

UNDERSTANDING THE ECONOMIC VALUATION OF UNPAID CARE WORK

Hema Prakash¹ & AnkurYadav²

The study explores and investigates the statistical understanding of unpaid care work, conceptualized with the gender inequality, monetary valuation of care work and its consequences on women's lives. Empirical evidences collected through primary field data with the help of Time Use Survey, obtained from varied groups of female caregivers (n = 120) in the province of Lucknow, Uttar Pradesh. Through examination of the intricate nature of unpaid care work and time allocation pattern, findings reveal the complex burden of care work and remarkable inequality with a gender perspective. The estimated monetary valuation of time and disguised labor input to care work signifies the substantial wage of care labor; significant economic contribution of women accruing to the economy and its constructive effects on women's well-being.

Keywords : *Unpaid Care Work, Time Allocation Pattern, Gender Inequality, Monetary Valuation*

Introduction

Women from across the world reported to consign considerably more unpaid care work than men; particularly in the South-Asian countries. The women's role in sharing unequal care work is significantly contributing to the economy and social development. Thus, it is important to know the hidden monetary value of women's work and the consequences of 'being uncompensated' effects upon women. Care work is deeply rooted with the patriarchal structure and associated with complex time allocation pattern with strenuous labor input, creates penalties in terms of lack of time autonomy; affects choices; preferences and capabilities. This creates constraints to women's lives and their economic activities. The unpaid work is taken as a form of responsibilities of women's that take place outside the market and are therefore invisible in the economic precincts. This conceals the economic role of the women and place them in a subordinate economic position; that disadvantage them in market production in general and in the labor market in particular (Beneria, 1979; Beneria & Sen, 1981). Hence, a significant portion of the care work, its hidden labor wage and its huge contribution to the country's GDP remains unknown. A large population of women primarily engaged in such work are deprived of economic recognition and not counted as a part of the economy's labor force.

¹ Ph.D. Research Scholar, Centre for Studies in Economics and Planning, School of Social Sciences, Central University of Gujarat, Gandhinagar-382029, Gujarat, India. Mobile No. (+918460128151) Email- hemaprakash24@gmail.com

² Ph.D. Research Scholar, Centre for Studies in Economics and Planning, School of Social Sciences, Central University of Gujarat, Gandhinagar-382029, Gujarat, India. Mobile No. (+917048353332) Email- ankur.ansh9@gmail.com

The study aims to outline the nature and classification of unpaid work and tries to provide an insight into recognizing the hidden labor form, its economic value and socioeconomic contribution of women through care work. Second part deals with literature review that shows how the notion of unpaid care work is anchored in the long-established and enduring debates about gender inequalities and work. The third section of the study intends to provide some empirical evidences which reveals the complex nature of care burden and gender inequality in time allocation pattern. It also attempts to estimate an expected wage of care workers (for certain listed SNA & non-SNA work) to reflect the economic value of unpaid care work. The study highlights the importance of counting of unpaid care work and argue that it is an issue which demands an urgent attention.

Conceptual background

Unpaid care work involves both direct and indirect care of people, encompasses all work taken as in sense of responsibility, duty and love of care giver within the household. Direct care involves direct physical and mental care while indirect care involves other work done with the sense of care for family members within the household, community and society (UNRISD, 2010a). Care work can take place in private homes where it might be done on an unpaid basis by household members or on a paid basis by non-household members (Razavi, 2007). Anna and Blackden (2009) explained "unpaid" means activities does not receive wage; "care" activities rendered to those being cared for and "work" entails expenditure of time and energy. Folbre (2006) explained it as "labor and output process" services that are input into the production and maintenance of the labor force, with no wage compensation criteria.

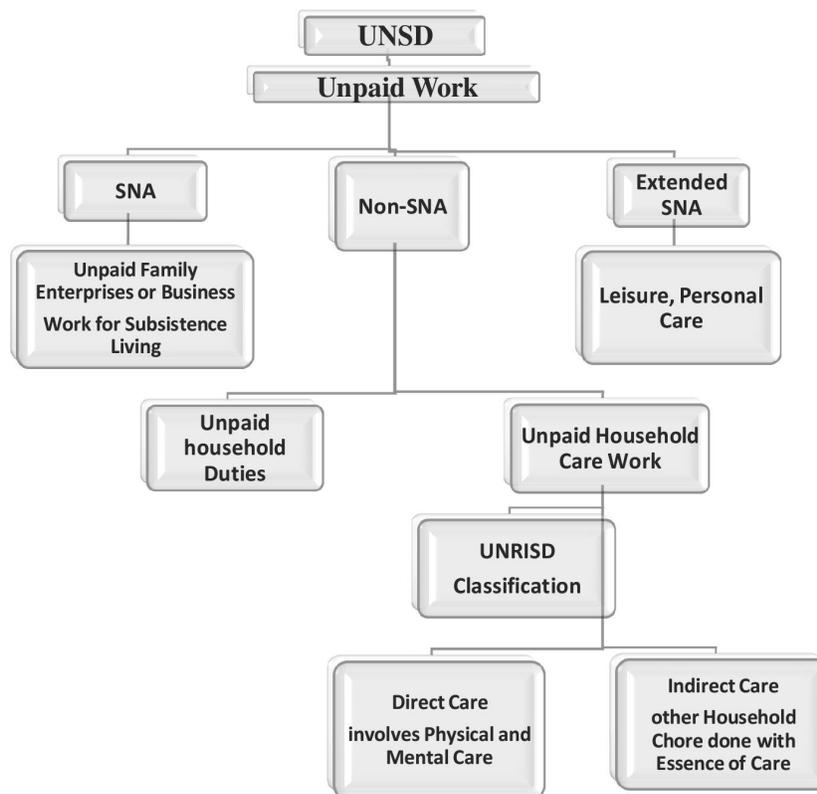
There is invisibility, non-accountability and non-remuneration associated with care work. Invisibility says that the female roles connected with the care of family and social reproduction, thus it is usually considered as non-productive work. Non-accountability refers to the assumption that whatever does not directly produce wealth cannot be recorded as a contribution to economic progress. Thus the accounting system is geared towards traditional economic units, to record the production of goods and services tradable in the markets. Lastly, non-remuneration refers to the abundance of manual labor available to perform care work for free which has infinite elasticity to adjust to the changes taking place in the macro-economic environment.

Statistical classification of unpaid care work

The UN System of National Accounts (UN-SNA), first published in 1953 excluded goods and services in the estimation of Gross Domestic Product that were produced by households for their own consumption.

In 1993, the UN Statistical Commission insisted on that national statistics office in all countries need to prepare satellite accounts using Time Use data to cover unpaid work, particularly those performed by women. Later in 1997, the United Nations Statistical Division (UNSD) developed the International Classification of Time USE Survey (ICATUS) in order to cover the economic importance of unpaid care work and other vital unpaid activities taking place within the household. This was later revised in 2003 which included a list of activities classified as SNA, non-SNA and Extended SNA.

Figure 1: United Nation statistical division of unpaid work



Source: Derived by authors from UNSD, UNRISD¹classification of work

According to Indian System of National Accounts (I-SNA), women's partaking in specified household activities, classified as usually engaged in domestic duties in the principal status-

First category (SNA): activities relating to work in household poultry, dairy, etc. and agricultural production such as maintenance of kitchen garden including a free collection of agricultural products for household consumption falls within the production boundary specified by both

i.e. United Nations System of National Accounts (UN-SNA)²-2008 as well Indian System of National Accounts (I-SNA). Therefore, if a woman had followed these activities in the principal status, then she would be categorized as 'employed' (NSSO, 2011).

Second category (non-SNA): activities performed by women in the processing of primary products produced by the household members for households' consumption; are categorized as an economic activity as per UNSNA-2008 but not by I-SNA (NSSO, 2011).

Third category (Extended SNA): activities performed to produce or derive utility for own consumption, but resulting in economic benefits to the households; is neither considered as economic activities by UN SNA - 2008 nor by I-SNA (NSSO, 2011).

The NSSO counting is limited to only SNA- activities (such unpaid domestic activities that can be seen with the economic per view). But the time and labor spent in direct and indirect care activities such as cooking; washing clothes of family members; sick care; old age care; child care (non-SNA activities) are left out. Only a few of non-SNA unpaid activities have been covered such a tailoring and tutoring children in the household and in the community.

The economic valuation of unpaid care work

The term "Unpaid" attached to care work conceals the fact that households are also linked with the rest of the economy through their production capacity. There is a continuous mechanism of demand & supply of producing goods and services by household unpaid care workers with the rest of the economic world; which usually falls out the general phenomena of demand & supply and wage allocations. The non-remuneration of time input, disguise labor input and hidden imputed skills in unpaid care work has undervalued the vital economic production of women and the household sector; and its contribution to the market economy. It depresses the labor or wage cost of unpaid care labor and represents a false interpretation of inclusive well-being of regional, national and international grounds.

Economic Justice Report, 1997

The market economy cannot exist without shadow economy. The market economy is dependent upon unpaid care workers to maintain those who work in the formal economy, to care for those who are unable to care for themselves. But the market economy pays nothing for this work. In effect, then, the shadow economy, subsidizes the market economy.

The undervaluation of unpaid care work occurs in many arguments as there is no production of tangible goods and service; has no exchange value; unpaid care work and leisure is no different; has

no cardinal utility and the accounting of care work could inflate the GDP and so on. These arguments lead to distress and vulnerable situation to care workers especially women. The economic operation and total productivity of workplace cannot be made possible without incorporating the values of the sustenance contribution of unpaid care workers (such as rearing children with attention and care, availing nutritious and hygienic healthy lives, teaching and mending them etc.) executing within household boundaries.

Simon Kuznets, 1941

The productive activities of housewives and other family members rendered within the family circle...are an important complement to the market-eventuating process in supplying goods to ultimate consumers, and should be considered in any attempt to evaluate the net product of the social system in terms of satisfying wants with scarce means.

Literature review

Armstrong and Armstrong (2001) pointed that the care work is attached with feminine values that often makes it invisible; accordingly negligible value assigned to it and hardly recognized as skilled work. England (2010) quoting the feminist economists (Folbre, 2001; Bakker & Gill, 2003; Mitchell & Katz, 2003) underlined that the gendering of work has its ideological and historical roots in the societal and spatial separation of wage work from social reproduction. The care work became non-market labors of love and primarily associated with a domestic sphere and to women's of the household (England, 2010). The ignorance of recognizing the professional skills women had pursued, and the skills embedded in caring work make it culturally devalued. It usually led to assign less pay to those who performing care work in the market area; and no value to those who are performing it within the household (Kilbourne, England, Farkas, Beron, & Weir, 1994; Steinberg, 1990; England, 1992).

Antonopoulos (2009) empirical evidences with TUS reveals gender disparity in time allocation between paid and unpaid work, in both developing and developed countries. Fahmida & Pervin (2014) in a primary study done in Bangladesh, estimated that male offer 2.5 hours of care activities in a typical day; whereas female offer 7.7 hours which is three times higher. The number of such activities undertaken by women were 12.1 whereas men concentrated to very few activities i.e. 2.7. According to the NSSO (2011) there is a huge disparity in numbers of men and women attending to domestic duties in India. In 2009-2010, in rural, only 5 per 1,000 and in urban only 4 per 1,000 males of every ages reported to be attending the domestic duties. Whereas in case of rural females, 347 per 1,000 females (all ages) reported to be

attending unpaid work and in case of urban females the number is even bigger i.e. 465 per 1,000 (all ages) attending only to unpaid work. The average time spent by rural women on unpaid work was estimated to be 29.52 hrs. a week and for rural men it is 3.51 hrs. As a comparison, the urban men used to spend 2.70 hours, whereas for urban women it is 32.08 hours.

Kabeer (1999) argued that the micro-analysis has concealed the significance of unpaid work at the macro level. If it included in national accounts would constitute 40% of Swiss GDP (Schiess & SchönBuhlman, 2004) and would be equivalent to 63% of Indian GDP (Budlender, 2007). A study in Nepal, in a total of 150 respondents consisting of 120 women and 30 men reveals that the estimation of GDP would rise to double; if the contribution of women's unpaid work counted (Shrestha, Efroymsen, FitzGerald & Jones, 2008). Time Use Survey of 18,591 households in India, shows that prevailing wage rates of workers of various categories increased by 26% to 50%; when the value of unpaid activities was added (Hirway, 2005). On estimating the monetary valuation of unpaid care work and assigning a very low wage rate to care works yields an annual figure for the value of women's unpaid work of US\$612.8 billion or 61% of GDP (Chaudhary, Tripathy & George, 2009). In Bangladesh, unpaid non-SNA works equivalent to 76.8% of GDP in 2013-2014 by replacement cost method. According to willingness to accept method, it is estimated at 87.2%, which is 2.5 and 2.9 times higher than the income received by paid women (Fahmida & Pervin, 2014).

Varshney (2011) chalked out distinctive characteristic of care work at regional grounds. Compared to urban women, rural women performing a broad range of unpaid work in maintaining the households and running the subsistence need of families, attending to farm and animals care, arts and handicrafts work (mat and basket weaving) etc. Such activities are neither measured in economic terms nor women being considered as a part of the labor force. Rukmini (2014) argued that even though the majority of women engaged in unpaid, but productive activities such as collecting firewood or rearing household poultry, etc. not classified as 'workers' as the value added by and the number of hours spent is invisible to be considered as 'economically productive activity'. Thomas (2013) outlined that missing numbers of female labor from India's official statistics are usually the labor, working within their own household and attending to unpaid work. Unequal opportunities in labor market such as wage pay inequalities and coping with manifold feminine roles generates an attitude of passive acceptance of helplessness that force women to take an interest in unpaid care work as their main occupation (Swaminathan, 2012).

The unpaid labor reflects the consequences of the continued expansion in the numbers of hours involved in unpaid care labor as well as the continued denial of 'workers' status of women (Swaminathan, 2009). This lowers the social status of women relative to men. Unpaid work thus been seen as an integral part of unequal power relations between men and women (Thompson & Walker, 1995). Measuring unpaid care work on a regular statistical basis will assign unambiguous value of the significant contribution of the household sector which provide more precise information on total production and actual growth of the economy that help to overcome certain socioeconomic evils such as gender inequality, women's poverty (Colman, 1998).

The above dialogue represents the massive efforts being undertaken in countries throughout the world to recognize and value the contribution of women unpaid work. However, in India the study is limited to some extent. Few studies have been done with the use of NSS data sources which is limited to an analysis of SNA household unpaid activities. Hardly known primary level study with Time Use Survey have been done so far in the province of Uttar Pradesh.

Objectives of the study

The objectives of the present study are motivated to:

- To deliver an understanding about the statistical classification and significance of monetary valuation of unpaid care work.
- To analyse the intricate nature and time allocation pattern of unpaid care work.
- To measure the value of time and labour spent by caregivers on care work and estimate the expected wage for unpaid care work.

Methodology

The present study analyses the economic valuation of unpaid care work undertaken by the women. In this regard, the household Time Use survey³ was conducted in the district of Lucknow, Uttar Pradesh province and the primary data collected through face to face recall interview with the help of the structured interview schedule. The sample size of 120 women ($N=120$) has been selected with the use of purposive non probability sampling method. The interview schedule developed by following a comprehensive literature on unpaid work and 'Guide to Producing Statistics on Time Use: Measuring Paid and Unpaid Work' by United Nations¹. Open ended questions are arranged subjectively in the interview schedule to overcome the limitation to respondents' responses and research biasness. Time Use Survey did with the help of its components such as Full Time Diary Activity Matrix² for female

care giver and Light Time Dairy Activity Matrix³ for the spouse of care giver which is incorporated to obtain the information about each period of Time Used/Allocated over the duration of 24 hours of the day on care work and for seven days of the week including Sundays'. Focus group discussion method integrated with an interview schedule to gain a better observation regarding the complex relationship among women's attitude, culture, personal values and monetary valuation of care work.

Findings and discussion

The study represents a case study of 120 household female caregivers (N=120) belonging to the Lucknow district of Uttar Pradesh province. The unit of analysis is female caregiver within households, chiefly responsible for all household chores in the form of direct-indirect care. Spouses of female caregivers have been also considered as a partial unit of analysis, to gain better observation with a gender perspective. In Uttar Pradesh, the number of women engaged only in unpaid work has increased in urban areas from 707 (per 1000 females) in 2009-10 to 720 in 2011-12. In rural regions it decreased from 717 (per 1000 females) in 2009-10 to 705 in 2011-12 (NSSO, 2011).

Time allocation pattern and inequality in sharing of care work

A particular age group of females associated with the burden of sharing care work. Among surveyed women, 33.3 percent belongs to the age group of 20-30 yrs. and 25.8 percent in age group of 31-40 yrs. Total 59.1 percent caregivers found to be in the age group of 20-40 years. This age group considered as a 'population of working age group' tends to have high productivity in terms of economic contribution. Instead, they are paying attention only to perform care work obligations. Household size or family type represents care dependency ratio of caregivers which affects the magnitude of time allocation to care work. However, the increasing trend of nuclear family type of household has been witnessed during a survey which reveals a situation of households having a sole female caregiver. 81 percent of caregivers were serving to nuclear family while only 19 percent were serving to joint family.

Figure 2 and figure 3 depicts time allocation pattern of caregivers to care work. It shows that number of hours allocated to care work in a day is high in magnitude as compared to the working hours of paid labor. Only 6.7 percent of caregivers reported to allocate 6-8 hours a day on performing care work. Whereas 93.3 percent caregivers are devoting more than 8 hours a day in routine life. Among them, 36.6 percent of women spends 14- 18 hours a day, which is equivalent to "double day work". In a focus group discussion, it has been observed that the time allocated to particular care activity is accompanied with

other simultaneous care and domestic works. Such work referred as ‘minor household work’ by caregivers.

Figure 2: Hrs. allocated to care work/day

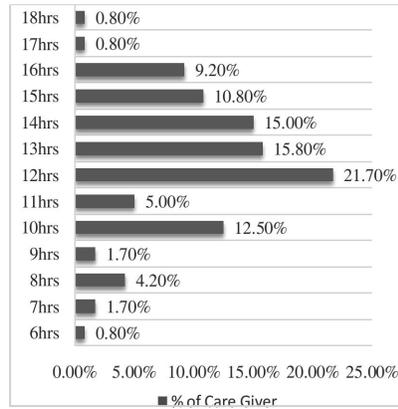
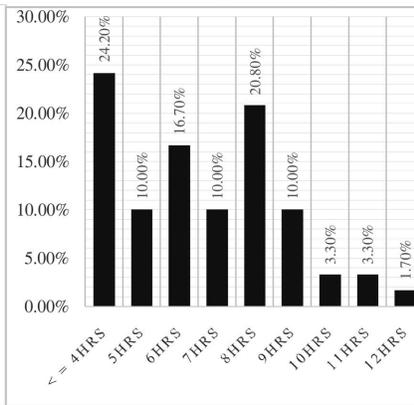


Figure 3: Simultaneous care working hrs./day



Source: Primary field survey, 2016 Source: Primary field survey, 2016

24.2 percent of surveyed women stated that they allocate less than 4 hours a day on performing multiple care duties. Whereas 57.5 percent women allocate 5-8 hours and 18.3 percent women spend about 9-12 hours of performing other care work simultaneously. This complex occurrence and nature of care work results in overwhelming effects on caregivers such as lack of time autonomy, strenuous labor input, mental and physical stress which in long term leads to other difficulties. Women occupied with resourceful household have to face care work’s complexities at different grounds than women of low economic background. There is no commensurate effect of rising income of households, better livelihood, availability of basic resource, a technology based domestic equipment, nuclear family type on the time burden reduction of care giving. The only difference observed is the quality of care work carried out by the caregivers belonging to different economic background.

Table 1.is supporting the enduring debate over gendering of care work. Huge gender disparity found to be occurring in performing care work by male spouses. Among the surveyed female caregiver 88.3 percent were married and live with their spouses. About 67.9 percent of them disclosed that they do not receive single help from their spouse in performing domestic and care work. Only 29.2 percent women receive help from their husbands in performing care work. Time Use Survey discloses the time allocation to care work by spouses. Among 29.2 percent spouses who helps in sharing care work, 64.7 percent devotes less than half an hour a day. Only 2.9 percent spouse reported to be spending more than 3 hours in a day in carrying out care

responsibilities. Whereas 2.8 percent spouses used to perform care duties occasionally or at time of need.

Table-1: Time allocation by male spouse to unpaid care work (in %)

Time allocation	Male Spouse
Yes →	29.2
<1/2 hrs./day	64.7
1-2 hrs./day	26.5
Hours/Day	
2-3 hrs./day	5.9
>3 hrs./day	2.9
Occasionally →	2.8
No →	67.9

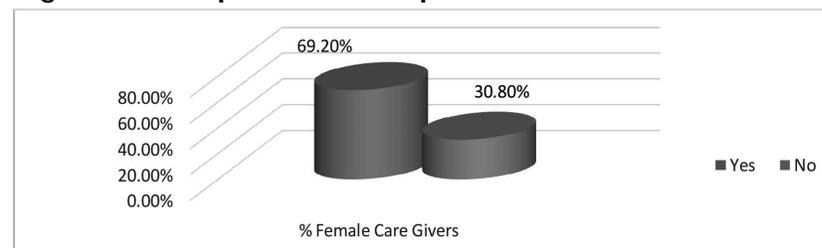
Source: Primary field survey, 2016

For the spouses who attend care work occasionally, time allocation depends upon need and the kind of work which usually found to be 1-2 hours on the particular day. The high participation of spouses in performing care work have been observed from the household belonging to better educational background and engaged with fixed working-hour job. This reflects some noteworthy reasons- first, the educational attitude of spouse towards women and care work. Second, fixed hours of a paid job tend them to have more disposable time to get involved in care work compared to spouses engaged with flexible hour job.

Monetary valuation of unpaid care work: Perspective of unpaid care workers

The feminine values in performing care work for the well-being of family members and society overruled the economic cost of such activities. 69.20 percent of surveyed care givers perceive that household care work has some value in terms of cost or wage. There should be wage allocation or some kind of remuneration as women have to suffer and sacrifice in many ways such as health; inequality; time poverty; declining capability; personal well-being and development while accomplishing these tasks. They deem that they are not only the dependent consumer upon breadwinner.

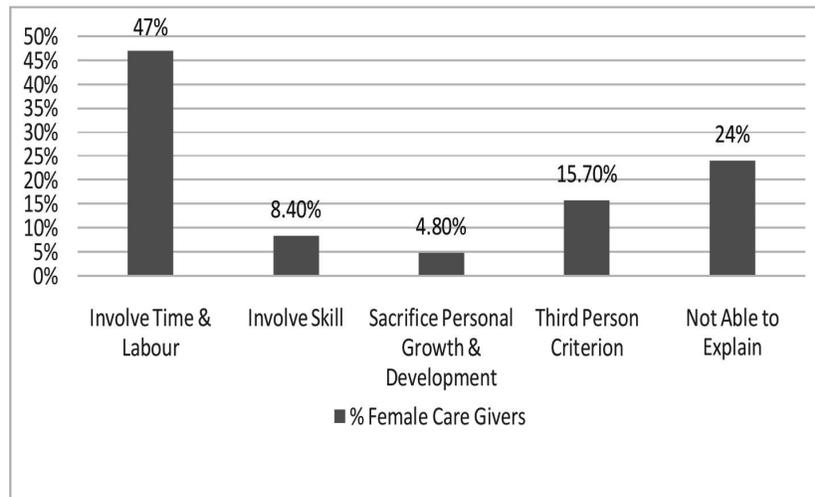
Figure 4: Perception about unpaid care work remuneration



Source: Primary Field Survey, 2016

About 47 percent women state that care work took twofold time with concealed physical & mental labor and should have some monetary valuation. They presume that assigning monetary value is the only way to make their work visible; led it to be counted as work and provide a status of “workers” to care giver. It also freed women from the penalties of patriarchal division of labor.

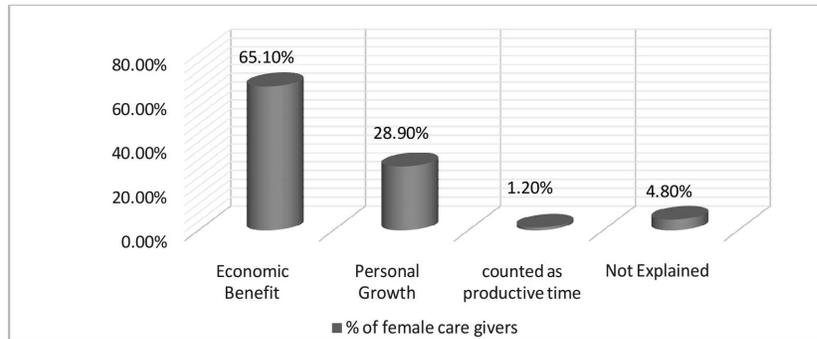
Figure 5: Reasons for unpaid care work remuneration



Source: Primary field survey 2016

In discussion, women characterized the unpaid work in certain ways that laid some noteworthy reasons to the remuneration of unpaid work. As in the case when a third person does the care work if he/ she hired would be paid for his/ her time and labor drawn in care work, 15.7 percent caregivers supports this “third person criterion” view for remuneration of care work. About 4.8 percent women perceive that sacrifices (personal growth and development) in the shadow of the unequal gender division of intra-household work and labor are irreplaceable with the passage of time. The skill, education and economic opportunities are functions of time, which devalues in the economic market with the lag in time period. The overburden of care work and inherited feminine skill drains out the professional, productive skills with time and affects the total welfare of women. Opportunities and welfare achieved at the time period (t) would not be same as in the time period (t_{n-1}) because of such devaluations. The utility derived from goods and services generated through care work enjoyed by everyone is at the cost of utility sacrificed by care givers without any compensation.

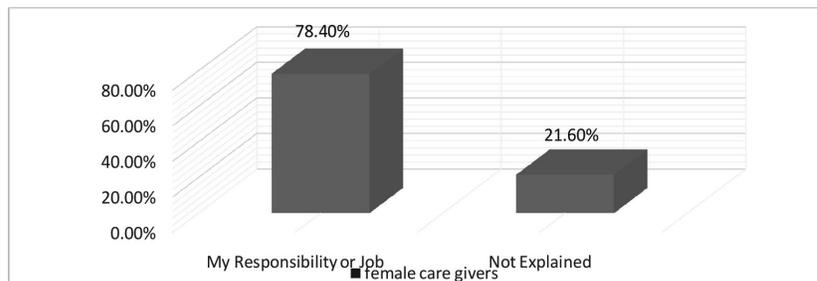
Figure 6: Benefits assumed by remuneration of unpaid care work



Source: Primary field survey, 2016

Remuneration would not only make caring work visible and statistically accountable but also enhance the lives of women at several grounds. 65.1 percent women assumes that it would be beneficial in terms of making them empowered. 28.9 percent caregivers supposes, it would boost up the personal growth in terms of narrowing down gender disparity; intra-gender disparity; raising prestige; sexual harassment; value of work; confidence builds up and socially empowered. About 1.2 percent women think that the remuneration would convert the unpaid time in the form of visible productive time.

Figure 7: Reason for non-remuneration of unpaid care work



Source: Primary field survey, 2016

About 30.8 percent women not agreed with the monetary valuation of care work. Among them, 78.4 percent argued that there is no cost of feminine values and there should not be any remuneration or wage allocation for such duties as it is predestined responsibility of the lady of the household or on whose it eventually falls and that is a matter of beyond any exchange value and market mechanism.

Expected wage allocation to unpaid care work

The major unpaid care work reported by respondents during the pilot survey, they use to attend to daily routine have been listed down in Table 2. These activities have been considered for monetary valuation as an attempt to highlight the hidden economic cost of producing vital goods and services through unpaid care work and to estimate the wages of unpaid care labor. The shadow cost has been consigned to unpaid care activities through willingness to accept method. The respondents asked to assign a minimum wage for each care activities according to the labor input, education, age, skill involve, family size, time allocated to that particular work. The case where respondents fail to assign any wage to work were then asked to assume the minimum possible wage on the basis of "third person criteria".

Table-2. Expected wage composition to unpaid care work (wages/ month in Rs.)

Sr. No.	Activities	Min. Wage (in Rs.) Expected	Max. Wage (in Rs.) Expected	Total Wage (in Rs.) Expected	Avg. Wage (in Rs.) Expected
1.	Cooking	500	15,000	3,76,200	4532.53
2.	Cleaning dishes	250	10,000	1,63,550	1970.48
3.	Washing clothes	300	12,000	2,22,600	2681.93
4.	Cleaning house	300	10,000	1,51,800	1828.92
5.	Gardening	300	8,000	1,75,700	2116.87
6.	Repairing	100	8,000	1,30,850	1576.51
7.	Teaching child	100	10,000	1,47,700	1779.52
8.	Total child care	500	10,000	3,46,500	4174.70
9.	Shopping	100	10,000	1,40,700	1695.18
10.	Pets care	200	20,000	3,10,300	3738.55
11.	Sick Care	200	30,000	4,48,700	5406.02
12.	Old Age Care	500	10,000	4,10,500	4945.78
13.	Voluntary Service	500	50,000	2,67,200	5808.70
14.	Collecting Fuel	300	4,000	35,900	1380.77

Source: Primary field survey, 2016

Note: wage is calculated for 69.02 percent of caregivers who perceives that their work has some cost and there should be some remuneration.

According to the responses derived, Table 2 illustrates the range of expected minimum and maximum wage for each activity. The assigning of expected wages depends upon the educational and awareness background of females about the value of their work. Caregiver who know about the wage of the same work done by a third person is aware with the monetary value of their work; those who perceive that their forgone monetary earnings has higher cost.

**Table-3. Expected wage allocation to unpaid care workers
(For listed 14 unpaid care activities)**

■	Expected Monthly Average Wage for listed 14 unpaid activities for one unpaid worker is Rs. 3,111.41 = \$46.32
■	Expected Wage for listed 14 unpaid activities for one unpaid worker in a financial year (including Sunday) is Rs. 37,336.92 = \$555.82
■	Total Expected Wage for listed 14 unpaid activities for 83 i.e. 69.02% unpaid worker in a month is Rs. 3111.41 * 83 = Rs. 258,247.03 = \$3844.39
■	Total Expected Wage for listed 14 unpaid activities for 83 i.e. 69.02% unpaid care in a financial year (including Sunday) is Rs. 3,098,964.36 = \$46159.91

Note: \$1 = Rs.67.13(in 2016)

Source: Primary field survey, 2016

Table 3 is representing the expected minimum wage to listed 14 unpaid care activities for caregivers. This is an attempt to reflect the hidden substantial monetary value of care work. The monthly expected wage for 69.02 percent caregivers is significant in monetary numbers Rs. 258,247 equivalent to \$3844; reflecting their vital economic contribution through care work. However, the calculated wage is comparatively meager for caregivers performing "double day work" and had pursued professional skill; can earn more expected wage if they move to visible labor market. The estimated figures are not only representing the hidden expected wages of 69.02 percent unpaid care workers; but moreover, it is representing the unaccounted cost of invisible production accruing to the economic market.

Conclusions

In the view of the above discourse, the present study is an attempt to generalize the understanding about the valuation of concealed economic factors in unpaid work; and to draw the inferences regarding accounting of the time allocation and monetary valuation of care work for women and in policy making. It can be identified that the over-representation of care work and women as a care givers led them to several vulnerabilities within socioeconomic setup; depriving them from achieving equalities and well-being.

The magnitude of the time allocation pattern; huge gender disparity in the sharing of unpaid time and labor; and the estimated figure of expected wage to care labor needs to unmask the statistical invisibility of care work. In this concern, ISNA needs to adopt the UNSNA classification of work and a more gender profound approaches in crafting and planning Time Use Survey. This should aim to cover large-scale sample to look into the socioeconomic complexities arising due to patriarchal division of work; particularly gender based issues existing at great extent in developing countries. Such attempts would not only contribute to improve national statistics, but would assist in

reconstruction of breakthrough policies regarding work-time-wage equality; gender; division of labor; female participation in labor force; more precisely. However, considering time use data collection only as a forerunner to the construction of household satellite accounts left us with some kind of ambiguity in statistical implication or in policy making. To overcome this, we require to develop a redistributive framework associated with time use data collection. Such framework goes beyond statistical visibility and recognition of care work to find more just ways of allocating the cost and benefits of unpaid work.

The underestimation of the monetary value of care work necessitates the 'institutionalization of care work' with appropriate wage structure and social securities to care workers; working on a paid basis. It would support the reduction and redistribution of unpaid care work within a background that identifies both caregivers' contributions to socioeconomic well-being and the actual materialistic cost of care giving. The monetary valuation of care work for analyzing comparative inequalities; inequalities over time and its implication on gender poverty; female labor relations to labor market is not spoken in this study. Such work may be part of a future plan which could bring a new discourse to the subject specific.

The present case study is representing a micro level interpretations. It is obvious that the study on the subject specific requires to be carried out at extended level with the use of large scale Time Use Survey. The further extended study should be focusing on wider aspects of gender for both men and women through heterogeneous intra-gender groups, concentrating majorly on developing countries. The survey should be formulated in such a manner that it takes into account the cultural impediments across regions; participatory research could lay better observations where ethical issues arise problems to derive responses. The analysis through gender statistics, gender responsive budget and quantification of unpaid time allocation with time use survey would be helpful to provide an improved and more generalized interpretations.

Acknowledgements

In preparing this paper, the authors are immensely pleased to place on record profound gratitude and heartfelt thanks to Dr. Vinod Sen & Dr. Tulika Tripathi, faculty members of the Centre for Studies & Research in Economics, Central University of Gujarat, and Dr. Rekha Gupta, Central University of Allahabad for their valuable guidance. Special thanks are due to remarkable keynote lectures and conversation with Janine Rodgers (ILO), Prof. Gita Sen (Harvard), Prof. Indira Hirway (CDA), Dr. Swati Dutta (IHD) and Dr. Ishita Mukhopadhyay (University of Calcutta) took place during the thematic session of unpaid care work in 57th Annual Conference of The Indian Society of Labor Economics in 2015.

End Notes

1. UNRISD, United nation Research Institute for Social Development is an autonomous research institute within the United Nations that undertakes multidisciplinary research and policy analysis on the social dimensions of contemporary development issues.
2. UNSNA-2008, United Nation System of National Accounts, 2008 (2008 SNA) is a statistical framework that provides a comprehensive, consistent and flexible set of macroeconomic accounts for policymaking, analysis and research purposes.
3. Guide to Producing Statistics on Time Use: Measuring Paid and Unpaid Work, Department of Economic and Social Affairs, Statistics, United Nations, New York, 2005, is a special guideline of appropriate methodologies to carryout time use survey with respect to capture unpaid care work (direct & indirect).
4. In Full Time Diary Activity Matrix respondent have to provide complete activity they do from the start of the day and the every next activity they perform, with the details of starting and ending time of each activities they perform. Here in matrix the 24 hours of days are divided into interval time slot of 10, 15 or 30 minutes (United Nation).
5. In 24 hours Light Time Diary Activity Matrix, respondent report the time at which each care activity occurs based on an exhaustive list which may consists of a small number of broad activity or may contain a longer list of more detailed care activities and tasks (United Nation).

REFERENCES

- Anna, F., & Blackden, M. (2009). Unpaid care work, gender equality and poverty reduction. *Policy Brief(1)*. New York: UNDP. Reterieved from <http://www.undp.org/content/dam/undp/library/gender/Gender%20and%20Poverty%20Reduction/Unpaid%20care%20work%20English.pdf>
- Antonopoulos, R. (2009). The unpaid care work- Paid work connection. *Working Paper No.86*. Geneva: International Labor Organization. Reterieved from http://www.ilo.org/wcmsp5/groups/public/—dgreports/—integration/documents/publication/wcms_119142.pdf
- Armstrong, P., & Armstrong, H. (2001). *Thinking it through: Women, work and caring in the new millenium*. Halifax: Health Balance Research Program.
- Bakker, I., & Gill, S. (2003). Global politics of economy & social reproduction. In S. Gill & I. Bakker (Eds.), *Power, Production and Social Reproduction*. London and New York: Macmillan Palgrave.
- Beneria, L. (1979). Reproduction, production and the sexual division of labor. *Cambridge Journal of Economics*, 3(3).
- Beneria, L., & Sen, G. (1981). Accumulation, reproduction and women's role in economic development : Boserup revisited. *Journal of Women in Culture and Society*, 7(2).

- Budlender, D. (2007). A critical review of selected time use surveys. *Programm on Gender and Development, Paper No.2*. Geneva: UNRISD.
- Choudhary, N., Tripathy, A., & George, B. (2009). *Women's economic contribution through their unpaid household work: The case of India*. Nagpur, India: Evangelical Social Action Forum (ESAF) and HealthBridge. Retrieved from https://healthbridge.ca/images/uploads/library/India_summary_report_final.pdf
- Colman, R. (1998). The economic value of unpaid housework and child care in nova scotia. *Measuring Sustainable Development*. Halifax: GPI Atlantic.
- Commission, U. N. (1993). *System of national accounts 1993*. New York: United Nation Statistical Division.
- Economic Justice Report .(1997). Out of the shadow: Policy principles to recognize women's unpaid work. *Ecumenical Coalition for Economic Justice, 8*(3).
- England, P. (1992). *Comparable worth: Theories and evidence*. New York: Aldine.
- England, K. (2010). Home, work and the shifting geographies of care. *Ethic, Place and Environment, 13*(2).
- Fahmida, K., Khan, T.I., &Pervin, S. (2014). Estimating women contribution to the economy the case of Bangladesh. *A Summary of Discussion*. Dhaka: Centre For Policy Dialogue (CPD). Retrieved from <https://cpd.org.bd/wp-content/uploads/2014/10/Estimating-Women%E2%80%99s-Contribution-to-the-Economy-Study-Summary.pdf>
- Folbre, N. (2001). *The invisible heart: Economics and family values*. New York: New Press.
- Folbre, N. (2006). Measuring care: Gender, empowerment and the care economy. *Journal of Human Development, 7*(2).
- GOI. (2011). Employment and unemployment situation in India 2009-2010. *NSSO Report No.537 (66/10/1), NSSO 66th Round*. New Delhi: National Sample Survey Office, MOSPI.
- Hirway, I. (2005). Integrating unpaid work into development policy. *Unpaid Care Work and Economy: Gender, Poverty and Millenium Development Goals*. New York: Levy Economics Institute.
- Kabeer, N. (1999). Resource, agency, achievements: Reflections on the measurement of women's empowerment. *Development & Change, 30*.
- Kilbourne, B., England, P., Farkas, G., Beron, K., & Weir, D. (1994). Return to skills, compensating differentials and gender bias: Effects of occupational characteristics on the wages of white women and men. *American Journal of Sociology, 100*.
- Kuznets, S. (1941). *National income and its composition 1919-1938*. New York: National Bureau of Economic Research.
- Mitchell, M., & Katz, C. (2003). Special issues on 'life's work'- Social reproduction and the state. *Antipode, 35*(3).
- Razavi, S. (2007). The political and social economy of care in a development context: Conceptual issues, research question and policy options. *Gender and Development Programme Paper No.3*. Geneva: United Nations Research Institute for Social Development. Retrieved from [http://www.unrisd.org/80256B3C005BCCF9/\(httpAuxPages\)/2DBE6A93350A7783C12573240036D5A0/\\$file/Razavi-paper.pdf](http://www.unrisd.org/80256B3C005BCCF9/(httpAuxPages)/2DBE6A93350A7783C12573240036D5A0/$file/Razavi-paper.pdf)
- Rukmini, S. (2014, October14). Most Indian women engaged in unpaid work. *The Hindu*. Retrieved from <https://www.thehindu.com/news/national/most-indian-women-engaged-in-unpaid-housework/article6498326.ece>
- Schiess, U., & SchonBuhlmann, J. (2004). *Satellite Account House-hold Production. Pilot Project for Switzerland* . Neuchatel: Federal Statistical Office.
- Shrestha, K., Efromson, D., FitzGerald, S., & Jones, L.(Eds.). (2008). *A study on economic valuation of women's unpaid work in Kathmandu valley*. Kathmandu, Nepal: Resource Centre for Primary Health Care

- (RECPHEC) & Healthbridge.
- Steinberg, R. (1990). Social construction of skill: Gender power and comparable worth. *Journal of Work and Occupation, 17*(3).
- Swaminathan, P. (2009). Outside the realm of protective labor legislation: Saga of unpaid labor in India. *Economic & Political Weekly, 44*(44).
- Swaminathan, P. (2012). *Women and work. readings of the economy, polity and society*. Telangana: Orient Blackswan.
- Thomas, J. J. (2013). A woman shaped gap in the Indian workforce. *The Hindu*. Retrieved from <http://www.thehindu.com/opinion/op-ed/a-womanshaped-gap-in-the-indian-workforce/article4287620.ece>
- Thompson, L., & Walker, A. (1995). The place of feminism in family studies. *Journal of Marriage & Family, 57*(4).
- United Nation et al. (2008). *System of national accounts*. Washington, DC: Inter-Secretariat Working Group on National Accounts.
- UNRISD. (2010). Why care matters for social development. *Research & Policy Brief*(9). Geneva: UNRISD.
- UNRISD. (2010a). *What do time use studies tells us about unpaid care work? Evidence from seven countries*. Geneva: UNRISD.
- UNRISD. (2010b). *Gender, poverty and inequality: The role of markets, states and households*. Geneva: UNRISD.
- Varshney, S. (2011). Role of women in informal sector. *Economic Affairs, 52*(2).