# **BANGLADESH**

A quantitative review of Household Strategies in a Time of High Food Price Volatility for the

Ensuring food and nutrition security in a time of volatility project

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Income poverty declined between 2005 and 2010 in Bangladesh in spite of the substantial price fluctuations and the increase in calorie consumption that would be expected to accompany such change was heavily skewed towards the richer sections of the population. To better understand how households dealt with high prices after a period of high volatility, the strategies adopted by households are reviewed through nationally representative survey data, bearing in mind those identified by the qualitative study.

Households do not consider price volatility as a shock, which may suggest that they have internalised it as a phenomenon here to stay to which they have adapted their lives. Reported shocks are predominantly weather related and affect the majority of the population. Interestingly, the cost containment measures reported by households in the qualitative study do not appear in the surveys. Where it may have been expected that households would cut down on costs –such as health or education- we find the opposite: households seem to be giving priority to sustaining and developing their human capital in spite of increasing prices. These trends seem to include not only households classified as poor but also those that have the lowest per capita calorie consumption which would rule out that the difference between quantitative and qualitative findings are due to the methodology used. The answer to the divergence between the qualitative and quantitative results may lie in the characteristics of the communities selected for the qualitative study which include an urban slum and in the last round, a location hard hit by a natural disaster, namely cyclone Aila in 2009. These communities have had to deal with very particular challenges, for example regular expulsion for the slum dwellers - which may lead to the adoption of idiosyncratic measures.





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## 1 INTRODUCTION

The objective of this paper is to provide a quantitative complement to the ongoing qualitative research in Bangladesh. A recent paper written by the Bangladesh team<sup>1</sup> concentrates on four key issues which are investigated through qualitative means, based on the study of three specific sites: trends in well-being, coping strategies; support systems and the impact of price volatility on future farmers.

Thus, different occupational groups are found to have been affected in different ways by price volatility. As one would expect small farmers and agricultural days labourers are the worst affected while large-scale owners are better able to manage. Those worse affected turn to a number of coping strategies: they try to contain expenditures, cutting down on food, schooling, and leisure spending. They also diversify and switch to new income generating activities and household members who did not work previously contribute economically become income earners. There are signs that youths are no longer interested in farming, an activity particularly affected by price volatility, and are gradually turning to other jobs. Farmers with larger farms are less likely to abandon agriculture but are encouraging their children to switch to non-agricultural income earning activities. Where these strategies are not sufficient to cope with the new economic context, people resort to migration. The two types of support systems, those provided by the Government and by NGOs, are expected to have been stepped up in response to households' difficulties in dealing with the effects of price volatility.

In what follows, after a brief description of the methodology used, through the analysis of existing household surveys, namely the *Bangladesh Bureau of Statistics Household Income Expenditure Survey*, we try to illustrate/ complement or challenge the findings that have emerged from the qualitative work.

## 2 METHODOLOGY

The Bangladesh Bureau of Statistics (BBS)'s Household and Income Expenditure Survey (HIES) 2005 and 2010 are used for the purpose of this exercise<sup>2</sup>. These surveys are nationally representative as well as representative at the Division level.

The 2010 survey was carried out during February 2010 – January 2011 and the 2005 between January and December 2005 (shaded in pink on Figure 1). By the time the 2010 survey was carried out, households had had to deal with intense price volatility: a price hike in 2007/08 followed by a slump and prices increasing again since August 2009. One would therefore expect responses in 2010 to reflect how people have reacted to price volatility but also to the ongoing price rise. In terms of level, throughout the second survey, average prices are substantially higher than in the 2005 survey. The difference in timing of the surveys and the qualitative exercise may have some bearing on the qualitative/quantitative comparison and should therefore be borne in mind throughout the analysis.

<sup>&</sup>lt;sup>1</sup> F. Jahan, Shahan, A.M., Mamun-ur-Rashid, M., Bayazid Hassan, M. and Siddiki, O.F (2012) The Bangladesh country report, 2012 Food Price Volatility Research

<sup>&</sup>lt;sup>2</sup> The next HIES is not until 2015, and data will not be available until well after the lifetime of the present project.

Wholesale national price rice

Wholesale national price rice

Wholesale national price rice

Wholesale national price rice

Under the state of the s

Source: Department of Agriculture Marketing (DAM), Bangladesh

The change in Consumer Price Index (CPI) gives an indication of the price inflation between both survey years and will allow contextualising some of the changes observed. The total CPI has increased by 45% in Bangladesh while the food CPI (which includes beverages and tobacco) has increased by 52%. While this is substantial, it is lower than the changes found in India, Nepal or Myanmar for example, but higher than Thailand or Bhutan (see Figure 2).

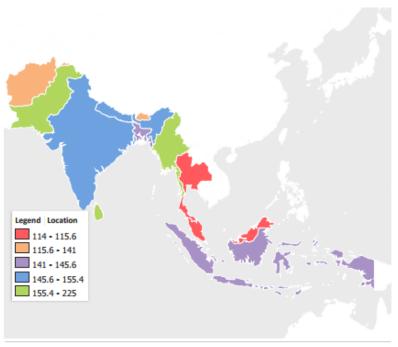


Figure 2. 2010 CPI in South Asia (with 2005 as base year =100)

Source: WDI indicators, Graph created with knoema.com

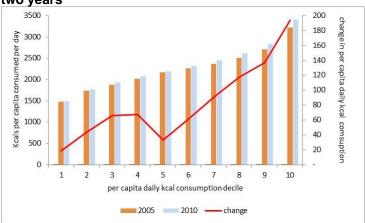
The poverty line is used to differentiate between poor and non-poor households. Given the limitations associated with using a poverty line, we also divide the population into per capita calorie intake deciles as a proxy to well-being. We report the results using deciles when results are of relevance. It should be noted that there is no exact correlation between per capita calorie intake deciles and the division of the population into poor and non-poor categories using the Cost of Basic Needs method i.e. some non-poor households are in the lowest per capita calorie consumption decile and conversely, some poor households in the richest decile.

# 3 IMPACTS OF PRICE VOLATILITY

#### 3.1 Well-being and shocks

In spite of the price volatility observed over the period under study, poverty as measured by the HIES and based on the Cost of Basic Needs method is reported to have declined from 40% to 31.5% of the population between 2005 and 2010. Concurrently, per capita kilocalorie consumption has increased, although the rise is 10 times higher for the highest per capita kilocalorie consumption deciles than for the lowest one: thus, the former groups consumes on average 194 kilocalories per capita per day more compared to an increase of 19 kilocalories per capita per day for the latter group (Figure 3). Thus, for those in most need of additional calorie intake, overall improvements in income levels have not translated into more food.

Figure 3. Per capita daily kcal consumption by decile in 2005 and 2010 and change over the two years



Almost all households report having experienced some type of shock in the year preceding the 2010 survey but the effect of price fluctuations does not appear predominantly. Climate related shocks (drought, irregular rain and floods) are the most common. Pest and disease are also often cited, more so by the non-poor households, possibly reflecting the fact that they are more likely to own crops than non-poor households (Figure 4). The unusually high prices of agricultural inputs which were also affected by price volatility, is cited as a cause of shock in the year preceding the survey in 7% of the cases for non-poor households and 5% for their poor counterparts. The unusual low prices of agricultural outputs —also a reflection of price volatility- only constitute 2% of non-poor households' shocks and is virtually absent for poor households.

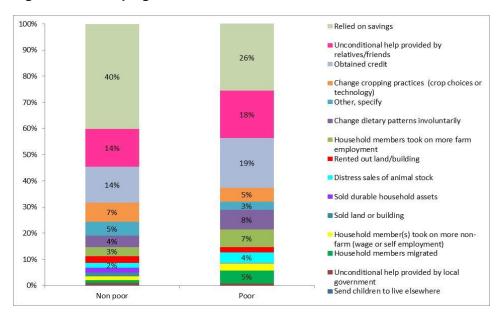
About three quarters of households affected by at least one shock report a decline in their income as a result; about half a decline in their assets and 66% a decline in their food production. There are no significant differences between poor and non-poor households. Interestingly, almost half of non-poor households report having bought less food as a consequence of a shock, compared to over half for poor households. Droughts/irregular rains are the type of shock that has the most negative effects on households (Annex 1). In terms of how they have dealt with these shocks, 40% of non poor households used their savings against 26% of poor households who likely to have fewer funds to draw on (Figure 5). Unconditional help from friends and relatives is also sought quite often and loans are taken. Poor households in 8% of the cases have had to change their dietary patterns (4% for richer households) so while less food is being bought, the composition of diets remains the same for

most. For the worst off, this may suggest the lack of leeway to switch to a worse but cheaper diet. In 7% of the cases, poor households had to take on additional farm employment (3% for richer households).

■ Drought /irregular rains 100% ■ Floods 20% ■ Unusually high level of crop pests and disease 25% Serious illness or accident of other HH 80% member(s) ■ Fire/tornado/earthquake, etc ■ Serious illness or accident of income earner(s) 15% 25% Other 60% ■ Unusually high level of livestock disease Landslides/erosion 7% Loss of employment not due to illness/accident 5% 40% 6% Unusually high prices of agricultural inputs 10% 6% Death of non earning hh member Conflict/violence 20% ■ Theft of agricultural assets/output ■ Death of income earner ■ Unusually low agricultural output price 0% ■ Reduction in the earnings of hhold member poor non poor

Figure 4. Prevalence of different types of shocks for those that experienced them

Figure 5. Main coping mechanism used to deal with shock



In what follows, we turn to the possible strategies adopted by households to deal with price volatility in the 12 months preceding the survey. The strategies are grouped in the same categories identified in the qualitative study.

#### 3.2 Cost containment

#### **Schooling**

While the qualitative information identifies dropping out of school as a strategy to handle the effects of price volatility, the quantitative surveys carried out earlier find that, overall, households, including those under the poverty line and those with lower per capita calorie intake, are not sending their children less to school. In fact, more children of primary and secondary school going age are attending school in 2010 than in 2005 (Table 1). For primary school, the increase in notably higher for the households consuming the least calories per capita (Annex 2). The increase in the proportion of poor households having received primary school stipend -from 19% in 2005 to 23% in 2010 can only in part explain these results, especially given that the increase in the average amount received is far from the rate of inflation in that same period (

Annex 3). The rise in primary and secondary school attendance is all the more surprising that the costs associated with schooling (fees, uniforms, donations etc.) have shot up dramatically, surpassing inflation by far: +101% (Table 2).

The only worsening in education seeking behaviour concerns higher education which was already rare among poor households in 2005 and in 2010 has virtually disappeared. On the other hand, non-poor households send their children into higher education more frequently in 2010: from 4.7% to 5.5% of children of higher education age attend higher education (Annex 4).

Table 1. Schooling

|                                  |              | 2005 |     | 2010 |     |
|----------------------------------|--------------|------|-----|------|-----|
| Children of primary school going | All          | 80%  |     | 85%  |     |
| age currently attending school   | non poor hhs | 86%  | *** | 89%  | *** |
|                                  | poor hhs     | 73%  |     | 78%  |     |
| Children of secondary (pre-SSC)  | All          | 74%  |     | 82%  |     |
| school going age currently       | non poor hhs | 82%  |     | 87%  |     |
| attending school                 | poor hhs     | 63%  | *** | 70%  | *** |

Table 2. Spending on education

|   | 2005      | 2010       | change |
|---|-----------|------------|--------|
| Spending on education net of any stipend if have kids in school | 5,395     | 10,857     | 101%   |
| from non poor hhs   | 7,548 *** | 14,174 *** | 88%    |
| from poor hhs   | 1,299     | 2,627      | 102%   |

#### Health

Price hikes can be expected to affect households' health, especially poor ones, in more than one way. Diets worsened through cost containment and longer working days may lead to poor health. Concurrently, poorer households may be reluctant to spend money on treatment thus worsening existing illnesses.

In the HIES, no change is registered in reporting of illness/injuries in the last 30 days –short term illnesses consisting in fever, diarrhea, pain, etc. Only a slight increase for illness/disability experienced over the last year is registered. But for poor households, this increase in long term -mostly gastric/ulcers, arthritis/rheumatism, blood pressure and asthma- illnesses is small- compared to non-poor households (

Table 3).

Table 3. Households with at least one member having suffered from ill health

|  |          | 2005  | 2010    |
|--|----------|-------|---------|
|  | All      | 44%   | 49%     |
| Suffered disability or ill health in the last year   | non poor |       |         |
| Suffered disability or ill health in the last year   | hhs      | 45% * | 51% *** |
|  | poor hhs | 42%   | 44%     |
|  | All      | 56%   | 56%     |
| Suffered from injury or ill health in the last month | non poor |       |         |
|  | hhs      | 55%   | 55% **  |
|  | poor hhs | 56%   | 59%     |

When asked how they dealt with different crises in 2010, households do not mention reducing expenses towards health (Figure 5). And indeed, the proportion of households with members having suffered illnesses and injuries over the last 30 days that did not seek any treatment has declined since 2005 (Annex 5). As expected, poor households are more likely to not seek treatment although this is 'only' the case for 8.4% of them in 2010. Also, there are only marginal changes with regards to the place where sick people sought treatment/help from, with the main source remaining government doctors in government facilities followed by doctors in private facilities and government doctors in private facilities. The latter is used less by poor households who tend to visit government doctors in government facilities (Annex 6). The reasons behind these choices have also changed little over time, with the main one being the proximity of the treatment source and the second the quality of treatment which is cited much more often by both poor and non-poor in 2010 (Annex 6). Cost is a consideration that is cited only slightly more frequently in 2010 but substantially more often by poor households. Yet, the amount spent for treatment has soared between 2005 and 2010, with an average increase of almost 300%. As in 2005, in 2010, poor households spent substantially less than non-poor households on treatment although their expenditure has increased by a comparable percentage. While in 2005 rural households spent substantially less than their urban counterparts, the amounts spent are no longer significantly different in 2010 (Table 4). In spite of this substantial increase in costs, just like in 2005, over 80% of health expenditures are met with regular household income and the rest with savings. Only in very few cases is money borrowed (Annex 8).

Table 4. Average cost of treatment (in taka) for those who sought treatment in the last 30 days

|              | 2005 |     | 2010 |     | change |
|--------------|------|-----|------|-----|--------|
| All          | 360  |     | 1432 |     | 298%   |
| Rural        | 335  | *** | 1479 |     | 341%   |
| Urban        | 436  |     | 1241 |     | 185%   |
| non poor hhs | 441  | *** | 1704 | *** | 286%   |
| poor hhs     | 211  |     | 869  |     | 312%   |

## 3.3 Borrowing

This information is only available in the 2010 survey and shows whether and why people are borrowing. Thus, in 2010, 40% of poor households borrowed money in the year preceding the survey against 33% of non-poor ones (Figure 5). 38% of rural households and 27% of urban ones took loans. Poor and non-poor borrow money mainly from big NGOs through microcredit schemes. They do not appeal to or money lenders very often (Figure 6). There are significant differences in the amounts taken out as loans by poor and non-poor households in the last one year: Taka 18,269 versus Taka 49,288. The difference is even more considerable between urban and rural households reflecting the fact that *urban non poor* households borrow very high amounts.

With regards to the use of the loan, in 2010, about one fifth of poor households who have experienced a shock in the previous year do report that they have obtained credit in order to cope (against 14% of rich households having experienced a shock). In 27% of the cases, non-poor households have borrowed money towards their business: this is 20% for poor households. The next main purpose of loan taking for both types of households is agriculture and housing. One notable difference is that 15% of poor households have borrowed money for purchasing food against 9% for non-poor households. Health or education figure quite rarely as a reason for borrowing (Figure 7). The differences between rural and urban households in terms of use of loans are to be expected with the main reason for borrowing in urban areas being business while it is agriculture (closely followed by business) in rural areas (Annex 9). Housing is also cited more often in urban areas but purchase of food is cited as one of the reasons for around 10% of the loans in both groups.

Figure 6. Source of loans

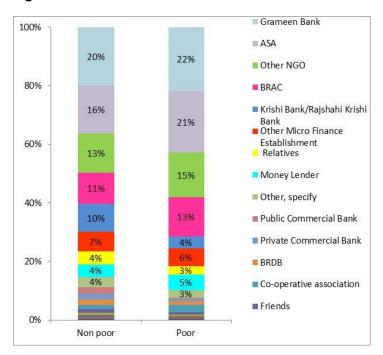
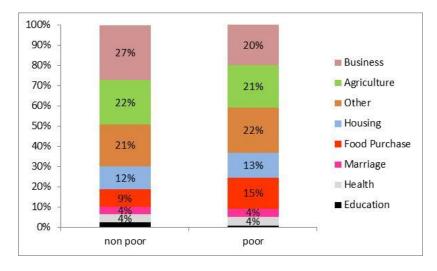


Figure 7. Purpose of loan taken for poor and non-poor households



# 3.4 Changes in income generating activities and household members' participation

The qualitative study finds that along with cost containment, households turn to new occupations or start engaging in additional income generating activities so as to earn more income. Household members not previously involved in income earning are also called upon.

With regards to involving more household member in income generating work, the surveys show little change over time. Children are not called upon to work more frequently –in fact, a slight decline in child labour is registered (Figure 8). Little change is also registered in terms of involvement of women in income earning activities: similarly to the situation in 2005, in 2010, close to 85% of males adults

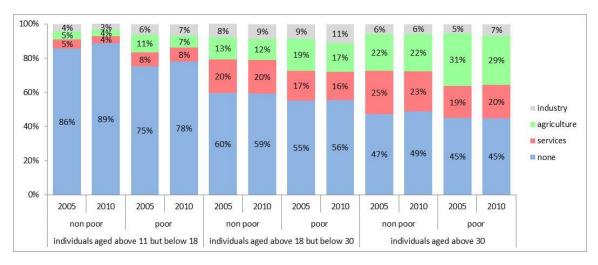
are earners. For females, this remains well below 10%. There is little difference between poor and non-poor households in the percentage of female earners but urban women participate more in the job market than their rural counterparts: in 2010, in rural areas, 7% of adult females are earners, against 13% in urban areas. One difference observed over time is that while in 2005, 31% of adult women working were household heads (against 5% for those who were not working), in 2010, this figure is down to 17% which seems to suggest that working has become more common for women even there is a male adult household head providing for the household.

As for the types of income generating activities in which women are involved, the only notable change is in rural areas where fewer women provide unskilled services in 2010 than in 2005 (from 20% to 15%) but more work in the industrial sector (from 19% to 25%)- see

Annex 10. Overall, both in 2005 and 2010, younger adults are less involved in agriculture than their older counterparts (Figure 8). But there is not clear shift in 2010 towards non-agricultural jobs for young adults over time as suggested by the qualitative findings.

Finally, the 2010 survey indicates that 7% of poor households having suffered some sort of crisis (3% for richer households) report having taken on additional farm employment in order to cope (Figure 5).

Figure 8. Percentage of individuals with a reported economic activity in the last 12 months in different sectors, by age group and poverty status



Turning to levels of remuneration, employees in non-agricultural activities see their wages grow substantially less than labourers' agricultural daily wages and even of non-agricultural daily wages, especially benefits, which constitute a substantial part of the remuneration (Table 5). The highest improvement in wages is thus for daily agricultural labourers who see their remuneration rise by more than double the inflation rate. This improvement is not distributed evenly and indeed, the gender gap has widened for poor females between 2005 and 2010 who see their daily wages in agriculture improve substantially less (Table 6). For employees, while the gender gap worsens slightly across the board in terms of net wages, women – especially poor ones- seem to have gained dramatically in terms of the benefits associated with the job (Annex 11 and Annex 12).

Table 5. Average remuneration agricultural daily wage in the last 12 months for daily labourers by poverty status

|                    |                      | 2005     |      | 2010 |          |       | change 2005-2010 |          |      |
|--------------------|----------------------|----------|------|------|----------|-------|------------------|----------|------|
|                    |                      | non poor | poor |      | non poor | poor  |                  | non poor | poor |
| doily              | agricultural         | 65       | 63   |      | 143      | 135   | **               | 120%     | 114% |
| daily<br>labourers | non-<br>agricultural | 101      | 77   | ***  | 197      | 155   | ***              | 95%      | 101% |
|                    | net wages            | 4201     | 2095 | ***  | 7,448    | 3,578 | ***              | 77%      | 71%  |
| employees          | benefits             | 6901     | 2783 | ***  | 9,732    | 3,783 | ***              | 41%      | 36%  |

Table 6. Gender gap in labourers' and employees' wages by year and poverty status

|           |                  | non poor |      | change poor |      |      | change |
|-----------|------------------|----------|------|-------------|------|------|--------|
|           |                  |          |      | in %        |      |      | in %   |
|           |                  | 2005     | 2010 | points      | 2005 | 2010 | points |
| daily     | agricultural     | 63%      | 55%  | -8%         | 52%  | 74%  | 22%    |
| labourers | non-agricultural | 133%     | 171% | 37%         | 136% | 133% | -3%    |
|           |                  |          |      |             | -    |      |        |
|           | net wages        | -37%     | -35% | 2%          | 101% | -93% | 7%     |
| employees | benefits         | 80%      | 51%  | -28%        | 123% | 10%  | -113%  |

#### 3.5 Migration

1.2% of households currently have at least one adult current member who *has been* abroad for more than 6 months over the last 5 years. The large majority are from non-poor households. The main reason for returning home is the end of their contract followed by disagreements with the country of migration's authorities. In 3.1% of the cases, people cite the economic recession as a reason for returning (Annex 13). Overall however, the first price hike resulted in a peak in international migration rather than the opposite as shown by data from the Bangladesh Bank (Figure 9). In 2010, at the time of the survey, 9.7% households *currently* have an international migrant, 2% of which are women. As expected, this is significantly more the case for non-poor households although 4% of poor households still manage to send members abroad. This is also more often the case for rural households (Table 7).

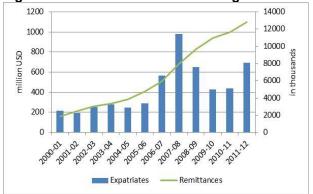


Figure 9. Number of international migrants and remittances

Source: Bangladesh Bank

In 4.1% of households, at least one person has migrated domestically: 4.8% for non-poor households and 3.0% for poor households (Table 7).

Table 7. Households with at least one international migrant or one national migrant at the time of the survey

|              | International | <u> </u> | National |     |  |  |  |
|--------------|---------------|----------|----------|-----|--|--|--|
| All          | 9.7%          |          | 4.1%     |     |  |  |  |
| Rural        | 10.5%         | ***      | 5.0%     | *** |  |  |  |
| Urban        | 7.5%          |          | 1.6%     |     |  |  |  |
| non poor hhs | 12.3%         | ***      | 4.8%     | *** |  |  |  |
| poor hhs     | 3.9%          |          | 3.0%     |     |  |  |  |

Almost all households with migrants receive remittances and half also receive goods. The value of the goods received amounts to about 10% of the remittances for domestic migrants. These goods are mostly clothing, especially for poor households (Annex 14). This is followed by food. The Bangladesh Bank data show that international remittances expressed in US dollars have increased steadily over time, unaffected by price volatility or jumps in the number of migrants (Figure 9). Thus, receipts in cash and goods from international migrants have increased by 140% between 2005 and 2010 and a staggering 326% for domestic migrants. The increase in remittances and the value of goods sent back is particularly high for poor households: +427% for domestic migrants and +235% for international ones (Table 8).

Table 8. Average value of money/goods received by international and domestic migrants over the previous 12 months in 2005 and 2010

|                 | internationa | international migrants domestic migran |        |            | ints   | ohongo |
|-----------------|--------------|--|--------|------------|--------|--------|
|                 | 2005         | 2010                                   | change | 2005       | 2010   | change |
| All             | 67,577       | 162,259                                | 140%   | 10,409     | 44,373 | 326%   |
| rural           | 65,418       | 160,359                                | 145%   | 9,833      | 40,652 | 313%   |
| urban           | 76,722       | 169,718                                | 121%   | 13,199     | 76,605 | 480%   |
| non poor<br>hhs | 73,448       | ** 170,729 ***                         | 132%   | 12,704 *** | 49,173 | 287%   |
| poor hhs        | 31,199       | 104,635                                | 235%   | 5,455      | 28,758 | 427%   |

#### 3.6 Support system

In line with the qualitative study, the HIES finds limited effects of the Social Safety Net Programmes in place. Comparisons over time are challenged by the fact that the 2005 and 2010 surveys have not included the same number of SSNPs in their questions however<sup>3</sup>. So rather than focusing on changes over time, one should focus on differences between poor/non-poor and rural/urban at each point in time.

In both years and in both rural and urban areas, poor households benefit significantly more from the SSNs included in the HIES than non-poor households, but overall, it is the rural poor that are best catered for (Annex 15). And indeed, in 2005, coverage -by the SSNs included in the survey- is much worse in urban areas when compared to the poverty head count: 44% of the rural population is poor while 16% of households received SSNs while 28% of the urban population is poor but only 6% receive benefits. This greater disparity in urban areas continues and is accentuated in 2010 (Figure 10). The percentage of households covered by at least one SSN in 2005 in rural areas was double for poor households than for non-poor households. In 2010, it is only 1.5 times higher. For urban areas, it is four times higher in 2005 but only 2.5 higher in 2010. This seems to indicate an increase in mistargeting (Annex 15). To ensure this result is not due to the inadequacy of the poverty line, per capita calorie intake deciles are used to look at safety net participation and they confirm these patterns. In 2005, there are significant differences between the top and bottom deciles in both rural and urban areas. In 2010, there is no significant difference between the top and bottom decile in rural areas (Figure 11).

The qualitative research indeed finds that SSNPs are often used by political leaders to satisfy their clientele groups. Program benefits are often awarded to the people who are not in a destitute

<sup>&</sup>lt;sup>3</sup> The SSNP module which was first introduced in HIES 2005 included 11 programmes compared to 30 in the HIES 2010. This makes comparisons tricky (e.g. coverage automatically increases because they have included more SSNs in the list). The 2005 11 programmes included were: VGD, IFS, FFW (money), Test Relief, VGF, Gratuitous Relief (Cash), Money for education, RMP, Old age pension and Freedom fighters pension.

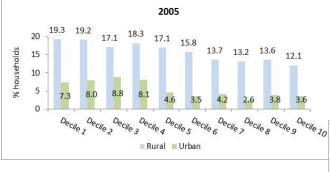
The 2011 30 programmes included were: VGD, VGF, GR, Allowance for the Widowed, Deserted and Destitute, Allowance for the Financially Insolvent Disabled, Maternity allowance Program for the Poor Lactating, Honorarium for Insolvent Freedom Fighters, Honorarium for Injured Freedom Fighters, General Relief Activities, Allowances for distressed cultural personalities/Activists, Allowance for beneficiaries in CHTs, Stipend for Disabled Students, Grants for the schools for the Disabled, Cash for Work, Housing Support, Agriculture Rehabilitation, Subsidy for open market sales, Test Relief, FFW, Employment Generation for Hard-core Poor or 100 days, Stipend for Primary Students, School Feeding Programme, Stipend for drop out students, Stipend for Secondary and Higher Secondary/Female Student, Maternal Health Voucher Allowance, Rural Employment opportunities for protection of public, Char livelihood, and Rural Employment, Social forestation and Rural Maintenance Program.

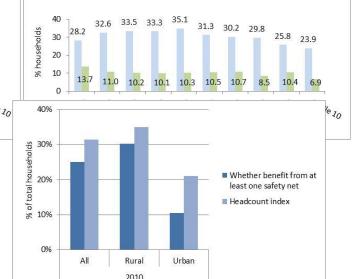
In 2010, about 60% of public spending on SSNPs went to these 30 programmes.

condition and who do not really need the help from the government. Some caution is necessary in the comparison given that many more SSNs are included in the 2010 survey but it is interesting that in 2010, contrary to 2005, there are no significant differences between the proportion of poor and non-poor that report having had to pay bribes to enroll in a SSN which over the programmes included amounts to about 17% of the beneficiaries (

Annex 16). The majority of respondents that have not been allowed to join an SSN give as reason the fact that they were 'not fit for the programme'. It is unclear from the questionnaire however whether it is they or the authorities who believe this. The rest believe that the selection was not properly done: 29% of the poor against 15% for the non-poor (Annex 17).

Figure 10. Poverty and coverage rates of the SSNs included in the HIES 2005 and 2010





2010

Figure 11. Households benefitting from at least one safety net by calorie intake per capita decile

Amounts received are comparable across rural and urban areas in 2010 with some notable differences between what the poor and non-poor receive, the poor receiving less on average (Annex 18)<sup>4</sup>. Cash amounts received by recipient households amount to a tiny fraction of their total consumption<sup>5</sup> (

<sup>&</sup>lt;sup>4</sup> It is not possible to talk about the significance of differences in 2005 because there are not enough cases in some categories.

<sup>&</sup>lt;sup>5</sup> I am not saying anything more on this because these results seem implausible. There seems to be an issue with the data and with a potential mix up in the recording on an annual or monthly basis (pointed out in Barkat as well). The amounts seem to be given for the entire year, which yields the results above. If we were to consider that they are monthly receipts, it would still represent only around 5% of their total consumption. For example. For Old Age Allowance where people should receive Tk 300 per month received every three months, we find that 70% have reported receiving Tk 300 and others from Tk25 to Tk4500. So everyone seems to be using a different time scale.

Annex 19) which goes to confirm that government assistance is inadequate and does not help people to get out of their poverty trap. Based on these data, Barkat *et al* (2013)<sup>6</sup> estimate that removing SSNs altogether would increase the poverty head count by a mere 0.5 percentage points so it is not actually making that much difference. This also goes to confirm the findings of the qualitative work which finds that assistance programs are short term solutions that are inadequate to bring about any real significant change.

Economic support in Bangladesh is not only provided by the State and NGOs. Individuals also contribute through charity and zakat. This contribution —whether in cash or in kind- has clearly declined between 2005 and 2010 (Table 9), especially for the in-kind help received by the poor. The average amounts received have increased in line with inflation whereas the value of in kind gifts has increased much more, especially for poor households (Table 10). Nevertheless, poor households do report unconditional help from friends and relatives to be their way of coping with shocks in 18% of the cases, against 14% for their richer counterparts.

Table 9. Proportion of households who received charity, zakat or other type of help

|         | non poor |      | poor |      |  |
|---------|----------|------|------|------|--|
|         | 2005     | 2010 | 2005 | 2010 |  |
| in cash | 9%       | 6%   | 13%  | 9%   |  |
| in kind | 15%      | 11%  | 21%  | 14%  |  |

Table 10. For those who received charity, zakat or other type of help, average amount

|         | non poor |       |        | poor  |       |        |
|---------|----------|-------|--------|-------|-------|--------|
|         | 2005     | 2010  | change | 2005  | 2010  | change |
| in cash | 5,042    | 7,378 | 46%    | 2,682 | 4,143 | 54%    |
| in kind | 2,440    | 4,443 | 82%    | 1,267 | 2,614 | 106%   |

## 3 CONCLUSION

Income poverty clearly declined between 2005 and 2010 in spite of the substantial price fluctuations and the increase in calorie consumption that would be expected to accompany such change was heavily skewed towards the richer sections of the population. Households do not consider price volatility as a shock which may suggest that they have internalised it as a phenomenon here to stay to which they have adapted their lives. Reported shocks are predominantly weather related and affect the majority of the population. These shocks have negative effects on income, food production and also food expenditure and consumption.

To better understand how households dealt with high prices after a period of high volatility, the strategies adopted by households are reviewed through the survey data bearing in mind those identified by the qualitative study. Interestingly, the cost containment measures reported by households in the qualitative study do not appear in the surveys.. Primary and secondary schooling is on the rise across the board, in spite of substantial increases in the costs associated with education. Long term illnesses which could be worsened by more difficult life conditions due to price volatility

<sup>&</sup>lt;sup>6</sup> Barkat (2013) *Improving the Targeting Effectiveness of Social Safety Nets in Bangladesh*, Manob Sakti Unnayan Kendro (MSUK)

(worse or less food, more work, less treatment) are on the rise but mostly for richer households but reduction of expenses towards health is not mentioned as a way to deal with shocks and in fact, most households do seek some form of treatment when they are sick in spite of soaring costs. Borrowing is quite common especially for poor households and about one fifth of households having experienced some type of shock in the preceding year have borrowed money to be able to cope. But borrowing – mostly as microcredit- is also common as a way to finance business.

Little change is also observed with regards to the type of activities people get involved in or who is put to work. Children are not called upon to work nor are women although one notable trend is that women who work are no longer most likely to be heads of households. In other words, female participation in the paid work force is becoming more common and acceptable.

Agricultural daily wages have increased the most over the period under study and well above the inflation rate as observed in the qualitative study. This in turn will affect those who have to employ them. Daily agricultural wage labourers however are more exposed to price fluctuations in that decisions of land owners to plant or not will affect them directly. Their work is also seasonal, leaving them without or with little work in the lean season (Annex 20).

International migrant remittances have steadily increased unperturbed by the global economic crisis. For the close to 4% of poor households who have international migrants, this represents a valuable source of income which as soared between 2005 and 2010. This is also the case of domestic remittances which suggests that, especially for poor households, migration has been an indispensable strategy to keep afloat during prices hikes.

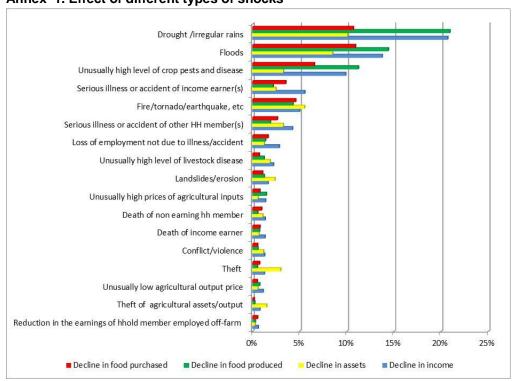
Finally, the support systems in place are mostly inadequate in their scale with safety nets only catering for only a small part of those in need and not necessarily concentrating on the most needy, while private help has also declined in frequency, probably reflecting the effect of economic crisis across the population.

The quantitative findings do not always coincide with the qualitative ones. Where it may have been expected that households would cut down on costs —such as health or education- we find the opposite: households seem to be giving priority to sustaining and developing their human capital in spite of increasing prices. These trends seem to include not only households classified as poor but also those that have the lowest per capita calorie consumption which would rule out that the difference between quantitative and qualitative findings are due to the methodology used. The answer to the divergence between the qualitative and quantitative results may lie in the characteristics of the communities selected for the qualitative study which include an urban slum and in the last round, a location hard hit by a natural disaster, namely cyclone Aila in 2009. These communities have to deal with very particular challenges, for example regular expulsion for the slum dwellers- which may lead to the adoption of idiosyncratic measures.

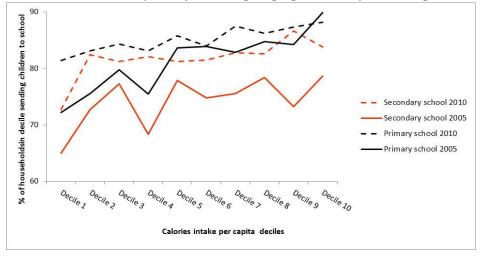
One possible explanation could be the timing of the surveys: as the 2010 has occurred after quite some volatility, it could be that what we are witnessing are not the initial knee-jerk reactions to price changes but the more long term reactions whereby households, even the poor ones, are giving priority to sustaining and developing their human capital.

## **ANNEXES**

Annex 1. Effect of different types of shocks



Annex 2. Children of primary school going age currently attending school



Annex 3. Stipend for primary school children

|  | 2005 | 2010 | % change |
|--|------|------|----------|
| Children of primary school going age currently | 470/ | 100/ |          |
| attending school receive primary stipend       | 17%  | 18%  |          |
| non poor hhs                                   | 16%  | 17%  |          |
| poor hhs                                       | 19%  | 23%  |          |
| If receiving primary stipend, how much         | 841  | 902  | 7%       |
| non poor hhs                                   | 858  | 893  | 4%       |
| poor hhs                                       | 822  | 914  | 11%      |

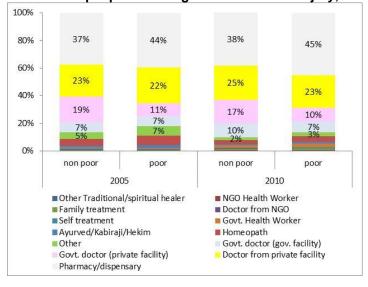
Annex 4. Higher education

|  | 2005 |     | 2010 |     |
|--|------|-----|------|-----|
| Children of higher education age currently |      |     |      |     |
| attending                                  | 3.6% |     | 4.2% |     |
| from non poor hhs                          | 4.7% | *** | 5.5% | *** |
| from poor hhs                              | 1.3% |     | 0.1% |     |

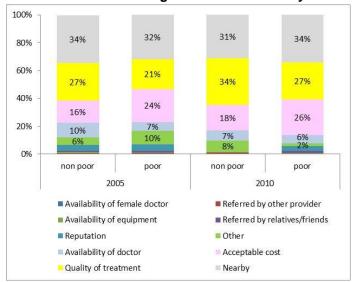
Annex 5. Proportion of households with people who suffered illness or injury in the last 30 days but did not seek treatment

|          | 2005      | 2010    |
|----------|-----------|---------|
| All      | 16.6%     | 9.1%    |
| Rural    | 16.9%     | 9.6%    |
| Urban    | 15.6%     | 7.0%    |
| non poor |           |         |
| hhs      | 14.2% *** | 8.4% ** |
| poor hhs | 21.1%     | 10.7%   |

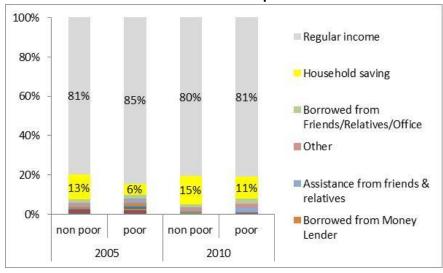
Annex 6. If people suffering from illness and injury, from where did they seek help, it at all



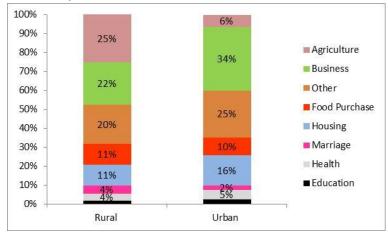
Annex 7. Reason for seeking treatment where they did



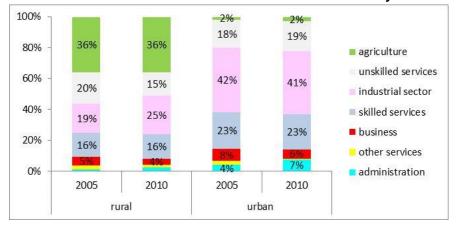
Annex 8. Source of funds used for health expenditure



Annex 9. Purpose of loan taken for urban and rural households



Annex 10. Sector in which women with an economic activity in the last year worked



Annex 11. Average monthly net pay for adult employees involved in non-agricultural activities

|        | non poor |      |        | poor |      |        |
|--------|----------|------|--------|------|------|--------|
|        | 2005     | 2010 | Change | 2005 | 2010 | Change |
| male   | 4819     | 8191 | 70%    | 3008 | 4395 | 46%    |
| female | 3516     | 6055 | 72%    | 1499 | 2272 | 52%    |

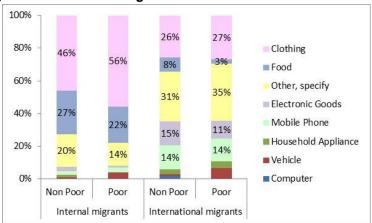
Annex 12. Average monthly value of in-kind or other benefits (tips, bonuses or transport) for adult employees in non-agricultural activities

|        | non poo | non poor |        | poor |      |        |
|--------|---------|----------|--------|------|------|--------|
|        | 2005    | 2010     | Change | 2005 | 2010 | Change |
| male   | 8111    | 10949    | 35%    | 3637 | 4087 | 12%    |
| female | 4518    | 7249     | 60%    | 1633 | 3718 | 128%   |

Annex 13. Reasons for return of adults having been abroad for more than 6 months in the last five years

| Lost job                      | 11.0% |
|-------------------------------|-------|
| Illness                       | 15.0% |
| End of employment contract    | 29.8% |
| Disagreement with authorities | 20.6% |
| Homesick                      | 13.8% |
| Economic recession            | 3.1%  |
| Other (specify)               | 6.7%  |

Annex 14. Nature of goods received in the last 12 months by households with international migrants and national migrants



Annex 15. Whether benefitting from any safety net (as included in each survey)

|       |              | 2005  |     | 2010  |     |
|-------|--------------|-------|-----|-------|-----|
|       | All          | 13.2% |     | 25%   |     |
| All   | non poor hhs | 9.1%  | *** | 21%   | *** |
|       | poor hhs     | 20.5% |     | 35%   |     |
|       | All          | 15.9% |     | 30.3% |     |
| Rural | non poor hhs | 11.9% | *** | 26.2% | *** |
|       | poor hhs     | 22.4% |     | 37.8% |     |
|       | All          | 6.7%  |     | 10.4% |     |
| Urban | non poor hhs | 3.5%  | *** | 7.9%  | *** |
|       | poor hhs     | 14.5% |     | 19.6% |     |

Annex 16. Whether had to pay for bribe to benefit in safety net

|          |              | 2005 |     | 2010  |
|----------|--------------|------|-----|-------|
|          | All          | 1.5% |     | 16.7% |
|          | non poor hhs | 1.0% | *** | 16.5% |
| National | poor hhs     | 2.4% |     | 11.5% |
|          | All          | 1.8% |     | 17.0% |
|          | non poor hhs | 1.3% | *** | 17.1% |
| Rural    | poor hhs     | 2.5% |     | 17.1% |
|          | All          | 0.8% |     | 11.5% |
|          | non poor hhs | 0.3% | **  | 12.3% |
| Urban    | poor hhs     | 2.1% |     | 10.3% |

Annex 17. Reasons given for not being included in any SSN programme (in %)

|  | poor | non poor |
|--|------|----------|
| 1. Didn't Know about the programme     | 5    | 5        |
| 2. Not fit for that programme          | 56   | 71       |
| 3. Fit for the programme but not apply | 4    | 4        |
| 4. Due to shortness of budget          | 6    | 3        |
| 5. Selection was not proper            | 29   | 15       |
| 6. Not, any programme is this area     | 1    | 3        |

Annex 18. How much received in the last month on average by households who received some cash from an SSN in 2010

|          | All          | 427 |     |
|----------|--------------|-----|-----|
| National | non poor hhs | 477 | *** |
|          | poor hhs     | 359 |     |
|          | All          | 426 |     |
| Rural    | non poor hhs | 475 | *** |
|          | poor hhs     | 361 |     |
|          | All          | 439 |     |
| Urban    | non poor hhs | 497 | **  |
|          | poor hhs     | 337 |     |

Annex 19. Cash received (for those who received some) as proportion of total household consumption

| All      | 0.5% |     |
|----------|------|-----|
| non poor |      |     |
| hhs      | 0.4% | *   |
| poor hhs | 0.6% |     |
| Rural    | 0.6% | *** |
| Urban    | 0.3% |     |

Annex 20. Average number of months worked in last 12 months if working

|                             | 2005 | 2010     |
|-----------------------------|------|----------|
| All                         | 10.5 | 10.8     |
| Rural                       | 10.3 | 10.6     |
| Urban                       | 11.4 | 11.5     |
| agricultural occupation     | 9.7  | 10.2     |
| non agricultural occupation | 11.1 | 11.3     |
| non poor hhs                | 10.7 | 11.0 *** |
| poor hhs                    | 10.3 | 10.5     |

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