

Variables	Coefficients (t-statistics)	Mean (standard deviation)
Log membership * log wage	-.225 (-1.451)	22.25 (2.50)
Age	.043 (0.712)	5.25 (3.683)
Age squared	-.000 (-0.089)	4.69 (3.29)
Average yearly rainfall	.000 (1.442)	184.551 (66.763)
Standard deviation of yearly rainfall	-.000 (-1.017)	124.668 (114.853)
Electrification density	-.792 (-1.030)	.087 (.084)
Primary school density	.732 (0.494)	.369 (.120)
Secondary school density	5.708 (1.316)	.095 (.032)
Road density	4.130 (2.104)	.111 (.064)
Commercial and Krishi bank density	13.444 (1.397)	.049 (.036)
Staff training cost	.000 (4.057)	177.279 (26.726)
If age of the branch is less than 5 years old	.058 (0.942)	.464 (.500)
Year 89 - Dummy	-.263 (-3.562)	.291 (.455)
Constant	1.139 (0.208)	
R-square	.981	
F-statistics	51.66	
No. of observations	220	
Marginal Cost of:	Membership	0.039 (1.318)
	Disbursement	0.101 (7.786)
	Savings	0.069 (1.511)
Economies of scale	0.558 (5.284)	

Source: Household survey data, 1991-92 and BRAC.

Table 7.1  
Membership and dropouts, 1985-94  
(year ending on December 31)

Year	Men			Women			Total		
	Members	Dropout	%	Members	Dropout	%	Members	Dropout	%
1985	40,454	280	.69	54,063	286	.53	94,782	566	.58
1986	54,637	543 (93.93)	.99	70,548	404 (41.26)	.57	125,203	947 (67.13)	.76
1987	73,952	840 (54.70)	1.14	101,350	568 (40.59)	.56	175,201	1,408 (48.68)	.80
1988	92,657	833 (-0.833)	.89	148,469	769 (40.14)	.54	239,546	1,630 (15.77)	.68
1989	127,407	2,927 (251.38)	2.30	200,750	2,030 (155.03)	1.01	328,946	4,846 (197.30)	1.47
1990	153,316	3,346 (14.32)	2.18	271,412	3,816	1.41	423,531	6,916 (42.72)	1.63
1991	187,199	9,694 (189.72)	5.18	380,656	18,022 (372.28)	4.73	566,916	27,058 (291.24)	4.77
1992	167,260	62,828 (548.11)	37.56	482,014	39,986 (121.87)	8.29	649,274	102,814 (279.98)	15.83
1993	146,729	28,922 (-53.97)	19.71	679,061	49,803 (24.55)	7.33	825,790	78,725 (-23.43)	9.53
1994	127,707	42,054 (45.40)	32.93	908,549	23,358 (-53.10)	2.57	1,036,254	65,412 (-16.91)	6.31

*Note:* Figures in parentheses represent the percentage increase over the preceding year.

*Source:* BRAC.

Table 7.2  
Determinants of dropout among BRAC members by gender

Variables	Men		Women	
	Coefficient	t-statistic	Coefficient	t-statistic
Age of the branch	.017	1.912	.000	.036
Age squared	-0.000	-1.006	.000	.574
Average rainfall	-0.000	-0.979	.000	1.017
Standard deviation of rainfall	.000	1.137	.000	.305
Electrification per sq. km.	.131	.734	.215	2.061
Primary school per sq. km.	.217	.494	.666	2.608
Secondary school per sq. km.	-0.636	-0.551	-0.290	-0.432
Roads per sq. km.	-0.375	-0.799	-0.619	-2.263
Commercial and Krishi bank per sq. km.	-2.749	-1.107	-0.973	-0.674
Percentage of borrowers	-0.024	-1.018	.011	.820
Staff training cost	.000	.480	1.023	.019
Staff employment and income generation cost	.000	2.461	.000	3.444
Other skill development cost - staff	-0.000	-1.114	-0.000	-3.369
Constant	.072	.254	-0.206	-1.245
Adjusted R-squared	.116		.406	
F-statistics	1.35		2.83	
Number of observations	223		223	

Source: BRAC.

**Table 7.3**  
**BRAC aggregate loan recovery rate by sector and by gender**

Sectors	1990									1991								
	Men			Women			Total			Men			Women			Total		
	Realizable	Realized	%	Realizable	Realized	%	Realizable	Realized	%	Realizable	Realized	%	Realizable	Realized	%	Realizable	Realized	%
Total	82.99	77.25	93.09	155.96	149.64	95.95	238.94	226.89	94.96	87.77	78.70	89.66	189.22	179.03	94.62	276.99	257.73	93.05
Agriculture	5.84	5.35	91.66	5.55	4.97	89.54	11.39	10.32	90.63	6.29	5.55	88.29	6.12	5.20	84.85	12.42	10.75	86.59
Irrigation	3.54	3.16	89.53	3.75	3.28	87.44	7.29	6.45	88.46	5.67	5.04	88.98	5.07	4.29	84.49	10.74	9.33	86.86
Fisheries	.62	.58	93.57	.249	.214	85.77	.865	.790	91.32	1.40	1.34	95.62	.366	.309	84.27	1.77	1.65	93.27
Livestock	14.09	12.43	88.23	40.09	38.18	95.22	54.18	50.60	93.40	13.18	11.16	84.68	45.81	43.74	94.49	58.99	54.45	92.30
Services	2.93	2.72	92.89	7.06	6.87	97.33	9.89	9.59	96.03	3.62	2.99	82.68	11.51	10.74	93.25	15.14	13.73	90.72
Rural transportation	9.08	8.82	97.11	1.58	1.60	101.43	10.66	10.42	97.75	12.64	12.22	96.68	3.64	3.34	91.72	16.28	15.55	95.57
Rural trading	45.82	43.39	94.70	70.07	67.74	96.66	115.90	111.13	95.89	43.16	39.06	90.49	94.43	90.56	95.90	137.59	129.62	94.21
Food processing	1.00	.724	72.42	27.53	26.72	97.06	28.53	27.44	96.19	1.47	1.01	68.54	21.94	21.01	95.74	23.42	22.02	94.03
Health	.014	.013	96.20	.054	.053	99.23	.067	.066	98.62	.050	.049	83.41	.302	.298	98.74	.361	.348	96.24
Miscellaneous	.071	.068	95.91	.013	.012	94.86	.083	.080	95.76	.275	.286	97.05	.012	.010	86.53	.281	.277	96.60

**Table 7.3 (Continued)**  
BRAC aggregate loan recovery rate by sector and by gender

Sectors	1992									1993								
	Men			Women			Total			Men			Women			Total		
	Realizable	Realized	%	Realizable	Realized	%	Realizable	Realized	%	Realizable	Realized	%	Realizable	Realized	%	Realizable	Realized	%
Total	216.56	196.53	90.75	592.17	570.92	96.41	808.72	767.45	94.90	281.63	248.68	88.30	936.70	915.92	97.78	1218.33	1164.59	95.00
Agriculture	14.40	12.64	87.81	34.75	32.61	93.85	49.14	45.25	92.08	21.46	21.18	98.70	66.86	66.86	100.00	88.32	88.04	99.10
Irrigation	45.67	40.99	89.76	47.27	41.17	87.11	92.94	82.17	88.41	11.41	11.41	100.00	12.78	12.78	100.00	24.19	24.19	100.00
Fisheries	3.31	3.20	96.70	2.81	2.64	93.94	6.12	5.84	95.44	4.52	4.52	88.86	3.60	3.60	100.00	8.12	8.12	100.00
Livestock	14.35	11.59	80.80	86.53	83.00	95.92	100.88	94.60	93.77	14.84	13.19	99.26	122.99	112.51	99.62	137.83	135.70	98.46
Cottage industry	6.78	6.16	90.74	27.38	26.77	97.79	34.16	32.93	96.39	12.37	12.28	85.00	43.96	43.96	100.00	56.33	56.24	99.80
Services	3.87	3.67	94.86	4.43	4.24	95.55	8.30	7.90	95.23	2.06	.175	85.50	2.011	1.79	97.86	4.07	3.72	91.34
Rural transportation	17.68	17.23	97.46	3.31	2.88	86.93	20.99	20.10	95.80	29.44	25.17	87.09	7.55	7.48	99.18	36.99	32.65	88.20
Rural trading	84.75	79.52	93.83	188.04	184.89	97.95	272.79	263.71	96.67	149.62	130.30	80.20	313.53	306.49	97.75	463.15	436.78	94.30
Food processing	25.46	21.26	93.49	196.44	192.23	97.85	221.90	213.48	96.21	34.98	28.05	100.00	362.27	349.12	96.37	397.25	377.17	94.00
Health	.125	.116	93.00	.493	.496	100.46	.618	.611	98.96	.12	.12	87.09	.49	.49	100.00	.61	.61	100.00
Miscellaneous	.162	.154	95.05	.718	.699	97.45	.880	.833	97.01	.81	.70		.67	.67	100.00	1.48	1.38	92.00

Source: BRAC.

Table 7.4  
Fixed-effects estimates of the determinants of branch-level loan repayment rate

Variable	Agriculture		Fisheries	Livestock		Transportation	
	Men	Women	Total	Men	Women	Men	Women
Age of the branch	.013 (.176)	-0.22 (-.354)	-.491 (-.442)	-.045 (-1.013)	.032 (.774)	-.024 (-.584)	-.308 (-2.777)
Age squared	-.007 (-1.560)	.002 (.537)	-.078 (-1.155)	.005 (1.526)	.001 (.467)	.004 (1.420)	.015 (2.046)
Average rainfall	-.002 (-1.449)	.000 (.406)	-.014 (-.796)	.000 (.466)	-.000 (-.565)	-.001 (-.743)	.002 (1.227)
Std. devia. of rainfall	.002 (2.363)	-.000 (-.367)	.009 (.607)	-.000 (-.403)	.000 (.785)	-.000 (-.291)	-.001 (-1.054)
Electrification density	3.141 (1.788)	-.181 (-.126)	7.263 (.254)	-.966 (-.978)	-1.478 (-1.545)	-.478 (-.598)	53.456 (6.663)
Primary school density	-.073 (-.022)	-.909 (-.343)	137.773 (2.009)	.984 (.458)	-1.423 (0.668)	.186 (.086)	22.096 (2.683)
Secondary school density	27.910 (2.592)	-3.560 (-.380)	129.262 (.733)	-6.785 (-.840)	-4.366 (-.603)	-6.613 (-1.008)	5.162 (.888)
Road density	4.881 (1.059)	3.263 (.182)	155.099 (2.492)	1.917 (.252)	1.044 (.427)	5.830 (1.718)	-
Commercial and Krishi bank density	1.310 (.062)	8.566 (.509)	327.805 (1.103)	9.437 (.720)	-5.529 (-.495)	-1.350 (-1.22)	-
Training cost	.001 (1.952)	.000 (.453)	.002 (.197)	.000 (.218)	.000 (.584)	.001 (1.363)	-.001 (2.260)
Employment and income gen. trg. cost	.000 (1.232)	.000 (.997)	-.011 (.190)	.000 (-1.723)	-.000 (-1.310)	-.000 (-1.368)	.001 (2.666)
Other skill dev. training cost	.000 (1.042)	.000 (1.488)	-.019 (-2.370)	.000 (-.752)	.000 (.947)	-.000 (.260)	.002 (3.764)

Table 7.4 (continued)  
 Fixed-effects estimates of the determinants of branch-level loan repayment rate

Variable	Agriculture		Fisheries Total	Livestock		Transportation	
	Men	Women		Men	Women	Men	Women
Constant	-1.023 (-.910)	.769 (.300)	-80.363 (-2.052)	.419 (.217)	1.511 (2.441)	.734 (.467)	-26.834 (-4.668)
Dummy for 1989 (or later)	-.095 (-.788)	.004 (.047)	-6.221 (-2.484)	-.018 (-.217)	-.068 (-.843)	-.028 (-.341)	.854 (2.290)
No. of observations	108	91	76	112	180	163	19
F-statistics	3.61	8.19	1.25	7.87	5.74	5.60	129.25
R-squared	0.72	0.88	0.65	0.87	0.79	0.79	0.999

Table 7.4 (continued)  
Fixed-effects estimates of the determinants of branch-level loan repayment rate

Variable	Small trading		Fisheries		Irrigation (collective)		Fisheries (collective)	
	Men	Women	Men	Women	Men	Women	Men	Women
Age of the branch	.028 (.553)	-0.084 (-1.084)	.033 (.284)	.074 (.883)	.020 (.149)	.123 (.647)	-0.108 (-0.644)	-0.114 (-0.819)
Age squared	-0.003 (-0.929)	.005 (1.056)	.000 (0.021)	-0.000 -0.038	.002 (.292)	.019 (1.740)	.013 (.830)	.003 (.333)
Average rainfall	-0.000 (-0.079)	.000 (.106)	.002 (.931)	.001 (.382)	-0.005 (-2.540)	-0.002 (-0.405)	.000 (-0.018)	.000 (.082)
Standard deviation of rainfall	.000 (.053)	-0.000 (-0.123)	.002 (.519)	-0.000 (-0.364)	.004 (2.976)	-0.000 (-0.158)	-0.000 (-0.064)	.000 (.174)
Electrification density	.176 (.174)	.252 (.139)	-0.150 (-0.028)	-1106 (-0.610)	2.203 (.768)	-5.301 (-0.589)	-1.001 (.239)	123.187 (1.428)
Primary school density	.001 (.00)	6.992 (1.699)	-0.954 (-0.186)	-3.655 (-0.775)	-7.334 (-1.293)	7.539 (1.433)	7.321 (.599)	-1.852 (-0.191)
Secondary school density	4.673 (.651)	9.621 (.909)	3.949 (-0.257)	-11.874 (-0.926)	29.222 (1.444)	-60.278 (-0.685)	-11.497 (-0.136)	121.331 (.814)
Road density	1.855 (.548)	-2.152 (-0.456)	-	1.767 (.450)	.437 (.104)	-14.223 (-4.23)		
Commercial and Krishi bank density	4.917 (.351)	-10.890 (-0.489)	14.179 (.282)	7.918 (.329)	4.944 (.141)	111.462 (2.148)		
Training cost	.000 (.265)	-0.000 (-0.449)	-0.001 (-0.704)	.000 (.205)	.002 (2.257)	.002 (.673)	-0.00 (-0.049)	-0.001 (-1.767)
Employment and income generation training cost	-0.000 (-0.517)	.000 (.410)	-0.001 (-0.743)	-0.000 (-1.081)	.000 (.091)	.000 (1.376)	-0.000 (-0.478)	-0.000 (-0.317)
Other skill development cost	.000 (.510)	.001 (1.906)	-0.001 (-0.596)	-0.001 (-0.835)	-0.000 (.198)	.001 (.3577)	-0.000 (-0.239)	.000 (.483)
Constant	-0.053 (-0.027)	-3.702 (1.241)	-0.807 (-0.150)	2.336 (1.207)	.142 (.036)	-7.071 (-0.567)	.256 (.021)	-33.649 (-1.531)

Table 7.4 (continued)  
Fixed-effects estimates of the determinants of branch-level loan repayment rate

Variable	Small trading		Fisheries		Irrigation (collective)		Fisheries (collective)	
	Men	Women	Men	Women	Men	Women	Men	Women
Dummy for 1989	.006 (-0.060)	.029 (.188)	-0.139 (-0.474)	-0.146 (-0.696)	-0.099 (-0.482)	.581 (2.604)	.063 (.131)	-0.132 (-0.339)
Number of observations	199	208	31	75	56	38	26	22
F-statistics	2.54	1.33	2.94	2.60	4.52	23.23	.88	4.15
R-squared	0.62	0.45	0.92	0.71	0.91	0.99	0.78	0.95

*Note:* Figures in parentheses are t-statistics.

Recovery rate is defined as the ratio of the amount received to the amount receivable.

*Source:* Thana level secondary statistics, branch survey data, and BRAC.

Table 7.5  
Impact of programs on aggregate village wage

Variables	Men		Women		Children		Mean (standard deviation)
	Ordinary least squares method	OLS with White's correction of standard errors	Ordinary least squares method	OLS with White's correction of standard errors	Ordinary least squares method	OLS with White's correction of standard errors	
If the village has RD-12: 1=yes, 0=no	-1.55 (-0.66)	1.55 (0.75)	0.59 (0.40)	0.59 (0.36)	-2.56 (-1.65)	-2.56 (-1.92)	.29 (.45)
If the village has GB: 1=yes, 0=no	4.39 (2.01)	4.39 (1.99)	-0.12 (-0.09)	-0.12 (-0.08)	2.25 (1.56)	2.25 (1.72)	.32 (.47)
If the village has BRAC: 1=yes, 0=no	1.52 (0.67)	1.52 (0.76)	-0.02 (-0.02)	-0.02 (-0.02)	-0.08 (-0.05)	-0.08 (-0.06)	.28 (.45)
If the village has pucca road: 1=yes, 0=no	0.24 (0.12)	0.24 (0.11)	1.83 (1.42)	1.83 (1.60)	1.62 (1.19)	1.62 (1.24)	.28 (.45)
If the village has any bank: 1=yes, 0=no	-1.76 (-0.61)	-1.76 (-0.62)	1.66 (0.92)	1.66 (0.94)	-0.44 (-0.23)	-0.44 (-0.28)	.10 (.31)
If the village has electricity: 1=yes, 0=no	-0.59 (-0.33)	-0.59 (-0.34)	1.57 (1.40)	1.57 (1.43)	-0.07 (-0.06)	-0.07 (-0.06)	.51 (.50)
Distance from thana HQ (km)	-0.43 (-2.78)	-0.43 (-2.70)	-0.18 (-1.86)	-0.18 (-1.84)	-0.28 (-2.73)	-0.28 (-2.67)	8.47 (5.79)
If the village any development program: 1=yes, 0=no	2.38 (1.69)	2.38 (1.42)	0.32 (0.31)	0.32 (0.31)	0.78 (0.70)	0.78 (0.71)	.54 (.50)
Constant	28.43 (10.26)	28.43 (10.44)	11.10 (6.42)	11.10 (5.97)	15.17 (8.29)	15.17 (8.35)	
F-statistics (87, 173)	2.14		1.94		2.40		
Adjusted R <sup>2</sup>	0.034	0.034	0.028	0.028	0.016	0.041	
No. of observations	261	261	261	261	261	261	261

Note: Figures in parentheses are t-statistics except for the last column.

Source: Household survey data, 1991-92.

Table 7.6  
Trends in subsidy per member and borrower  
(year ending on December 31)

Year	Total economic subsidy (million taka)			Subsidy as % of loan outstanding			Subsidy per borrower (taka)			Savings per member (taka)	Savings per thousand taka loan outstanding (taka)
	RDP	RCP	Program aggregate	RDP	RCP	Program aggregate	RDP	RCP	Program aggregate		
1991	99.53	51.22	116.11	32.54	18.80	20.08	240.22	123.75	280.23	428	443
1992	103.71	89.87	164.75	41.17	22.81	25.51	240.47	208.38	382.11	457	459
1993	112.27	147.03	212.56	29.89	20.32	22.90	211.47	276.95	401.28	480	427
1994	99.36	142.87	242.14	17.18	18.46	17.91	295.01	354.72	327.40	452	346

Source: BRAC.



## **APPENDIX A**

### **The seventeen promises**

1. We will not do malpractice and injustice.
2. We will work hard and bring prosperity to our family.
3. We will send our children to school.
4. We will adopt family planning and keep our family size small.
5. We will try to be clean and keep our house tidy.
6. We will always drink pure water.
7. We will not keep our food uncovered and will wash our hands and face before we take our meal.
8. We will construct latrines and will not leave our stool where it doesn't belong.
9. We will cultivate vegetables and trees in and around our house.
10. We will try to help others under all circumstances.
11. We will fight against polygamy and injustices to our wives and all women.
12. We will be loyal to the organization and abide by its rules and regulations.
13. We will not sign anything without having a good understanding of what it means (we will look carefully before we act).
14. We will attend weekly meetings regularly and on time.
15. We will always abide by the decisions of the weekly group meetings.
16. We will regularly deposit our weekly savings.
17. If we receive a loan we will repay it on time.



## **Appendix B** **Financial Sustainability of the RDP<sup>1</sup>**

One of the BRAC's goals is reducing and eventually removing donor dependence which implies, as with any other operation, that BRAC needs to minimize its operating costs and attempt to maximize its revenue. However, although the organization stresses cost efficiency in many of its interventions, it will not sacrifice its broader development mission and quality of its services in an attempt to meet unrealistic numerical targets.

BRAC aims to make its credit operation cover its costs and generate a surplus that can cross subsidize its social services in the areas of education, health and paralegal programs. The sectoral interventions have an in-built cost recovery mechanism in the form of service charges which is designed to reduce the subsidy levels required to operate these programs over time.

Moreover, these sectoral programs are also developing profit making commercial enterprises which will provide another path towards their sustainability.

A key element of the sustainability of BRAC's credit operation is the transition of RDP to RCP branches. This change is not in name alone. After a concentrated four-year period of RDP activities including social conscientization, institution building, training, savings mobilization and credit the whole branch office is "transferred" to become a branch office of the Rural Credit Program (RCP). These branches combine both financial and social objectives: the development programs are carried out in line with RDP branches. If and when BRAC receives its banking license, the RCP branches will become part of the BRAC Bank network of rural branches. The granting of a license would mean that BRAC could offer its savings and loans package to a wider clientele leading to a larger disbursement volume and therefore, a more rapid route towards branch self-financing.

The idea is that RCP branches interest revenue from its lending operation ought to cover the cost of lending as well as generate a surplus that will cover part of BRAC's social programs. The cost of the credit operation includes salaries of all credit personnel plus the entire salary of

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<sup>1</sup> This section forms a part of the RDP IV Project Proposal: 1996-2000 published in July 1995.

the branch manager, accountant and cook, in addition to the cost of funds charged by head office to the RCP branch (9%), the interest paid on savings deposited (6%), head office overhead costs, loan loss provision (2%), depreciation, traveling and transportation.

**Table 1: Agewise surplus/(deficit) of RDP/RCP “model branches”**

	RDP					RCP				
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Surplus/ (deficit)	(999,710)	(716,100)	(417,350)	(107,000)	206,320	428,825	658,130	893,580	1,139,130	1,321,730

Over time there will be an increasing proportion of RCP branches and the target is that by the end of the year 2000 all branches will be RCP branches. This will be possible due to the slowdown in RDP's horizontal growth; no new branches will be opened after 1997 and therefore an increasing portion of existing branches will mature into self-sustaining ones.

**Table 2: Surplus/(deficit) of RCP branches (millions taka)**

	1990	1991	Actual						Projected			
			1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Net surplus/ (deficit)	(5.2)	18.0	41.9	32.0	51.1	76.6	120.9	143.9	151.8	188.0	242.7	281.6

However, organizational sustainability can not take place without high loan repayment rates; in other words “borrower viability” is crucial. BRAC recognizes this fact and attempts to make loan investments profitable by complementing credit with selective skill training, material supplies and marketing for certain microenterprises. There is also an implicit ceiling on the interest RDP can charge on its loans; there is a trade off between raising rates and repayment figures and moreover although village money lenders may charge far higher rates, BRAC needs to uphold its “moral mandate” not to make interest rates exorbitant.

BRAC has also devised a mechanism to make its development interventions through its five sector programs self sufficient over time. Each sector program has several subcomponents through which a “service charge” is collected from the program beneficiaries in return for the services provided by BRAC. This is similar to “user charges” for other public or merit goods.<sup>2</sup> For instance the fisheries program collects charges from its carp and sarputi pond projects as well as from its prawn nursery project participants. The Table A3 shows a summary picture of total projected service charge collection for each sector as well as the estimated costs of running the program. The costs include salaries of the concerned personnel at field and head office level, the training costs involved for both staff and group members, logistical expenses and other capital costs projected for the program. The biggest variable costs are training of new members to undertake the activity. Once members are trained they receive refresher courses each year and hence total costs decline over time and then level off. The sector programs expect service charge revenues to gradually increase and cover the costs of delivering the services by the fourth year of its introduction in the branch. BRAC aims to have introduced these sector programs for at least three, if not four, years in all branches by the year 2001. After the year 2000, the program staff numbers and the training cost components of the various sectors will be reduced dramatically, as new devices will be constructed to make training self financing, which accounts for the sharp drop in program costs in the year 2001.

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<sup>2</sup> An example of a user charge for a public goods are tolls on highways.

The table indicates that the extent of subsidy declines markedly during RDP IV except for the social forestry program. In the year 2001, the poultry and livestock sector as well as the fisheries sector are only marginally subsidy dependent. This is due to both internal revenues rising through service charge collection and also inflation adjusted costs declining over time.

**Table 3A: Subsidy requirements for RDP's sector programs**

Sector program		1996	1997	1998	1999	2000	2001
Poultry and livestock	Revenue	5,265,000	8,651,250	11,864,250	13,828,500	14,769,000	17,722,800
	Cost	44,286,535	49,895,421	33,315,573	24,745,179	22,295,771	18,930,038
	Requirement	39,021,535	41,244,171	21,451,323	10,916,679	7,526,771	1,207,238
	% subsidy	88.11	82.66	64.39	44.12	33.76	6.38
Fisheries	Revenue	3,997,170	5,773,050	7,082,190	8,363,520	9,085,725	10,902,870
	Cost	20,634,405	22,257,180	24,058,155	19,118,880	19,118,880	11,256,960
	Requirement	16,637,235	16,484,130	16,975,965	10,755,360	10,033,155	354,090
	% subsidy	80.63	74.06	70.56	56.26	52.48	3.15
Social forestry	Revenue	486,000	715,300	918,000	1,093,500	1,242,000	1,490,400
	Cost	15,842,558	16,064,693	16,699,204	16,179,458	16,946,313	7,095,921
	Requirement	15,356,558	15,349,193	15,781,204	15,085,958	15,704,313	5,605,521
	% subsidy	96.93	95.55	94.50	93.24	92.67	79.00
Sericulture and silk development	Revenue	840,000	1,800,000	3,520,000	5,200,000	5,625,000	6,750,000
	Cost	19,929,641	28,367,799	29,004,711	20,537,194	23,087,015	17,327,896
	Requirement	19,089,641	26,567,399	25,484,711	15,337,194	17,462,015	10,577,896
	% subsidy	95.79	93.65	87.86	74.68	75.64	61.05
Horticulture and vegetable cultivation	Revenue	5,944,500	7,093,000	8,172,000	8,932,500	9,202,500	11,043,000
	Cost	14,455,980	16,024,672	17,642,784	16,741,022	17,578,073	14,367,050
	Requirement	8,511,480	8,932,672	9,470,784	7,808,522	8,375,573	3,324,050
	% subsidy	58.88	55.74	53.68	46.64	47.65	23.14
<b>Total</b>	Revenue	16,532,670	24,031,800	31,556,440	37,418,020	39,924,225	47,909,070
	Cost	115,149,118	132,609,765	120,720,427	97,321,732	99,026,052	68,977,866
	Requirement	98,616,448	108,577,965	89,163,987	59,903,712	59,101,827	21,068,796
	% subsidy	85.64	81.88	73.86	61.55	59.68	30.54

*Notes:* Revenue is calculated by aggregating individual component service charges for the sector program. The costs have been adjusted for inflation. Requirement is the amount needed from donor funds for the specified year. Subsidy % has been calculated as the proportion of the funds needed for the sector which needs to be met through donor support for the specified year.

Savings are also a key component of organizational sustainability. In a World Bank comparative study<sup>3</sup> on four Asian rural finance institutions the one with the most impressive “subsidy dependence index” (SDI) figure also had the largest ratio of savings to its loan portfolio.<sup>4</sup> Savings mobilization is built in within BRAC’s operational model as illustrated in the

<sup>3</sup> Yaron 1994, “Successful Rural Finance Institutions,” World Bank Discussion Paper No. 150. Washington, DC.

<sup>4</sup> Unit Desa in Indonesia with a ratio of 1.1:1.0.

earlier “Savings and Credit” section. Dropout of members from RDP and withdrawal of this savings will not affect the sustainability calculations.

The Research and Evaluation Division intends to cover part of its expenses from outside sources in terms of research grants and consultancy fees. The health program will have to be donor-funded in RDP IV.

BRAC also values the social sustainability of its development interventions. The organization’s empowerment objectives have repercussions on intrahousehold and intravillage gender relations as well as the relationship between rich and poor. BRAC wishes to make the redressment in traditional inequalities permanent and hence will pay increased emphasis on devising participatory measures to ensure BRAC’s social sustainability goals are kept in mind both throughout the organization and amongst BRAC’s client group.



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