Are Unpaid Women Willing to Work in the Labour Market? Evidence from India

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Recommended Citation

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By Krishna M[1]

Abstract

India has set an ambitious target of achieving a US$5 trillion economy by 2025. However, a steady increase, perhaps even more rapid in recent years, in women's participation in unpaid domestic work poses a grave threat to India's economic development. Significantly, the extent of women's participation in unpaid domestic work ballooned in India, recording a quantum leap from 200 million in 2004–05 to 287 million in 2017–18. The main aim of this paper is to examine the role of socio-economic factors in explaining the willingness of unpaid women to undertake work in the labour market, using data from unit-level records of employment and unemployment and labour force surveys. This study shows that, despite engaging in routine household chores, about one-third of unpaid women are willing to take up work in the labour market. Moreover, the majority of women engaged in unpaid domestic work in India have no choice but to do this work due to the socio-economic constraints. From a policy perspective, governments should encourage unpaid women who are willing to participate in the labour market to do so, by reinforcing gender-focused measures such as provision of basic facilities, public childcare, easy access to credit facilities for entrepreneurial activities, and invigorating technical education and vocational training.

Keywords: Unpaid work, Women's work Participation rate, Labour force, Household, India, Non-labour market

JEL classifications: J11, J12, J17, J21

Introduction

India has set an ambitious target of achieving a US$5 trillion economy by 2025. However, a steady increase, perhaps even more rapid in recent years, in women's participation in unpaid domestic work poses a grave threat to India's economic development. Significantly, the size of women's participation in unpaid work ballooned in India, recording a quantum leap from 200 million in 2004-05 to 287 million in 2017–18, of which 68% in the rural sector. What is surprising is that despite robust economic growth, there has been a continuous increase in the number of women engaged in unpaid domestic work. For instance, notwithstanding India's buoyant economic growth of over 8% (on an average per annum) between 2004–05 and 2011–12, about 20 million rural women workers were out of the labour force. During the same period, the number of women performing unpaid domestic work increased by 56 million. It further increased by about 31 million from 2011–12 to 2017–18. Figure 1, which plots work participation rate (WPR) and unpaid domestic work of women in India from 1983 to 2017–18, shows that the percentage of women engaged in unpaid domestic work increased from 19% in 1988 to about 46% in 2017–18, whereas the WPR of women declined steadily during the same period.

Figure 1. Participation of Women in Workforce and Unpaid Domestic Work (%)

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Figure 1. Participation of Women in Workforce and Unpaid Domestic Work (%)
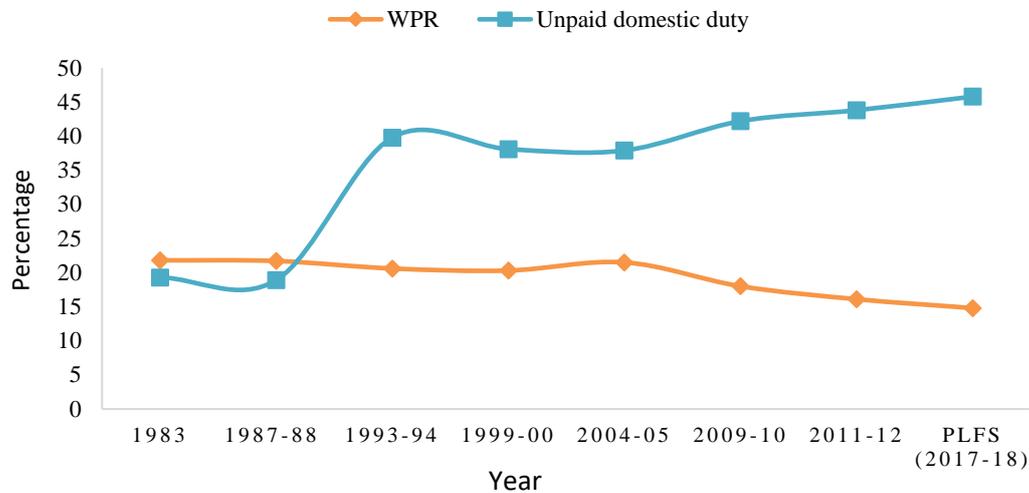
Source: Author's estimation based NSS unit-level data, various rounds.

Unpaid domestic work is a set of heterogeneous activities carried out without a wage or salary. Although it is an integral part of the household economy, unpaid domestic work is of little account in the standard measures of economic well-being. From a policy perspective, as a result of the burgeoning extent of women's unpaid work, India is confronted with two critical issues. First, a high concentration of women in housework is likely to deteriorate not only their economic independence but also their bargaining power both within and outside households (Agarwal, 1997; Rao, 2011; John, 2020). Further, according to the Global Gender Gap Report (World Economic Forum, 2017), India was ranked 108 out of 144 countries, a deterioration of its previous year's rank of 88. Second, despite engaging in routine household chores, about one-third of unpaid women are willing to take up work in the labour market, but not actively seeking it due to several reasons, such as lack of other family members to perform household chores, unavailability of qualified and rewarding jobs, inability to afford hired domestic help, and social and religious constraints.[2]

Globally, as an integral part of the Sustainable Development Goals (SDGs), the United Nations has initiated several policies and programmes to achieve gender equality across its member nations. It is now increasingly being recognized that encouraging women to participate in the labour market will have a greater impact not only on gender equality but also economic growth. In economics literature, the role of women in economic development has been debated extensively (Lewis, 1954; Boserup, 1970; Goodnow and Bowes, 1994; Davidson, 1998; Mammen and Paxson, 2000; Klasen and Pieters, 2015; Mehrotra and Parida, 2017; Singh and Pattanaik, 2019; Patel, 2020). In his article, 'Economic Development with Unlimited Supplies of Labour', Arthur Lewis (1954: 404), a Nobel Laureate in Economics in 1979, commented on one of the finest features of economic development:

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[2] Those who are willing to work, but not actively seeking it, may be subsumed under the category of discouraged workers or discouraged job seekers (ILO (n.d.); Liu, 2017). By definition, discouraged workers are those who are available for work, but not looking for it. Therefore, they are outside the purview of the labour force (Liu, 2017).

The transfer of women's work from the household to commercial employment is one of the most notable features of economic development. It is not by any means all gain, but the gain is substantial because most of the things which women otherwise do in the household can, in fact, be done much better or more cheaply outside, thanks to the large-scale economies of specialisation, and also to the use of capital. One of the surest ways of increasing the national income is, therefore, to create new sources of employment for women outside the home.

The objectives of this paper are two-fold: first, to examine the magnitude and nature of women's unpaid work in India; second, to investigate the role of personal, household, and non-labour market factors to explain unpaid women's willingness to participate in the labour market. The present study contributes to existing academic literature on women's unpaid work in two ways. First, it expands the repository on women's unpaid work by drawing from a large sample size spread across Indian states. Second, it explores the multi-dimensional effects of socio-economic factors such as caste, human capital, household income, and land ownership, on the willingness of women engaged in unpaid work to participate in the labour market. To my knowledge, existing literature has largely neglected to address the section of unpaid women who are willing to participate in the labour market. In this study, the data are sourced from recent employment and unemployment surveys (EUS) conducted by the National Sample Survey Office (NSSO).

Following this introduction, the study presents a brief review of literature, outlines the measurement of unpaid domestic work in the Indian context, describes the data sources and methods applied, and presents the findings, followed by concluding remarks and policy implications.

Women's Unpaid Domestic Work: A Brief Review of Literature

The neo-classical model of labour-leisure choice is one of the earliest attempts to map the patterns of time allocation within the household. The model separates market activities from household activities (Borjas 2005). In this model, the term leisure is used in a broad sense, including a host of activities generated within the household sector such as child care, preparing meals, cleaning and maintaining the house, and so on. The objective is to maximise utility derived from the allocation of time between labour and leisure activities. Like the consumption of goods, which are derived from labour, leisure is also equally important. However, given the time constraint, there is a trade-off between the consumption of goods and leisure. By analysing the relationship between household income and labour force participation, Mincer (1962) extended the two-way decision model to a three-way decision model, by distinctly classifying unpaid domestic work from leisure. Thus, the three-way choice model includes paid work, unpaid domestic work, and leisure. Becker (1973) explicates that the time allocation by a married couple in a particular activity is determined by marginal productivities, which, in turn, depend on investment in human and physical capital, and other factors. Similar to the comparative advantage, a marriage between a man and woman brings substantial gains when they are engaged in their specialized activities (Becker 1973).

Given the broad theoretical framework, the following section presents a brief review of the empirical studies undertaken in the Indian context. The literature review presented in this study is broadly classified into two strands. While the first strand of literature provides various reasons why women transfer from paid work to unpaid work at the macro level, the second category of studies explicitly addresses the nature of women's unpaid work using micro-level evidence.

A number of studies have investigated the reasons why the women's workforce participation rate has been declining in India (Mazumdar and Neetha, 2011; Rangarajan *et al.*,

2011; Abraham, 2013; Klasen and Pieters, 2015; Naidu, 2016; Mehrotra and Parida, 2017). As mentioned earlier, a decline in women's workforce is accompanied by a concomitant increase in their participation in unpaid domestic work in India. From a macro perspective, the gist of the empirical studies analysing the decline in women's workforce, or more broadly, the transfer of women from paid to unpaid domestic work, can be encapsulated by the following three arguments.

First, it is observed that India has recorded a 'jobless growth' since 2010, partly due to stagnation in the agricultural sector, a steady decline in manufacturing employment, mechanization of agricultural activities, and global turbulence. All these macroeconomic events have adversely affected women's work participation, particularly those who were engaged in farm activities (Chandrasekhar and Ghosh, 2011; Jose, 2012; Patel, 2020). For instance, the compound annual growth of employment between 2004–05 and 2011–12 was a mere 0.51%, while economic growth was, on average, 8.19% per annum during the same period. Second, as stated by the feminization U hypothesis, the women's workforce is likely to decline with the rising per capita GDP in the initial stages of economic development (Goldin, 1994; Mazumdar and Neetha, 2011; Abraham, 2013; Lahoti and Swaminathan, 2016). This is one of the most cited reasons for the decrease in women's workforce in developing countries. Third, the transfer of the surplus labour from traditional to modern sectors, which is in tune with the structural transformation of the economy, is restricted in the sense that it does not accommodate all who want to work in the modern sector. Due to the lack of skills and technical prowess, and rigid labour laws in the modern sector, women tend to be confined to unpaid domestic work (Jose, 2012).

Until now, only a few micro-level studies have examined the nature and magnitude of women's unpaid work in the Indian context. Most of these studies analysed the household behaviour and time allocation by men and women on different paid and unpaid activities. Choudhary et al. (2009), using a field survey of 50 men and 200 women in the rural and urban sectors, found that the participation of women in unpaid work is inextricably bound up with cultural and social norms that persist in a patriarchal society. Similarly, using a field survey of 232 households in Uttarakhand, Sidh and Basu (2011) investigated the time spent by household members on different unpaid activities. Hirway and Jose (2011), by comparing the findings from the EUS of NSSO and Time Use Survey of India (TUS), 1998–99, concluded that the TUS is more appropriate for capturing women's participation in paid and unpaid work in the context of developing economies such as India. More recently, Singh and Pattanaik (2019), by investigating the role of several socio-economic factors influencing paid and unpaid work of women, conclude that marital status, household income, land size, and social groups play a major role in determining women's choice to participate in unpaid domestic work. Tasnim (2020) attempted to address several challenges in recognizing unpaid care work in the estimation of economic well-being.

Hypothesis Testing

It is clear from the above description that there are several factors that determine the willingness of unpaid women to undertake work in the labour market. From the review of previous studies, the following three hypotheses are derived to be tested.

Hypothesis 1: Human capital investment (education and training) positively affects unpaid women's willingness to participate in the labour market.

Hypothesis 2: Economic status negatively affects unpaid women's willingness to participate in the labour market.

Hypothesis 3: Size of land owned negatively affects unpaid women's willingness to participate in the labour market.

Data and Model Specifications

This study mainly uses the unit-level data from the 68th round of EUS conducted by the NSSO in 2011–12. It is a large scale sample survey and quite comprehensive, covering a wide range of personal, household, labour, and non-labour market characteristics of the population. Along with the 68th round, the study also makes use of other rounds of NSS data at the unit level. The most recent survey, the Periodical Labour Force Survey (PLFS), was conducted in 2017–18. Unlike the previous EUS rounds, which provide a detailed account of unpaid domestic activities, PLFS does not cover follow-up questions for persons with the usual principal activity of unpaid domestic work. In fact, the patterns and relationships drawn from the 68th round of EUS are germane to the contemporary context of India's economic development.

The typical binary response model is specified as follows:

$$P\left(x_{1,\ldots,}x_k\right) = f(x_{1,\ldots,}x_k) \quad \ldots\ldots\ldots (1)$$

Equation (1) estimates the probability that Y = 1 as a function of a set of explanatory variables. For the probit model, equation 1 can further be specified as

$$P\left(x_{1,\ldots,}x_k\right) = \Phi(\beta_0 + \beta_1 x_1 + \beta_2 x_2 + \ldots + \beta_n x_n) = \Phi(\beta_0 + x\beta) \ldots\ldots\ldots (2)$$

where,

Φ represents the standard normal cumulative distribution function, limited between 0 and 1 (Wooldridge, 2014). The dependent variable is whether or not an unpaid woman is willing to accept work in the labour market. In equation 2, x is a vector of factors influencing women's decision to accept work in the labour market, broadly consisting of: area, age, marital status, general and technical education, vocational training, religion, social group (caste), household income, land owned, and household size (Appendix 1). Similarly, β is a vector of coefficients. The independent variables are constructed based on a preliminary review of the previous studies in the field and availability of data (Chiappori, 1997; Chiappori *et al.*, 2002; Choo and Siow, 2006; Anderson and Eswaran, 2009; Duflo, 2012; Singh and Pattanaik, 2019).

Defining and Measuring Unpaid Work

The term 'unpaid domestic work' consists of a wide range of activities generated by household members without 'pay or profit' (Miranda, 2011). In other words, unpaid domestic work is undertaken for the well-being of household members. Taking insights from the studies by Friedemann-Sánchez and Griffin (2011) and Singh and Pattanaik (2019), the unpaid work comprises three components: routine household work, taking care of other household members, particularly children and the elderly, and other household work. The routine household work includes preparing meals, cleaning, and washing.

Measuring the nature and magnitude of unpaid work is a challenge. In this article, unpaid domestic work was measured using data from the unit-level records of EUS. As per the conventional definition, the population of India is broadly classified into three categories, 'workforce', 'unemployed', and 'not in the labour force'. While the workforce refers to persons engaged in different types of economic activities, unemployed are those who are actively looking for jobs but are not able to find suitable jobs. Therefore, the labour force consists of both the workforce and unemployed. The last category represents a heterogeneous group, consisting of beggars, prostitutes, students, children below four years, pensioners, and persons engaged in in unpaid domestic work. What distinguishes 'workforce' from 'not in the labour force' is that while the former actively contributes to goods and services produced, and thereby generates income, those not in the labour force are engaged in activities that are not driven by 'pay or profit'.

In this article, two components of the 'not in the labour force' category are considered for final analysis: first, those who attended to domestic duties only; and second, those who attended to domestic duties and also engaged in free collection of goods (vegetables, roots, firewood, cattle feed, etc.), sewing, tailoring, weaving, etc. for household use (NSSO, 2011). In this article, both categories are referred to as unpaid domestic work or simply unpaid work. This study highlights a detailed account of some specified activities carried out by women engaged in unpaid domestic work. Interestingly, persons engaged in unpaid domestic work were asked to report whether they were willing to take up employment if it was available in their household. In this article, those who are willing to accept the work but are not looking for it are also considered as a proxy for potential labour market participants.

Results

Magnitude of the Labour and Non-labour Market in India

According to the usual principal approach of the EUS, the number of women participating in unpaid domestic work increased from 134 million to 173 million in the rural sector and from 68 million to 83 million in the urban sector between 2004–05 and 2011–12. Further, it increased to 195 million in the rural sector and 92 in the urban sector in 2017–18 (Table 1). Overall, the size of women's participation in unpaid work ballooned in India, recording a quantum leap from 200 million in 2004–05 to 287 million in 2017–18. Moreover, the gender chore gap, which reflects the gap between men's and women's participation in unpaid domestic work, is quite enormous. The overall size of the labour force constituted by men (371 million) is three-and-half times larger than that comprising women (99 million). However, the number of women engaged in unpaid domestic work (287 million) is 57 times greater than that of men, indicating that the workforce is predominantly dominated by men and women outnumber men in unpaid work. It is also clear that a precipitous decline in women's workforce is accompanied by a concomitant increase in their participation in unpaid domestic work.

Table 1. Magnitude of Labour and Non-labour Market Participation in India (%)

Composition of population	Rural			Urban		
	Male	Female	Total	Male	Female	Total
PLFS (2017–18)						
(i) Labour force	54.6	16.1	35.8	56.8	15.1	36.3
(ii) Not in the labour force	45.4	83.9	64.2	43.2	84.9	63.7
(iii) Participation in domestic duty only	0.6	31.4	15.6	0.6	43.6	21.7
(iv) Participation in domestic duty and household activities	0.3	13.7	6.9	0.1	3.7	1.9
(v) Unpaid domestic work (iii+iv)	0.9	45.1	22.5	0.7	47.3	23.6
Population **(in millions)**	**456**	**432**	**888**	**216**	**194**	**410**
68th round (2011–12)						
(i) Labour force	54.7	18.1	36.8	56	13.4	35.6
(ii) Not in the labour force	45.3	81.9	63.2	44	86.6	64.4
(iii) Participation in domestic duty only	0.16	18.48	9.12	0.21	36.38	17.56
(iv) Participation in domestic duty and household activities	0.25	23.69	11.71	0.08	11.61	5.61

(v) Unpaid domestic work (iii+iv)	0.41	42.17	20.83	0.29	47.99	23.17
Population (in millions)	**433**	**410**	**843**	**192**	**173**	**365**
61st round (2004–05)						
(i) Labour force	54.6	24.9	40.1	56.6	14.8	36.6
(ii) Not in the labour force	45.4	*75.1*	59.9	43.4	*85.2*	63.4
(iii) Participation in domestic duty only	0.2	17.5	8.7	0.3	35	16.9
(iv) Participation in domestic duty and household activities	0.2	17.8	8.9	0.1	10.6	5.1
(v) Unpaid domestic work (iii+iv)	0.4	35.3	17.6	0.4	45.6	22
Population (in millions)	**400.8**	**379.1**	**779.9**	**164.7**	**148.3**	**313**

Note: Population figures represent the projected population.
Source: Author's estimation based on NSS unit-level data.

Nature of Unpaid Domestic Work

The nature of unpaid domestic work performed by women differs in magnitude across Indian states. Table 2 presents some specified unpaid activities carried out by women regularly, along with routine household activities. For this analysis, the specified activities carried out regularly during the previous 365 days are subsumed under four groups: (i) activities relating to agricultural production, (ii) processing of commodities produced in own farm or free collection for household consumption, (iii) processing of commodities acquired for household consumption, and (iv) other activities undertaken for household use.

Among women engaged in unpaid work, 57% in the rural sector and 13% in the urban sector carried out one or more of the specified activities relating to agricultural production. Among agricultural production–related activities, collection of firewood, cow-dung, and cattle feed preparation characterise the penurious living standards of women in India's rural sector. Among rural women performing unpaid domestic work, about 9% were involved in processing commodities produced in their own farms or free collection and about 8% were engaged in processing products acquired for their own consumption.

As listed under group (iv), nearly 57% of women in India participated in other activities undertaken for household use. Considering all four groups, about 66% of the women engaged in unpaid work were engaged in any of the activities listed under all four groups, albeit in varying proportions in rural and urban sectors. In rural India, preparation of cow-dung cake for use as fuel constitutes a significant share of the work, primarily due to the lack of household access to electricity. Similarly, bringing water from outside the household premises is also a major activity for rural women, since only 35% of rural households reported having a source of drinking water within the premises (Census of India, 2011).

Table 2. Classification of Specified Unpaid Activities Carried out by Women (%)

Specified activities (unpaid)	Rural	Urban	India
Activities relating to agricultural production			
(1) Maintenance of kitchen gardens, orchards, etc.	23.3	7.8	18.5
2) Work in household poultry, dairy, etc.	21.6	2.4	15.6
Either item 1 or 2	33.5	9.2	25.9
(3) Free collection of fish, small game, wild fruits, vegetables, etc.	18.9	1.8	13.5

(4) Free collection of firewood, cow-dung, cattle feed, etc.	43.6	5.33	31.7
Either item 4 or 5	45.8	6.0	33.4
Any of items 1-4 [Group 1]	57.2	13.0	43.5
Processing of primary products for household consumption (Commodities produced in own farm/free collection)			
(5) Husking of paddy	5.4	0.3	3.8
(6) Grinding of food grains	4.2	0.6	3.0
(7) Preparation of *gur* [jaggery]	0.2	0.02	0.1
(8) Preservation of meat and fish	0.8	0.1	0.6
(9) Making baskets and mats	1.7	0.2	1.3
Any of items 5-9 [Group 2]	9.0	1.0	6.5
Processing of primary products for household consumption (Commodities acquired)			
(10) Husking of paddy	3.9	1.4	3.1
(11) Grinding of food grains	4.6	2.3	3.9
(12) Preparation of *gur* [jaggery]	2.7	1.1	2.2
(13) Preservation of meat and fish	3.2	1.3	2.6
(14) Making baskets and mats	3.2	1.4	2.6
Any of items 10–14[Group 3]	7.6	3.4	6.3
Other activities carried out for own consumption			
(15) Preparation of cow-dung cake for use as a fuel in the household	40.9	4.6	29.6
(16) Sewing, tailoring, weaving, etc.	27.4	23.4	26.1
(17) Tutoring own children or others' children free of charge	6.8	12.0	8.4
(18) Bringing water from outside the household premises	30.7	9.6	24.1
Any of items 15–18 [Group 4]	65.6	36.7	56.6
Any of the items in Group 1, Group 2, Group 3 and Group 4	*76.6*	*42.7*	*66.1*
The proportion of women engaged in unpaid domestic work excluding subsidiary status	42.2	48.0	43.8

Source: Author's estimation based on NSS unit-level data.

Willingness to Work and Types of Work Acceptable

The majority of women engaged in unpaid domestic work in India have no choice but to perform such activities. Table 3, which presents the percentages of unpaid women who are willing to accept work (categorised by nature and type of work), reveals four stylized facts. First, despite engaging in routine household chores, about one-third of the unpaid women are willing to take up work in the labour market, although constrained by many socio-economic factors. Second, given the responsibility of family, the majority of women, who are willing to accept work, prefer regular part-time work to regular full-time work. Third, tailoring is one of the most preferred types of work acceptable to unpaid women both in rural and urban sectors. However, it is to be noted that participation in such economic activities is not strictly comparable to formal sector jobs, which provide greater autonomy and decision-making power to women (Kantor, 2003; Anderson and Eswaran, 2009). Fourth, the lack of adequate skills and experience continues to be a major barrier for women to do more than unpaid domestic work, and this remains a major challenge for India.

Table 3. Willingness of Unpaid Women to Accept Work by Nature and Type of Work (%)

	Rural	Urban	All
Willing to accept work			
Women willing to accept work if the work is made available at their household	33.7	28.2	32.0
Nature of work acceptable			
Regular full-time	20.9	24.7	22.1
Regular part-time	73.7	70.0	72.5
Occasional full-time	2.0	1.8	2.0
Occasional part-time	3.4	3.5	3.4
Total	100	100	100
Type of work acceptable			
Dairy	17.5	3.8	13.7
Poultry	9.1	2.5	7.3
Other animal husbandry	10.0	2.1	7.8
Food processing	7.0	8.3	7.4
Spinning and weaving	9.0	9.0	8.9
Manufacturing wood and cane products	0.8	0.6	0.8
Tailoring	34.3	50.7	38.8
Leather goods manufacturing	0.28	0.46	0.33
Others	12.0	22.7	15.0
Total	100	100	100
Skill/experience to undertake work			
Women having any skill/experience to undertake the acceptable work	53.4	54.3	53.6

Source: Author's estimation based on NSS unit-level data.

Empirical Estimates

As a follow-up to the previous discussion, this section presents the role of socio-economic factors accounting for unpaid women's decision to undertake work in the labour market by drawing insights from various theoretical approaches such as gender relations, human capital, and economic development. Results of the probit regression analysis along with marginal effects (ME) at the mean are presented in Table 4. Broadly, the coefficients indicate the effect of changes in the independent variables on the predicted probability. In the same way, a positive coefficient indicates the effect of an increase in the independent variable on the probability of unpaid women being engaged in the labour market and vice versa.

The coefficient of the rural sector is positive and statistically significant, implying that a rural unpaid woman is more likely to accept work in the labour market compared to an urban unpaid woman. The positive relationship is due to three reasons. First, there is a marked rural–urban dichotomy in India, as the percentage of urban women engaged in unpaid work is higher than that of the rural women, since the majority of rural women depend on agricultural activities as their major source of livelihood. Second, compared with urban women, a substantial proportion of rural women also fall below the poverty line (BPL) and, therefore,

looking for additional economic activities is necessary for their survival. Third, the role of public-sponsored programmes plays a pivotal role in the rural labour market. The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), guarantees 100 days of wage employment to poor rural households, specifying that one-third of the workers must be women. In practice, women's participation under MGNREGA is much higher than stipulated. According to the Economic Survey of 2015–16, nearly 57% of the total 1,350 million person-days of employment provided under the MGNREGA during 2015–16 was taken up by women (GoI, 2016). Moreover, the National Rural Livelihoods Mission (NRLM), established to relieve poverty through women's self-help groups, further increases the likelihood of rural unpaid women willing to participate in the labour market.

The coefficient of age is statistically significant and positive, indicating that an increase in age increases the probability of a woman engaged in unpaid domestic work to accept employment in the labour market. However, the coefficient of age-squared is statistically significant and negative, suggesting that the probability of an unpaid woman willing to accept work in the labour market decreases gradually after a certain age. These findings suggest that, among unpaid women in India, young women are more likely to accept work than old. This finding has special significance in the Indian context. India, which has a population of 1.3 billion, consists of 356 million people in the age group of 10–24 (United Nations Population Fund, 2014). According to the Census of India (2011), about 39% (466 million) fall in the age group of 10–29 years, of which 223 million are women. India's 'demographic dividend', which mainly results from a decline in fertility and infant mortality rates, opens the doors to profound economic benefits if the nation is prepared to reap the harvest by providing so-called 'decent work' (Lerche, 2012). A plenitude of young people with adequate skills and knowledge, but without access to decent work, is a portent of demographic disaster.

The coefficients of currently married and single people are statistically significant and negative. It shows that marital status is an important factor that affects unpaid women's decision to enter the labour market. These findings are in line with published literature, suggesting that marriage is a social constraint. Given family responsibilities, a married woman in India is burdened with routine household work, including taking care of other members of the household. Studies show that marriage plays a significant role in transferring women from paid work to unpaid domestic work (Becker, 1973; Sudarshan and Bhattacharya, 2009; Webster, 2014, Mehrotra and Parida, 2017).
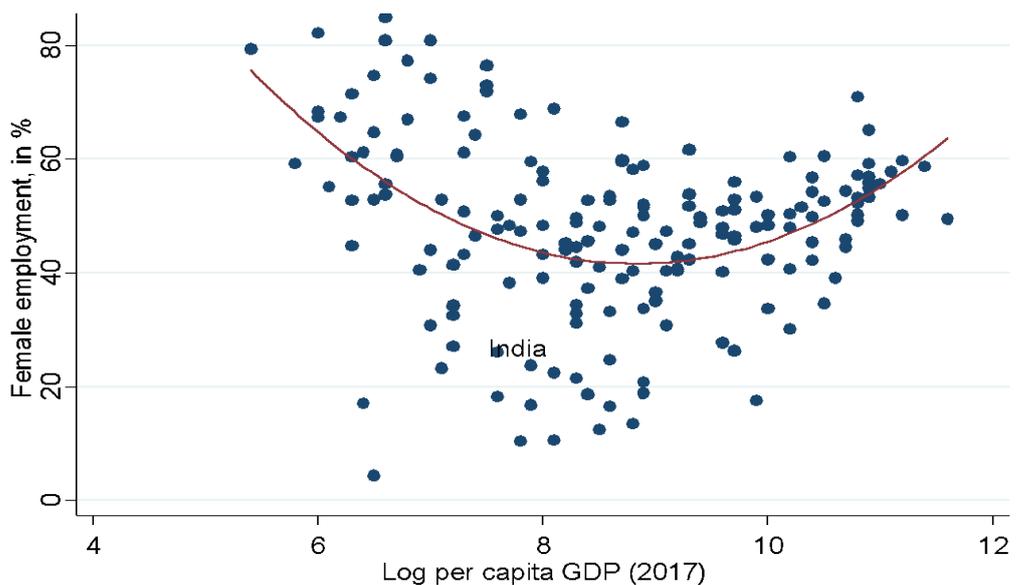
As expected, the coefficients of primary education, technical education, and vocational training are statistically significant and positive. It indicates that, in reference to an illiterate unpaid woman, the probability of accepting work in the labour market declines for an unpaid woman holding primary education. The same holds true for coefficients of technical education and vocational skills. These results support our first hypothesis, underlining the need for suitable working conditions and opportunities for women along with their human capital investment (Pal *et al.*, 2021). Taking insights from Boserup (1970), Schultz (1994), Das and Desai (2003), it is argued that there is a positive relationship between women's WPR and their investment in human capital.

Social and religious barriers often restrict women's decision-making, mobility, and control over economic resources (Krishnakumar & Viswanathan, 2021). The proxy for social constraints (religion and social group), is statistically significant and positive, indicating that an unpaid woman who belongs to other religions is more likely to accept employment as compared to an unpaid woman in the Hindu religion. Similarly, the classification of women engaged in unpaid work by social group indicates that, in reference to upper caste women engaged in unpaid work, unpaid women belonging to scheduled tribes and scheduled caste are more likely to accept work in the labour market. Taking insights from Davidson (1998) and Pal *et al.* (2021), disadvantaged women are more likely than upper-caste women to participate

in paid work, mainly due to poor economic conditions. Indeed, in rural India, WPRs of women from scheduled castes is higher than those of the upper caste (Singh and Pattanaik, 2019).

One of the earliest attempts to draw the relationship between household income and labour force participation rate was carried out by Mincer (1962). Whether a person is willing to work in the labour market is influenced by both income and substitution effects. As expected, the coefficients of poor class, middle class, upper-middle class, and upper class are statistically significant and negative. The reason for how economic status can affect unpaid women's willingness to participate in the labour market has already been justified in the extant literature (Goldin, 1994; Carrasco and Domínguez, 2011). Goldin (1994) proposed the feminization U hypothesis, according to which women's WPR initially responds negatively to rising per capita GDP and positively to rising per capita GDP beyond a threshold level. Using a sample of 176 economies in 2017, this study finds strong empirical support for the existence of feminization U hypothesis (Figure 2). Taking cues from Carrasco and Domínguez (2011) and John (2020), in a typical male-breadwinner model, women are gradually inclined to participate in unpaid work mainly due to two reasons: first, women engaged in paid work are likely to report partner and non-partner violence; and second, women prefer unpaid work if husband's earnings are sufficient to provide a good standard of living. Overall, these results are in line with our second hypothesis.

Figure 2. Per capita GDP and Female employment, 2017 in 176 Countries

Source: World Bank, World Development Indicators.

As expected, the coefficients of three categories of land owned by households are statistically significant and negative in comparison to the landless category. This result supports our third hypothesis. In fact, the 'landholding-patriarchy hypothesis' suggests that an increase in the size of household landholding limits women's autonomy (Goli and Pou, 2014). Similarly, the coefficient of household size is statistically significant and positive. It indicates that an increase in household size increases the probability that a woman engaged in unpaid domestic work will enter the labour market, as domestic chores may be shared among other household members.

Table 4. Estimation Results of the Probit Model and Marginal Effects at Means

Independent variables	Probit model	
	Coeff.	ME
Constant	-.309 ***(.080)	
Area (reference group = urban)		
Rural	.0447*** (.0110)	.015***
Age of unpaid women		
Age	.0353***(.003)	.012***
Age square	-.0009***(.00005)	-.0003***
Marital status (reference group = unmarried)		
Currently married	-.1988*** (.020)	-.073***
Single (Widowed/divorced/separated)	-.1422*** (.036)	-.052***
General education (reference group = no schooling)		
Primary	.0329*** (.0123)	.011***
Secondary	.006 (.015)	.002
Graduate and above	-.017 (.022)	-.006
Reference group = no technical education		
Technical education	.272*** (0.60)	.102***
Vocational training (reference group = no training)		
Formal training	.781*** (.038)	.302***
Informal training	.508*** (.024)	.194***
Religion (reference group = hinduism)		
Islam	019 (.013)	.006
Others	.142*** (.018)	.051***
Social group (reference group = upper caste)		
Scheduled Tribe (ST)	124*** (.018)	.045***
Scheduled Caste (SC)	.106*** (.016)	.038***
Other backward Class (OBC)	-.051*** (.012)	-.017***
MHCE (reference group = poorest)		
Poor class	-.066*** (.015)	-.024***
Middle class	-.144*** (.015)	-.053***
Upper middle class	-.187*** (.017)	-.068***
High class	-.357*** (.019)	-.124***
Land owned (reference group = landless)		
Marginal (up to 1 ha)	-.048 (.057)	-.017
Small (1 ha – 2 ha)	-.063 (.059)	-.022
Semi-medium (2 ha – 4 ha)	-.184*** (.061)	-.064***
Medium (4 ha – 10 ha)	-.227*** (.063)	-.078***
Large (10 ha and above)	-.295*** (.079)	-.100***
Household size	.021*** (.002)	.007***
Number of observations	79,189	
Wald chi-square	7082.38***	

Pseudo R-square	0.0807
Log pseudo likelihood	-46240.46

Source: Author's estimation based on NSS unit-level data.
Robust standard errors in parentheses.
*** *p* < .01; ** *p* < .05; * *p* < .1

Conclusions and Policy Implications

This study has examined the nature of unpaid work performed by women in rural and urban India. In general, Indian women are engaged in a variety of unpaid domestic activities, ranging from maintenance of kitchen gardens to bringing water from outside the household premises. Since all such activities fall outside the purview of economic activities, the socio-economic standing of women in India has largely been degraded, particularly within the household. India's spirit of fostering inclusive and sustained economic growth requires women's participation in the labour market. This can be achieved through the formulation of gender-specific programmes and policies such as child-care provisions and improvement in working conditions. In many ways, such interventions are expected to have a considerable impact on women's economic and social well-being. Using the probit regression model, this study has identified several socio-economic factors that affect unpaid women's decision to participate in the labour market.

The author makes the following policy recommendations. First, all households in India, particularly in the rural sector, should be guaranteed the provision of basic necessities. It is found that millions of households in rural India do not have any access to bare essentials such as safe drinking water, electricity, and cooking gas. Going by statistics, nearly 45% of rural women engaged in unpaid work must bring water from outside their household premises. Similarly, about 41% of rural women engaged in domestic chores are engaged in preparing cow-dung cakes as fuel for the household. If all rural households have access to basic facilities, a large number of women in India would be able to participate in paid work. The formulation and efficient implementation of public policies such as gender budgeting is essential to strengthening the position of women. The outcome of several government-sponsored initiatives and schemes such as Support to Training and Employment Programme for Women (STEP), Rashtriya Mahila Kosh, Training for Rural Youth and Self-employment, Condensed Courses of Education for Women, and Micro Units Development Refinance Agency (MUDRA) needs to be assessed periodically.

As suggested by Mitra and Okada (2018), it is essential to enhance the vocational and technical training of women, along with access to decent work in the non-farm sectors. Based on the skills and knowledge they possess, women should be encouraged to take up entrepreneurial activities by providing initial capital and easy access to credit facilities. From a policy perspective, governments should encourage unpaid women who are willing to participate in the labour market to do so, by reinforcing measures such as provision of basic facilities, public childcare, credit facilities for entrepreneurial activities, and vocational and technical training. Certainly, government intervention acts as a crucial role in bringing about not only a systematic change in the socio-economic condition of women but also economic growth.

One of the limitations of this study is that it does not provide a state-level analysis of the status of women's unpaid work. A state-level analysis of unpaid domestic work in India would be useful in understanding the regional disparities and their impact on women's willingness to accept work in the regional labour market. In addition, this study may be

extended by considering TUS 2019, which provides vital cues on the allocation of time by men and women on different types of unpaid activities in India. In the present context, it is also important to understand how India can facilitate decent work for unpaid women willing to participate in the labour market.

Declaration of Conflicting Interests

Funding

Appendix 1
Variable definition and sample statistics

Variable	Definition	Mean
Sector	Binary categories: Urban = 0, rural = 1	.592
Age	Age of unpaid woman	37.8
Age square	Age square of unpaid woman	1621
Marital status	Three categories: unmarried = 0, currently married = 1, single = 2	.98
General education	Four categories: no schooling = 0, primary = 1, secondary = 2, graduate and above = 3	2.04
Technical education	Two categories: no technical education = 0, technical education = 1	.007
Vocational training	Three categories: no training = 0, formal = 1, informal = 2.	.093
Religion	Three categories: Hinduism = 0, Islam = 1, Others = 2.	.355
Social group	Four categories: Upper caste = 0, ST = 1, SC = 2, OBC = 3	1.60
MHCE	Five categories: Poorest = 0, Poor class = 1, Middle class = 2, Upper middle class = 3, High class = 4.	3.02
Land owned	Six categories: Landless = 0, Marginal = 1, Small = 2, Semi-medium = 3, Medium = 4, Large = 5	1.35
Household size	Number of members in family	5.5

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