MISSING WOMEN
An Estimate of Women Domestic Work in Bangladesh

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EXECUTIVE SUMMARY

This research attempts to estimate the unpaid women domestic work in Bangladesh. The study conducted a nation-wide survey in seven districts of seven administrative divisions and the number of households from each district was selected using Probability Proportional to Size (PPS) method. A total of 520 women, comprising 202 from rural and 318 from urban areas were chosen randomly and interviewed for the purpose of this pioneering research.

The research applied two recognised methods - the opportunity cost and the market replacement cost - to estimate the monetary value of the unpaid household work by women in the country.

The study reveals that the total unpaid work per year might be equivalent to BDT 1115914.8 million or USD 14.45 billion. The total gross domestic product (GDP) of the country was BDT 1037990 crore in the FY 2012-13.

The study reveals that the total unpaid work per year might be equivalent to BDT 1115914.8 million or USD 14.45 billion. The total gross domestic product (GDP) of the country was BDT 1037990 crore in the FY 2012-13.

The opportunity cost method, which measures the amount what women would earn if they are employed as waged labourers instead of engaged in unpaid domestic work, esitimates that the total unpaid women work per year might be equivalent to BDT 1115914.8 million.

Using another method, the report finds out that the total amount of the unpaid work by women in Bangladesh might be equivalent to BDT 336918.58 million or USD 4.36 billion, if the market replacement cost method is employed which is computed based upon what it would have been spent to hire someone to carry out the work.

The research observes that the economic value of unpaid domestic work by women would have been much higher if the wages of women in Bangladesh were not comparatively low and the wage deferential between men and women was not so high.

Referring to the rising share of women in the labour force as 'feminisation of labour,' the study reasons that growing need and decline of familial support along with the ever-

increasing pressures for sustenance have pushed women to engage in income generating activities.

For addressing the issue of unpaid work in Bangladesh, the report calls for recognition of the embedded institutional rigidities that reproduces the system, formulate comprehensive social policy and institute holistic social security system. Unless and until such realities are recognised and responded with appropriate policies, institutional structures and monetary instruments, it will be impossible for achieving real equality in the society.

For addressing the issue of unpaid work in Bangladesh, the report calls for recognition of the embedded institutional rigidities that reproduces the system, formulate comprehensive social policy and institute holistic social security system.

Considering general profile of the respondents, it is found that most of the respondents (81.9 percent) are living in a nuclear family whereas only 18.1 percent are living in a joint family. Again, it is found that 67.5 percent of the respondents have their family members 3-5 while 24.4 percent have 6 and above. Only 8.1 percent have their family members in between 1-2. It is also found that more than nine of every 10 households are headed by male and remaining 8.8 percent are headed by female.

Regarding education status, the average year of schooling among the all respondents is 8.83 years. On the other hand, among all the respondents, 39.4 percent are engaged with only household work as a housewife. Moreover, it is found that 32. 1 percent, 2.5 percent, 6.7 percent, 2.1 percent, and 17.1 percent respondents are engaged with professional services, business, handicraft, waged lobour and domestic work respectively along with their household work.

Respondents, who are in different types of professional services, have daily spent on an average of 3.71 hours for the household work. Women, who are engaged in business and handicraft, have spent an average time of 3.69 hours and 5.2 hours per day respectively for household work. Additionally, the study also shows that on an average, the waged labourers and the domestic workers spend daily 4.8 and 4.3 hours for their household work respectively. One of the main findings of the study is that, those who are housewives have averagely spent 8.13 hours per day for their household work.

More specifically, it is found that, women engaged in different types of occupation except household work spend an average of 7.29 hours per day for their occupation and their monthly average income is BDT 9167.

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1. INTRODUCTION

Unpaid work does not devalue women. Women are devalued when their work is discounted.
(Evelyn Drescher in *Mothers Are Women*)

The option for women to make choices and to claim rights to decent living has remained elusive in the context of survival and hence has been subjected to violence, injustice and dispossession.

This research attempts to monetise unpaid family work of women in Bangladesh. The issue has received very little consideration in Bangladesh. With the existing institutional barriers along with the hurdles of patriarchal society women are generally deprived of their traditional means of livelihood, at the same time their housework is not valued or counted as the part of the economy. The option for women to make choices and to claim rights to decent living has remained elusive in the context of survival and hence has been subjected to violence, injustice and dispossession (Titumir, 2013).

Like elsewhere, in Bangladesh, the typical thinking is that men are responsible for 'outside' work and women for housework and child care. As the stereo-typing goes, income earning is usually the responsibility of males, women are economically dependent and thus they are given no choice but to live in this dependent condition because of patriarchal social structure, instrumentalised through tangible variables such as comparatively lower educational levels and fewer marketable skills.

Women who have paid employment are to continue to bear the responsibilities for housework, despite the rising share of women in the labour force. The feminisation of labour has been accelerated by the growing need and decline of familial support along with the ever increasing pressures to sustain has pushed women especially to engage in income generating activities (Titumir, 2013).

The crucial contributions of women are often invisible and are usually provided without assurance of economic return. The invisibility of much of work done by women in the home and the fields add to their low status and the ill treatment from which they suffer. Their unpaid work is neither

officially recognised by policy-makers, nor recognised as true work (Keklik, 2006).

The foundation of the economy of a nation largely depends on work, whether paid or unpaid. But the fact is that paid work is counted as part of the economy and unpaid work, neglected. Unpaid workers are not considered part of the labour force and their work is not counted as national income. Unpaid workers thus fail to get the attention they deserve. Women bear major responsibilities for unpaid work which includes cooking, washing clothes, cleaning, taking care of children and the sick and the elderly, tutoring children and so on. Usually they start working early in the morning and are to work for longer period until midnight in comparison with any other member in the family. In most of the cases, their work remains as invisible work (Rollins, 1985), though unpaid work is essential to the development of human capabilities and well-being. However, work of women in segments and sectors - for example in care work - appears that efficiency wages are not being paid (see Grimshaw and Rubery, 1995; Akerlof and Yellen, 1986; Bulow and Summers, 1986; Shapiro and Stiglitz, 1984, Yellen, 1984).

The Beijing Platform for Action, adopted at the 1995 United Nations Fourth World Conference on Women, urged countries to develop "suitable statistical means to recognise and make visible the full content of the work of women and all their contributions to the national economy including their contribution in the unremunerated and domestic sector" (United Nations 1996). In spite of the essential role of domestic workers in maintaining household, they are often low paid, sometimes ill-treated, and frequently undervalued for the work they perform. Undervaluation is certainly in the part of a historical legacy, reflecting the low status of women at the time the jobs became associated with the labour of women (Rau and Wazienski, 1999).

The contributions of unpaid work done by women have always been invisible and are not considered in economic and social policies. As a society, it should be recognised that women are doing the bulk of the work and are not being financially rewarded for doing so. To a certain extent, they are often deprived of equal access to health care, capital, and decision making in and outside the family. Measurement of unpaid household work is therefore important to better understand the income distribution as well as to achieve

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more comprehensive estimates of the level of economic activity while giving visibility to their work (Aslaksen and Koren, 1996). Valuation of their work would likely to establish them as an important player in the economic scene, and would likely have further multiplier effects in improving their overall contribution and participation in economic and other activities.

The main purpose of this study is thus to obtain a picture of the economic value of unpaid work of women in and around the home as well as to raise attention to a serious but neglected issue in Bangladesh.

2. METHODOLOGY

This study uses both the opportunity cost method and the market replacement cost method. In case of market replacement cost method, the study employs the monthly income of domestic workers in the sense that most of the housework is performed by them. The calculation is done in the following way:

Let, I for the monthly average income for women from the labour market and W for the average time (hours) spent on the labour market for their job per month.
Then we may calculate the average income per person per hour as:

$$DI = I/W$$

If the average time spent for household work (unpaid) of the respondents is HW per person per year, the average annual income per person is calculated as:

$$AI = DI \times HW$$

So that, if P_i is the total unpaid population of a country (where, $i = 1,2,3…..n$), then the average amount of unpaid work per year can be calculated as:

$$AYI = (P_1 \times AI) + (P_2 \times AI) + (P_3 \times AI) + ………… + (P_n \times AI)$$

$$\therefore AYI = \sum_{i=1}^{n} P_i \times AI$$

In case of market replacement cost, AI is calculated on the basis of income for the same activities in the labour market.

Valuation of their work would likely to establish them as an important player in the economic scene, and would likely have further multiplier effects in improving their overall contribution and participation in economic and other activities.

This study uses both the opportunity cost method and the market replacement cost method.

A Multistage Stratified Sampling (MSS) has been adopted for this survey. The study comprised the data collected from 7 administrative divisions of Bangladesh. The sample are stratified and selected in multiple stages. The 7 administrative divisions of Bangladesh are stratified into 7 strata. From each stratum, 1 district is randomly selected: Dhaka from Dhaka division, Noakhali from Chittagong division, Rajshahi from Rajshahi division, Khulna from Khulna division, Sylhet from Sylhet division, Barisal from Barisal division, and Dinajpur from Rangpur division. It is assumed that the socio-economic conditions of all the districts from each division are unique. The number of households, according to the Statistical Pocketbook of Bangladesh 2012 and Population and Housing Census 2011, at each division is calculated by using a Probability Proportional to Size (PPS) method at the first stage of sampling.

A total of 520 women, of which 202 from rural and 318 from urban areas were interviewed from 10 November to 5 December, 2013. In order to perform the above task, first, a pilot survey was conducted to identify respondents, and then the information was collected from those respondents. The main instruments for data collection were well-structured questionnaires administered on the respondents by the trained enumerators under the supervision of Unnayan Onneshan. The detail methods and materials of the study are presented in Appendix-A. The data were edited, compiled, processed and analysed by using SPSS 16.0 programme. Information from the secondary source (Bangladesh Bureau of Statistics) is also used in this study.

3. GENERAL PROFILE OF THE RESPONDENTS

This section aims at provoking information on the demographic profile such as type of family, marital status, number of family member and household head and socio-economic characteristics of the respondents like education status, occupation status, daily time spent on paid and unpaid work and monthly income.

Type of Family of the Respondents
The traditional joint family structure in Bangladesh has been breaking down over last few decades due to poverty, attitudes of self-interest, quarrels, maladjustment and so on

and is gradually being replaced by nuclear families (UNESCO, 1992). This study reveals that most of the respondents (81.9 percent) are living in a nuclear family whereas only 18.1 percent are living in a joint family. The study further shows that 25 percent of the respondents in Dhaka division are living in a nuclear family followed by Chittagong (14 percent), Rajshahi (12.3 percent) and Khulna (11.2 percent).

Table 1: Type of family by division

Division	Type of family		Total
	Nuclear	Joint	
Rajshahi	64 (12.3)	16 (3.1)	80 (15.4)
Dhaka	128 (24.6)	37 (7.1)	165 (31.7)
Khulna	58 (11.2)	4 (0.8)	62 (11.9)
Chittagong	73 (14.0)	15 (2.9)	88 (16.9)
Sylhet	31 (6.0)	0 (0.0)	31 (6.0)
Barisal	30 (5.8)	2 (0.4)	32 (6.2)
Rangpur	42 (8.1)	20 (3.8)	62 (11.9)
Total	**426 (81.9)**	**94 (18.1)**	**520 (100)**

Source: UO field survey, 2013
Note: Figure in parenthesis indicates percentage

Considering rural and urban areas, in urban area about five of every 10 respondents are living in a nuclear family while in rural area about three of every 10 respondents are living in a nuclear family. The percentage of the respondents living in a joint family in both rural and urban areas remains low - 7.5 percent and 10.6 percent respectively.

Figure 1: Percentage distribution of the respondents by type of family and area
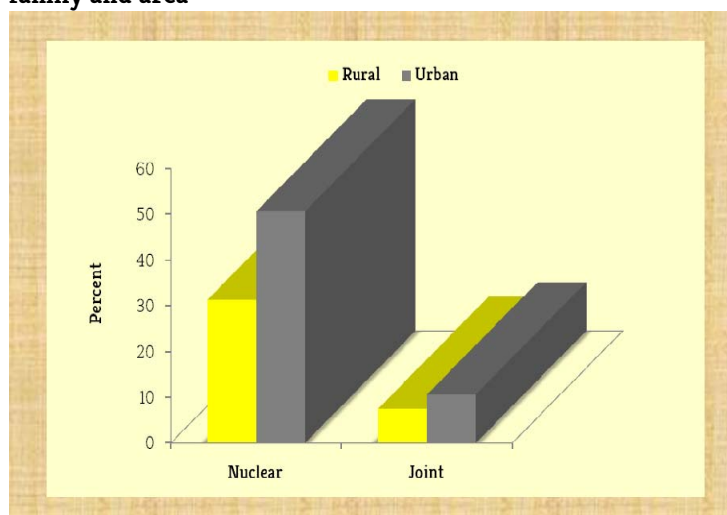
Source: UO field survey, 2013

Marital Status

The study consists of only married women. As seen in Table 2, the majority of respondents are married (91.7 percent) followed by widows (6.2 percent), and divorced or separated (2.1 percent). Among the respondents, 28.5 percent married women are from Dhaka division, 14.8 percent from Chittagong, 13.8 percent from Rajshahi, 11.8 percent from Khulna, 10.8 percent from Rangpur, and 6 percent from both Sylhet and Barisal division.

Table 2: Marital status of the respondents by division

Division	Marital status			Total
	Married	Widow	Others	
Rajshahi	72 (13.8)	6 (1.2)	2 (0.4)	80 (15.4)
Dhaka	148 (28.5)	11 (2.1)	6 (1.2)	165 (31.7)
Khulna	62 (11.9)	0 (0.0)	0 (0.0)	62 (11.9)
Chittagong	77 (14.8)	10 (1.9)	1 (0.2)	88 (16.9)
Sylhet	31 (6.0)	0 (0.0)	0 (0.0)	31 (6.0)
Barisal	31 (6.0)	1 (0.2)	0 (0.0)	32 (6.2)
Rangpur	56 (10.8)	4 (0.8)	2 (0.4)	62 (11.9)
Total	**477 (91.7)**	**32 (6.2)**	**11 (2.1)**	**520 (100)**

The study also observes that 58.1 percent of the respondents are married in urban area, while 33.7 percent in rural area.

Source: UO field survey, 2013
Note: Figure in parenthesis indicates percentage

The study also observes that 58.1 percent of the respondents are married in urban area, while 33.7 percent in rural area.

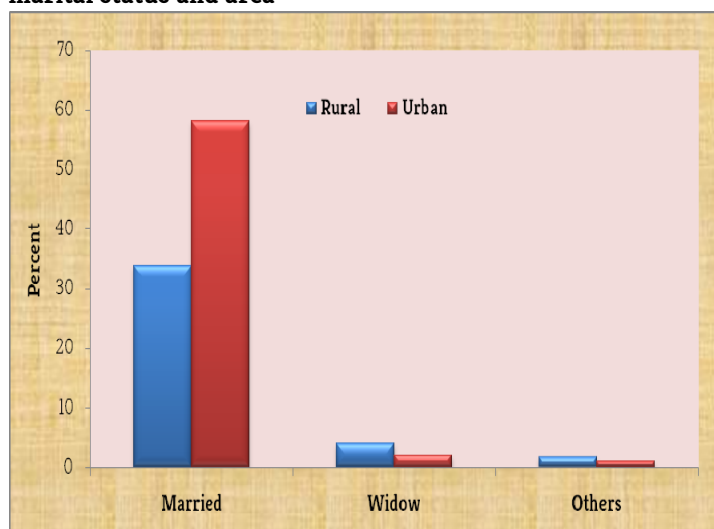**Figure 2: Percentage distribution of the respondents by marital status and area**

Source: UO field survey, 2013

Number of Family Members

The household size is generally large in Bangladesh. It is found that 67.5 percent of the respondents have 3-5 members in their family while 24.4 percent have 6 and above. Only 8.1 percent have 1-2 members in their family. In Dhaka division, 21.2 percent of the respondents have the family members of 3-5 followed by Rajshahi (11.5 percent), Chittagong (11.3 percent), Rangpur (7.9 percent), Khulna (7.1 percent), Barisal (4.4 percent) and Sylhet division (4 percent). The following table presents the composition of the respondents in terms of family members.

Table 3: Number of family members by division

Division	Number of family members			Total
	1-2	3-5	6+	
Rajshahi	5 (1.0)	60 (11.5)	15 (2.9)	80 (15.4)
Dhaka	18 (3.5)	110 (21.2)	37 (7.1)	165 (31.7)
Khulna	8 (1.5)	37 (7.1)	17 (3.3)	62 (11.9)
Chittagong	6 (1.2)	59 (11.3)	23 (4.4)	88 (16.9)
Sylhet	2 (0.4)	21 (4.0)	8 (1.5)	31 (6.0)
Barisal	0 (0.0)	23 (4.4)	9 (1.7)	32 (6.2)
Rangpur	3 (0.6)	41 (7.9)	18 (3.5)	62 (11.9)
Total	**42 (8.1)**	**351 (67.5)**	**127 (24.4)**	**520 (100.0)**

Source: UO field survey, 2013
Note: Figure in parenthesis indicates percentage

The percentage of the respondents having their family members in the range of 3-5 remains high for both in rural and urban areas. In urban areas, it consists of 67.5 percent while 26.2 percent in rural areas. Moreover, 10.6 percent and 13.8 percent of the respondents from rural and urban areas have an average family member of 6 and above.

Figure 3: Percentage distribution of the respondents regarding number of family members and area
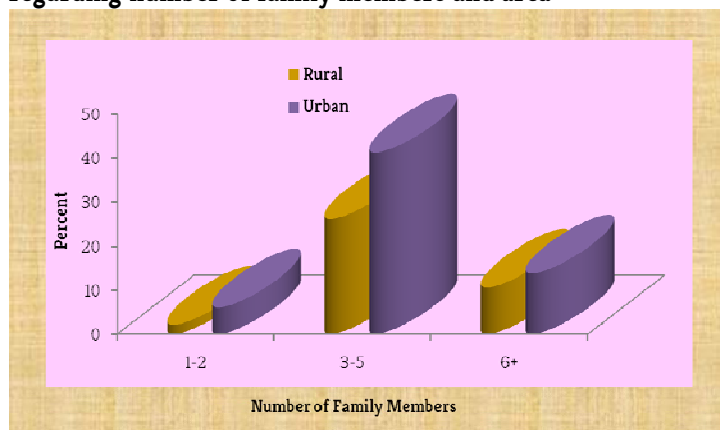
Source: UO field survey, 2013

Household Head

Generally, patriarchal tradition dominates in Bangladesh where male heads the household. It is observed that 91. 2 percent households are headed by male and remaining 8.8 percent are headed by female. Higher percentage of the households headed by male are found in Dhaka division (29.2 percent) followed by Chittagong (14.8 percent), Rajshahi (14.6 percent), Khulna (11.7 percent), Rangpur (11.2 percent), Barisal (5.6 percent) and Sylhet (4 percent). The female-headed households contain a lower percentage in all the divisions.

It is observed that 91. 2 percent households are headed by male and remaining 8.8 percent are headed by female.

Table 4: Head of the household by division

Division	Household Head		Total
	Male	Female	
Rajshahi	76 (14.6)	4 (0.8)	80 (15.4)
Dhaka	152 (29.2)	13 (2.5)	165 (31.7)
Khulna	61 (11.7)	1 (0.2)	62 (11.9)
Chittagong	77 (14.8)	11 (2.1)	88 (16.9)
Sylhet	21 (4.0)	10 (1.9)	31 (6.0)
Barisal	29 (5.6)	3 (0.6)	32 (6.2)
Rangpur	58 (11.2)	4 (0.8)	62 (11.9)
Total	**474 (91.2)**	**46 (8.8)**	**520 (100)**

Source: UO field survey, 2013
Note: Figure in parenthesis indicates percentage

Like all the divisions, male-headed households are higher in urban areas (57.1 percent) than those of rural areas (34 percent). On the other hand, 4.8 percent of the rural households are headed by the female while 4 percent in urban areas.

Figure 4: Percentage distribution of the respondents by household head and area
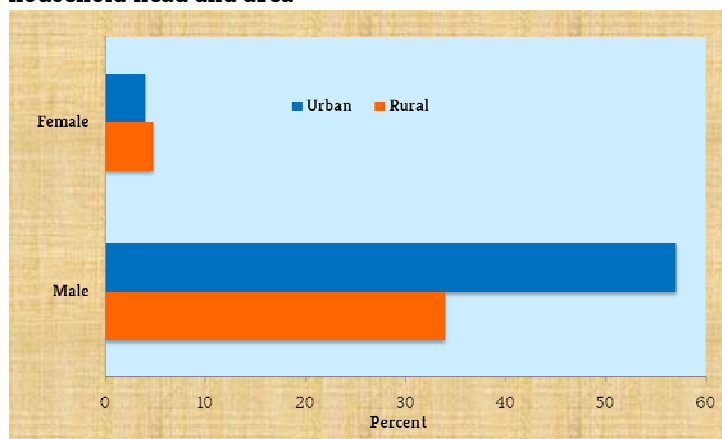
Source: UO field survey, 2013

Educational Status

Bangladesh has achieved progress in education especially in female education over the years. Table 5 shows that majority of the respondents (28. 3 percent) have completed class VI-X followed by higher education (26.7 percent), completed class I-V (19.6 percent), no education (14.4 percent) and completed class XI-XII (11.0 percent). The average year of schooling among the all respondents is 8.83 years. In Dhaka division, majority of the respondents have higher education and a similar result is found for Rajshahi and Khulna division. In Barisal and Rangpur division, majority of the respondents have completed their education of class VI-X. In Chittagong division, majority of the respondents have completed class I-V while in Sylhet division majority of the respondents have no formal education. Considering average years of schooling, respondents from Rajshahi, Dhaka, Khulna, Chittagong, Sylhet, Barisal and Rangpur division have average year sof schooling of 11.52, 8.62, 12.4, 6.67, 1.42, 8.44 and 9.32 years respectively.

The average year of schooling among the all respondents is 8.83 years.

Table 5: Educational status of the respondents by division

| Division	Education Status					Total
	No Education	Completed Class I-V	Completed Class VI-X	Completed Class XI-XII	Higher Education	
Rajshahi	8 (1.5)	4 (0.8)	18 (3.5)	9 (1.7)	41 (7.9)	80 (15.4)
Dhaka	32 (6.2)	36 (6.9)	36 (6.9)	15 (2.9)	46 (8.8)	165 (31.7)
Khulna	1 (0.2)	2 (0.4)	13 (2.5)	18 (3.5)	28 (5.4)	62 (11.9)
Chittagong	10 (1.9)	26 (5.0)	42 (8.1)	5 (1.0)	5 (1.0)	88 (16.9)
Sylhet	22 (4.2)	8 (1.5)	0 (0.0)	0 (0.0)	1 (0.2)	31 (6.0)
Barisal	0 (0.0)	11 (2.1)	14 (2.7)	4 (0.8)	3 (0.6)	32 (6.2)
Rangpur	2 (0.4)	15 (2.9)	24 (4.6)	6 (1.2)	15 (2.9)	62 (11.9)
Total	**75 (14.4)**	**102 (19.6)**	**147 (28.3)**	**57 (11.0)**	**139 (26.7)**	**520 (100)**

Source: UO field survey, 2013
Note: Figure in parenthesis indicates percentage

The average year of schooling for the rural respondents is 6.68 years where majority of the respondents (13.5 percent) have completed class VI-X. On the other hand, majority of the urban respondents (22.5) have higher education where the average year of schooling is 10.2 years.

Figure 5: Educational status of the respondents by area
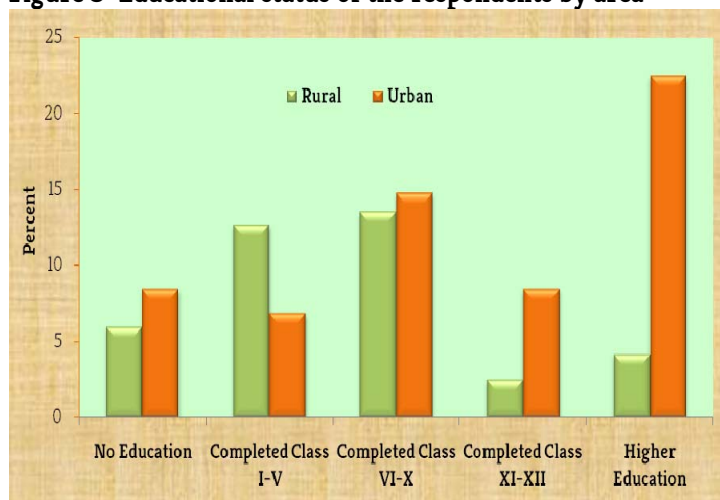
Occupational Status

The survey confirms that highest numbers of the respondents (39.4 percent) are engaged with only household work as homemakers. At the same time, it is found that 32. 1 percent, 2.5 percent, 6.7 percent, 2.1 percent and 17.1 percent respondents are engaged in service, business, handicraft, waged lobour and domestic work respectively beside their household work. To be specific, it is observed that, majority of the respondents from Rajshahi and Dhaka division are engaged with service while in Sylhet, majority of the respondents are engaged with domestic work. In this connection, in Khulna, Chittagong, Barisal, and Rangpur division, majority of the respondents are engaged with household work only.

Highest numbers of the respondents (39.4 percent) are engaged with only household work as homemakers.

Table 6: Types of occupation by division

| Division	Types of Occupation						Total
	Professional service	Business	Handicraft	Wage labourer	Others	Only house work	
Rajshahi	41(7.9)	0 (0.0)	3 (0.6)	3 (0.6)	4 (0.8)	29 (5.6)	80 (15.4)
Dhaka	82 (15.8)	3 (0.6)	10 (1.9)	4 (0.8)	42 (8.1)	24 (4.6)	165 (31.7)
Khulna	17 (3.3)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	45 (8.7)	62 (11.9)
Chittagong	6 (1.2)	7 (1.3)	18 (3.5)	0 (0.0)	8 (1.5)	49 (9.4)	88 (16.9)
Sylhet	1 (0.2)	0 (0.0)	0 (0.0)	0 (0.0)	30(5.8)	0 (0.0)	31 (6.0)
Barisal	3 (0.6)	1 (0.2)	0 (0.0)	1 (0.2)	0 (0.0)	27 (5.2)	32 (6.2)
Rangpur	17 (3.3)	2 (0.4)	4 (0.8)	3 (0.6)	5 (1.0)	31 (6.0)	62 (11.9)
Total	**167 (32.1)**	**13 (2.5)**	**35 (6.7)**	**11 (2.1)**	**89 (17.1)**	**205 (39.4)**	**520 (100)**

Note: Figure in parenthesis indicates percentage

As seen in figure 6, in rural areas, highest percentage of the respondents (20.8 percent) are engaged only with the

household work while in urban areas, majority of the respondents (26.5 percent) are engaged with service along with household work. Regarding occupational status, the difference in the percentage of respondents in rural and urban areas indicates that in rural areas there are limited job opportunities than those of urban areas.
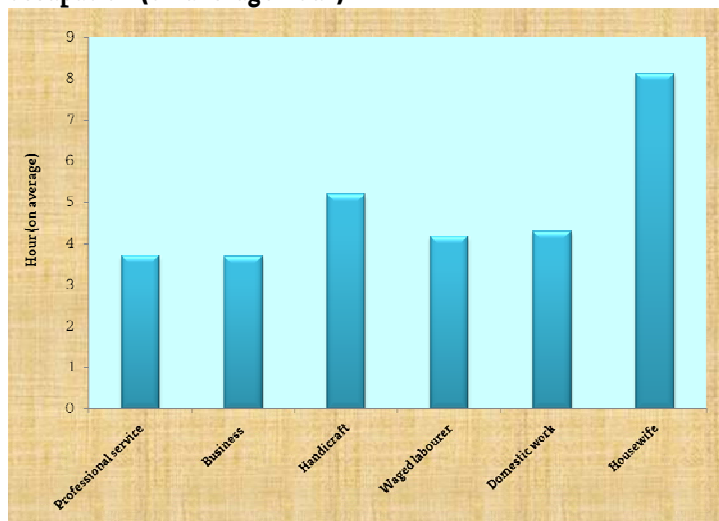
Figure 6: Types of occupation by area
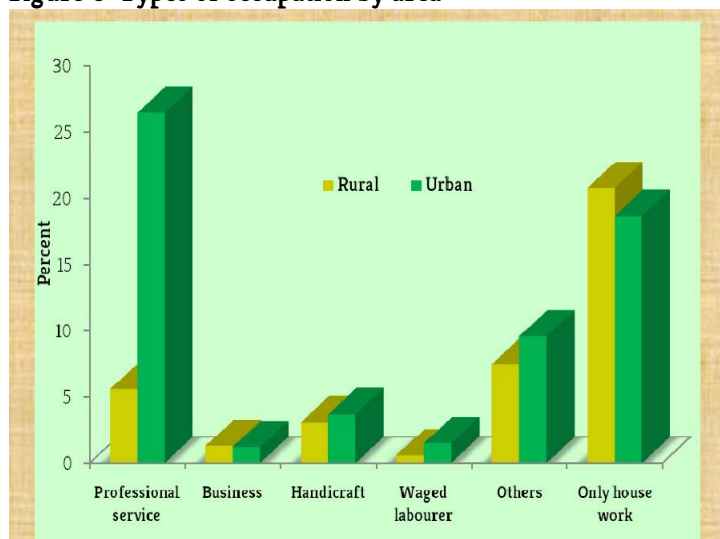
Source: UO field survey, 2013

Daily Time Spent on Family Work (Unpaid)

Those who are housewives have averagely spent 8.13 hours per day for their household work.

Respondents in this study have engaged themselves in different types of occupations beside the household work as stated in earlier section. The analysis shows that respondents who are in different types of professional services have spent an average time of 3.71 hours daily for the household work. Women, who are engaged in business and handicraft, have spent an average time of 3.69 hours and 5.2 hours respectively per day for household work. Additionally, the study also shows that, on an average, the waged labourers and the domestic workers have spent 4.8 hours and 4.3 hours daily for their household work respectively. One of the main findings of the study is that, those who are housewives have averagely spent 8.13 hours per day for their household work.

Figure 7: Daily time spent on family work (unvalued) by occupation (on average hour)
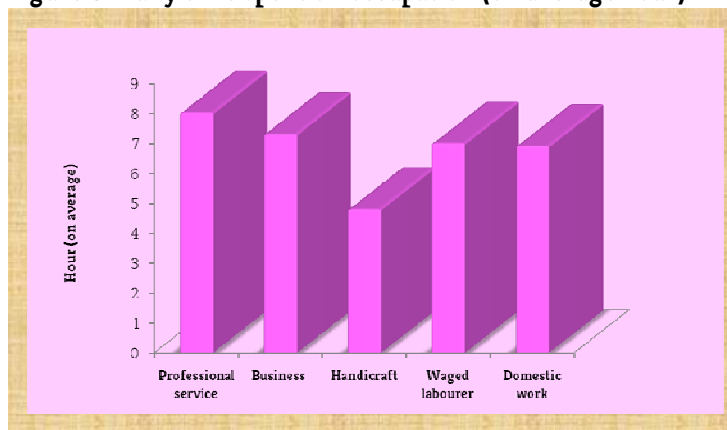

Source: UO field survey, 2013

Daily Time Spent on Paid Work (Occupation)

Women engaged in different types of occupation except household work have spent an average of 7.29 hours per day for their occupation.

Respondents of different types of professional service holder have averagely spent 8.02 hours per day for the purpose of service. Respondents who are engaged with business have spent an average of 7.3 hours daily in their work place. Waged labourer have averagely spent 7 hours daily for their work while domestic workers have spent an average of 6.91 hours per day and those who are engaged in handicraft have averagely spent 4.8 hours for their work per day. More specifically, women engaged in different types of occupation except household work have spent an average of 7.29 hours per day for their occupation.

**Figure 8: Daily time spent on occupation (on average hour)**

Source: UO field survey, 2013

Monthly Income

Women are largely influenced by the push and pull factors to be engaged in various income generating activities. In the context of growing need and decline of familial support along with the ever increasing pressure to sustain, women have been pushed to engage in income generating activities (Rahman, 2013). It is observed that the monthly average income of the service holder respondents is BDT 14101 while BDT 9846 for those in business. The average monthly income for those engaged in handicraft, day labour, and domestic work is BDT 3791, BDT 3527, and BDT 2622 respectively. In addition, this study reveals that the average monthly income of the respondents engaged in different types of occupation (including all the service categories) is BDT 9167.

Figure 9: Monthly income from occupation (in BDT)
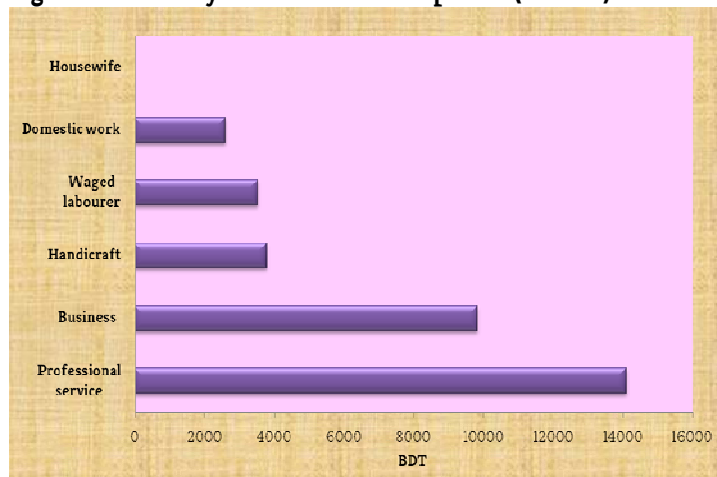
Source: UO field survey, 2013

4. MEASURING THE ECONOMIC VALUE OF HOUSEHOLD WORK

It should be noted that no one method is perfect; no method can provide an exact answer of measuring the economic value of unpaid household work done by women. Nevertheless, the point is to get a reasonable estimate of the value of something that is by its very nature uncountable. This section provides the estimated value of unpaid domestic work of women.

Opportunity Cost Method

The patriarchal societal structure reproduces itself with acknowledging and considering men's work economically

productive, but women who are engaged in full time housework are not classified like that.

The opportunity cost method estimates the amount that women would have earned if they were in the paid labour market instead of doing unpaid work. This method measures the value of unpaid work equal to the income that the persons who perform the unpaid work could have earned in the labour market if they had performed paid work rather than unpaid work. For the employed individuals, the opportunity cost of unpaid work is equal to the market wage rate that they earn while for the individuals who are non-employed, the opportunity cost is estimated by either their "potential wages" (that is, the average wage of an employed person with the same observed market characteristics) or by their "reservation wage" (that is, the wage rate at which a typical individual with the same market characteristics would be indifferent between a unit of time assigned to paid work and a unit of time assigned to unpaid work) (Sousa-Poza et al. 2001). One drawback of the opportunity cost method is that it places a higher value on the domestic work of individuals whose market productivity is higher. One way to minimise this discrepancy is to use the average wage for all people (or all people of a particular sex) in the economy instead of the actual or predicted wage of the person who performed the unpaid work (Sousa-Poza et al. 1999; Budlender, 2010).

By making a broader calculation, it can be said that the total unpaid work might equivalent to BDT 1115914.8 million (USD 14.45 billion) per year. Moreover, this amount is equivalent to 10.75 percent of the GDP for the fiscal year 2012-13.

As shown in the earlier section, the respondents (housewives) have spent an average of 8.13 hours per day for their household work. On the other hand, the respondents engaged in different types of paid work have spent averagely 7.29 hours per day and their monthly average earning is BDT 9167. If we make a calculation we can observe that the respondents earn BDT 41.9 per hour from their paid work. Based upon this calculation, it can be found that, respondents, who are fully engaged in unpaid domestic work might be equivalent to BDT 0.123 million per person per year. In addition, there are 9.1 million unpaid workers in Bangladesh (BBS, 2013). By making a broader calculation, it can be said that the total unpaid work might equivalent to BDT 1115914.8 million (USD 14.45 billion) per year. Moreover, this amount is equivalent to 10.75 percent of the GDP for the fiscal year 2012-13.

Considering full-time employment, another interesting finding can be showed that the total engagement of the unpaid workers in Bangladesh might be equivalent to 9.3 million full-time employments per year.
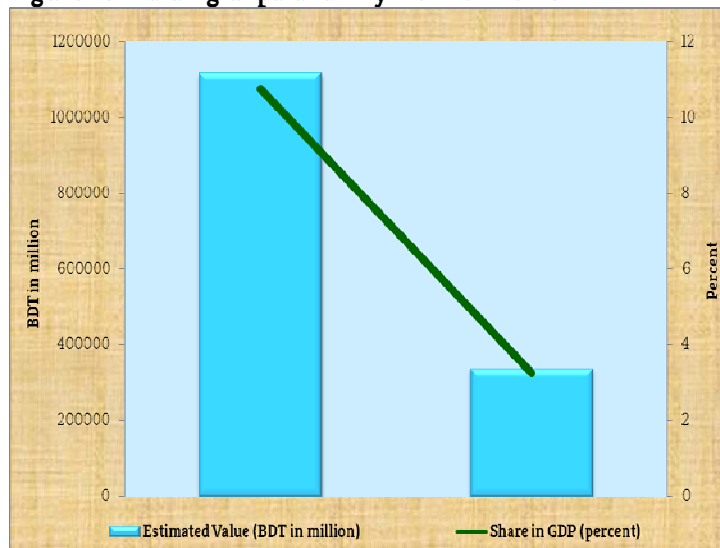
Market Replacement Cost Method

Market replacement cost is another model of valuation of domestic labour. Users of this method presuppose that the time a household member spends on unpaid activities can be valued at the earnings level of other people who are engaged in similar activities in the market sector. In this method, it is assumed that household members and their "replacements" are equally productive and responsible.

The replacement cost method calculates the value of unpaid work by computing what it would cost to hire someone to do the same work. The quality and productivity of the substitute hired from the market may differ from the quality and productivity of the unpaid worker and thus remains the vital concern about the replacement cost method. On the one hand, the substitute from the market might be more productive as a result of having received special training. Conversely, the market replacement method may fail to capture the value of "personal and emotional care" in unpaid domestic work (for example, the care one provides to one's own children), thus yielding values of unpaid work that are too low (Folbre and Nelson 2000). Another apprehension about the method is that it may breed a downward bias because the average earnings of domestic workers tend to be lower than the wages of most other occupations. Despite the shortcomings of this approach, however, the replacement cost method using the wages of generalist workers as the standard is generally preferred to other input- based methods because it requires lesser data and its results are more consistent (Varjonen et al.1999).

Based upon the market replacement cost method, it is found that the monthly average earnings of the respondents engaged in housework is BDT 2622 for which they have spent an average time of 6.91 hours. In case of monetary value, it is estimated that the total annual engagement of unpaid workers in Bangladesh might be equal to BDT 336918.58 million or USD 4.36 billion. Specifically, the amount is equal to 3.25 percent of the GDP for the fiscal year 2012-13.

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Figure 10: Valuing unpaid family work of women

Source: UO field survey, 2013

5. COMPARISON OF UNPAID FAMILY WORK OF WOMEN BETWEEN DIFFERENT COUNTRIES

The value of unpaid work obtained by the opportunity cost method is typically higher than the value obtained by the replacement cost method using generalists' wages, because the opportunity cost method takes into account all occupations and the replacement cost method considers only domestic workers who typically earn low (Dong and Xinli, 2012).

An estimate of the unpaid work of women in household in Bangladesh indicates that this amount is equivalent to 10.75 percent of the GDP for the fiscal year 2012-13. Some calculations and studies carried out throughout the world to assess the economic value of unpaid work suggest that its contribution to GDP is substantial. For example, depending on the method used, the value assigned to unpaid work varies from 25 to 32 per cent of China's official GDP (Dong and Xinli, 2012). From a comparative perspective, the estimates of the relative size of unpaid work to GDP for China are lower than those for developed countries in the west (for instance, 32 to 62 per cent for the United States, 44 percent for France and 31 to 46 per cent for Canada) but similar to the estimates for Japan (20 to 31 percent) and South Korea (19 to 29 percent) – two developed countries in

East Asia.[1] The valuation of unpaid work for developing countries typically displays large variation as per the alternative methods. For instance, the value of unpaid work is estimated to be between 27 to 63 percent for India and 11 to 30 per cent for South Africa (Budlender 2010). The total yearly value of unpaid family care work equals to 8.29 and 67.06 billion Euros, which corresponds to 4.3 per cent and 4.5 per cent of GDP in Poland and Italy respectively (Francavilla, et al., 2011). With the opportunity cost approach, the values of unpaid work and unpaid family care work are 2655 and 470 billion Euros respectively, summing up to 3125 billion Euros for the whole European domestic activities. This value corresponds to 27.1 percent of GDP of EU for the year 2006 (Eurostat 2006).

The percentage of the value of unpaid work in the share of GDP in Bangladesh remains low as compared to other countries due to the lower wage structure in different occupations in Bangladesh than the other countries mentioned. The economic value of unpaid housework of women would have been much higher if the wage of women in Bangladesh would not be comparatively low and the wage deferential between men and women would not prevail.

Table 7: Wage differential by sex

Industry	Hourly wage		
	Male	Female	**Female as % male**
Manufacturing	15.2	11.5	**75.7**
Electricity, gas and water supply	27.0	-	**-**
Construction	18.8	11.2	**59.6**
Wholesale and retail trade	13.2	-	**-**
Hotels and restaurants	12.3	8.5	**69.1**
Transport, storage and communications	17.8	-	**-**
Financial intermediation	40.0	28.3	**70.8**
Education	15.6	13.2	**84.6**
Health and social work	17.4	14.0	**80.5**
Other services	**20.1**	**16.9**	**84.1**

Source: Bangladesh Bureau of Statistics (BBS), 2007

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[1] The estimates are from Sousa-Poza et al. (1999) for the United States and Canada, Fouquet and Chadeau (1981) for France, and Budlender (2010) for Japan and South Korea.

In terms of hourly wages, the largest gender gap is in construction, where the average hourly wage for women is approximately 60 per cent that of men; followed by hotels and restaurants (69 per cent); financial intermediation (71 per cent) and manufacturing (76 per cent). The smallest gaps are observed in the service industries in education, health and social work and other services industries in which women have a fairly high share of employment.

6. CONCLUSIONS

This study has monetised the unpaid work of women using the survey data. Domestic work of women has historically been identified as undignified and "dirty" work and this work divides women by race and class by defining domestic workers as "dirty" and defining the women who are benefited from their labour as "clean" (Palmer 1989). Women remain invisible and unpaid though they are contributing to society as well as the state. Household work is perceived as the main work of women. Women spend a lot of time, labor, and devotion to maintain the household. All these efforts are not recognised rather are devaluated to continue the traditional domination and power structure in the household. Women are putting longer work hours in family and their contribution is not visualised or counted in the GDP.

Despite several progresses in various indicators related to women, they are still facing a lot of barriers. The institutional barriers along with the hurdles of patriarchal society have slowed the desired levels of progress of women. The possibilities of women are limited by their traditional role imposed by the society (Titumir, 2013).

It is anticipated that research on the family work of women without pay will raise attention to the vital role played by women and to the continuing need to work towards a higher status for women.

The results of this study suggests that the total contribution of women to the economy in Bangladesh through their unpaid work is roughly USD14.45 billion or 10.75 percent of GDP for FY 2012-2013. Another interesting finding can be showed that the total engagement in unpaid work in Bangladesh might be equivalent to 9.3 million full-employments per year. Measurement of unpaid work of women in terms of monetary value is very complex. It might be impossible to generate a precise, accurate value of unpaid work of women. Thus, the main point of this study is not to arrive at the appropriate figure, rather to give a sense of the magnitude of contributions done by women by presenting a reasonable range of estimates. That extent will vary

considerably depending on whether we continue undervaluing work performed by women or begin to assign it value based on its essential nature to the functioning of society. It is anticipated that research on the family work of women without pay will raise attention to the vital role played by women and to the continuing need to work towards a higher status for women. Learning to value women is one of the vital steps that must be taken to create more humane, healthy, balanced, and caring societies. Acknowledging the value of the work carried out by women for their families could be an important start.

Their contribution is overlooked just because patriarchy claims that they cannot contribute directly to the national economy.

The household work of women considered as normal or natural and that is why it is unpaid. Their contribution is overlooked just because patriarchy claims that they cannot contribute directly to the national economy. Capitalist patriarchy is unable to understand that homemakers are separate but sectors are equal and they are very closely integrated to the national economy. Without changing this view, it is difficult to ensure equal rights. Moreover, there is no strong or active Domestic Workers Union in Bangladesh while in New York, in the 1960s, a nationwide domestic workers' rights movement lobbied for dignity, professionalisation, and greater legal protections (Boris and Nadasen 2008, Nadasen 2010, Cobble 2004, Beck 2001).

In general, any work that receives little pay is considered unimportant and is labeled as "women's work", despite the fact that such work actually brings tangible economic benefits to the family. If women were ever to go on strike, we would understand more fully the full worth and importance of their work. In fact, families would cease to function if women did not work, which is the precise reason why women cannot go on strike (Efroymson, et.al, 2007). It is important to accomplish qualitative change in the attitudes, values and outlooks of policymakers and the general public regarding household work. Valuing the caring and household work that are essential to a nation can only bring benefits to all.

To address the issue of unpaid work in Bangladesh, some major changes are required. For addressing the issue of unpaid work in Bangladesh, there is an urgency for recognition of the embedded institutional rigidities that reproduces the system, formulate comprehensive social policy and institute holistic social security system.

Unless and until such realities are recognised and responded with appropriate policies, institutional structures and monetary instruments, it will be impossible for achieving real equality in the society.

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Sample Design
A Multistage Stratified Sampling (MSS) is adopted for conducting the survey.

Stratification
The samples are stratified and selected in multiple stages. The seven administrative divisions of Bangladesh are stratified into seven strata. From each stratum one district is randomly selected. It is assumed that the socio-economic conditions of all the districts in each division are unique. Then the number of households according to the Statistical Pocketbook of Bangladesh 2012, at each division is calculated by using a Probability Proportional to Size at the first stage of sampling.

In the second stage, the selected seven districts are stratified into urban and rural areas. The district headquarters of each district are considered as urban area and one randomly selected upazila (excluding district headquarters) is considered as rural area. To keep adequate representation from each area exact proportional allocation is done.

In third stage, there was a listing of households in wards/villages by the respective enumerator. Then the respondents were selected randomly from those households.

Figure 10: A Flow-chart of collected data
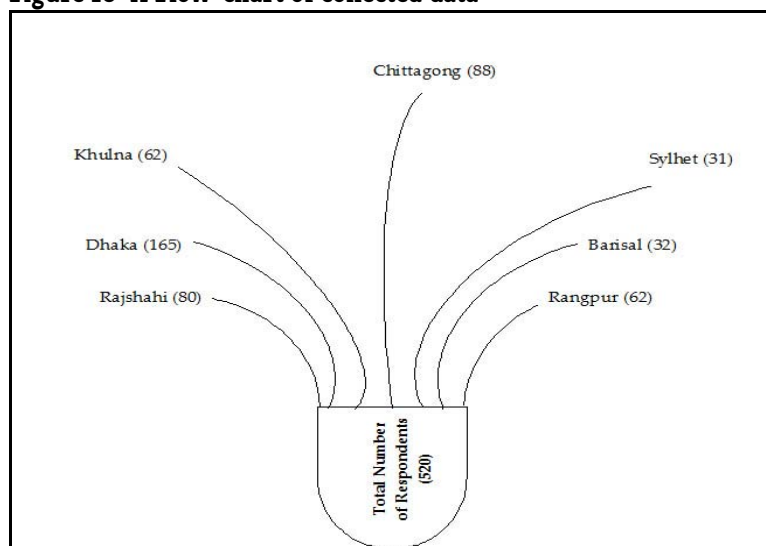
Assumptions
The socio-economic conditions of all the districts in each division are unique. All the households in a sample area are uniform.

Calculation of Sample Size

The calculation of necessary sample size is,
$$n = \{t^{2*} \sigma * (1 - \sigma)\}/ e^2$$
Where,

   n = Sample size
   σ^2 = Standard deviation
   t = 95% Confidence Interval for large scale sampling
   e = Error term

Here,

   σ = 0.5 (Since we haven't actually administered our survey yet 0.5 is the most forgiving number and ensures that the sample will be large enough).
   t = 1.96 (95% Z scores)
   e = 0.05 (Marginal error)

Therefore, $n = \{(1.96^{2*} 0.5*(1-0.5)\}/ 0.05^2 = 384.16$

That is, in case of large scale sampling more than 384 samples statistically represent a population at 5% level of significance. In this study, the number of sample size is considered as 520 of which 202 (38.8 percent) from rural areas and 318 (61.2 percent) from urban areas.

Calculation of Error Term
The calculation of error term is,
$$e = \sqrt{[\{t^{2*} \sigma * (1 - \sigma)\}/ n]}$$
Here,

   σ = 0.5
   t = 1.96
   n = 550
Therefore, $e = \sqrt{[\{(1.96^{2*} 0.5*(1-0.5)\}/ 520]} = 0.043$