# Accounting for Unpaid Care Work in India-2019

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## Introduction

The economic lifecycle can explain age's crucial role in economic behavior. It is a fundamental feature of all contemporary societies, characterized by periods at the beginning and end of one's life where consumption exceeds production and a period in the middle where production exceeds consumption (United Nations, 2013). The economic flows that happen between the ages in surplus and deficit through family, markets, and government is what keeps them sustainable (Samuelson, 1958; Diamond, 1965; Willis, 1988; Lee, 1994; Lee & Mason, 2011; United Nations, 2013). Like age, gender is one other important component of a generational economy. While using NTA to understand the economic flows between age groups and generations does help, it also fails to separate this for males and females. It is methodologically feasible and correct to apply the NTA framework separately for men and women. However, there is still a major insufficiency. The economic flows generated by household production are missing in the NTA resource reallocation framework and since women are more likely to contribute to household production, it will systematically understate the economic contribution of women thus leading to the false conclusion that men's economic contribution to the economy is significantly higher than the women (Fürnkranz-Prskawetz et al., 2017; Jiménez-Fontana, 2015; United Nations, 2013).

In the 'Care Work and Care Jobs for the Future of Decent Work' report, 2018, estimates from 64 countries show that 16.4 billion hours per day were spent in unpaid care work. Women contributed to over three-fourths (76.2%) of this total. This unpaid labor is equivalent to 2.0 billion people working full-time (40 hours per week) without pay, representing 66.9% of the world's working-age population. In the same report, from data from 53 countries, it was found that if unpaid care work were assigned a monetary value based on the hourly minimum wage using the opportunity cost approach, it would equate to 9.0% of global GDP (Addati et al., 2018).The Indian System of National Accounts (SNA), like other countries, does not include the value of home-produced services in the national accounts production boundary. Especially in the case of an economy like India, where the labor force participation rate of women remains low and most of their work is invisible and unaccounted for, accounting for those home-produced services and creating extended SNA accounts hold extreme significance (Fletcher , 2017; Singh and Pattanaik, 2020).The aim of this article is to estimate the 'unpaid care work' done by men and women both in time units and then monetize it to compute the economic value of this 'unpaid care work.'

Household satellite accounts were published in the early 2000s to get unpaid household activities into the boundary of national accounts. However, an approach in research introducing age and generational transfers into household production, thus extending the NTA framework and Household Satellite Accounts, was pioneered by Phananiramai (2011) by estimating time transfers for Thailand. This was followed by a comprehensive methodology by Gretchen Donehower (2018; earliest version in 2011), incorporating gender and a satellite account for

time inputs for productive activities not already accounted for in National Income and Product Accounts. These estimations are called the National Time Transfer Accounts.

**Data and Methodology**

Defining Unpaid Care Work: "*Unpaid care work are time inputs those for which the value of the time is never paid to anyone and is not included in national accounts measures such as Gross Domestic Product or Gross National Income"* (Donehower, 2018)

In the study, unpaid care work is classified as direct and indirect care work. Direct care work includes- cooking, purchasing, cleaning, laundry, household management, and other general household activities, and travel for these activities. Indirect care work includes caring for children, the elderly, and other dependent household members, as well as providing services to other households and communities through volunteering and travel to accomplish the above-mentioned tasks.

Data Sources used for the study are the Time Use Survey 2019 and the Periodic Labour Force Survey 2019-20. The methodology followed in the creation of NTTA in this study was developed by Gretchen Donehower.

The initial step is to identify available time-use surveys. The latest time-use survey available for India was in 2019. Then we make sure that 24 hours were accounted for each respondent. The responses that had accounted for less than 24 hours or close to 24 hours were removed. The time-use survey had information on simultaneous activities being performed during a specified time period. The current methodology includes only the information on principal activity and no information on multitasking, overlapping activities, or secondary activities.

From the recorded responses in time use survey, we identify the activities that are not accounted for in the National Income but would be included if they were considered as a paid activity. So, applying the "third-party criterion," the best guess is made as to which activity can be outsourced and what cannot be. These are the NTTA activities/unpaid care work. The study also includes estimates of time spent in non-NTTA activities, such as education, sleep, and, most importantly, paid work. The variable on time spent in paid work also considers work-related activities like job searching, work-related socializing, and commuting.

Next step is to estimate production age schedules. Once the unpaid care work activities are identified, the NTTA age schedules for each production activity identified is calculated as survey-weighted mean time spent on each activity group by age and gender. For people who do not perform a particular activity, the value 'zero' is used while calculating mean time. Then, as we do not have a direct observation on the consumption of time, we use assumptions and thus allocate the time in production to individuals within a household and estimate the consumption age profiles. For general household activities, like cooking, purchasing, cleaning, laundry, household management, and other general household activities, and travel for these activities; time is divided evenly between household members. This is from the understanding that consumption of these activities is uniform across the household. For care activities, the estimation of time consumption is different. For child care, the consumers are individuals aged less than 18 years old and for adult care the consumers are individuals aged 18 and more. Thus, here we regress the production on the number of individuals of each group. Estimated age profiles of net time transfers for men and women are then created. The assumption when calculating transfers is that since there is no way to save or store time, the time produced is

consumed instantly. Hence the net transfer is the difference between production and consumption. For the direct unpaid care works, the total amount of time produced is converted as the total outflow and the total amount of time consumed as the total inflow. However, this is not the case for indirect care activities like cooking cleaning etc.. An adjustment needs to be made to account for the fact that a portion of produced time is consumed by the produced itself, and that portion is not a transfer.

After age profiles of production, consumption, and net transfers are created, smoothing and adjustments are made to them to finally ensure that the aggregate production of unpaid care work is equal to the consumption of unpaid care work.

The final stage of the construction of NTTA is monetizing the time spent in household production. Since data availability will be an issue, we choose to go for input pricing where the labour inputs in NTTA will be valued. The time will be valued by the wage that someone would have earned doing that activity. The labour inputs are valued using the *specialist replacement method* where we ask ***–"if the person had to pay someone else to perform each task, how much would it cost?"*** **(**Donehower, 2019 ; Ried, 1934). The wages appropriate for each NTTA activity is identified from the Periodic Labour Force Survey (PLFS 2019-2020. Hourly wages are obtained from PLFS and then converted to annual wages. The age profiles in terms of time were in hours per week terms, hence they are multiplied by 52 to make them annual profiles. These are then multiplied by hourly wages to create the age profiles of production, consumption and transfer of unpaid are work in monetary terms.

**Result**

Results point out that men dominate in paid work, whereas women dominate in unpaid care work, whereas leisure and education seem to show very little gender variation in time use. We see that there is huge gender variation in the production age profiles of unpaid care work. Since the age of 6 years (since when information is available in the time use survey), the curve for males never goes above the curve for females. A female aged 15 spends an average of 11 hours per week on unpaid care work, which peaks at around 52 hours a week by age 27. At the same time, the maximum time men spend on unpaid care activities never goes above 6.5 hours a week. At age 15, the men spend only 2 hours per week on unpaid care activities, and then it peaks at age 22 with only 6.5 hours spent per week. There was a rise in time spent by males at around age 58, reaching the same peak of around 6.5 hours per week at age 66. This second peak is not visible in the case of women. The peaks in early ages among both men and women are due to the investment of time in child care.

The total time spent on indirect care is more than direct care for all ages. The total time spent on unpaid work peaks from around 25 to 40 years of age, indicating that those are the ages where time spent on direct care and the indirect care activities are the highest. The similarity between the direct and indirect care curves is that they peak in early adulthood, possibly indicating the burden of child-rearing years. As age decreases, all three graphs gradually decline, indicating that the time spent on unpaid care work decreases as age increases.

Specifically looking at indirect care, we observe the magnitude of gender specialisation is quite huge. The maximum hours men of any age group spend on indirect care are 4.8 hours per week, and this peak occurs at the age of 65. Generally, men spent approximately 4 hours per week between 47 and 76 years. During the early adulthood years of 20 to 40 years, the average time

spent on indirect care for men is 3.26 hours per week. At the same time, the significant gender difference lies in the fact that women in their prime early adulthood, rather than those in retirement, are the primary contributors to indirect care work. This peak also exists at a colossal magnitude. At age 35, women spend an average of 42.79 hours per week on indirect work, equivalent to time spent on a regular full-time job.

The time males spend on individual indirect care activities does not go beyond 1.5 hours a week. Of all the categories of indirect unpaid care work, men spent the majority of their time in do-it-yourself activities' of improving, maintaining, and repairing own dwelling, personal and household goods, vehicles, pet care, and related activities. Purchase is another major indirect unpaid care activity that men contribute to. Other than cooking, laundry, and purchase where an initial peak is observed in early adulthood ages, all the other activities show a gradual increase in time spent on indirect unpaid care activities till they reach the early retirement ages, mostly post-60 where there is a peak observed indicating that in general men post-retirement indulge themselves more in indirect care activities of the household.

The case of women is different. Cooking is the indirect care activity that takes up the majority of their time. During the prime ages of 30 to 40 women spent approximately 28 hours cooking. All the other activity takes less than 10 hours per week of women's time. However, all the curves peak during early adulthood, at the ages of 20 to 40, and then declines there on. Cleaning, lawn and garden care, and laundry are other prominent indirect care activities women spend time on, in the household. Of all the different categories of indirect care activities considered, purchase and travel seem to take up the least time from women.

Direct unpaid care components include child care, adult care (dependent and non-dependent), and other unpaid caregiving services for children, adults and others inside and outside one's household. The hours spent on direct care is higher for women than men. Time spent in direct care increases rapidly around age 20 and peaks at age 27 by spending around 11 hours per week. From age 27, it then declines steadily. The next rise in the curve for time spent in total direct care for women is observed since age 46, reaching the next peak at age 59. For men, the time spent on direct care activities steadily increases in their early 20s and then peaks at 33 years of age. The other peak, which appears in post-retirement for men, also happens a little later than that of women at 65. One significant observation is that the humungous gender difference in time spent on direct care happens between the ages of 20 and 40. But in the early ages till 18 and late ages of 75 and above, the gender difference in time spent on direct care is significantly less.

All the gender differences between men and women in time spent providing direct care stem from time spent on child and adult care activities. Hence, graphs for child care and adult care follow the same shape and exhibit the exact characteristics of the curves of total direct care for both men and women. The contribution of other care (which includes travel for caregiving services for individuals, community and organization-based volunteering) to direct care activities is significantly less among all genders, and although even though the gender variation is much less in this category, men do have a slightly upper hand in 'other care' in across all ages.

Infants (ages 0 and 1) are the obvious highest consumers of unpaid care work. For both sexes, the consumption of care decreases rapidly till age ten and then holds a steady level. There is a slight hump seen from around age 40 and then slowly increasing since then to older ages. There

is no gender gap observed in consumption of unpaid care work. Now specifically, looking into the consumption of direct and indirect care again, there are no gender differentials observed in the consumption of both direct care and indirect care. For both males and females, while children below 10 years are the primary consumers of direct care with around 10 hours per week for both males and females. During the ages of 20 to 65, there is almost no consumption of direct care by both genders. From age 65 there is again an increase in hours of direct care consumed for both genders. Now, in the case of indirect care, both men and women have increased till around the age of 20 and then decrease and stabilize in adulthood. There is a modest increase in indirect care consumption in the later years for both genders.

Time transfers, the non-market counterparts of Life Cycle Deficits in the NTA dataset, are the difference between the consumption age profiles and production age profiles of unpaid care work. Individuals below age 20 and above age 65 are net receivers of time transfers, and working-age individuals are the net givers of time transfers. The gender specialization observed here is very prominent. Since women produce unpaid care work more than men of all ages and with no gender specialization seen in the consumption of unpaid care work at all ages, women are net givers of unpaid care work, and men are net beneficiaries of unpaid care work.

NTTA production, consumption and net time transfer age profiles in monetary terms:

To account for the value of unpaid care work activities produced in homes, following the methodology proposed by Donehower (2019), by applying the input pricing approach, we find out the value of unpaid care work by assigning wages to different activities. Figure 12, Figure 13, and Figure 14 give the age profiles of various activities in monetary terms, rescaled using per capita GDP (average annual value/per capita GDP). Children at age 0 consume unpaid care work to level equivalent to 250 percent of per capita GDP. The prime contributors to household economy are women and at all ages they are the net givers of unpaid care work.

**Discussion**

The paper accounts for the unpaid care work in India in time units and monetary terms for the year 2019. Women, being the major contributors to these activities, accounting for them and their work, will give visibility and value to time they spent on productive activities and thus their contributions to the Indian economy. As Reid (1934) mentions, the reason that unpaid care work gained less attention is that households are not money-making institutions. But to bring about a change in this perspective and to focus specifically through policies on unpaid care work, it is first important to account for it.

The earlier National Time Transfer Accounts for India were created in 1999. This paper accounts for the unpaid care work for 2019. There is a significant gender differential observed in the age-specific profiles of unpaid care work production. Women specialize in the production of unpaid care work while men specialize in market work production. Now, within unpaid care activities, men specialize in ‘do-it-yourself activities’ of improving, maintaining, and repairing when contributing to unpaid care work in households, and women tend to specialize in cooking and cleaning.

While the results are descriptive, the scope this study puts forward is huge. Accounting for unpaid care work for 2019 is merely the first step to initiating much-focused and inclusive interventions to approach unpaid care work production and the individuals involved in it. With

revisions in the System of National Accounts, the importance of accounting of the unpaid household services, and thus creating extended accounts are paramount.

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