

What Drives Women Participation in Unpaid Work in India?

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Abstract

The primary goal of this paper is to examine the factors that bear on the greater participation of women in unpaid activities in India. The study is based on the employment-unemployment survey conducted by the National Sample Survey Office (NSSO) in 2011-12, and NSS Report Numbers 550 and 559. The results of descriptive and regression analysis show that socio-cultural factors strongly affect women's participation in unpaid work as compared to other economic and non-economic factors. It is also found that women belonging to rich and affluent households with better education are less likely to participate in paid work.

Keywords: Unpaid work, Women workers, Women Labour Force Participation (WLFP), Labour Market

JEL Classifications: J13, J14, J16, J22, J82

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1. Introduction

Women Labour Force Participation (WLFP) in India has been historically low. One of the most important reasons is the greater involvement of women in unpaid activities. Unpaid work is any kind of work that does not receive any direct remuneration. Such workers, mostly women, perform their tasks without any fair, formal, or legal agreement with anyone. Rather than economic factors, non-economic factors such as sentiments, social mores, cultural and religious customs, family background, etc. define the relationship between the employer and employee. Women spend most of their time on caring and household up-keeping tasks that are not included in the System of National Accounts (SNA). Thus, reflecting the low participation of women in the labour force.

The wide gender gap in labour force participation is common across the world. According to an International Labour Organisation (ILO) report, ‘World employment and social outlook: Trends for women 2018’, the participation of women in labour force across the world is 48.5 percent. It is 26.5 percent less than their male counterparts. The gender gap in labour force participation in Southern Asia is even starker at 51.4 percent. In India, women’ labour force participation stood at 17.5 percent in 2017-18, which is almost 10 percent lower than the South Asian average of 27.6 percent and 31 percent less than the global average (of 48.5percent) (ILO, 2018).

Several studies have emphasised how lower female participation in the labour market pulls economic growth downward (Duflo, 2005; World Bank, 2012). Many others have also found that the gender gap in labour force participation, entrepreneurial activity, and education proceeds to hamper economic growth (Cuberes & Teignier, 2012, 2014; Esteve- Volart, 2004; Klasen & Lamanna, 2008). Literature in India widely observes that the de-feminisation of the labour force during 2004-05 to 2011-12 is the foremost cause of the decline in the aggregate labour force (Chandrasekhar & Ghosh, 2011; Rangarajan et al., 2011; Himansu, 2011; Kannan & Raveendran, 2012; Abraham, 2013). Taşseven et al., (2016) showed that economic, social, and cultural norms also influence women’ s labour force participation in OECD countries. In general, both economic and non-economic factors affect the participation of women in unpaid activities in developing countries.

The above literature reveals the factors influence women’ s participation in paid or unpaid work. But, the degree of impact is different across countries and regions. Thus, the present study tries to comprehend what are the important factors leading to greater participation women in unpaid work in India.

The paper is organised into eight sections. With the following Section two, this section provides the definitional issues related to inclusion and exclusion of unpaid work. Section three provides a review of the theoretical and empirical literature on unpaid work. The next two sections present the analytical framework, data, and major variables used in the study. Section six presents the status of unpaid work in India. Econometric results are presented in Section seven, while the final section, Section eight, presents conclusion.

2. Definitional Problem of Unpaid Work

The inclusion of women's unpaid activities as labour has long been debated in the academic community, but very little attention has been paid to defining women's unpaid work in theoretical literature. Classical theory states that unpaid domestic services are not production activities, and thus, they do not come to the market. Neo-classical economists consider that unpaid work within the household is outside the purview of economics, as unpaid work constitutes non-market activities; it's free and unlimited. Kuznets also kept unpaid work outside the purview of national income as it is a housewife's production and not a part of the economy. Due to the lack of recognition in economic theory, policymakers also did not pay attention to incorporating such activities into the labour force. Thus, many activities are performed by unpaid workers, but these are neither included in the Indian System of National Accounts (I-SNA) nor the UN-SNA. For example, the processing of primary products produced by households for their own consumption is included in the UN-SNA (2008) but not in the I-SNA.

Theoretically, we can define unpaid work with respect to two conditions: first, whether the person receives wage for her or his work or not, and second, whether her or his production (output) is included in the system of national accounts (SNA) or not. There are many types of work that are not covered in the direct wage agreement: for example, voluntary work, forced work, community labour, work done by attached labour, unpaid family workers in household enterprises, persons engaged in pure domestic activity, or person engaged in domestic duty with allied activity. Unpaid work is divided into two broad categories: first, household up-keeping which includes cooking, washing, cleaning, shopping for own household etc., and secondly care work¹ such as caring for children, the elderly, sick and disabled family members. There are several activities mainly performed by women in India that are included in NSSO surveys. These include agricultural production such as the maintenance of kitchen gardens; work in household poultry, dairy, etc., and the free collection of agricultural products for household consumption, which are included in the UN-SNA as well as the I-SNA. Several other activities² are not included in I-SNA but are incorporated into UN-SNA (2008). However, in India, because major unpaid activities are not included in the I-SNA, workers are suffering from double burdens of exclusion. Thus, in the present study, *we defined unpaid work as wage work, whether or not they are paid.*

Finally, keeping in view the availability of data, researchers have used the wage (received or not) criterion of unpaid work and considered the following categories of unpaid work for the study: 1) unpaid family workers engaged in household enterprises, 2) attending to domestic duty only, 3) attending domestic duty and being engaged in free collection of goods for own consumption and for production process.

3. Survey of Literature

The existing theoretical literature related to unpaid work can be divided into three sections: First, macro theory: that describes how economic development and government policy affect female labour force participation. Secondly, a meso framework that pertains to household characteristics such as participation in education or social and cultural norms determining female participation in the labour force. Lastly, there are micro level phenomena that force any female to participate in the labour force or unpaid work.

3.1 Macrolevel

The most popular theoretical explanation that associates women's labour force participation with economic development is the U-shaped feminisation hypothesis, which argues that when economies change considerably in developing countries, women are taken out of the labour force (Durand, 1975; Goldin, 1995; Mammen & Paxson, 2000; Abraham, 2013). The U-shaped curve takes shape due to the substitution and income effects on women's choice of an alternative among domestic duty/unpaid work and paid work. In underdeveloped economies, females contribute to labour in sustenance agricultural allied activities such as poultry, dairy, etc. and in household enterprises as voluntary household labour along with domestic activities, leading to distress from multiple loads of work. With the increase of mechanised agriculture, systematic conversion, improvement in family income, and decreasing wage differentials, the opportunity cost of domestic duties declines. Thus, women are inclined to pull out of the labour force. It is known as the 'income-effect'. On the other hand, as there is an increase of service sector white-collar jobs, growing female education, and lessening of gender wage gap, the opportunity cost of paid labour for females gets grows. Consequently, females prefer or are encouraged to substitute remunerative work for domestic duties.

Gonzalez et al. (2015) observed that the occurrence of gender-based legal restrictions, limitations on a female's virtue to legacy and belongings, as well as lawful hindrances to economic activities, are muscularly linked with well-built gender gaps in labour force participation.

3.2 Meso level

Socialist-feminists use the development of capitalist unfair gender dealings to give an explanation to de-feminisation of the labour force. With the emergence of the capitalist system of production in a paternal social organisation, female labour increasingly undergoes 'female marginalisation' (Hartman, 1976; Boserup, 2008; Mies, 1982). The end of attached labour with the end of the feudal system and the emergence of wage labour with the rise of the capitalist system of cultivation have created household divisions of labour. This capitalist system of production veers towards sustaining only wage labour that is male-dominated, while female labour veers towards domestic duty and domestic duty with allied activity. The transfer of work sites outside of home also pushes women out of the labour force (Hartman, 1976) and makes them economically dependent on men. On the other hand, a female's salaried work shows meagre social status and is stigmatised. Ascendant social mobility of households is exemplified by labour market sharing of males, marginalisation of females in the labour force and 'housewifization' of females as exposed in studies on Indian households (Mies, 1982).

Several studies have also highlighted the significance of education for female labour supply. Eckstein and Lifshitz (2011) estimated a dynamic stochastic female labour supply model with discrete choice (Eckstein & Wolpin, 1989) and pointed out that changes in education and wages (about 20 percent) play a large role in explaining female employment.

3.3 Micro level

An alternative theoretical frame for female labour force participation is the time allocation criterion. Baker (1965) explained that women make their labour force participation decision not only based on the basis of work leisure trade-off, but also on the loss of home-based production and services, such as caring of the elderly and children. Several studies have pointed out that earnings play an input role in female labour supply (Heckman & MaCurdy, 1980; Abraham, 2013). Nevertheless, Jaumotte (2003) found that working for a wage is preferred by women only if the income at least makes up for

the lost home production as well as the associated costs, implying an elevated elasticity of female labour participation to wages. Bhalla and Kaur (2013) observed that the education level of the husband has a more significant negative effect – (each extra year of male education means a drop in female participation of one percentage point) than the significant positive effect on participation of increasing female education.

4. Analytical Framework

The empirical model employed here is the multinomial choice model with four choices open to the women in the age group 15–65 years. The multinomial model involves one categorical response variable and a set of explanatory variables. The four choices are: work in household enterprises as unpaid family labour; engagement in domestic duty only; attending to domestic duty along with free collection of goods; or participation in labour market as paid workers. The dependent variable is nominal in nature, with categories 1 for work in household enterprises as unpaid family labour, 2 for engagement in domestic duty only, 3 for attending domestic duty along with free collection of goods, and 0 for participation in the labour market as a paid worker. Thus, the nature of the explained variable allows us to use a multinomial logit model (Greene, 2002) to understand the factors bearing on the greater participation of women in different types of unpaid activities as compared to paid work. The underpinning methodology in the estimation of the logit model is the maximum likelihood estimation (MLE) technique, not the least square estimation technique. So, the technique is free from many of the necessary conditions of the least squares estimation technique. In the absence of data for unpaid work on subsidiary status, the present study uses the principal status of unpaid work.

$$Prob(Y_i = j) = \frac{e^{\beta_j x_i}}{\sum_{k=0}^3 e^{\beta_k x_i}}, \quad j = 0, 1, 2, 3 \tag{1}$$

where, Y_i represents an individual’s choice among the four unordered alternatives of unpaid-paid categories. The estimated equation 1 provides a set of probabilities for the $\mathbf{J}+1$ choice for a decision maker with characteristics x_i . Before proceeding, we must remove an indeterminacy in the model. A convenient normalisation that solves the problem is to assume that $\beta_0=0$ (this arises because the probabilities sum to one, so only the \mathbf{J} parameter vectors are needed to determine the $\mathbf{J}+1$ probabilities). The multinomial logit model requires a particular category of dependent variables, which would be designated as the base category against which all the results would be compared. Thus, we have selected participation in paid work as a comparison group. Therefore, the probabilities are:

$$Prob (Y_i = j/x_i) = \frac{e^{\beta_j x_i}}{1 + \sum_{k=1}^J e^{\beta_k x_i}} \text{ for } j = 1, 2, \dots, J, \beta_0 = 0 \tag{2}$$

here, X_i represents the set of independent variables. The interpretation of coefficients in the multinomial logit model cannot be done directly as in the OLS model. Thus, we compute marginal effects for each explanatory variable. The marginal effect of a variable is computed by using the following equation:

$$\delta_p (y) / \delta_p x_i = \beta x_i * \exp [Z] / [1 + \exp (z)]^2$$

wherein Z is the sum of coefficients multiplied by the means of the respective variables plus the constant term.

5. Data and Variables

For this study, we used the 68th round of national sample survey (NSS) unit-level data on ‘Employment and Unemployment Survey’ conducted by the Ministry of Statistics and Programme Implementation (MoSPI) in India. The NSS survey is a nationally representative survey that provides information about all 28 states and eight union territories. A stratified multi-stage design was adopted for the 68th round survey. NSS used 2001 census villages and considered households as sampling units for data collection. The NSS 68th round covered 59,700 rural and 42,024 urban households in 7,469 villages and 5,268 urban blocks across the country. Besides, we also used two NSS reports (550 and 559) based on three rounds of NSS unit-level data - 55th (1999-2000), 64th (2004-05), 68th (2011-12) rounds. Both reports are exclusively based on women’s unpaid work and provide detailed information about the status of women’s unpaid work in India.

The study used both household and individual level variables for multinomial logit regression. Household income plays a very significant role in household labour supply (Goldin, 1994; Abraham, 2013). Empirical research in India attributed a sharp reduction in female labour force participation in recent years to a significant increase in household income (Mazumdar, 2011; Kannan, 2012; Abraham, 2013). Thus, it is assumed that household income has a positive impact on unpaid work. According to NSS reports (Nos. 550 and 559), it was found that the majority of women were engaged in unpaid domestic duties such as collection of goods (vegetables, roots, firewood, cattle feed, etc.), sewing, tailoring, weaving, etc. for household use, and no other male members were available to carry out the domestic duties. Thus, the present paper assumes that household size has a positive impact on women’s participation in the labour force or a negative impact on women’s participation in domestic duty (unpaid work) (Mitra, 2019). Age and the square of age are expected to test for non-linearity of the relationship (Ferrant et al. 2014). Hirway and Jose (2011) argued that there are several disadvantages for women undertaking multiple jobs within the house and outside it. First, performing multiple jobs does not help a person, particularly a woman, acquire specialization or skills in any one job (Sinha, 2011). Second, the person performing multiple jobs remains in low productivity as well as low earning activities (Ferrant et al., 2014), and finally, preoccupation with too many activities may restrict upward mobility in the labour market (Antonopoulos, 2008). The unequal burden of unpaid work on women has divided the labour market along gender lines (Hirway, 2008; Esquivel, 2008; IMF, 2001). The burden of unpaid work, along with the traditional and social norms attached to it, results in low attainment of human capital accruing activity by women, which in turn constrains their performance in the labour market (Charmes, 2019). Therefore, our study uses a dummy for skill. There is no ideal definition of skill, but several empirical studies use years of schooling as a proxy for skill (Green, 2011; Attewell, 1990; Love et al., 2015). The present study treats any woman skilled if she has more than 12 years of general education, any type of technical education, and any vocational training. De-feminization of labour market literature shows a sharp decline in female labour force participation due to the larger participation of females in education (Chowdhury, 2011; Mazumdar, 2013; Abraham, 2013). The decision by any individual, especially women, to participate either in paid or unpaid work is determined by the type of household³ (Mitra, 2019) based on means of livelihood. The residential status of women whether rural or urban, and the openness of society that allows women to go outside for work also affect their participation in the labour market (Charmes, 2019).

One may believe that the development of states and regions affect the participation of women in unpaid work (Chakraborty, 2010). To examine this, states have been divided into three categories based on the Human Development Index⁴ (HDI). Highly developed states are those whose HDI ranking is between 0.790 and 0.570 (Kerala, Himachal Pradesh, Punjab, Maharashtra, Delhi, Goa, North Eastern states 5 and Tamil Nadu); mediumly developed states have HDI ranking between 0.569 and 0.444 (Haryana, Jammu and Kashmir, Gujarat, Karnataka, West Bengal, Uttarakhand, Andhra Pradesh, and Assam); and lowly developed states are those with HDI ranking below 0.444.

Further, High-HDI has been selected as the reference category for regression analysis. Besides, the study also considers the marital status of women as an independent variable because marriage puts on women different kinds of restrictions such as social and cultural norms, less freedom to work outside the house, and responsibilities of caring for household members, especially children and the elderly (Mitra, 2019; Ferrant et al., 2014). Consequently, their participation in paid work decreases. Several more restrictions are imposed by society on the basis of religion and caste (for both males and females) but such social and cultural standards are strongly implemented in the case of women (Raghuram, 2001; Singh & Pattanaik, 2020). To check the significance of such kinds of social restrictions on women’s ability to participate in unpaid work, the study uses Hindu religion and upper caste as a benchmark category (Eswaran et al., 2013). Table 1 presents the summary of variables used for the regression analysis.

Table 1: List of Variables and Definitions

Variable	Definition used in the study
Per-capita Household consumption expenditure	Monthly household consumption expenditure Size of household
Household Size	Number of persons including children living in household.
Age	Age of individual in years.
Age square	Square of individual age (Age in years)
Dummy for Sector	Dummy for an individual living in urban area.
<i>Caste (Upper Caste) *</i>	
Schedule caste	Dummy for an individual belonging to schedule caste family.
Schedule Tribe	Dummy for an individual belonging to schedule tribe family.
Other backward caste	Dummy for an individual belonging to other backward caste family.
<i>Religion (Hindu) *</i>	
Muslim	Dummy for an individual following Islam.
Christian	Dummy for an individual following Christianity.
Other	Dummy for an individual following other religions.
Skill component	Dummy for an individual have any skill.
Participation in education	Dummy for an individual currently participate in education.
Marital Status	Dummy for married individual.

Self-employed household	Dummy for individual belonging to self-employed household.
	State Category (High HDI state) [@]
High HDI states	HDI ranking between 0.790 and 0.570
Medium HDI states	HDI ranking is between 0.569 and 0.444
Low HDI states	HDI ranking is below 0.444

*Note: * refers benchmark/ reference category.*

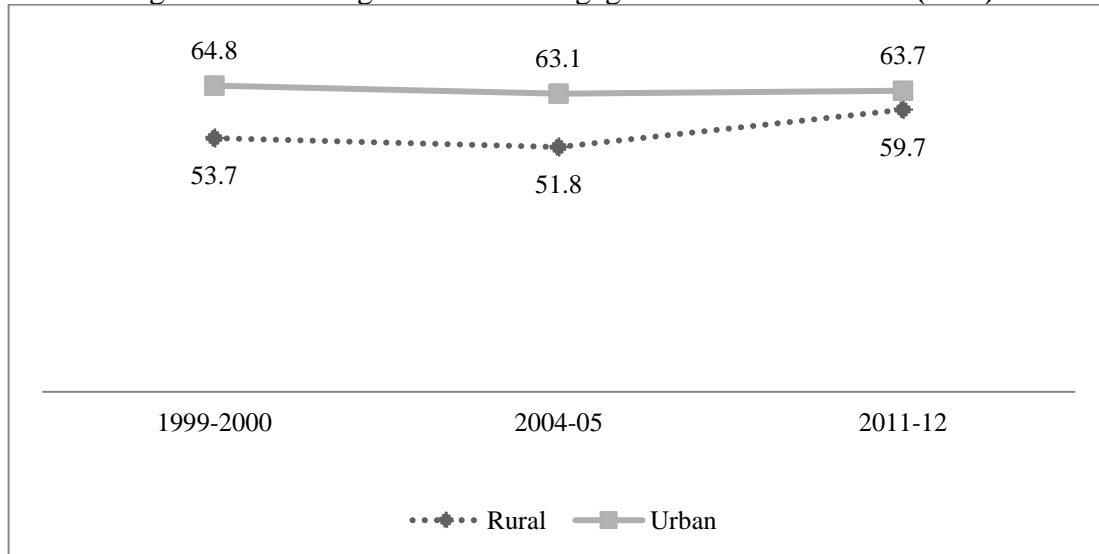
Source: Authors' calculation

6. Status of Unpaid Work

A large number of women are engaged in unpaid activities in both rural and urban areas. However, rural areas have witnessed a substantially higher growth in the number of women in unpaid work during 1999-2012 than urban areas. The participation of women in unpaid work in rural areas, which was 53.7 percent in 1999-2000 reached 59.7 percent in 2011-12. However, women's participation in unpaid work declined by one percent in urban areas during the same period (see Figure. 1). The high growth rate of unpaid work in rural areas as compared to urban areas is caused by the crowding-out of the labour force in the phase of agricultural stagnation and the slowing down of the rural economy (Kannan & Raveendran, 2012). However, the participation of women in unpaid work does not follow a uniform pattern; it is influenced by factors such as social and economic groups, age, education level, and cultural norms among others. Thus, the socio-economic status of women will help to understand under what circumstances a woman participates in unpaid work.

Table 2 depicts women's participation in unpaid activities that include unpaid family workers engaged in household enterprises, attending to domestic duty only, and engaged in domestic duty and free collection of goods. Although more than three-fourths women of each age group engage in domestic duties, the relative share is high in the 15-30 years age group. In India, women living in rural areas are less likely to participate in paid work compared to urban areas due to the strong social and cultural norms that consider it a taboo for them to go outside home for work (Klasen & Pieters, 2012; Neff et al., 2012). This phenomenon is also applicable to caste and religion. The participation in labour force for paid work among upper caste and Muslim women is low due to strict social and cultural norms imposed on them.

Figure 1: Percentage of Women Engaged in Domestic Duties (UPS)



Note: UPS stands for usual principal status.

Source: National Sample Survey Reports Nos. 550 and 559.

It is hypothesised that better education helps to get better opportunities in the job market. The level of education, whether general or technical, plays a very significant role in deciding whether an individual will participate in paid work (labour market) or unpaid work (outside labour market). But Indian women are a classic case. Our results do not support this hypothesis, as women’s participation in unpaid domestic duties has increased with education level. The possible justification may be stated as follows: with the development of the economy, the service sector grows and opportunities for white-collar jobs increase, as do institutionalized caregiving, expansion of education opportunities for women, while wage differentials decline. Thus, the opportunity cost of women’s paid labour increases. Women entering the labour market with high level of education or skill will face less discrimination on the basis of gender. Thereafter, women “substitute” domestic activities for paid work. Our result is in line with Goldin’s (1995) finding that shows the U-shaped female participation pattern in the US.

Household income should be considered an important determinant of women's participation in unpaid domestic work. Table 2 depicts that women’s participation in unpaid work increases as income level of household increases. The participation of women belonging to the poorest households is highest in paid activities compared to women from richer households. This is obvious, as poor women do not have other opportunities to meet the basic needs of their households. It seems that, besides better education, women belonging to richer households are less likely to participate in paid work, partially because of the household’s strategy that men will manage the household’s resources while women will spend time on care work and other domestic duties.

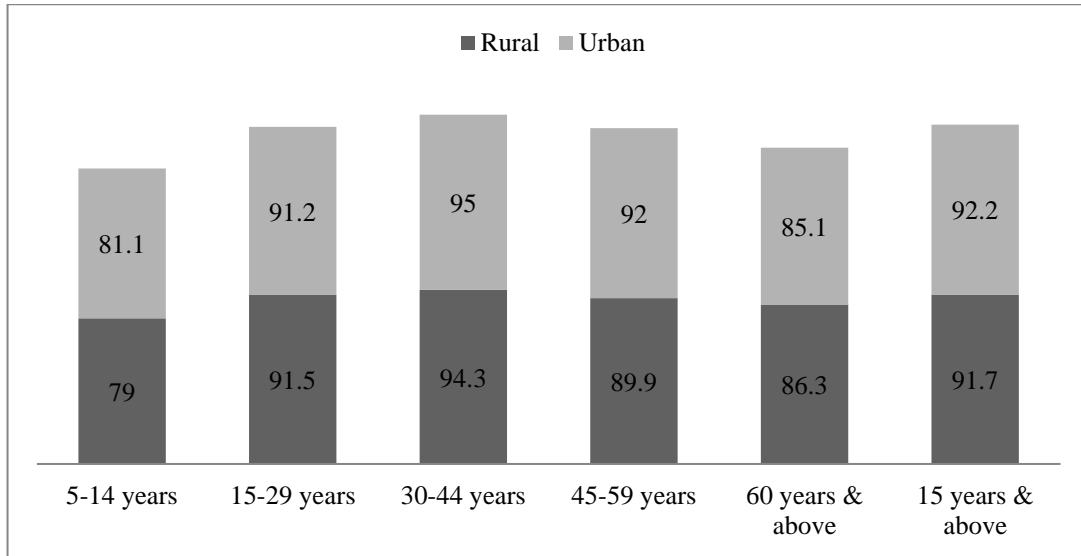
Table 2: Percentage of Indian Women (aged 15-65 years) in Paid or Unpaid Work by Socio-economic Status, 2011-12

Background characteristics	Paid work	Unpaid work
<i>Age of Women</i>		
15 - 30 years	15.10	84.90
31 - 45 years	21.74	78.26
46 - 65 years	19.39	80.61
<i>Place of Residence of women</i>		
Rural	10.81	89.19
Urban	18.15	81.85
<i>Caste</i>		
Schedule caste and tribe	24.76	75.24
Other backward caste	17.62	82.38
Upper caste	14.25	85.75
<i>Religion</i>		
Hinduism	19.57	80.43
Islam	11.81	88.19
Other	20.82	79.18
<i>Income quintile of household</i>		
Poorest	24.76	75.24
Poorer	18.55	81.45
Middle	16.35	83.65
Richer	14.21	85.79
Richest	14.87	85.13
<i>Education Status of women</i>		
No education	21.00	79.00
Primary	17.38	82.62
Middle	13.94	86.06
Secondary	12.20	87.80
Higher Education	22.86	77.14

Source: Authors’ calculation from 68th NSS EU unit level data.

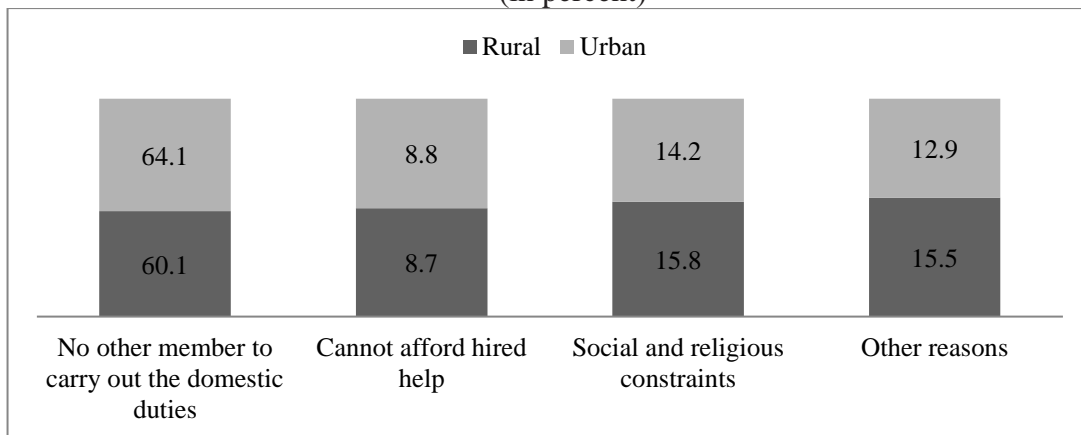
In addition, it would be worthwhile to understand in which age group women spend more time in unpaid activities(see Figure 2). It is clear from the figure that an overwhelming majority of women (almost 90 percent) who engaged in unpaid activities reported that they had spent most of their time on domestic duties such as child and elder care, collection of vegetables and fuel wood for cooking, collection of fodder for animals, helping in family enterprises, and so on during the 365 days preceding the survey. In general, the proportion of women spending most of their time on unpaid domestic duties is higher in urban areas compared to rural areas in all age groups. Furthermore, the study also inquired as to why women spent of the majority of their time on domestic duties. Figure 3 shows that among reported reasons, ‘no other member to carry out the domestic duties’ was the single-most cited reason for women spending most of their time in care and other domestic duties in both rural and urban areas. Almost 16 percent of women in rural areas and 14 percent in urban areas reported that social and religious constraints were the next main reasons that forced them to spend most of their time on domestic duties and unpaid work. This indicates that reducing women’s unpaid work and redistributing these activities with males may push them into paid work.

Figure 2: Percentage of Women Spending Most of the Time on Domestic Duties (UPS) 2011-12.



Note: UPS stands for usual principal status.
 Source: Computed from NSS report no. 559

Figure 3: Reasons for Spending Most of the Time on Domestic Duties (UPS) 2011-12 (in percent)



Note: UPS stands for usual principal status.
 Source: Computed from NSS report no. 559

In contrast, according to NSS Reports Numbers 550 and 559, the share of women who spent the last time on domestic duties declined significantly both in rural and urban areas. Females who spent the least time in domestic duties as unpaid workers were engaged in either the paid labour market, educational institutions or may be engaged as full-timers in unpaid work. This shift of females outside the labour force may be explained as caused by either an increase in the household income or rising female participation in education. While some studies have portrayed this decline as a positive effect due to rising participation in education among young females (Rangarajan et al., 2011), others have been pessimistic, claiming that it was due to the crowding-out of female labour in the face of agricultural stagnation and a slowdown of the economic growth (Kannan & Raveendran, 2012). Another alternative viewpoint put forward is that this decline might have been due to the reversal of an exceptional increase in female labour force caused by agrarian distress during the earlier period 1999- 2000 to

2004-05 (Abraham, 2009; Himanshu, 2011; Klasen & Pieters, 2012; Neff et al., 2012). Abraham (2013) argued that de-feminization of labour force has been caused by the participation of women in education and an increase in household income.

7. Determinants of unpaid work

The estimated coefficients of the multinomial logit model and marginal effects are presented in Tables 3 and 4, respectively. The study has used macro, meso, and micro level variables to estimate coefficients and marginal effects. The individual β coefficients are tested using the Wald chi-square statistic. The results of multinomial logit regression reveal that the level of education, household size, and higher income household are positively related to the participation of women in each type of unpaid work. However, poorest households are more likely to belong to lower caste groups than the general category, Islam and other religions, as opposed to Hinduism, women's age, and marital status are negatively associated with women's participation in unpaid activities.

The results of marginal effects show that the level of education has a significant positive impact on women's participation in all three categories of unpaid activities in comparison to paid work. The econometric results are similar to the descriptive results presented in Table 3. But the participation of women mainly increases due to education in the 'engaged only in domestic duties' category. It is observed that the income of households also plays a significant role in the decision making of women to participate in the labour market. Women are less likely to participate in household enterprises such as unpaid family labour as well as domestic duties such as free collection of fish and fodder for animals, vegetables, firewood, cow-dung and care of cattle etc., as their survival strategy increases, and spend more time on paid activities. On the contrary, as the income of households increases, women themselves tend to participate in domestic and other care duties. In case of India, female labour is basically distress labour, so if household income starts increasing, females withdraw from the labour force and participate in human capital-accumulating activities like training and education.

Table 3: Multinomial Logit Regression Coefficient of Participation in Unpaid Work, Women Aged 15-65 Year in India, 2011-12

	Unpaid Family labour Vs Paid Labour		Attended only Domestic Duty Vs Paid Labour		Attended Domestic Duty with other Act Vs Paid Labour	
	Coeff (β_1)	SE of (β_1)	Coeff (β_1)	SE of (β_1)	Coeff (β_1)	SE of (β_1)
Intercept	-2.672***	0.145	3.206***	0.097	0.403***	0.101
Age	-0.059***	0.006	-0.158***	0.005	-0.084***	0.005
Square of Age	0.001***	0.000	0.002***	0.000	0.001***	0.000
Living in rural area	0.999***	0.039	-0.482***	0.021	0.552***	0.023
PE ¹	0.170	0.215	-0.173	0.141	-0.094*	0.150
Married	-2.309***	0.064	-1.576***	0.031	-1.886***	0.035
SEH ²	1.226***	0.033	-0.204***	0.019	0.078***	0.019
Household Size	0.104***	0.006	0.122***	0.005	0.157***	0.005
MPCE (Richest) [@]						
Poorest	-0.605***	0.057	-0.403***	0.037	-0.007***	0.039
Poorer	-0.046	0.053	-0.157***	0.034	0.078***	0.037
Middle	0.127***	0.052	0.040	0.033	0.112***	0.036
Richer	0.215***	0.053	0.123***	0.033	0.163***	0.037
Level of Education (Higher) [@]						
No education	1.203***	0.059	0.070***	0.032	0.613***	0.034
Primary	1.092***	0.059	0.492***	0.032	0.563***	0.035
Middle	1.124***	0.063	0.798***	0.035	0.788***	0.038
Secondary	1.149***	0.068	0.943***	0.038	0.752***	0.042
Caste (forward castes) [@]						
Scheduled tribes	0.056	0.045	-1.068***	0.038	-1.011***	0.036
Scheduled caste	-0.845***	0.044	-0.620	0.028	-0.628***	0.029
Other backward caste	-0.098***	0.034	-0.223***	0.023	-0.472***	0.024
Religion (Hindu) [@]						
Muslim	-0.407***	0.051	0.469***	0.031	0.375***	0.032
Christian	-0.123	0.081	-0.430	0.057	-0.286***	0.062
Other religion	-0.406***	0.099	0.183***	0.056	0.591***	0.057
State Category (High HDI state) [@]						
Medium HDI	0.030***	0.030	-0.105***	0.020	0.065***	0.022
Low HDI	0.534***	0.034	0.409***	0.025	0.998***	0.025

Note: @- Base category, 1- Currently participate in education, 2- Self-employed household (major part of household income comes from self-employment, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Source: Estimated from NSS 68th round employment unemployment survey.

Besides, women belonging to the middle income group engage in low-income activities to support their household income and maintain the social status of their households. But income from lower-earning activities has various types of costs, such as loss of household production and care of children and the elderly which includes emotional costs as well. Thus, it is very difficult for women to decide to participate in paid work while leaving children at home. In the case of higher income households, women have less pressure to generate resources for families. However, the cost of hiring domestic workers is quite high; hence, the opportunity cost of women's participation in paid work gets increased. Thus, women spend most of their time on child and elderly care and other domestic duties compared to their male counterparts. According to a time use

survey, women spend 40 to 50 percent more time on domestic duties than men, but these activities are not included in the SNA (Hirway, 2005; Antonopoulos, 2009).

Table 4: Marginal Effects of Participation in Unpaid work, Women Aged 15–65 Years in India, 011-12

	Unpaid Family labour		Engaged only in Domestic Duty		Engaged in Domestic Duty with other Activity	
	<i>dy/dx</i>	<i>SE</i>	<i>dy/dx</i>	<i>SE</i>	<i>dy/dx</i>	<i>SE</i>
Predicted outcome	0.173		0.063		0.448	
age	0.002***	0.001	-0.001***	0.000	0.043***	0.001
Square of age	0.000***	0.000	0.001***	0.000	-0.000***	0.000
Living in rural area	0.055***	0.003	-0.046***	0.002	0.214***	0.004
PE ¹	0.196*	0.022	-0.027***	0.017	-0.021	0.024
Married	0.470***	0.007	-0.035***	0.002	-0.135***	0.006
SEH ²	-0.071***	0.007	-0.059***	0.002	0.026***	0.003
Household Size	-0.003	0.003	0.002***	0.000	0.139***	0.001
MPCE (Richest) [@]						
Poorest	-0.024***	0.006	-0.011***	0.003	0.075***	0.006
Poorer	-0.043***	0.005	-0.008***	0.003	0.048***	0.006
Middle	0.006	0.005	0.013***	0.003	0.053***	0.006
Richer	0.066***	0.004	-0.009***	0.003	0.012***	0.006
Level of Education (Higher) [@]						
No education	0.062***	0.004	-0.010	0.004	0.125***	0.006
Primary	0.047***	0.003	-0.054***	0.004	0.025***	0.006
Middle	0.031***	0.003	0.037***	0.004	0.032***	0.006
Secondary	0.023***	0.003	0.058***	0.004	-0.007***	0.007
Caste (General Category) [@]						
Scheduled tribes	0.092***	0.006	0.039***	0.003	-0.195	0.007
Scheduled caste	-0.002***	0.005	-0.031***	0.002	-0.038***	0.005
OBC	0.003***	0.003	0.003***	0.002	-0.072***	0.004
Religion (Hinduism) [@]						
Islam	-0.017***	0.002	0.043***	0.002	0.099***	0.005
Christianity	0.046***	0.004	-0.016***	0.005	-0.075***	0.011
Other religion	-0.038***	0.009	-0.028***	0.004	0.022***	0.010
State Category (High HDI state) [@]						
Medium HDI	0.003***	0.001	-0.035***	0.001	0.029***	0.004
Low HDI	-0.004***	0.002	-0.068***	0.002	0.158***	0.004

Note: @- Base category, 1- Currently participate in education, 2- Self Employed Household (major part of household income comes from self employment, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$).

Source: Estimated from NSS 68th round employment unemployment survey.

For caste and religion, Table 4 shows that members of Schedule Caste (SC), Schedule Tribe (ST) and Other Backward Caste (OBC) are more likely to participate in household enterprises as unpaid family labour. It is apparent because women from the upper caste have relatively higher level of education and skill than SC, ST and OBC women. The upper caste women, especially in rural India, are more restricted with social and cultural norms. The result of marginal effects confirms that a one-unit change in the number of SC women workers decreases the probability of being engaged in unpaid family labour by less than one percent. Similarly, Muslim women workers are less likely to participate in unpaid family labour, and more likely to participate in both domestic duties and other unpaid activities. This pattern is similar for Upper Caste (UC) Hindu women. In addition, estimation of macro level variables confirms that the development of the state negatively affects women’s participation in unpaid work; the extent of the impact is modest.

From the above discussion, it is clear that micro- and meso-level factors are more strongly affecting women's participation in unpaid activities compared to macro-level factors such as economic growth and human development.

8. Conclusion and policy implications

Gender equality plays an important role in economic development and has long been understood in literature. Various studies have highlighted how lower female labour force participation or weak entrepreneurial activity drags economic growth and that empowering woman has significant economic benefits in addition to promoting gender equality (Duflo, 2005; World Bank, 2012). The Indian labour market displays several striking features: very low rates of female labour force participation; and a large share of both women and men working in the informal sector.

In the present study, we have found that social and cultural norms are more powerful determinants for women's decision whether to work in the labour market or not, irrespective of their levels of education and skill. Women's participation in unpaid work will increase with household responsibility or strict socio-religious norms. So, married women, women from upper castes, and Muslim women are more likely to participate in unpaid work. Women from economically affluent households are less likely to participate in unpaid work, which supports the U-shape feminisation hypothesis proposed by Goldin (1994) for a developed country. It is also validated by Abraham's (2013) findings for India.

Elson (2017) suggested that the 'Triple-R' approach – recognition, reduction, and redistribution of unpaid work could be an alternative way to involve women in paid activities. Neo-liberal policies have had an adverse impact on unpaid work (Elson, 2017). It has off loaded the cost of these economic policies on unpaid work (Folber, 2008). Elson (2017) also argued that the success of neo-liberal policies in raising economic growth is usually achieved at the cost of women, which in turn causes some macroeconomic loss. It has, however, resulted in restructuring of production (to increase flexibility) and labour (to reduce labour costs). Because women who are burdened with unpaid work fit well into this flexibility, they end up taking work (generally at the low end of value chain) that is of poor quality, low waged, and lacks social protection.

It is also evident that Indian women spend considerable time on the collection of wood for cooking food. Recently, the government of India has provided free LPG cylinders to poor households, that are helping women save time. Thus, to reallocate the time of women, they can be offered loans under MUDRA⁶ scheme to start businesses in collaboration with non-government organisations (NGOs) and self-help groups. As a result, women would become more empowered, and their participation in paid activities would increase.

Notes:

¹Care can be defined as meeting the physical and emotional requirements of dependent adults, children and others.

² For more details, see NSSO Employment-Unemployment Report (2010-11).

³Self-employment household, more than 50 percent of income comes from self-employed activity.

⁴India Human Development Report 2011: Towards Social Inclusion.

⁵Northeastern states (excluding Assam).

⁶MUDRA scheme was launched in India on 8th April 2015 for financing all the different kinds of small and medium-scale businesses, with a focus on supporting the ones that banks or NBFCs are currently unable to support.

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