Community-based Change Ranking: Understanding Poverty Dynamics from a Multidimensional Perspective

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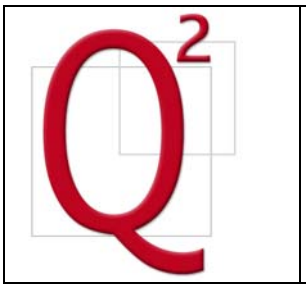

Q-Squared Working Paper No. 48
November 2007

I. Introduction:

The question of 'whose reality matters' has led to increasing recognition of the local knowledge of poverty. This has also opened up the importance of enquiry into the multidimensionality of deprivation. However, most of the empirical studies of poverty dynamics are still unidimensional and dichotomous. Community-based approach can fill this gap by explaining poverty dynamics considering all the dimensions that are relevant. Therefore, there is a promising trend of 'method mix' by putting community-based approaches with indicator-based analysis both sequentially and simultaneously to enhance our understanding of poverty dynamics.

Analyses of poverty dynamics typically use income-expenditure measures. Errors in such estimates can substantially inflate movement across poverty line (McCulloch and Baulch 2000). Probably, this is why analysis of poverty dynamics and chronic poverty 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 these, 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 (e.g. 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 demonstrate that 31% of Bangladeshis are chronic poor (Sen and Hulme 2004). However, among them 61% are dynamic chronic poor who have managed to increase their income. In fact, 40% of the chronic poor have managed to increase their income at a rate of 3% per annum. This suggests that though the period between 1990 and 2000 has been broadly an ally for the poor, they have 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 demonstrate considerable changes below the line.

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.

In the next section, we outline the process of community-based assessment of poverty dynamics and the survey data that has been used. Section 3 presents the extent of change in household welfare across socio-economic strata. Nature of changes in different welfare groups by community reported indicators and more detail account of change for the

poorest are reported in the fourth section. Fifth section investigates the initial conditions that put the poorest households in different change trajectories. Final section concludes the paper.

II. Methodology

Participatory approaches are increasingly being used in empirical research and discussions on poverty dynamics. For example, Krishna (2006) 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.

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 doing the same 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.

PRAs were conducted in three districts in northern Bangladesh – Rangpur, Kurigram and Nilphamari – in the communities where the CFPR/TUP programme was implemented in 2002 by BRAC. In the programme, participatory wealth rankings are done 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 think 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 (Figure 1) in order to assist the ranking exercise.

(*Insert Figure 1 here*)

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 categorized into 4 ranks, rank 1 being the richest and rank 4 being the poorest (Annex 1 gives the categorization). It should be mentioned here that the number of strata in the wealth rankings were predominantly 4 and 5 covering 52% and 34% of the households respectively. 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).

The households in the bottom category in the 2002 PWR are part of another research where panel data was generated to assess the CFPR/TUP programme impact. The surveys were carried out in 2002 and 2005 on the same set of households and covered 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 determinants of the change ranks for the ultra poor.

III. Is there a pattern in change across wealth ranks?

Overall, most households showed slight changes – 29% improving slightly and 36% deteriorating slightly. 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 across households of different 2002 wealth ranks, we found that in general, the community perceives the rich to have become richer and the poor to have gotten poorer.

(*Insert Figure 2 here*)

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.

(*Insert Figure 3 here*)

Figure 3 by providing a more 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 comparable figures of the poorest group, 2% and 22% respectively, are just the reverse of the wealthiest. Encouragingly, 66% percent 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 four 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.

IV. 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.

IV.1 Indicators of change: Findings from Participatory Change Ranking Exercise

Community perceptions of indicators of change, by 2002 wealth rank, are tabulated in Tables 1 and 2.

(*Insert Table 1 here*)

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 TVs, motorcycles, 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 decentralism of food as an indicator of ascent is because the notion of food security has itself 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)

(*Insert Table 2 here*)

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 this group 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 3). 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.

(*Insert Table 3 here*)

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 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.

IV.2. 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 use the change data we obtain for these indicators using the 2002-05 panel data. Summary of this analysis is provided in Table 4.

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 suggests 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 lives 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 is 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 five 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.

(*Insert Table 4 here*)

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.

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.

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.

We explored this using multiple discriminant analysis (only the key points are being reported here). Four functions were formed among which two dominant functions explained 56% and 22% of the variance.

The first function mainly discriminates 'improved' households from the rest. Expenditure made in homestead maintenance/improvement and self-perception of change in creditworthiness, are the key indicators in that function. Krishna (2006) 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 were 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, which discriminates between 'high improvement' and 'slight improvement', the variables that turn out to be important are related to change in owning more substantial productive assets i.e. cultivable land and cow. Interestingly, slightly improving poorest households tend to have more cows but not land and the 'highly improved' poorest households are those who have more cultivable land but not necessarily more cows. This seems to 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.

V. 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, McCulloch 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 regression. A range of initial endowment characteristics, usually used in poverty dynamics studies, was incorporated 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 4). 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. Geirbo and Imam (2006) gives an ethnographic explanation on why dowry persists. However, interestingly, this effect disappears when only the SUP households are considered even though here was no significant difference between the SUP and the NSUP households in terms of number of under-16 female members..

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 very limited and often the quality of those assets is so 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.

(*Insert Table 5 here*)

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).

VI. Conclusion

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. 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 find 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.

Notes:

[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

References:

BBS. Report of the household income and expenditure survey 2000. Bangladesh Bureau of Statistics, Dhaka, Bangladesh, 2003.

Bowles, S., Durlauf, S. N. and Hoff, K. (eds) Poverty traps, N.J. Princeton University Press, 2006

GED. Unlocking the potential: National Strategy for accelerated poverty reduction. General Economics Division, Planning commission, Government of Bangladesh, 2005.

Geirbo, H. C. and Imam, N. The motivations behind giving and taking dowry. Research monograph series No. 28, Research and Evaluation Division, BRAC, Bangladesh, 2006.

Krishna, A. Pathways out of and into poverty in 36 villages of Andhra Pradesh, India. *World Development*, 34(2): 271-288, 2006

Krishna, A., Kristjanson, P., Radeny, M. and Nindo, W. Escaping Poverty and Becoming Poor in 20 Kenyan Villages,' *Journal of Human Development*, 5 (2), 211-26. 2004

Matin, I., Noor, M. and Shihab, A. M. Struggling TUP members: Lessons from case studies. (Mimeo) Research and Evaluation Division, BRAC, 2004.

Matin, I. and Halder, S. R. Combining methodologies for better targeting of the extreme poor: lessons from BRAC's CFPR/TUP programme. (CFPR/TUP working paper series no. 2) Dhaka and Ottawa: BRAC and Aga Khan Foundation Canada, 2004.

McCulloch, N. and Baulch, B. Stimulating the impact of policy upon chronic and transitory poverty in rural Pakistan. The Journal of Development Studies 36 (6): 100-130, 2000.

McCulloch, N. and Baulch, B. Distinguishing the chronically from the transitory poor: evidence from Pakistan. Working Paper No. 97, Institute of Development Studies, University of Sussex, UK, 1999.

Sen, B. Movement In and Out of Poverty: A Tentative Explanation in Rahman, Hossain Zillur, Mahabub Hossain, and Binayak Sen (ed.), 1987-94: *Dynamics of rural poverty in Bangladesh, Mimeo* Bangladesh Institute of Development Studies (BIDS), Dhaka, 1996.

Sen, B. and Begum, S. Methodology for identifying the poorest at local level. BIDS, Dhaka, Bangladesh, 1998
Downloaded from www.prcpb-bids.org/documents/workingpaper/wp1fulltext.pdf on 01.03.2006

Sen, B. and Hulme, D. (eds) Chronic poverty in Bangladesh: tales of ascent, descent, Marginality and persistence. The State of the Poorest 2004/2005. Bangladesh Institute of Development Studies (BIDS), Dhaka, Bangladesh and Chronic Poverty Research Centre (CPRC) UK. 2004

Smith, S. C. Ending global poverty: A guide to what works, N.Y. Palgrave Macmillan, 2005

Sulaiman, M. and Matin, I. Targeting effectiveness of CFPR/TUP in scale up environment, (CFPR/TUP working paper series no. 8) Dhaka and Ottawa: BRAC and Aga Khan Foundation Canada, 2006.

Figures and Tables

Figure 1: Community Change Ranking Diagram

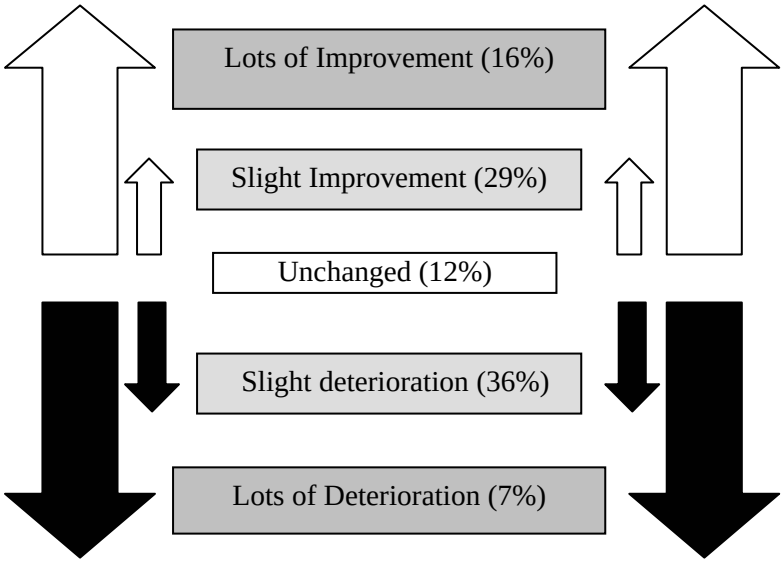

Figure 2: Average change scores in different wealth ranks

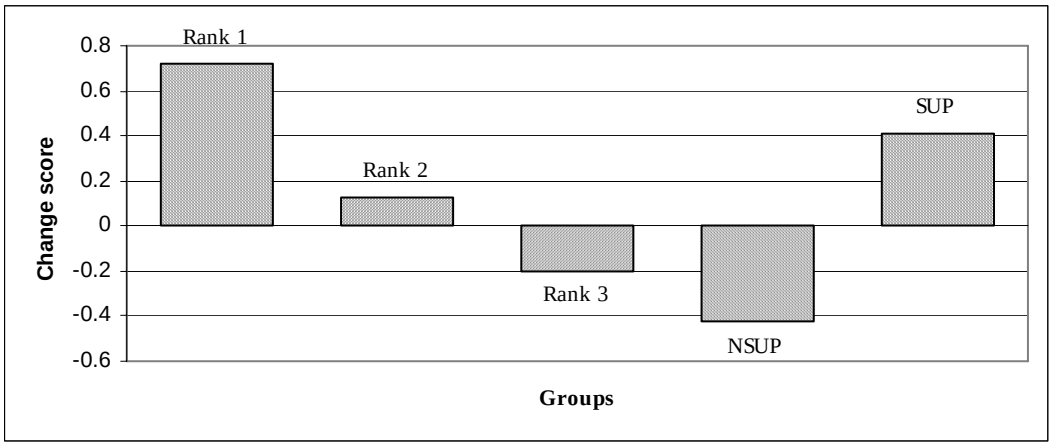

Figure 3: Community based change ranks by wealth ranks

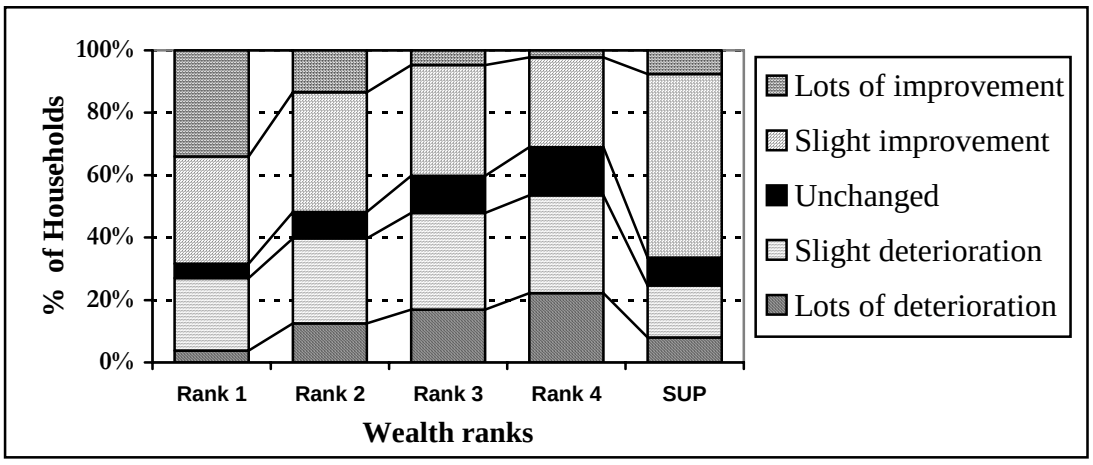

Table 1: Indicators of improvement

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

Percentages are based on households who were ranked 'improved'

Table 2: Indicators of deterioration

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

Percentages are based on households who observed deterioration

Table 3: 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

Table 4: Dimensions of changes in different change ranks

Change in …	Lots of deterioration	Slight deterioration	Slight improvement	Lots of improvement	Total
Was tin roofed but not now (%)	5.84	3.02	2.19	3.57	2.84
Same as 2002 (%)	70.78	65.28	65.94	69.64	66.61
Improved to tin roof (%)	23.38	31.7	31.87	26.79	30.56
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 (%)	33.12	36.23	43.63	46.43	39.43
Installed sanitary latrine (%)	36.36	46.42	64.54	78.57	54.44
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 (%)	2.6	4.15	8.76	16.07	6.77
In the last 3 years sold land (%)	4.55	3.02	1.59	1.79	2.38
In the last 3 years mortgaged in land (%)	2.6	3.4	13.94	23.21	9.52
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
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 (%)	21.43	11.70	7.57	7.14	10.61
Unchanged (%)	44.16	43.40	32.67	28.57	36.69
Improved (%)	34.42	44.91	59.76	64.29	52.70
Borrowing ability					
Improved (%)	34.42	38.49	72.91	75.00	56.27
Unchanged (%)	34.42	38.87	21.31	21.43	29.55
Decreased (%)	31.17	22.64	5.78	3.57	14.18
Amount can be borrowed in a week [a]	804	1,018	1,628	2,530	1,371
Income					
Change in per capita income [a]	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**

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

Table 5. Determinants of change for the ultra poor

Explanatory variables	Change rank[a]	Change rank[a] (SUP)	Change rank[a] (non-SUP)
TUP beneficiary (1= Yes, 0 otherwise)	1.031 (13.63)***	-	-
Female headed household '02 (1=yes, 0 otherwise)	-0.052 (0.56)	-0.087 (0.68)	0.001 (0.01)
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	0.254	0.228
	(1.92)*	(1.61)	(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 (1=yes, 0=otherwise)	0.241 (2.74)***	0.245 (1.91)*	0.238 (1.92)*
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 (1=yes, 0=no)	0.190 (2.64)***	0.222 (2.09)**	0.204 (2.03)**
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

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

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