Using Change Rankings to Understand Poverty Dynamics:
Examining the Impact of CFPR/TUP from Community Perspective

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FOREWORD

Over a quarter of Bangladesh's people live in extreme poverty, not being able to meet even the barest of the basic needs. They spend most of their meagre, unreliable earnings on food and yet fail to fulfil the minimum calorie intake needed to stave off malnutrition. They are consequently in frequent poor health causing further drain on their meagre resources due to loss of income and health expenses. More often than not, the extreme poor are invisible even in their own communities, living on other peoples' land, having no one to speak up for them or assist them in ensuring their rights. Extreme poverty also has a clear gendered face – they are mostly women who are dispossessed widows, and abandoned.

The extreme poor are thus caught in a vicious trap and the story of denial and injustices tend to continue over generations for a large majority of them. Thus, a vast majority of the extreme poor in Bangladesh are chronically so. The constraints they face in escaping extreme poverty are interlocked in ways that are different from those who are moderately poor. This challenges us to rethink our existing development strategies and interventions for the extreme poor, and come up with better ones that work for them. This is the challenge that drove BRAC to initiate an experimental programme since 2002 called, 'Challenging the Frontiers of Poverty Reduction: Targeting the Ultra Poor' programme. The idea to address the constraints that they face in asset building, in improving their health, in educating their children, in getting their voices heard, in a comprehensive manner so that they too can aspire, plan, and inch their way out of poverty.

The extreme poor have not only been bypassed by most development programmes, but also by mainstream development research. We need to know much more about their lives, struggles, and lived experiences. We need to understand better why such extreme poverty persists for so many of them for so long, often over generations. Without such knowledge, we cannot stand by their side and help in their struggles to overcome their state.

I am pleased that BRAC's Research and Evaluation Division has taken up the challenge of beginning to address some of these development knowledge gaps through serious research and reflection. In order to share the findings from research on extreme poverty, the 'CFPR/TUP Research Working Paper Series' has been initiated. This is being funded by CIDA through the 'BRAC-Aga Khan Foundation Canada Learning Partnership for CFPR/TUP' project. I thank CIDA and AKFC for supporting the dissemination of our research on extreme poverty.

I hope this working paper series will benefit development academics, researchers, and practitioners in not only gaining more knowledge but also in inspiring actions against extreme poverty in Bangladesh and elsewhere.

Fazle Hasan Abed
Chairperson, BRAC

Using Change Rankings to Understand Poverty Dynamics: Examining the impact of CFPR/TUP from Community Perspective

ABSTRACT

Studies of poverty dynamics relying solely on household income-expenditure surveys can yield noisy results, overestimating transient poverty and underestimating persistence of poverty, especially for the poorest. In this study, we make use of an approach that relies on community based change ranking to explore various directions and levels of change experienced by almost 6,000 households living in over 100 communities. We find that changes are initial condition dependent and that improvement, even small ones are far less likely to happen over time for the poorest. Traps do seem to exist and matter for the poorest. This suggests that intervention design for the poorest will have to be far more comprehensive including promotional, protective and transformative strategies to make a real dent on extreme poverty.

We also argue that most empirical studies of poverty dynamics by focusing on relatively large movements into and out of poverty in different waves, misses out on the smaller movements experienced by households. Understanding the extent of and the forces that drive such smaller movements is important as it is the accumulative dynamics of these that ultimately lead to the larger movements of ascent, descent and trap, especially for those at the very bottom, the poorest. Exploring poverty dynamics of the poorest from such ‘small change’ perspective also allows us to develop indicators of incremental graduation to monitor and assess interventions targeted to bring about positive change in the livelihoods of the poorest.

INTRODUCTION

The question of 'whose reality matters' have led to increasing recognition of the local knowledge of poverty. This leads us to look into the multi-dimensionality of deprivation. However, the development interventions intended to help people improve their livelihood often stick to their indicators by which the programme targets are set. Whether the levels of successes revealed by these 'objective' indicators really reflect changes that are meaningful to the people concerned are often not critically examined.

BRAC has been implementing a specially designed livelihood support programme targeted towards the ultra poor since 2002. After selecting the beneficiaries with considerable efforts on targeting, they are provided with different supports starting with stipends and income generation training to assets for income generation, healthcare services and social support in different forms. Assessment of a range of outcome tells a compelling story about the usefulness of the programme in terms of improving many dimensions of the livelihoods of the ultra poor (Ahmed and Rana 2005, Haseen 2006, Rabanni *et al.* 2006).

However, this paper takes a different approach to understand the impact of the programme, which is essentially about positive changes. Using participatory methods, we tried to understand the *extent*, *dimensions* and the *causes* of such changes. We use insights and change rankings from the participatory exercises and make use of panel survey data to better understand these changes and what causes them focusing on the poorest households. Two main aims of this paper are to investigate the indicators of change and the underlying causes of these changes for the poorest households. This paper also makes some methodological integration of participatory and quantitative data focusing on change dynamics of the ultra poor households.

We argue that most empirical studies of poverty dynamics, by focusing on relatively large movements into and out of poverty in different waves, misses out on the smaller movements experienced by households which are important but does not lead to movements out of poverty as defined by some threshold measure. Understanding the extent of and the forces that drive such smaller movements is important as it is the accumulative dynamics of these that ultimately lead to the larger movements of ascent, descent and trap, especially for those at the very bottom, the poorest. Exploring poverty dynamics of the poorest from such 'small change' perspective also allows us to develop indicators of incremental graduation to monitor and assess interventions targeted to bring about positive change in the livelihoods of the poorest.

The authors acknowledge the contributions of Hasanur Rahman, Tariq Omar Ali and Mehnaz Rabbani in developing and applying the change ranking methodology.

POVERTY DYNAMICS: OVERVIEW OF THE LITERATURE

Empirical studies of poverty dynamics are mostly uni-dimensional and dichotomous. There are two approaches to analyze poverty dynamics viz. spell approach and component approach (Yaqub 2000). In the spell approach, poverty dynamics and chronic poverty are analyzed by the position of the households in different spells and their probability of crossing the line. However, this requires long-term panel data with shorter wave intervals.

In the component approach, two components of poverty dynamics are separated which are permanent and transitory component. Based on transitory and permanent component, Jalan and Ravallion (2000) distinguish three mutually exclusive groups of poor viz. persistently poor (always below the line), chronically poor (mean consumption is below the line but seasonal fluctuation may put them above) and transiently poor (mean consumption above the line but fluctuations may bring them below occasionally).

The transitory component in this approach is considered to be purely random or uncorrelated with the permanent component. However, fluctuations from the trend line are not necessarily random. While some fluctuations are short lived, they can have lagged effect as well. Therefore, the poverty dynamics are both stochastic and structural. Following this line of thinking on poverty dynamics, Carter and Barrett (2006) suggest using stock of asset as the indicator of poverty since it can better predict further asset accumulation and the expected income in the following years.

However, these approaches have the limitations of using a few, if not only one, indicators of welfare. Moreover, these are usually limited to relatively large movements into and out of poverty in different waves and fail to consider smaller fluctuations witnessed by households which do not move in and out of poverty as defined by some threshold measure. Understanding the extent of and the forces that drive such smaller movements is important as it is the accumulative dynamics of these that ultimately lead to the larger movements of ascent, descent and trap.

Poverty dynamics: the Bangladesh story

Analysis of chronic poverty and poverty dynamics in Bangladesh leaves us with some puzzling statistics. Late 80s have been a period with largely static condition in poverty reduction. However, according to the 21-village survey by BIDS between 1987 and 1990, the probability of becoming non-poor was almost equal for the hardcore poor (30%) and moderate poor (27%) based on their consumption expenditure (Sen 1996 as cited in Sen and Begum 1998). On the other hand, a non-poor household is as likely to become hardcore poor as a moderate poor household is (30% vs 28% respectively). Besides, almost equal number of people crossed the extreme poverty line (32%) and the upper poverty line (36%). These figures suggest relatively fluid movements across poverty status and raise serious questions on the notion of poverty trap for the ultra poor that is also a common understanding (Bowles *et al.* 2006, Smith 2005). If traps are weak and can be overcome at relative ease, which such fluidity in poverty status seems to suggest, then this has important implications for safety net policies and intervention design.

More recent statistics of poverty dynamics show that 31% of Bangladeshis were chronic poor (Sen and Hulme 2004). However, among them 61% were ‘dynamic chronic poor’ who had managed to increase their income. In fact, 40% of the chronic poor had managed to increase their

income at a rate of 3% per annum. This suggests that though the period between 1990 and 2000 had been broadly an ally for the poor, they had not managed to escape poverty. However, the study does not distinguish moderate and extreme poverty. Provided there are differences in income growth rates for the extreme and moderate poor, a lower rate of growth for the extreme poor would mean they will take disproportionately longer to move out. Nonetheless, the figures show considerable changes below the line.

METHODOLOGY

Participatory approaches are increasingly being used in empirical research and discussions on poverty dynamics. For example, Krishna (2005) and Krishna *et al.* (2004) used a community applied 'Stages-of-Progress' method to understand poverty dynamics in India and Kenya. The strength of PRA-based poverty dynamics study is that it can differentiate between random and permanent changes. Moreover, it was observed in the PRAs for this study that the participants factor in predictable vulnerability of the households when assessing change (Box 1). However, this is, by no means to claim that PRAs are the only way to assess the change in conditions of households. Community members are not necessarily always aware of all the changes or willing to express those even if they know.

Poverty dynamics is usually seen as movements around the poverty line and estimated through income and expenditure surveys and, increasingly, through self-perceptions of mobility. We felt that an investigation into community perceptions would add a new dimension to poverty dynamics studies. Further, the study enriches our understanding of how the changes in the lives of CFPR/TUP programme participants are perceived by the community.

We use community perceptions of household level poverty dynamics in three districts in northern Bangladesh – Rangpur, Kurigram and Nilphamari – in the communities where the CFPR/TUP programme was implemented in 2002 to assess and understand change.

Various participatory approaches were piloted to develop a community-based change ranking methodology. Initially, we explored the possibility of doing a repeat participatory wealth ranking exercise in the same communities where this was done as a part of CFPR/TUP programme's targeting in 2002. This would be an obvious approach to take in a study of poverty dynamics.

However, we quickly realized that there were two problems with this approach. First, most of the poorer households were being ranked at the same level as they were in 2002. However, when we discussed the matter, we heard descriptions of various types of changes experienced by these households which were relatively small and did not merit a change in the level of the wealth group being assigned to them. Yet, we strongly felt that missing out on these small changes would be a loss in any study of charting change, which is central to any study on poverty dynamics. The

Box 1. Change in vulnerability is a change in well-being…

PRA participants reported the condition of a household as deteriorating since the head has become dependent on his sons (who have different household) because of his old age. According to the community, though this household may maintain expenses as earlier, its vulnerability has increased because of this dependency.

Another household was considered to be in the same position in the last 4 years despite accumulating some savings and acquiring a small piece of land. This is because they have a grown up girl who is soon to be married off.

second problem was more to do with the general expectation that BRAC's programme for the poorest involving asset transfer of substantial value to a well-selected but limited group of the poorest created among those who were not selected. As participatory wealth ranking was done as a part of programme selection, the repeat exercise that we were doing was perceived as an expansion of the programme, thereby raising expectations and biasing the wealth ranking exercise.

In order to ensure maximum participation from the community, which was defined for the purpose of programme's targeting as a cluster of about 100 households, we carried out a door-to-door invitation. This yielded results – the average number of participants in our participatory change ranking exercise was about 40. A team of three carried out one of these participatory change ranking sessions and all of them were extensively trained in the technique by a group of RED researchers who have expertise and experience in participatory research methodologies.

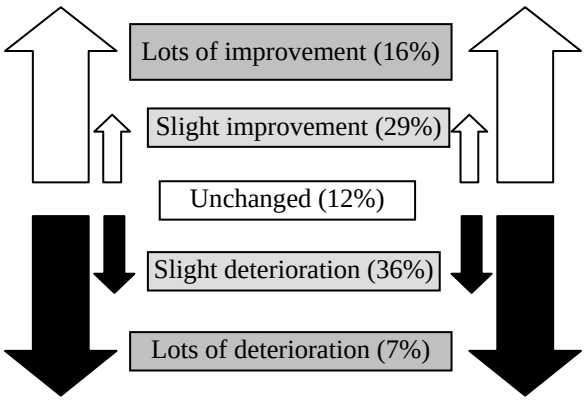
Instead of focusing only on the households which were ranked as 'poorest' in the 2002 participatory wealth ranking (PWR), we deliberately included households from all 2002 PWR wealth categories. There were two reasons for this. First, we were interested in getting a representative picture of changes that were happening to households in the community so that we could examine the welfare gap over time. The second reason was more strategic which again had to do with expectations of being recruited by BRAC's programme. We realized that one way to control such biases would be to include house-holds from various wealth categories sequenced randomly.

As mentioned, participatory wealth rankings are done in the CFPR/TUP programme to identify the ultra poor in the community[1]. We took 2002 participatory wealth ranking data for 108 communities and selected 5,856 households from these communities, representing the different wealth ranks from 2002. We then convened a community meeting where the participants decided whether these households had "improved a lot", "improved slightly", "remained the same", "deteriorated slightly" or "deteriorated a lot" in terms of their overall well-being during the time interval, i.e. from 2002 to 2005.

The participants were asked to consider and discuss all the dimensions they thought relevant before doing the change ranks. The discussions on each of the cases were noted by the researchers. We also explored the indicators of change by asking the question, "what makes you think the household's overall situation has changed?" At the meetings, a figure was drawn on the ground (Fig. 1) to assist the ranking exercise.

In analyzing the data from the change ranking, some adjustments had to be made in the 2002 wealth ranks of the households. Since the number of strata in the wealth rankings varied from 4 to 7, these were recategorized into 4 ranks (rank 1 being the richest and rank 4 being the poorest)[2]. After the modifications, 15%, 20%, 31% and 34% of the households belong to rank 1 to 4 respectively. About 23% of the rank 4 households (considered as ultra poor) received benefits from CFPR/TUP programme. These beneficiary households are usually referred to as selected ultra poor (SUP) and the non-beneficiaries are not-selected ultra poor (NSUP).

Figure 1. Community change ranking diagram



[1] For more on CFPR/TUP targeting methodology, see CFPR/TUP 2004. See Matin and Halder 2004 and Sulaiman and Matin 2006 for an assessment of the targeting effectiveness of the CFPR/TUP targeting methodology.

[2] Annex 1 gives the categorization process. However, the number of strata in the wealth rankings were predominantly 4 and 5 covering 52% and 34% of the households respectively.

The households in the bottom category in the 2002 PWR are part of another research where panel data were generated to assess the CFPR/TUP programme impact. The surveys were carried out in 2002 and 2005 covering a wide range of household characteristics. Combining the panel data and change ranking data obtained from this study, we get 1,093 households (532 beneficiaries and 561 non-beneficiaries). Those survey information cross validates the findings as well as gives us the opportunity of methodological integration to investigate the constituents and determinants of the change ranks for the ultra poor.

FINDINGS

Is there a pattern in change across wealth ranks?

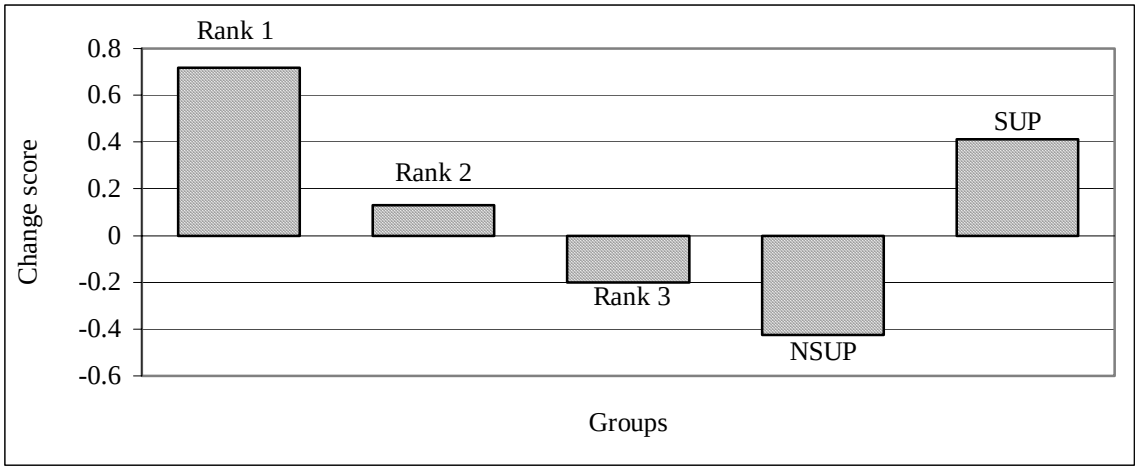
Overall, most households showed slight changes – 29% improved slightly and 36% deteriorated slightly (Fig. 1). Encouragingly, very few households were perceived to have deteriorated a lot (7%). Only 12% households considered in the change ranking were ranked as 'unchanged'. The extent of households being ranked as either improved or deteriorated is not an exaggeration of change since most of the changes have been ranked as small ones. Such small changes are unlikely to move a household from its original wealth category in 2002. Therefore, the ultra poor households making a slight improvement are most likely to still belong to the same poverty category. Differentiating between households of different 2002 wealth ranks, we found that in general, the community perceives the rich to have become much richer and the poor to have gotten poorer. Time is generally not an ally for majority of the ultra poor.

To get an at-a-glance picture of change ranks across the different wealth groups, we constructed a simple additive scoring, where the changes are scored from –2 to 2 (-2 for high deterioration… 2 for high improvement). Figure 2 reports the average in change scores of the households in different groups, where we clearly see the general widening of welfare gap over time between the better-off and the poorer segments of the population. However, we also observe the markedly different trend for the SUP households – the poorest who joined BRAC's CFPR/TUP programme in 2002.

Figure 3, by providing a disaggregated version of change across the various groups, allows us to get a more detailed picture of the change ranks.

Amongst those who were ranked wealthiest in 2002, 34% were change ranked as showing 'lots of improvement' and only 4% as 'lots of deterioration' during 2002-05. However, the

Figure 2. Average change scores in different wealth ranks



comparable figures of the poorest group, 2% and 22% respectively, are just the reverse of the wealthiest.

Encouragingly, 66% of SUP is perceived to have 'improved', though most of them have improved slightly. Admittedly, 'lots of improvement' for the poorest over a period of 4 years is very difficult and, if we compare the SUP with the NSUPs, we find that they are seen by the community to have performed significantly better.

This change ranking exercise gives two important insights. First, even though we get an impression of a relatively fluid poverty dynamics from studies that are based on income-expenditure surveys as discussed in the previous section, the pattern that emerges from community-based change ranking suggests that initial conditions do matter and that improvements, even small ones are far less likely to happen over time for the poorest. Traps do seem to exist and matter for the poorest. Related to this is the finding that intervention such as CFPR/TUP that is targeted towards unknotting the trap for the poorest through a range of supports do yield results, albeit expressed as 'small changes' by the community.

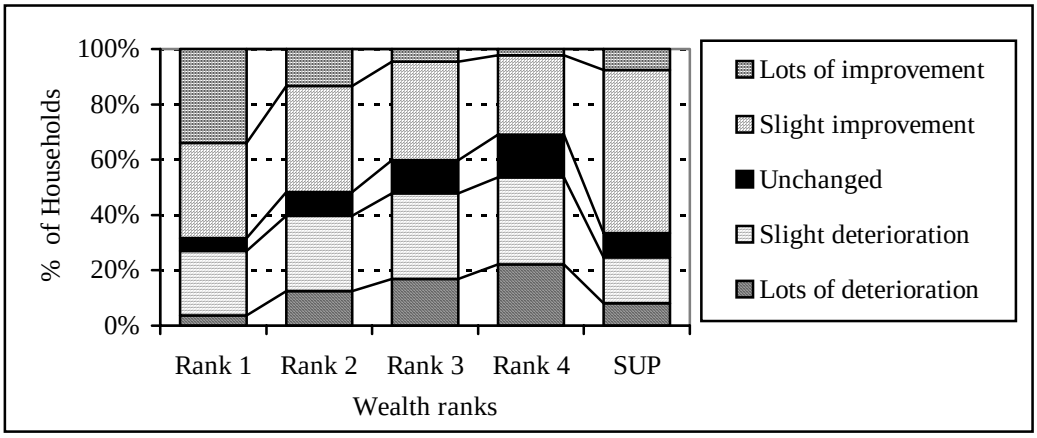
Secondly, the importance of 'small' changes is brought out, especially for the poorest. The large majority of the SUPs have witnessed relatively small overall improvements as perceived by the community, which would have been missed in traditional studies of poverty dynamics focusing on movements in and out of poverty, which for the poorest can be quite large. Understanding the nature of these small changes is critical if we are to design policies and strategies that will help the poorest inch their way out of extreme poverty.

Reexamining the pattern: evidence from event analysis

Before the day of the actual change ranking exercise, every household of the communities where we carried out the change ranking was visited by the research team to invite them to participate in the change ranking session of the next day. During this brief visit, the available member(s) of the households were asked to mention the major events that have happened in their households since 2002, the baseline year for this study. They were then asked to describe whether the particular events were 'good', 'bad' or 'neutral' for them.

Lives of the better-off households appear to be more eventful with a larger share of 'good' events (Table 1). However, it is interesting that all groups of households have reported higher number of 'good' events, on average, than 'bad'

Figure 3. Community based change ranks by wealth ranks



events[3]. Events also largely have meanings and implications as 'good' or 'bad' rather than being 'neutral'.

Reporting of some events are clearly dependent on the wealth category of the households. For instance, access to assets, both land and non-land are clearly more likely to be reported as an event by the better-off households than the poorer ones. So are events such as 'children's education' or 'getting a new job'. Conversely, certain events are more likely to be reported by the poorer households, such as 'death', or 'severe illness'.

The same event can however be qualitatively very different depending on the wealth status of the household. For instance, higher order child education related events, such as child passing public exams or getting admission in colleges, are twice as much reported by the rank 1 households compared to the rank 4 ones. Such higher level of human capital formation by the households in better-off households ensures that when their younger family members enter labour market, they take better jobs, which is reflected in such events being much more likely to be reported by such households, compared to the poorer ones. More interestingly, the same event can carry different meanings depending on the wealth status of the household. For instance, 18% of the incidences of marriage have been reported as 'bad' for the households by rank 4 compared to 8% by rank 1.

We observe significant differences between the poorest households who have received support from BRAC's CFPR/TUP programme (the SUP households in Table 1) and those who have not (rank 4 households in the Table 1). Despite being significantly worse-off than the poorest households who were not selected by the programme according to the baseline analysis carried out in 2002 (BRAC 2004), the SUP households are far more likely to report 'good' events that have happened in their lives over the last four years. 'Bad' events, such as death, or severe illness of household members, that are more likely to be reported by the poorer households, were much less frequently reported by the SUP households. The health support provided by the CFPR/TUP programme could be a reason for this (Ahmed and Rana 2005, Prakash and Rana 2006). Given that a range of income generating assets were trans-

Table 1. Major events for the households

	Household type					Total
	Rank 1	Rank 2	Rank 3	Rank 4	SUP	
No. of events/HH	1.77	1.64	1.55	1.39	1.73	1.54
Good events (%)	74	68	61	54	74	62
Bad events (%)	24	32	37	45	25	37
Neutral events (%)	2	1	2	1	1	1
Event score (mean)	0.92	0.59	0.37	0.13	0.87	0.37
Type of event						
Birth	22	24	26	24	11	23
Marriage	19	20	17	17	12	17
Severe Illness	11	16	15	18	10	16
Death	9	8	10	12	8	10
Housing/homestead	37	39	35	32	32	34
Land access	28	21	18	12	7	15
Non-land assets	24	23	22	17	44	23
Child education	19	13	10	9	5	10
New job/earner	12	6	5	4	4	5
BRAC assistance	0.0	0.0	0.0	1	42	5
Other	12	15	17	19	10	16

[3] This is most likely due to the methodology used where household members were asked to report important events first and then asked to categorize them. Generally, people are more likely to report 'good events' more to outsiders than 'bad' ones. We may have obtained a different balance of 'good' and 'bad' events had we asked the households to report these separately right at the outset.

ferred to all the SUPs under the CFPR/TUP programme, it is not surprising that accumulation of non land assets as an event was far more likely to be reported by the SUP households.

To get an overall perspective, we carried out a simple OLS regression on level of change obtained by a household in the participatory change ranking exercise with its event score, the household's 2002 PWR wealth rank, and its status with respect to BRAC's CFPR//TUP programme as explanatory variables. Results reported in Table 2 clearly suggests that households perceived by the community to have witnessed higher level of positive changes are far more likely to report a larger share of positive events, and tend to have a higher 2002 wealth rank status. However, even after controlling for these fairly obvious household features, we find a strong positive association between household's change rank and it being a member of BRAC's CFPR/TUP programme, suggesting that from the perspective of the community in general, CFPR/TUP programme membership has mattered in bringing about positive improvements in the lives of the poorest.

Table 2. Variables that affect change rank

	Household change[a]
Event score	0.334 (30.30)***
Wealth rank (1=riches, … , 4=poorest)	-0.259 (15.45)***
CFPR/TUP membership (1=yes, 0=else)	0.636 (13.00)***
Constant	3.521 (63.58)***
Observations	5856
Adjusted R^2	0.21

t value in parenthesis,
*** significant at 1%
[a] Five categories are 1 = lot of deterioration, …., 5 = lot of improvement

Understanding change

What are the indicators used by the community members to assess change? Do they vary across wealth groups? Do they vary depending on the level of change, i.e. 'big' or 'small'? For the poorest households for whom we have panel data, how do the changes ranked by the community map onto more 'objective' indicators? What are the determinants of the change ranks for the poorest? These are some of the questions we explore in this section.

Indicators of change: findings from participatory change ranking exercise

Community perceptions of indicators of change, by 2002 wealth rank, are tabulated in Tables 3 and 4.

Improved housing turns out to be the most important indicator of improvement for all the groups. Increased access to land and increased productive assets are also major indicators of improvement across groups, though this is more so for the wealthier groups. These are probably important because such changes are visible to the community as a whole. Also, the rich are more likely to be on an accumulative trajectory and able to increase assets. Increased non-productive assets – such as TV, motorcycle, etc – are more important indicators of change for the rich than other wealth categories. Also, as expected, improved food intake is a more important indicator of change for poorer than rich groups. However, it is not the most important indicator of ascent, even for the poorer households. The decentrality of food as an indicator of ascent is because the notion of food security has itself

Table 3. Indicators of improvement

	Rank 1	Rank 2	Rank 3	Rank 4	SUP
Improved housing	68%	72%	66%	58%	55%
Increased access to land	61%	50%	43%	34%	21%
Increased productive assets	35%	33%	32%	27%	62%
Improvement in food intake	22%	35%	32%	46%	49%
New IGA	18%	16%	13%	10%	15%
Child in school	11%	13%	11%	8%	7%
Improved clothing	4%	9%	10%	13%	11%
Increased non-productive assets	17%	10%	8%	7%	7%

Percentages are based on households who were ranked 'improved'

undergone fundamental qualitative changes in the context of Bangladesh over the years. This is expressed powerfully in the Bangladesh PRSP:

> [T]here has been a qualitative change in the *experience of poverty* itself: The intensity of seasonal deprivations have marked a significant decline, percentage of population going without three meals a day has been substantially reduced, access to basic clothing has become near universal. (GED, Oct 2005: xvi)

Though frequency of mentioning food intake as an indicator of ascent is not that powerful, even for the poorer group, the major indicator of descent for poorer groups is *deteriorations* in food intake. For richer households, the predominant indicator of descent is sale of land. This suggests that those who own something sell it, which is noticed by the community, and those who do not own anything to sell, consume less, which is also noticed by the community.

The analysis above aggregates 'large' and 'small' changes. In general, the average number of indicators reported to describe 'large' changes, in either direction irrespective of wealth categories is higher than it is for 'small' changes. This suggests that it is some combination of indicators that drives larger changes of ascent or descent compared to the smaller changes. Are there any differences in the composition of the indicators depending on whether the changes are 'large' or 'small'? Does this differ across various wealth groups? To explore this, we categorized the various change indicators into two broad groups – changes in 'basic needs' indicators, covering changes in food intake, clothing, basic housing; and changes in 'asset-based' indicators. We report the ratio of 'basic needs' indicators to 'asset-based' indicators for 'small' and big' changes (Table 5). In this formulation, a ratio of less than 1 would suggest relatively greater importance of asset-based indicators while a ratio of greater than 1 would suggest the reverse. We report this for the best-off group and the poorest households.

Generally, movements in either direction and at both 'large' and 'small' levels for the best-off households are driven by changes in assets-based indicators. This is true for the poorest households only for 'high ascent' movement. Other changes

Table 4. Indicators of deterioration

	Rank 1	Rank 2	Rank 3	Rank 4	SUP
Deterioration in food intake	28%	35%	42%	44%	47%
Sale of land	51%	34%	28%	24%	14%
Deterioration in Housing	10%	10%	18%	24%	20%
Decrease in productive assets	16%	21%	16%	11%	26%
High dependency	17%	18%	13%	13%	10%
Indebted	12%	17%	13%	11%	9%
Deteriorated clothing	5%	7%	10%	10%	7%

Percentages are based on households who observed deterioration

Table 5. The relative importance of assets and basic needs indicators across change levels and wealth groups

	Best-off		Poorest	
	Total	Ratio	Total	Ratio
High ascent	3.05	0.77	2.66	0.75
Slight ascent	2.52	0.96	2.40	1.59
Slight descent	2.35	0.46	2.01	1.49
High descent	2.61	0.78	2.58	1.47

for the poorest households are driven mostly by changes in indicators reflecting 'basic needs', especially for 'slight ascent'.

As 'slight' ascent is the predominant positive change most interventions for the poorest can expect to generate in the short run, a good understanding of such changes and what sustains and makes them create the foundations for larger changes is essential for monitoring progress of such interventions. We further explore this theme focusing on the poorest households making use of 2002-05 panel data in the next section.

Sharpening the indicators: analysis based on 2002-05 panel data

In order to sharpen our understanding of the different reported indicators and their importance in determining change ranks for the poorest households, we used the *change data* for different indicators from the 2002-05 panel data. Summary of this analysis is provided in Table 6.

Table 6. Multidimensional changes in different change ranks

Change in …	Lots of deterioration	Slight deterioration	Slight improvement	Lots of improvement	Total
Housing and homestead					
Was tin roofed but not now (%)	6	3	2	4	3
Same as 2002 (%)	71	65	66	70	67
Improved to tin roof (%)	23	31	32	27	30
Change in value of main living room[a,b]	575	502	1003	1039	798
Expenses for homestead maintenance[a]	1856	2030	3105	6058	2747
Installed tubewell (%)	33	36	44	46	39
Installed sanitary latrine (%)	36	46	65	79	54
Land					
Own cultivable land	-0.45	0.18	-0.09	2.96	0.10
Others' land cultivating	-0.49	1.36	3.30	2.38	2.28
In the last 3 years bought land (%)	3	4	9	16	7
In the last 3 years sold land (%)	5	3	2	2	2
In the last 3 years mortgaged in land (%)	3	3	14	23	10
Livestock					
Difference in number of cows owned	0.39	0.36	1.34	1.71	0.89
Difference in number of goats owned	0.16	0.09	0.33	0.38	0.22
Difference in number of chickens owned	0.37	1.23	2.01	3.48	1.64
Other assets					
Difference in chair-table owned	0.18	0.21	0.36	0.54	0.30
Difference in woodbox owned	0.38	0.40	0.46	0.63	0.44
Difference in quilt owned	0.07	0.14	0.20	0.18	0.16
Difference in bed owned	0.10	0.27	0.35	0.48	0.29
Difference in clothes of main women	0.30	0.28	0.55	0.56	0.43
Difference in clothes of main men	0.18	0.38	0.38	0.43	0.35
Food security					
Deteriorated (%)	21	12	8	7	11
Unchanged (%)	44	43	33	29	37
Improved (%)	34	45	60	64	53
Borrowing ability					
Improved (%)	31	38	73	75	56
Unchanged (%)	34	39	21	21	30
Decreased (%)	31	23	6	4	14
Income					
Change in per capita income[a,b]	1,023	1,264	1,746	2,400	1,539
Share of agri day labour in income	-3.69	-12.08	-16.19	-9.87	-13.24
Share of non-agri day labour in income	4.84	4.64	-1.24	-7.66	1.14
Housemaid work	-1.10	1.54	-4.65	-5.81	-1.85
Share of other works	-.04	5.90	22.08	23.34	13.95
Total ultra poor households	154 (14%)	265 (24%)	502 (46%)	56 (5%)	1093
Non-beneficiaries (NSUP)	115 (21%)	192 (34%)	164 (29%)	13 (2%)	561
Beneficiaries (SUP)	39 (7%)	73 (14%)	338 (64%)	43 (8%)	532

[a] Average in Taka; [b] in 2002 price

Since housing came up as a major indicator reported in the change ranking exercise, we can start with this variable by looking at the changes in housing of the ultra poor. In housing, the best ultra poor can afford is tin roof. Between 2002 and 2005, over 30% of the ultra poor have improved their housing condition by installing tin shades. However, such a change is not concentrated to the 'improved' ranks only. Change in housing measured only by the material of roof does not show any clear pattern of the ultra poor households' change ranks. As the data suggest, changes in *homestead* rather than the housing unit itself, is more consistent with change ranks. Material of roof is no more a strong indicator of ultra poverty in Bangladesh. Over 71% of the population live in houses with tin-roof and there is no significant difference in the poverty level in different housing structures (BBS 2003).

Because of the recent efforts to improve sanitation status in Bangladesh, there has been a general increase in installation of sanitary latrine by the households who did not have any. Nonetheless, a greater proportion of 'improved' households have set up sanitary latrine, making it a useful indicator of positive change for the poorest households.

The ultra poor have limited amount of land to lose. Still highly deteriorating ultra poor have, on average, 0.45 decimal lesser cultivable land in 2005 than they used to have in 2002. Change in amount of own cultivable land was observed only among the households who have made remarkable improvement. Change in tenancy does not show any association with change in household situation. Extent of buying and selling cultivable land was reflected in the change in ownership of cultivable land. Extent of taking control of land through mortgage has remarkable difference across different change ranked households.

In the changes in livestock ownership, goat does not seem to have any association with the change ranks. However, increase in number of cows owned is concentrated among the 'improving' households. Though there is a general increase in owning different types of furniture, such changes are somewhat equally prevalent in the different groups of households. This type of assets does not seem to constitute the change. However, only the change in number of chair-table owned has the expected pattern. Having a chair in the households is sometime a status symbol.

Significance of food insecurity for the ultra poor cannot be overstated. For this we used self-perceived food security status. More than half of the ultra poor have reported an improvement in their food adequacy. Changes in perceived food adequacy is consistent with change ranks even though a good portion of deteriorating households had improved food sufficiency.

There is a clear break between the 'improving' households from the rest in their self-reported borrowing ability. Frequency of improvement in borrowing ability sharply increases between 'unchanged' and 'slightly improved' households. Even in informal credit market, creditworthiness depends largely on the economic status. The association between change rank and perceived borrowing ability indicates that active financial market participation is an important indicator of positive change for the poorest households.

Change in per capita real income shows an expected pattern. Though there has been a general decline in the proportion of income coming from agriculture day labour, it does not show any clear pattern across different change rank. Dependence on non-agri wage labour has increased for deteriorating households while it has decreased for the improving ones.

Descriptive analysis combining the change data from the 2002-05 panel and the indicators obtained from the participatory exercise change ranking in this section provided us greater clarity of the individual indicators that matter in describing change. However, we note from the participatory exercise that it is a combination of these indicators that define different levels and directions of change. In the next section, we explore this issue using discriminant analysis.

Exploring how indicators are combined: discriminant analysis

Discriminant analysis is widely used in marketing research to identify the characteristics of the individuals that best explain their choice of certain product items. It is increasingly being used in social research to discriminate among different occupational groups (Juvaneie 2003), mode of transactions (Semalulu *et al.*. 2004), adopters of technology in agriculture, etc. This is a useful technique to handle multi-dimensionality and extract the most relevant indicators. Different sets of functions (k-1 functions for k number of categories) are generated based on those indicators. These function(s) make the discrimination among the observations. In the context of this analysis, the category to be discriminated was the household change ranks.

A series of variables, along with those reported in Table 6, were included in discriminant analysis. A total of 31 variables of change covering different dimensions were considered. Stepwise multiple discriminant analysis (MDA) procedure was followed[4]. Collinearity between discriminating variables did not seem to be a problem since the maximum correlation between any of the variables finally included was 0.37. While this weak correlations among the change indicators give a comfort in doing the MDA, it also shows that change in different dimensions do not necessarily occur simultaneously.

The stage of variable selection in discriminant analysis was restricted to the NSUP households since the programme intervention may itself change the change functions for the SUP households. Such a restriction also allows us to see the change pattern among the SUP by using the functions for the non-beneficiary households.

Since there are five different groups, four discriminant functions are formed (Table 7). The first function, which is the superior one, explains 56% of the variance. Comparable figures for the subsequent functions are 22%, 15% and 7% respectively. Third and fourth functions have relative weaker discriminating power but all the four functions are significant at 95% or higher confidence level.

Among the 31 indicators, only 7 were used in MDA. It was interesting that change in per capita real income was excluded as it was not as successful in making discrimination in the change ranks as the other variables. Income, especially change in income is generally argued to be a noisy indicator of change in household status. The variables that were accepted by the MDA include:

- Expenses incurred in homestead improvement (EXPHIMP),
- Change in self-reported creditworthiness (CRWORTHC),
- Change in amount of cultivable land owned (OWNAGRLDC),
- Change in number of cows owned (NCOWC),
- Change in self perceived food sufficiency (SPFOODSC),
- Change in earner member ratio (EARNMEMC) and
- Whether installed sanitary latrine in the last 3 years (INSTLATR).

Means of group centroids explain the main levels of change being discriminated by each function (Table 8). We discuss here the first two functions, which are two more powerful discriminating functions but report the means of group centroids for all four in annex 2.

The first function largely differentiates the poorest households who were ranked as having observed ‘improvement’ from the rest and shows a clear pattern being the most superior function of all four, while function 2 distinguishes between the ‘high improving’ poorest households from the ‘slightly’ improving ones.

We examine the standardized function coefficients and correlations of the different functions to determine the relative importance of different variables (Table 9). Two variables emerge as important for the first function—expenses incurred in homestead improvement and self-perception of increased creditworthiness.

[4] Maximum level of significance of F for a variable to enter at each step was 0.05. At every step, the variable that minimizes Wilk’s Lamba was entered.

Krishna (2005) in his study of poverty dynamics also found that home improvement was what very poor people invest in immediately following basic food needs being met. Most of the expenses incurred for homestead improvement are relatively basic, such as maintenance/improvement of existing housing structure, yet of critical importance for the 'improving' poorest. Having to sleep under a leaking roof during monsoon or having to change clothes and spend nights, especially for women and girls in a house with dilapidated wall without basic privacy and security are very commonly voiced by the poorest in describing their lives. It is thus not surprising that expenses incurred for this purpose turns out to be an important variable distinguishing between the 'improving' poorest with the rest. Increased self-perception of creditworthiness is essentially a relational variable and signifies changes in confidence level of the poorest who are traditionally excluded from credit market.

In the second function, the variables that turn out to be important are related to change in owning more substantial productive assets, such as cultivable land and cow. The negative coefficient of change in number of cows is interesting since this suggests that while slightly improving poorest households tend to have more cows but not land, the 'highly improved' poorest households are those who have more cultivable land but not necessarily more cows. This seems to

Table 7. Characteristics of discriminant functions

Eigenvalues				Wilks' Lambda				
Function	Eigenvalue	% of Variance	Canonical Correlation	Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.170[a]	56.2	.381	1 through 4	.751	157.307	28	.000
2	.066[a]	21.9	.250	2 through 4	.879	71.028	18	.000
3	.047[a]	15.4	.211	3 through 4	.937	35.717	10	.000
4	.020[a]	6.5	.139	4	.981	10.679	4	.030

[a] First 4 canonical discriminant functions were used in the analysis.

Table 8. Functions at Group Centroids

HHCHANGE	Function			
	1	2	3	4
Highly deteriorated	-.440	.141	.278	.121
Slightly deteriorated	-.105	.159	-.109	-.154
Unchanged	.009	-.023	-.402	.238
Slightly improved	1.256	-.342	.094	-.026
Highly improved	2.127	.891	-.292	.142

Unstandardized canonical discriminant functions evaluated at group means

Table 9. Standardized function coefficients and correlations

Variables	Standardized Coefficients of Function				Function (structure matrix)			
	1	2	3	4	1	2	3	4
EXPHIMP	.591	-.105	.437	.212	.701*	.068	.284	.199
CRWORTHC	.418	-.354	-.188	.377	.535*	-.312	-.259	.327
OWNAGRLDC	.293	.648	.004	.325	.453	.630*	.092	.313
NCOWC	.128	-.412	.478	.214	.025	-.391*	.332	.163
SPFOODSC	.087	.098	-.806	.226	.180	.009	-.761*	.137
INSTALATR	.388	.284	-.048	-.599	.421	.277	-.041	-.603*
EARNMEMC	-.236	.253	.269	-.562	-.200	.293	.198	-.544*

* Largest absolute correlation between each variable and any discriminant function

suggest that the asset acquisition strategy for 'improving' poorest households is first to invest in assets such as cows, increasing its value through rearing and multiplying, and then selling it to move onto the next stage of asset which is land. Thus, a useful monitoring indicator for programmes targeted at the poorest in the short-term could be change in ownership of livestock, such as cows while a longer-term variable could be changes in access to land.

Reasons of change: findings from the ranking exercise

Indicators of change are conceptually different from its reasons. Indicators are typically response to the question of 'what" while reasons are response of 'why'. For instance, the fact that a poor household had to sell a piece of land is an indicator observing which the community perceives the household to have witnessed 'deterioration'. However, the reason will have to explore as to why the household had to do so, which could be triggered by an event such as dowry to marry off daughter. Table 10 provides some examples of such differences that emerged from the discussion in the participatory change ranking exercises for various levels and directions of change across different wealth groups.

Community perceptions of reasons of change, by 2002 wealth rank, are presented below (Table 11 and 12). Many poor households, according to the community members, managed to bring about

Table 10. Indicators and reasons: some examples

Wealth rank	Change rank	Indicators	Reasons
Poorest	High descent	Sold the small piece of land, cannot have three regular meals, indebted, children out of school	Had to sell land and take credit for marrying-off daughter, earns less since no land, cannot repay the loan.
Poorest	Slight descent	Less food intake, indebted	Two rickshaw vans were stolen in short span of time, pulls hired rickshaw
Richest	High descent	Sold land, cow and house;	Sold assets to go abroad for work but was cheated.
Richest	Slight descent	Large number of dependants, less amount of land.	Sold land for starting new business but incurred loss in the business, low income compared to family size.
Poorest	High ascent	Built two new houses, repaid earlier loans, much better food intake	Head pulls rickshaw and sons are also earning now, increased HH income
Poorest	Slight ascent	Cultivate land for sharecropping, repays loan on time, purchased cow.	Started sharecropping taking loan from an NGO.
Richest	High ascent	Constructed a brick-built house, have extended their shop, purchased land	Good income from the shop and profit from new fishery
Richest	Slight ascent	Increased land, built new house, purchased cassette player;	Have wholesale business, engaged in money lending, inherited some assets, have good business knowledge

Table 11. Top five reasons of improvement

Rank 1	Rank 2	Rank 3	Rank 4	SUP	Overall
Industrious (38%)	Industrious (41%)	Industrious (42%)	Industrious (39%)	TUP assistance (66%)	Industrious (35%)
New IGA (27%)	New IGA (26%)	New IGA (19%)	Increased earners (14%)	New IGA (11%)	New IGA (18%)
Increased earners (16%)	Increased earners (11%)	Increased earners (11%)	New IGA (13%)	Industrious (10%)	TUP assistance (12%)
Assistance from relatives (7%)	Assistance from relatives (7%)	Assistance from relatives (6%)	Microcredit (6%)	Increased earners (4%)	Increased earners (11%)
Increased access to land (3%)	Microcredit (4%)	Microcredit (4%)	Migration (5%)	Increased productive assets (3%)	Assistance from relatives (5%)

Percentages are based on households who managed to improve

positive change in their livelihoods through their existing occupations – pulling rickshaws, day labouring, or small trading. These reasons of improvement have been described as "being industrious" (*porisromi*), which is the major cause of improvement for non-SUP households, across wealth ranks. Involvement in new income generating activities (IGA) is important for the households in all the wealth ranks. However, the importance of new IGA as a driver of improvement reduces for the poorer groups indicating their low levels of opportunities to undertake new and profitable IGAs. On the other hand, for the SUP, programme assistance was cited as the major reason of improvement.

For the poorer wealth ranks, relative to the wealthy, aging and deteriorating health of income earner is a major driver of descent (Table 12). This is probably because poor households due to low levels of human capital tend to be more dependent on harsher forms of physical labour which has health consequences over the long haul. Marrying off daughters is also a major driver of descent across wealth ranks, indicating the financial burdens of dowry. Marrying off daughters is more significant for the wealthy, which may reflect the higher dowry prices that wealthy households have to pay[5]. Healthcare expenses matter more for the wealthy than the poor, suggesting that the poor cannot afford to spend on healthcare resulting in the relatively higher importance placed on 'age and deteriorating health of income earner' as a more important reason for their descent. Interestingly, police and court cases are a major driver of descent is only reported for the richest group – suggesting that the poor generally do not seek justice using such institutions and justice through such formal institutions is costly to access, even for the rich. Household demographics – such as a high dependency ratio, household splits, and decreased earners – are also major drivers of descent.

What causes change for the poorest?

In this section we use regression models to examine the factors causing change in the ranks for the poorest households. We also explore whether being selected in BRAC's CFPR/TUP programme matters.

Different regression models are used in explaining poverty dynamics. For example, McCullouch and Baulch (1999), in their study of poverty dynamics in Pakistan, use both ordered logit and multinominal logit models by categorizing the households into chronic, transitory and never poor. When there is a natural ordering in the dependent variable, ordered logit helps in identifying the relative influence of characteristics. Multinominal logit describes the characteristics that are more prevalent in specific household categories.

Since the dependent variable, change rank, has a natural ordering we used order probit. A

Table 12. Top five reasons of descent

Rank 1	Rank 2	Rank 3	Rank 4	SUP	Overall
Marrying off daughter (23%)	Marrying off daughter (23%)	High dependency (18%)	Age/physical weakness of earner (20%)	Age/physical weakness of earner (19%)	Age/physical weakness of earner (17%)
Age/physical weakness of earner (10%)	High dependency (15%)	Marrying off daughter (16%)	High dependency (21%)	Marrying off daughter (16%)	Marrying off daughter (16%)
High dependency (10%)	Age/physical weakness of earner (14%)	Age/physical weakness of earner (14%)	Marrying off daughter (13%)	Loss of productive assets (11%)	High dependency (15%)
Police case (10%)	Sales of land (7%)	Health treatment expenses (9%)	Decreased earners (7%)	High dependency (9%)	Health treatment expenses (7%)
Health treatment expenses (8%)	Decreased earners (5%)	Decreased earners (5%)	Split of households (6%)	Split of households (6%)	Decreased earners (6%)

Percentages are based on households who observed deterioration

[5] For an interesting ethnographic study on why dowry persists, see Gierbo and Imam 2006.

range of initial endowment characteristics, usually used in poverty dynamics studies, was incurporated as explanatory variables. The list of confounding variables includes household heads' age, sex, number of household members of different age groups, number of earner, educational status of the household, amount of land and non-land asset owned and access to leased land (Table 13). We carry out pooled and separate regressions for the SUP and the NSUP households to examine the impact of the programme and if the variables causing change for the SUP and the NSUP households are different.

Only a few explanatory variables were found to be significant. The effect of being a member of BRAC's CFPR/TUP programme is quite clearly visible. Sex, age and occupation of the household head do not have any significant effect on the households' change rank. The number of under-16 females in the household in 2002 has a significant negative effect on its change rank given by the community in 2005, which corresponds to marrying off daughters being identified as a major driver of descent during the participatory exercises. However, interestingly, this effect disappears when only the SUP households are considered[6].

Having at least one member who had some years of schooling has positive influence over the direction of change of the household. The number of earners in the household is a significant factor of improvement only for the NSUP households. It indicates the impact of the programme in terms of being able to reverse a key disadvantage that the poorest households have by increasing the productivity of existing members of the household. Positive impact of cultivable land and other physical assets is not consistently significant. Since the amount of physical assets of the ultra poor is extremely limited and often the quality of those assets is very low, these do not bring any significant change. Moreover, these assets are also associated with greater extent of asset-related shocks, especially for the SUP households who have been provided with a range of income generating assets by the programme.

[6] There was no significant difference between the SUP and the NSUP households in terms of number of under-16 female members.

The positive effect of the response to 'whether people would lease/rent/give tenancy of land to them' is consistently significant. This is quite interesting because 44% of the observations reported that people would lease land to them and only 7% of them had actually leased in any land. Therefore, this variable is probably reflecting 'vertical social capital' in terms of the quality of their relationship with those who have land to lease or rent out. The quality of this relationship may have implications beyond the possible land market transactions as landowners are also likely to be providers of credit and other services and patronage.

However, this relatively long list of explanatory variable explains only a small fraction of the differences in changes. Probably including variables reflecting the quality of personal characteristics, such as 'being hard working', 'having good partnership between husband and wife', etc. in the regression could have yielded better results. The importance of such variables in explaining change often came up in the participatory exercises and other qualitative research on 'well performing' and 'poorly performing' SUPs (Matin *et al.* 2004).

While the coefficients of ordered probit regressions give the direction of influence of the variables, the values are not readily interpretable. This is because such model assumes a latent variable and explains the relation with that variable. Therefore, predicted values are often used to interpret the outcome.

For this purpose, we construct a positive base case for a NSUP household, where the household is a NSUP, had perceived access to tenancy in 2002, faced no crisis in the year before the survey in 2005 and had average values in all other characteristics. Using estimates of the first regression, such a household has a 37% probability of being in 'slightly improved' rank and about 49% probability of being ranked as 'deteriorated' (Fig. 4).

Adding two disadvantages to the base case, i.e. perception that landowners would not lease land to them and facing two crises decreases the predicted probability of being ranked as 'slightly

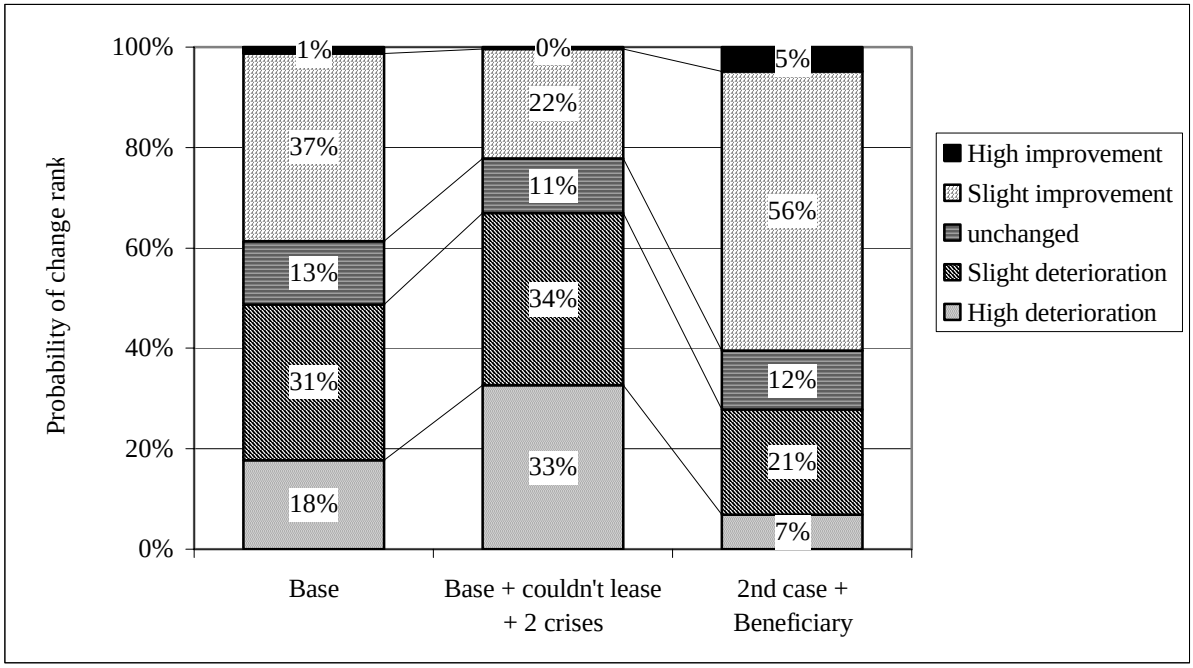
improving' to 22%, a reduction of over 40% from the base case. However, when we include CFPR/ TUP membership on the 'disadvantaged NSUP' case, we find that the probability of 'slight' improvement increases to over 55%. The programme participants even with the two disadvantages demonstrate a much higher chance of being ranked as 'improved' than the initial well positioned NSUP, suggesting a strong impact of the CFPR/TUP programme.

Table 13. Determinants of change for ultra poor

Explanatory variables	Change rank[a]	Change rank (SUP)	Change rank (non-SUP)
TUP beneficiary	1.031 (13.63)***	-	-
(1= Yes, 0 otherwise)			
Female headed household '02	-0.052 (0.56)	-0.087 (0.68)	0.001 (0.01)
(1=yes, 0 otherwise)			
Age of household head '02	-0.017 (0.84)	-0.006 (0.20)	-0.012 (0.45)
Age^2 of household head '02	0.000 (0.31)	0.000 (0.11)	-0.000 (0.26)
Head in non-agri day labour in 02	0.216 (1.92)*	0.254 (1.61)	0.228 (1.39)
Number of male children '02	-0.057 (1.65)*	0.015 (0.27)	-0.129 (2.85)***
Number of female children '02	-0.115 (3.07)***	-0.025 (0.45)	-0.217 (3.97)***
Number of adult female '02	-0.159 (1.66)*	-0.179 (1.28)	-0.125 (0.91)
Number of aged male '02	-0.162 (0.91)	-0.308 (1.20)	-0.051 (0.20)
Number of aged female 02	-0.146 (0.85)	0.029 (0.10)	-0.070 (0.31)
Any member has schooling '02	0.241 (2.74)***	0.245 (1.91)*	0.238 (1.92)*
(1=yes, 0=otherwise)			
Number of earner '02	0.094 (1.63)	-0.065 (0.71)	0.225 (2.95)***
Amount of agriculture land '02	0.096 (1.80)*	0.169 (1.10)	0.073 (1.26)
Number of cows '02	0.094 (0.92)	-0.441 (1.29)	0.165 (1.53)
Number of goats '02	0.077 (0.80)	-0.075 (0.41)	0.098 (0.85)
Number of poultry birds '02	0.027 (1.69)*	0.021 (0.80)	0.030 (1.51)
Have rickshaw '02	0.479 (2.29)**	0.656 (1.53)	0.459 (1.89)*
People would lease cultivable land to them '02	0.190 (2.64)***	0.222 (2.09)**	0.204 (2.03)**
(1=yes, 0=no)			
Number of crises faced in 2004	-0.142 (3.32)***	-0.254 (4.19)***	-0.014 (0.22)
Observations	1049	531	518
Adjusted R^2	0.11	0.08	0.09
Model	Ordered probit		

Absolute value of z statistics in parentheses
* significant at 10%; ** significant at 5%; *** significant at 1%
[a] Five categories are 1 = lot of deterioration, …., 5 = lot of improvement

Figure 4. Predicted probability of change rank



CONCLUSION

Studies of poverty dynamics relying solely on household income-expenditure surveys can yield noisy results, over-estimating transient poverty and under-estimating persistence of poverty, especially for the poorest. In this study, we make use of an approach that relies on community-based change ranking carried out in 2005 by exploiting the participatory wealth ranking carried out by BRAC in 2002 as a part of its targeting for its new programme for the poorest. This allows us to assess various directions and levels of change experienced by almost 6,000 households living in over 100 communities. The use of participatory methods also allowed us to unpack the multi dimensionality of indicators and reasons of change. Moreover, we made use of the 2002-05 panel survey data which allowed us to understand better the key variables that constitute and cause the change rankings from the participatory ranking exercises.

Instead of focusing on poverty dynamics understood as movements into and out of poverty, our study examined change, both 'big' and 'small' in either direction. This allows us to focus on different levels of change, especially the 'smaller' movements. We argue that most empirical studies of poverty dynamics by focusing on relatively large movements into and out of poverty in different waves, misses out on the smaller movements experienced by households which are important but does not lead to movements out of poverty as defined by some threshold measure.

We found that over the short run lasting for about 4-5 years, the time frame used by most poverty dynamics literature, the predominant level of improvements is 'small', especially for the poorer households. Capturing and understanding such churning in the lives of the poorest is clearly important for policy and programme development.

In our study, amongst those who were ranked wealthiest in 2002, 34% were change ranked as showing 'lots of improvement' and only 4% as 'lots of deterioration' during 2002-05. However, the comparable figures of the poorest group, 2% and 22% respectively, are just the reverse of the wealthiest. We do not have comparable studies from earlier periods to comment on how the distributional pattern of perceived change has altered over a longer time period. The results, however, suggests that at least over the period of the study, 2002-05, in some of the poorest districts of Bangladesh there has been a widening of the welfare gap over time among the rich and the poor, in particular for the poorest. This calls for urgent action to develop appropriate programmatic approaches targeting the poorest.

We used the community-based change ranking exercise also to examine the impact of the programme that BRAC has been experimenting since 2002 in the study districts. We find strong evidence of programme impact in bringing about positive change in the lives of the poorest from the perspective of the community. However, most of such changes as perceived by the community are 'small' which is to be expected given the initial conditions of these households.

Understanding the extent of and the forces that drive such smaller movements is important as it is the accumulative dynamics of these that ultimately lead to the larger movements of ascent, descent and trap, especially for those at the very bottom, the poorest. Exploring poverty dynamics of the poorest from such 'small change' perspective also allows us to develop indicators of incremental graduation to monitor and assess interventions targeted to bring about positive change in the livelihoods of the poorest. Studies of poverty dynamics will have focus more in understanding the nature and structure of such 'small' changes to design policies and approaches that work for the poorest.

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Annexes

Annex 1

Categorization of the wealth ranks

PWRs with 5 strata		PWRs with 6 strata		PWRs with 7 strata	
Initial rank	New rank	Initial rank	New rank	Initial rank	New rank
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	2
4	4	4	3	4	3
5	4	5	4	5	3
		6	4	6	4
				7	4

Annex 2

Standardized coefficients and correlations of all four discriminating functions

Variables	Standardized coefficients of function				Function (structure matrix)			
	1	2	3	4	1	2	3	4
EXPHIMP	.591	-.105	.437	.212	.701*	.068	.284	.199
CRWORTHC	.418	-.354	-.188	.377	.535*	-.312	-.259	.327
OWNAGRLDC	.293	.648	.004	.325	.453	.630*	.092	.313
NCOWC	.128	-.412	.478	.214	.025	-.391*	.332	.163
SPFOODSC	.087	.098	-.806	.226	.180	.009	-.761*	.137
INSTALATR	.388	.284	-.048	-.599	.421	.277	-.041	-.603*
EARNMEMC	-.236	.253	.269	-.562	-.200	.293	.198	-.544*