



Measurement of Unpaid Household Work of Women in India: A Case Study of Hooghly District of West Bengal

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A comprehensive notion of economic empowerment of women comprises both the market economy where women participate in the labour market, and the household economy, where women bear the burden of sustaining and nurturing the market economy. When household work is carried out in the person's own home, it is unpaid and not reflected in national statistics or economic analyses, despite its significance to our everyday wellbeing. Using Time-use survey method, this paper tries to figure out the labour force participation of women, their time use pattern and the type of domestic activities in which they are mainly involved and to find out the monetary value of these activities in Hooghly district of West Bengal. A sample of 400 households comprising 200 rural households from 8 villages of the Chinsurah-Magra Administrative block and 200 urban households from 8 municipal wards of the Hooghly-Chinsurah Municipality area is collected during July 2015 for our study. We have used the six-working-day recall method, i.e. we have excluded Sunday from our study, since Sunday is a holiday which does not follow the normal working routine of the members of the household. We have also tried to compute the monetary value of such unpaid household activities including care activities done by the women respondents of our sample using the replacement cost method. Highlights of the results of our study are as follows. Both rural and urban women have spent much lower share of total time on paid work than their men counterparts, whereas share of total time spent on unpaid care work by rural and urban women is much higher than their men counterparts. While variability of total time spent on paid work by men is less than that of women, that of total time spent on unpaid household care work by men is higher than that of women both in rural and urban areas. For all the age-groups, average work-time of women on unpaid household activities is higher than those for men, whereas, average work-time of men on paid activities is higher than those for women. There is no significant difference in average work-time on unpaid family care activities by women due to difference in their educational qualifications. As household size increases, average work-time of women on unpaid household care work increases, although finally it declines for households with large family-size. There is no significant difference in average work-time of women on household care activities for the low and medium monthly expenditure classes. However, for higher monthly expenditure classes, women have spent fewer hours on household care activities. Our study reveals that Total value generated by 400 women respondents of our sample in the 6 working days of previous week is Rs. 239118/-. Therefore, per capita value of unpaid care of women is Rs. 597.80/-.

Classification number: J08, J21, J22

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1. Introduction

Analysis of economic empowerment of women cannot be inclusive if the focus is entirely on women participating in the labour force, and not on a wider understanding of economic empowerment. A comprehensive notion of economic empowerment of women comprises both the market economy where women participate in the labour market, and the household economy, where women bear the burden of sustaining and nurturing the market economy. When household work is carried out in the person's own home, it is unpaid and therefore, it is not reflected in national statistics or economic analyses, despite its significance to our everyday wellbeing. Unpaid household work refers to all sorts of household chores done in the home for the members of the household, e.g. preparing food, shopping food items and apparels, collecting firewood and water etc. and also all sorts of care work like taking care of children, the ill and the elderly. According to the prevailing gender norms, in all societies, women undertake the responsibility of the unpaid household work required to sustain the households. Being unpaid, this work is supposed to be less valuable than paid work. It is ignored and not considered to be "work" by men who benefit directly from it and even by women who engage themselves in it.

There is a strong and inverse relationship between the amount of time that women spend on unpaid household work and their economic empowerment. The burden of unpaid household work hinders women from seeking employment and income, which in turn holds them back economically and, therefore, obstructs their economic empowerment. Furthermore, the hard work that is often involved in carrying out domestic responsibilities impacts negatively on the health and wellbeing of women, further compromising their ability to participate in economic, social and political spheres. An increase in their household responsibilities, either through marriage or childbearing, forces many women either to withdraw themselves from the labour market; or to find more flexible, part-time jobs; or to enter into self-employment that offers more flexible time management. Even when their children no longer require childcare, women frequently face hardships to enter into the labour force due to obligations to care for elderly or sick relatives at home. There is a common belief that women from affluent households are more likely to be in formal sector jobs, and can afford to pay for childcare, whereas, poorer women often have to care for children, sick and elderly relatives by themselves. But, in the typical Indian society, this is not always true. Richer families often restrict women members to enter into the paid job market in the name of their tradition and prestige, whereas women from poorer families are forced to enter into the job market to earn money for sustaining their livelihoods. Women often end up in home-

based work in order to maintain the balance between their household responsibilities and income earning. However, research has found that working at home while performing household chores negatively affects the productivity of women. Women working at home are able to do less work than women working in formal or informal paid jobs. Women working at home are even less likely to get assistance for their unpaid household work (including care work) from other members of their family, as they are perceived to be at home and their unpaid work is considered to be primary work, whereas their paid work is considered to be supplementary work. In the Indian society, a woman who is engaged in paid work, within or outside the household premises, usually faces the double burden of working hours, since her paid working hours reduce her leisure time, whereas her unpaid working hours do not decline. Since unpaid household work is invisible in national statistics and less valued than the paid work, government generally fails to frame proper social and economic policies that can reduce women's primary responsibility for unpaid household work.

It is therefore evident that women's total workload is higher than men's and with women working longer per day on average than men including paid and unpaid labour (Frances and Russel, 2005). According to Kulshreshtha, and Singh (2005), throughout the world, women perform most of the of domestic tasks, including both household maintenance and childcare, even when they are employed part or full time, the mean time spent on unpaid domestic work by women is more than twice of that for men. An analysis based on the thirty-second (1977–8; NSSO 1978) and thirty-eighth (NSSO 1983) rounds of the NSSO employment–unemployment survey reveals that 90 per cent of women who did not participate in the workforce attributed a “pressing need for domestic work” as the primary cause for their non-participation (Amitabh Kundu and Mahendra Premi 1992). Yet standard labour force surveys such as the NSSO surveys do not provide any data on unpaid domestic work (Hirway and Jose, 2011). Unpaid household work remains unreported in the accounting framework of System of National Accounts (SNA) even though the households derive significant amount of utility from these activities. Difficulty in measurement of non-SNA activities in monetary terms and their inclusion in national accounts is a serious problem in this issue. However, remembering the enormous contribution of women's unpaid household work to the wellbeing of the society, it is quintessential to make this work more visible so that it becomes easier for the government to frame proper social and economic policies favourable for women in this respect. Time-use surveys can provide a much better picture of unpaid work done by women within their household premises, compared to the traditional household surveys. Time-use survey throws light on the paid and unpaid work of men and women, and estimates the contribution of unpaid work to human wellbeing, which may help in integrating paid and

unpaid work in national policies. Under this backdrop, this paper is an attempt to figure out the labour force participation of women, their time use pattern and the type of domestic activities in which they are mainly involved and to find out the monetary value of these activities in Hooghly district of West Bengal. A sample of 400 households comprising 200 rural households from 8 villages of the Chinsurah-Magra Administrative block and 200 urban households from 8 municipal wards of the Hooghly-Chinsurah Municipality area is collected during June 2015 for our study.

Rest of the paper is designed as follows. Section 2 discusses about the definition of household production and importance of time-use survey for valuation of unpaid household production. Section 3 talks about the history of time-use survey in India. Section 4 discusses about the characteristics of the data used in this study. Section 5 reveals the main findings of time-use survey in rural and urban areas of the Hooghly district of West Bengal including the computation of monetary value of unpaid household work including care work done by women. Section 6 concludes.

2. Definition of Household Production and Importance of Time-Use Survey for Valuation of Unpaid Household Production

The production of goods and services by households can be divided into production intended to be sold or exchanged, i.e. market production and that to be consumed by the household itself or given free of charge to another party, i.e. non-market production. The former is within the domain of the System of National Accounts (SNA) economic production boundary and called 'SNA market production'. The latter can be further divided into three sub-categories, namely, the production of goods, the production of paid domestic services and owner-occupied housing services and the production of other services. The first two also are almost entirely included in the SNA economic production boundary and referred to as 'SNA non-market production'. The third type of household production consists of formal and informal unpaid volunteer services and those other domestic and personal services that are consumed within the household, both of which are explicitly excluded from the SNA economic production boundary. We can further divide the third category into two parts, namely, 'personal activities' (mainly physiological and recreational activities such as eating, sleeping, exercising, etc.) and the 'unpaid household activities including care activities'. 'Personal activities' are defined as those services consumed by an individual that cannot be performed by anyone else other than that individual. Such activities are not considered to be 'productive in an economic sense' and are therefore excluded even from the general production boundary of the SNA. We refer to them as 'non-productive activities'. 'Unpaid

household activities including care activities' are those which are performed mostly by women but consumed not only by the women themselves, but also by the other members of the households. Therefore, they are definitely productive activities but not included in the SNA economic production boundary.

Unpaid household work is the production of goods and services by family members that are not sold on the market. Some unpaid work is for consumption within the family, such as cooking, gardening and house cleaning. The products of unpaid work can also be consumed by people not living in the household, e.g. cooking for guests, buying groceries for an elderly relative, or educating the domestic worker's children. The boundary between 'unpaid work' and 'personal care and leisure' is determined by the 'third-person' criterion. If any third person can be paid to do the activity, it is considered as work. Cooking, cleaning, childcare, laundry, walking the dog and gardening are therefore all examples of unpaid work. On the other hand, someone else cannot be paid to watch a movie, play football, or reading a book or sleeping as the benefits of the activity would be enjoyed by the performer, i.e. the third person, and not to the hirer (Ironmonger, 1999). Consequently these latter activities are considered to be 'personal care or leisure'. However, some unpaid works, e.g. playing with children, walking the dog, etc. are often enjoyable. This form of satisfaction is a benefit that cannot be transferred to another person. Still, such activities are considered to be unpaid care work. Thus the level of enjoyment of the person doing the activity cannot be used to distinguish between work and leisure (Hill, 1979).

Activities of human beings can therefore be aggregated into four main categories: 1) unpaid household work; 2) paid work 3) unpaid social or religious work and studies 4) personal care and leisure. 'Unpaid household work' can be divided into three sub-categories.

- a. Routine housework: Most unpaid work is routine housework – cooking, cleaning, shopping, gardening and home maintenance.
- b. Care work:
 - i) Childcare: Childcare can again be divided into three sub-categories, namely, physical care, educational or recreational care and travel related to physical or recreational childcare. Physical childcare means the meeting basic needs of children, including dressing and feeding children, changing diapers, providing medical care for children, and supervising children. Educational and recreational childcare implies helping children with their homework, reading books for children and

playing games with children. Travel related to any of the two other categories means carrying children to school, to a doctor or to sport activities, etc.

- ii) Caring for adults: Caring for adults is an important part of unpaid care work in a society where people are ageing rapidly.
- c. Construction and repair: construction and repair of household premises is an important unpaid care work which is generally done by male members of the family.

‘Paid work’ covers full-time and part-time paid jobs within or outside household premises and also unpaid work in family business/farm. ‘Unpaid social or religious work and studies’ include religious activities and social obligations and also time spent in education. ‘Personal care’ covers sleeping, eating and drinking, and going outside the house for medical and personal services, whereas, ‘leisure’ includes pursuing hobbies, watching television, computer use, sports, socialising with friends and family, attending cultural events, and so on. ‘Unpaid social work’ means unpaid work for relatives and for the wider community, i.e. all voluntary works which contribute directly and indirectly to societal well-being.

In the second part of twentieth century, particularly during the last few decades, a need was felt to measure the “invisible” unpaid work to estimate the contribution of this work to human welfare. Countries like Canada, Great Britain in the 1960s and Norway, Bulgaria, Finland, Hungary, Austria and others in the 1970s and 1980s (Goldschmidt Clermont and Pagnossin – Aligisakis 1996, Ironmonger 1999, Niemi 1983 and others) depended on time use surveys to estimate the time and value of unpaid work of women. Time-use surveys record how people allocate their time, typically using a 24-hour diary. It is the only survey technique available to us at present that provides a comprehensive information on how individuals spend their time, on a daily or weekly basis (Gershuny 1992).

3. History of Time-use Survey in India

India conducted the first official TUS on a pilot basis in 1998–99 (Government of India 2000). This TUS covered rural and urban areas in six major states from six major regions in India, Haryana in North India, Madhya Pradesh in Central India, Tamil Nadu in South India, Gujarat in West India, Orissa in East India, and Meghalaya in Northeast India. The survey was conducted in four rounds to capture seasonal changes. The analysis of the time-use data done in this survey has shown that the TUS-based Workforce Participation Rates are much higher for both men and women than the NSSO-based Workforce Participation Rates as well as the Workforce Participation Rates based on the 2001 Census of

Population (Hirway, ?). In short, the pilot-level TUS in India has proved the fact that TUS can provide useful supplementary information on the labour force in India. The major policy recommendation of this pilot-level survey was to conduct TUS more in India in order to acquire more accurate estimates and improved understanding of the workforce in India.

Under this background, time-use survey seems to be the most suitable methodology to figure out the type of domestic activities in which the women of Hooghly district are involved and to find out the monetary value of these activities.

4. Data

Hooghly is one of the central district of West Bengal which is surrounded districts like Burdwan, Bankura, Howrah, 24 Parganas (N), Nadia and Medinipur (W). After independence, Hooghly has become a very important industrial district specializing in machine tools, textile, jute and automobile industries. Because of its nearness to Kolkata and existence of major industrial centres, urban areas of Hooghly have attracted people from all over the State and the country. The district has a very large hinterland as well which is notable for agricultural products. Therefore, despite being one of the most important industrial districts the district retains its basic rural characteristics with over 70% of its total population depending on agriculture and retained its position as one of the major producers of cereals in West Bengal.

In the Hooghly district, the income-earning members of rural households are engaged in agriculture or work as domestic workers in nearby urban households, whereas most of the urban breadwinners are non-agricultural workers, domestic workers and regular-salaried employees. Within the rural as well as urban houses, women are engaged in cooking for family members as well as the farm labour, housekeeping, childcare, care of livestock, storing foodgrains and other related activities alongwith working in the family manufacturing enterprises. Much of such work is not recognised as 'work' in employment surveys as well as national income statistics. Hence, to reduce the invisibility of unpaid work performed by these women, our study carries out a time-use survey in Chinsurah-Magra Administrative block and Hooghly-Chinsurah Municipality area of the Hooghly district in June 2015. We have used the six-working-day recall method, i.e. we have collected information on how people spent the 24×6 hours of last six working days. We have excluded Sunday from our study, since Sunday is a holiday which does not follow the normal working routine of the male and female members of the household.

In this study, a sample of 400 households comprising 200 rural households from 8 villages of the Chinsurah-Magra Administrative block and 200 urban households from 8 municipal wards of the Hooghly-Chinsurah Municipality area is collected. Selection of houses is based upon the multi-stage random sampling method. In the Chinsurah-Magra Administrative block, at the first stage, 8 villages are chosen randomly out of 52 villages of the block. From each village, a sample of 25 households has been selected randomly. In the Hooghly-Chinsurah Municipality area, at the first stage, 8 wards are chosen randomly out of 30 wards of the municipality area. Then, from each ward, a sample of 25 households has been selected randomly. There are 200 female respondents from the rural households and also 200 female respondents from the urban households. Out of 400 households in rural and urban area, 14 households in the rural area and 39 households in the urban area have no male member because women are either unmarried or widow or divorced or have no other income earning male member in the family. In other words, if rural and urban households are taken together, there are 400 female respondents and 347 male respondents. In a nutshell, total number of households is 400 and total sample size is 747.

5. Main Findings of the Time-use Survey

Within our sample, 53.5 per cent are women and 46.5 per cent are men. Among the total number of respondents in the rural area, 51.8 per cent are women and 48.2 per cent are men, whereas, in the urban area, 55.4 per cent are women and 44.6 per cent are men. 92 per cent of all the households have nuclear family structure comprising maximum 4 members and remaining 8 per cent have joint family structure comprising 5 members or more. Main occupation structure of all the surveyed households is as follows: 6.5 per cent of all households are self-employed in non-agriculture, 10.1 per cent are self-employed in agriculture, 11.6 per cent are agricultural labourers, 35.2 per cent are other workers, 19.1 per cent are domestic workers and remaining 17.6 per cent are regular salaried employees. Out of all surveyed households, 89.4 per cent are Hindus and remaining 10.6 per cent are from other religious background. 39.7 per cent of all households are from upper caste background and 60.3 per cent are either scheduled castes or scheduled tribes. 93 per cent of all the families have own houses and remaining 7 per cent stay in rented houses. 80.9 per cent of the houses are pucca houses and remaining 19.1 per cent of the houses are kutcha houses. 54.3 per cent of all the households bear monthly expenditure less than Rs. 5000 and remaining 45.7 per cent bear monthly expenditure Rs. 5000 or more. Age of 63.8 per cent of all female respondents is 40 years or more and that of remaining 36.2 per cent is less than 40 years. Age of 80 per cent of all male respondents is 40 years or more and that of remaining 20 per cent is

less than 40 years. 73.9 per cent of all female respondents are married and remaining 26.1 per cent are either unmarried or widow or divorced. 17.1 per cent of all female respondents are illiterate, 72.9 per cent are educated upto higher secondary level and remaining 10.1 per cent are graduate or post-graduate. 68 per cent of all female respondents are employed in the paid job market either in principal status or in subsidiary status and remaining 32 per cent are unemployed. Female respondents were asked whether they have the decision-making power in household matters. 72.4 per cent of them have given positive replies and remaining 27.6 per cent of them have given negative replies.

Both male and female respondents of our sample are asked how they have spent their total time of 144 hours of 6 working days in the previous week on different activities. Table 1 shows share of total time spent on unpaid household work by female and male respondents of our sample.

Table 1: Share of total time spent on unpaid household work by female and male respondents

Share of total time spent on unpaid household work		
	10% or more of total available time	Less than 10 % of total available time
Percentage of women	70.9	29.1
Percentage of men	53.3	46.7

Source: Primary survey done by the author.

Table 1 shows that 70.9 per cent of all women respondents spent 10 per cent or more of total time on unpaid household work, whereas, remaining 29.1 per cent spent less than 10 per cent of total time on such work. On the other hand, 53.3 per cent of all men respondents spent 10 per cent or more of total time on unpaid household work, whereas, remaining 46.7 per cent spent less than 10 per cent of total time on such work. This observation clearly indicates that majority of women respondents have spent larger share of total time on unpaid household works, whereas around 50 per cent of men respondents have spent longer hours on such works.

Table 2: Time spent on paid and unpaid work in last 6 working days by female and male respondents

	Average working hour	Average leisure and personal care hour	Share of time spent on paid work (%)	Share of time spent on unpaid household work (%)	Share of time spent on unpaid social work and studies (%)	Share of time spent on leisure and personal Care (%)
Rural male	63	81	22.1	9.0	12.4	56.4
Rural female	79	65	14.3	27.9	13.0	44.8
Urban male	73	71	32.3	7.5	11.1	49.1
Urban female	74	70	10.8	26.5	13.9	48.7

Source: Primary survey done by the author.

Table 2 shows that average time spent on paid and unpaid work by female and male respondents of our sample. According to the figures shown in Table 2, average work-time of rural male respondents is 63 hours and that of urban male respondents is 73 hours. Average leisure and personal care time of rural male respondents is 81 hours and that of urban male respondents is 71 hours. The table also shows that average work-time of rural female respondents is 79 hours and that of urban female respondents is 74 hours. Average leisure and personal care time of rural female respondents is 65 hours and that of urban female respondents is 70 hours. This clearly indicates that average work-time of women is higher than that of men and average time for leisure and personal care for women is lower than that of men both in rural and urban areas. However, difference between the average working hours of women and men is higher in rural areas compared to the urban areas.

Table 2 also shows that rural men spent 22.1 per cent of whole time on paid work, 9 per cent on unpaid household work, 12.4 per cent on unpaid social work and studies and remaining 56.4 per cent on leisure and personal care. On the other hand, rural women spent 14.3 per cent of whole time on paid work, 27.9 per cent on unpaid household work, 13 per cent on unpaid social work and studies and remaining 44.8 per cent on leisure and personal care. Figures also reveal that urban men spent 32.3 per cent of whole time on paid work, 7.5 per cent on unpaid household work, 11.1 per cent on unpaid social work and studies and remaining 49.1 per cent on leisure and personal care. On the other hand, urban women spent 10.8 per cent of whole time on paid work, 26.5 per cent on unpaid household work, 13.9 per cent on unpaid social work and studies and remaining 48.7 per cent on leisure and personal care. It is clear from Table 2 that in rural as well as urban areas, share of time spent on paid work is much lower for women than for men and that spent on unpaid household work is much higher for women than for men.

Ironically, average figure has its own limitations. It does not reflect the ups and downs of the values within the range. To measure the inter-personal variation of working hours on

paid and unpaid work by men and women, we have calculated the coefficient of variation¹ of working hours of men and women.

Table 3: Coefficient of Variation in working hour on total work, paid work, unpaid household work, unpaid social work and studies and leisure and self-care by rural and urban female and male respondents

	C.V. in total working hour (paid+unpaid)	C.V. in time spent on paid work	C.V. in time spent on unpaid household work	C.V. in time spent on unpaid social work and studies	C.V. in time spent on leisure and self-care
Rural male	0.41	0.57	0.66	0.56	0.32
Rural female	0.30	0.80	0.42	0.55	0.36
Urban male	0.20	0.32	0.67	0.70	0.20
Urban female	0.24	1.22	0.46	0.72	0.25

Source: Primary survey done by the author.

Table 3 shows that C.V. of total working hour (paid +unpaid) of both rural men and women is higher than that of both urban men and women. Variability of working hour is highest for rural men and higher than that of rural women. On the other hand, variability of working hour for urban men is lower than that of urban women. C.V. of total time spent on paid work by men is less than that of women both in rural and urban areas. It is worth-mentioning that variability of total time spent on paid work by women is extremely high both in rural and urban areas. This implies that some women spent long hours on paid work, whereas some other spent much less hours on it. On the other hand, almost all men spent considerably long hours on paid work and therefore variability is case of men is low. Our study also shows that C.V. of total time spent on unpaid household work by men is higher than that of women both in rural and urban areas. This implies that variability of total time spent on unpaid household work by men is extremely high both in rural and urban areas. Some men spent longer hours on paid work, whereas some other spent much less hours on it. On the other hand, almost all women spent considerably long hours on unpaid family care work and therefore variability is case of women is low. C.V. of total time spent on unpaid social work and studies by rural men and women is lower than that of urban men and women. This implies, rural men and women spent almost same hours on unpaid social work and studies, whereas, in urban areas, some men and women spent longer hours on unpaid social

¹ Coefficient of Variation (CV) is defined as the ratio of the standard deviation σ to the mean μ .

$$C.V. = \frac{\sigma}{\mu} . \text{ It shows the extent of variability in relation to the mean of the population.}$$

work and studies and some others spent much less time on it. Variability of leisure and personal care time is low for both rural and urban men and women. This is understandable since common people usually spend almost similar hours for leisure and personal care.

Table 4: Age-wise classification of average working hours of women and men on unpaid household work and paid work

Age-group	Women		Men	
	Average working hours on unpaid household activities	Average working hours on paid activities	Average working hours on unpaid household activities	Average working hours on paid activities
15-29	40.2	14.2	13.1	40.7
30-44	40.3	22.8	13.1	42.6
45-59	38.4	14	11.4	37.6
60 and above	29	0	10.8	20.4

Source: Primary survey done by the author.

It is clear that both in rural and urban areas of our study, women have spent much more hours on unpaid household work and much less hours on paid work than men. To find out variability of average working hours on paid activities and unpaid household activities across women of different ages and across men of different ages, we have done age-wise classification of average working hours of women and men on unpaid care work as well as paid work (Table 4). Women with age group of 15 years to 29 years and with age group of 30 years to 44 years have almost same average working hours on unpaid household activities, whereas, average working hours on such activities have declined for women with higher age groups. Women with age group of 30 years to 44 years have the highest average working hours on paid work. Men with age group of 15 years to 29 years and with age group of 30 years to 44 years have same average working hours on unpaid household activities, whereas, average working hours on such activities have slightly declined for men with higher age groups. Men with age group of 30 years to 44 years have the highest average working hours on paid work. For all the age-groups, average working hours of women on unpaid household activities are higher than those for men. On the other hand, for all the age-groups, average working hours of men on paid activities are higher than those for women.

We have tried to find out whether age gap between the male member and the female member of the household has indirectly put extra burden of unpaid care activities on the female member within the household. Table 5 shows that if the female member is older than the male member, average work-time of the female member on unpaid household activities is quite high. Again, if the male member is older than the female member by 7 years or more,

the average work-time of the female member on unpaid household activities is also quite high. On the other hand, if there is no income earning male member in the household or if the male member is older than the female member by 1 year to 6 years, the average working hours are comparatively low. Such a finding can be explained as follows: a mother or elder sister would not let the son or younger brother to do household works and would do those activities for them as much as possible. Again, if the age-gap between the husband and wife is smaller, they seem to have more friendly than dominating relation and the husband would probably try to share the burden of the wife to some extent, whereas if the husband is much older than the wife, he is more dominating than friendly, and, therefore, the wife would be compelled to do all the caring activities for the husband as well as other members of the household.

Table 5: Classification of average working hours of women on unpaid household activities according to gap of age from that of the male earning member

Age-gap	Average working hours on unpaid household activities
No age gap due to the absence of male earning member in household	33.4
Negative age gap	44.3
Positive age-gap of 1-6 years	35.9
Positive age-gap of 7-12 years	42.1
Positive age-gap of 13 years or more	43.6

Source: Primary survey done by the author.

In this study, we have also checked whether education qualification of a woman does affect the hours spent on unpaid family care work by her (Table 6). However, we observe no significant difference in average working hours on unpaid family care activities by women due to difference in their educational qualifications. Those who are only literate, have the maximum average working hours on unpaid family care work, whereas those who are educated upto primary level, have the minimum. All the other groups have quite similar average working hours on such activities. Such a result is quite obvious. Women in the typical Indian society are taught from the childhood that it is their responsibility to do all the household chores and take care of children and elderly people in their houses after their marriage. Higher educational qualification of a woman does not guarantee smaller work-time on household care activities, especially, after her marriage.

Table 6: Classification of average working hours of women on unpaid household activities according to educational qualification

Educational qualification	Average working hours on unpaid household activities
Illiterate	39.7
Only literate	54.0
Primary	32.9
Secondary	40.4
Higher Secondary	40.2
Graduate and above	39.9

Source: Primary survey done by the author.

We all know that the gender composition of the labourforce in the world has changed significantly during neoliberal globalization. In addition to continuing participation of women in traditional sectors such as household industries, participation of women in the paid labour force has been accelerated phenomenally. Under these circumstances, we have tried to find out whether entering into the paid job market reduces the working hours of a woman on household caring activities. Ironically, we have found no significant difference between average working hours of employed and unemployed women on household activities (Table 7). This observation indicates the fact that doing household activities is a must for typical Indian women and full-time or part-time employment in the job market does not reduce such burden significantly.

Table 7: Employment status-wise classification of average working hours of women in unpaid household work and paid work

Status	Average working hours on unpaid household activities
Unemployed	40.6
Employed (P.S. +S.S.)	38.5

Source: Primary survey done by the author.

Smaller family size is supposed to reduce the burden of unpaid care work for women, whereas larger family size is assumed to increase that burden. In this study, we have tried to test whether larger size of the household puts extra burden of unpaid family care work on women. Table 8 shows that as household size increases, average working hours of women on unpaid household work increases, although finally it declines for households with 6 or more family members. This may be because households having 6 or more members are generally joint-families, where such activities are supposed to be shared by several women members of the family.

Table 8: Household size-wise classification of average working hours of women in unpaid household work and paid work

Household size	Average working hours on unpaid household activities
1	29.4
2	35.3
3	37.6
4	43.8
5	48.6
6 and more	44.7

Source: Primary survey done by the author.

To test whether differences in main occupation of the household create any difference in working hours of women on unpaid household activities, we have done main occupation-wise classification of average working hours of women on such activities. Table 9 shows that there is marginal difference between average working hours of women on unpaid household activities among the households where earning members are self-employed in agriculture, agricultural labourers, other workers, domestic workers and regular-salaried employees. Average working hours of women in unpaid household activities are lower in case of the households where earning members are self-employed in non-agriculture. In such households, women may either be engaged in small manufacturing works within the household premises or they may be working in the small-scale manufacturing factories on piece-rate basis and therefore have to work for longer hours to earn a fair amount of money. As a result, such women may have smaller time to devote on household activities.

Table 9: Classification of average working hours of women on unpaid household activities according to main occupation of the household

Main occupation	Average working hours on unpaid household activities
Self-employed in non-agriculture	29.3
Self-employed in agriculture	41.7
Agricultural labourer	36.3
Other workers	40.9
Domestic workers	38.2
Regular salaried	40.8

Source: Primary survey done by the author.

Table 10: Classification of average working hours of women on unpaid household activities according to monthly household expenditure

Monthly household expenditure (Rs.)	Average working hours on unpaid household activities
1000-5000	39.4
5001-9000	40.6
9001-13000	32.7
13001-17000	49.5
17001-21000	33
21001-25000	32

Source: Primary survey done by the author.

Monthly expenditure of a household is incorporated in our study as a proxy variable of family income. To test whether the affluence of the household makes any difference in the working hours of women on unpaid household activities, we have done the classification of average working hours of women on unpaid household activities according to monthly household expenditure. Table 10 indicates that there is no significant difference in average working hours of women on household activities for the monthly expenditure classes Rs.1000-Rs.5000, Rs.5001-Rs.9000, Rs.9001-Rs.13000 and Rs.13000-Rs.17000. For higher monthly expenditure classes, i.e. Rs.17001-Rs.21000 and Rs.21001-Rs.25000, average working hours of women on household care activities are lower. But this does not imply that as the affluence of the household increases, average working hours of women on household activities decline because expenditure class Rs.9001-Rs.13000 has lower average working hours of women on household activities than the expenditure class Rs.13001-Rs.17000. In fact, the expenditure class 13001-17000 has highest average working hours of women on household activities. Such a result is plausible. In Indian society, women of lower income class and middle income class families have to do most of the household chores and care activities irrespective of their educational and job status. Only women of higher income class families have the luxury of appointing full-time domestic servants to do some of these activities on their behalf, although they play the roles of supervisors within the households.

Computation of monetary value of unpaid household work done by women:

It is clear from our analysis that women respondents of our sample both in rural and urban areas have spent long hours on household activities. Unfortunately, these activities were unpaid and therefore they are supposed to have no economic value for the households as well as for the economy as a whole. In this study, we have tried to compute the monetary value of such unpaid household activities done by the women respondents of our sample. However, computing the monetary value of unpaid household activities is not an easy task. According to the existing literature, there are two main methods of computing monetary value of unpaid activities: first is the opportunity cost method and second is the replacement

cost method. The opportunity-cost method values the unpaid work at the rate of market wage of the paid-work a woman might have chosen. The underlying assumption is that the household member has foregone earnings for home production. The valuation of such work will change depending upon the type of paid-work a woman might have chosen, the skill level of the woman as well as the availability of jobs for the women. However, it is quite difficult to determine the type of job the woman would have chosen or probable wages of such jobs. Moreover, this method may overstate values since most of the household activities do not demand high skills. The replacement-cost method considers what it would cost to hire a worker to perform the household activities (OECD 2011). The formula for this estimation procedure of unpaid household work according to replacement-cost method is:

$$\begin{aligned} \text{Value of unpaid work} &= (\text{average time spent for activity}) \times (\text{wage rate}) \times (\text{no. of persons}) \\ &= (\text{total time spent for activity}) \times (\text{wage rate per unit of time}) \text{ ----- (1)} \end{aligned}$$

(Danhoa Harpreet and Uppal Anupama, 2014).

In our study, we have used the replacement-cost method to compute the value of unpaid household work done by women in six days.

Table 11: Valuation of unpaid household work done by 400 women respondents in six days

Educational Qualification	Average working hours on unpaid household care activities	Total Number of Women	Average wage/salary earnings per day (8 hours) (Rs.)	Average wage/salary earnings per hour	Value of Unpaid Care Work (Rs.)
Illiterate	39.7	68	84.47	10.56	28508
Only Literate	54.0	10	101.46	12.68	6848
Primary	32.9	72	101.46	12.68	30036
Secondary	40.4	180	144.90	18.11	131696
Higher Secondary	40.2	30	144.90	18.11	21841
Graduate and Above	39.9	40	101.22	12.65	20189
Total		400			239118
Per Capita Value					597.80

Source: i) Primary survey done by the author, ii) NSSO, 68th Round Employment-Unemployment Survey

Unlike the other states of India, West Bengal government has not yet framed laws to determine minimum wages of domestic workers. It is, however, considering to do it very soon. Therefore, in the absence of any minimum wage for domestic workers fixed by the state government, we have used the All-India level average wage/salary earnings per day received by regular wage/salaried employees of division 97² according to NIC classification, 2004, as mentioned in 68th round Employment-Unemployment Survey of NSSO. 68th round Employment-Unemployment Survey Report of NSSO gives average wage/salary earnings (Rs. 0.00) per day received by regular wage/salaried male and female employees of division 97 of age 15-59 years according to their education level. We have calculated the average working hours of women in our sample on unpaid household works according to their education level and arranged total number of women respondents according to these education levels. We have used daily wage rates of the female employees of division 97 of age 15-59 years from NSSO 68th round Employment-Unemployment Survey Report for our valuation. Assuming that average work-time of 8 hours per day, we have converted the daily wage rates into hourly wage rates. Finally, we have used the formula (1) to calculate the total value of unpaid household work done by the women respondents of our sample in 6 working days of the previous week and divided it with the total number of women respondents of our sample to obtain the per capita value of unpaid household work. The results are shown in Table 11. Table 11 shows that, women of secondary education level have generated maximum value of unpaid household work, followed by women of primary education level and illiterate women. Only literate women have generated minimum value of unpaid household work.

6. Conclusions

This study is a modest attempt to analyse the labour force participation of women, their time use pattern and the type of domestic activities in which they are mainly involved and to find out the monetary value of these activities. A sample of 400 households of Hooghly district of West Bengal comprising 200 rural households from 8 villages of the Chinsurah-Magra Administrative block and 200 urban households from 8 municipal wards of

² DIVISION 97 (NIC 2004): Undifferentiated service-producing activities of private households for own use service-producing activities of households. These activities include cooking, teaching, caring for household members and other services produced by the household for its own subsistence. In application, if households are also engaged in the production of multiple goods for subsistence purposes, they are classified to the undifferentiated subsistence service-producing activities of households.

the Hooghly-Chinsurah Municipality area is taken for our analysis. Selection of houses is based upon the multi-stage random sampling method on the basis of six-working-day recall method.

Our study reveals that more than 70 per cent of female respondents and slightly more than 50 per cent of male respondents have spent longer hours on unpaid household works. Average work-time of women is higher than that of men and average time for leisure and personal care for women is lower than that of men both in rural and urban areas. We also observe that both rural and urban women have spent much lower share of total time on paid work than their men counterparts, whereas share of total time spent on unpaid household work by rural and urban women is much higher than their men counterparts.

We further notice that variability of total working hour of both rural men and women is higher than that of both urban men and women. While variability of total time spent on paid work by men is less than that of women, that of total time spent on unpaid household work by men is higher than that of women both in rural and urban areas.

For all the age-groups, average work-time of women on unpaid household activities is higher than those for men, whereas, average work-time of men on paid activities is higher than those for women. If the female member is older than the male member, average work-time of the female member on unpaid household activities is quite high. Again, if the male member is much older than the female member, the average work-time of the female member on unpaid household activities is also quite high. On the other hand, if there is no income earning male member in the household or if the male member is not much older than the female member, the average working hours are comparatively low.

We spot no significant difference in average work-time on unpaid family care activities by women due to difference in their educational qualifications. Furthermore, we have found no significant difference between average work-time of employed and unemployed women on household activities. As household size increases, average work-time of women on unpaid household work increases, although finally it declines for households with large family-size.

There is negligible difference between average work-time of women on unpaid household activities among the households in which members work as self-employed in agriculture, agricultural labourers, other workers, domestic workers and regular-salaried employees. Average work-time of women in unpaid household activities is lower in case of the households where members work as self-employed in non-agriculture. There is no significant difference in average work-time of women on household activities for the low and

medium monthly expenditure classes. However, for higher monthly expenditure classes, women have spent fewer hours on household activities.

In this study, we have used the replacement-cost method to compute the value of unpaid household work done by women. Women with secondary education level qualification have generated maximum value of unpaid household work, whereas women with only literacy level qualification have generated minimum value of unpaid household work. Total value generated by 400 women respondents of our sample in the 6 working days of previous week is Rs. 239118/-. Therefore, per capita value of unpaid care of women is Rs. 597.80/-.

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