



PUNE INTERNATIONAL CENTRE

**Unpaid Labour, Unseen Barriers: Identifying
Constraints to Women's Empowerment in
Maharashtra**

March 2026

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By Arya Pansare

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Abstract

Unpaid domestic and care work remains one of the major obstacles to women's empowerment in Maharashtra, India. This study intends to explore the gaps in economic participation by working women using the 2019 Time Use Survey conducted by National Statistical Office of India. The analysis focuses on total men and women in the age group of 15-59 across all districts in the state of Maharashtra and investigates the differences in unpaid work using sector, marital status, education, social group, and employment status. Socioeconomic correlations of unpaid work and socio-economic factors were analysed through survey-weighted linear regression models. The study also estimates value generated by women's unpaid contributions in rural and urban sectors and analyses the effectiveness of Integrated Child Development Services (ICDS) and Maternity Benefit Act in reducing the burden of unpaid work. The results of the study clearly demonstrate that there is a gender gap in all forms of unpaid work as women undertake far more domestic and care activities than men, irrespective of their employment and educational level, and even their marital status. Married women are especially burdened with the routine caregiving workload and additional household work.

This study highlights the gap in targeted policy action, seeking to redistribute caregiving responsibilities and achieve gender balance, as well as the socio-economic empowerment of women in Maharashtra. The findings add to the understanding of the nuanced interactions between unpaid work and women's workforce participation, driving informed actions to mitigate gender imbalances and enhance sustainable development of the economy in the region.

Introduction

Sustainable Development Goal (SDG) 5 focuses on advancing gender equality and women's empowerment. Achieving gender equality is vital for a peaceful and prosperous society and it is a fundamental human right. Even with growth in numerous sectors, there are considerable gaps, particularly in women's economic participation and overall living standards. A particularly important and often overlooked contributor to these inequalities is the disproportionate burden of unpaid labour (care and domestic work) which impact women far more than men. To combat such inequalities, the United Nations has set specific targets under SDG 5. Target 5.4 aims to “Recognise and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate” (UN-SDG). The International Labour Organisation (ILO, 2024) defines the burden of caring work as one of the most critical obstacles to the employment of women. In some regions, this phenomenon is even more striking and severely limits women's economic activities.

In the Asia-Pacific region, alongside participating in paid work, men engage in unpaid caregiving work the least, and it is the least proportion compared to their global counterparts. In this region, male participation stands at merely 1 hour and 4 minutes. One country that stands out in this region for its extreme gender imbalance concerning caregiving inequality is India. In India, male participation in unpaid care responsibilities is extremely low, even by Indian standards, averaging 31 minutes, or merely 7.9% of their time (Addati et al., 2018). Analysing unpaid care work demands an understanding of how such work is defined and categorised in economic terms. The term ‘unpaid care and domestic work’ broadly captures the range of essential activities for the smooth functioning and welfare of a household, but are not captured by economic measures. According to the System of National Accounts (SNA), this can be classified into two categories: SNA Production and Non-SNA Production (Hirway, 2015). SNA Production consists of unpaid activities classified under the scope of the SNA's production. Non-SNA Production is the category

of work that lies within the broader production boundary, but outside the SNA production boundaries.

It is important to consider that, as noted by Hirway (2015), 35-50% of total work time in any economy is spent on non-SNA unpaid work that is not captured by national statistical systems and is also not included in national income accounts. Unpaid work in this research entails domestic and caregiving tasks, which include housekeeping, childcare, and eldercare, all of which are classified as non-SNA activities within the broader general production boundary. This granularity enables an in-depth analysis of the existing gender imbalances related to these essential, albeit frequently overlooked, spheres and their influences on women's economic empowerment in the state of Maharashtra.

This classification system deeply affects the perception of unpaid work in the context of national economies. With the growing recognition that non-SNA unpaid work contributes significantly to the economy, its exclusion from traditional economic measurements is increasingly deemed problematic. Although crucial to economic well-being, this unpaid work goes unacknowledged and is economically marginalised. Furthermore, deep-rooted cultural attitudes and gender roles create invisible obstacles that curtail women's movement, and control over and access to essential resources. These social attitudes not only perpetuate gender gaps but also deepen economic issues. All of these factors significantly economise a woman's personal time, attention, and energy, making them lose greater value in terms of individual fulfilment, career growth, and financial self-sufficiency. Ignoring women's potential in economic productivity and decision-making processes results in a massive waste of human resources and economic growth opportunities. While the international and national picture of gender discrimination in unpaid work is getting clearer by the day, more localised analysis is still needed. Work on gender discrimination in unpaid work is abundant but for the state of Maharashtra, insights into its contribution to women's economic advancement are scarce. This study seeks to analyse the gender inequalities in unpaid work in Maharashtra, specifically focusing on how domestic and care responsibilities affect women's economic and social standing.

Literature Review

Research focused on unpaid work and empowerment of women reveals important challenges affecting women's participation in the labour market. One major challenge is the overwhelming unpaid domestic work that women do. According to the findings of a 2019 Time Use Survey performed by India's National Statistical Office (NSO), women devote eight times more hours to unpaid caregiving than men. This disparity exists across all educational, occupational, and marital demographics because care work is gendered. Women with paid jobs still assume about six times more unpaid caregiving duties than their male counterparts, which underscores the double burden they face.

The social institution of family emerged as one considers the greater burden of routine domestic work and caregiving responsibilities borne by women raised in marriage i.e. been socialised in marriage-based family structure, where cultural norms and patriarchal norms prepare them to take on—and continue bearing—a disproportionate share of household and caregiving duties once married (Chakraborty and Sutradhar, 2023). As household land increases, there is a corresponding decrease in women's freedom; this is termed as the “landholding-patriarchy hypothesis.” The economic dimension is also important. The “feminisation U hypothesis” states that with an increase in the per capita GDP of a region, women's participation in the workforce decreases up to a certain level and then increases after that threshold (Krishna, 2022). There is evidence to suggest that while household income per capita increases, women tend to exit the workforce, which is contradictory to social progress associated with increased income. This is likely owing to prevailing cultural attitudes or inadequate employment opportunities (Krishna, 2022). Chakraborty and Sutradhar (2023) highlight the association between economic growth and attendance for work. Studies carried out in India indicate that regions with higher per capita income do not necessarily show lower levels of unpaid work and free labour by women alongside active, voluntary work in paid positions, thus negating the assumption that investment in the economy enables women to shift from domestic responsibilities to gainful economic activity. There is also a positive impact of human capital investment, like education and specialised training, on women's participation in the workforce, however, many tend to lack the required skills (Krishna, 2022). The most marked gaps in unpaid work remain in the northwestern and

western states of Haryana, Punjab, and Rajasthan, whereas the eastern and northeastern regions demonstrate a comparatively more equitable division of unpaid work. Women's time commitment to unpaid labour shows no pertinent relationship with other indicators of women's empowerment such as economic participation, mobile phone ownership, or decision-making power within the family. This indicates that social attitudes concerning unpaid work are deeply ingrained and unlikely to shift even while other markers of women's empowerment improve (Nikore, 2022).

The United Nations has observed that countries where women have a high stake in economic activities report fairly equal bifurcation of other household responsibilities between men and women. In India, women's unpaid work is calculated to constitute nearly 40% of the present GDP, which demonstrates its economic importance. Typically, however, women's unpaid domestic and caregiving activities, essential for the maintenance of a household, are not regarded as economically productive, hence falling outside the production boundary. This exclusion from the System of National Accounts (SNA) production boundaries leads to a distorted perception of women's economic participation and contribution to society's labour force (Deb, 2022).

Notably, the UNECE (United Nations Economic Commission for Europe) study from 2021 highlights that a significant number of women cite care responsibilities as a major factor for not participating in paid employment or working in the informal economy. This gap in unpaid work contributes to occupational gender segregation, with women funnelled into lower-tier, stereotypically feminine jobs such as child care workers, cooks, teachers, beauticians and related workers, nursing professionals etc. Insufficient access to affordable and quality childcare and eldercare services places a greater share of unpaid care responsibilities on women. The majority of countries in Eastern Europe and Central Asia do not provide adequate social protection or employer mandate paid family leave policies, diffusing the responsibility of redistributing unpaid work. While maternal leave is widely accepted, there is a paucity of attention towards paternal leave and flexible schedules that foster men's participation in caregiving activities.

According to the findings of Das & Nair (2021), women's participation in the workforce in Maharashtra is merely 24.1%, while men's participation is at 57.6%. This gap reflects the considerable obstacles that women still face with regards to economic empowerment. The gender budget analysis highlights the lack of strategic investment in enabling environments and economic

opportunities for women within the region. There seems to be a focus on self-help groups and skills training; however, there are no interventions aimed at employment, entrepreneurship, or aid for women in the informal sector.

Antonopoulos (2009) addresses and analyses the issue of the intersection of unpaid caregiving and paid work, deepening the understanding of the care economy while exposing the gender dynamics that underscore the issue. This work argues that unpaid work performed by women as an unrecognised economic subsidy limits women's economic participation and advocates for policy redistributions of care responsibilities to foster gender equitable outcomes. Attitudes towards unpaid work and its role in the economy significantly determine the effectiveness of legislation aimed at promoting gender equality and equality in the labour force, as highlighted in Sümer's (2022) comparative study of European gender policies. Equally, Vuri's (2023) research on childcare policies and the availability of affordable childcare provides more elucidation on the issue by showing its positive effects on maternal employment.

Cumulatively, the literature on unpaid work and women empowerment in India offers valuable perspectives on the underlying barriers at the micro-level, but not much has been done on the region of Maharashtra. Although overarching patterns like increasing strands of unpaid work, urban/rural divides, and persistent socially constructed roles provide some context, the socio-economic features of the state of Maharashtra require deeper understanding.

Research Questions

- How do gender disparities in unpaid domestic and care work vary across different districts in Maharashtra, considering factors such as sector, marital status, educational levels, social group, and employment status for men and women?
- What is the economic valuation of unpaid domestic and care work in Maharashtra for females, and how does it vary across rural and urban sectors?
- What are the strengths and limitations of the Integrated Child Development Services (ICDS) and Maternity Benefit Act, and what specific policy recommendations can be formulated to effectively reduce the burden of unpaid labour and promote women's empowerment in Maharashtra?

Methodology

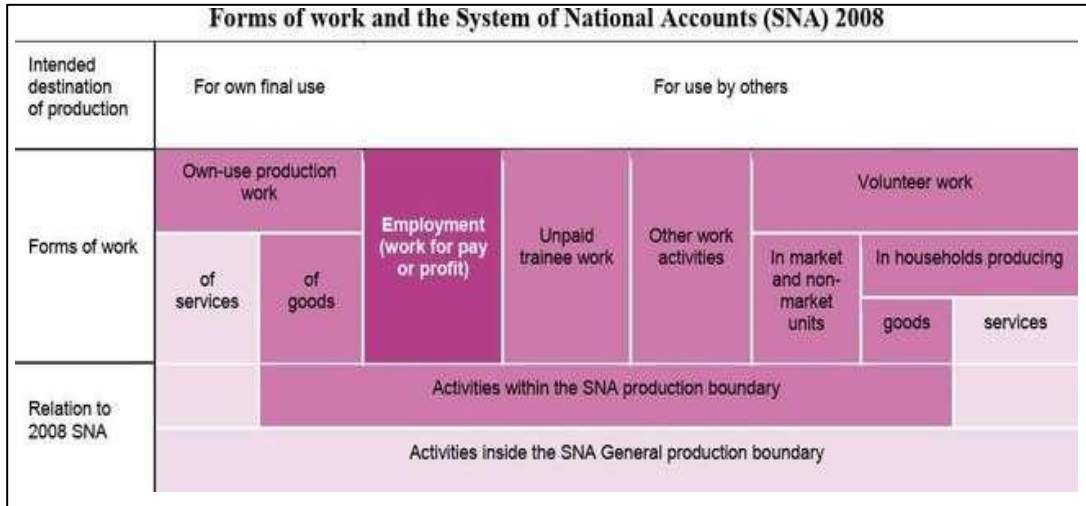
The Time Use Survey (TUS) is one of the most effective tools developed for examining the different ways individuals spend their time. The survey captures insights into the time spent and characteristics of activities performed by individuals, which is unlike any other household survey. TUS captures time allocation with unprecedented accuracy and detail. For example, allocation of time to paid work, unpaid chores, and other activities are captured with granularity that sets it apart from other survey methods.

When accompanied by other studies, TUS fulfils its principal purpose of estimating the level of engagement by both men and women across paid and unpaid activities. Its analysis of unpaid work plays a crucial role in measuring the economic impact of caregiving, volunteer service, and other household services rendered by family members free of charge. Moreover, TUS captures the time household members devote to educational activities, social interactions, leisure, and self-care.

In India, the national time use survey was originally undertaken by the NSO in 2019. This survey captures both the participation rate and the full-time equivalent hours worked in paid employment, care services, unpaid work, and other activities. It is designed to provide an insightful analysis of how different demographic groups make use of their time with respect to work and leisure activities. The information collected in this context is important for analysis concerning the gaps in the labour market, economic activity, gender inequality, or work-life balance

The TUS is divided into five distinct hierarchical levels, each with a specific set of data blocks related to various stages of the survey. Level 1 consists of Blocks 1, 2, and 9, capturing the critical activities of FSU identification (first stage unit—the primary sampling unit selected for surveys) and field operation recording (FO recording). Contained within Level 2 is Block 3, which is responsible for SK formation (sampling kernels—small, manageable units or clusters derived from a larger sampling frame for detailed data collection). Level 3 consists of Block 4, which contains the list of hamlets for villages with SU formation (sub-unit—the basic unit selected for data collection) and sub-units as well as the chosen SUs. Level 4 consists of Block 5, which has the household list and documents the household selection for these households. Finally, Level 5 consists of Block 6, where the household sampling information is recorded

The microdata available from the integration of all five levels is useful for research purposes as it offers a detailed and complete dataset. Unlike aggregated datasets, this merged dataset contains micro-level details regarding participants’ specific activities and the duration spent on each activity. The study concentrates on all the districts in the state of Maharashtra and particularly focuses on the patterns of unpaid care and domestic work for men and women between the ages

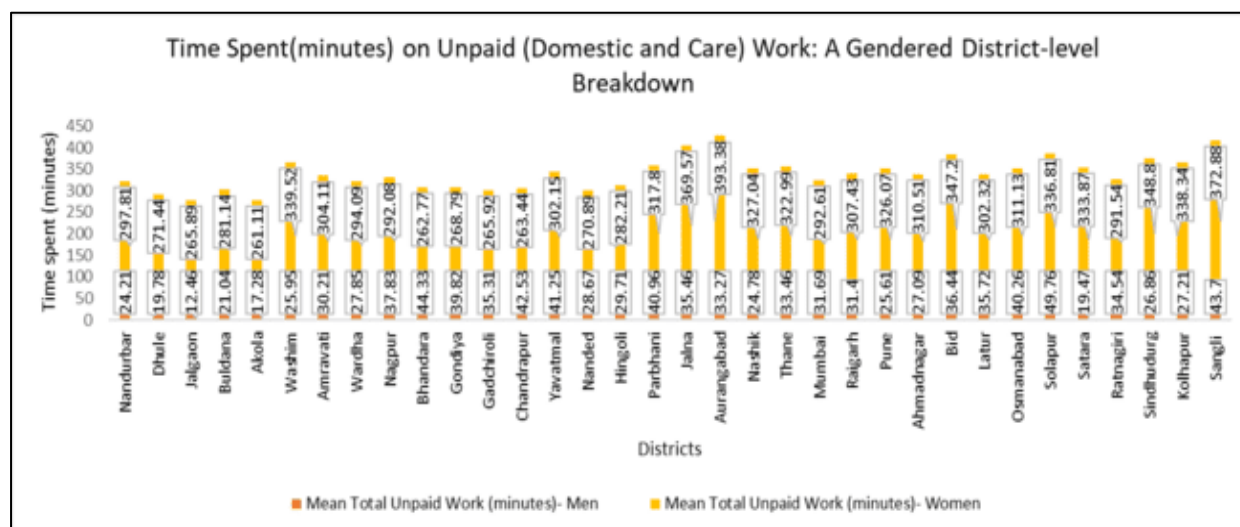


Source: International Labour Organization (ILO), “Resolution concerning statistics of work, employment and labour underutilization”, nineteenth International Conference of Labour Statisticians, October 2013 [online]

of 15 to 59. Notably, the study does not consider any data regarding transgender individuals as well as those below the age of fifteen and above the age of fifty-nine, thereby honing in on the relevant demographic's time use patterns in the region. Socioeconomic survey data and unpaid work were analysed using survey-weighted linear regression models to determine the relationship between unpaid work and socioeconomic variables.

The primary criterion for classifying activities in the construction of ICATUS is their "productive" nature. Productive activities are categorised into two groups: a) Those within the SNA production boundary, and b) Those outside the SNA production boundary but still within the general production boundary, known as non-SNA production. Non-SNA production within the general production boundary encompasses the creation of services by household members for their own final consumption (UNSD, 2017).

The scope of activities within the SNA production boundary includes: (i) the creation of goods and services for the market by businesses and companies; (ii) non-market production conducted by government bodies and non-profit organisations; (iii) services related to owner-occupied housing; (iv) domestic and personal services offered by paid employees; (v) the generation of knowledge intended for personal use or gross capital formation; (vi) production of goods for personal use. Excluded from this boundary are unpaid household services (such as domestic and personal care) for personal use within the household or by other households, as well as volunteer work in non-profit organisations. Activities that fall outside the SNA production boundary include all unpaid services (primarily domestic and personal care) created for use within the household, by other households, and the community. These services, produced through unpaid labour, are not included in the national accounts. (CAUTAL, 2016).



Source: Author's compilation from TUS 2019 (microdata)

Time use activities are classified under 3 categories. Primary production activities, secondary sector activities and tertiary sector activities (trade, business and services) fall under the production boundary of SNA activities. Household maintenance, management and shopping for own households, care of children, elderly, disabled for own household and community services are non-SNA activities falling in the general production boundary. Learning, social and cultural activities and personal care and self-maintenance are non-productive activities which fall outside the SNA and non-SNA and which cannot be delegated to anybody else (Hirway, 2001). This paper looks into only two categories, i.e., unpaid domestic and caregiving services.

The graph provides a district-level breakdown of time spent (in minutes) on unpaid domestic and care work for men and women. Women spend significantly more time on unpaid domestic and care work than men across all districts.

On average, women's time spent is much higher, often exceeding 250 to 350 minutes per day, whereas men's contribution is much lower, typically below 50 minutes. The highest time spent by men is in Osmanabad (49.76 minutes) and Beed (36.44 minutes). The lowest is observed in Jalgaon (12.46 minutes) and Buldhana (21.04 minutes). Metro cities like Mumbai, Pune, and Thane show

a relatively lower time spent by women (around 290-320 minutes), possibly due to a mix of urban employment, access to domestic help, and changing social roles. Rural districts tend to have higher female unpaid work values, suggesting traditional gender roles still dominate household responsibilities. There is minimal variation in men's contribution across districts, but women's unpaid work varies significantly.

Coastal Maharashtra

Women in coastal districts generally spend less time on unpaid work compared to inland districts. Mumbai shows some of the lowest gender disparities, likely due to higher urbanisation and increased female workforce participation. Ratnagiri and Sindhudurg (Konkan region) still show a notable gap but remain lower than central and eastern regions.

Inland Western

Pune, Satara, and Kolhapur show higher unpaid work hours for women, indicating strong cultural expectations of domestic work. Sangli has one of the highest gender disparities, with women spending over 370 minutes compared to men's 43 minutes—an 8x difference. This region has a mix of urban and rural economies, with rural areas showing higher female unpaid work burdens.

Inland Northern

Nashik, a major city, shows relatively high unpaid work among women (327 minutes) but still lower than districts like Sangli and Aurangabad. Tribal-dominated districts like Nandurbar and Dhule have somewhat lower gender disparity compared to other rural regions.

Inland Central

Aurangabad and Jalna stand out with some of the highest female unpaid work hours, exceeding 390 minutes. Parbhani, Hingoli, and Nanded also show high female unpaid work, suggesting a strong patriarchal structure in the Marathwada region. Men's contribution remains low (30–50 minutes), showing a large gender imbalance.

Inland Eastern

Nagpur, being a large urban centre, has relatively lower unpaid work for women (292 minutes), closer to Nashik. Amravati, Akola, and Wardha show moderate gender disparities, though still favouring men. Washim has an extremely high value for women (339.5 minutes), one of the highest in the region.

Eastern

Gadchiroli and Chandrapur have relatively lower female unpaid work hours compared to Marathwada, possibly due to a higher percentage of tribal populations, where gender roles may be more balanced. Bhandara and Gondiya show trends similar to other eastern districts.

Table 1 - Mean Unpaid Work by Gender and Sector

Group	Mean (minutes)	Standard Error	95% Confidence Interval
Male, Rural	32.64	1.26	(30.17, 35.12)
Female, Urban	28.68	1.25	(26.23, 31.12)
Male, Rural	307.00	3.64	(299.86, 314.14)
Female, Urban	316.03	4.05	(308.09, 323.98)

Source: Author's compilation from TUS 2019 (microdata)

Males do significantly less unpaid work compared to females, regardless of sector. The difference is approximately 10 times higher for females (307–316 min.) than for males (28–32 min.). For males, unpaid work is slightly higher in rural areas (32.64 min.) compared to urban (28.68 min.). For females, unpaid work is slightly higher in urban areas (316.03 min.) than rural (307.00 min.). Sectoral differences are negligible, meaning unpaid work patterns are similar across sectors.

Table 2 - Education & Unpaid Work

Education Level	Mean Unpaid Work (Males)	Mean Unpaid Work (Females)
Not literate (1)	34.99 min.	290.72 min.
Below Primary (2)	36.50 min.	315.09 min.
Primary (3)	39.54 min.	335.63 min.
Upper Primary (4)	30.98 min.	328.57 min.
Secondary (5)	29.32 min.	320.73 min.
Higher Secondary (6)	28.26 min.	306.22 min.
Diploma (Secondary) (7)	26.73 min.	195.89 min.
Diploma (Higher Secondary) (8)	24.03 min.	278.20 min.
Diploma (Graduation) (10)	30.84 min.	279.52 min.
Graduate (11)	28.15 min.	298.62 min.
Postgraduate (12)	34.04 min.	294.25 min.

Source: Author's compilation from TUS 2019 (microdata)

Unpaid work declines with higher education (except slight increases at postgraduate level). Most educated males (diploma holders, graduates, and postgraduates) report the lowest unpaid work. Peak unpaid work (335 min) is at the primary education level. Men with higher education levels do less unpaid work than men with no formal education. Women with postgraduate degrees still do about 294 min/day of unpaid work, significantly more than men. For males, unpaid work declines with education. For females, unpaid work remains high across all education levels. This suggests cultural and societal expectations play a bigger role than education in unpaid work distribution. Even women with graduate or postgraduate degrees spend over 4-5 hours daily on unpaid work. This suggests women's economic participation is restricted by unpaid work responsibilities.

Table 3 - Marital Status & Unpaid Work

Gender	Marital Status	Mean Time (Minutes)	Std. Error	95% Confidence Interval
Male	Never Married	19.15	0.96	(17.26 – 21.03)
Male	Married	35.99	1.14	(33.76 – 38.23)
Male	Widowed	111.06	11.46	(88.57 – 133.54)
Male	Divorced/Separated	51.00	13.15	(25.19 – 76.81)
Female	Never Married	108.99	3.38	(102.35 – 115.63)
Female	Married	363.87	3.10	(357.78 – 369.95)
Female	Widowed	256.20	5.07	(246.24 – 266.15)
Female	Divorced/Separated	226.43	13.03	(200.85 – 252.01)

Source: Author's compilation from TUS 2019 (microdata)

Married women have the highest unpaid work burden. Married women (363.87 min./day) spend 10x more time on unpaid work than never-married men (19.15 min./day). Even widowed/divorced women (256.20 min./day) still do significantly more unpaid work than married men (35.99 min./day). Never-married men do the least unpaid work, only 19.15 minutes per day, which is significantly lower than never-married women (108.99 min./day). The gap suggests that unpaid work is disproportionately borne by women, even before marriage. Married men do more unpaid work than single men, but still far less than women—married men (35.99 min./day) vs. married women (363.87 min./day), which is 10x more. It suggests that household responsibilities are not equally distributed in marriage. Widowed/divorced men do unpaid work, but still less than women. Widowed/divorced men (111.06 min./day) do significantly more unpaid work than married men but far less than widowed/divorced women (256.20 min./day). Even after separation, women continue to spend 256 min./day on unpaid labour. This highlights the need for support systems for single and widowed women.

Table 4 - Social Group and Unpaid Work

Social Group	Mean Total Unpaid Work (min.)	Std. Error	95% Confidence Interval
Scheduled Tribes	157.54	4.55	(148.60, 166.47)
Scheduled Castes	165.52	2.63	(160.36, 170.68)
Other Backward Classes	166.99	2.10	(162.87, 171.12)
Others	170.17	2.30	(165.66, 174.69)

Source: Author's compilation from TUS 2019 (microdata)

Scheduled Tribes (STs) report the lowest unpaid work (157.5 minutes/day), while Others (General category) report the highest (170.2 minutes/day). Scheduled Castes (SCs) and Other Backward Classes (OBCs) are in between, with 165.5 and 167 minutes, respectively. This indicates a link between higher social status and increased unpaid work, possibly due to differences in labour division and domestic expectations. Scheduled Tribes have significantly lower unpaid work than all other groups. Scheduled Tribes (STs) may have different work structures, with more time spent on subsistence activities (e.g., agriculture, foraging) rather than household unpaid labour. Scheduled Castes (SCs) and OBCs may face social expectations leading to more unpaid domestic and caregiving work. General category (Others) may have higher household responsibilities or larger family structures, increasing unpaid work.

Table 5 - Unpaid Hours by Employment & Sector

Group- Women	Predicted Unpaid Minutes	Interpretation
Non-employed, Rural (Baseline)	332.4	Women in rural areas who are not employed spend the most time on unpaid work.
Employed, Rural	278.4 (↓ 54)	Employment reduces unpaid work significantly.
Non-employed, Urban	347.4 (↑ 15)	Urban non-employed women do slightly more unpaid work than rural non-employed women.
Employed, Urban	262.2 (↓ 85.2)	Urban employed women have the lowest unpaid work hours.

Source: Author's compilation from TUS 2019 (microdata)

In both rural and urban areas, employed women spend significantly less time on unpaid work than non-employed women. The reduction is greater in urban areas (85.2 mins) compared to rural areas (54 mins). Urban non-employed women (347.4 mins) have slightly higher unpaid minutes than rural non-employed women (332.4 mins). This may stem from increased expectations around home management, despite access to more paid services. Urban employed women (262.2 mins) spend the least time engaged in unpaid work relative to all other groups. Urban areas provide greater access to household support services such as cleaning, cooking, and childcare. If urban-employed women have lower unpaid work but still have similar household needs, outsourcing is likely. Availability of daycare centres, restaurants, laundromats, and grocery delivery services allows urban women to substitute unpaid work with paid services. These services are more available and affordable in urban areas than in rural areas. Urban-employed women may choose to spend more time in paid work and outsource unpaid tasks because their time is more valuable in the labour market. Urban households may have fewer extended family members, reducing informal help and increasing reliance on market services.

Gender is the strongest determinant of unpaid work—being female increases unpaid work the most. Marital status is the second most important factor, with married individuals spending significantly more time. Employment reduces unpaid work, with urban employment reducing it the most. Social group has a moderate effect, with "Others" (General category) contributing the highest unpaid work. Urban vs. Rural differences exist but have a minimal impact on unpaid work. This confirms that gender norms and marital responsibilities are the primary drivers of unpaid work, while caste and urbanisation play a smaller but still significant role.

Methods to Calculate Unpaid Work

The output-based method considers the cost of acquiring an unpaid care service in the marketplace, such as an hour of daycare provided by a centre. This approach assigns the price of comparable market alternatives to non-market goods and services. Nonetheless, this method encounters certain conceptual challenges when it comes to defining the output of unpaid care work, like childcare. Additionally, the output-based approach is constrained by the challenge of obtaining suitable data that reflect market prices for outputs of the same quality and quantity as those produced by unpaid care work.

The input-based approach prioritises the evaluation and valuation of labour contributions to unpaid care work. While theoretically, other factors like capital and raw materials should be accounted for, labour is the central focus. Extensive, nationally representative time diary surveys offer accurate estimates of the time allocated to unpaid care activities within households, including childcare and eldercare. By applying the third-person criterion, these time estimates are then assessed against market wage rates for workers engaged in similar roles in the labour market. The two primary methods for establishing market wage rates are based on either the opportunity cost or the replacement cost (Abraham and Mackie 2005). Opportunity cost represents the hourly value of time that could have been used for an alternative activity if the individual were not involved in unpaid care work. For those with paid employment, this might correspond to lost earnings, but for those without jobs, additional calculations may be needed. Although this method accurately reflects what an individual forgoes to engage in unpaid care work, it might not fully account for the benefits to others. Conversely, the replacement cost valuation uses the wage that would be paid to someone hired to perform the same tasks (i.e., the third-party criterion). Unlike opportunity cost valuation, replacement cost valuation applies the same market wage of a particular job or role to which unpaid work can be compared, irrespective of the individual's earnings from paid employment. Additionally, the spectrum of wage rates for substitute workers hired to replace unpaid care workers shows significant variation. This is because the generalist wage model assigns a uniform wage to all tasks, regardless of their nature, whereas the specialist wage model allocates different wages to different tasks according to the prevailing actual wage rate for each specific job. This discrepancy is particularly evident in care work. On one side (the generalist model), there are low-wage workers in the market, such as domestic workers. On the opposite side (the specialist

model), there are higher-wage professionals, like nurses and teachers, who engage in specialised activities. The specialist wage model for valuing household production assigns specific wage rates to various tasks; so time spent preparing meals would be valued at a cook's wage, while time spent caring for adults suffering from Alzheimer's or other dementias would be valued at a highly skilled nurse's wage (Levine, 2004). Due to the lack of consensus on appropriate wages, there is a broad range of wages that can span from a lower-bound estimate to an upper-bound estimate. However, both the generalist and specialist wage models have the drawback of not accounting for the time individuals spend on unpaid care work. For example, an inexperienced person would take much longer on tasks like painting or plumbing compared to an experienced professional. Consequently, using the specialist wage model might result in an overestimation of the value of unpaid care work (Abraham and Mackie, 2005).

Unpaid care work plays a crucial role in economic development but often remains unrecognised in national accounts. To estimate its economic value, the study applies the replacement cost method using the generalist approach. This method assumes that if unpaid work were replaced by paid workers, it would be compensated at the prevailing wage rates for casual labour.

The valuation process involves:

- Determining the wage rates for casual labour based on PLFS (Periodic Labour Force Survey) 2018-19 data.
- Adjusting wages to 2025 levels using cumulative inflation multipliers.
- Estimating the total number of unpaid work hours for rural and urban women.
- Multiplying the unpaid hours by the adjusted hourly wage rate to estimate the economic value.

Base Wage from PLFS 2018-19

Based on data from PLFS 2018-19, the average daily wage earnings for casual labour in current weekly status were:

- Rural women: ₹139.6 per day
- Urban women: ₹188.92 per day

To adjust these wages to 2025, a cumulative inflation multiplier is applied:

- Rural wage adjustment factor: 1.353
- Urban wage adjustment factor: 1.378

Thus, the estimated daily wages for 2025 are:

- Rural women: ₹139.6 x 1.353 = ₹188.89 per day
- Urban women: ₹188.92 x 1.378 = ₹260.33 per day

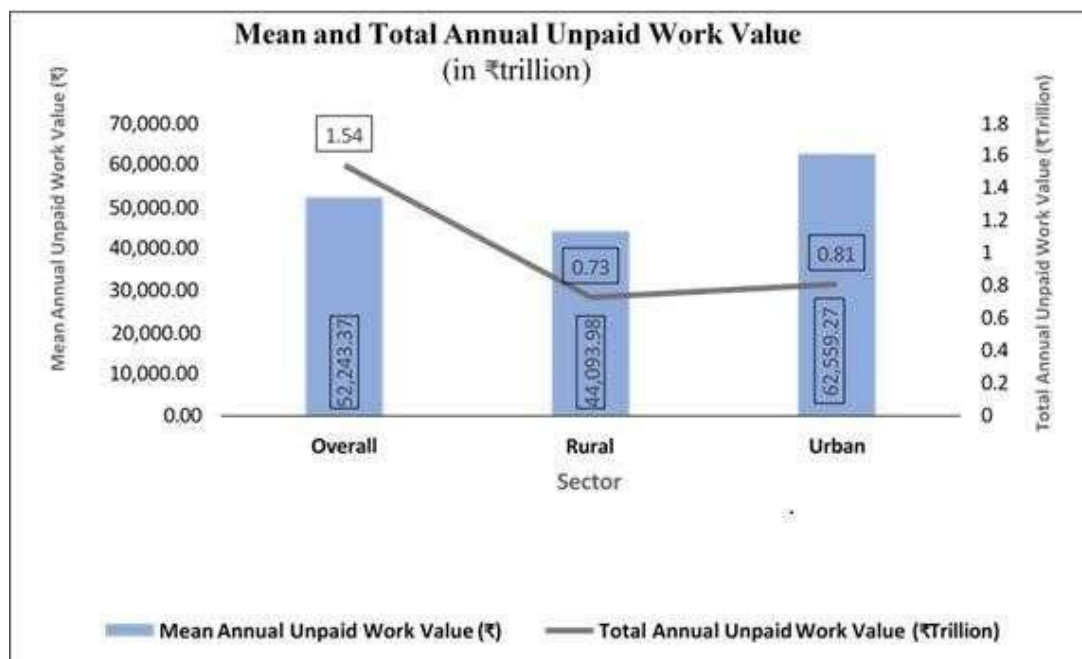
Assuming an 8-hour workday, the hourly wages for 2025 are:

- Rural women: ₹188.89 ÷ 8 = ₹23.61 per hour
- Urban women: ₹260.33 ÷ 8 = ₹32.54 per hour

Total Annual Unpaid Work Value Calculation:

- The total annual unpaid work value was obtained by multiplying the estimated unpaid hours by the respective hourly wage rate and aggregating across the weighted population.

The analysis calculates the economic value of unpaid domestic and caregiving undertaken by women in Maharashtra, using the replacement cost method.



Source: Author's compilation from TUS 2019 (microdata)

Statistic	Overall	Rural	Urban
Mean Annual Unpaid Work Value (₹)	52,243.37	44,093.98	62,559.27
Total Annual Unpaid Work Value (₹Trillion)	1.54	0.73	0.81
Standard Error (SE) (₹Trillion)	0.0286	0.0273	0.0353
95% Confidence Interval (₹Trillion)	(1.48 - 1.59)	(0.672 - 0.779)	(0.744 - 0.882)
Population Size (Weighted)	29,453,476	16,454,606	12,998,870

Source: Author's compilation from TUS 2019 (microdata)

On average, a woman's unpaid work in Maharashtra is worth ₹52,243.37 per year, with a margin of error of around ₹570.43. Women in rural Maharashtra perform unpaid work valued at ₹44,093.98 per year on average, contributing to a total annual valuation of ₹726 billion. Urban women's unpaid work is valued higher per individual (₹62,559.27 per year on average) than in

rural areas, contributing to a total valuation of ₹813 billion annually. Urban women's unpaid work is valued 42% higher than rural women's work (₹62,559.27 vs. ₹44,093.98 per year). This is due to higher replacement wages in urban areas.

As of the 2024-25 fiscal year, Maharashtra's Gross State Domestic Product projected to be ₹42.67 lakh crore, or ₹42.67 trillion (Maharashtra Budget, 2024-25). Calculating the share of unpaid work in relation to the GSDP:

$$\begin{aligned}\text{Percentage} &= (\text{Value of Unpaid Work} / \text{GSDP}) \times 100 \\ &= (1.54 \text{ trillion} / 42.67 \text{ trillion}) \times 100 \\ &= \mathbf{3.61 \%}\end{aligned}$$

Unpaid domestic and care work by women constitutes approximately 3.61% of Maharashtra's GSDP. This significant contribution underscores the substantial economic value of unpaid labour, highlighting its critical role in the state's overall economy. Recognising the economic value of unpaid work can inform policies aimed at supporting caregivers, promoting gender equality, and ensuring equitable economic development.

Limitations and Considerations

- The 8-hour framework may not reflect actual hours spent on unpaid care, which often exceed standard labour hours. Women's unpaid labour is often spread throughout the day in fragmented intervals, unlike formal employment.
- While the generalist approach offers simplicity, future studies could enhance precision by integrating task-specific wages and localised inflation trends. Unpaid care work is not identical to casual labour, as it involves emotional labour, multi-tasking, and responsibility that cannot always be captured through monetary valuation.
- The study assumes that rural and urban unpaid work is equally valuable, but differences in work intensity, social norms, and access to services may impact its true economic worth. Rural women may engage in more physically demanding labour, whereas urban women may perform more mental and managerial tasks in unpaid care work.

Policy Reviews

Integrated Child Development Services (ICDS): An Overview

The ICDS is centrally sponsored scheme and implemented by state governments and union territories, started in 1975, intends to cater to the nutritional, healthcare, and educational requirements of children younger than six years, expectant women, and breastfeeding mothers. Activities are achieved through Anganwadi centres, which provide nutrition, immunisation, pre-schooling, and health checkups. It is one of the most comprehensive programmes for maternal and child health and nutrition in India and plays an important role for women and children in socioeconomically backward and rural regions of Maharashtra.

Strengths of ICDS

1. Comprehensive Service Delivery

Anganwadi centres (AWCs) practice an integrated approach to enhance the health and nutrition education of children and improve the health status of mothers. Women in India would also benefit from supplemented pregnancy care, postpartum health examination, and nutrition, which could alleviate the burden of unpaid domestic child and maternal work (UNICEF, 2020). ICDS achieves childcare and economic productivity through maternal employment by facilitating access to early childhood schooling. Women's unpaid labor burden is lessened and they are able to participate more in paid employment and community life as a result of this institutional support, which transfers some of the childcare and maternal care responsibilities from the home to public provision.

2. Accessibility in Rural Areas

Services through Anganwadis are well integrated and subsidised in rural areas of Maharashtra, making them accessible for maternal and child health. This ICDS network through Anganwadis solves the problem of service inaccessibility caused by isolation for remote poor vulnerable groups.

3. Community Support Systems

The ICDS programme facilitates the development of a supportive network for women through local Anganwadi workers, who often become respected community figures. This network provides women with opportunities for social interaction and advocacy, offering a platform to converse about health, nutrition, and child-rearing matters.

Shortcomings of ICDS

1. Insufficient Infrastructure and Resources

Studies have reported gaps in infrastructure facilities at Anganwadi centres, which are the primary units for ICDS service delivery. Many AWCs lack proper buildings, drinking water facilities and toilets (Chudasama et al., 2016). This inadequate infrastructure hampers the effective provision of services to the beneficiaries.

2. Overworked Staff

The ICDS programme aims to provide a wide range of services, including food supplementation, immunisation, health check-ups, and early childhood education (Vikram and Chindarkar, 2019). This broad scope of responsibilities could contribute to staff being overworked, as they must manage multiple tasks and cater to various groups of beneficiaries.

3. Insufficient Focus on Unpaid Care Work

While ICDS indirectly addresses unpaid labour by supporting maternal and child health, it fails to directly tackle the broader issue of domestic caregiving and household tasks that disproportionately affect women. Consequently, the programme falls short in assisting women in balancing home responsibilities with workforce participation.

Global Best Practices and Policy Recommendations for ICDS

To enhance the effectiveness of the ICDS scheme and better address unpaid labour, learning from successful international models is crucial. The following are some policy recommendations that integrate these global practices.

Enhancement of Infrastructure and Personnel Resources: Exemplary international models, such as the Integrated Early Childhood Development (IECD) programmes implemented in Sweden and Finland, highlight the crucial role of well-funded early childhood services. These nations make substantial investments in childcare centre infrastructure and ensure appropriate training and remuneration for caregivers. The ICDS programme in Maharashtra would benefit from increased financial allocation to upgrade Anganwadi facilities, including improved infrastructure, safety, and hygiene standards. Moreover, prioritising the recruitment and development of a competent workforce is essential to prevent the overextension of Anganwadi workers and to maintain service quality.

Incorporation of Menstrual and Reproductive Health Education: Global best practices suggest that addressing menstrual hygiene and reproductive health is crucial for improving overall health outcomes and gender equality. Integrating comprehensive menstrual and reproductive health education into the ICDS curriculum, targeting both women and men (Parish & Rubio-Aurioles, 2010; Wegner et al., 1998). By focusing on education, gender equity, and comprehensive health services, the ICDS can better serve the needs of women and adolescents in India, which would not only educate and empower women but also address a significant gap in existing services.

Promotion of Equitable Caregiving Responsibilities: Sweden's parental leave policy serves as an exemplary model for encouraging shared caregiving duties among parents. The Swedish government provides equal paid parental leave for both mothers and fathers, allowing each parent to take time off work for newborn care (Wells and Sarkadi, 2011).

This approach helps mitigate the disproportionate burden of unpaid labour on women and promotes paternal involvement in childcare. The International Men and Gender Equality Survey (IMAGES)

revealed that when men hold equitable attitudes, it is associated with greater participation in the home and reduced use of violence (Levtov et al., 2014). This indicates that ICDS could benefit from incorporating programmes that promote men's involvement in childcare and household responsibilities, potentially leading to more equitable caregiving practices.

Synergy with Economic Empowerment Initiatives: Brazil's Bolsa Família programme demonstrates the effective integration of conditional cash transfers with educational, healthcare, and childcare requirements, directly connecting economic support to gender equality. Women receive financial assistance upon fulfilling specific criteria, such as ensuring their children's school attendance and regular medical checkups. The *Chile Crece Contigo* (Chile Grows with You) programme integrates childcare services with initiatives that actively support fathers' involvement in caregiving, while also promoting women's access to paid employment (ILO, 2016). A similar programme could be introduced in conjunction with the ICDS in Maharashtra, linking financial aid for families to the provision of unpaid care services and equal participation of both genders in caregiving responsibilities. This approach would help alleviate the pressure on women to bear the majority of caregiving duties and allow them to dedicate more time to educational pursuits or income-generating activities.

Maternity Benefit Act (MBA): An Overview

The Maternity Benefit Act is a Central scheme, passed in 1961 and amended in 2017, enforced by State governments and is a pivotal piece of legislation in India designed to support women in the workforce during pregnancy and childbirth, ensuring 26 weeks of paid maternity leave for women employed in organisations with ten or more employees (Maternity Benefit (Amendment) Act, 2017).

Strengths of MBA

1. Economic Security

The Act ensures that women retain their income by guaranteeing paid leave, helping alleviate financial stress. This support allows women to maintain economic stability during maternity, fostering greater financial independence among women.

2. Workforce Retention

The provision encourages women to remain in the labour force post-childbirth, as they can return to their jobs without significant career disruption, potentially narrowing the gender gap in employment.

Weaknesses of MBA

1. Exclusion of Informal Sector Workers

The Maternity Benefit Act 2017 in India, while progressive in many aspects, excludes informal sector workers, which is a significant oversight given the large proportion of women employed in this sector. More than 85% of women are employed in establishments with fewer than 10 workers, which are exempt from the Maternity Benefit Act — leaving the vast majority outside its scope. Only 6.5% of all working women in India are eligible for maternity benefits, and this share declines to 4.7% among working mothers of infants under one year (PLFS 2022–23, IndiaSpend analysis). Even among regular salaried women workers, only 32.1% are eligible, while the figure is almost negligible for casual labour (0.1%). In effect, 93.5% of India's women workers cannot access maternity benefits despite India having one of the most progressive maternity leave laws globally (IndiaSpend, 2024).

2. Limited Support for Fathers

The Maternity Benefit Act 2017 in India provides limited support for fathers, reflecting a broader trend of gender disparities in parental leave policies across countries. While the act significantly expanded maternity leave benefits, it did not introduce substantial provisions for paternity leave, highlighting the focus on maternal care over paternal involvement in child care. The limited support for fathers in India's Maternity Benefit Act of 2017 may perpetuate gender inequality in childcare responsibilities and workplace opportunities. The Act focuses solely on maternity leave, omitting paternity or shared parental leaves. Including such provisions could distribute caregiving duties more evenly between parents, further supporting women's career progression.

3. Implementation Issues

The implementation of the Maternity Benefit Act 2017 in India faces several challenges, particularly in providing high-quality midwifery care and ensuring access to maternity services. Key barriers include a lack of competent maternity care providers, limited recognition of midwives as autonomous professionals, and inadequate health system infrastructure (Mcfadden et al., 2020). Improving resource availability, enhancing midwives' skills and recognition, and strengthening health system infrastructure are critical steps.

4. Limited Coverage

The requirement of 10 or more employees excludes women in smaller organisations or the informal sector, where a significant portion of India's female workforce is employed. This leaves many women without maternity protection.

5. Employer Burden

Employers bear the entire financial responsibility, which may strain small and medium-sized businesses. This could inadvertently discourage the hiring of women of childbearing age, counteracting the Act's intent to promote gender equality.

Global Best Practices and Policy Recommendations

- **Expand Paid Family Leave to Include Fathers**

Globally, there is a growing trend towards expanding paid family leave policies to include fathers, recognizing the significance of fathers' participation in childcare and family well-being. Paid parental leave mandated by the Swedish government has been accessible to both mothers and fathers since 1974, with each parent having non-transferable leave months (Haas & Hwang, 2008). This policy has had positive effects on fathers' participation in childcare and satisfaction with child contact.

- **Include Informal Sector Workers**

Policymakers should consider implementing a non-contributory maternity cash transfer programme for informal sector workers, similar to the one proposed in the Philippines (Ulep et al., 2020). Such a programme could promote greater social equity, enhanced economic productivity, and improved health outcomes by supporting mothers in achieving their breastfeeding goals. Interestingly, not all informal workers are marginalised or work out of economic necessity. A study in India revealed that a large proportion of informal workers are self-employed entrepreneurs (Gurtoo and Williams, 2009). This diversity in the informal sector workforce should be considered when designing maternity schemes to ensure that they cater to the needs of both dependent employees and self-employed individuals.

- **Introduce Childcare Support Systems**

Policymakers should consider a range of evidence-based strategies to support childcare systems globally. These may include investing in staff training, leveraging technology for menu planning and monitoring, providing targeted educational materials, and implementing policies that support fathers' participation in childcare (Fox et al., 2009). Additionally, addressing the unique challenges faced by different types of childcare providers (e.g., centres vs. family homes, urban vs. rural) is crucial for developing effective interventions (Dev et al., 2019). Ongoing research and evaluation of large-scale programmes are essential for refining and improving childcare support systems worldwide.

- **Services for Eldercare**

Expanding access to affordable professional services—such as home-based caregivers, assisted living, and adult daycare—can help ease women's caregiving responsibilities. Promoting eldercare startups can be beneficial and may help in the long term senior care. Governments can support caregivers through financial assistance, pension benefits, and targeted tax relief. Strengthening public healthcare systems with subsidised eldercare services reduces reliance on informal caregiving and enables women to better balance care responsibilities with other roles. Social organisations and community-based programmes play a vital role by offering logistical help and emotional support—ranging from respite care services to caregiver support groups. These networks reduce isolation, provide practical guidance, and create reliable support systems for families. For women who shoulder the bulk of caregiving, such initiatives offer essential relief and encouragement.

Areas for Future Research

- **Valuation of Unpaid Work by Unmarried Dependent Women**

The unpaid labour of unmarried dependent women in households of their relatives is often significantly undervalued—both economically and socially—compared to the unpaid work performed by married women in their own homes. This discrepancy stems from deep-rooted societal biases that overlook the contributions of single dependent women. Future research should explore the extent of this undervaluation and its implications for economic and gender equity.

- **Economic Classification of Unpaid Work**

There has been no formal economic or sectoral classification of the diverse types of unpaid work that women perform. Activities such as caregiving, cooking, housekeeping, and child-rearing are distinct forms of labour, each with varying skill requirements and potential market values. The absence of a structured classification system has led to an underestimation of their economic worth. Future studies should focus on developing a comprehensive framework for categorising and valuing unpaid work to better reflect its contribution to the economy.

- **Impact of Technological Advancements on Unpaid Work**

Technological innovations, such as automation in household chores, digital caregiving solutions, and e-commerce for household management, have the potential to reduce the time burden of unpaid work. Research is needed to analyse how these advancements impact the distribution of unpaid labour, whether they contribute to gender equality, and how accessible they are across different socioeconomic groups.

Conclusion

This study has illuminated the pervasive gender disparities in unpaid domestic and care work in Maharashtra, underscoring their profound implications for women's economic empowerment. Drawing on the National Statistical Office's Time Use Survey (2019), the analysis reveals that women in Maharashtra dedicate significantly more time—averaging 307 to 316 minutes daily—to unpaid work compared to men, who contribute a mere 28 to 32 minutes. This stark imbalance persists across districts, sectors, marital statuses, educational levels, and social groups, highlighting the entrenched nature of gender norms that disproportionately burden women with domestic and caregiving responsibilities. The economic valuation of this unpaid labour, estimated at ₹1.54 trillion annually or 3.61% of Maharashtra's GSDP in 2024-25, underscores its critical yet invisible contribution to the state's economy. This figure, while substantial, likely underestimates the true value due to the limitations of the replacement cost method and the exclusion of emotional and multitasking dimensions inherent in care work.

The findings reveal notable variations across Maharashtra. Rural women, particularly in districts like Aurangabad and Sangli, bear a heavier unpaid work burden, reflecting stronger patriarchal norms and limited access to market-based substitutes such as domestic help or childcare services. In contrast, urban areas like Mumbai and Pune exhibit slightly lower unpaid work hours for women, possibly due to greater workforce participation and access to outsourcing options. Education offers some relief, with unpaid work decreasing as educational attainment rises, yet even highly educated women spend over four hours daily on these tasks, suggesting that cultural expectations outweigh human capital gains. Marital status further exacerbates the disparity, with married women shouldering the highest burden—up to ten times that of never-married men—while social group differences indicate that tribal communities experience relatively lower unpaid work, possibly due to distinct labour divisions.

Policy interventions like the Integrated Child Development Services (ICDS) and the Maternity Benefit Act (MBA) provide partial support but fall short of addressing the root causes of unpaid labour disparities. ICDS alleviates some childcare burdens through Anganwadi centres, yet its inadequate infrastructure and lack of focus on broader domestic responsibilities limit its impact. Similarly, the MBA ensures economic security for formal sector women but excludes the vast informal workforce and fails to promote shared caregiving by omitting paternity leave provisions.

Drawing from global best practices—such as Sweden's equitable parental leave and Brazil's Bolsa Família—targeted recommendations include enhancing ICDS infrastructure, integrating men into caregiving roles, and extending maternity benefits to informal workers.

Ultimately, reducing the unpaid labour burden requires a multifaceted approach: redistributing care responsibilities within households, investing in accessible childcare and eldercare services, and recognising unpaid work in economic frameworks. By addressing these unseen barriers, Maharashtra can unlock women's economic potential, fostering gender equality and sustainable development. This study fills a critical gap in Maharashtra-specific research, offering a foundation for policymakers to craft evidence-based strategies that value and alleviate women's unpaid contributions, paving the way for a more equitable future.

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