

Selected Living Standard Indicators and the ultra poor

Shantana R. Halder

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BRAC
Research and Evaluation Division
75 Mohakhali C/A, Dhaka 1212 Bangladesh
Email: bracamr@bdmail.net; Fax: 880-2-8823542,
Phone:880-2-8824140, Ext. 2710

Abstract

This report aimed to give a clear picture on the nature of their vulnerability and potentiality to cope with by analysis their non-land asset base, ownership of savings and their level of human poverty. It was estimated that 91% of the ultra poor possessed any kind of non-land assets, 62% owned any productive assets and only 19% had savings. Average value of total non-land assets was only Tk. 3,787 at current price, of them value of productive assets constituted only 26%. Results on human poverty showed that 96% of the ultra poor used tube-well water for drinking, 88% for cooking, 76% for dish washing, 39% for cloth washing and 38% for bathing. Only 14% used slab/pit latrine for defecation. Eighty percent of the adult males and females possessed minimum two pieces of ordinary cloths. Access to winter clothing and footwear for all household members were for only 12% and 30% households respectively.

Introduction

Poverty is a state of deprivation. It is about income, employment, education, food security, gender inequality and so on. This chapter focuses on some selected living standard indicators such as, non-land assets, current savings status and the indicators of human poverty like access to tubewell water, use of sanitary latrine, possession of winter clothing and so on as defined in the Human Development Report '98.

Rural households in Bangladesh face different kinds of anticipated and unanticipated crisis. To cope with such crisis distress sale/leasing out of assets and loan taken at a very high rate of interest were found to be the most frequent crisis-coping mechanisms (Hossain and Hossain (eds), 1995). Credit-worthiness of the household is also defined by the household asset base, the latter being one of the major determinants of income. Household asset base is one of the important indicators to assess the household economic condition. The land-poor status of the ultra poor has already been discussed. Here an in-depth analysis of their non-land assets, savings and indicators of human poverty are being carried out to give a clear picture on the nature of their vulnerability and the potentiality to cope with.

This report aimed to give a clear picture on the nature of their vulnerability and potentiality to cope with by analysis their non-land asset base, ownership of savings and their level of human poverty. Data used in this report were collected in December 1998 from 1,250 ultra poor households residing in five districts under 25 BRAC's RDP Area Offices. These are the households who were eligible for NGO membership but not participated in the NGO activities. In sample selection the list of all ultra poor households living in the villages of all RDP working areas but not participating in NGO activities prepared by RDP local staff in 1997 was used. The five districts selected for this study were Comilla, Jamalpur, Faridpur, Rangpur and Bogra where concentrations of the non-participating ultra poor households were highest. From each

selected region five Area Offices (AOs) were sampled based on the higher frequency of non-participating households.

Ownership of non-land asset

Ninety-one percent of the sample households were found with some kind of non-land assets. Types of assets included ownership of poultry, livestock, living house, jewelry, big trees with current timber value of Tk. 100 or more, ownership of other durable goods and prestigious items such as bicycle, watch, rickshaw/van, fishing nets, boat, sewing machine, *dhenki* (wooden husking paddle), handloom, radio, tape-recorder and TV. Tables 1 and 2 present item-wise ownership of different kinds of assets by region. According to the tables 85% had their own living houses, 46% owned poultry, 17% owned livestock, 36% owned jewelry and 21% possessed big trees. Types of assets owned differed significantly by region. For example, 68% of the sample population in Comilla possessed poultry while it was only 18% in Rangpur. On the other hand, ownership of livestock was relatively higher in Bogra. Ownership of big trees also differed significantly by region. Jewelry is a customary item, which every household is expected to possess due to the existing socio-cultural norms and practices of the rural society. In jewelry, all kinds of gold and silver items, including the nose-ring, were included. It is the last item that women part with when they face a crisis. Ownership of jewelry was not satisfactory and varied significantly by region as shown in the results. A maximum of 60% households in Comilla possessed jewelry compared to a minimum of 7.6% in Rangpur (Table 1).

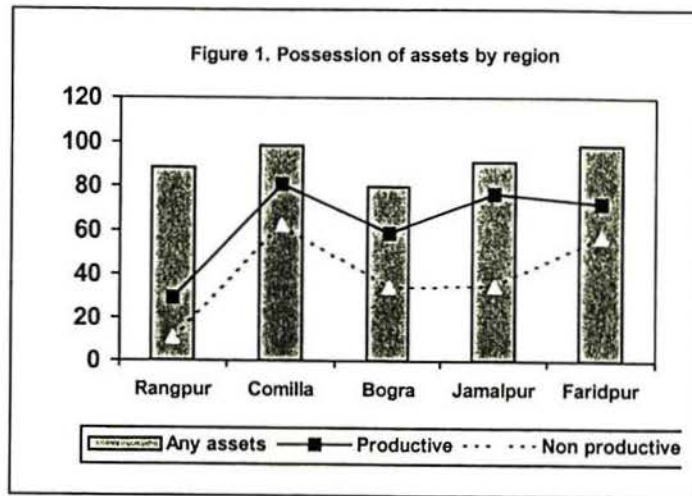
Among regions, highest ownership of specific items along with their current value was in Comilla. The performance of Rangpur was lowest in this regard.

Among different components of assets, value of the living house constituted 68.8% of the total value of Tk. 3,457. Share of productive¹ to total non-land assets was found to be 25.9%. The other non-productive assets² excluding house value constituted only 5.3% of the total assets. Share of productive to total assets indicates the relative potentiality of different households in raising income. Taking this into account Rangpur was found to be the most vulnerable region where this share was only 10%. Although 88% of the households in Rangpur possessed living houses constituting 89% of the total value of their non-land assets, the absolute value of their houses was lowest like the value of productive assets compared to other regions (Table 2).

It was found that on the average, 62% of the total samples owned any kind of productive assets. Ownership of non-productive assets was 41%. Ownership of any kind of productive assets was highest in Comilla (80.9%) and lowest in Rangpur (29%) implying that seventy-one percent of the ultra poor in Rangpur were without any productive assets. Similarly 90% of the ultra poor in Rangpur did not possess any durable goods and prestigious items (Figure 1).

¹ include poultry, livestock, big trees with minimum current value Tk. 100, rickshaw, van, fishing nets, boats, dhenki, sewing machine and handloom

² include jewelry and other durable goods and prestigious items such as radio, TV, tape-recorder, watch and bicycle.



Association of assets with other socioeconomic indicators

Significant association between non-land asset ownership (productive and non-productive) and land was observed. Male-headed households possessed higher assets than female. Households headed by literate heads owned more assets than the households headed by illiterates. Significant differences were also found among different income earning groups. Value of assets owned by households, depending only on female income, was less than those owned by households with 'male only' income group. Strong correlation was also found between asset ownership and household heads' occupation. The beggars, disabled and wage earning group owned significantly less assets than others. Analysis of factors contributing to non-land asset ownership indicates that the land-poor and the disadvantaged group owned significantly less assets (Table 3).

Savings

Household saving is defined as the surplus income after deducting current consumption expenditures. There is another approach of measurement that defines

savings as the change in net-worth (Hossain, 1996). Here the first approach has been followed due to lack of data. In the calculation of total savings, cash in hand, loan given to others, seeds, *mushti chal*³ and mortgaged-in land have been included. It has been found that only 19% of the sample population had some savings.

Saving as a function of income goes up with the rise in the income level. It has been discussed earlier that the ultra poor lack continuous flow of income opportunities and potentials to increase it. Therefore, it is likely that their marginal propensity to save, i.e., amount saved per unit of increased income, will be low. As shown in Table 4, only 19% of the total population managed to save either in cash or in kind. Average amounts saved per saver household and for all households were Tk. 943 and Tk. 179 respectively. Number of saver households significantly differs by region. It was highest in Jamalpur (31.6%) and lowest in Rangpur (3.6%). On the other hand, the amount per saver household was highest in Comilla followed by Bogra and Jamalpur. It was only Tk. 12 in Rangpur. If all households are considered then the amount was highest for Jamalpur. Rate of savings which is the current savings-income ratio was highest in Jamalpur, although the average was very low, only 1.4%. In all respects performance of Rangpur region was the worst.

Amount of land as a function of income had significant effect on the savings behavior. As shown in Table 5, only 15% of the landless managed to save compared to 19% of those who had only homestead. The number of savers was 40% among those who had any cultivable land. The amount per saver and the rate of savings increased sharply with an increase in landholding status. Although number of saver households and amount were significantly higher for male-headed households due to their relatively higher income opportunities, share of savings to income was higher for the female-headed ones. Households headed by literate heads had more savings than illiterate ones in terms of number and amount. A strong association between savings and occupation of the household heads was also observed. Among different income earning groups, the

³*Handful of rice saved by rural women before cooking*

percentage of saver households and the amount saved were significantly lower for those depending only on female income. But the share of savings to total income for these households was higher than those depending only on males. Relatively higher rate of savings of households headed by female and those depending only on female income compared to male indicates that women have a higher propensity to save.

Water and sanitation

Access to tubewell water and sanitation has been identified as basic human needs and has also been recognized as the foundation for health maintenance. As mentioned by Karim and Begum (2001) lack of tubewell drinking water and adequate sanitation practices is a leading cause of many communicable diseases in developing countries. In the early 80s, results on the use of tubewell drinking water and sanitation practices were too low. During the Water and Sanitation Decade, starting from 1981, significant progress has been made through the joint efforts of the government and non-government organizations. Presently, 95% of the rural households use tube-well water for drinking and 59% for domestic work; 17% of the households have slab or pit latrine (BBS, 1997).

This section describes the sources of water used by the ultra poor for various purposes and investigates the places used for defecation. A significant proportion of the ultra poor are absolute landless and assetless. It would be interesting to know about their water and sanitation practices in different parts of the country by controlling their different socio-economic status. For this analysis only the verbal responses of the respondents were considered. It is likely that the ultra poor without any asset base can not afford to own any tube-well. On the other hand, many of them may not also have any water source of their own like ponds and wells or that they live far from rivers or canals. To solve the problem of accessibility to tubewell water for all, the government installed many tube-wells and excavated ponds in different common public places. There is also another common practice where people who do not have direct access to public sources collect water from their neighbours.

Considering all these the present analysis provide more emphasis on practices rather than ownership. Before going into the details some conceptual clarification may be required for a clear understanding on the results presented below. In the case of use of water from different sources, tube-well and tap water have been considered as tubewell

and free from bacteria, the rest being considered as non-safe. In sanitation practices, the use of ring-slab latrine for defecation has been considered to be a better choice.

Sources of water used for different purposes

On an average, 96% of the sample households used tube-well water for drinking and another four percent used water from wells, rivers and canals. It may be mentioned here that none of the respondents used pond water for drinking. For cooking 88% used tube-well water and 76% used it for dish washing. More than one-third also used it for washing clothes and bathing. Nearly 50% used pond water for washing clothes and bathing (Table 6).

Wide variations were prevalent among different regions in the use of tube-well water for different domestic and personal uses. For example, when in all other areas the use of tube-well water for drinking reached more than 98%, it was 87% in Bogra. The use of tube-well water for cooking and dish washing was relatively lower in Comilla and Bogra compared to other regions. The use of tube-well water for washing clothes and bathing i.e., personal use, was significantly low in Comilla and Faridpur region, four and 15% respectively. It was also relatively low in Bogra (23%). One of the possible explanations could be the fact that usually in rural areas water from other sources i.e., pond, river or canal, are used for personal uses. Faridpur and Comilla are low-lying areas where access to such sources was high. On the other hand, Rangpur and Jamalpur are dry areas. During dry season all the closed water sources, i.e., ponds, canals become dry and the households living in those areas have to fully depend on tube-well water (Table 7).

The use of tube-well water for drinking, cooking and other domestic and personal uses was relatively higher for the highest landholding group and vice versa. The landless used less tube-well water compared to other landholding groups. The use of tube-well water for drinking was found significantly higher among the male-headed households

compared to the female-headed households. For use other than drinking, no significant differences between male-headed households and female-headed households were observed. Education was found to be positively associated with the use of tubewell water for drinking and negatively with other purposes. Results show that households with literate heads or households with any literate member use it relatively more for drinking and less for other purposes than the households with illiterate heads or the educationally dark households. Among different income earning groups, the households with only male income earners used tubewell water more for drinking, cooking and dish washing and less for washing clothes and bathing as compared to other income earning groups. Among different employment groups, performance of the most vulnerable group was significantly poor in the use of tube-well water for drinking, cooking and dish washing. On the other hand, the use of tube-well water for other personal uses, i.e., clothes washing and bathing, was relatively higher (Table 8).

The use of tubewell water for drinking, cooking and dish washing was higher among high income groups. The reverse results were observed in the use of tube-well water for washing clothes and bathing that implied that the low-income group used more tube-well water for personal uses (Table 8). It may be because, the low-income group not having direct access to/ownership of any water sources, fully depends on the commonly used public water sources, i.e., either tubewells for common use, canals or any other public water sources.

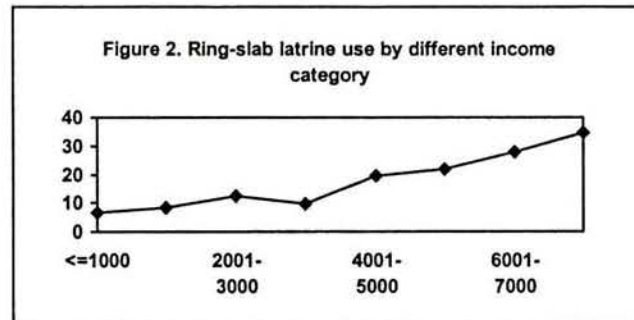
Places of defecation

Only 14.2% of the ultra poor used ring-slab latrine for defecation. One-third used *kutcha* latrine covered with walls. Fifty-two percent of the sample households used open space for defecation. Wider variations in sanitation practices exist in different parts of the country. Although the use of ring-slab latrine was minimum, it was relatively higher in Comilla, (31%) and very low in Rangpur and Bogra regions, 4% and 5% respectively. Eighty-seven percent in Faridpur and 46% in Comilla used *kutcha*

latrine while more than 90% in Rangpur and Bogra regions used open space for defecation (Table 9).

The use of ring-slab latrine was higher among the highest landholding category and the educated and lowest among the female-headed and beggars and disabled households. (Table 10). In the use of *kutcha* latrine no such differences could be identified although it was relatively higher among households depending only on female income and the destitutes. It is likely that people not having any permanent residence or those without any uninhabited space in their homestead for establishing a latrine, use different places for defecation, although results do not give any clear idea. It is evident from the table that a significant proportion of households having land, even cultivable, used open space for defecation which implied that types of latrine use are not only associated with purchasing power, but are also a matter of habit.

Establishment of ring-slab latrine is costly which all can not afford. Higher use of ring-slab latrine with increasing income (Figure 2) indicates that to create awareness among people is not enough in changing an existing practice until people can change their economic condition.



Clothing

Clothing as a human need is second basic after food. Usually the possession of minimum clothing is a self-expressive indicator being used in the poverty analysis. In

assessing minimum clothing requirement two items are being considered. First is the ownership of a minimum of two pieces of sari or *lungi* per adult (female or male) and a piece of winter cloth for each member in the family. Results presented in Table 11 show that 20% of the adults did not possess a minimum of two pieces of clothes for wearing. Access to minimum clothing for female adults increases significantly with increasing land i.e., household wealth. On the other hand, no significant variation was observed in the ownership of a minimum two pieces of *lungi* for male adults. It may be because frequent movement of males in the public places for employment and the types of activities they carry on forced them to have a minimum two piece of clothing. Since majority of the female adults do not move outside their homestead frequently, they will have to make trade-off between their needs and that of their male counterparts.

Striking variations have been observed with respect to possession of minimum clothing between households headed by males and females. Among the male-headed households more than 80% of the adults of both sex owned a minimum of two pieces of clothes compared to 70% of the females and 54% of the males of female-headed households. Those depending only on female income were in a worse-off position. Literacy of household heads significantly influenced reduction of gender inequality.

Possession of winter clothing and foot wear

Possession of winter clothing is also a part of human basic needs. The poor should have the right to access it. Results show that only 12% of the ultra poor had access to winter clothing for all their household members (Table 12). The average percentage of those having access to footwear for all household members was 30%. Significant variations were found in the possession of winter clothing and footwear among different landholding groups. Only seven percent of the landless had access to winter clothing and 20% of them to footwear while, among the highest landholding group the figures

were 27% and 52% respectively. Significant variations in results were also observed between households headed by literate and illiterate heads and among different occupational groups, but no such variations were found among different income earning groups and between households headed by male or female. Since land, education and occupation are the functions of income, they may have some influence on the possession of winter clothing and footwear.

Possession of minimum clothing and footwear by region

If possession of winter clothing and footwear is considered as the best indicator for measuring human poverty, Rangpur and Jamalpur could be identified as the most poverty prone regions where only six to seven percent of the ultra poor possessed a piece of winter clothing for all of their family members. In Rangpur, 45% of the female and 38% of the male adults, as reported by the respondents, did not have a minimum of two pieces of clothes of their own. In Jamalpur also, at least 35% of the male and female adults did not possess minimum clothing. The possession of winter clothing and footwear for the ultra poor has been found to be a vital issue, irrespective of region, which did not exceed 20% and 40% respectively (Table 13).

Discussions and conclusions

Ownership of different types of non-land assets shows significant low possession of any type of assets by the ultra poor in any study location. For example, according to agriculture and livestock census 1996 (BBS 1999) when in Rangpur region 77% of the rural households owned poultry, 54% owned goat or sheep and 47% owned cattle, very few of the ultra poor in Rangpur owned them (17.6%, 2.4% and 3.6% respectively). In Comilla according to BBS statistics among the rural households while 42% owned poultry, 58% owned goat or sheep and 50% owned cattle, ownership of such assets was significantly lower among the ultra poor households. Similar trends were also observed for other regions. Low ownership of poultry and livestock of the ultra poor was explained by the following: Firstly, regarding cattle, goat or sheep raising, since majority of the ultra poor were either absolute landless or own only homestead, they

face frequent shortage of fodder for livestock rearing. Purchasing of fodder is not cost effective to them. Limited or no space within the homestead was also one of the other probable reason. Rearing of cattle involves certain risk, which the ultra poor are unable to cope with due to their poor resource base. Long gestation period for having return is also another factor. The ultra poor cannot afford to wait for long after making an investment to get return due to their pressing income needs and lack of adequate income opportunities for survival. Secondly, regarding poultry rearing, on the one side, they can not afford to rear HYV birds due to their poor resource base, i.e., lack of space within their homestead, risk of high mortality, lack of education, lack of technological know how, dependence on purchased feed and lack of extra hands to look after birds. On the other hand, a significant proportion of the ultra poor, mainly the absolute landless, cannot afford to rear poultry of any variety due to lack of free space. Low ownership of trees was also related with their landlessness.

To increase ownership of productive assets only transfer or provision of assets to them without considering all the constraints mentioned above will not serve the purpose. Poor savings status of the ultra poor was explained by their limited income. To increase savings creation of additional income opportunities will be necessary.

It is likely that the ultra poor can not afford to install tube-well. Higher use of tube-well water for drinking indicates the growing consciousness among all population. But results on the use of tubewell water for different domestic purposes may contradict results of other studies showing relatively higher use of tube-well water for cooking and dish washing by the ultra poor. Usually people in the rural society do not use tube-well water for cooking and dish washing due to that fact that tube-well water alters colour of food because of its high iron content, which many of the rural people do not like. There is also a local belief that tube-well water causes gastric ulcer. In the use of water from different sources, their ownership and accessibility are important. But the great majority of the ultra poor are absolute landless who do not have direct access to any such water sources. They have to collect water from areas outside their

living place. It could be that once they collect water for drinking, subsequently use it for other frequent domestic uses like cooking and dish washing.

The use of tube-well water for personal purposes was significantly lower in Comilla and Faridpur and higher in Rangpur and Jamalpur regions. Comilla and Faridpur are low lying areas where, throughout the year, access to water sources other than tube-well was higher. On the other hand, Rangpur and Jamalpur are not directly linked with any bigger open water sources where the access to other water sources was limited and available only during the monsoon/ wet season. Different uses of tube-well water for personal purposes are explained by the differential access to other water sources besides tube-well.

The use of slab-ring latrine, considered as hygienically tubewell, is highly correlated with household wealth. The rate of tubewell latrine use is very low in the rural Bangladeshi households, irrespective of their socio-economic conditions. According to BBS (1997), 66% of the rural Bangladeshi households possessed latrine, but only 17% possessed sanitary latrines in 1991. Mitra (1992) found that the rate of use of ring-slab latrine by the ultra poor was 14%. Landlessness and poverty do not permit the ultra poor to bear the cost of its installation and maintenance. Lack of knowledge on the benefits of ring-slab latrine could be another possible reason. Findings of the present study on factors associated with latrine possession are similar to those of Mitra, where he mentioned lack of space, education and prevalence of poverty as the reasons for low possession. According to him, maintenance of pit latrine is costly. He also cited examples about those who went back to open space for defecation. The inconveniences of frequent cleaning or change of pits and rise of water during floods and monsoon are some of the other reasons of their going back. According to Mitra, latrines are mainly used for privacy and convenience rather than health. Due to lack of data on this issue we could not provide any comment. But Mitra's study provide a clear understanding

about lack of knowledge among the Bangladeshi rural households on the usefulness of using latrine and practicing hygiene.

To increase slab/pit latrine use, raising of awareness or provision of latrine will not help the absolute landless and those not have adequate space within their homestead for its installation.

Regarding possession of minimum clothing, results show that 20% of the adults lack the minimum two pieces of cloths. Eighty-eight percent of the households could not afford winter clothing for all of their household members, likewise 70% did not have footwear for all. To ensure possession of minimum clothing and footwear for all in the short run, a local fund can be generated by motivating local elites and the rich. In the organizing committee of such fund representation from existing local institutions, like mosques, schools, madrashas and other registered local development organizations, may be ensured for transparent transfer the benefits to the most needy who are eligible. There also should be a long run poverty alleviation programme strategy addressing mainly their development needs in increasing their purchasing power which ultimately will solve this problem.

References

BBS (1999), *Census of Agriculture – 1996: Structure of Agricultural Holdings and Livestock Population*, Vol. 1.

BBS (1997), *Summary Report of the Household Expenditure Survey 1995-96*, *Bangladesh Bureau of Statistics*, Statistics Division, Ministry of Planning, 1997

Hossain Zillur Rahman, Hossain Mahbub, and Sen Binayak (1996.), *1987-1994: Dynamics of Rural Poverty in Bangladesh*, Bangladesh Institute of Development Studies, Dhaka

Hossain Zillur Rahman. and Hossain Mahbub.(eds.), *Rethinking Rural Poverty: Bangladesh as a Case Study*, University Press Limited, 1995

Karim F. and Begum S.A. (2001), 'Use of Water and Sanitation In *Counting the Hills: Assessing Development in Chittagong Hill Tracts* edited by Rafi M. and Chowdhury A.M.R., University Press Limited, Dhaka, pp. 127-136

Mitra and Associates (1992), *The 1991 National Survey on Status of Rural Water Supply and Sanitation for DPHE/UNICEF*. Final Report,

Table 1. Region-wise distribution of households by ownership of different types of non-land assets

Types of non-land assets	Rangpur	Comilla	Bogra	Jamalpur	Faridpur	Average
Poultry	17.6	67.6	35.2	48.8	59.6	45.8
Cow	3.6	13.2	16.8	9.2	9.2	10.4
Goat	2.4	5.2	10.8	4.0	10.8	6.6
Living house	88	88	72	85.6	91.2	85
Jewelry	7.6	60.4	25.6	30.0	56.0	35.9
Trees	4.8	42.0	7.6	38.8	9.2	20.5
Others	3.6	9.6	9.6	20.0	10.4	10.6
Total	88.4	98.4	80.0	91.2	98.4	91.3

Table 2. Share of different types of assets by region

Share of asset	Rangpur	Comilla	Bogra	Jamalpur	Faridpur	Average
Non-land productive	9.6	25.0	22.3	39.3	31.8	25.9
House	88.7	67.7	69.8	56.2	63.0	68.8
Other non-productive	1.6	7.4	7.9	4.6	5.2	5.3
Total (Taka)	875	7,523	3,697	2,824	2,366	3,787

Table 3. Ownership of productive and non-productive non-land assets and their mean value by different socio-economic indicators

Indicators	% owned			Mean value assets (Taka)
	Productive	Non-productive	Total	
Total*	57.7	39.9	91.3	3,787
A. Landholding category				
Absolute landless	48.5	27.6	73.5	1,593
Only homestead	66.9	44.0	96.5	3,615
Homestead+ cultivable	84.5	63.2	93.5	14,051
Significance level	p < .01	p < .01	p < .01	p < .01
B. Sex of the household head				
Male	68.4	52.0	96.1	4,436
Female	56.1	20.3	82.5	2,391
Significance level	p < .01	p < .01	p < .01	p < .01
C. Education of the household head				
Illiterate	63.1	39.5	90.4	3,324
Literate	75.2	61.2	98.5	7,301
Significance level	p < .01	p < .01	p < .01	p < .01
D. Sex of income earners				
Households with female only	51.4	19.3	80.0	2,185
Households with male & female	67.8	40.0	93.2	3,195
Households with male only	69.4	53.6	97.0	4,785
Significance level	p < .01	p < .01	p < .01	p < .01
E. Occupation of the household head				
Wage	57.2	41.9	92.7	3,272
Self	61.5	50.4	96.8	4,061
Begging/disables/old age	35.2	12.3	77.1	2,781
Others	75.0	47.6	92.7	7,300
Significance level	p < .01	p < .01	p < .01	p < .01

Table 4. Household savings by region

Savings indicators	Rangpur	Comilla	Bogra	Jamalpur	Faridpur	Average
% possessing savings	3.6	11.2	18.4	31.6	30.4	19.0
Average for all households (Taka)	12	195	201	341	148	179
Average per saver household (Taka)	345	1,739	1,095	1,080	486	943
Savings rate to income	0.2	0.9	1.6	3.0	1.1	1.4

Table 5. Ownership of savings by different household indicators

Indicators	Savings		Average for all households	
	%	Average (Taka)	Taka	Savings rate to income
A. Landholding category				
Absolute landless	14.5	503	73	0.9
Only homestead	18.9	1,003	190	1.4
Homestead + cultivable	40.3	1,227	495	2.5
Significance level	p < .01	ns	p < .01	ns
B. Sex of the household head				
Male	21.2	1,070	227	1.3
Female	15.0	611	92	1.4
Significance level	p < .01	p < .10	p < .05	ns
C. Education of the household head				
Illiterate	18.1	807	146	1.2
Literate	26.7	1,704	454	2.4
Significance level	p < .05	p < .01	p < .01	p < .05
D. Sex of income earners				
Households with female only	14.7	567	83	1.5
Households with male & female	21.7	898	195	1.6
Households with male only	20.4	1,118	228	1.2
Significance level	p < .05	ns	p < .10	ns
E. Occupation of the household head				
Wage	18.3	720	132	1.3
Self	27.4	1,279	350	2.1
Begging/disables/old age	7.8	831	65	0.4
Others	22.6	1,179	266	1.6
Significance level	p < .01	ns	p < .01	p < .05

Table 6. Distribution of households by use and sources of water

Sources of water	Purpose of use				
	Drinking	Cooking	Dish washing	Cloths washing	Bathing
Tube-well	96.0	88.1	75.7	38.9	37.9
Pond	-	6.9	18.3	49.2	49.5
River and canal	1.0	1.4	3.8	9.4	10.2
Well	3.0	3.6	2.2	2.5	2.4

Table 7. Use of tube-well water for different purposes by region

Regions	Tube well water used for				
	Drinking	Cooking	Dish washing	Cloths washing	Bathing
Rangpur	97.6	96.8	95.2	76.4	73.2
Comilla	98.4	71.6	62.4	4.4	3.6
Bogra	86.8	79.2	49.2	23.6	23.2
Jamalpur	97.6	96.8	93.6	74.8	74.8
Faridpur	99.6	96.0	78.0	15.2	14.8
Significance level	p < .01	p < .01	p < .01	p < .01	p < .01

Table 8. Use of tube-well water for different purposes by different socioeconomic indicators

Indicators	Tube well water used for				
	Drinking	Cooking	Dish washing	Cloths washing	Bathing
Total*					
A. Landholding category					
Absolute landless	94.5	88.4	71.6	38.9	39.3
Only homestead	96.2	87.6	76.2	38.1	38.8
Homestead + cultivable	100	93.5	85.5	50.0	48.4
Significance level	ns	ns	p < .10	ns	ns
B. Sex of the Household head					
Male	97.0	88.8	76.3	38.8	37.7
Female	94.0	86.8	74.5	39.0	38.3
Significance level	p < .05	ns	ns	ns	ns
C. Education of the Household head					
Illiterate	95.8	88.5	76.4	39.6	38.7
Literate	97.8	84.4	69.9	33.3	31.1
Significance level	ns	ns	p < .10	ns	p < .10
D. Sex of income earners					
Households with female only	93.6	87.7	73.1	40.3	39.4
Households with male & female	96.2	89.7	76.4	46.0	45.6
Households with male only	97.3	88.2	76.9	35.1	33.8
Significance level	p < .05	ns	ns	p < .01	p < .01
E. Occupation of the Household head					
Wage	96.3	86.5	71.5	35.3	34.5
Self	97.2	93.7	84.1	42.9	42.1
Begging/disables/old age	92.7	84.9	73.7	44.7	43.6
Others	96.8	90.3	84.7	42.7	40.3
Significance level	p < .10	p < .01	p < .01	p < .05	p < .05

Table 9. Use of tubewell water for different purposes by income category (%)

Income category	Tube- well water used for				
	Drinking	Cooking	Dish washing	Cloths washing	Bathing
≤Tk. 1000	91.9	81.1	70.3	54.1	52.7
Tk. 1001- Tk. 2000	96.6	86.9	75.5	47.7	44.6
Tk. 2001- Tk. 3000	96.1	85.2	70.1	35.7	35.4
Tk. 3001-Tk.4000	97.5	92.4	79.2	33.5	33.0
Tk.4001- Tk. 5000	93.7	86.8	74.8	30.2	30.8
Tk. 5001-Tk. 6000	95.1	92.7	82.9	37.8	36.6
Tk. 6001-Tk. 7000	98.1	96.3	88.9	37.0	37.0
> Tk. 7000	97.3	92.0	80.0	37.3	37.3
Significance level	ns	p<.05	p<.05	p<.01	p<.01

Table 10. Types of latrine use by region

Region	Ring-slab latrine	<i>Kutcha</i>	Open space	Total
Total	14.2	33.6	52.2	100
Rangpur	4.0	2.4	93.6	100
Comilla	31.2	46.4	22.4	100
Bogra	4.8	4.0	91.2	100
Jalalpur	18.0	28.4	53.6	100
Faridpur	13.2	86.8	-	100
Significance level	p<.01	p<.01	p<.01	

Table 11. Types of latrine use by different socioeconomic indicators

Indicators	Ring-slab	Kutchra	Open space
<u>A. Landholding category</u>			
Absolute landless	6.5	30.5	63.0
Only homestead	15.7	34.8	49.5
Homestead + cultivable	27.4	29.0	43.5
Significance level	p < .01	ns	p < .01
<u>B. Sex of the Household head</u>			
Male	15.5	32.2	51.7
Female	11.8	35.3	52.9
Significance level	p < .10	ns	ns
<u>C. Education of the Household head</u>			
Illiterate	12.6	33.6	53.7
Literate	27.4	33.3	39.3
Significance level	p < .01	ns	p < .01
<u>D. Sex of income earners</u>			
Households with female only	10.0	35.6	54.4
Households with male & female	10.3	25.1	64.7
Households with male only	18.3	36.0	45.7
Significance level	p < .01	p < .01	p < .01
<u>E. Occupation of Household head</u>			
Wage	11.8	37.0	51.2
Self	19.8	28.6	51.6
Begging/disables/old age	4.5	30.7	64.9
Else	30.6	29.0	40.3
Significance level	p < .01	p < .05	p < .01

Table 12. Possession of minimum clothing and footwear by different socioeconomic indicators

Indicators	Possession of			
	Min. 2 sari per adult females n = 1250	Min. 2 lungi per adult males n = 880	Winter cloths for all members n = 1250	Footwear for all members n = 1250
Total average	79.4	79.2	11.6	30.2
<u>A. Landholding category</u>				
Absolute landless	73.1	79.5	7.6	20
Only homestead	80.4	78.5	11.7	31.9
Homestead + cultivable	91.9	87.0	27.4	51.6
Significance level	p < .01	ns	p < .01	p < .01
<u>B. Sex of the Household head</u>				
Male	84.6	81.4	12.1	30.9
Female	69.7	53.6	10.7	28.9
Significance level	p < .01	p < .01	ns	ns
<u>C. Education of the Household head</u>				
Illiterate	78.3	78.8	10.0	28.3
Literate	88.1	82.0	22.9	45.9
Significance level	p < .01	ns	p < .01	p < .01
<u>D. Sex of income earners</u>				
Households with female only	68.5	46.7	11.1	29.7
Households with male & female	76.0	70.9	9.1	30.0
Households with male only	87.2	83.8	12.9	30.6
Significance level	p < .01	p < .01	ns	ns
<u>E. Occupation of the Household head</u>				
Wage	81.6	81.1	10.4	30.8
Self	85.3	81.9	15.9	32.1
Begging/disables/old age	59.8	63.1	7.8	17.3
Else	83.1	73.6	15.3	41.9
Significance level	p < .01	p < .01	p < .05	p < .01

Table 13. Possession of minimum clothing and footwear by regions

Indicators	Possession of			
	Min. 2 sari per adult females n = 1250	Min. 2 lungi per adult males n = 880	Winter cloths for all members n = 1250	Footwear for all members n = 1250
Rangpur	54.4	62.2	6.0	18.8
Comilla	99.2	96.8	18.8	39.6
Bogra	81.5	79.4	14.4	36.0
Jamalpur	62.8	66.7	6.8	30.0
Faridpur	98.8	91.0	12.0	26.8
Average	79.4	79.2	11.6	30.2
Significance level	p < .01	p < .01	p < .01	p < .01