

# The Invisible Workforce: Insights from MOSPI's PLFS & TUS on Women's Domestic Contributions

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## Unpaid Domestic Service Activitis: TUS 2019

Estimates are represented in respect of participation rates and average time spent in unpaid domestic service activities like *cooking, cleaning, do-it-yourself decoration, maintenance and repair, textiles and footwear care, household management, pet care, and shopping for household members, travelling, moving, transporting or accompanying goods or persons for household members*, that are undertaken by the household members for use of the household members.

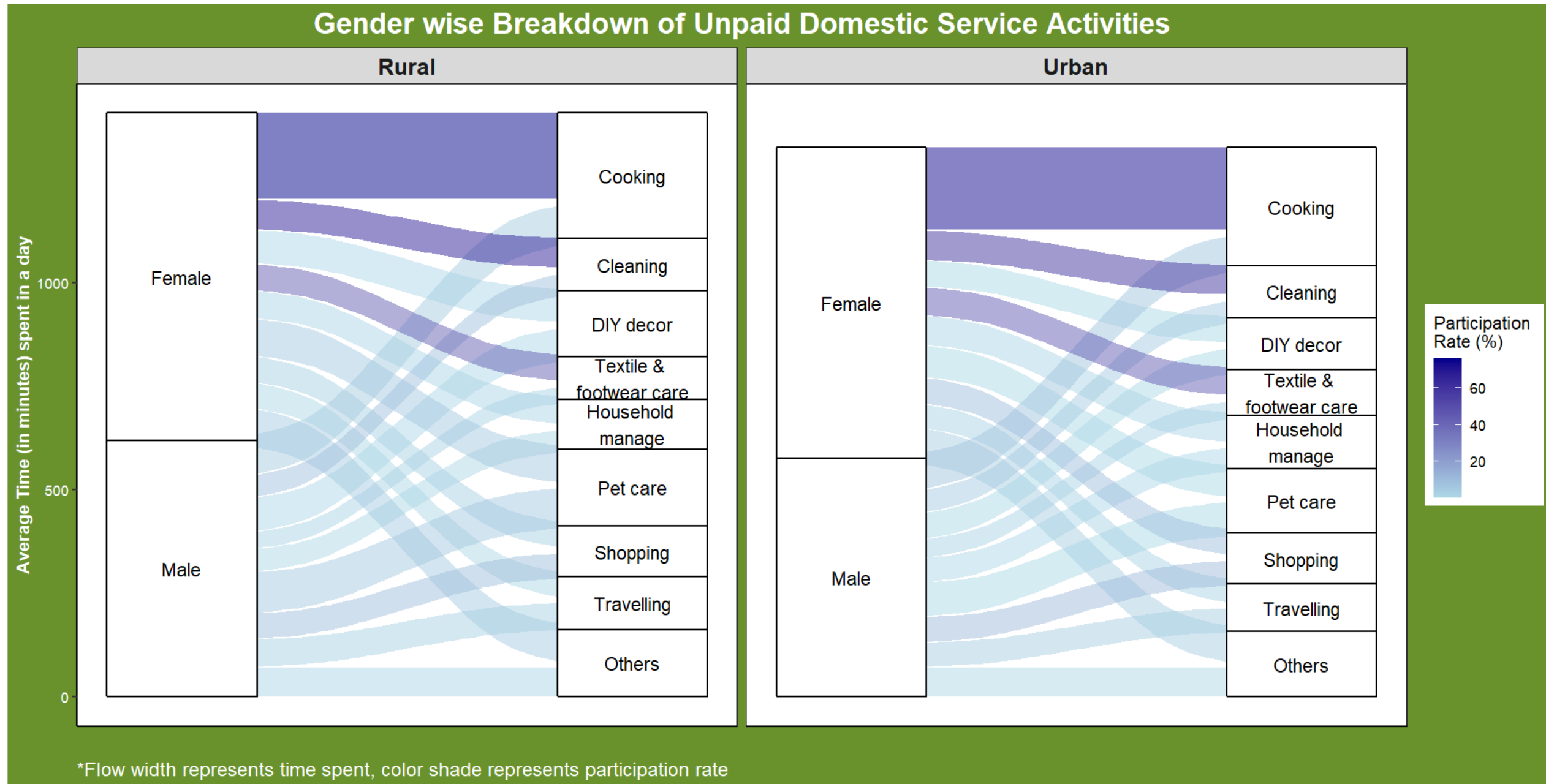
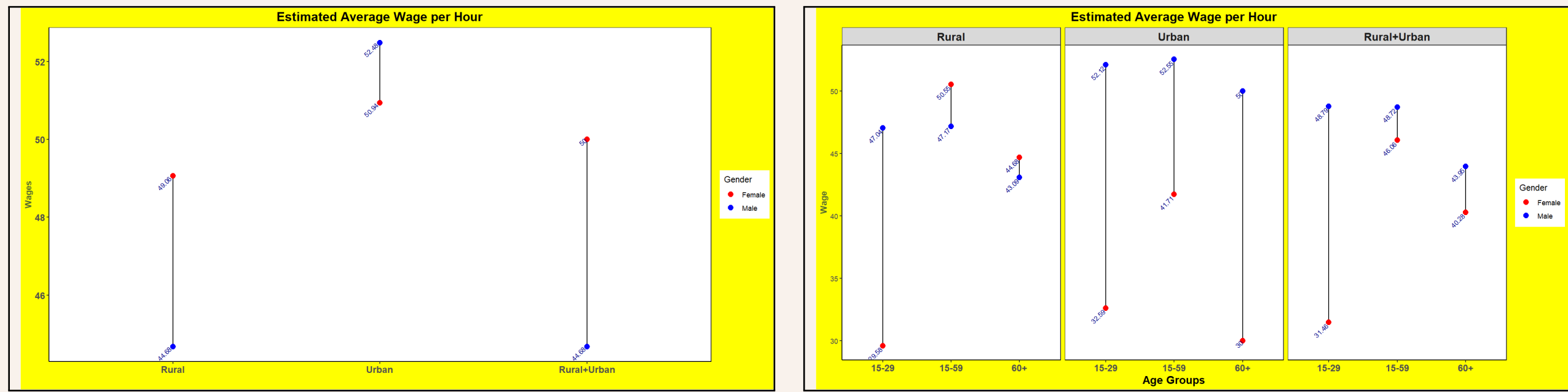


Figure 1. Alluvial Plots depicting Participation and Average Time spent in a day

*Females have a higher overall participation rate in unpaid domestic activities across both rural and urban areas. A significant portion of their time is dedicated to cooking in both settings.*

## Estimating Wage Rate: PLFS 2019-20

- Using the **NIC-Activity Code 97** from PLFS 2019-20, which includes households employing domestic personnel. This category closely aligns with the breakdown of unpaid domestic service activities in the TUS.
- Compute the weekly wage and weekly time spent for each individual engaged in domestic service activities.
- Estimate the Average Wage per Hour across different demographic (male/female) and regional settings (rural/urban/overall).



(a) Region wise Estimated Wage per Hour

(b) Age-Group wise Estimated Wage per Hour

Figure 2. Region & Age-Group wise Estimated Wage per Hour for NIC Division-97 from PLFS 2019-20

*Region-wise wage rates reveals notable gender differences, with males generally earning higher wages than females—except in rural areas for the 15-59 and 60+ age groups, where the trend reverses.*

*Building on these wage estimates, we now analyze how they translate into economic valuations for unpaid domestic service activities.*

## Monthly Estimated Expenditure on Domestic Activities: Combining TUS-2019 data with Estimated Average Wage rate

- Estimate the average monthly expenditure on unpaid domestic activities as:

$$\text{Wage Per Hour} \times \text{Average Hours Spent per Day} \times \text{Participation Percentage} \times 30$$

- The formula assumes domestic services are performed daily, making a 30-day estimation reasonable.
- The participation percentage is included in the formula to account for the fact that not all individuals within a given demographic group engage in unpaid domestic work.

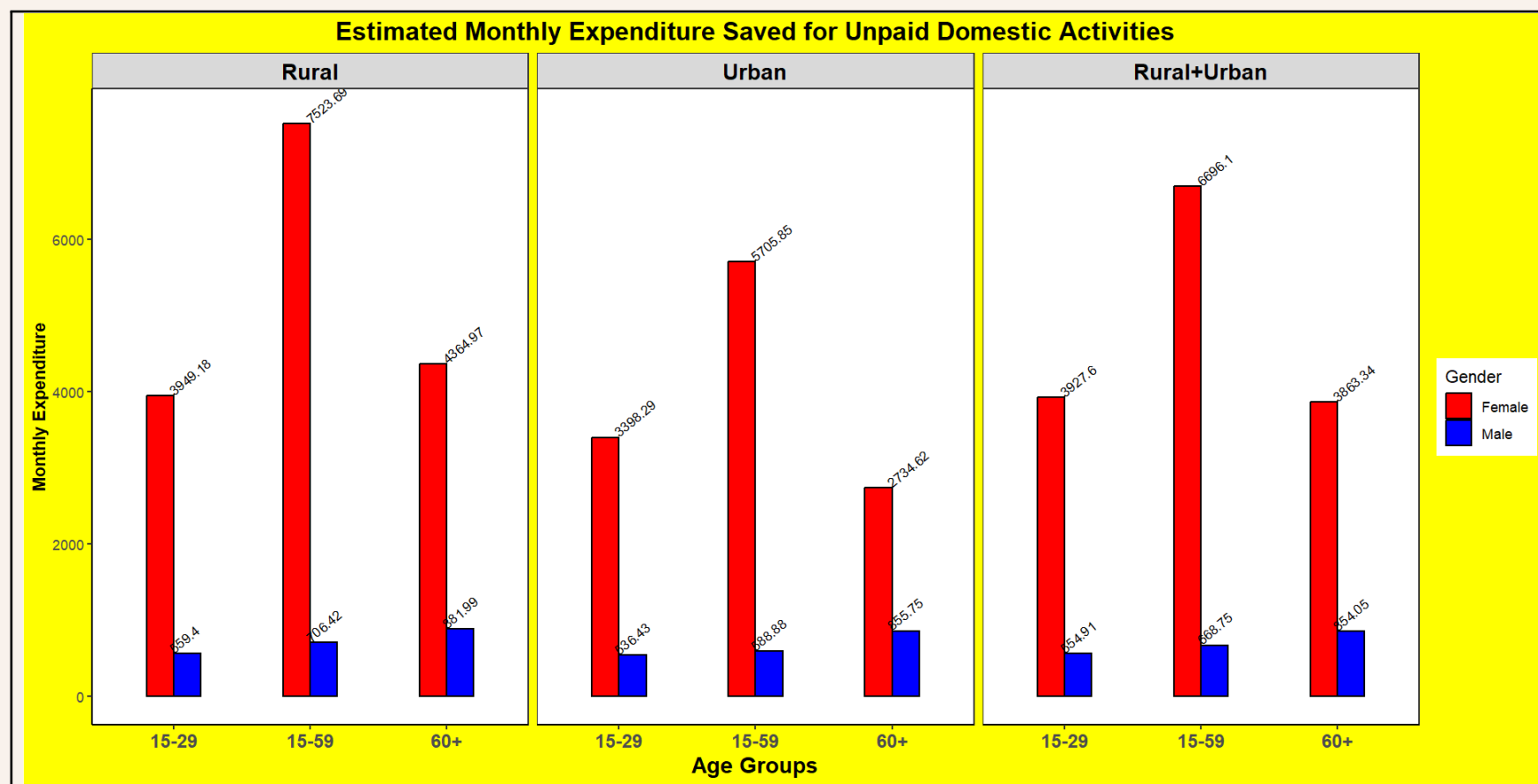
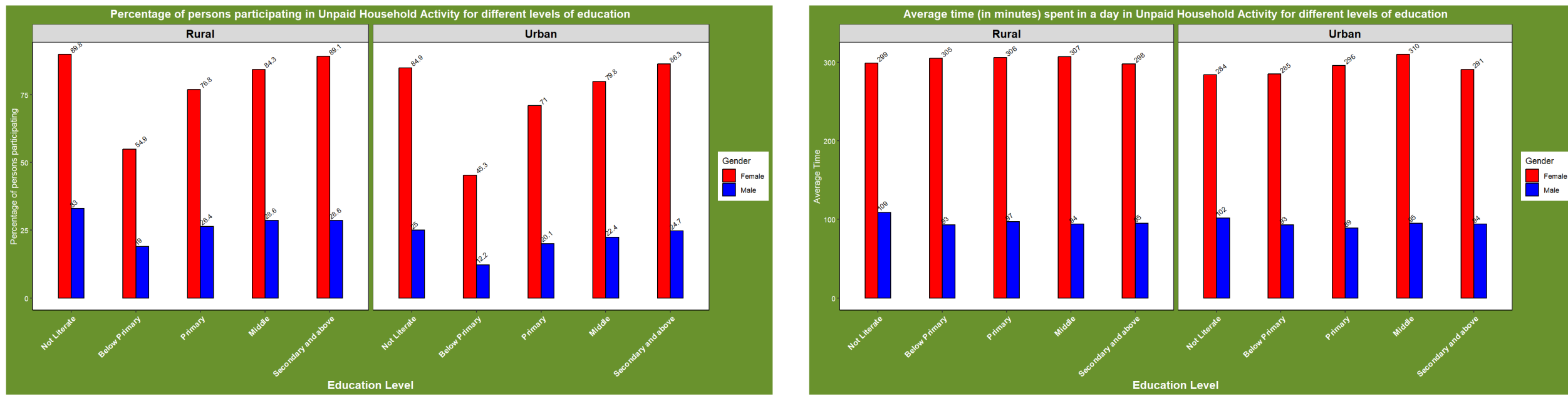


Figure 3. Estimated Monthly Expenditure saved on Unpaid Domestic Activities

*This visualization highlights the economic value of unpaid domestic work by combining time-use data with wage estimates. It reveals the 'invisible' labor in the economy, particularly the substantial contribution of women across all age groups and regions.*

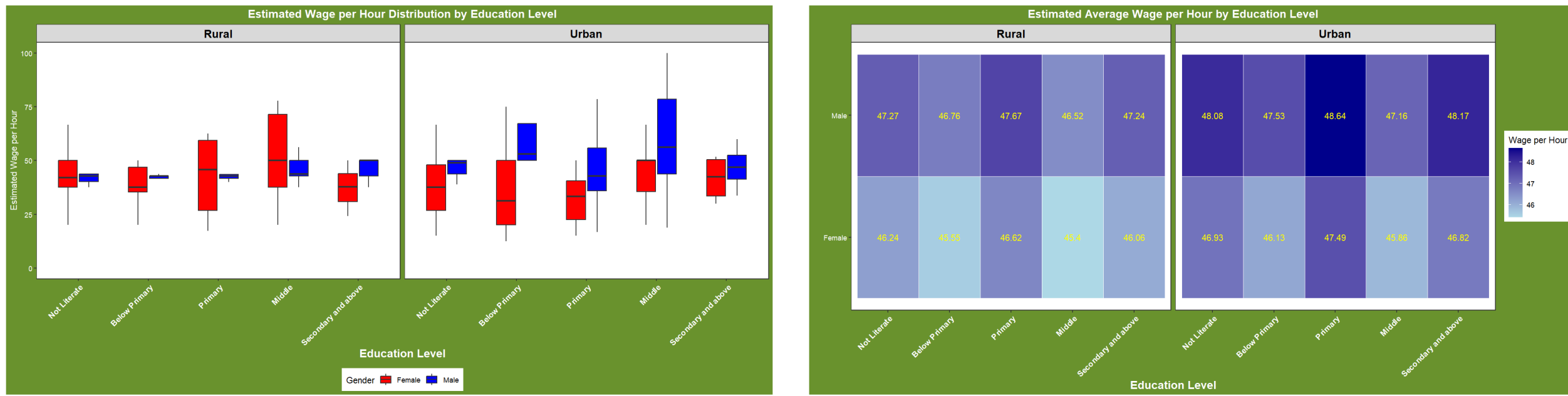
## Education Level Wise Comparison

The comparisons with respect to the level of education: *Illiterate, Below Primary, Primary, Middle, Secondary and above* has been shown.



(a) Percentage of persons participating - TUS 2019

(b) Average time spent in a day per participant - TUS 2019



(c) Estimated wage per hour for participating individuals - PLFS (2019-20) & TUS

(d) Estimated Average Wage per hour - PLFS (2019-20) & TUS

Figure 4. Comparison over different levels of Education

*The figures highlight that the time spent on unpaid domestic service activities and the mean wage rate show minimal variation across education levels.*

## Total Monthly Household Work Valuation (Paid + Unpaid)

The '*total monthly household work valuation*' is a '**viksiti**' (advanced) measure that integrates both usual household consumption expenditure and the estimated savings from unpaid domestic service activities, providing a more comprehensive assessment of household economic contributions.

- Compute the Number of Males and Females per Household (PLFS Data)**  
Extract the number of males and females in the household belonging to the 15-59 and 60+ age groups from PLFS Household data.
- Estimate the Actual Number of People Engaged in Unpaid Household Work:**

$$\text{Engaged Females in the Age Group} = \text{Number of Females in Household in the Age Group} \times \frac{\text{Participation Percentage for Females in the Age Group}}{100}$$

$$\text{Engaged Males in the Age Group} = \text{Number of Males in Household in the Age Group} \times \frac{\text{Participation Percentage for Males in the Age Group}}{100}$$

- Estimate Total Hours Spent per Day on Unpaid Work:** Multiply the average time spent in a day on unpaid domestic work per participant (TUS) by the number of engaged people to get total hours spent per day.

$$\text{Total Hours for Females in the Age Group} = \text{Engaged Females in the Age Group} \times \text{Average Time spent by female in the Age Group per day}$$

$$\text{Total Hours for Males in the Age Group} = \text{Engaged Males in the Age Group} \times \text{Average Time spent by male in the Age Group per day}$$

- Estimate the Economic Value of Unpaid Work per Day:**

$$\text{UWP for Females in the Age Group per Day} = \text{Total Hours for Females in the Age Group} \times \text{Wage per Hour for Females in the Age Group}$$

$$\text{UWP for Males in the Age Group per Day} = \text{Total Hours for Males in the Age Group} \times \text{Wage per Hour for Males in the Age Group}$$

$$\text{UWP for Females per Day} = \text{sum over UWP for Females in the Age Group per Day for both the age groups}$$

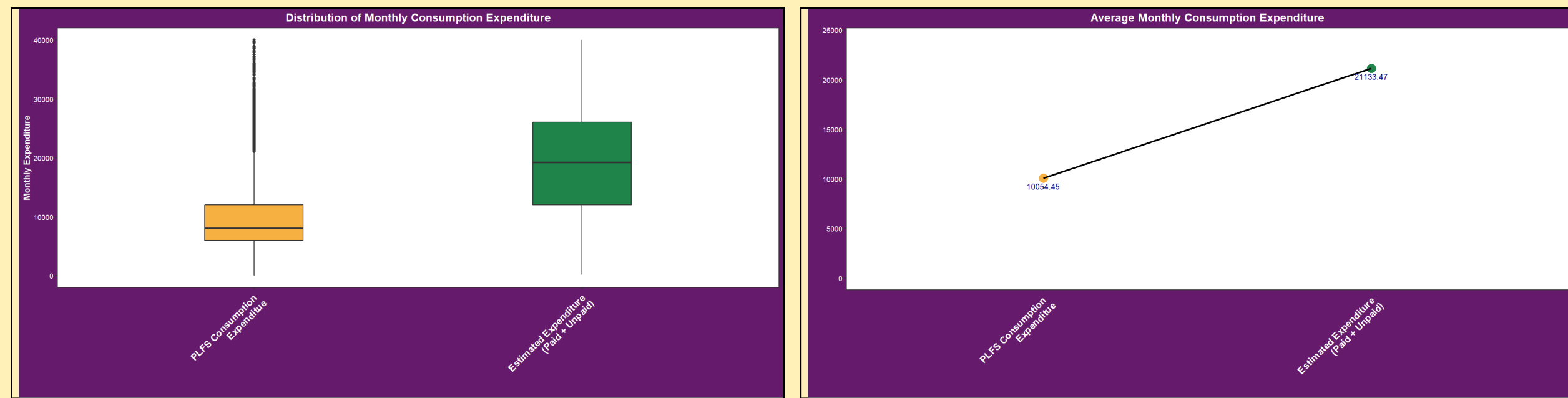
$$\text{UWP for Males per Day} = \text{sum over UWP for Males in the Age Group per Day for both the age groups}$$

- Monthly Value of Unpaid Domestic Service Activities:**

$$\text{Monthly UPW per Household} = (\text{UWP for Females per Day} + \text{UWP for Males per Day}) \times 30$$

- Total Monthly Household Economic Value of Work:**

$$\text{Total Monthly Household Economic Value of Work} = \text{PLFS Monthly Household Consumption Expenditure} + \text{Monthly UPW per Household}$$



(a) Distribution of Monthly Household Expenditure

(b) Monthly Average Household Expenditure

Figure 5. Comparison of usual PLFS Monthly Expenditure and Total monthly Household Work Valuation

*The visuals highlight the significant economic value of unpaid domestic service activities. If these tasks were outsourced instead of being performed by household members without compensation, the average household consumption expenditure would increase by 110%, underscoring their often-overlooked financial impact.*

## Key Insights & Conclusions

- Women contribute disproportionately to unpaid domestic services across all regions and age groups.
- Wage rate estimates remain largely unaffected by education level, indicating that formal education does not influence participation in household labor.
- If these services were outsourced, household expenditure would rise significantly, revealing the hidden financial impact of unpaid work.
- Quantifying unpaid domestic work using time-use data and wage estimates exposes the '*invisible labour*' in the economy, particularly the substantial contribution of women in all age groups and regions.

*Recognizing and quantifying unpaid domestic labor is crucial for shaping policies that promote gender equity, strengthen social protection systems, and ensure the economic recognition of domestic work. Integrating these insights into national accounts and labor policies can help bridge economic disparities and drive inclusive development, bringing India one step closer to a 'Viksit Bharat'.*

## Abbreviations

- MOSPI: Ministry of Statistics and Programme Implementation
- NIC: National Industrial Classification
- PLFS: Periodic Labour Force Service
- TUS: Time Use Survey
- UWP: Unpaid Work Value