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ABSTRACT

BRAC initiated an innovative programme known as Challenging the Frontiers of Poverty Reduction (CFPR) in 2002 to address the extreme poverty in Bangladesh. Impact assessment studies on the first phase of CFPR (2002-06) have shown that the programme had significant positive impacts on the livelihoods of the participant households. However, whether this impact on livelihoods is sustainable or not remained the key research question. Based on panel data from three rounds of survey (2002, 2005 and 2008), this study explores sustainability of livelihood impacts of the first phase of CFPR. The findings show that programme impacts on income, employment, food security and asset holding were mostly sustainable in the long-run. Magnitude of impact on per capita income was found to be increased over time. Livestock and poultry holding increased substantially among the programme participants due to mainly transfer of these assets by the programme and the increase sustained in the long-run. The findings of this study also show that although the programme did not have significant impact on education in the short-run, in the long-run it had a modest positive impact on boys' primary enrolment. Qualitative exploration reveals that determination, confidence, social network, asset management skill, and hard work of the participant women are the key factors for effectively using the supports provided by the CFPR programme.

INTRODUCTION

Addressing extreme poverty in a more affirmative manner has become a key agenda in the development discourse all over the world. Bangladesh, one of the poorest countries in the world, despite its impressive economic growth and consistent reduction in the rate of poverty, is still struggling with the extreme poor, about one-forth of the country's total population.[1] In an effort to combat poverty, both the Government of Bangladesh and non-government organizations (NGO) have been implementing a number of programmes including the widely available microfinance, vulnerable group development (VGD), vulnerable group feeding (VGF), employment generation programme, and other forms of food and cash transfers. However, one important thing observed over the past decades is that there was always a cohort of people who slip through the cracks of every form of poverty alleviation strategy tried and tested. This group of people are mainly the extreme poor. To address this group BRAC initiated a programme known as challenging the Frontiers of Poverty Reduction (CFPR) in 2002. CFPR programme aims to improve the lives of the ultra poor through a combination of asset transfer, supplementary feeding, and livelihood support services as well as social awareness and other welfare activities.[2]

The first phase of CFPR programme (2002-2006) was implemented in 15 poorest districts covering 100,000 specially selected ultra poor households. Based on the lessons of this phase, the second phase was initiated with intensity of coverage and diversity in support packages. The ultra poor households are selected through a rigorous process. The households are ranked into different wealth categories through Participatory Rural Appraisal (PRA) technique and the households from the bottom category are checked for specific selection criteria in household visits.

A number of studies have been conducted to evaluate the CFPR phase I. These studies explored the targeting effectiveness of the programme (Sulaiman and Matin 2006) and investigated its impacts on the livelihoods of the participant households (Ahmed *et al.* 2009, Haseen 2007, Ahmed and Rana 2005, Rabbani *et al*.). In general, the impact studies showed that the programme had significant positive impacts on the livelihoods of the participant households. The grant-based approach of the programme has made the support package costly but cost-benefit analysis showed that it was significantly cost-effective; benefit-cost ratio was found to be 5.07 (Sinha *et al.* 2008).

The key concern of many of the poverty reducing interventions in Bangladesh is that they very often assist the ultra poor for a short-term; in other words, the accrued benefit is not sustainable over the longer-term.[3] CFPR aims to improve the lives of the ultra poor that could be sustained over the longer-term. The impact studies on CFPR, as mentioned earlier, however mainly investigated the short- to medium-term impacts of the programme. The key research question is thus whether the effectiveness of CFPR is sustainable or not. The present study has been undertaken to analyze the sustainability of livelihood impacts of CFPR i.e. longer-term effectiveness of the programme.

[1] Proportion of extreme poor varies by different estimates. For example, based on the cost of basic needs (CBN) method 25% population of Bangladesh live below lower poverty line while based on calorie intake method the proportion is 19% (BBS 2007).

[2] For detail of CFPR support packages see Ahmed *et al*. (2009).

[3] For example Hashemi (2001) showed that in IGVGD (Income Generation for Vulnerable Group Development), one of the well-known programmes for the extreme poor in Bangladesh, the beneficiaries could not sustain all the gains that they had made during the intervention period.

METHODS

The data

CFPR programme was initiated in 2002 in three poorest districts (Rangpur, Kurigram and Nilphamari) of Bangladesh. As part of the evaluation of the programme, a baseline survey was carried out during June- August, 2002 in these three districts. As mentioned earlier, CFPR beneficiaries were selected through participatory wealth ranking (PWR) technique. Usually house-holds in the poorest category of wealth rankings were considered as the 'ultra poor' though sometimes households in the poorest two categories were considered. Among the ultra poor, a group of households were selected to receive programme benefits based on the exclusion and inclusion criteria. These programme beneficiaries were called SUP (selected ultra poor) and the rest of the ultra poor were called NSUP (not selected ultra poor). The baseline survey included both the SUP and NSUP households. The NSUP households were surveyed for representing the comparison group of the impact assessment.

The sample size for baseline survey was 5,626 households, of which 2,633 households were SUP and 2,993 were NSUP. In the 2005 follow-up survey, 2,474 SUP and 2,754 NSUP households were successfully re-visited. The third round survey was conducted in 2008 where 2,251 SUP and 2,298 NSUP households were successfully re-visited. The present study is mainly based on 2002, 2005, and 2008 panel data consisting of 2,251 SUP and 2,298 NSUP households. Data were collected from the main female member of the households.[4] Food expenditure data were collected from a sub-sample of 400 households (200 SUP and 200 NSUP households) of the 2002 baseline survey. These households were surveyed in 2002, 2004, 2006 and 2008. In 2008 survey, 154 SUP and 144 NSUP households were successfully re-visited. Therefore, food expenditure was analyzed using a panel of 154 SUP and 144 NSUP households.

In addition to quantitative survey, qualitative information was collected on few beneficiary households through in-depth interviews in January, 2010. Four case studies were conducted to understand the impact pathways of the programme.

Analytical technique

To assess the CFPR programme we have used difference-in-difference technique. The fundamental equation for using this technique is as follows:

$$Yit = \alpha_0 + \alpha_1 A1 + \alpha_2 A2 + \alpha_3 p_C + \delta_1 A1P_C + \delta_2 A2P_C + \mu ic + vict \ldots\ldots\ldots\ldots\ldots\ldots (1)$$

where,

- Yit = outcome variable of interest for household (or individual) i at time t,
- $A1$ = (1) if year 2005
- $A2$ = (1) if year 2008
- Pc = (1) if programme intervention
- μic = all (observed and unobserved) household (or individual) level time invariant factors
- $vict$ = unobserved idiosyncratic household (or individual) and time-varying error.

The parameters of interest are δ_1 and δ_2; δ_1 is the double-difference estimator of the average programme effect for 2005 (relative to 2002), and δ_2 for 2008 (relative to 2002). We emphasize that the programme effects are

[4] For SUP households the main female member is the CFPR participant

identified by the randomized design; given the randomization of *Pc*, it (and any interactions involving it) is un-correlated with all observed or un-observed household level variables so that the δ_s can be consistently estimated. Indeed, the main reason to include household variables in a regression like this is to increase the precision of the estimates, not because we are concerned about the consistency of the estimator for δ. As a robustness check on the results (described later), we include household-level effects and find no substantial differences in the estimates of the programme effects, other than that they tend to improve the level of significance.

This paper measures impact of the programme in 2005 over 2002 (short-run impact) and in 2008 over 2002 (long-term impact). Impact was considered sustainable if the impact in 2008 over 2002 is greater than or equal to the impact in 2005 over 2002. Therefore, after estimating the double difference equation, we have tested whether the difference between δ_1 and δ_2 is statistically significant.

IMPACTS OF CFPR

Income

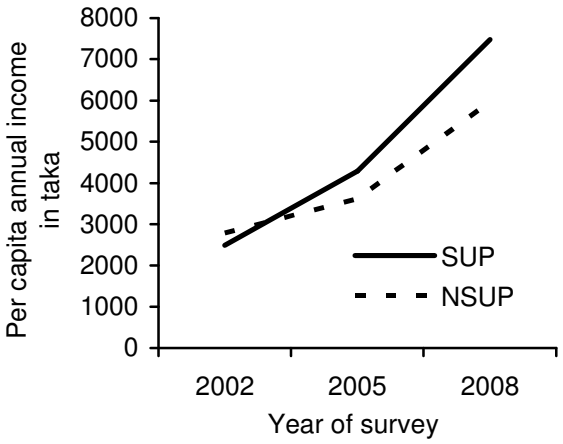
To estimate effect on per capita income we have used the difference-in-difference method first. Then, we have controlled the baseline household level characteristics in the difference-in-difference equation because, the comparison group (NSUP households), in many aspects of baseline characteristics, were different from the SUP households.

Trends in per capita income

Per capita income has been measured by summing up the increased value of assets owned and the net income from the income generating activity. The amount then has been deflated by the baseline 'value of money' to convert in real terms using rural consumer price index. It appears that in the baseline the NSUP households (comparison group) had higher per capita income compared to the SUP households (Fig. 1). In 2005, per capita income of the SUP households exceeded that of the NSUP households. In 2008, the gap in real per capita income between SUP and NSUP was sharper than that of 2005.

Analysis of distribution of per capita income reveals that in the baseline more than 80% of both NSUP and SUP households lived below \$0.5/day[5] and almost all households fall below \$1/day (Fig. 2). In 2008 proportion of SUP households below 0.5\$/a day decreased significantly to less than 20%. We also observed that the NSUP households improved substantially during the period; proportion of NSUP households living below \$0.5/day decreased to about 30% in 2008. What contributed to this significant improvement of the NSUP households? One issue is that the NSUP households were relatively better-off group of ultra poor in terms of economic states in the baseline who failed to arrive at final selection which might have contributed to increase their income.

Figure 1. Trends in per capita income (Taka, at 2002 constant price)



Impact on per capita income: difference-in-difference technique

Table 1 shows impact estimate of per capita income based on the regression equation (1). The regression was estimated using OLS. An alternative way to present difference-in-difference in income is shown in Annex 1 which allows us to see the trend in per capita income of the NSUP and SUP households as well as their difference-in-differences. Table 1 shows that difference-in-difference in per capita income for 2005 (over 2002) i.e. coefficient of year 5*beneficiary was 969 and that for 2008 (over 2002) was 1802. Both the difference-in-differences were found to be statistically significant at 1% level. Impact on per capita income in 2008 over 2002 was found to be almost double of that of 2005 over 2002 and this

[5] We have used 0.5\$/a day as the extreme poverty benchmark. At 2002 prices, the value of a dollar in purchasing power parity (PPP) is Tk. 21.60 or Tk. 7,880 per annum.

difference was found to be statistically significant at 1% level (Annex 1). This indicates that impact on per capita income was not only sustainable but also increased over time.

Impact on per capita income: difference-in-difference technique controlling for baseline characteristics

Previously difference-in-difference method was used to estimate the impact of the programme on per capita income of the households. However, one assumption of that method is that the intervention group and the control group possessed the same characteristics before the intervention took place. But empirical evidence shows that these two groups were significantly different in terms of baseline characteristics (Table 2). For example, 21% of NSUP had some kind of cash savings whereas for SUP it was 8%. Again 53% of NSUP households owned some form of physical assets, while for SUP households it was 37%.

Figure 2. Income distributions of the SUP and NSUP households

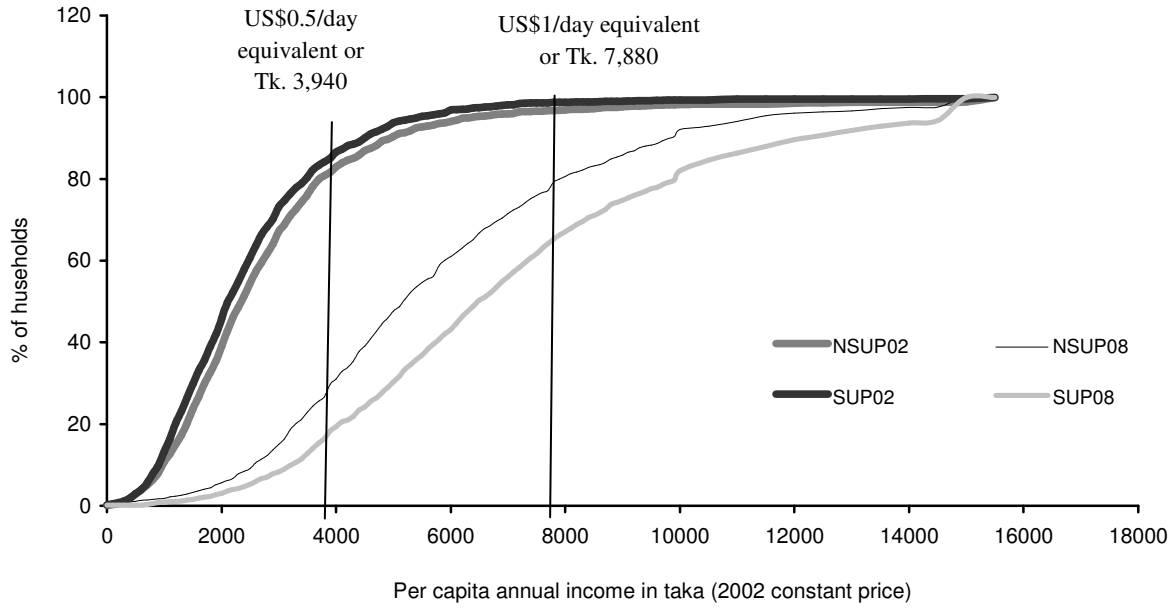


Table 1. Impact estimate of per capita income using difference-in-difference technique (Dependent variable: per capita annual income at 2002 constant price)

Regressors	Coefficient	
Year 5 (1=Year 2005, 0=Otherwise)	831	(9.59)***
Year 8 (1=Year 2008, 0=Otherwise)	3186	(36.78)***
Beneficiary (1=beneficiary, 0=Otherwise)	-292	(-3.35)***
Year 5* beneficiary	969	(7.88)***
Year 8* beneficiary	1802	(14.65)***
Constant	2785	(45)***
Observations	13620	
R-Squared	0.28	

Note: Robust t-statistics in parenthesis; *** denotes significant at 1% level.

Table 2. Baseline characteristics of the SUP and NSUP households

	SUP	NSUP	Difference
Faced at least one crisis (% of HHs)	82	73	9***
Land ownership (% of HHs)	49	63	-14***
Had cash savings (% of respondents)	8	21	-13***
Ownership of physical asset (% of HHs)	37	53	-16***
Female headed household (% of HHs)	40	25	15***
Household head is divorced/separated/ widowed (% of HHs)	34	21	13***
Age of the household head (years)	43	43	0
Have working aged (15-60) male member (% of HHs)	66	79	13***

Note: *** denotes significant at 1% level.

Now if these characteristics are correlated to per capita income, the estimates of effect on per capita income using simple difference-in-difference technique can end up being over-estimated or under-estimated. The objective of this section is estimate the effect on per capita income after controlling for the baseline characteristics. The baseline characteristics which were controlled for estimating impact on per capita income are discussed below.

We have controlled *sex of the household head* as one of the factors for estimating effect on per capita income because in general a male-headed household is expected to have higher per capita income compared to a female headed one. Now if the per capita income is positively (negatively) correlated with the household head being a male, then for not taking this difference under consideration, we might end up with over-estimated (or under-estimated) of the impact.

Marital status of the household head is likely to have some impact on the per capita income. Generally a single household head is able to spend more time on income generating activities and earns more compared to a married household head. In the baseline 34% of SUP household heads were separated/ divorced/widow/widower while for NSUP households the proportion was 21%.

We have considered several forms of education: *level of education of the household head, average level of education of the household members* and also *the maximum level of education in the household*. The rationale behind considering this information is that generally the higher the household head's level of education the more there is the probability of other members to be educated. And the higher the average or maximum level of education of the members the more they tend to earn. Here we have considered *level of education of the household head and also the average level of education for the household members* to cut off any influence of the household size.

Having more working aged (15-60 years) male members in the household increases the chances of having higher per capita income. Therefore, we incorporated the *number of working aged male member*. Household head is the important earning member of a household whose physical ability may affect per capita income; household head's age was thus added as one of the variables.

Having some sort of asset base before the intervention is expected to have a positive impact on per capita income of the households. In the baseline, there was significant difference in asset holding between the SUP and NSUP households. Therefore, we have considered whether the households were holding any asset in the baseline. This includes natural assets like land, physical assets (livestock, rickshaw or van) and financial assets like cash savings. Each of these is expected to have positive impact on per capita income.

After controlling for baseline characteristics, difference-in-difference in per capita income for 2005 over 2002 (coefficient of *Year 5* beneficiary* was found to be 995 (Table 3). In the last regression (regression results in Table 1) it was 969. On the other hand, difference-in-difference in per capita income for 2008 over 2002 (coefficient of *Year 8* beneficiary* was found to be 1,833 after controlling for the baseline characteristics (Table 3) while it was 1,802 in earlier regression (Table 1). Although

Table 3. Impact estimate of per capita income after controlling for baseline characteristics (Dependent variable: per capita annual income at 2002 constant price)

Explanatory variable	Coefficient
Year 5 (1=Year 2005, 0=Otherwise)	830 (9.74)***
Year 8 (1=Year 2008, 0=Otherwise)	3118 (36.18)***
Sex of the household head (male=1)	334 (3.84)***
Age of household head (years)	18 (8.91)***
Marital status of household head (divorced/separated/ widow/widower=1)	213 (3.55)***
Education of household head (years)	82 (3.75)***
Average schooling of household members (years)	528 (10.93)***
Maximum level of education (years)	-348 (-15.83)***
Number of working aged males	255 (5.65)***
Have own land (Yes=1)	10 (0.19)
Physical asset (Yes=1)	220 (4.25)***
Have cash saving (Yes=1)	507 (6.97)***
Beneficiary=1	-316 (-3.65)***
Year 5*beneficiary	995 (8.25)***
Year 8*beneficiary	1833 (15.2)***
Constant	924 (5.61)***
R squared	0.30
Number of observation	13612

Note: ***denotes significant at 1%, level. Values in the parentheses are the t-statistics.

the impact estimates do not vary significantly between the two techniques, we find that the t-ratios in the difference-in-difference regression controlling for baseline characteristics were higher than those estimated in simple difference-in-difference regression. According to the regression result, the coefficient of the variable sex of household head is 334 (Table 3). This illustrates that the per capita income is Tk. 334 more when the household head is male compared to a female. This outcome is statistically significant at 1% level. Number of working-aged male members, physical asset and cash savings in the baseline were found to be positively associated with per capita income. Although average years of education and years of education of the household head were found to be positively associated with per capita income, maximum years of education was found to be negatively associated.

Employment

Evidence, as mentioned earlier, shows that SUP households, on average, experienced an increase in per capita income due to programme participation. But, we need to understand the changes in employment dynamics that might have an effect on the income change of the SUP households. CFPR intends to promote self-employment among the targeted households; it is thus expected that prevalence of distress occupation like begging and housemaid among the participant households would decrease. In order to have an idea on the changes in employment dynamics, primary occupation of the working-aged females and males (15-60 years old) has been analyzed. Farm self-employment increased and day labouring decreased among the SUP working aged males in 2005 compared to 2002 (Table 4). Annex 2 reveals that both the difference-in-differences for farm self-employment and day labouring are statistically significant. Non-farm self-employment of the SUP working-aged males also increased during 2002-2005 sustaining over longer term while that of the NSUP remained almost the same over time. The difference-in-difference for proportion of working-aged males engaged in non-farm self-employment was found to be significant for both 2005 (over 2002) and 2008 (over 2002) (Annex 2).

Looking into the primary occupation of the working-aged females it was found that farm self-employment tremendously increased among the SUP working-aged females in 2005 although it slowed down to some extent in 2008 while that of the NSUP showed a modest increase during 2002-2008 (Table 5 and Annex 3). Begging which was primary occupation for 3.5% of the SUP women in 2002 decreased to 1.4% in 2008. Working as housemaid has also been found to be decreased among the SUP working-aged females and sustained over longer term. On the other hand, household chore which was primary occupation for 49% of the SUP working-aged females in baseline had fallen sharply to 21% in 2005 but increased to 31% in 2008.

In general, it was found that both working-aged males and females of the SUP households were engaged more in self-employment, as primary occupation, as a result of programme participation, decreasing their dependence on day labouring and housework. While such change was found to be remarkable in 2005, particularly for females, in 2008 primary occupation in farm self-employment of the SUP females fell to some extent. However, it is also important to look into the secondary occupation of the working-aged members, but information at this level was not available.

We have also analyzed the main sources of income of the households to understand the importance of different sources for income generation. This is also expected to shed light as regards employment dynamics of the household members. Figure 3 shows that in the baseline, dependency on day labouring as primary income source was predominant among both SUP and NSUP households. Over time this dependency has decreased significantly for the SUP households. During 2002-05 although

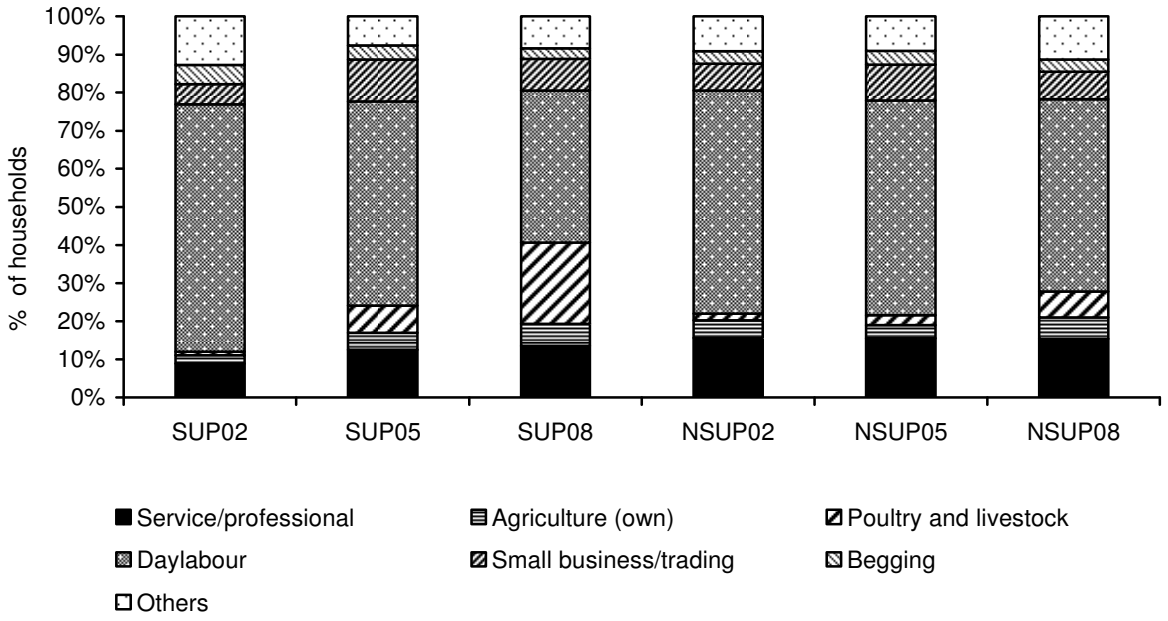
Table 4. Primary occupation of the working-aged (15-60 years) males

	2002		2005		2008	
	SUP	NSUP	SUP	NSUP	SUP	NSUP
Farm self-employment (%)	3.1	3.8	4.6	3.2	5.2	3.9
Day labour (%)	67	59	59	58	55	56
Non-farm salary employment (%)	2.9	3.5	2.6	2.8	4.7	4.2
Non-farm self-employment (%)	17	24	25	26	26	25
Begging (%)	1.5	1.0	0.7	0.8	0.5	0.4
Servant (%)	2.0	1.6	0.9	0.4	0.6	0.5
Student (%)	1.1	2.6	3.0	3.1	4.2	4.9
Unemployed (%)	5.7	4.4	4.1	5.8	3.6	5.1

Table 5. Primary occupation of the working- aged (15-60 years) females

	2002		2005		2008	
	SUP	NSUP	SUP	NSUP	SUP	NSUP
Farm self-employment (%)	0.2	0.3	44	7.9	37	11
Day labour (%)	24	14	15	18	12	16
Non-farm salary employment (%)	0.9	0.7	1.0	0.8	1.2	0.6
Non-farm self-employment (%)	4.3	3.6	7.2	3.5	4.2	4.1
Begging (%)	3.5	1.5	1.5	0.9	1.4	1.0
Servant/housemaid (%)	13.9	8.3	6.0	9	7.7	9.6
Student (%)	1.6	2.5	2.4	2.6	3.5	4.5
Unemployed (%)	2.7	2.9	1.8	2.5	1.7	1.7
Household chores (%)	49	67	21	55	32	52

Figure 3. Main source of income



NSUP households did not experience a decrease in dependency on day labouring as primary income source, in 2008 it decreased to some extent. Although poultry and livestock rearing remained a narrow income source for SUP households in 2002, its importance increased significantly in 2005 and further in 2008. Importance of small business and trading seems to increase significantly for the SUP households, but it remained almost the same for NSUP households.

Assets

CFPR intends to build an asset base among the targeted households so that they can generate income in a sustainable manner. Programme, as a single shot, transfers asset to the participant households. However, if any household loses assets due to various adverse consequences, a second round support is provided. Our earlier analysis indicated that the impact on income and employment was quite sustainable but it is important to analyze the asset base of the households to understand whether they are holding a substantial asset base that would enable them to generate income in future. The asset holding, we have analyzed here include physical, natural, financial, human and social assets.

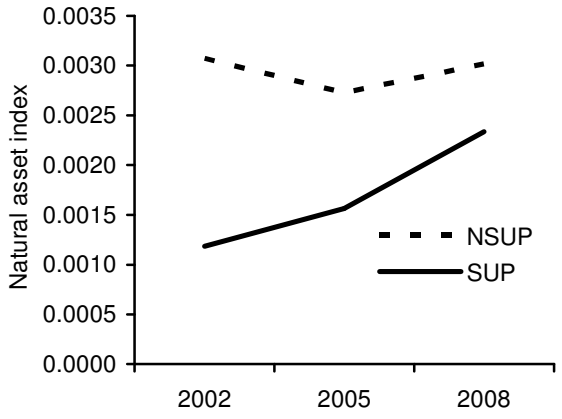
Natural and physical assets

Economic condition, particularly in rural areas, is strongly correlated with ownership of natural and physical assets (BBS 2007). Natural asset, like land, is not only a source of productivity and livelihoods but also a determinant of shelter and security. In order to analyze natural asset holding an index was constructed taking own homestead land, and own cultivable and uncultivable land (Fig. 4).[6] During 2002-05, the natural asset index fell for NSUP households but for SUP households it increased. During 2005-08 land index for SUP households shows a sharp increase lowering the gap between SUP and NSUP households. Annex 4 reveals that impact on land holding during 2002-2008 was higher than that of 2002-05. This indicates that long-run impact on land holding was higher than that of short-run impact.

For analyzing physical asset holding an index was constructed for cow, goat/sheep, rickshaw/ van, poultry, big tree, radio/tv, ornaments and

[6] Land index was constructed using the following formula: land index = (actual amount of land-minimum amount of land)/(maximum amount of land-minimum amount of land).

Figure 4. Natural asset (land) index of the SUP and NSUP households



tubewell[7]. Figure 5 shows that in the baseline physical asset base of the SUP households was lower than that of the NSUP households. But in 2005 asset base of the SUP households sharply increased and exceeded that of NSUP households and the increase seems to be remained sustained over the longer-term. Annex 4 reveals that for most of the physical assets programme had positive impact and it sustained over the longer-term. For example, in 2002 6% of the SUP households owned goat/sheep which increased to 25% in 2005 and 34% in 2008. Although there was an increase in goat/ sheep holding of the NSUP households, however, the magnitude of increase for NSUP was smaller than that of the SUP households. It should be noted here that some of the physical assets (such as livestock and poultry) analyzed here were transferred by the programme indicating that the increase in asset holding among the SUP households was, at least partly, due to programme support but it is encouraging to observe that the increase sustained over time indicating that programme was able to make a sustainable asset base among the households.

Financial assets

Financial asset index was constructed using savings, outstanding credit and outstanding lending (Fig. 6). Financial asset index was constructed in the way as was for physical asset index. This shows that during 2002-05 there was remarkable increase in financial asset of the SUP households. During 2005-08 financial asset of the NSUP households, in fact, decreased while that of the SUP households remained almost the same. Why did the financial asset increase so sharply? Annex 5 reveals that this is because of a sharp increase in saving behaviour and credit market participation. In the baseline, 8% of the SUP women had cash savings which increased to 94% in 2005 and then further to 98% in 2008. On the other hand, percentage of NSUP women with cash savings increased from 21% in 2002 to 30% in 2005 and to 34% in 2008.

Figure 5. Physical asset index of the SUP and NSUP households

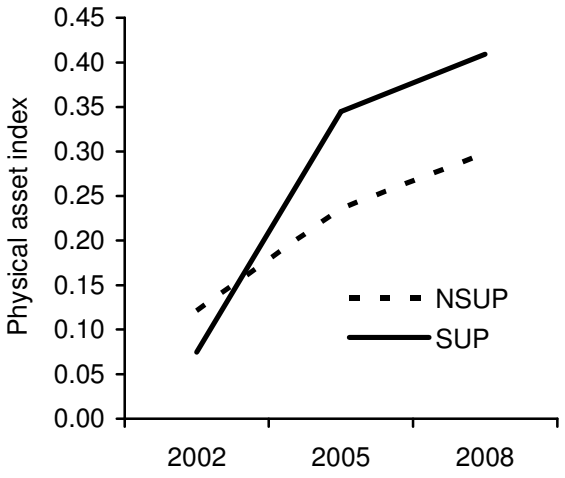
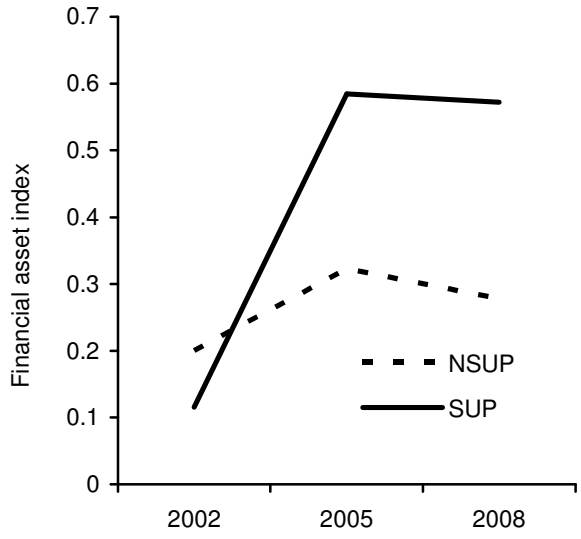


Figure 6. Financial asset index of the SUP and NSUP households



[7] To construct the index, for each type of asset we assigned a value "1" if the household owned the asset and "0" if did not own it. Then after summering up the scores it was divided by total number of assets.

Annex 5 also shows that in the baseline 27% of the SUP households had outstanding loans. The concept of CPFR approach was innovated mainly based on the general understanding that the ultra poor are largely bypassed from formal credit markets, even from microfinance.[8] In 2005 proportion of SUP and NSUP households with outstanding loan increased to 77% and 68% respectively. Programme participation was also found to have positive impact on the lending behaviour; Annex 5 reveals that proportion of SUP households with outstanding lending increased from 1% in 2002 to 19% in 2008 while the corresponding proportions for NSUP households were 1% and 6%.

Social asset

To understand the social asset truly one should conduct long-term anthropological studies (Ellis 2000). In this study we have discussed this issue briefly by investigating few indicators (Table 6 and Annex 6). It was found that in the baseline, compared to NSUP households, a lower proportion of SUP households got invitation from non-relative neighbour and believed that someone would lease land to them. In 2005, the SUP households were better off than the NSUP in these two indicators and this sustained over the longer term—the difference-in-difference for 2005 and 2008 over 2002 is statistically significant. For another indicator *helped by non-relative neighbour* we also found significant positive impacts during 2002-2008. Baseline information on the indicator *anybody taken advice from the women* was not available, but the two follow-up surveys showed that compared to the NSUP women a higher proportion of SUP women reported that someone had taken advice from them.

Human asset

Health

In order to analyze human asset we have used two indicators – health and education. Poor health depletes human capital and also reduces further capital accumulation. One of the key components of CFPR support package is health. We have examined the effect of the programme on the extent of illness, working days lost due to illness and spending ability to counter poor health among the households (Table 7 and Annex 7). In the baseline there was significant gap between proportions of sick members spent for medical treatment—the NSUP were more likely to spend for medical treatment. However, over time this gap reduced, and in 2008 the proportion was higher for SUP. It was found that the SUP households spent less for medical treatment than the NSUP in the baseline. Medical expenditure increased remarkably for the SUP households during 2002-2008 while that for the NSUP households remained almost the same. Both the difference-in-differences were found to be statistically significant with positive sign indicating that due to programme participation participant households' medical expenditure increased. An increase in loss of working days can be seen as a positive impact of the programme because it indicates that the households had the ability to forgo work. We see that the difference-in-differences for mean working days lost for 2005 and 2008 over 2002 are statistically significant with positive sign indicating that programme participation enabled the households to forgo more working days during illness.

Education

Education is another important component of human asset. Negative association between human capital (education) and poverty is common understanding from empirical studies. In CFPR, there is no direct component of education but it is not unexpected that through livelihood changes there might be an effect on education. Analyzing net enrolment, it was found that the programme did not have significant impact on the enrolment rate in the short-run, i.e. during 2002-2005 (Table 8 and Annex 8). Annex 8 shows that difference-in-difference for enrolment rates, either primary or secondary, for 2005 over 2002 is statistically insignificant. However, in the long-run (2002-2008) there was modest positive impact on net primary enrolment for boys; difference-in-difference for net primary enrolment of the boys in 2008 over 2002 is positive and statistically significant at 10% level. Although we did not observe significant impact on girl's net enrolment, the rate was found to be significantly high for both SUP and NSUP.

[8] For example, Rahman and Razzaque (2000) showed that poorest of the poor are less-represented in microfinance.

Table 6. Social assets

	2002		2005		2008	
	SUP	NSUP	SUP	NSUP	SUP	NSUP
Got invitation from non-relative neighbour (%HHs)	25	28	38	33	50	43
Helped by non-relative neighbour (%HHs)	17	15	40	37	55	47
Anybody taken advice (% respondent women)	-	-	37	21	45	34
Believed that someone would lease land (% of HHs)	39	44	47	30	60	42

Table 7. Prevalence of illness, medical treatment and working days lost

	2002		2005		2008	
	SUP	NSUP	SUP	NSUP	SUP	NSUP
Prevalence of illness (% of members)	17	16	18	18	15	15
% of sick members spent for treatment	67	73	81	81	88	86
Medical expenditure (mean, Tk.)	69	140	148	136	212	140
% of sick members lost working days	23	22	40	38	44	37
Mean working days lost	6	6	7	7	6	6

Table 8. Net enrolment of the boys and girls

	2002		2005		2008	
	SUP	NSUP	SUP	NSUP	SUP	NSUP
Net primary enrollment (boys) (%)	64.7	72.5	63.7	71.0	70.2	71.7
Net primary enrollment (girls) (%)	69.4	70.9	73.8	74.7	75.4	76.3
Net secondary enrollment (boys) (%)	4.3	9.3	3.8	7.2	8.4	12.0
Net secondary enrollment (girls) (%)	13.3	21.4	15.7	21.6	14.1	19.1

Housing condition

Housing condition is one of the important indicators in understanding economic condition of the households. An improvement in the economic condition of the poor induces them to spend more on fulfilling their basic needs including housing. Table 9 provides housing condition of the SUP and NSUP and Annex 9 provides details of the impact results with statistical significance test. Although in the baseline a lower proportion of SUP households had house with the roof made of tin compared to the NSUP households, the proportion was higher for SUP both in 2005 and 2008.

The difference-in-difference was found to be positive and statistically significant (Annex 9). With regard to value of the house, both SUP and NSUP households were found to improve over time but the difference-in-differences were found to be insignificant. On the other hand, we found a modest impact on ownership of house—the differences-in-differences are positive and statistically significant.

Water and sanitation

Both SUP and NSUP households were significantly well-off in the baseline with regard to use of safe water (for cooking and drinking) and it further improved for both the groups (Table 10 and Annex 10). Sanitation condition of the SUP shows a robust improvement over the years. Table 10 clearly shows that for the SUP households sanitary/slab latrine ownership dramatically increased during 2002-2005 which sustained in 2008. For the NSUP households, the sanitary latrine was also observed to have increased to some extent, particularly during 2005-2008. Difference-in-difference for proportion of households with sanitary latrine

Table 9. Housing condition

	2002		2005		2008	
	SUP	NSUP	SUP	NSUP	SUP	NSUP
Roof made of tin (% of HHs)	44	55	79	77	94	92
Value of the house (Tk.)	864	1562	1775	2408	4758	5300
Have own house (% of HHs)	93	95	96	95	98	96
Type of house						
Jhupri (shack) (% of HHs)	3	1.4	5	6	2	2
One slanting roof (% of HHs)	34	31	49	32	34	26
Two-piece roof (% of HHs)	44	42	25	26	35	34
Four-fold roof (% of HHs)	18.8	25.6	21	36	29	38

Table 10. Water and sanitation system

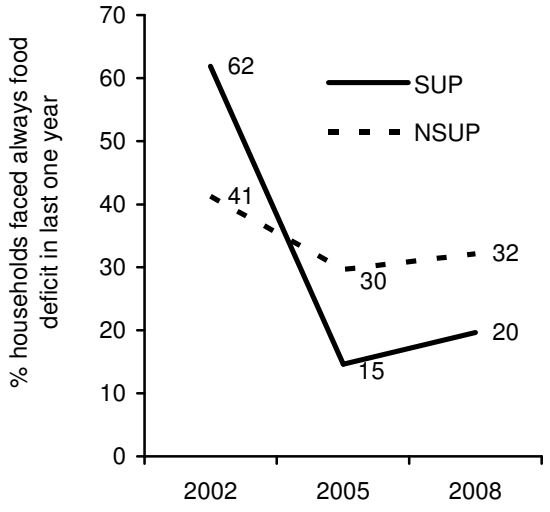
	2002		2005		2008	
	SUP	NSUP	SUP	NSUP	SUP	NSUP
Drink tubewell water (% of HHs)	97.7	97.5	99.6	99.0	99.8	99.7
Cook using tubewell water (% of HHs)	96.5	96.3	99.2	98.2	99.6	99.3
Have sanitary latrine (% of HHs)	2	4	77	43.0	72	56.7
Everyday uses sandal while using toilet (% of HHs)	-	-	86	69	81	69

was found to be positive and statistically significant for both 2005 and 2008 (Annex 10). The increase in sanitary latrine among the beneficiary households is not surprising because the programme often provides sanitary latrine to the SUP households. Practice of hygienic sanitation is also important besides using sanitary latrine among the members. To understand this, whether all the members of the household use sandal has been analyzed. Information on this was only available in the follow up surveys. However, we see significant difference between NSUP and SUP households probably indicating that SUP households were more aware regarding using sandal while using toilet.

Food security

Figure 7 shows self-perceived food insecurity of the surveyed households. In the baseline, chronic food insecurity among the SUP households was significantly high compared to the NSUP households (Fig. 7 and Annex 11). In 2005 proportion of SUP households with chronic food insecurity had fallen tremendously recording a fall of 47 percentage points whereas among the NSUP households it had fallen by 11 percentage points. However, in 2008 chronic food insecurity increased to some extent for both groups of households. As is known 2007/08 period experienced a significant food price hike which probably contributed to the increase in food insecurity of the households. Both the difference-in-differences were found to be positive and statistically significant.

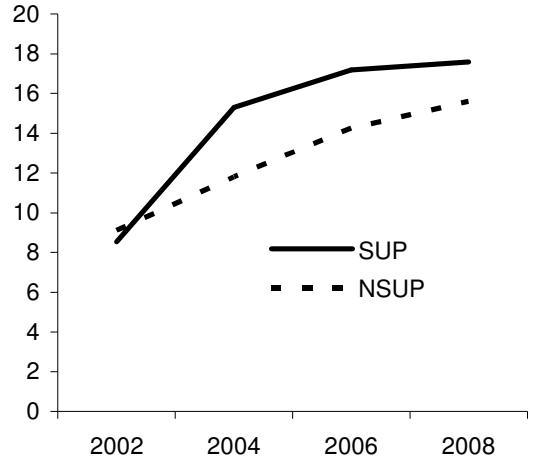
Figure 7. Self-perceived food insecurity



When we analyze per capita food expenditure it appears that the SUP households had lower per

capita food expenditure in 2002 compared to the NSUP households (Fig. 8 and Annex 12). In 2004, when the programme support ended, per capita food expenditure of the SUP households was significantly higher than that of the NSUP households. However, after 2006 the rate of increase in food expenditure was higher for NSUP households and the gap between SUP and NSUP slowed down to some extent. It should be noted here that since in 2006 per capita food expenditure of the SUP households reached to a level of high enough they might have then started to increase the non-food expenditure. Analysis of non-food expenditure might provide important insights regarding this; however, information on this was not collected through the impact surveys.

Figure 8. Per capita food expenditure (Tk. per day, 2002 constant price)



Role of asset in reducing food insecurity

Table 11 displays the correlation coefficients of the asset indices (physical, natural and financial) with incidence of chronic food insecurity. We have analyzed the correlation separately for SUP and NSUP as these assets holding of the SUP households were affected by programme support. Expectedly, greater household asset is negatively related to food insecurity. Across different types of assets, physical asset was found to have the highest correlation (in absolute term) with severe food insecurity for both SUP and NSUP. This indicates that, using physical assets as an entry point is a good strategy of CFPR programme. Financial asset was also found to have significant role in reducing severe food insecurity.

Table 11. Correlation between food insecurity and asset indices

	Incidence of severe food shortage		
	2002	2005	2008
SUP			
Financial Assets	-0.079**	-0.144***	-0.115***
Natural Assets	-0.05***	-0.039*	-0.115***
Physical Assets	-0.10***	-0.219***	-0.206***
NSUP			
Financial Assets	-0.144***	-0.182***	-0.184***
Natural Assets	-0.091***	-0.095***	-0.112***
Physical Assets	-0.207***	-0.293***	-0.247***

Note: ***, ** and * denote significant at 1%, 5% and 10% level, respectively.

Crisis and incidences

The multidimensionality of poverty elevates the magnitude of uncertainty and vulnerability. Feelings of insecurity, uncertainty and defence-lessness can aggressively diminish the current state of well-being (Calvo and Dercon 2007). To what extent the SUP households faced crises and incidences and how they coped up with these are thus important considerations for the impact assessment. Table 12 shows the variations and the extent of crises and incidences that the ultra poor households dealt with in the last one year of surveys and Annex 13 provides the details of the analysis. The most widespread crises were found to be damage of house due to covariate shocks and illness of the household members. In 2002 42% of the SUP households faced damage of dwellings which decreased to 19% in 2005 and 10% in 2008. Decreasing trend in damage of house has also been observed for NSUP households. Similar trend was also observed for serious illness of the household members. However, difference-in-differences for house damage and illness of household member was found to be statistically insignificant, indicating the programme did not have significant impact on house damage and severe illness of the household members (Annex 13).

Table 12. Crisis and incidence faced during the last one year of surveys by the SUP and NSUP households

	2002		2005		2008	
	SUP	NSUP	SUP	NSUP	SUP	NSUP
House damaged (% of HHs)	42	38	19	13	10	8
HH member seriously ill (% of HHs)	24	25	17	18	14	13
HH member got married (% of HHs)	5	5	6	7	7	6
Death of livestock (% of HHs)	3	5	9	3	7	3
Death of HH member (% of HHs)	3	3	2	2	2	2
Death of duck/hen (% of HHs)	-	-	23	23	32	25

When we look at the death of livestock we see that although for NSUP households such incidence has decreased during 2002-2005, for SUP households it has increased. Due to programme participation livestock holding significantly increased among the SUP households and thus they probably faced more loss of livestock. However, it is encouraging to observe that proportion of SUP households facing death of livestock has fallen in 2008 compared to 2005. Although we do not have information for death of duck/hen in the baseline, information for 2008 indicates that it was higher for SUP households although it remained the same for SUP and NSUP in 2005. It should be noted that duck/hen holding significantly increased among the SUP households due to programme participation. Proportion of households with hen/duck holding increased from 33% in 2002 to 63% in 2008 (Annex 4).

How did the households cope up with incidences and crises they faced? Analysis of expenses for the incidences may be an indicator to understand this. Table 13 and Annex 14 show proportion of households who spent for the incidences and crises. It was found that most of the households, either SUP or NSUP, spent for the incidences like damage of house, illness of household members and marriage of household members. For damage of house, difference-in-difference for 2008 was found to be statistically significant indicating that SUP households were more likely to spend for repairing damaged houses compared to the NSUP households (Annex 14).

Data on amount of money spent for the incidences were not collected in the baseline, but the two follow-up surveys did include this information. Analyzing those, we see that for SUP households the expenses increased from Tk. 1,700 to Tk. 4,932 during 2005-08 while for NSUP households the corresponding figures were Tk. 2,523 to Tk. 4,564. This probably can be seen as improved ability to spend of the SUP households for the incidences. What were the sources of the money spent for the incidences? We find that savings is one of the important sources, and dependency on this source increased over time but at a higher rate for SUP households (Table 14). Borrowing also appears to be another important source of money for

Table 13. Percentage of households spent for the crisis/incidence

	2002		2005		2008	
	SUP	NSUP	SUP	NSUP	SUP	NSUP
House damaged (% of HHs)	91	91	80	80	86	80
HH member seriously ill (% of HHs)	93	93	98	98	98	98
HH member got married (% of HHs)	93	89	98	96	97	98
Death of livestock (% of HHs)	7	19	10	12	16	19
Death of duck/hen (% of HHs)	-	-	2	1	6	4
Expenses for the incidences (Tk., mean) (at 2005 constant prices)	-	-	1700	2523	4932	4564

both NSUP and SUP households. In the baseline both SUP and NSUP households were found to be significantly dependent on relief to meet the expenses but that decreased significantly in both 2005 and 2008 compared to 2002. Sale of asset was found to be negligible for both SUP and NSUP households.

Graduation

Main objective of the CFPR programme is to create graduation pathways for the extreme poor and ultimately lift them out of poverty. Our analysis of impact of the programme using a longitudinal panel data reveals that the programme had significant positive impacts on the livelihoods of the participant households and it sustained in the long-run. However, the key question is what proportion of the intervened households improved their livelihoods and consequently crossed the threshold of extreme poverty (or poverty). Although simply income or calorie intake analysis is widely used as single indicator for measuring poverty, each has its own limitation. Furthermore, CFPR programme intends to address multi-dimensional aspects of extreme poverty. Therefore, without depending on single indicator, we have used 10 simple indicators for analyzing graduation of the households. These indicators are related to food security, income source diversification, financial and physical asset, water and sanitation, housing, education and family planning (Table 15). Table 15 reveals that the SUP households significantly improved their status during 2002-08.

Table 14. Sources of expenditure to cope with crisis/incidence (multiple responses allowed)

(% of cases)

	2002		2005		2008	
	SUP	NSUP	SUP	NSUP	SUP	NSUP
Savings	24	30	78	71	69	59
Asset sale	7	7	9	10	9	4
HH member had to migrate to find work	6	6	1	1	1	1
Relief	48	36	8	12	2	4
Borrowing	35	42	21	27	20	24
Others	10	8	10	13	9	14
Total	129	130	126	134	109	107

Table 15. Indicators for graduation

(% of households)

Sl no	Indicators	2002		2005		2008	
		SUP	NSUP	SUP	NSUP	SUP	NSUP
1	Did not face severe food deficit in last one year	38	59	85	70	80	68
2	Have three income sources	37	40	58	43	79	51
3	Have sanitary latrine	2	4	77	43	72	57
4	House with roof made of tin	44	55	79	77	94	92
5	Households own livestock/poultry	36	52	95	63	92	61
6	Drink tube-well water	97.7	97.5	99.6	99.0	99.8	99.7
7	Have cash savings	8	25	94	30	98	34
8	School going aged children goes to school	49	55	56.7	62.2	56.4	60.4
9	Everybody of the household wear sandal	56	67	92	87	95	92
10	Eligible couples adopt family planning	43	47	73	63	70	68

It needs to be mentioned here that not all indicators are applicable for all households. Two such indicators are the school-going status of the children and adopting family planning. Because in some households there was no school-going aged child and couples were not eligible for family planning. All other eight indicators are applicable for all households.

Now the question is what is the maximum number of indicators that needs to be satisfied by a household in order to be considered as graduated? We may want to set a threshold, where more than half of the relevant indicators will have to be satisfied. Among the households for whom all indicators (10) are applicable, if any household satisfy six indicators, it should be considered as graduated. Table 16 shows distribution of the households (for whom all the 10 indicators are applicable) by number of indicators they satisfied. We found that 98% of the SUP households satisfied at least six indicators in 2008. The corresponding proportion for NSUP households was 82%. But we see that in the baseline the NSUP households were significantly better off than the SUP; 45% of the NSUP households satisfied six indicators against 21% among the SUP.

Even if we restrict the graduation threshold indicators at seven (out of 10), the graduation rate was found to be 92% for SUP households against 64% for NSUP.

The households for whom nine indicators were applicable, their distribution was presented in Annex 15. Here the graduation rate, assuming five indicators out of nine as the threshold level (more than half), was found to be 98%. But, if we fix six indicators as the threshold, the rate was found to be 92% for SUP households. The households for whom eight indicators were applicable, their distribution is shown in Annex 16. If we assume five indicators (more than half) as the threshold level, we found that rate of graduation for SUP in 2008 was 96%.

Table 16. Graduation of the SUP and NSUP households (for whom all the 10 indicators were applicable)

Number of indicators satisfied	2002		2005		2008	
	SUP	NSUP	SUP	NSUP	SUP	NSUP
10 (all)	0.0	0.1	16.0	2.9	24.2	6.3
At least 9	0.5	3.3	50.6	13.8	56.8	23.5
At least 8	2.0	11.0	76.2	36.1	78.8	43.9
At least 7	8.1	25.1	90.6	56.8	92.2	64.1
At least 6	**21.2**	**45.2**	**96.4**	**75.4**	**98.4**	**82.2**
At least 5	41.2	64.6	98.2	88.8	99.6	92.8
At least 4	63.3	82.2	99.4	95.6	100.0	97.5
At least 3	84.4	93.5	99.8	98.8	100.0	99.2
At least 2	96.1	98.2	100.0	100.0	100.0	99.9
At least 1	100	100	-	-	100.0	100.0

IMPACT PATHWAYS: QUALITATIVE EXPLORATION

Preceding findings showed that programme had, on average, significant positive impacts on the livelihoods of the participant households. In this section, we present qualitative exploration to help explain the impact pathways of the programme. We present four case studies. These are real stories from people behind the numbers, told in their own words.

Dholi Bala's hard working led her to prosperity

Status before programme participation

Dholi Bala got married when she was 15. Her husband was landless and worked as a day labourer. Dholi Bala herself also came from a poor family but her brother had some homestead land and she lived in her brothers' homestead after marriage. Dholi Bala started to work as a housemaid immediately after her marriage. She had only one daughter and could not afford her schooling after she passed class four. Dholi Bala's life became challenging when her husband became paralyzed in 1997. She had to meet her family expenditure and husband's treatment cost with her meagre amount of income from working as housemaid. After suffering from paralysis for three years, her husband died in 2000.

Livelihood challenge for Dholi Bala was then not only limited to meeting the meals for the two family members but also to managing money for marrying off her daughter. However, she settled her daughter's marriage with an old widower, because she would not need to give any dowry for this marriage. Her daughter was not willing to marry the old man and even went into starvation for few days to resist this. Later on, her neighbours helped Dholi Bala financially to marry off her daughter with another person.

Status after programme participation

Dholi Bala was selected as a TUP beneficiary in 2002. She received two cows from BRAC as well as few tins for making sheds for the cows. She started cow rearing. Besides, she continued to work as a day labourer whenever she could because after taking care of the cows she had some spare time which she didn't want to spend without earning. As she mentioned, *"Bose theke ki hobe, kaje gele to kichu rojgar hobe*" (why shall I spend the time without doing anything?; if I work I would earn some money). But she could not work the same hours as a day labourer as she did before taking assets from CFPR programme. The weekly stipend that she received from BRAC was thus partly used for her consumption expenditure, and the rest she saved in BRAC savings account.

The two cows she received from BRAC gave three calves. In 2006, Dholi Bala gave two of the cows to her daughter. Because, she is concerned not only about her own welfare but also about her daughter. She mentioned, "*Meye bhalo thakle amio bhalo thakbo, tai meye ke goru diyechi*" (if my daughter is well I would be well, so I have given her the cows).

Dholi Bala had a determination to buy homestead land and build house on it. She sold two of her cows for Tk. 10,000 and bought two decimals of homestead land and built up a house on that land, with roof made of tin, and walls with bamboo. She grows vegetables in the roof of her house and has planted some trees in the homestead. Dholi Bala hopes that once the trees will be big enough, she will sell those and buy cultivable land as she thinks cultivable land is very important for livelihoods. She has a sanitary latrine that she received from BRAC. She also has installed a tube-well in her house. Dholi Bala has separate kitchen. In her main living room there are two beds, one chair and one table. Now Dholi Bala has one cow and savings of Tk. 2,500 in BRAC savings account.

Dholi Bala has obtained three loans from BRAC. She mentioned that before participation in the CFPR programme she never took loan from any NGO, as she was afraid to repay the loans. With the first loan she bought few goats which she

sold later on and gave the money to her daughter. She gave the second loan to her daughter as well. The loans were repaid by her daughter through Dholi Bala. Her daughter had used that money for land cultivation. Dholi Bala lives alone in her house. Her daughter lives in a distant village in the same *upazila*. Dholi Bala was concerned about who would take care of her if she fell sick or faced any kind of problem. So she has adopted a son who takes care of her when needed. The third loan Dholi Bala obtained from BRAC has been given to her adopted son. She now plans to obtain another loan and start puffed rice business.

Dholi Bala thinks that she should be eligible for old age allowance. She once communicated with the Chairman of the Union Parishad for old age allowance. But she did not get that. Chairman mentioned that since she is enjoying benefits from BRAC, she should not be eligible for old age allowance.

Points to note

- Dholi Bala was able to multiply her asset that she received from BRAC although she transferred some of the assets to her daughter. She has bought two decimals of homestead land and built a house on it.
- Dholi Bala did not face any major crisis after her CFPR membership, which probably helped her build up an asset base.
- Dholi Bala is very hard working and has well planning that led her to prosperity.

Crisis and incidence did not end miseries of Hasina

Status before programme participation

Grown up in a poor family Hasina was married off at the age of 14 years with an old man who was divorced and had three children from the first wife. For a five-member landless household, Hasina and her husband were the only earners and both of them worked as day labourers. Hasina also gave birth to four children—three daughters and one son. The nine member family lived in a hut. They had no cultivable land and were completely dependent on earning from day labouring.

Status after programme participation

After selected as a CFPR beneficiary, Hasina received 36 hens, two goats and few tins for making cage for the hens and sheds for the goats. The weekly subsistence allowance she received from BRAC was used for family consumption expenditure because she had to spend time for hen rearing for which she had to forgo working days, as she explained. BRAC continued to provide input support for the hen for seven months. Once, three hens died of disease and the rest grew up and started laying eggs. A proportion of the eggs were used for family consumption and the rest were sold. But after the end of BRAC's input support she found that hen rearing was not profitable after spending for inputs. So she sold the hens and the goats and bought a cow.

By the time, Hasina's step sons separated themselves from their parents after their marriages. Hasina also married off her eldest daughter in 2006 and paid dowry of Tk. 10,000. As the large household was extremely dependent on earning from day labouring, it was difficult for her to manage the money without depleting of her meagre amount of asset. Thus she sold the cow. Later on when marrying off another daughter, Hasina took help from *Bangladesh Jamat-e-Islami a right wing political party.*

After graduating from the grant phase, Hasina took three loans from BRAC although she never participated in any NGO activities before her CFPR programme participation. The first loan was used for repairing the house. Hasina described that her homestead condition was dilapidated when she joined the CFPR programme. Coping up with the crisis and managing her daily meals for the large family, it was impossible for her to improve the housing condition. Therefore, she repaired the house using the BRAC loan and repaid it from their earnings from day labouring.

Hasina took the second loan from BRAC and invested the money in paddy husking business. Her husband mainly took care of the business and Hasina assisted him. They used to purchase paddy from the nearby market and prepared rice and then sold it. The business was running well but soon her husband became sick and the business was stopped. When asked why she did not continue the business

herself? He replied that she did not have the skill to run the business. In her own words "*Ami to bazar theke dhan kinte gele kibhabe doradam korte hobe ta jani na*—(I do not know how to bargain to buy paddy from the market)."

After few days, Hasina took the third loan and purchased a *van* for her son. His earning was quite good. But after few days, Hasina had to sell the *van* to meet the expenses of her husband's treatment. She even had to sell the tins of her house for this purpose. She spent about Tk. 12,000 for her husband's treatment. But that could not save her husband's life.

Now Hasina's family has three members, her youngest daughter, son and herself. Both Hasina and her son work as day labourers. Her youngest daughter goes to school and reads in class five. But Hasina does not have any productive asset. She sold everything for her husband's treatment and daughter's marriage. She could be well-off if she could sustain her income generating activity (IGA) that she started with support from BRAC and/or could continue her small business that she started by investing the money taking loans from BRAC.

Points to note

- Hasina experienced few incidences for which she had to deplete her asset base such as marrying off her daughters and treatment of her husband.
- Although Hasina never participated in microfinance before CFPR programme participation, she is now effectively participating in BRAC microfinance. This indicates that her confidence has increased due to programme participation.
- Although Hasina has struggled to improve her livelihood through micro-finance participation she failed due to various adverse consequences.
- Hasina has not given up her hope; she plans to take another loan from BRAC to buy a rickshaw for his son.

Social network and well planning helped Shajon Bewa improve her livelihoods

Status before programme participation

Shajon Bewa lost her husband before the independence of Bangladesh in 1971. She had two daughters and a son. She married off her daughters, but her younger daughter was mentally disabled. So, few years after her marriage the youngest one came back to her mother with her daughter. Shajon Bewa thus had to maintain a four-member family with the income from day labouring by herself and her son. But there was scarcity of work and her son sometimes used to migrate out of village to find work. Shajon Bewa did not have any land and lived in a hut made on her relative's land. In this backdrop Shajon Bewa was selected as a beneficiary for CFPR support.

Status after programme participation

Shajon Bewa received 36 hens, two goats and few tins for making cages for the hens and shed for goats. She then started to spend time on hen and goat rearing. She also worked as day labourer whenever she got time. However, after few days 18 hens died of disease. Then she sold the rest of the hens and goats, and bought a cow. The daily subsistence allowance Shajon Bewa received from BRAC was partly used for consumption expenditure and the rest of the amount was saved. Later on, with this savings she purchased another cow.

Shajon Bewa informed that she managed to obtain some bamboos from the *Gram Daridra Bimochon Committee* (GDBC) committee members to repair the cow-shed.

Once the cows grew up, Shajon Bewa sold one of them and bought few acres of homestead land. She has some trees on her homestead land. Shajon Bewa now has one cow and it is expected to give birth soon. Current market value of the cow is about Tk. 20,000. When asked whether she would sell the cow soon, she replied "*na ami bikri korbo na; ami chai je amar goaal bhora goru thakbe*" (No, I will not sell the cow, I wish to have a lot of cows).

In 2004 her son got married and started living separately at her homestead. Her son still works as a day labourer and sometimes migrates out of district for work.

Shajon Bewa is now enjoying the old age allowance; she has managed to obtain it with the help of local ward member with whom she has good relation. She informed that sometimes she works as day labourer.

Shajon Bewa's social, legal and political awareness seemed to be impressive; she helps the pregnant women of her neighbourhood by taking them to the nearby hospital. She hopes not to marry off her granddaughter before reaching the age of 18 years. Her granddaughter is now going to school. When we talked with her, she recalled all the awareness-related issues that BRAC PO taught her during her CFPR membership.

Shajon Bewa obtained three loans from BRAC. She gave part of the first loan to her eldest daughter for meeting the expenses of her granddaughter's marriage. With the rest of the money she settled the expenses related to registering the homestead land which she bought by selling one of her cows. The second loan was spent on repairing of her house. Since she is enjoying old age allowance and earns sometimes from day labouring, she managed to repay the loans quite smoothly.

Points to note

- Shahjon Bewa is hard working and has well planning that helped improve her livelihoods. She has been able to build strong asset base through proper use of BRAC support.
- She has good social networks for which she was able to get old age allowance.
- Her social awareness is impressive. She helps the pregnant women of her locality by taking them to the hospital.

Asset management skill and confidence helped Anisa improve her livelihoods

Status before programme participation

Anisa got married when she was 15 years old. Her husband had two decimals of homestead land but no cultivable land. He worked as an agricultural day labourer and earned about Tk. 20-30 per day. But, he could not get work all year around and sometimes had to remain unemployed for three to four months in a year. Anisa thus started to work as a housemaid. As a housemaid, she often had to work for one meal a day. Her problems continued to culminate as the family expanded with their three children. She explained, "We had to live in perpetual hardship. Despite our hard work, we were unable to meet the basic needs…in many days we could not manage two full meals." However, Anisa realized the importance of education. Despite the hardship and impoverishment, she managed to educate her second son up to class V.

Status after programme participation

In 2002 Anisa was selected as a member for the CFPR support. She received training on poultry rearing at the local BRAC office and got 36 hens and three goats from BRAC. She also received a tubewell and a sanitary latrine. She then started to spend considerable time in taking care of the hens and the goats. However, she worked as a housemaid whenever she had an opportunity. In her absence, her sons used to take care of the hens and goats. The hens started to lay eggs after few months. She sold the eggs in the local market. Her goats also gave birth to three kids within a year. She sold the kids for Tk. 2,500 and saved it in her current account with BRAC. But unfortunately, after few months the egg production decreased substantially. She discussed this with BRAC staff, and as per their advices, she sold the hens and bought a cow.

She neither had any training nor any experience in cattle rearing. Even then, she managed to rear both the cow and goats successfully. Within few months her cow gave birth to a calf and started to give milk. She kept a portion of the milk for her family's consumption and sold the rest; saved the earnings with her BRAC savings account. As per the advice of the BRAC PO, Anisa also started vegetable gardening in her homestead. She used the vegetables for her family's consumption and also earned some money by selling the surplus in the local market.

She informed that during the two-year support phase, BRAC staff visited her on weekly basis and taught her the basic health and legal issues. She also learned to count numbers and write her name.

In 2007, Anisa sold one of her cows for Tk. 8,000. She lent the money to one of her neighbours at interest of Tk. 100 per month. In the meantime, two of her sons started to work as assistant to mason. They each earned Tk. 50-60 per day. With the accumulated savings

from her enterprises and contributions from her sons, she bought ten decimals of homestead land where she built a tin-roofed house.

At present, Anisa's husband no longer works as a day labourer rather he collects money for a local mosque. Anisa now has two cows and a goat. Every year, she buys goat kids and raises them till the Eid-ul-Azha so that she can sell goats at a higher price. She considers it as a profitable venture in spite of the difficulties associated with management.

Anisa mentioned, "Since my husband is a simple-minded man, I took my own decisions. My financial condition has improved a lot and I am now confident about operating new ventures. No one can easily deceive me now. And for all of these, I owe to BRAC. BRAC has showed me the path. I simply worked hard and got the results." Surprisingly, Anisa never took loan from BRAC. She told us that she never required one since she was able to use her own resources and improve a lot thereby.

Anisa's elder son recently got married and started to live separately right next to her house. Anisa said that she did not want to depend on her sons when she and her husband would not be able to work anymore. That is why, she is trying to accumulate savings through investing in income generating activities. She plans to buy more land and dreams of a better tomorrow.

Points to note

- Anisa had excellent asset manage-ment skill which helped her multiply asset base.
- Due to programme participation she became more confident in undertaking new income generating activities. She has now multiple sources of income.
- She did not face major crisis which probably did not make her any unusual depletion of asset base.

CONCLUSION

Sustainable livelihood improvement of the ultra poor is the key objective of CFPR. A number of earlier studies investigated short- to medium-term impacts of CFPR which showed that programme had significant positive impacts on the livelihoods of participant households. This study intends to analyze sustainability of livelihood impacts, i.e. longer-term impacts of CFPR. This study was based on panel data from three rounds of surveys (2002, 2005 and 2008).

Programme participation was found to have remarkable positive impacts on per capita income of the households. The magnitude of impact on per capita income was not only sustainable over long-term but also increased over time. Self-employment, as primary occupation of the working-aged members, particularly females tremendously increased in 2005 due to programme participation but in 2008 it decreased to some extent.

The CFPR programme had little impact on land holding in 2005 (i.e. short-term impact), however, in 2008 impact on land holding was remarkable. Physical asset holding, although it was transferred by the programme, showed significant improvement in 2005 and sustained over longer-term indicating that programme helped the participant households generate a sustainable physical asset base. It was found that financial asset (savings, lending, and borrowing) saving behaviour showed dramatic improvement in 2005 owing to programme.

Participant households were found to increase health expenses and forgo more working days during illness due to programme participation. An increase in loss of working days can be seen as a positive impact of the programme because it indicates that the households had the ability to forgo work. There was dramatic improvement in sanitary latrine holding among the participant households. Households' food security remarkably increased due to programme participation and the gain sustained over longer-term. Although programme participation did not have significant impact on education in the short-term; however, in the long-term a modest positive impact on boys' net primary enrolment was observed.

Using qualitative exploration, we found that determination, confidence, social network, asset management skill, and hard working of the participant women are the key factors for effectively using the supports by the CFPR programme.

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ANNEX

Annex 1. Trends in per capita income, and their differences and difference-in-differences

	2002			2005			2008			Impact in 2005 over 2002 (DiD)	Impact in 2008 over 2002 (DiD)	Difference between impacts in 2005 and 2008
	SUP	NSUP	Difference	SUP	NSUP	Difference	SUP	NSUP	Difference			
	(1)	(2)	(3=1-2)	(4)	(5)	(6=4-5)	(7)	(8)	(9=7-8)	(10=6-3)	(11=9-3)	(12=11-10)
Per capita Income (Tk., 2002 constant price)	2492	2785	-292*	4293	3615	678***	7480	5970	1510***	969***	1802***	833***

Note: ***, * significant at 1%, and 10% level, respectively.

Annex 2. Impact on primary occupation of the working aged (15-60 years) males

	2002			2005			2008			Impact in 2005 over 2002 (DiD)	Impact in 2008 over 2002 (DiD)	Difference between impacts in 2005 & 2008
	SUP	NSUP	Difference	SUP	NSUP	Difference	SUP	NSUP	Difference			
	(1)	(2)	(3=1-2)	(4)	(5)	(6=4-5)	(7)	(8)	(9=7-8)	(10=6-3)	(11=9-3)	(12=11-10)
Farm self-employment (%)	3.1	3.8	-0.7	4.6	3.2	1.4**	5.2	3.9	1.3**	2.1**	2.0**	-0.1
Day labour (%)	67	59	7.7***	59	58	0.8	55	56	-1.4	-7.0***	-9.1***	-2.2
Non-farm salary employment (%)	2.9	3.5	-0.7	2.6	2.8	-0.1	4.7	4.2	0.4	0.5	1.1	06
Non-farm self-employment (%)	17	24	-7.1***	25	26	-0.6	26	25	1.7	6. 5***	8.8***	2.3
Begging (%)	1.5	1.0	0.5	0.7	0.8	0.02	0.5	0.4	0.1	-0.5	-0.5	0
Servant (%)	2.0	1. 6	0.4	0.9	0.4	0.4*	0.6	0.5	0.2	-0.02	-0.3	-0.28
Student (%)	1.1	2.6	-1.6***	3.0	3.1	-0.1	4.2	4.9	-0.8	1. 5*	0.8	-0.7
Unemployed (%)	5.7	4.4	1.3*	4.1	5.8	-1.7**	3.6	5.1	-1.5**	-3.0***	-2.8***	0.2

Note: ***, **, * denote significant at 1%, 5% and 10% level, respectively.

Annex 3. Impact on primary occupation of the working aged (15-60 years) females

	2002			2005			2008			Impact in 2005 over 2002 (DiD)	Impact in 2008 over 2002 (DiD)	Difference between impacts in 2005 & 2008
	SUP	NSUP	Difference	SUP	NSUP	Difference	SUP	NSUP	Difference			
	(1)	(2)	(3=1-2)	(4)	(5)	(6=4-5)	(7)	(8)	(9=7-8)	(10=6-3)	(11=9-3)	(12=11-10)
Farm self-employment (%)	0.2	0.3	-0.1	44	7.9	35.9***	37	11	25.7***	36.0***	25.8***	-10.1***
Day labour (%)	24	14	10.6***	15	18	-2.4**	12	16	-4.0***	-13.0***	-14.6***	-1.6
Non-farm salary employment (%)	0.9	0.7	0.2	1.0	0.8	0.2	1.2	0.6	0.5**	0.02	0.4	0.4
Non-farm self employment (%)	4.3	3.6	0.6	7.2	3.5	3.7***	4.2	4.1	0.1	3.0***	-0.6	-3.6***
Begging (%)	3.5	1.5	1.9***	1.5	0.9	0.6*	1.4	1.0	0.4	-1.4***	-1.5***	-0.1
Housemaid/servant (%)	13.9	8.3	5.5***	6	9	-3.1***	7.7	9.6	-1.9**	-8.7***	-7.4***	1.3
Student (%)	1.6	2.5	-0. 9**	2.4	2.6	-0.2	3.5	4.5	-1.0*	0.7	-0.1	-0.8
Unemployed (%)	2.7	2.9	-0.2	1.8	2.5	-0.6	1.7	1.7	0.03	-0.5	0.2	0.7
Household chores (%)	49	67	-17.8***	21	55	-33.9***	32	52	-20.0***	-16.2***	-2.2	13.9***

Note: ***, **, * denote significant at 1%, 5% and 10% level, respectively.

Annex 4. Impact on natural and physical assets

	2002			2005			2008			Impact in 2005 over 2002 (DiD)	Impact in 2008 over 2002 (DiD)	Difference between impacts in 2005 & 2008
	SUP	NSUP	Difference	SUP	NSUP	Difference	SUP	NSUP	Difference			
	(1)	(2)	(3=1-2)	(4)	(5)	(6=4-5)	(7)	(8)	(9=7-8)	(10=6-3)	(11=9-3)	(12=11-10)
% of households own the asset												
Homestead land	48.1	61.6	-13.51***	50.1	56.5	-6.37***	65.2	66.0	-0.84	7.13*	12.66***	5.53
Cultivable land	2.0	7.9	-5.93***	5.3	7.4	-2.11	8.7	7.4	1.26	3.81***	7.19***	3.38*
Cow/bull	3.1	10.5	-7.46***	84.6	12.2	72.4***	76.8	21.7	55.06***	79.87***	62.52*	-17.35***
Goat/sheep	6.1	9.3	-3.18***	25.2	8.9	16.35***	34.4	16.2	18.15***	19***	21***	-1.13
Duck/hen	32.7	46.2	-13.52***	59.1	58.1	0.94	62.9	48.5	14.38***	14**	28***	14***
Rickshaw/van	1.4	3.9	-2.49***	8.0	6.3	1.64	10.1	6.7	3.42***	4.66***	6.35***	1.7
Bed	64.8	76.8	-11.94***	81.3	83.6	-2.21	90.8	89.6	1.24	15***	23.04***	8.04
Chair	15.6	31.7	-16.13***	33.9	40.0	-6.09***	45.0	50.0	-5.04*	9.89	18***	8.1
Size of asset#												
Homestead land (decimal)	1.9	3.3	-1.38	2.3	3.0	-0.71***	3.2	3.6	-0.43***	0.69***	0.96***	0.28
Cultivable land (decimal)	0.3	2.5	-2.2***	0.7	2.2	-1.52***	1.4	2.2	-0.89***	0.69	1.32**	0.63
No. of cow/bull	1.4	1.8	-0.34**	2.0	1.7	0.33***	1.9	1.7	0.15***	0.66***	0.49***	-0.17**
No. of goat/sheep	1.7	1.5	0.22**	2.2	1.8	0.41***	1.9	1.7	0.21	0.18	-0.02	-0.2
No. of duck/hen	2.6	3.1	-0.52***	4.4	4.4	0	6.2	5.0	1.29***	0.52*	1.81***	1.29***
No. of rickshaw/van	1.3	1.2	0.13*	1.1	1.0	0.02	1.0	1.0	0*	-0.11	-0.13	-0.02
No. of bed	1.2	1.3	-0.14***	1.4	1.4	-0.09***	1.5	1.5	-0.05**	0.06**	0.1***	0.04
No. of chair	1.4	1.7	-0.25***	1.6	1.9	-0.27***	2.0	2.0	-0.05	-0.03	0.19**	0.22***

Note: ***, **, * denote significant at 1%, 5% and 10% level respectively.
#Average amount listed for only those that owned each type of asset.

Annex 5. Impact on financial market participation

	2002			2005			2008					
	SUP	NSUP	Difference	SUP	NSUP	Difference	SUP	NSUP	Difference	Impact in 2005 over 2002 (DiD)	Impact in 2008 over 2002 (DiD)	Difference between impacts in 2005 and 2008
	(1)	(2)	(3=1-2)	(4)	(5)	(6=4-5)	(7)	(8)	(9=7-8)	(10=6-3)	(11=9-3)	(12=11-10)
Have cash savings (% of respondents)	8.44	20.5	-12.06**	94.31	29.85	64.46***	97.73	34.42	63.31***	76.52***	75.37***	-1.15
Have outstanding loans (% of HHs)	27	40	-13***	77	68	9***	58	46	11***	22***	24***	2
Size of outstanding loans (Tk.) #	1104	2365	-1261***	1788	1745	43	2537	3177	-640***	1304***	621***	638**
Have outstanding lending (% of HHs)	0.58	1.31	-0.73**	8	4	4***	19	6	13***	5***	13***	8***
Size of outstanding lending (Tk.) #	1623	3297	-1674	2153	2332	-179	8660	7675	985	1495	2658	1163

Note: ***, ** denote significant at 1% and 5% level, respectively.
#Average amount listed for only those that owned it.

Annex 6. Impact on social assets

	2002			2005			2008			Impact in 2005 over 2002 (DiD)	Impact in 2008 over 2002 (DiD)	Difference between impacts in 2005 and 2008
	SUP	NSUP	Difference	SUP	NSUP	Difference	SUP	NSUP	Difference			
	(1)	(2)	(3=1-2)	(4)	(5)	(6=4-5)	(7)	(8)	(9=7-8)	(10=6-3)	(11=9-3)	(12=11-10)
Got invitation from non-relative neighbour (% of HHs)	25	28	-3**	38	33	6***	50	43	7***	9***	10***	1
Helped by non-relative neighbour (% of HHs)	17	15	2	40	37	3**	55	47	8***	2	6***	4
Anybody taken advice (% of respondents)	-	-	-	37	21	16***	45	34	11***	-	-	
Believed that some would lease land (% of HHs)	39	44	-6***	47	30	17***	60	42	18***	23***	24***	1

Note: ***, ** denote significant at 1% and 5% level, respectively.

Annex 7. Impact on health

	2002			2005			2008			Impact in 2005 over 2002 (DiD)	Impact in 2008 over 2002 (DiD)	Difference between impacts in 2005 and 2008
	SUP	NSUP	Difference	SUP	NSUP	Difference	SUP	NSUP	Difference			
	(1)	(2)	(3=1-2)	(4)	(5)	(6=4-5)	(7)	(8)	(9=7-8)	(10=6-3)	(11=9-3)	(12=11-10)
Prevalence of illness (% of members)	17	16	0.9	18	18	0.04	15	15	0.2	-0.89	-0.78	0.12
% of sick members spent for treatment	67	73	-6.3***	81	81	-0.2	88	86	1.4	6.09***	7.68***	1.6
Medical expenditure (mean, Tk.)	69	140	-71.2***	148	136	11	212	140	71.8***	82.37**	143.04***	60.68*
% sick members lost working days due to illness	23	22	1.0	40	38	2.3	44	37	7.1***	1.35	6.17**	4.82*
Mean working days lost	6	6	-0.8**	7	7	0.5*	6	6	0.4	1.34***	1.16**	-0.18

Note: ***, **, * denote significant at 1%, 5% and 10% level, respectively.

Annex 8. Impact on education

	2002			2005			2008			Impact in 2005 over 2002 (DiD)	Impact in 2008 over 2002 (DiD)	Difference between impacts in 2005 and 2008
	SUP	NSUP	Difference	SUP	NSUP	Difference	SUP	NSUP	Difference			
	(1)	(2)	(3=1-2)	(4)	(5)	(6=4-5)	(7)	(8)	(9=7-8)	(10=6-3)	(11=9-3)	(12=11-10)
Net primary enrollment (boys) (%)	64.7	72.5	-7.8***	63.7	71.0	-7.4***	70.2	71.7	-1.5	0.43	6.26*	6*
Net primary enrollment (girls) (%)	69.4	70.9	-1.5	73.8	74.7	-1.0	75.4	76.3	-0.9	0.54	0.63	0.09
Net secondary enrollment (boys) (%)	4.3	9.3	-5.0***	3.8	7.2	-3.4***	8.4	12.0	-3.6**	1.63	1.41	-0.22
Net secondary enrollment (girls) (%)	13.3	21.4	-8.1***	15.7	21.6	-5.9**	14.1	19.1	-5.0**	2.14	3.08	0.92

Note: ***, **, * denote significant at 1%, 5% and 10% level respectively.

Annex 9. Impact on housing condition

	2002			2005			2008			Impact in 2005 over 2002 (DiD)	Impact in 2008 over 2002 (DiD)	Difference between impacts in 2005 and 2008
	SUP	NSUP	Difference	SUP	NSUP	Difference	SUP	NSUP	Difference			
	(1)	(2)	(3=1-2)	(4)	(5)	(6=4-5)	(7)	(8)	(9=7-8)	(10=6-3)	(11=9-3)	(12=11-10)
Roof made of tin (% of HHs)	44	55	-11***	79	77	3**	94	92	2**	14***	13***	-1
Value of the house (Tk.)	864	1562	-698***	1775	2408	-633***	4758	5300	-546***	60	146	86
Have own house (% of HHs)	93	95	-1.7**	96	95	1	98	96	1.3**	2.6***	2.9***	-0.3
Type of house												
Jhupri (shack) (% of HHs)	3	1.4	1.3***	5	6	-1	2	2	0	-2***	-1*	1
One slanting roof (% of HHs)	34	31	3**	49	32	17***	34	26	8***	14***	5***	-9***
Two-piece roof (% of HHs)	44	42	3*	25	26	-1	35	34	1	-4**	-2	2
Four-fold roof (% of HHs)	18.8	25.6	-6.8***	21	36	-15***	29	38	-9***	-8***	-2	6***

Note: ***, **, * denote significant at 1%, 5% and 10% level, respectively.

Annex 10. Impact on safe water use and sanitation

	2002			2005			2008			Impact in 2005 over 2002 (DiD)	Impact in 2008 over 2002 (DiD)	Difference between impacts in 2005 and 2008
	SUP	NSUP	Difference	SUP	NSUP	Difference	SUP	NSUP	Difference			
	(1)	(2)	(3=1-2)	(4)	(5)	(6=4-5)	(7)	(8)	(9=7-8)	(10=6-3)	(11=9-3)	(12=11-10)
Drink tube-well water (% of HHs)	98	98	0.17	100	99	0.56	100	100	0.13	0.39	-0.04	0.43
Cook using tube-well water (% of HHs)	96	96	0.23	99	98	1.02	100	99	0.3	0.8	0.06	-0.73
Have sanitary latrine (% of HHs)	2	4	-2**	77	43	34.35***	72	57	14.86***	34.35	14.87***	-19.48***
Everybody uses saldal while using toilet (% of HHs)	-	-	-	86	69	18***	81	69	12****	-	-	-

Note: ***, ** denote significant at 1% and 5% level, respectively.

Annex 11. Impact on food security (self-perceived)

	2002			2005			2008			Impact in 2005 over 2002 (DiD)	Impact in 2008 over 2002 (DiD)	Difference between impacts in 2005 and 2008
	SUP	NSUP	Difference	SUP	NSUP	Difference	SUP	NSUP	Difference			
	(1)	(2)	(3=1-2)	(4)	(5)	(6=4-5)	(7)	(8)	(9=7-8)	(10=6-3)	(11=9-3)	(12=11-10)
Always faced food deficit (% of HHs)	62	41	21***	15	30	-15***	20	32	-12***	35.6***	-33.07***	-2.5
Face food deficit at times (% of HHs)	36	49	-14***	53	53	0	58	55	3**	14***	17***	3
Neither deficit nor surplus (% of HHs)	2	8	-6***	25	14	11***	19	12	7***	17***	12***	-4***
Food surplus (% of HHs)	0.0	1.4	-1.3***	7	3	4***	4	1	3***	5***	4***	-1*

Note: ***, **, * denote significant at 1%, 5% and 10% level, respectively.

Annex 12. Impact on per capita food expenditure

	2002		2004		2006		2008		Impact in 2004 over 2002 (DiD)	Impact in 2006 over 2002 (DiD)	Impact in 2008 over 2002 (DiD)
	SUP	NSUP	SUP	NSUP	SUP	NSUP	SUP	NSUP			
Per capita food expenditure (Tk. 2002 constant price)	8.53	9.10	15.30	11.80	17.17	14.25	17.60	15.60	4.07***	3.50***	2.57**

Note: ***, ** denote significant at 1% and 5% level, respectively.

Annex 13. Impact on crisis and incidence

	2002			2005			2008			Impact in 2005 over 2002 (DiD)	Impact in 2008 over 2002 (DiD)	Difference between impacts in 2005 and 2008
	SUP	NSUP	Difference	SUP	NSUP	Difference	SUP	NSUP	Difference			
	(1)	(2)	(3=1-2)	(4)	(5)	(6=4-5)	(7)	(8)	(9=7-8)	(10=6-3)	(11=9-3)	(12=11-10)
House damaged (% of HHs)	42	38	3.5**	19	13	6***	10	8	1.9**	2.5	-1.6	-4.1**
HH member seriously ill (% of HHs)	24	25	-0.7	17	18	-1.0	14	13	0.8	-0.3	1.4	-1.7
HH member got married (% of HHs)	5	5	-0.4	6	7	-0.5	7	6	1.5**	-0.1	1.9**	-2.0**
Death of Livestock (% of HHs)	3	5	-1.8***	9	3	6.8***	7	3	4.2***	8.5***	6.0***	2.5***
Death of household member (% of HHs)	3	2.9	0.4	2	2	0	2	2	0	-0.03	0.11	0.13
Death of duck/hen (% of HHs)	-	-	-	23	23	0	32	25	7***	--	--	--

Note: ***, ** denote significant at 1%, and 5% level, respectively.

Annex 14. Impact on households' spending for the crisis and incidence

	2002			2005			2008			Impact in 2005 over 2002 (DiD)	Impact in 2008 over 2002 (DiD)
	SUP	NSUP	Difference	SUP	NSUP	Difference	SUP	NSUP	Difference		
House damaged (% of HHs)	91	91	-0.5	80	80	-0.6	86	80	6.0	-0.12	6.46*
HH member seriously ill (% of HHs)	93	93	-0.1	98	98	0.1	98	98	0.1	0.23	0.20
HH member got married (% of HHs)	93	89	3.4	98	96	1.7	97	98	-1.6	-1.70	-5.03
Death of livestock (% of HHs)	7	19	-12**	10	12	-1.2	16	19	-2.9	11.19	9.50
Death of duck/hen (% of HHs)				2	1	1.2*	6	4	1.8		
Expenses (Mean, Tk, 2005 constant price)				1700	2523	-822***	4932	4564	368		

Note: ***, **, * denote significant at 1%, 5% and 10% level respectively.

Annex 15. Graduation of the SUP and NSUP households (for whom nine indicators were applicable)

Number of indicators satisfied	2002		2005		2008	
	SUP	NSUP	SUP	NSUP	SUP	NSUP
9 (all)	0.0	0.4	19.1	3.6	22.6	6.3
At least 8	0.1	2.1	48.5	13.9	57.3	22.3
At least 7	2.9	8.3	76.5	34.1	81.1	42.9
At least 6	10.9	22.4	90.8	54.4	93.0	65.9
At least 5	**27.4**	**42.7**	**97.4**	**74.7**	**98.1**	**78.5**
At least 4	50.1	65.5	99.7	90.5	99.7	93.5
At least 3	75.8	86.7	100.0	97.6	99.8	99.1
At least 2	91.6	95.7	100.0	99.5	100.0	99.9
At least 1	100.0	100.0	100.0	100.0	100.0	100.0

Annex 16. Graduation of the SUP and NSUP households (for whom eight indicators were applicable)

Number of indicators satisfied	2002		2005		2008	
	SUP	NSUP	SUP	NSUP	SUP	NSUP
8 (all)	0.0	0.7	25.4	2.2	38.1	7.4
At least 7	1.6	4.3	65.8	9.8	66.8	19.7
At least 6	5.0	10.2	87.3	26.3	86.3	37.7
At least 5	**16.7**	**21.7**	**95.9**	**52.2**	**96.2**	**58.3**
At least 4	35.3	44.9	98.1	79.1	99.1	79.6
At least 3	67.8	75.8	99.7	93.9	99.7	94.8
At least 2	90.4	94.8	100.0	99.6	100.0	99.5
At least 1	100.0	100.0	100.0	100.0	100.0	100.0