Accounting for Unpaid Care Work in India: National Time Transfer Accounts Analysis

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ABSTRACT
Economic flows from unpaid care work/home-produced services fall outside the national accounts production boundary, systematically understating women's economic contributions, as they predominantly contribute to household production. This study accounts for unpaid care workflows for men and women in time and monetary units, estimating its economic value in India. Using the National Time Transfer Accounts (NTTA) methodology, data from Time Use Survey 2019, and Periodic Labour Force Survey 2019-2020, we estimate the profiles of production, consumption, and transfers of unpaid care work across all ages. A significant gender differential was observed in the age profiles of unpaid care workers. Women specialize in unpaid care work production, while men specialize in paid work. Women are net givers of unpaid care work from age 16 to age 79, while men are net beneficiaries across all ages. Women of reproductive age are the prime givers, and young children are the prime receivers of unpaid care. The monetary profiles of these activities mirror the time-based profiles. The study thus accounts for the unequal unpaid care burden in India on women from a generational economy perspective using NTTA, highlighting the importance of addressing this for achieving generational justice and gender equity.

Keywords: Unpaid care work; time use; gender; National Time Transfer Accounts; intergenerational transfers; generational economy

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Understanding the generational economy

Introduction

Nations worldwide are undergoing demographic transitions, resulting in changes in the age structure of their populations. Changing age structure, in turn, affects the country's economic, social, political, and developmental scenarios and determines its possible economic opportunities and challenges (United Nations, 2013). Age is one of the most critical determinants of an individual's economic behaviour, and it can help deduce much about their life's economic, demographic, and social aspects (Donehower, 2023; Istenič et al., 2019).

The economic lifecycle explains age's crucial role in economic behaviour. The economic lifecycle 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). This creates ages with lifecycle deficits when their consumption is greater than production and ages with lifecycle surpluses when their production is greater than consumption. The economic flows between the ages in surplus and deficit through family, markets, and government keep them sustainable (Diamond, 1965; Lee & Mason, 2011; Willis, 1988; Samuelson, 1958; United Nations, 2013). This system of *"the social institutions and economic mechanisms used by each generation or age group to produce, consume, share and save resources"* *(*(Lee and Mason, 2011, p. 4) constitutes the 'Generational economy'. Thus, realizing the ability of age to reveal colossal information about a person's economic behaviour and the lack of information on age and generational dimension in the System of National Accounts called for the development of the National Transfer Accounts (NTA) framework (Donehower, 2023; United Nations, 2013). The *"National Transfer Accounts constitute a complete, systematic and coherent accounting of economic flows from one age group or generation to another, typically for a national population in a given calendar year"-* (United Nations, 2013, p.vi).

Like age, gender is another vital component of a generational economy. While using NTA to understand the economic flows between age groups and generations does help, it fails to separate this for males and females. This is an issue because men and women differ as providers and receivers of generational support. While it is methodologically feasible and correct to apply the NTA framework separately for men and women, provided the data required for the same is available, it will still face a major insufficiency. The economic flows generated by household production are missing in the NTA resource reallocation framework, and since women are much 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 (Vargha et al., 2016; Jiménez-Fontana, 2015; United Nations, 2013). Reid (1934), in her book 'Economics of Household Production,' points out that *"we tend to be especially blind to things which are close at hand."* She argued that the oversight of household production is because they are not profit-oriented. As a society that places greater emphasis on money, household activities are increasingly overlooked. It was thus essential to acknowledge this gap and account for the economic flows from household production that were not already included in the national accounts and NTA framework.

Background

The System of National Accounts includes flows from the production and consumption of market goods and services and the production and consumption of home-produced goods. What is missing from the System of National Accounts is the value of flows created by the production and consumption of home-produced services (Donehower, 2023). The different terms used to indicate this in literature are – household production, unpaid care work, unpaid household services, etc. Reid (1934), in her book "Economics of Household Production," defines household production as "*those unpaid activities which are carried on, by and for the members, which activities might be replaced by market goods, or paid services, if circumstances such as income, market conditions, and personal inclinations permit the service being delegated to someone outside the household group*" (p. 11). This paper uses the term 'unpaid care work' to indicate that part of household production is not already included in the national accounts and NTA framework. This will include activities like cooking, cleaning, household care and maintenance, management, care for children, the elderly, and other dependent household members, and services to other households and communities through volunteering.

The Overlapping Generations model (Samuelson, 1958) put forth the idea of interaction between multiple generations that overlap in time and how their economic behaviors are influenced by their stage of life. It opened up the way to further discussions on generational economics and, thus, the development of the National Transfer Accounts framework. Gary Becker's Household Production Model (1965) proposed that households combine time and market goods to produce goods and services for their own consumption, hence activities like cooking, cleaning, etc, that are not in the conventional production boundary of SNA as commodities. This theory was critical in recognizing household production as an economic activity. Marxist feminists like Mariarosa Dalla Costa and Selma James in their paper- *The Power of Women and the Subversion of the Community* (1972), and Silvia Federici, in her pamphlet *Wages Against Housework* (1975), made some crucial contributions towards the

development of Social Reproduction Theory which urges to acknowledge the role of unpaid domestic labour by women in sustaining the capitalist system, the economy and the society and the need to compensate for this unpaid labour. The feminist economist perspectives brought to light by Marilyn Waring's *If Women Counted: A new feminist economics* (1988) and *Counting for Nothing: What men value and What Women Are Worth* (1999) played a crucial role in pointing out that conventional measures like GDP do not account for unpaid labour, the consequences of this leading to invisibility to individuals engaged in such activities primarily women and advocated for new metrics that account for unpaid labour.

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), the 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.

The National Time Transfer Accounts gives the cross-sectional age profiles, i.e., the average by age and gender, of household production, consumption, and net time transfers. Net time transfers are obtained from the difference between production and consumption for each age and gender thus concluding whether they are net beneficiaries or net givers of household products and services (Vargha et al., 2016).

Need for the study

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 labour 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).

In India, only 22 percent of women participate in the workforce, with 70 percent involved in informal agricultural activities that offer little to no economic compensation, social recognition, or access to social protection (Mehrotra et al., 2014). Results from a study showed that 60.9 percent of India's women population was engaged in unpaid

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domestic work in 2011–12. It was 48.8 percent in the years 1993–94, and this increase is apparent among both rural and urban women involved in unpaid domestic work (Singh & Pattanaik, 2020). The latest PLFS 2023-24 report shows that the female Labour Force Participation Rate (LFPR) in India has increased to 41.7%, marking an improvement over the previous year (MoSPI, 2024a). However, this remains below the global average, highlighting persistent gender disparities in workforce participation. This underscores the urgent need for policies that address the redistribution of unpaid care work and create pathways for formal workforce inclusion.

As mentioned earlier, women perform the majority of the unpaid care work universally, whereas men's contribution to total unpaid care work does not even account for 25 percent of total unpaid care work. Globally, when women spent 265 minutes per day in unpaid care work, men spent only 83 minutes per day doing the same. To understand this huge gender gap, when the time spent per day is converted to the average number of working days in a year, considering 8 hour-work days, it was observed that women dedicated 201 working days to unpaid work and men, on the other hand, spent only 63 working days (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 labour 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 & Pattanaik, 2020). The draft SNA 2025 acknowledges the importance of extended accounts. *"Extended accounts present concepts that expand or modify the standard boundaries of production, consumption, investment, income, assets, and wealth, and indicators that concern phenomena beyond these boundaries. Measuring these concepts could involve the use of experimental methodologies"* (United Nations Statistics Division, (n.d.) para 38.10).

Objective

The aim of this article is to account for economic flows from unpaid care work for men and women in time and monetary units and thus compute the economic value of unpaid care work in India.

Methods and Materials

Defining Unpaid Care Work: "*Unpaid care work is 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. Indirect care work includes cooking, purchasing, cleaning, laundry, household management, and other general household activities, and travel for these activities. Direct 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 direct care activities.

Data Sources used for the study are the Time Use Survey 2019 (Ministry of Statistics and Programme Implementation 2020) and the Periodic Labour Force Survey 2019-20 (Ministry of Statistics and Programme Implementation 2021). The methodology followed in the creation of NTTA in this study was developed by Gretchen Donehower. The first draft of this methodology, released in 2011, gave the steps to estimate gender-specific NTA age profiles and add a set of satellite accounts based on time spent in productive activities outside the market economy.

The initial step to account for unpaid care work and create the National Time Transfer Accounts, 2019 for India, is identifying available time-use surveys. The latest time-use survey available for India was in 2019. The initial step was to 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.

The time-use survey uses the International Classification of Activities for Time Use Statistics (ICATUS) 2016 (United Nations Statistics Division, 2017) 3-digit codes to record the activities of the household members. Now, from these recorded responses, we identify the activities that are not accounted for in the National Income but would be included if they were 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 identified unpaid care work activities are- Cleaning, Laundry, Cooking, Household maintenance and repair, Household Management, Petcare, Purchasing goods and services, Childcare, Care for adults and elders,

Volunteering or other forms of care for community members, and Travel related to all the above-mentioned activities.

For comparative purposes, 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.

The next step is to estimate production age schedules. Once the Unpaid care work activities are identified, the estimation of the production side of the account is straightforward. 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 older. Thus, here, we regress the production on the number of individuals in each group.

Once the production and consumption age profiles of unpaid care work are estimated, age profiles of net time transfers for men and women are 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 direct unpaid care works, the total amount of time produced is converted to 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.

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The final stage of the construction of NTTA is monetising the time spent in household production. National income is calculated using 'output pricing'. That is, it includes the product's value when it is purchased in the market. If the same principle is to be followed in NTTA for pricing household production, we should have considered the value of what is produced during time spent in home production. However, since data availability will be an issue, we choose to go for 'input pricing instead,' 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 2018 ; 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.

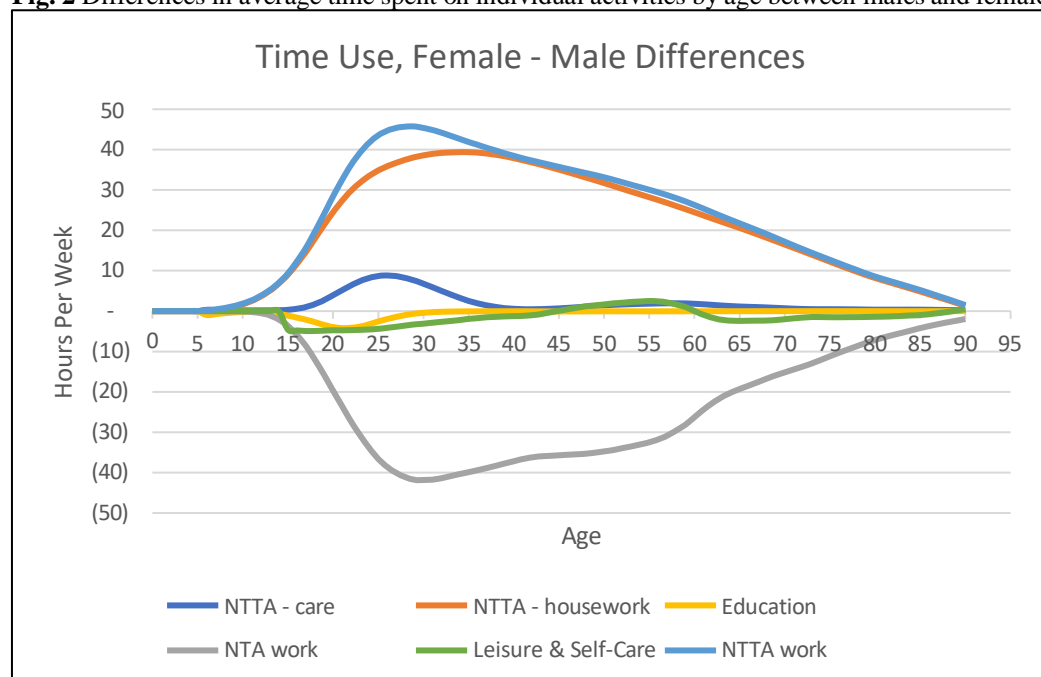Microsoft Excel and STATA version 15 were used for all the analysis in this article.

Results

Fig. 1 Average time spent on individual activities by age, both sexes, India
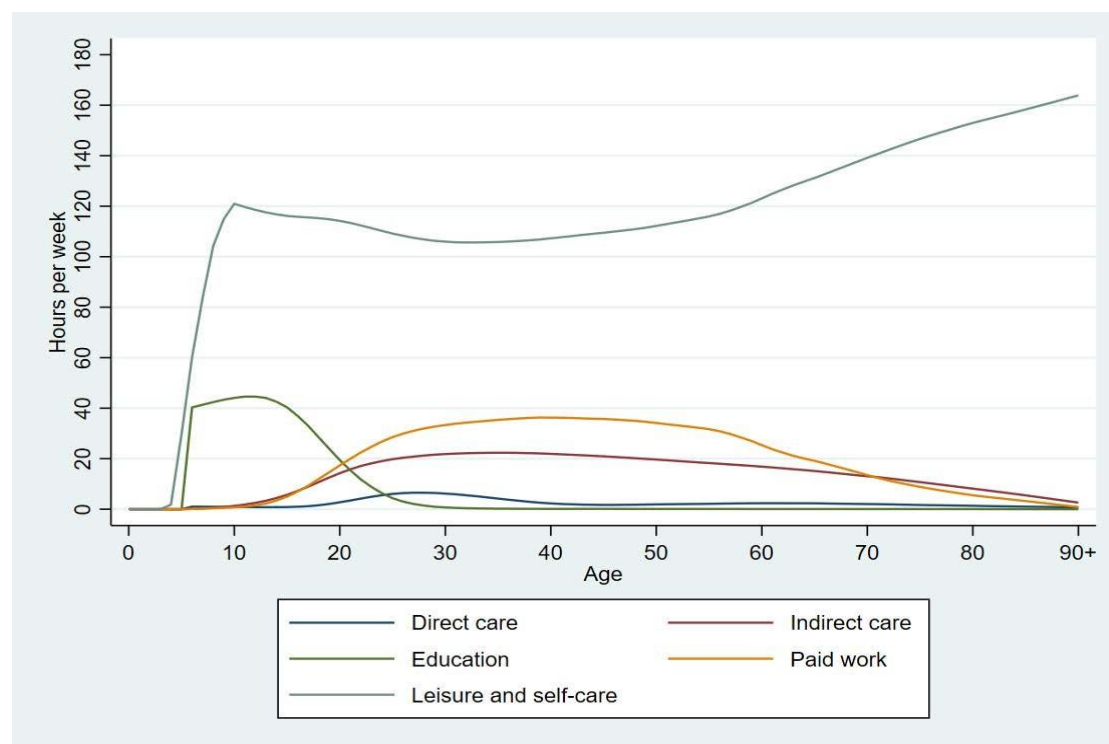
Source: Author's calculation from Time Use Survey 2019.

Fig. 2 Differences in average time spent on individual activities by age between males and females, India
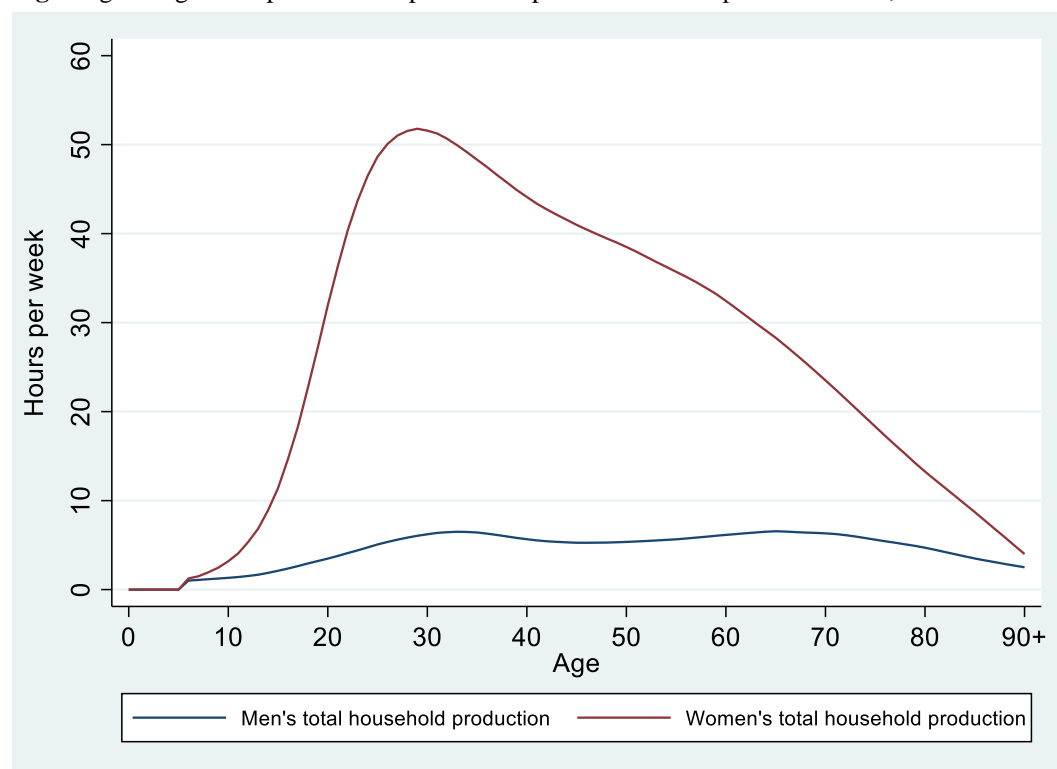

Source: Author's calculation from Time Use Survey 2019.

Figure 1 gives the average time individuals spend on different activities, and Figure 2 gives the difference in time spent between men and women in those activities. The difference is calculated as time spent by men subtracted from time spent by women. Thus, we see that women dominate or rather specialize in the activities in Figure 2 with curves formed in the upper section, above 0 on the Y axis, and men dominate those curves below 0. Thus, as expected, the figures 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.

The third-party criterion (Ried 1934) is applied to identify the activities that could be included in national income if they were not unpaid and could pay someone to perform the activity and receive its benefits. The current study uses the concept of 'unpaid work', as defined by Donehower (2018), where unpaid care includes direct care of individuals and indirect care through housework.

Fig. 3 Age and gender-specific time spent on the production of 'Unpaid care work', India
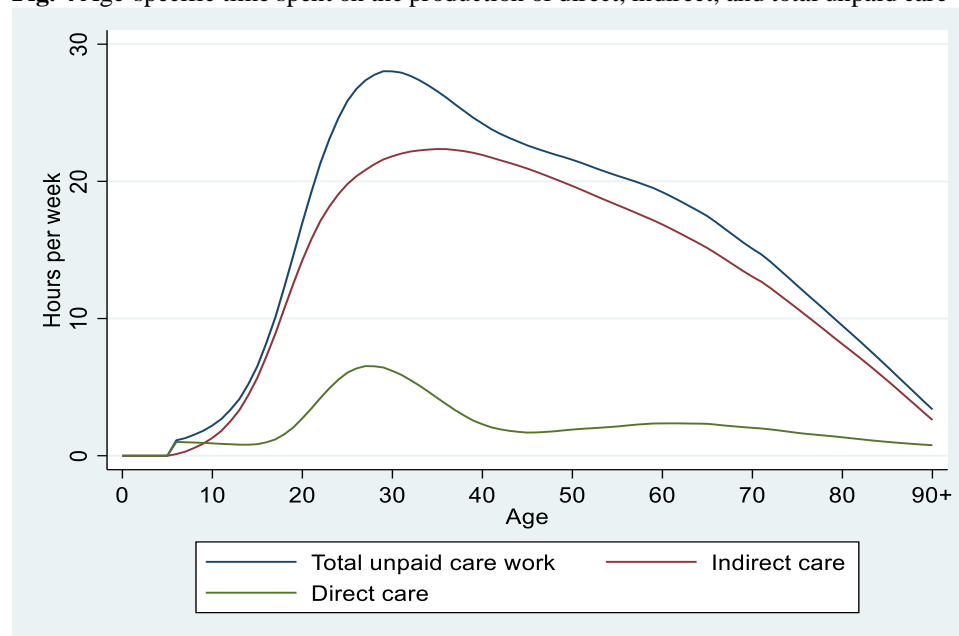

Source: Author's calculation from Time Use Survey 2019.

Figure 3 gives the average time spent on the production of total unpaid care activities at each age and separately by males and females at each age. We see the huge gender variation in the production age profiles of unpaid care work. Since the age of 6 years (information is available in the time use survey for respondents aged six years and above), 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 could mean that some men, post-retirement, diverted their time into unpaid care activities. However, 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.

Time spent on different components of unpaid care work is shown in Figure 4. 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 supporting activities of cooking, cleaning, and other household management activities are the highest. The similarity between the direct and indirect

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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.

Fig. 4 Age-specific time spent on the production of direct, indirect, and total unpaid care work, India

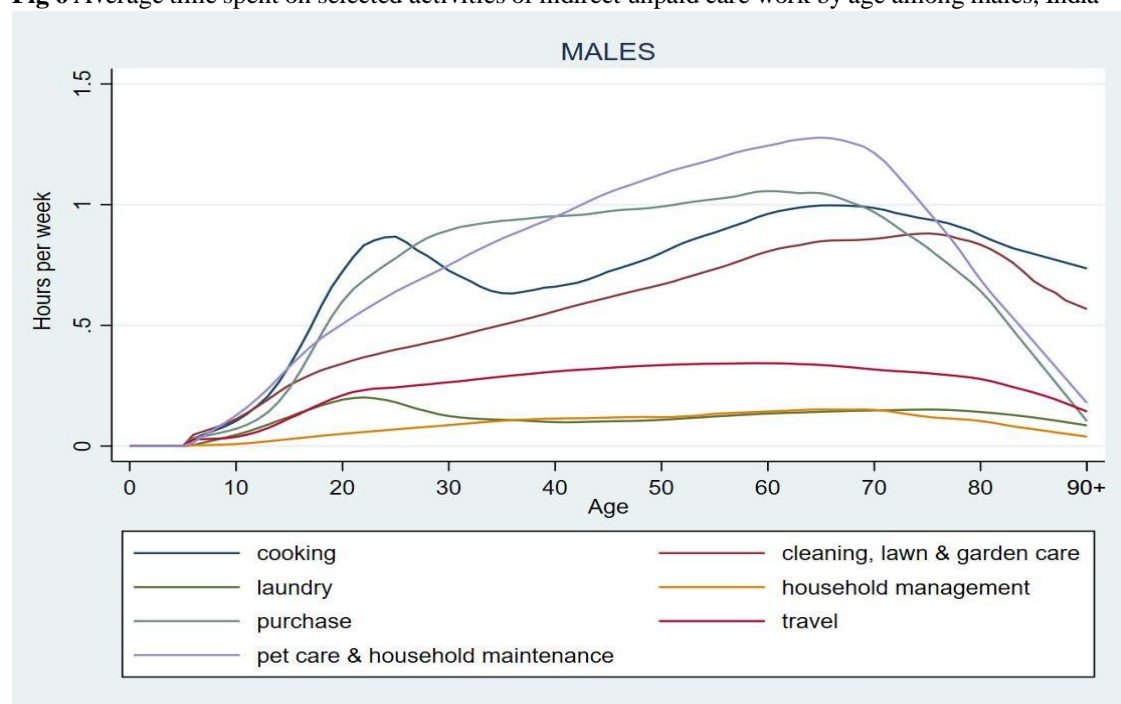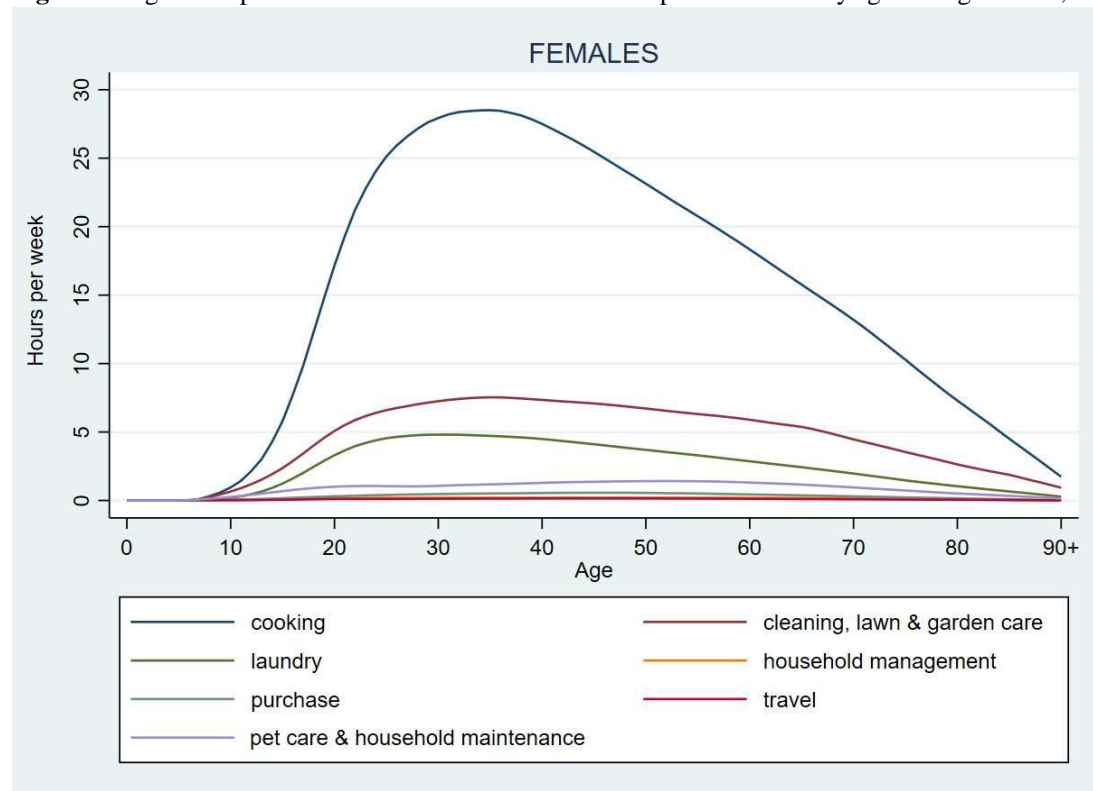Source: Author's calculation from Time Use Survey 2019.

Fig. 5 Age and gender-specific time spent on the production of indirect unpaid care work, India

Source: Author's calculation from Time Use Survey 2019.

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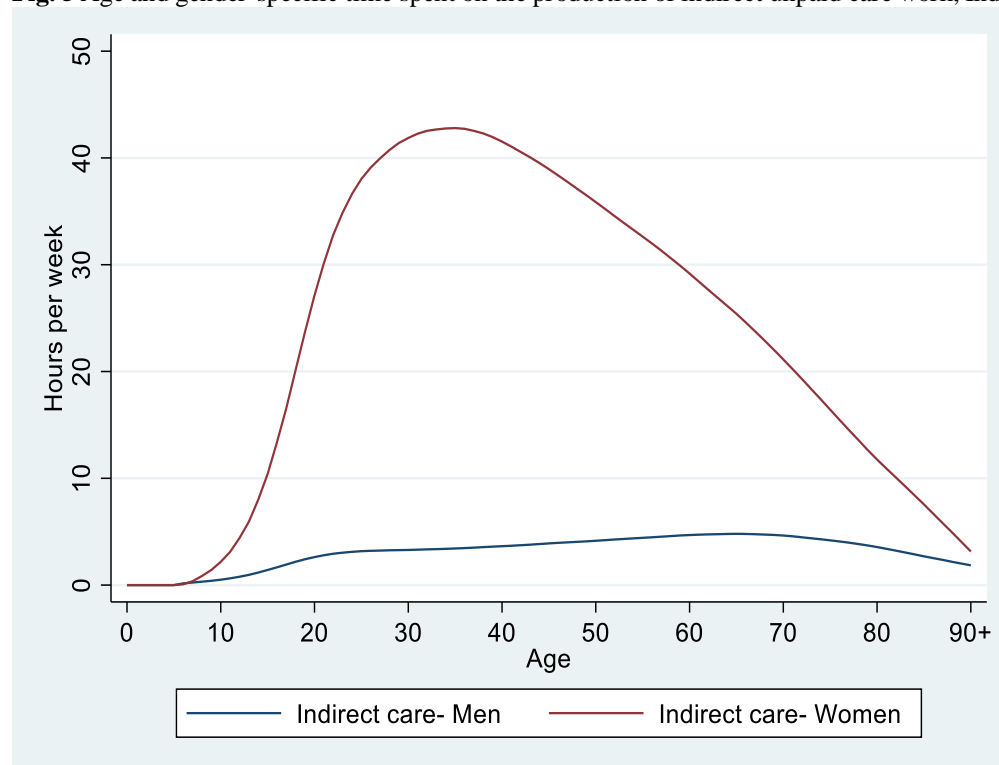
Specifically looking at indirect care, we observe that the magnitude of gender specialisation is quite huge. Figure 5 points out that the maximum hours men of any age group spend on indirect care are 4.8 hours per week, and this peak occurs at the age of 65. Generally, men spent approximately 4 hours 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, significant gender difference is observed when we note 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.

Fig 6 Average time spent on selected activities of indirect unpaid care work by age among males, India

Source: Author's calculation from Time Use Survey 2019.

Fig. 7 Average time spent on selected activities of indirect unpaid care work by age among females, India
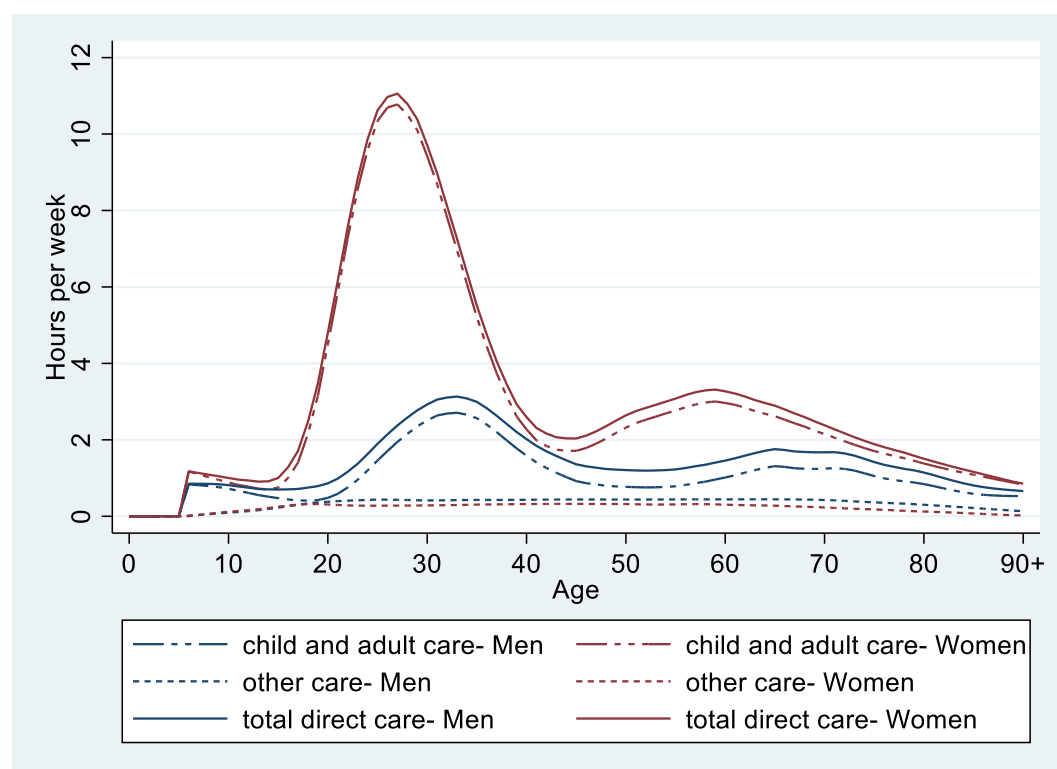

Source: Author's calculation from Time Use Survey 2019.

Figure 6 and Figure 7 show the hours per week spent by males and females in various categories of indirect care work, respectively. The time males spend on individual indirect care activities does not go beyond 1.5 hours a week. In early adulthood, ages between 15 and 35, there is a peak observed for activities of cooking, laundry, purchasing, and travel. Of all the categories of indirect unpaid care work, men spent the majority of their time on household maintenance and pet care. It includes the '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. In all ages, the least amount of time is spent on household management. Laundry also takes up very little of men's time. 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. However, the shape of the curve for purchase, travel, and household management remains steady from the late 20s to the late 60s and then declines thereafter.

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 decline. Cleaning, lawn and garden care, and laundry are other prominent indirect care activities women spend time on. Of all the categories of indirect care activities considered, purchase and travel seem to take up the least time from women.

Fig. 8 Age and gender-specific time spent on various direct care work, India

Source: Author's calculation from Time Use Survey 2019.

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. From Figure 8, we see that 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 is

there 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. The curves also almost meet between the late 30 and early 40 years.

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.

Fig. 9 Age- and gender-specific consumption of unpaid care work, India
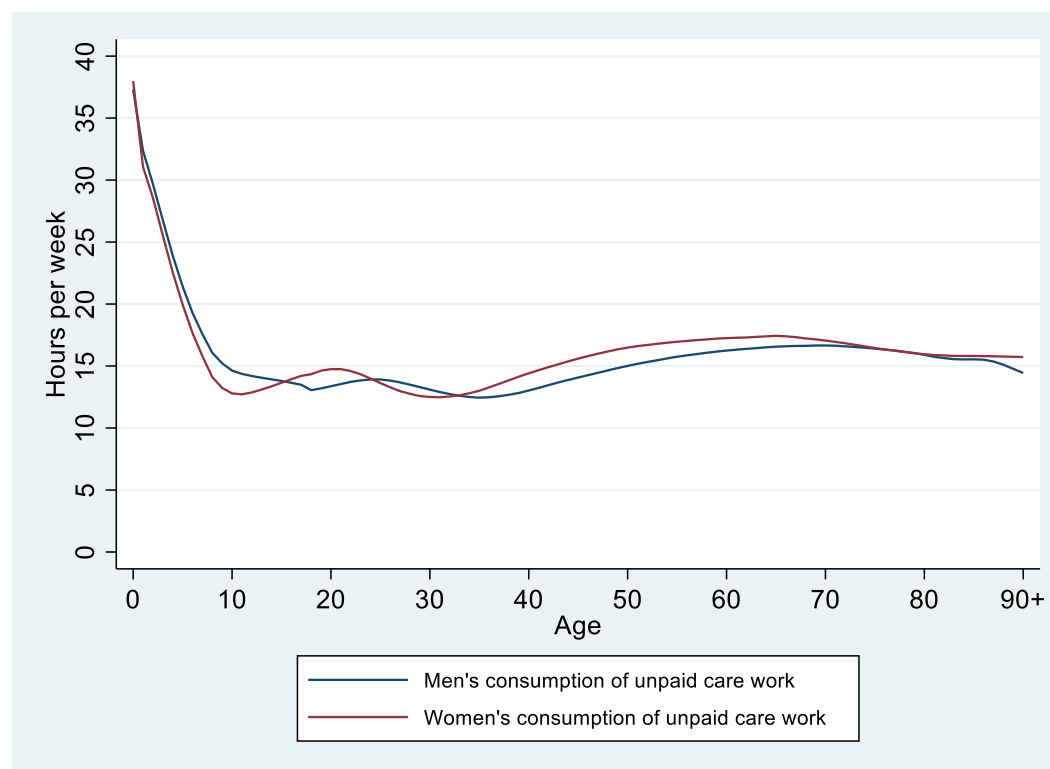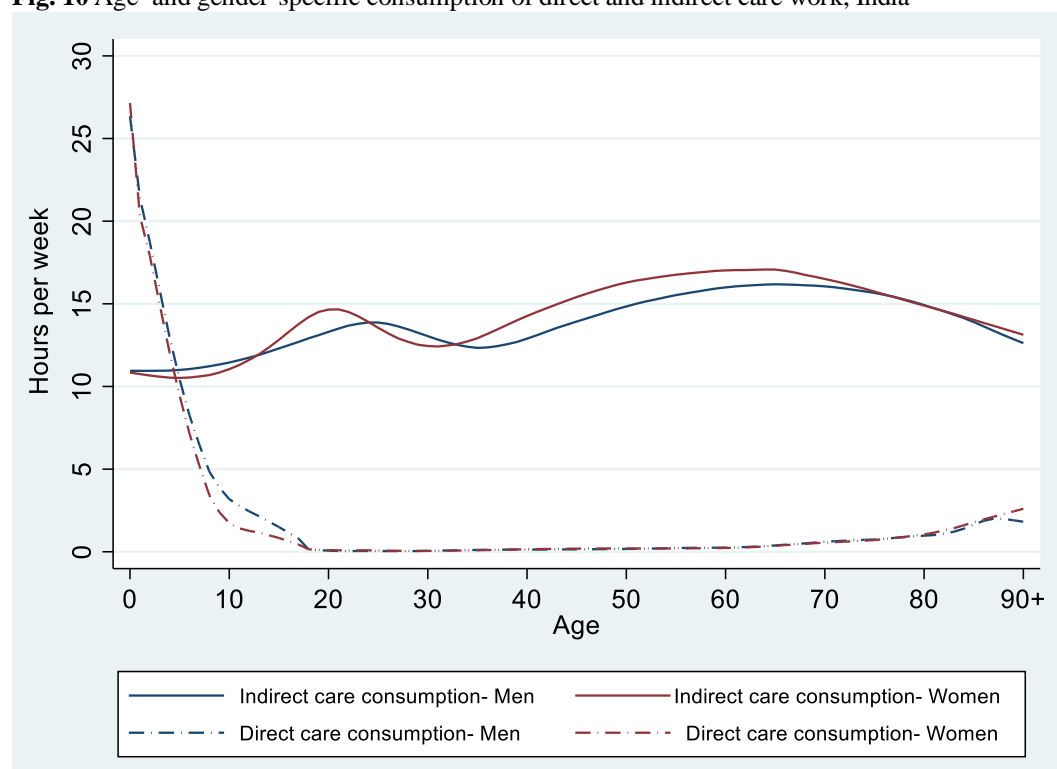

Source: Author's calculation from Time Use Survey 2019.

Figure 9 shows that 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. No gender gap was observed in the 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. This is shown in Figure 10. 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.

Fig. 10 Age- and gender-specific consumption of direct and indirect care work, India

Source: Author's calculation from Time Use Survey 2019.

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Fig. 11 Net time transfers of unpaid care work by age and gender in hours per week
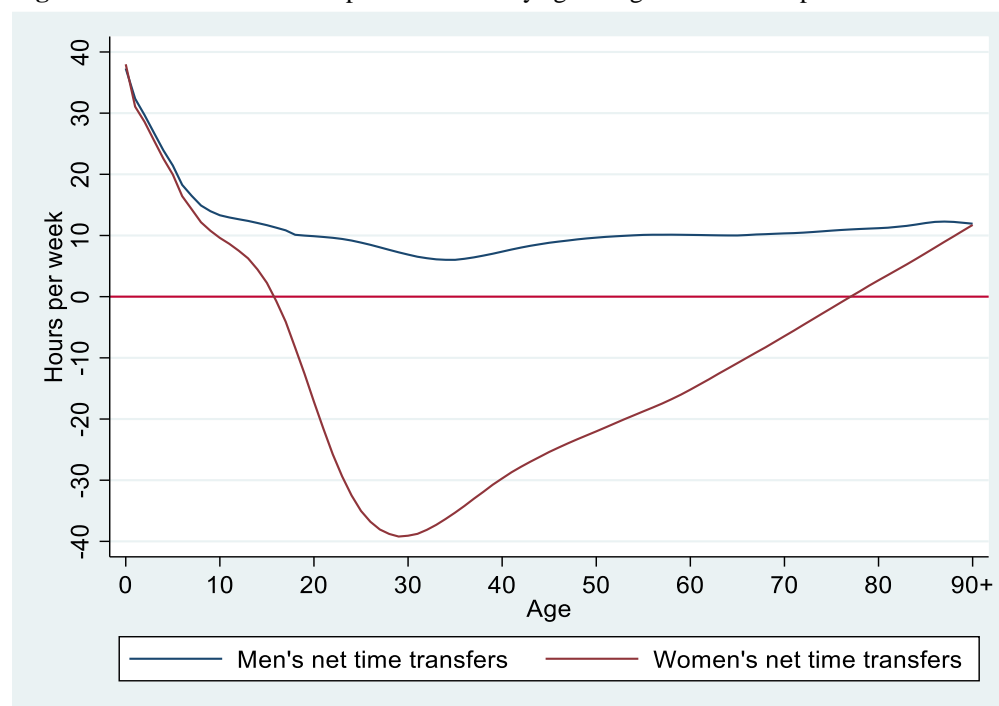
Source: Author's calculation from Time Use Survey 2019.

Time transfers, the non-market counterparts of Life Cycle Deficits in the NTA dataset, are the difference between consumption and production age profiles of unpaid care work. The net time transfers are plotted in Figure 11. The negative values of net transfers indicate that they are net givers of time of unpaid care work to others (usually other individuals in the household), and positive values indicate that they are net receivers of time of unpaid care work from individuals. 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 since age 16 to age 79, and men are net beneficiaries of unpaid care work across all ages. The leading receivers of unpaid care work in India are babies and young children, and the prime givers of unpaid care work are the women of early reproductive ages.

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

The aggregate value of unpaid care work estimated from the Periodic Labour Force Survey 2019 was estimated as a share of GDP at current prices. We obtain GDP from the Handbook of Statistics on the Indian Economy 2019-20 (Reserve Bank of India 2020). Using wages available from the Periodic Labour Force Survey, unpaid care

work was valued at 26.6 percent of GDP. The same imputed wage was used for both men and women as it is conceptually difficult to address the difference in efficiency or productivity of men and women in care activities.
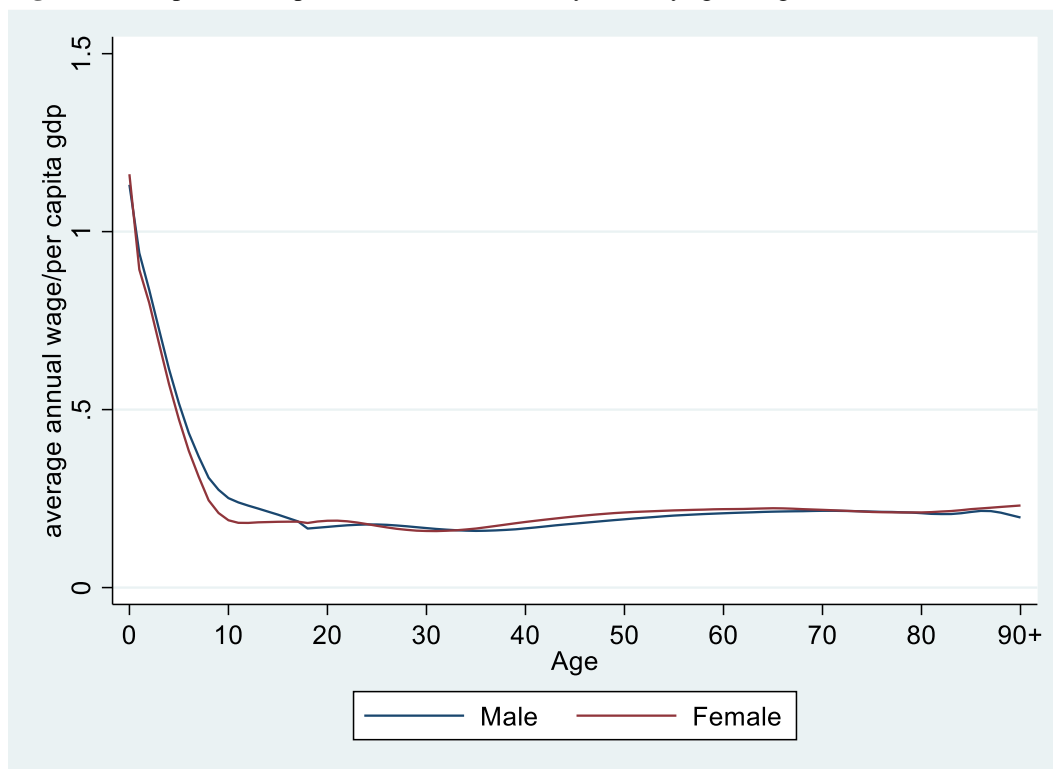
Fig. 12 Production of Unpaid care work in monetary terms by age and gender, India
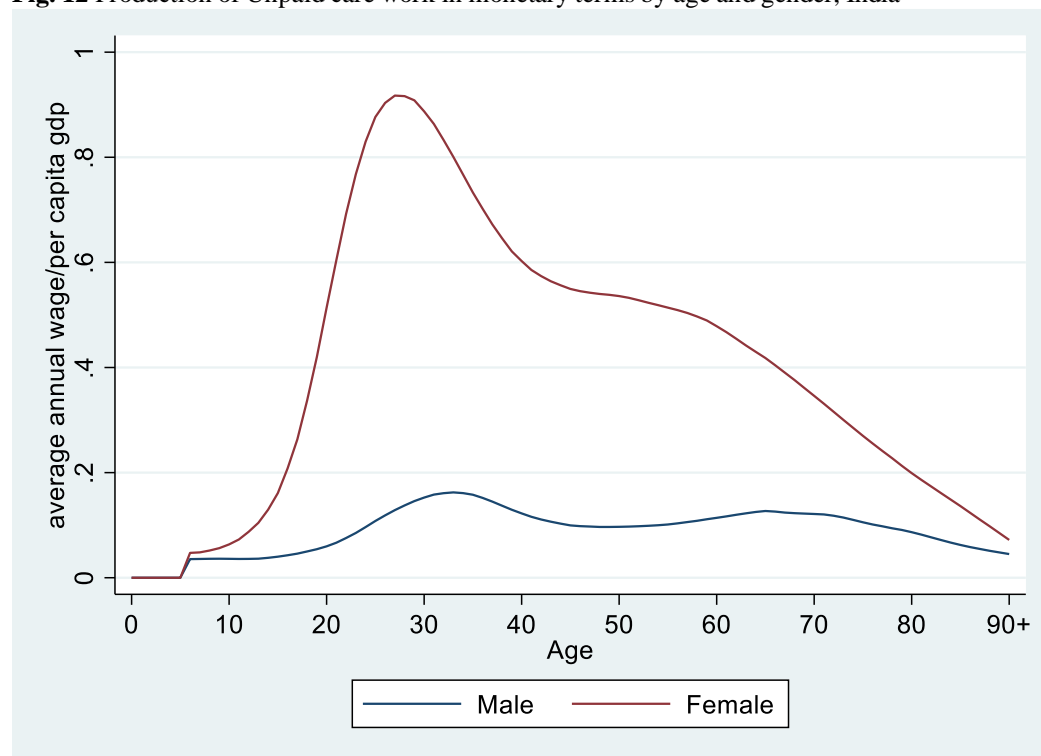
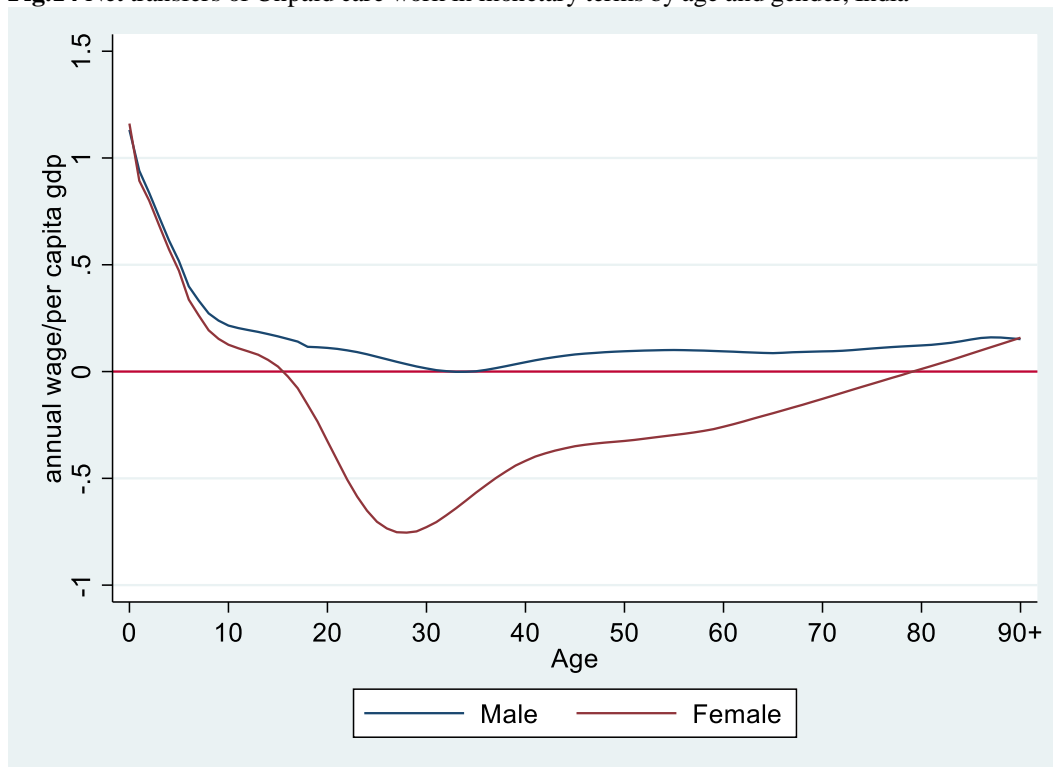Source: Author's calculation from Time Use Survey 2019 and Periodic Labour Force Survey 2019-2020

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 a level equivalent to 120 percent of per capita GDP. The prime contributors to the household economy are women, and at all ages, men are the net receivers of unpaid care work.

Fig 13 Consumption of Unpaid care work in monetary terms by age and gender, India

Source: Author's calculation from Time Use Survey 2019 and Periodic Labour Force Survey 2019-2020

Fig.14 Net transfers of Unpaid care work in monetary terms by age and gender, India

Source: Author's calculation from Time Use Survey 2019 and Periodic Labour Force Survey 2019-2020

Decadal Comparison: Two Decades, The Persistent Gender Divide In Unpaid Care Work

Fig.15 Gender specialisation in time use, by age (1999)
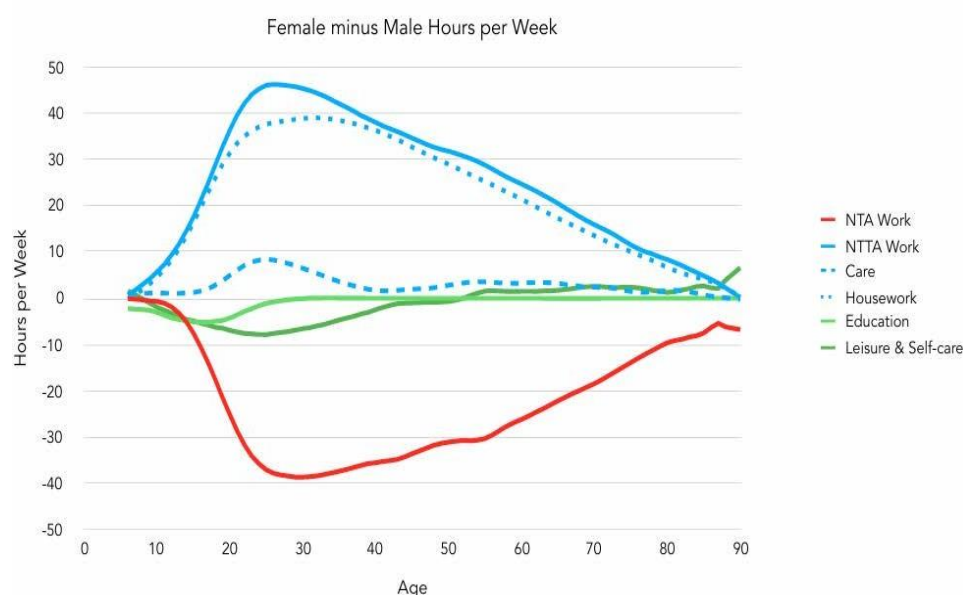
Source: Ladusingh,L. (N.D.) The market and the household in India: Counting women's work, country report No:2

A pilot Time-Use Survey was conducted in India in 1999, covering six states—Haryana, Madhya Pradesh, Gujarat, Orissa, Tamil Nadu, and Meghalaya—to ensure regional representation. The graph above illustrates the gender differences in time use for various activities in 1999. Following the same classification as this 2019 analysis, a comparison with the 1999 study reveals several significant observations.

Over a span of 20 years, despite substantial economic growth and improvements in female education, one would expect at least a shifting trend toward a more equitable distribution of unpaid care work. In early age groups, in 1999, boys spent noticeably more time on education than girls. However, by 2019, this difference appears to have reduced among younger age groups, signaling a hopeful change. Despite this progress, the data indicate a **stagnant gender gap**. The specialization of women in unpaid (NTTA) work and men in paid (NTA) work remains unchanged. The peak gender gap in unpaid work still falls between ages 20 and 40, coinciding with caregiving responsibilities. Women continue to spend 30-40 hours more per week than men on housework and caregiving, reinforcing the long-standing division of labour.

This persistent imbalance over the past 20 years clearly indicates how misaligned past policies have been in addressing gender disparities at home and how invisible the household has remained. It underscores the urgent need to recognize and dismantle the structural barriers preventing change.

Discussion

As Margaret Reid (1934) aptly stated, *"We are familiar with household production as with many other commonplace things, yet really know very little about it."* This observation remains true today for India, as unpaid care work continues to be undervalued and overlooked in economic frameworks and policymaking.

The paper accounts for the unpaid care work in India in time units and monetary terms for 2019. This is an attempt to highlight the importance of accounting for home-produced services, thus revealing the role played by gender in the generational economy by estimating the value of time spent in producing, consuming, and transferring unpaid care work across ages. The results from the study point out the importance of unpaid care work in an economy and raise awareness that this remaining invisible is causing the contributions of individuals who engage in such activities to remain invisible. Women, being the major contributors to these activities, accounting for them and their work, will give visibility and value to the time they spend on productive activities and, thus, their contributions to the Indian economy. As Reid (1934) mentions, unpaid care work gained less attention because households are not money-making institutions. However, to bring about a change in this perspective and to focus specifically on policies on unpaid care work, it is vital to account for it.

There is a significant gender differential observed in the age-specific profiles of unpaid care work production, and it can be said that women specialize in the production of unpaid care work while men specialize in market work production. Now, within unpaid care activities, some observations can be highlighted. Men tend to specialize in 'do-it-yourself activities' of improving, maintaining, and repairing their own dwellings, personal and household goods, vehicles, pet care, and related activities when contributing to unpaid care work in households, and women tend to specialize in cooking and cleaning. Women of reproductive age groups are the prime givers of unpaid care work and young children are the prime receivers of this unpaid care.

When compared with a study based on a pilot time-use survey in 1999 (Ladusingh, n.d.), the gender gap in the educational attainment of young children has decreased in the last 20 years, but it is observed that women's education gains are not translating into workforce participation at the same rate as men's. A key reason for this is the double burden on women, particularly in the 20–40 age group, where caregiving responsibilities coincide with

peak employment years. The deeply entrenched traditional norms that view unpaid care work as a woman's responsibility further limit their ability to participate in the labour market. The Periodic Labour Force Survey (PLFS) 2023-24 highlights this stark disparity—64% of urban women remained out of the labour force due to childcare or household responsibilities, compared to just 1% of urban men. Similarly, in rural areas, 56% of women cited household commitments as the reason for not working, while this number was just 1% for rural men. These figures reinforce the urgent need for policies that not only reduce the burden of unpaid care work but also create pathways to absorb women into the workforce (MoSPI, 2024b).

We value what we measure. National Time Transfer Accounts (NTTA), derived from the National Transfer Accounts (NTA) framework—which is essentially GDP with people—offers a crucial tool to bring visibility to unpaid care work. The faces of those who care should not remain invisible. These faces shape economies, sustain societies, and drive the future. It is time we measure, recognize, and value them accordingly. Moving forward, it is essential to implement paid parental leave for both men and women, invest in building a strong care economy, and introduce flexible work policies that enable individuals to balance work and caregiving responsibilities without being forced out of employment. By ensuring men also take on caregiving roles, such policies can help shift social norms toward a more equitable division of unpaid care work.

While the results are descriptive, the possibility of future work this study puts forward is vast. Accounting for unpaid care work for 2019 is merely the first step to initiating much-focused but more inclusive interventions to approach unpaid care work production and the individuals involved in it. With the upcoming revisions in the System of National Accounts pointing out the importance of accounting for unpaid household services and thus creating extended accounts, the scope of further work is paramount in areas of gender and economic contributions, intergenerational transfers and ageing, labour markets, role of caregivers, etc.

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