

Working or Not: What Determines Women's Labour Force Participation in India?

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ABOUT THIS PUBLICATION

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ABOUT IWWAGE

Initiative for What Works to Advance Women and Girls in the Economy (IWWAGE) aims to build on existing research and generate new evidence to inform and facilitate the agenda of women's economic empowerment. IWWAGE is an initiative of LEAD, an action-oriented research centre of IFMR Society (a not-for-profit society registered under the Societies Act). LEAD has strategic oversight and brand support from Krea University (sponsored by IFMR Society) to enable synergies between academia and the research centre. IWWAGE is supported by the Bill & Melinda Gates Foundation. The findings and conclusions in this report are those of the authors and do not necessarily represent the views of the Bill & Melinda Gates Foundation.

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ABSTRACT

Women's labour force participation is abysmally low, and persistent gender gaps characterise the Indian labour market. It is alarming to note that women have been continuously dropping out of the labour market since the mid-2000s. Their participation has been declining despite rising GDP, increasing educational attainment, rising household incomes, and declining fertility. Utilising household-level data of Periodic Labour Force Surveys (PLFS) (covering the years 2017-18 and 2018-19), and NSSO's Employment-Unemployment Surveys (EUS) (various rounds completed in 1993-94, 1999-00, 2004-5, 2009-10, 2011-12), this paper provides systematic evidence on the country's gender gaps in employment and labour market outcomes. Since multiple factors influence their decision to undertake the paid market work, this paper tries to unpack the critical aspects of low female labour force participation in rural and urban India. We find that women have notably lower employment rates than men, even though their enrolment in schools and colleges have risen. We witness a U-shaped relationship between education and women's labour force participation, which is strongly evident in the case of urban women. Women perform a disproportionate amount of unpaid care work and domestic work and face multiple constraints in society, limiting their mobility and labour market choice, forcing them to take non-wage employment or remain out of the labour force. Our findings suggest that policies supporting women's entry into the labour market, such as vocational and technical skills, can significantly impact increasing their participation and mitigating persistent inequalities in India's labour market outcomes. The paper underscores the importance of a comprehensive and integrated approach and suggests investing in gender-responsive policies to break down women's economic engagement barriers.



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Introduction

Globally, men are more likely to participate in labour markets than women. And, despite progress, the gender gap¹ in labour force participation is one of the most pressing challenges in today's world of work.² The data is clear—finding a paid job is much harder for women around the world in comparison to men, and once in the labour market, women still face limited opportunities. Women tend to perform low skilled jobs, are overrepresented in the informal economy, are faced with structural and societal barriers, and have few opportunities for learning and career advancement. In 2019, the global women's labour force participation rate stood at 45 per cent, and was about 25 percentage points lower than the rate for men (ILO's World Employment and Social Outlook [WESO]: Trends 2020). Among other things, there are also positive economic impacts of reducing gender gaps. The WESO: Trends for Women 2017 report noted that closing the participation gender gap by 25 per cent could increase global GDP by US\$5.3 trillion by 2025, which could significantly curb poverty in emerging countries.

India has one of the lowest female labour force participation rates among developing countries, and standing at 24.5³ per cent in 2018–19, it is well below the global average.⁴ Even worse, the gender gap in participation is particularly large

and has been widening. A review of longer-term trends suggest that women's low labour force participation rate is puzzling—it is low despite high economic growth rates, along with decline in fertility rates, and rise in educational attainment of girls and women. Women's low labour force participation rate is abysmally low in India, compared to 75.5 per cent of men in 2018–19. In fact, women have been continuously dropping out of the labour force since the mid-2000s,⁵ and this has drawn much social and academic attention. Besides, there are considerable variations in labour force participation rates between rural (26.4 per cent) and urban areas (20.4 per cent). It is critical to understand what is behind this paradox—are women voluntarily dropping out of the labour force, or is it because of structural constraints or socio-cultural factors?

The presence of large gap in the labour force participation rates of men and women does not indicate that women are working less; instead, it suggests that women perform a disproportionate amount of unpaid care work,⁶ and spend more time on it than men. This severely constrains women from participating in the labour market as they have less time and opportunity to do so.

Much has already been discussed⁷ about the low and declining female labour force participation

¹A great deal of progress has been made and gender differences have been narrowing considerably; in most countries around the world, the share of women in the labour force is higher than it was a half century ago.

²Closing gender gaps in the world of work and empowering women are central to achieving the 2030 Agenda for Sustainable Development.

³For 15 years and older.

⁴Various studies have highlighted how low female labour force participation weighs down economic growth, and that empowering women in the economy has significant economic benefits, such as increasing productivity, income equality and more inclusive economic growth, in addition to promoting gender equality (World Bank, 2012; ILO, 2018; UN Women, 2018).

⁵Women's participation rates declined from 34.1 in 1999–2000 to 27.2 in 2011–12.

⁶These fall outside the traditional economic boundary of production, and therefore women are not regarded as 'economically active' for the purpose of labour supply statistics.

⁷This is a heavily researched subject, as a number of empirical papers have analysed the reasons for low and declining labour force participation of women in India.

rate in India, and multiple explanations have been advanced towards explaining this trend, such as increased education levels among women, rising household income (income effect), measurement issues (substantially higher proportion of women attending to domestic duties), and a general decline in employment opportunities for women (Mehrotra and Sinha, 2017; Klasen and Pieters, 2015; Chaudhary and

Verick, 2014; Kapsos et al., 2014; Lahoti and Swaminathan, 2013; Mazumdar and Neetha, 2011). However, there is a still greater need to take a deep dive into factors that influence declining female labour force participation in India, especially from the newly available Periodic Labour Force Survey (PLFS) data. With this said, an obvious question remains: what determines women's labour force participation in India?

Review of the literature

This section gives an overview of the existing recent literature pertaining to key determinants of female labour force participation in India. It includes both the demand side and supply side

drivers of women's participation, and other factors influencing women's decision to enter the labour market.

2.1 Level of education and women's labour force participation

A range of studies have cast light on how education is one of the most important elements influencing women's labour force participation. However, the relationship between women's participation rates and educational attainment is by no means straightforward, especially in a transitional economy like India. The human capital theory suggests that there exists a causal relationship between education and subsequent earnings through the rise in productivity, as education is said to enhance knowledge, skills and abilities. Spence (1973) adds to this by arguing that a person's educational qualifications act as a signalling device to employers regarding her quality as a worker, i.e. it helps to eliminate information asymmetry in the job market. The study by Klasen and Pieters (2012) reveals that women benefit from increased investment in their human capital, availing of remuneration

that is commensurate with the work and securing better working conditions. However, contrary to the strictly linear relationship suggested by the human capital theory, we find a strong U-shaped relationship between education and female labour force participation in India. This is well established in existing literature (Kapsos et al., 2014; Klasen and Pieters, 2015; Das et al., 2015; Fletcher et al., 2017; Unni, 2017; Chatterjee et al., 2015; Chatterjee et al., 2018; Afridi et al., 2019).

The premise for the U-shape is that women with poor education levels are usually a part of households facing economic distress, hence their participation in the labour force is high. On the other end of the spectrum are women with high levels of education, who have financially lucrative job opportunities due to their educational achievements, hence their

participation in the labour force is also high. The U-shape is a consequence of these two trends.⁸

The U-shaped relationship is contested by alternative claims as well: most notably known as the substitution and income effect. Neoclassical labour supply theory suggests that the relationship between education and labour force participation should be positive since a rise in education should lead to higher wages, making the cost of leisure relatively expensive—known as the substitution effect. On the other hand, education also impacts women's labour supply decision by affecting their income. The theory posits that a rise in education leads to higher wages for the same amount of work, which then incentivises women to spend more time on domestic work. This is commonly referred to as the income effect.

Several researchers have found a positive relationship (Bhalla and Kaur, 2011) while others have found a negative relationship (Das and Desai, 2003) between education and women's labour force participation. Some studies also suggest a stagnation in labour force participation despite higher educational achievements of women than ever before. Klasen and Pieters (2015) highlight that while the gender gap in educational attainment has declined in urban India, women's labour force participation remains stagnant.

Afridi et al. (2019) distinguish the opposing forces that come into play with women's rising education. On the one hand, there is a rise in market productivity, which is reflected in a rise in the gender wage ratio. This motivates women to seek gainful employment and become a part of the labour force. On the other hand, with a rise in education, there is an accompanying rise in women's home productivity, which raises the demand for their involvement in the production of home goods. By modelling a married couple's time allocation decision, the authors find that home production and the gendered division of labour act as a binding constraint at higher levels

of women's education. Many studies corroborate the income effect empirically (Klasen and Pieters, 2015; Chatterjee et al., 2018). Also, an increase in household income can reduce work participation at lower levels of educational attainment due to the income and status effect (Sudarshan, 2014).

However, for married women, their own educational attainment is insufficient in explaining their participation in the labour force since the education of their spouses as well as the education levels of the head of the household play an integral role in influencing their labour supply. Hence, while determining factors behind women's labour force participation, it is fairly intuitive to regard the household as a decision-making unit, and also consider the education levels of other significant members. Afridi et al. (2016) find that in the period 1987–99, 87 to 95 per cent of the overall decline in women's labour force participation rate could be explained by their own education and that of the men in their household, jointly. Theory also suggests that educated women are likely to marry educated men with higher incomes, raising the combined wealth of the household and hence further discouraging women's participation in the labour force (Chatterjee et al. 2018).

In sum, while there is a consensus that very high levels of education among women result in higher labour force participation, many questions still remain. Women with some secondary education have the lowest participation in the labour force (Kapsos et al., 2014; Fletcher et al., 2017). Interestingly, the decline in women's work participation has taken place mostly among women with less than primary level of education (Desai et al., 2018). But there is conflicting evidence as well—that increasing educational attainment of married women in rural India is the major cause for the decline (Afridi et al., 2016). There is still a need to explore the decline in female labour force participation with regard to rising enrolment and education.

⁸ Interestingly, Chatterjee et al. (2018) give an alternate explanation for the U-shape: there is a positive linear relationship between education and female labour force participation for women engaged in salaried work, and a negative linear relationship for women employed in family farms or businesses and casual wage work. The resolution of these two separate trends results in the U-shape.

2.2 Skill levels and their impact on women's labour force participation

Apart from educational attainment, skill levels of women also play a central role in determining their participation in paid activities and increased income prospects. Unni (2017) finds India's performance in skill training of women to be dismal;⁹ only about 9 per cent of young females in 2011–12 reported that they had received some form of formal or informal training, which leaves a vast majority of women rendered unemployable for the job market. There are several other disadvantages that educated women face while seeking work. By the time women complete their education and fulfil their reproductive role, their age of entry into the labour market is much higher than that of men. Employers are less likely to invest in their skilling since they expect that women could leave the job due to their household obligations and other reasons. This exacerbates the problem of poor training of women, and reinforces the biases and barriers that women face. Besides, there are the dual problems of skill training: 'skill mismatch' and 'quality skill gap'.¹⁰ Fletcher et al. (2017) find evidence for the phenomenon of skill mismatch—according to them, female non-workers, who are willing to work, face great difficulties matching jobs. The skill mismatch is also well recognised by the National Skill Development Policy of the government of India (2009) and has been highlighted in other studies.¹¹

While it is expected that there will be a decline in female labour force participation as a greater share of the working age population is engaged in education, a recent worrying trend is the sharp decline in the non-student working age population, particularly women above the age of 30. Mahapatro (2013) attributes the decline in labour force participation (in the age group 35 to 54 years) to lack of technical skills among women, and also states that a lack of knowledge of new

techniques is restricting women from shifting from agriculture and home-based work to the industry and services sector. Another disturbing trend is the sharp rise in unemployment rates of both rural and urban women with secondary and higher education levels. A possible reason for this trend could be the discouraged worker effect, resulting from both a lack of availability of suitable jobs for women and the inability of women to exploit the existing opportunities due to poor skills/training and even bias (Kapoor, 2019). Many other researchers are also of the opinion that the higher unemployment of educated women as compared to educated men could be symptomatic of a mismatch between educational training and the demands of the industry (Klasen and Pieters, 2015; Unni and Sarkar, 2012). And, there is evidence suggesting that obtaining job-specific training improves women's work participation. Fletcher et al. (2017) find that 'obtaining vocational training is correlated with a higher likelihood of working among women', and at all levels of education, women with vocational training are more likely to work than those without training. Thus, to close the skill gap, there needs to be an emphasis on training that is conducive to employment.¹²

Several skill development programmes have been initiated by the government of India, but it is observed that most of these are associated with poverty alleviation endeavours of the state and target those with poor education levels, while ignoring the quality skill gap (Sudarshan, 2014). Other drawbacks posed by the government's skilling programmes are low coverage and poor effectiveness. Paliath (2020) reports that the central government's flagship programme on skill development, the Pradhan Mantri Kaushal Vikas Yojana (Prime Minister's Skill Development Programme), which started

⁹Even men fare poorly in this aspect. The study also finds a wide disparity between access to training that men and women have: women do not get the same time duration in training as men.

¹⁰Skill mismatch occurs when the education or training an individual has invested does not improve her job prospects since they do not match the demands of the job market. On the other hand, a quality skill gap occurs when the skilling, though appropriate for the field in which the individual is seeking work, lacks the level of rigour that is expected by employers.

¹¹Mehrotra et al., 2013; Mahapatro, 2013; Sorsa et al., 2015; Paliath, 2020.

¹²It should also factor in the skilling needs of rural and urban areas separately, as these might vary due to the diversity in job opportunities.

with an ambitious target of skilling about 11 million youth over four years, from 2016 to 2020, failed miserably by its own standards. By 31 July 2019, the skill development ministry had skilled only about half (4.6 million) the target, and a meagre 1.3 million out of the skilled were placed in jobs. There are several challenges faced by

existing skill development programmes, and there is an urgent need to improve the same. Unni and Sarkar (2012) note that simultaneously improving education, skills and vocational training programmes to provide better quality training to a wider population can considerably improve female labour force participation rates.

2.3 How social and cultural norms affect women's participation

In general, it is accepted that socio-cultural norms dictate women's decision to participate in the labour market, especially in South Asia. Conservative social norms impact women's mobility and are a major barrier to women's work, as these norms attribute primary responsibility of unpaid care and domestic work to women, simultaneously establishing men's role as the primary breadwinner in the family. Several studies illustrate how women's paid work is limited due to prevailing social norms which influence marriage, fertility and their role outside the household.

Gaddis and Klasen (2013) emphasise that socio-cultural restrictions, coupled with low education and care responsibilities, limit women's participation in formal work post-marriage and childbirth. Afridi et al. (2019) find that social norms related to division of labour within the household dominate over factors such as higher education attainment and higher wages. Consequently, married women end up contributing a significant time to home production (as the norm dictates), resulting in lower labour supply. Deshpande and Kabeer (2019) corroborate this while ascertaining the

impact on women's labour supply. Their study finds that socio-cultural norms that govern the gendered division of unpaid domestic and care work are of much greater significance than conservative social practices such as veiling.

Social norms form the basis of honour and social status of households. Eswaran et al. (2013) emphasise the role of 'status production'¹³ by married women on their labour supply decisions. Poor households require both partners to sell their labour in the market, but as households become more affluent, women gradually withdraw from market work. Additionally, gender norms and biases, community level attitudes, and a higher social status not only lower women's labour supply, but also lead to occupational and sectoral segregation, and limit sectoral mobility¹⁴ (Klasen and Pieters, 2012; Eswaran et al., 2013; Kapsos et al., 2014; Bernhardt et al., 2018). While social norms pose an inordinate challenge, evidence also suggests that these barriers created by tradition are not unshakable. Mitra and Okada (2017) find that social, physical and financial infrastructure can break social and cultural barriers and improve women's labour force participation to a certain extent.

¹³ The production of 'status goods' are activities which cannot be outsourced and must be carried out by family members themselves. It involves activities including giving attention to children, building networks to further social advancement or to facilitate marital alliances, and participating in rituals (mostly religious).

¹⁴ Kapsos et al. (2014) state that women are generally concentrated in occupations that lack employment growth (such as teaching professionals, life science and health associate professionals, and customer service clerks), and a very small share of women are employed in the top 10 fastest growing occupations in the country. Sudarshan (2014) corroborates this by arguing that social norms influence work-seeking behaviour, leading to persistent concentration of women workers in certain occupations and as home-based workers.

2.4 Role of caste and religion in influencing women's decision to work

Religion and caste play a key role in determining gender norms, especially in India. Despite progress on many fronts, caste remains a significant barrier to work, and limits employment opportunities. A particular way in which it operates in the context of women's labour force participation is the 'Sanskritization' process. Eswaran et al. (2013) explain that lower caste households in the caste hierarchy seek to imitate upper caste practices and limit women's participation in work outside the home. Job choices are limited for women; certain professions are deemed respectable and preferred such as teaching, administrative and clerical jobs, professional jobs in medicine, law and management. Blue collar jobs are considered to lower the status of the family in the eyes of the community. This is particularly true for married women in rural India.

Neetha (2014) notes that existing social and economic structures are exclusionary, and open markets only widen such inequalities. She emphasises that women from lower castes and underprivileged religious groups, typically with lower education and skills, are further vulnerable and marginalised in a globalised economy. This analysis is supported by Mitra and Okada (2017), who propose that modern growth processes which find use for highly skilled labour fail to absorb low caste labour since they have poor access to education and skill training. The consequence of this is that women belonging to such groups are either pushed out of the labour force or are relegated to low-paying menial work. Further, in a study to determine caste-based discrimination in Delhi's fastest growing 'new economy sectors', i.e. the software industry and call centres, Banerjee et al. (2008)

sent out fictitious resumes with caste identifiers in response to job advertisements. Their study found significant differences between callback rates for upper caste, Other Backward Castes (OBCs) and Scheduled Castes (SCs) (to a smaller extent) candidates in the case of call centre jobs. The study also found gendered differences in callback rates: women from Other Backward Castes suffered a great disadvantage in callbacks as compared to their male counterparts.

Since 2004–5, female labour force participation across all social categories has been on the decline. Neetha (2014) attributes this uniform decline to the generalised impact of economic policies on women, irrespective of their socio-economic status. However, her study finds that some groups have suffered more than the rest, and the decline in labour participation rate is indicative of the class divisions within these groups. The highest decline has been among Scheduled Tribe (ST) women, followed by SCs, clearly indicating a social bias in women's work opportunities. Andres et al. (2017) also find that despite highest employment rates among ST women, the decline in labour force participation was the sharpest for them in rural areas, while upper caste women experienced the smallest decline in the period from 1993–94 to 2011–12. In urban areas, SC women experienced the highest decline in labour force participation in this period.

As far as religions differences are concerned, Mehrotra and Parida (2017) find that women belonging to Hindu or Muslim families are less likely to participate in the labour market as compared to other religions (mostly Christian and Sikh). Besides, the nature of employment

is closely linked with social groups in India. Disaggregating the status of employment by social groups, the study by Neetha (2014) finds that self-employment is highest among Muslims, followed by upper caste Hindus, possibly due to

mobility restrictions, while casual wage work is highest among SCs. Further, upper caste women dominate in the modern economy, availing of better working conditions and more regular paying jobs.

2.5 Presence of children and the burden of unpaid work

Globally, the gender gap in labour force participation of prime age (25–54 years) men and women is a substantial 43 percentage points. Women cite unpaid care work as the principal reason for being out of the labour force, while men cite educational engagement, ill health and disability (ILO, 2018). On the one hand, this tells us that men's labour force participation doesn't depend much on their family situation as much as women's. On the other hand, it indicates that stereotypical gender roles still govern household decisions, such as the distribution of unpaid work¹⁵ (domestic chores and childcare and elderly care activities), and which members should engage in gainful employment activities. It has been found that women in India spend the most time on unpaid work (351.9 minutes per day), as compared to women in other countries.¹⁶ Men, on the contrary, spend 51.8 minutes on unpaid work. The fact that women bear the disproportionate burden of unpaid work compared to men exposes the patriarchy in society due to which women are relegated to an inferior status and assigned non-remunerative work. The United Nations recognises the unequal distribution of unpaid work between men and women as an infringement of the human rights of women as well as a barrier to women's empowerment.

Especially in the Indian context, where society is largely patriarchal, and where household chores¹⁷ and care work are considered the primary responsibility of women, the presence of children in the household keeps women from participating in remunerative work and poses the

biggest challenge to women's work. Women with young children are less likely to be in the labour force (Chaudhary and Verick, 2014; Chatterjee et al., 2015; Das and Žumbytė, 2017; ILO, 2018). Married women, and women with children in the household, perform more unpaid work than single women (Alonso et al., 2019; Oxfam, 2020). Raveendran (2016) finds that households with small children up to the age of 3 years saw a decline in labour force participation of women aged between 25 and 34 years, and the difference in women's participation between households with and without children was a significant 10 percentage points in 2011–12.¹⁸ Conversely, men's participation in the labour force was higher in households with young children (2.2 percentage points). This clearly indicates that women from these households would have been in the labour force were it not for their care-giving role, and the men are compensating for women's lack of participation. Another study that supports the idea that women are staying at home to take care of young children is Chatterjee et al. (2015), which also looks at the presence of older parents and elderly members in the household. The study finds that their presence does increase labour force participation of married women. Kanjilal-Bhaduri and Pastore (2018) find that the presence of dependents (both children and elderly) in the household has a very significant negative impact on paid work participation of women in both urban and rural areas. On the contrary, Deshpande and Kabeer (2019) find that it is the primary responsibility for domestic chores, not childcare, that is a significant constraint on

¹⁵It is difficult to define and measure unpaid work. Broadly, it refers to the production of goods and services for consumption within or outside a household (but not for sale in the market), and encompasses activities such as cooking, cleaning, procuring raw materials such as water, firewood, etc., caring for children and the elderly.

¹⁶Source: OECD Database, Employment: Time spent in paid and unpaid work by sex. OECD. Stat. <https://stats.oecd.org/index.aspx?queryid=54757#> (Accessed April 22, 2020).

¹⁷In India, 99.4 per cent of domestic and allied work is performed by women (Dutta, 2019).

¹⁸As the age of children in the household's advances, the decreases in female labour force participation rates are reduced. For the youngest child aged 4–9 years, Raveendran (2016) finds that the decrease in female labour force participation rates stood at 4.4 percentage points in 2011–12.

women's ability to participate in conventional work, irrespective of marital status.

Women's unequal participation in low productivity unpaid work and the consequent withdrawal from the labour force does not bode well for the economy as a whole, as it leads to lower economic growth. Besides, it has several adverse effects on women. It affects their education, the ability to participate in the labour market, the gender wage gap, their physical and mental health and well-being; it raises the risk of gender-based violence while also keeping women from accessing support for the same (Oxfam, 2020). ILO (2018) reports that unpaid care work is the main obstacle for women to shift to better quality jobs, affecting their status in employment and working conditions. It also leads to occupational downgrading—i.e. women choose jobs requiring lower skills or participate in part-time work to balance paid work with domestic work (Alonso et al., 2019; Dutta, 2019). Additionally, care responsibilities of women make it more likely for them to be self-employed and working in the informal economy and less likely to have social security benefits. It is important to note here that women do not choose to perform unpaid labour out of independent choice, but are often forced into it by cultural norms, lack of public services, household and community infrastructure, and family leave policies. Further, the disproportionate time spent by women in unpaid work and their low labour force participation is symptomatic of poor social care and an absence of public sector provisions such as basic infrastructure, childcare facilities and elderly care facilities (Sanghera, 2019). Therefore,

in a manner of speaking, unpaid work by women absolves the state of its responsibilities to provide basic provisions and care. It makes the care of elderly and the responsibility of health, nutrition and education of children a personal burden as opposed to an administrative burden (Oxfam, 2020).

In a country like India, with such a high incidence of unpaid work, there is an urgent need to redistribute the burden of work and break the vicious cycle in which women are trapped in lower productivity work, with lower wages than men, due to unpaid work posing a barrier for women to accumulate human capital such as better education, skills and health (Oxfam, 2020). ILO (2018) emphasises the need for 'Care Policies',¹⁹ a set of public policies directed at recognising, reducing and redistributing unpaid care in the form of money, services and time, such as childcare and elder care services, care-relevant infrastructure that reduces women's drudgery of work, and labour regulations such as leave policies and family-friendly working conditions. Alonso et al. (2019) observe that such policies motivate women to join and remain in the labour force, and are also successful in freeing up women's time for formal employment. Winkler (2016) argues that policies that support workplace flexibility via part-time work arrangements or flexible hours could improve the extent to which both men and women workers share the responsibilities of childcare, elder care and household chores. However, she also draws attention to the potential downsides of such policies for women's career advancement.

¹⁹ Childcare assistance policy (either via publicly provided childcare (such as crèches) or through government or private employers' subsidies) unambiguously supports women's labor force participation.

2.6 Other factors: A feminisation U hypothesis, industrial structure and government policies and programmes

As described above, different sets of factors may influence female labour force participation, including structural transformation. The most talked about factor related to women's labour force participation is the country's stage of economic development. There is a sizable body of literature that talks about a feminisation U hypothesis, or a U-shaped relationship between economic development and women's labour force participation. According to this widespread hypothesis, female participation in the labour market is very high in the early stages of economic development as they are inclined to participate in subsistence agriculture (when the country's income level is low), declines as the economy becomes more industrialised and manufacturing based, and then increases again as women gain education and move into white collar well-paying jobs. More specifically, this U-shape is the result of the structural transformation of the economy. But, as noted in various studies, the empirical evidence for the feminisation U hypothesis is weak at best, and especially in the Indian case, there is little support for a U-shaped relationship (Gaddis and Klasen, 2013; Lahoti and Swaminathan, 2016). Lahoti and Swaminathan (2016) also report that the unique structural transformation in India (which contributed to a gradually contracting agricultural sector in favour of a speedily expanding service sector and the lack of a shift towards manufacturing thereof) chiefly contributed to the slump in the participation of women in the labour market.

Winkler (2016) argues that in order to analyse and fully comprehend the variations in female labour force participation across regions, one must also examine the differences in the industrial

structure of the country. She cites the case of the United States, where a more prominent service sector provides substitutes for home production and offers exemplary opportunities for part-time and flexible employment; both these factors are known to facilitate women's entry into paid market work. Jensen (2012) explains a similar impact on female labour force participation in India due to the sizable growth of IT call centres. A large public sector, on the other hand, also tends to offer more employment opportunities for women. However, in the case of India, only 9.36 per cent women were found to be employed in Central Public Sector Enterprises in 2015–16 (SCOPE-ILO, 2018). Besides, there is evidence to support the glass ceiling, as the share of women holding managerial or leadership positions is very low in both public and private sector enterprises.

Finally, women's labour force is also affected by government policies and programmes,²⁰ and there is a growing body of literature focusing on this aspect (Das et al., 2015; Fletcher et al., 2017; Jain-Chandra et al., 2018; Shah and Steingberg, 2015; Oxfam, 2020).

Das et al. (2015) find female labour force participation to be positively associated with social sector spending and state-level initiatives. They find that development of state infrastructure, such as better roads and steady power supply, enhances employment probability of women. Alonso et al. (2019) also find that investments in water, sanitation, electricity and transport reduce women's engagement in low productivity tasks, thereby increasing their chances of participating in the labour force. Along the same lines, Dutta (2019) finds that

²⁰ There are several policies and programmes implemented by union and state governments in India which aim to advance social, political and economic empowerment of women and girls. While some schemes directly target women and girls, there are several schemes which operate at the household level but benefit women much more than men, especially those pertaining to household and community infrastructural development. Some of these include schemes ensuring basic amenities such as gas subsidies (Pradhan Mantri Ujjawala Yojana), electrification of households, piped water supply (National Rural Drinking Water Programme), construction of toilets and roads, etc.

women from households with access to the government's National Rural Drinking Water Programme spend on average 22 minutes less per day on care work and 60 minutes per day more on paid work. The results for households that use LPG gas cylinders for cooking under the Pradhan Mantri Ujjwala Yojana are similar for women from these households, spending 49 minutes less on care work and an hour more

on paid work. Fletcher et al. (2017) argue that educational quotas seem to have an encouraging effect on women's participation in the workforce. They also convincingly note that one-third reservation for women in gram panchayats (the village-level councils) has particularly benefited women in enhancing their labour market participation and entrepreneurship.

Datasets and methodological framework

The main datasets used in our analysis is household level data from India's Periodic Labour Force Surveys (PLFS), covering the years 2017–18 and 2018–19, and National Sample Survey Organization's (NSSO) Employment–Unemployment Surveys (EUS),²¹ covering the years 1993–94 and 2011–12. To present longer-term trends, data has been used for all the survey years, including 1999–2000, 2004–5 and 2009–10, while the empirical estimation of the drivers of female labour force participation is conducted on the latest PLFS survey of 2018–19.

This paper measures labour force participation using the usual status approach (considering both principal status and subsidiary status), which is more suitable for studying longer-term employment trends. Under usual activity status, a person is classified as belonging to the labour force if she/he had been either working or looking for work during the longer part of the reference year. Further, data has only been used

for the productive age group, i.e. for those aged 15 to 59 years.

The model specification for empirical estimation is as follows: the decision to participate in the labour market is a binary choice. Therefore, the structure of the econometric model is: $P = F(\alpha + \beta_i X_i)$; where P denotes the probability that an individual participates in the labour market, F is a logit-link function, α is a constant, X_i is a vector of explanatory variables and β_i is a vector of coefficients.

In this case, the dependent variable is female labour force participation (FLP) =1 if a woman is working or currently seeking work; =0 if otherwise (out of labour force). Several explanatory variables have been used—a distinction has been made between individual characteristics, household composition, cultural factors, and others, and separate estimations are done for rural and urban areas.

²¹ NSSO's EUS used to be the primary sources of data on various labour force indicators at the national and state levels, and were conducted every five years all over the country. These have now been discontinued, and were replaced with PLFS surveys in 2017–18.

Women's labour force participation- rural v/s urban trends

A careful analysis of the Indian labour market exhibits several striking features in terms of tremendously low rates of women's labour market participation; considerable geographical disparity, i.e. variance in rates of labour force

participation across Indian states; and a fairly large share of the population working in the informal sector, particularly in vulnerable employment.

Figure 1:
Trends in labour force participation rates, usual status (15–59 years)

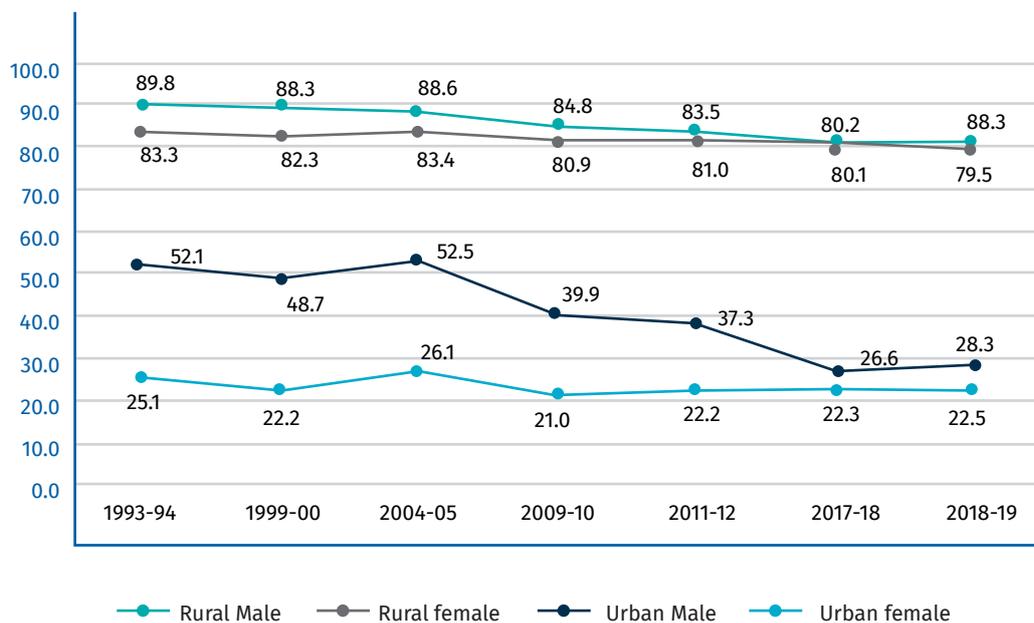


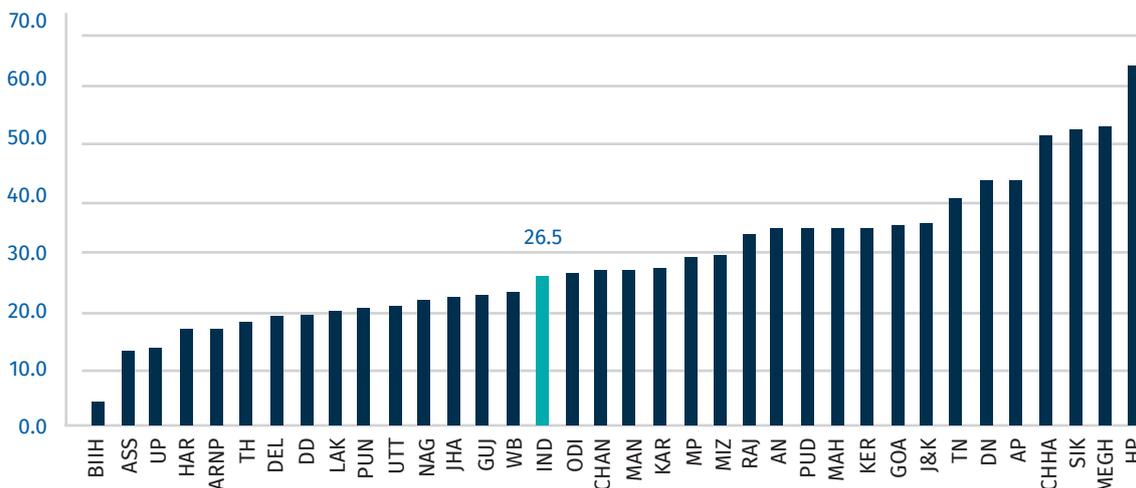
Figure 1 presents the labour force participation rates for women and men, separately for rural and urban areas. Trend analysis of labour force participation rates²² shows that women's participation nationwide has been steadily declining since 1993–94 (with 2004–5 being an exception), and the decline is exclusively attributable to the decline in rural areas, while the participation rate among men remains more or less stagnant over the period under consideration. Besides, pronounced gender disparities in labour force participation rates can also be observed in Figure 1, which shows that women are disproportionately confronted with barriers to accessing work. The gender gaps have been increasing over the years, and are particularly pronounced in urban areas, due to historically low levels of women's participation. It is also interesting to note that while labour force participation of males has diminished marginally since 1993–94, in both rural and

urban areas, women's labour force participation has shown a sharp decline—rural women's participation shrunk by 24 percentage points. In contrast, in the case of urban women, it declined marginally, from 25 per cent to 22.5 per cent.²³

While rural women's labour force participation rates have always been higher than their urban counterparts (for all years under consideration), the gap between rural and urban areas has narrowed considerably since 2017–18, owing to a significant fall in rural women's participation. The rural job market offers fewer employment opportunities for women,²⁴ and the situation is no better in urban areas with consistently low rates of women's participation.

Reckoning large regional differences, the trend analysis of labour force participation is also conducted by region and by states (see Figures 2 and 3).

Figure 2:
Variation in women's labour force participation rates by states, 2018–19



²² The labour force participation rate refers to the share of the population in employment or those who are unemployed, i.e. searching for a job and available to take up employment. This is otherwise known as 'economically active population'. The economically inactive population, therefore, is either engaged in non-market activities, such as household chores or unpaid care work, in education or training, or has retired from the labour market.

²³ The first large-scale national Time Use Survey (TUS) data of 2019 also confirmed the abysmally low paid labour force participation of women aged 15 to 59 in both rural and urban areas (21.3 per cent for rural women versus 18.9 per cent for urban women). Acute gender inequalities in paid work participation rates (20.6 per cent for females versus 68.5 per cent for males) point to a tremendous gap in access to financial income. Analysis of TUS data also reveals that rural women spend about six and a half hours every day in unpaid activities, and slightly more than six hours in urban areas. On average, women spend two and a half times more on unpaid activities in comparison to men; but what is interesting to note is that this gap is higher in urban areas, as the difference between women's and men's unpaid work time is almost three and a half times. A graphical representation of gender inequalities for paid and unpaid activities is presented in the Annexure (Figure A1 and A2).

²⁴ A striking characteristic of the rural labour market is the uninterrupted presence of large gender gaps in wages (Swaminathan, 2020).

Regional differences in women's labour force participation

Gender norms in both public and private spheres are closely knitted with the status of women in a region. As a consequence, significant differentials in female labour force participation exist by region, social status and religion. With respect to regional differences, there is a large variation in female labour force participation rates across Indian states²⁵ (Figure 2), with Bihar reporting the lowest rate at 4.5 per cent, and Himachal Pradesh reporting the highest participation of women in the labour force, standing at 64 per cent. Besides, states in the south and west of India (such as Andhra Pradesh, Tamil Nadu and Maharashtra) generally display higher participation rates than those in north India (such as Punjab and Haryana). However, even the better performing regions display colossal gender gaps in labour force participation rates across both rural and urban areas (Figure 3). We also see that rural women's

participation declined across all states during 2011–12 and 2018–19, and the decline is more significant than the national average in almost all the major states (Figure 4).

How can these regional variations be explained?²⁶ One explanation is that there are varying employment opportunities for women across states. The other explanation relates to the socio-cultural norms in the regions. Regions in northern India tend to be more patriarchal and feudal, and therefore have lower female labour force participation rates in comparison to regions in the south, where generally women have relatively more freedom and a more prominent presence in society. Although cultural restrictions are changing, women are not yet as free as men to participate in paid market activities. Besides, a married woman's employment outcomes are also influenced by the husband's preference and perceptions of community attitudes in India.

²⁵ In 15 states, women's labour force participation in 2018–19 was less than a national average of 26.5 per cent.

²⁶ Winker (2016) writes that to explain the variation in female labour force participation across and within regions, one needs to consider multiple factors, including differences in cultural expectations, prevailing gender norms, social status and religion, stage of economic development, predominant industrial mix, relative demand for women workers, and institutional features including differences in wage setting, labour market and family policies.

Figure 3:
Gender differences in labour force participation rates across rural and urban locations (15–59 years), 2018–19

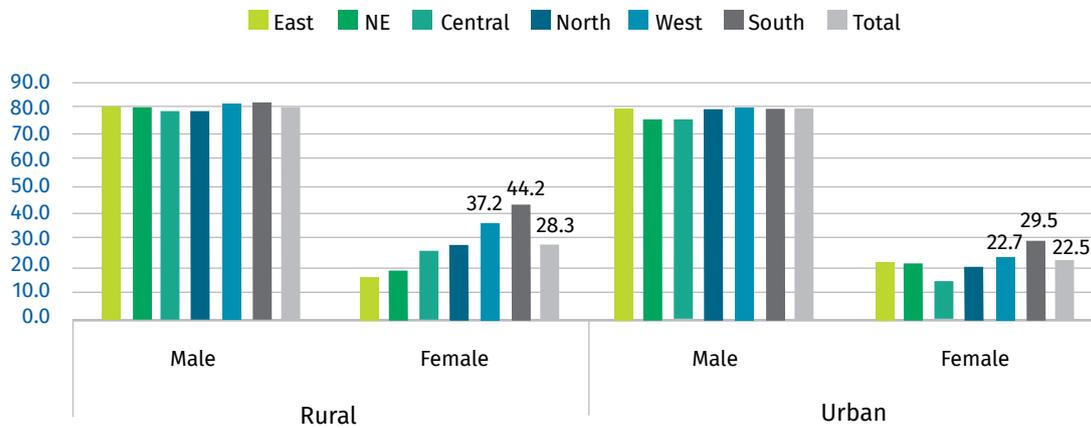
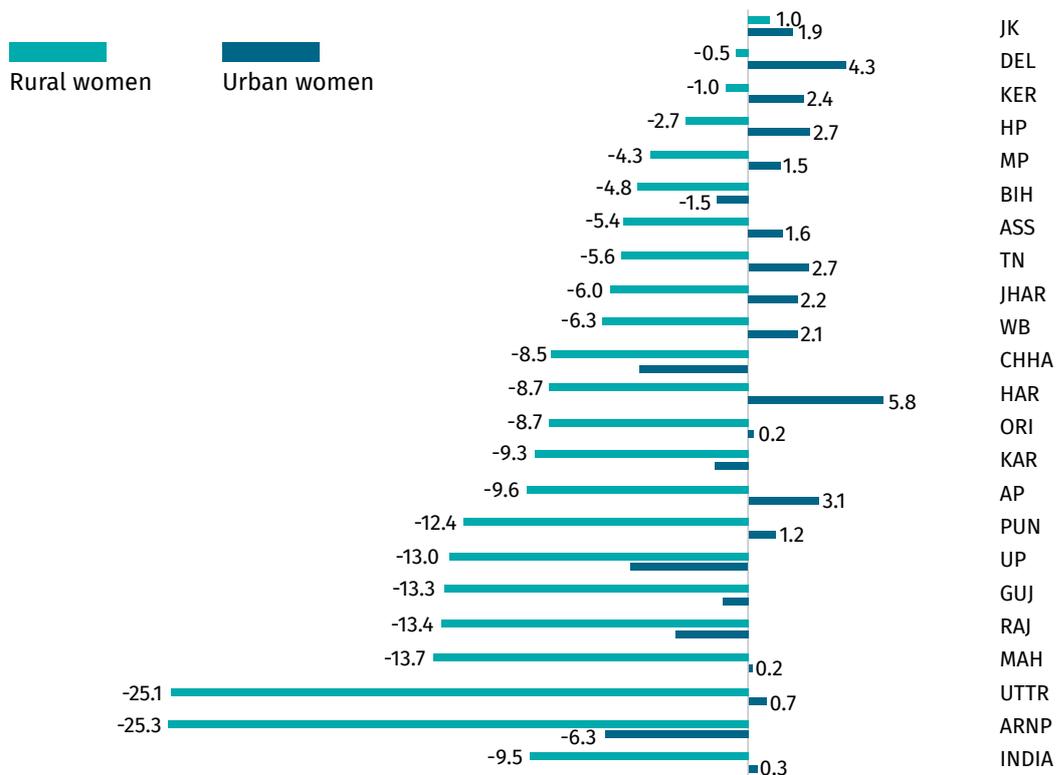


Figure 4:
Change in women’s labour force participation rate between 2011–12 and 2018–19 (%)



What explains the declining trend?

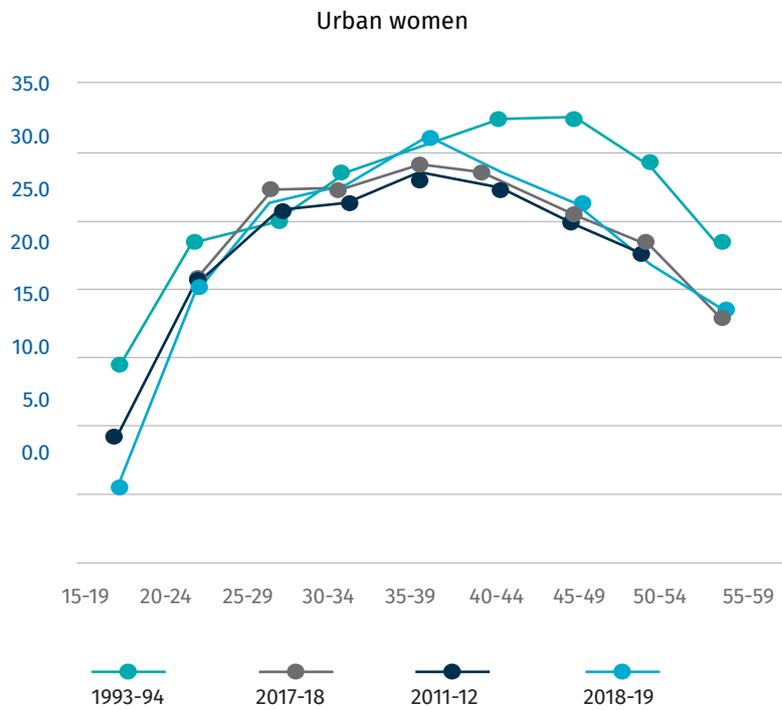
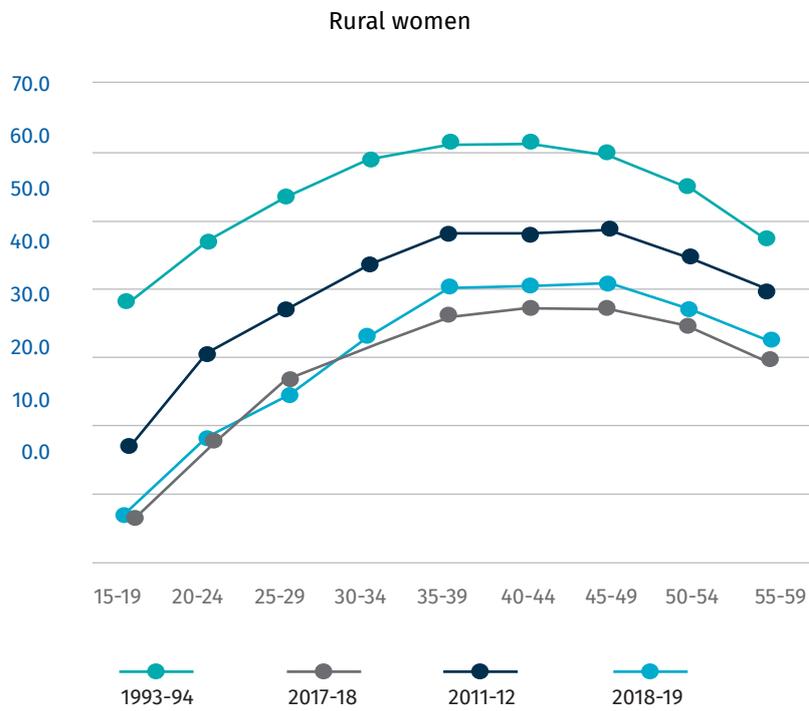
One of the often-cited reasons for declining rates of women's participation in the labour force has been their increasing educational enrolment in schools and colleges which makes them unavailable for paid market work. While this is true (as shown in Table 1), it is clear from

NSSO data (1993–94 and 2011–12) that this decline is not limited to young women workers, and, in fact, women's participation has decreased substantially across all age cohorts, especially between the age of 25 to 59 years (Figure 4).

Table 1:
Persons reporting currently attending educational institutions (%)

Year	Rural Male	Urban Male	Rural Female	Urban Female
<i>(15–19 age group)</i>				
1999–2000	41.3	58.5	25.8	51.7
2004–5	43.6	58.7	31.5	56.7
2009–10	58.7	68.8	47.3	66.9
2011–12	65.6	72.4	55.0	70.0
2017–18	73.2	76.0	64.8	77.0
2018–19	75.0	77.0	65.9	78.0
<i>(20–24 age group)</i>				
1999–2000	8.6	21.8	2.9	15.8
2004–5	9.1	21.5	3.9	14.9
2009–10	18.6	32.5	8.2	24.0
2011–12	22.0	33.3	10.6	25.4
2017–18	27.6	36.0	15.0	30.1
2018–19	26.3	33.3	15.3	29.8

Figure 5:
Age-specific labour force participation rates by location (%)



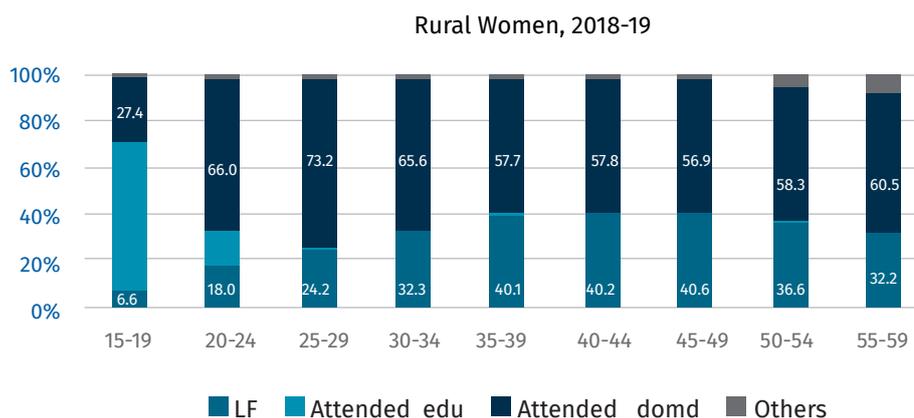
As noted by Desai et al. (2018) and Chowdhury (2011), it has more to do with the overall employment situation for women (it has not been women-friendly and there are persistent shreds of evidence of gender segregation of jobs), which has not improved, and the participation has declined for all women above the age of 15 years, not just for those currently attending any educational institution. PLFS data of 2018–19, however, reveals some reversion in the trend of women’s labour force participation rates, especially in urban areas. The labour force participation rates are higher for women aged 35 to 59 years compared to 2017–18.

While labour market participation of women is slowly picking up (more so in urban areas), it is nonetheless critical to evaluate women’s overall engagement in ‘labour force’ and ‘out-of-labour force’ activities. Disaggregation of women’s participation in economic and non-economic engagement suggests that there is a substantially high proportion of females reporting their activity status as attending to

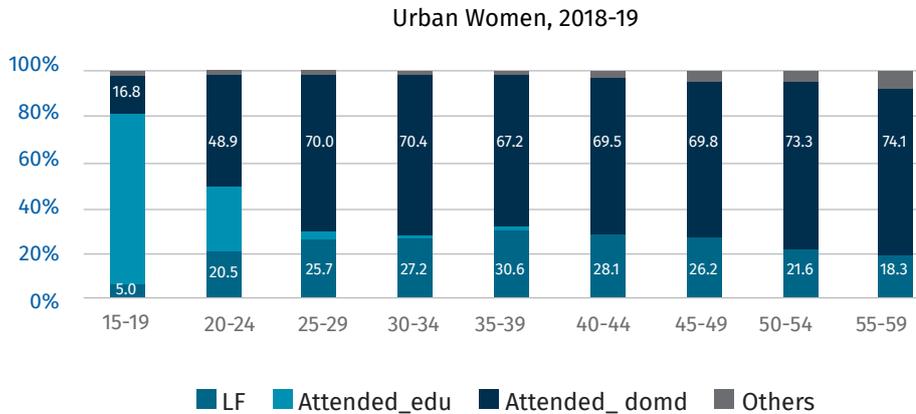
domestic duties²⁷ across both rural and urban locations (Figure 5). These are mostly unpaid activities not accounted for in employment, but considered essential to the welfare of society and the economy (ILO, 2019). Based on NSSO’s 2011–12 EUS data, the latest policy research working paper of the World Bank predicts that if all women engaged in domestic duties who are willing to work had a job, female labour force participation would gain by about 20 percentage points in India (Najeeb et al., 2020). Such analysis is not possible from the latest PLFS data, the reasons for which are discussed below.

Another seemingly disturbing observation is that a significantly higher proportion of women in urban areas (aged 30 to 59) were engaged in domestic duties in 2018–19 as compared to their rural counterparts. This shows that due to the nuclear nature of families in urban areas, women are burdened with a range of activities within households, such as caring for the young and elderly, cooking and other household chores, and their role in reproduction.

Figure 6:
Participation of women in the labour force and other non-economic activities, 2018–19 (%)



²⁷NSSO identifies domestic duties by codes 92 and 93 of activity status codes. Code 92 refers to attended domestic duties only; and code 93 refers to attended domestic duties and was also engaged in free collection of goods (vegetables, roots, firewood, cattle feed, etc.), and sewing, tailoring, weaving, etc. for household use.



As Table 2 shows, the proportion of women who spent time in domestic duties and activities for household consumption has increased considerably. In fact, the long-term trend since 1993–94 suggests that women have

been increasingly contributing to non-market activities (as described above), which has economic benefits for households. Still, often such work goes overlooked, undervalued and underreported.

Table 2:
Women who attend to domestic duties as a percentage of all women

Category	All women		Women (15–59)	
	Rural	Urban	Rural	Urban
1993–94	29.1	41.7	43.2	62.5
1999–2000	29.2	43.3	44.8	64.1
2004–5	27.2	42.8	40.5	60.9
2009–10	34.7	46.5	50.6	63.5
2011–12	35.3	46.1	51.2	62.4
2017–18	43.6	46.7	65.8	68.8
2018–19	41.9	46.8	63.2	68.4

Many scholars have pointed out that while the definition of economic activity used in labour force surveys is broadly in line with the definition adopted by the UN System of National Accounts, women's involvement in economic activity, however, is evaluated through a dichotomous indicator, i.e. 'in the labour force' or 'out of the labour force'.²⁸ Sudarshan (2014) and Hirway and Jose (2011) explain that following such crude categorisation, economically active women perhaps mistakenly get classified as 'inactive', and this has been one of the key reasons for the reportedly low labour force participation rates of women in India. Deshpande (2019) argues that by classifying women's activities in this way (between work, unemployment and inactivity) we miss an essential dimension—a 'grey zone' that defines the invisible and unpaid nature of women's work. She emphasises that women are actively engaged in work but they are not being counted and hence their contribution remains largely unseen. Chatterjee et al. (2015) find that the definition of unemployment in NSSO surveys affected estimates of female labour

force participation in India.²⁹ Swaminathan (2020) argues that labour force survey (both NSSO's EUS and PLFS) estimates on participation rates may be misleading, as the reverse trend is traceable with the time use data, where relatively more women are found to be engaged in economic activities. Recent studies present a compelling case for correct and comprehensive measurement of women's work (Deshmukh et al., 2019; Deshpande and Kabeer, 2019).

It is also worth mentioning here that NSSO's EUS used to collect information on several probing questions on women's engagement with domestic duties, such as the reasons for attending to domestic duties, willingness to accept paid work, type of paid work acceptable, the arrangement of work (part-time v/s full-time), etc. which not only reflected on the probable reasons for moving out of the labour force and reasons to take up domestic duties, but also manifested on the paucity of suitable employment opportunities in the vicinity.³⁰ However, the latest PLFS surveys have discontinued these questions.

²⁸ There is a vast literature on the measurement of women's engagement in economic work, and their exclusive engagement in domestic duties (Neff et al., 2012; Sudarshan, 2014; Deshpande and Kabeer, 2019; Deshmukh et al., 2019)

²⁹ The authors argue that in NSSO surveys, as per usual status, a person is not considered part of the labour force if she/he has not been searching for a job for at least six months during the survey year. As a result, many people registered with a placement agency and/or who sought work from public works programmes were not considered to be part of the labour force. Had these people been included, women's labour force participation rates would increase by 3 percentage points in rural areas and 5 percentage points in urban areas.

³⁰ As discussed by Chaudhary and Verick (2014) in their analysis of 2011–12 EUS data, a significant proportion of women usually engaged in domestic duties reported their willingness to accept work if the work was made available at their household premises. Of the total women usually engaged in domestic duties, 34 per cent in rural areas and 28 per cent in urban areas reported their willingness to accept work, with 'tailoring' being the most preferred work in both rural and urban areas. Among the women who were willing to accept work at their household premises, about 95 per cent in both rural and urban areas preferred work on a regular basis.

What explains the differences in women's labour force participation across social groups?

Table 3:
Labour force participation rate by social categories across location (%)

Social category	1993–94		2004–5		2011–12		2018–19			
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban		
	Women						Men			
ST	75.5	35.6	73.2	36.9	55.6	29.3	42.6	24.2	84.2	80.1
SC	56.9	33.7	55.3	31.5	40.3	26.1	28.2	25.6	81.4	81.1
OBC*	NA	NA	53	29.2	36.7	22.8	28.0	23.0	79.6	79.4
Others	47.2	23.5	41.2	21.4	29.8	19.7	21.4	20.7	79.9	79.4
All	52.1	25.1	52.5	26.1	37.8	22.2	28.3	22.5	80.6	79.6

Note: OBC was not separately defined, and was part of 'Others' in 1993–94

Gender–caste intersectionality is predominant in India and is manifested in differential employment outcomes, especially for women (Table 3). One of the striking features of the rural labour market is that SCs and STs typically comprise the major share of the female labour force in rural areas. Disaggregating trends in labour force participation rates across social categories, it is found that ST (Adivasi) women show the highest participation rates among all social groups.³¹ SC (Dalit) women also show higher participation, which is attributed to household poverty, higher mobility and fewer restrictions on working, particularly for occupations that require manual

labour (Das, 2006). Kapsos et al. (2014) also find that the probability of participating in the labour force is higher for SC and ST women. Upper caste women, on the other hand, have historically had low labour market attachment compared to lower caste (Dalit and Adivasi) women, as well as to upper caste men. Deshpande (2020) explains that working for wages has been regarded as a symbol of low status for upper caste women, and thereby lower participation. Mehrotra and Parida (2017) find that women belonging to upper castes are less likely to enter the labour force in rural areas, but they are more likely to participate in the labour market in urban India.

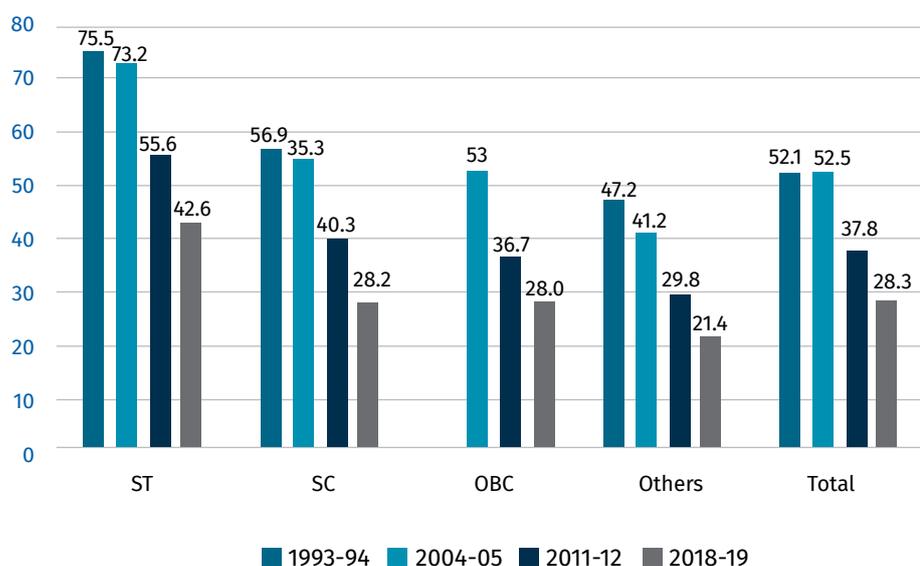
³¹ Along the same lines, Muslim women show the least participation in comparison to Hindu women.

On the other hand, there is less gap in the case of men as their participation remains the same across all social categories.

Women's labour force participation has been on the decline since 2004–5 (especially in rural areas), and there has been a uniform decline in labour force participation rates across all social groups. However, the highest drop has been registered for ST women (despite highest participation rates among ST women), followed by SC and OBCs in rural areas (Figure 7). In urban areas too, ST women experienced the highest decline during this period. Neetha (2014) refers to this as caste-based bias in women's work

opportunities, and notes that the nature of employment is also closely tied to social groups.³² Deshpande (2021) explains that the reasons for the phenomenal decline in rural ST (Adivasi) women's labour force participation are far more complex, and that these women are not dropping out of the labour force due to constricting social norms or fear of sexual violence or income effect. She underlines the importance of looking beyond the supply side story and investigate labour market discrimination, and the demand side narrative, such as skill mismatch, lack of adequate jobs, and employer's bias against women from marginalised sections.

Figure 7:
Labour force participation of rural women by social groups (15–59 years) (%)



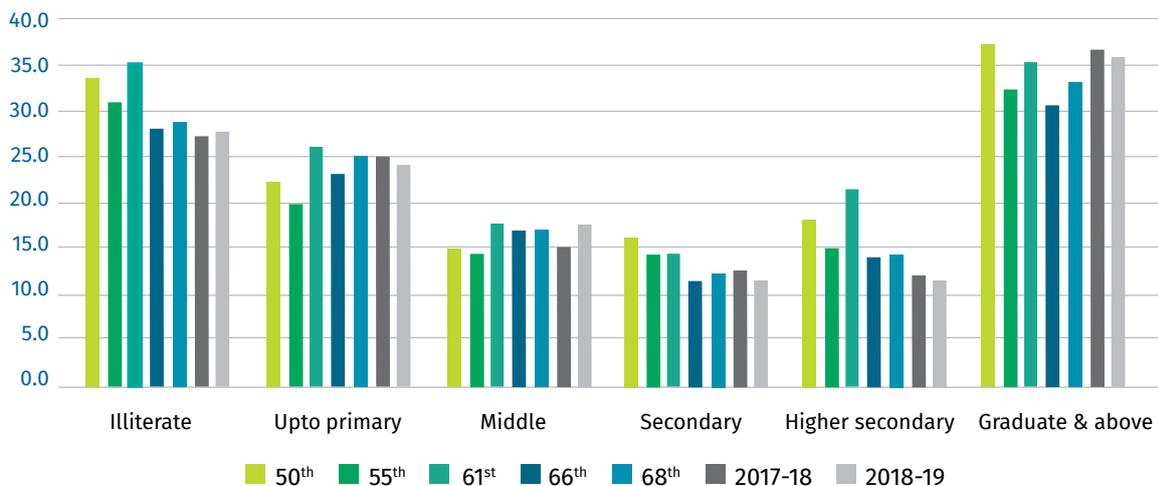
³² Self-employment is highest among Muslim women, followed by upper caste Hindu women, possibly due to mobility restrictions, while casual wage work (the most precarious category of work) is highest among SC women. Further, upper caste women dominate in the modern economy, availing of better working conditions and more regular wage jobs (Neetha, 2014).

Rising educational attainment and labour market participation

Interestingly, educational attainment of women has been steadily rising in India, and the gender gap in education (female to male ratio) has narrowed considerably over time (although there still remains a significant gap, particularly at higher education levels), and we can expect to see a rise in female labour force participation when this gap closes further. However, the relationship between educational attainment of women and their labour force participation is not unambiguous. This may be due to the relative strengths of income effect and substitution effect (as explained in the literature review section). But clearly, there is a U-shaped relationship between education and labour force participation rates of women, and is strongly evident in the case of urban women.

The U-shaped relationship shows that with increasing educational attainment of women, their labour force participation first declines and then picks up among highly educated women, especially university graduates and beyond, who participate in white collar, well-paying jobs (Figure 6). In other words, less educated and higher educated women are significantly more likely to be employed. Even so, relatively low labour force participation persists among highly educated women. In fact, labour force participation of urban women with a graduate degree and above was higher in 1993–94 (37.5 per cent) as compared to 2018–19 (36 per cent). Highly educated urban women still bear the primary responsibility for raising children, caring for sick and elderly, and managing the home.³³

Figure 8:
Female labour force participation by education levels, urban areas: 1993–94 to 2018–19 (15–59 years)



³³ This reveals that women's labour supply decision is a complex one and various factors interplay in determining their participation in paid activities; more often than not, this issue is compounded by the presence of young children in the households. As women stay out of the labour force to care for young children in their homes, initiatives such as crèche facilities (a day care centre at the workplace) and flexible working conditions have the potential of improving women's participation rates. Latest research by IWWAGE on 'The Future of Work for Women Workers in India's Emerging Gig Economy' explored the relevance of flexi-time in promoting women's participation in the platform economy, and found convincing evidence in support of it (Chaudhary, 2020)

Najeeb et al. (2020) explain that while the share of graduates in the overall female working age population has nearly doubled, the decline in labour force participation of educated urban women is associated with their limited participation in sectors providing white collar services jobs, which is the major employment sector for moderately educated workers. Klasen and Pieters (2012) argue that it may be so because not enough white-collar jobs are being created in the urban labour market to keep pace

with the increased supply of highly qualified women.³⁴ Similarly, Chatterjee et al. (2018) discuss demand driven factors to explain the U-shaped relationship and suggest that exclusion of women from white collar clerical and retail sales jobs is the real problem. Moreover, it is vital to analyse the gender-caste intersectionality in the area of education to see how women from poor and marginalised communities are faring in formal education, and its potential impact on their labour market outcomes.

Table 4:
Unemployment rate by educational attainment (15–59 years) (%)

Level	Rural			Urban			Total		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
<i>2018–19 PLFS</i>									
Illiterate	1.7	0.0	1.0	3.8	1.1	2.8	2.1	0.2	1.2
Up to Primary	3.0	0.6	2.4	3.7	1.6	3.2	3.2	0.8	2.6
Middle	5.5	1.8	4.9	5.7	4.5	5.5	5.6	2.5	5.1
Secondary	6.0	3.8	5.6	5.8	8.8	6.2	5.9	5.1	5.8
Higher Secondary	9.0	12.0	9.5	8.2	16.1	9.4	8.7	13.5	9.5
Graduate & above	17.7	34.3	20.8	11.8	20.1	13.9	14.4	25.1	16.8
Total	6.0	3.8	5.4	7.4	10.3	8.0	6.5	5.5	6.2
<i>2011–12 NSSO</i>									
Illiterate	0.5	0.2	0.4	0.8	0.5	0.7	0.6	0.2	0.4
Up to Primary	1.1	0.4	0.9	2.0	1.5	1.9	1.3	0.6	1.1
Middle	1.9	2.4	2.0	2.2	3.3	2.4	2.0	2.6	2.1
Secondary	2.0	5.8	2.7	2.3	6.7	2.9	2.1	6.0	2.7
Higher Secondary	4.1	10.9	5.2	4.8	9.2	5.4	4.4	10.2	5.3
Graduate & above	7.5	18.9	9.5	5.3	12.8	6.9	6.1	14.6	7.8
Total	1.9	1.7	1.8	3.1	5.5	3.6	2.2	2.5	2.3

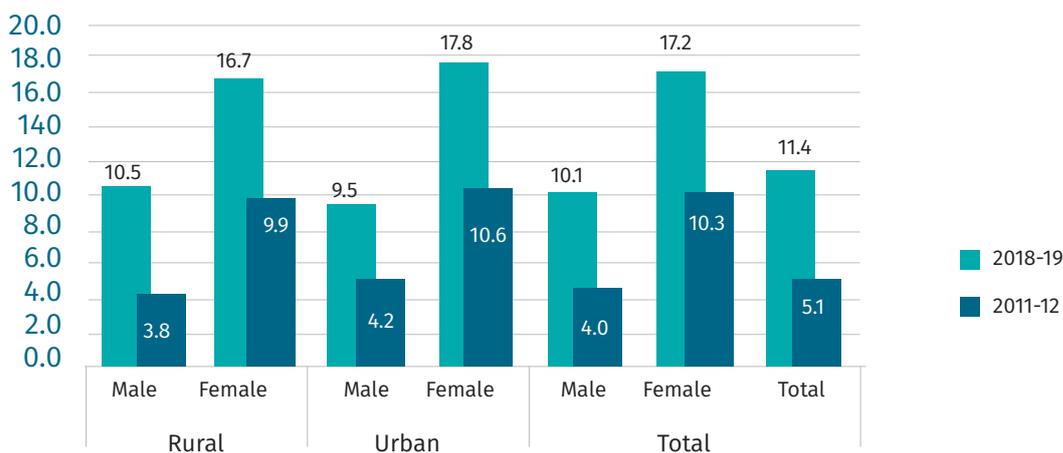
³⁴ The share of white-collar services jobs in urban employment fell from 19 per cent in 1987 to 17 per cent in 2009, while the share of graduates in the working age population increased from 11 per cent to 21 per cent.

While the proportion of women with college degrees (graduate and above) continues to grow, a greater number of educated women were unemployed in 2018–19 than in 2011–12, and the gender gaps in unemployment rate remain the largest among this population group. As reported in Table 4, it is depressing to note that 17 per cent of working age educated women were unemployed in the country in 2018–19, but only 10 per cent of comparable men find themselves without a job (Figure 9). Also, for rural educated women, unemployment stood at 16.7 per cent in 2018–19, increasing sharply from 9.9 per cent in 2011–12. Similarly, for urban women it increased substantially during 2011–12 and 2018–19 (Figure 9). Furthermore, the overall unemployment rate in urban areas is higher than in rural areas. Besides, the situation is much worse for the highly educated (those with college degrees), and the unemployment rate for women was double that of men in this segment in 2018–19. This once again reinforces that women, particularly those with higher education, face additional barriers compared

to men in accessing employment opportunities. And, alarmingly, the high unemployment levels of people with college degrees in rural areas urgently calls for the creation of more non-farm employment opportunities (more has been discussed later). Another big challenge is that unemployment rates are the highest among young people as compared to their adult counterparts³⁵ (see Table A1 in Annexure). The PLFS 2018–19 reveals that unemployment is highest among young urban women (32.7 per cent) and young rural women (18 per cent).³⁶

The high unemployment rates at higher levels of education may either reflect a possible supply side bottleneck and higher reservation wage,³⁷ or it may indicate demand side barriers in accessing jobs, such as gender discrimination in the hiring process. Levenson and O’Kane (2019) suggest ways to improve women’s labour force participation by employing inclusive hiring practices, such as well-designed job descriptions, competency-based assessments, and behavioural nudges in recruitment.

Figure 9:
Unemployment rate for people with secondary and above education (15–59 years) (%)



³⁵ This challenge will intensify further as a result of the COVID-19 pandemic. According to the latest ILO–ADB report, youth unemployment rates will rise further (to an estimated 30 per cent), and an equivalent of 6.1 million youth jobs will be lost in India in a six-month containment scenario. See: https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/documents/publication/wcms_753369.pdf

³⁶ Such high unemployment rates among youth can partly be explained by the quality skill gap and skill mismatch, income, social norms, etc. (supply side concerns). However, while looking to the demand side for explanations, it is hard to ignore the vanishing job opportunities, particularly in rural areas. In this context, Chatterjee et al. (2015) find that when there is a collapse in agricultural/farming jobs, and parallel job opportunities in the non-farm sector do not emerge, women are pushed out of the labour force.

³⁷ Highly educated women participate in the labour force as the opportunity cost of non-participation is higher, and they also have access to better quality, well-paid jobs, mostly in the services sector (as discussed above). In most cases, their participation is likely to be out of preference rather than absolute need. On the other hand, for women with lower levels of education who generally hail from poorer economic backgrounds and socially marginalised communities, labour force participation is a survival strategy. See: <http://crossasia-repository.uni-heidelberg.de/3470/1/Female%20Labour%20Force%20Sri%20Lanka.pdf>

Also, imparting necessary vocational and technical skills can have a particularly advantageous impact on increasing women's labour force participation in India. As explained in the literature review section, there is ample supporting evidence to show that those women who have undergone vocational training (formal or informal) are more likely to work or have higher participation rates, and it improves employment outcomes of women, regardless of their educational levels. However, not only is the skill base in India tragically low, there is also a huge gap between the current status and

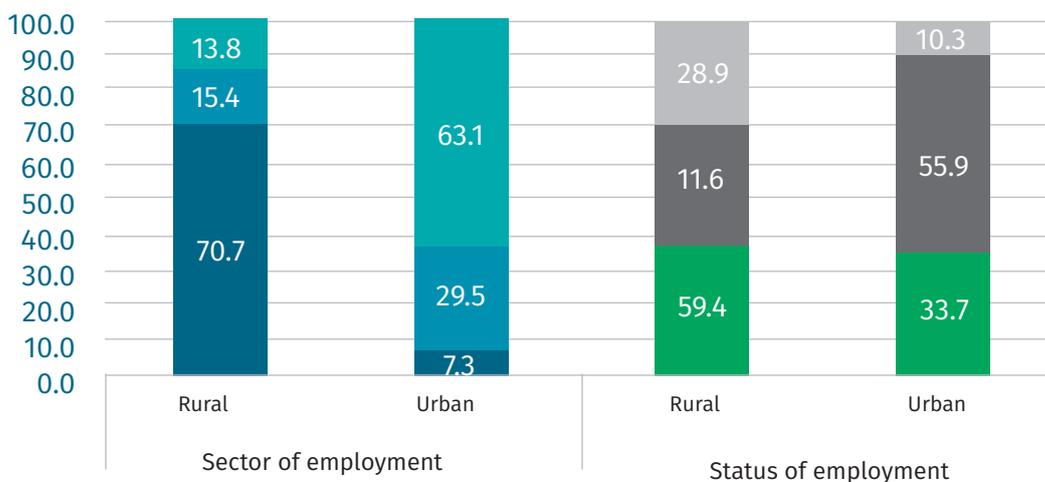
desired goal of a skilled workforce. Analysis of 2018–19 data reveals that 88.7 per cent of those in the age group 15–59 years did not receive any vocational/technical training. And of those who received any training, be it formal or informal (11.3 per cent), only a small proportion (2.4 per cent) received formal training. In other words, the majority of the skilled population acquires skills through non-formal channels, such as self-learning, hereditary skills and learning on the job. Besides, there are significant gender gaps, as only 6.9 per cent of women reported receiving any training compared to 15.7 per cent of men.

Explaining key employment trends for women

While the growth experience of the last two decades makes India an emerging economy, the economy's ability to engage the growing working age population has been continually diminishing, a trend named 'jobless growth'.³⁸ There are several different estimates of the workforce available in the country. According to one estimate, the absolute number of workers fell by 15.5 million during 2011–12 and 2017–18 (the total number of workers in the economy was 472.5 million in 2011–12, which declined

to 457 million in 2017–18) (Himanshu, 2019).³⁹ According to another estimate by Kannan and Raveendran (2019), the working age population in India (aged 15 years and above) grew by 128.3 million people (65 million men and 63 million women) between 2011–12 and 2017–18, and the total workforce declined by 6.2 million (the size of the male workforce increased by an estimated 15.6 million and that of the female workforce declined by 21.8 million).

Figure 10:
Employment distribution of women across broad sectors and status, 2018–19 (%)



³⁸ Jobless growth refers to a situation where the output or GDP growth in the economy is positive, but there is no growth in employment.

³⁹ <https://www.livemint.com/opinion/columns/opinion-the-seriousness-of-the-problem-of-unemployment-in-india-1564679281965.html>

In other words, the job market in India has not been able to absorb the growing number of male workers (as indicated by their labour force participation rates, which remained more or less stable during this period, at 55 per cent); 24.7 million women workers lost employment in rural India, and a substantially smaller increase of 2.9 million in urban India could not make up for it. Many researchers have questioned the comparability of PLFS data with earlier NSSO's EUS trends on account of data collection methodology. Even so, there is no denying that women are exiting the Indian workforce in large numbers, and that they are more severely affected than men due to the jobless growth regime.

One reason for the reduction in women's labour force participation in rural India is the stimulating shift that is taking place—away from agriculture in favour of manufacturing and services. However, careful examination of recent sectoral employment trends reveals that agriculture remains the major employer of the Indian workforce at 40.5 per cent, and women are overrepresented in this sector (54.7 per cent versus 36 per cent of men). It is worth noting that the employment structure at the sectoral level shows some improvement (the share of the services and industry sector have registered noteworthy increases, while the share of the primary sector in total employment has dipped significantly since 2011–12).⁴⁰

Table 5:
Sectoral distribution of workforce (15–59 years) (%)

Category	Rural			Urban			Total		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
<i>2018–19 PLFS</i>									
Agriculture	50.5	70.7	55.8	4.3	7.3	4.9	35.9	54.7	40.5
Industry	25.0	15.4	22.5	35.8	29.5	34.5	28.4	19.0	26.1
Services	24.5	13.8	21.7	59.9	63.1	60.6	35.7	26.3	33.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<i>2017–18 PLFS</i>									
Agriculture	52.4	72.8	57.5	4.6	8.3	5.4	37.8	56.3	42.2
Industry	24.5	13.9	21.8	36.4	30.2	35.1	28.1	18.0	25.7
Services	23.1	13.4	20.7	59.0	61.5	59.5	34.0	25.6	32.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<i>2011–12 NSSO</i>									
Agriculture	57.4	74.8	62.8	5.5	10.4	6.5	41.7	62.2	47.4
Industry	22.5	16.5	20.7	34.7	33.8	34.5	26.2	19.9	24.5
Services	20.1	8.7	16.5	59.8	55.8	59.0	32.1	17.9	28.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

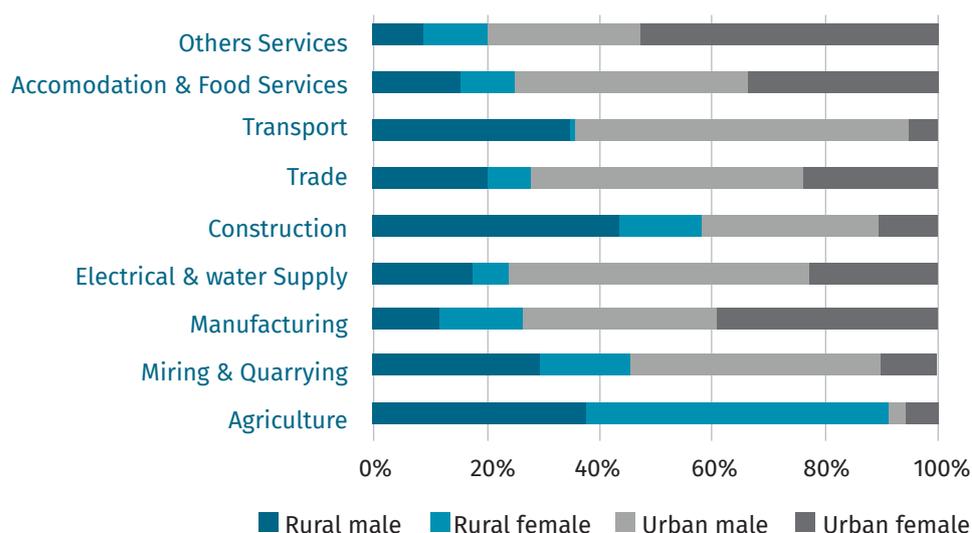
⁴⁰ The agricultural sector came down the halfway mark for the first time in 2011–12. This share was more than 60 per cent in the 1990s and about 55 per cent in 2009–10.

This confirms the fact that the recent growth trajectory (or structural change) in India has been driven by the services sector and not manufacturing.⁴¹ In tune with the aggregate trend, the share of women workers in the agricultural sector dropped from 62 per cent in 2011–12 to 54.7 per cent in 2018–19; in industry (manufacturing + non-manufacturing) the drop was from 19.9 per cent to 19.0 per cent. On the other hand, the share of women workers in the services sector has seen a significant increase during the same period.⁴² But this trend is largely driven by urban areas, and the news is not so good when we examine the disaggregated sectoral data for rural and urban areas separately. The largest proportion of rural women (71 per cent) are still working in the agricultural sector⁴³ (in predominantly low productive activities), followed by other services (9.6 per cent), manufacturing (9.3 per cent) and construction (5.7 per cent). All these sectors (except ‘other services’⁴⁴) registered a decline during 2011–12 and 2018–19, and the significant decrease of 4 percentage points was seen in the case of agricultural engagement⁴⁵ (see Tables A4 and A5 in Annexure). On the contrary, the

urban women’s workforce distribution is skewed towards the services sector, as it comprises 49 per cent of women workers, followed by manufacturing (25 per cent) and trade (10 per cent).

This resonates with the recurring debate around the process of structural transformation in India—that it has not been successful in altering the occupational structure, such that the large number of those employed in the primary sector could move to the non-agricultural sector, thereby creating diversification in the job market, especially towards higher value-added activities; it has also remained unsuccessful in improving the quality of employment (Mehrotra et al., 2014). Similarly, Majid (2019) argues that in the period of high growth in the country, structural change and labour transfer came primarily in the form of shifts of labour across sectors in the unorganised economy, rather than shifts from the unorganised to organised economy.

Figure 11:
Distribution of workforce by institutional sector, 2018–19 (%)



⁴¹Lahoti and Swaminathan (2016) establish that labour intensive manufacturing in India has not contributed to economic growth, which has resulted in low employment intensity growth and put women at a greater disadvantage than men in the job market. This is because women generally lack skills to perform skill intensive jobs in the services sector.

⁴²It is important to bear in mind that a significant share of urban women in the services sector work in the domestic work sector.

⁴³Swaminathan (2020) argues that in comparison to men, women are more dependent on agricultural work because there is relative absence of non-agricultural opportunities, and also because there are constraints to women’s mobility (in terms of physical accessibility) and they favour employment near residential premises. She also submits that if suitable employment opportunities are provided, the number as well as proportion of women workers will rise.

⁴⁴‘Other services’ employment increased by 4 percentage points.

⁴⁵Mehrotra et al. (2014) attribute the decline in women’s employment in agriculture to shrinkage in labour demand on account of rising rural wages, and the rise in agricultural mechanisation.

Another significant trend in the labour market is the increasing share of regular salaried workers who now constitute 25 per cent of total employment (in the age group 15–59 years). However, it also signifies that 75 per cent of the total workforce is still engaged in self-employment⁴⁶ and casual wage employment, and thereby lacks adequate social protection or job

security. Moreover, the occupational structure of women's workforce reveals that most women continue to work in marginal jobs. More than half work as self-employed, of which most are unpaid helpers/contributing family workers, and a majority are still engaged in vulnerable employment⁴⁷ (52 per cent versus 47 per cent of males).

Table 6:
Employment distribution of workforce (15–59 years) (%)

Category	Rural			Urban			Total		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
<i>2018–19 PLFS</i>									
Self-employed	55	59.5	56.3	36.9	33.7	36.3	49.4	52.9	50.2
Regular salaried	15.5	11.6	14.5	48.9	55.9	50.4	26	22.9	25.3
Casual labourer	29.4	28.9	29.3	14.1	10.3	13.4	24.6	24.2	24.5
Total	100	100	100	100	100	100	100	100	100
<i>2017–18 PLFS</i>									
Self-employed	55.6	57.4	56.1	37.5	33.7	36.6	50.1	51.4	50.4
Regular salaried	15.2	11	14.1	47.4	53.6	48.7	25	21.8	24.2
Casual labourer	29.2	31.6	29.8	15.2	12.7	14.7	24.9	26.8	25.4
Total	100	100	100	100	100	100	100	100	100
<i>2011–12 NSSO</i>									
Self-employed	52.3	58.9	54.4	40.3	42.1	40.7	48.8	55.6	50.6
Regular salaried	11	5.9	9.4	44.8	44.1	44.7	21.2	13.4	19.1
Casual labourer	36.7	35.2	36.2	14.8	13.8	14.6	30	31	30.3
Total	100	100	100	100	100	100	100	100	100

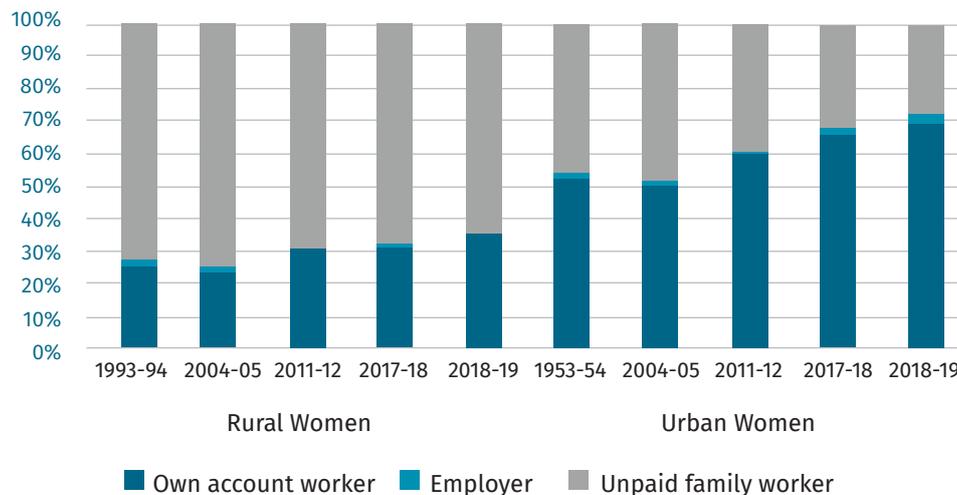
⁴⁶ NSSO categorises self-employed into three categories: (a) own-account workers, who operate their enterprises on their own account or with one or a few partners and who, by and large, run their enterprise without hiring any labour. They could, however, have had unpaid helpers to assist them in the activity of the enterprise; (b) employers who work on their own account or with one or a few partners and who, by and large, run their enterprise by hiring labour; and (c) contributing family workers/helpers in household enterprise, who are engaged in their household enterprises, working full- or part-time, and do not receive any regular salary or wages in return for the work performed.

⁴⁷ As defined by the ILO, vulnerable employment is described as the sum of own-account workers and unpaid or contributing family workers. And of the total vulnerable employed, absolute majority of women are working as unpaid family helpers, whereas for men the lion's share is that of own-account workers (see Table A3 in Annexure).

While it is apparent that there is a large unpaid segment to self-employed women in India, which contributes to the economy without receiving any payment or income for their labour,⁴⁸ long-term trends of self-employed women across rural and urban locations are completely dissimilar (see Figure 12). The share of contributing family workers/unpaid helpers⁴⁹ has remained most prominent in the case of rural women; on the

flip side, the proportion of own-account workers has been steadily increasing for women in urban India. Most notably, the share of self-employed stays minuscule in both rural and urban areas. These trends paint a dismal picture of self-employed women in rural India, and calls for an evaluation of the National Rural Livelihood Mission, the largest programme for promoting livelihoods in rural areas.

Figure 12:
Characteristics of self-employed women in India, 15–59 years.



It is important to flag here that entrepreneurship gender gaps are more prominent, and much more extensive, than gaps in labour force participation. As Khera (2019) estimates (based on the World Bank's Enterprise Survey), the incidence of men in entrepreneurship is much larger and women comprise a meagre 10 per cent of the total number of entrepreneurs in India. He argues that women confront several constraints in accessing institutional sources of finances, and thereby resort to informal sources.

Then again, although there has been a rise in salaried employment for women (as it registered an increment of 9.5 percentage points between 2011–12 and 2018–19), its share is still low in comparison to their male counterparts (23 per cent, as against 26 per cent of males). Further, the quality of these jobs remains a concern,

despite offering a steady flow of income. Besides, it is a well-known fact that informality permeates the less developed countries, and women are usually concentrated in the informal economy. Even within the formal sector, women often perform the most vulnerable type of work and are paid less than the statutory minimum wages, without the necessary non-wage (social security) benefits such as written contracts, paid leave, maternity leave, etc. The net employment generation in the past few years in India, especially in the last decade and a half, has been primarily in low-paid and unstable jobs in the informal sector. Between 2004–5 and 2011–12, 14 million jobs were added in the economy, the bulk of which were in the informal sector, which makes informal the new normal for India (Himanshu, 2017).

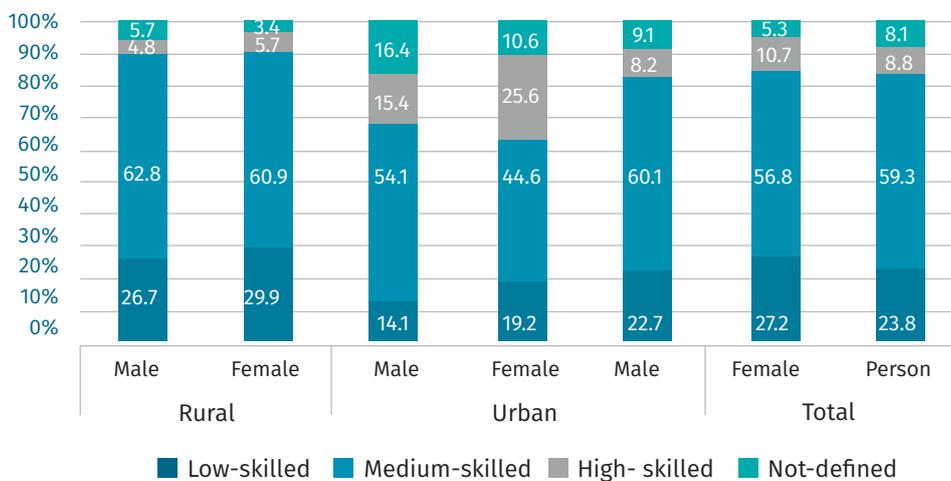
⁴⁸ Unpaid family workers do not receive any independent income. On the other hand, the two sub-categories within self-employment, i.e. the own-account worker and employer, receive wages/income. Own-account and contributing family workers are more likely to experience low job/income security, as well as lower coverage by social protection systems and employment regulation than employees and employers.

⁴⁹ Unpaid work here does not refer to domestic work such as cooking, childcare, cleaning, etc. but includes economic activities which result in production of goods and services, either for own use or produced for market.

Latest estimates suggest that the informal sector in India still contributes about 91 per cent of total employment (83.5 per cent in non-farm sectors), and the share of informal jobs within the organised/formal sector increased (Mehrotra and Parida, 2019). This indicates that not much has changed as far as quality of employment is concerned. What is more, data from 2018–19 shows that 54.4 per cent of regular salaried

women in the non-farm sector had no social security benefits, 66.5 per cent women had no written contracts, and 50.6 per cent were not eligible for paid leave. Such trends highlight the paramount need to promote the participation of women, on the one hand, and eliminate the barriers in accessing quality and remunerative jobs, on the other.

Figure 13:
Employment by occupation, 2018–19 (15–59 years)



Note: PLFS estimates for age group 15–59. Employment by occupation: skill level 1 (low) for elementary occupations; skill level 2 (medium) for clerical, service and sales workers, skilled agricultural and trade workers, plant machinists and assemblers; skill levels 3 and 4 (high) for professionals, technicians and associate professionals; and not-defined (skill levels are not defined for legislators, senior officials and managers).

Another dimension to India's labour market is that about 60 per cent of the workforce is employed in medium skilled occupations. Low skilled occupations account for more than 23 per cent of total employment (more so in rural areas). Also, about 30 per cent of women in rural India are performing low skilled occupations, compared to 19 per cent in urban areas. This evidence of the pattern of employment points

towards the urgent need to widen India's skill base and invest in skills demanded by employers, i.e. following the industry's requirements. To this end, there is abundant literature that speaks to the phenomenon of skill mismatch and the potential benefits of eliminating it (Klasen and Pieters, 2015; Fletcher et al., 2017; Kanjilal-Bhaduri and Pastore, 2018).

Determinants of women's labour force participation in India

Comprehending women's work is challenging, as the issues of women's labour force participation and employment are qualitatively different from those of the male workforce (Beneria and Sen, 1981). Women's labour force participation rate is influenced by multiple factors such as their marital status, number of children, caste, religion, gender, socio-cultural norms, lack of essential education and vocational skills, and labour market discrimination. Besides, women are primarily responsible for unpaid care and domestic work, which makes them time-poor. Further, male household members (husbands or in-laws) impose restrictions on women's movement and generally decide what type of job women should take up. These constraints often function at various levels in society and limit women's mobility and labour market choice, forcing them to take non-wage employment or remain out of the labour force.

With this understanding, the remainder of this paper focuses on an econometric analysis of women's labour force participation in rural and urban areas. The exercise aims to explore the impact of the critical individual and household variables and other macro variables on the likelihood of women being in the labour market or out of it.

A logit model has been estimated, and a range of explanatory variables was used to achieve this goal. The analysis draws on microdata of the PLFS 2018–19, and the marginal effects are presented in Table 7. The estimation is statistically significant, and most coefficients are highly effective (at the 1 per cent level).

Several factors significantly affect the probability of women's labour force participation. Higher household income is negatively linked to their labour force participation in both rural and urban areas. In other words, as the household's income levels increase, the likelihood of a woman being in the labour force decreases. Similarly, we find a robust negative relationship between women's labour force participation rate and the household head's education, suggesting that women withdraw from the labour force once the household's socio-economic status improves.

Women's own education is a major determinant of their labour force participation rate. There is a clear U-shaped relationship between female labour force participation rate and education. Their human capital endowments, particularly university education, play a crucial role. We find that relative to illiterate women, the marginal effects are negative and more prominent in subsequent educational attainment levels up to higher secondary schooling. For women with any tertiary education, the marginal effects are positive and significantly large: a woman with a graduate and higher degree has more than a 12 per cent chance of being in the labour force in urban areas.⁵⁰ Similarly, vocational training seems to be an important factor in determining women's paid work participation. All the different training types raises the probability of labour market participation in both rural and urban areas.

⁵⁰ Chaudhary and Verick (2014) find that women with a graduate degree have a 30 per cent higher likelihood of being employed in regular salaried work in rural areas, and 20 per cent higher likelihood in urban areas, when compared to illiterate women in their respective regions.

Table 7:
Results of the logit regression for women in urban and rural areas, 2018–19

	Urban women		Rural women	
	Coef.	Marginal effects	Coef.	Marginal effects
Age	0.347 (0.000)**	0.045 (0.000)**	0.284 (0.000)**	0.042 (0.000)**
Age squared	-0.004 (0.000)**	-0.001 (0.000)**	-0.003 (0.000)**	-0.000 (0.000)**
Log per capita household income	-0.440 (0.001)**	-0.057 (0.000)**	-0.454 (0.000)**	-0.067 (0.000)**
Household size	-0.128 (0.000)**	-0.017 (0.000)**	-0.122 (0.000)**	-0.018 (0.000)**
Children aged (0–4)	-0.040 (0.001)**	-0.005 (0.000)**	0.012 (0.000)**	0.002 (0.000)**
Children aged (5–15)	0.036 (0.000)**	0.005 (0.000)**	0.108 (0.000)**	0.016 (0.000)**
No. of elderly in the HH	0.037 (0.001)**	0.005 (0.000)**	0.072 (0.000)**	0.011 (0.000)**
No. of employed males in the HH	0.230 (0.001)**	0.030 (0.000)**	0.137 (0.000)**	0.020 (0.000)**
Religion (Ref. = Hindu)				
Muslim	-0.587 (0.001)**	-0.069 (0.000)**	-0.576 (0.001)**	-0.079 (0.000)**
Others	0.044 (0.001)**	0.006 (0.000)**	0.188 (0.001)**	0.029 (0.000)**
Social group (Ref. = General)				
ST	0.011 (0.002)**	0.001 (0.000)**	0.592 (0.001)**	0.088 (0.000)**
SC	0.137 (0.001)**	0.018 (0.000)**	0.295 (0.001)**	0.042 (0.000)**
OBC	0.140 (0.001)**	0.018 (0.000)**	0.371 (0.001)**	0.053 (0.000)**
Marital status (Ref. = Single)				
Married	-1.150 (0.001)**	-0.170 (0.000)**	-0.295 (0.001)**	-0.044 (0.000)**
Widow/divorced	-0.403 (0.002)**	-0.067 (0.000)**	-0.147 (0.001)**	-0.023 (0.000)**
Own education (Ref. = Illiterate)				
Up to Primary	-0.146 (0.001)**	-0.020 (0.000)**	-0.131 (0.001)**	-0.020 (0.000)**
Middle	-0.398 (0.001)**	-0.050 (0.000)**	-0.363 (0.001)**	-0.054 (0.000)**
Secondary	-0.735 (0.001)**	-0.084 (0.000)**	-0.400 (0.001)**	-0.059 (0.000)**
Higher Secondary	-0.689 (0.001)**	-0.080 (0.000)**	-0.521 (0.001)**	-0.075 (0.000)**
Graduate & above	0.768 (0.001)**	0.125 (0.000)**	0.383 (0.001)**	0.063 (0.000)**

Vocational training (Ref. = No training) Received formal vocational training	1.227 (0.001)**	0.200 (0.000)**	1.268 (0.002)**	0.217 (0.000)**
Hereditary	2.515 (0.003)**	0.458 (0.001)**	2.661 (0.002)**	0.456 (0.000)**
Self-learning	2.072 (0.002)**	0.371 (0.000)**	1.398 (0.001)**	0.241 (0.000)**
On-the-job training	3.726 (0.003)**	0.651 (0.000)**	2.485 (0.002)**	0.429 (0.000)**
Others	1.109 (0.002)**	0.178 (0.000)**	1.107 (0.002)**	0.188 (0.000)**
Household head (Ref. = Illiterate) Up to Primary	-0.194 (0.001)**	-0.028 (0.000)**	-0.057 (0.001)**	-0.009 (0.000)**
Middle	-0.314 (0.001)**	-0.044 (0.000)**	-0.086 (0.001)**	-0.013 (0.000)**
Secondary	-0.601 (0.001)**	-0.080 (0.000)**	-0.246 (0.001)**	-0.036 (0.000)**
Higher Secondary	-0.579 (0.001)**	-0.077 (0.000)**	-0.221 (0.001)**	-0.033 (0.000)**
Graduate & above	-0.559 (0.001)**	-0.075 (0.000)**	-0.325 (0.001)**	-0.047 (0.000)**
Missing: HH head is woman	-0.150 (0.001)**	-0.022 (0.000)**	-0.124 (0.001)**	-0.019 (0.000)**
Log per capita NSDP	15.764 (0.029)**	2.042 (0.004)**	42.730 (0.024)**	6.319 (0.003)**
Square log of per capita NSDP	-0.651 (0.001)**	-0.084 (0.000)**	-1.834 (0.001)**	-0.271 (0.000)**
Social sector expenditure as proportion of NSDP	0.028 (0.000)**	0.004 (0.000)**	0.071 (0.000)**	0.011 (0.000)**
Region (Ref. = South)	-0.430 (0.001)**	-0.055 (0.000)**	-0.653 (0.001)**	-0.103 (0.000)**
North				
Central	-0.329 (0.001)**	-0.043 (0.000)**	-0.419 (0.001)**	-0.068 (0.000)**
East	0.007 (0.001)**	0.001 (0.000)**	-1.055 (0.001)**	-0.155 (0.000)**
West	-0.265 (0.001)**	-0.035 (0.000)**	0.058 (0.001)**	0.010 (0.000)**
North-East	-0.330 (0.003)**	-0.043 (0.000)**	-1.680 (0.001)**	-0.220 (0.000)**
N	51,201	51,201	67,618	67,618

The marital status of women also significantly affects their labour force participation rate. Being married reduces the likelihood of an urban woman in the labour force by 17 per cent. Besides, the role of children is also noteworthy here. The presence of young children is associated with lower participation—women in households with young children aged less than 5 years of age are less likely to participate in the labour force across rural and urban areas. However, we don't find any such evidence in the case of older children. Klasen (2019) also notes no evidence of such a relationship. He argues that mothers cannot afford to stay out of the labour force for long due to income constraints in a relatively less developed country.

The coefficient on social sector spending suggests that the state's social sector spending

(as a share of Net State Domestic Product (NSDP) positively influences women's labour force participation rate across rural and urban areas. Region dummies show that all regions except east⁵¹ and west⁵² have significant negative coefficients, where south is the reference category. In other words, we find that women in these regions are less likely to participate in the labour market compared to women in the south.

Finally, social group and religion also play a dominant role in determining women's paid work participation in India. We find both are important correlates of female labour force participation, with SC/ST women and Hindu women being more active in the labour market than Muslim and upper caste women.

Concluding remarks and policy considerations

It is well known that women's economic activity outside the home translates into better outcomes for girls and women, such as improved health, improved educational attainment, reduced fertility, and reduced domestic violence. Besides, it is also beneficial for society as a whole, with extraordinary economic growth. With this understanding, the paper provides a careful and comprehensive examination of the key labour market trends for women in India, providing insights on the drivers of low female labour force participation, job quality, gender, social and regional disparities. The challenges in the Indian labour market highlighted in this paper include the slowing pace of job creation despite reasonable growth, large gender gaps, stagnant quality of jobs, and increasingly difficult access

to jobs faced by women from marginalised and vulnerable groups. Most striking is the poor quality of jobs, with the large majority of rural women workers engaging in agricultural work, unpaid, or informal employment, as opposed to formal wage jobs, which puts numerous women workers in positions of significant vulnerability.

Quality of jobs remains a major concern for the Indian workforce, especially women, with most of them engaged in unpaid work as contributing family workers. Addressing these challenges will require critical attention to facilitating job creation in micro, small and medium enterprises, and diversification of manufacturing jobs. Besides, it will require improving workers' skills and linkages to jobs. More specifically, there is a need to generate suitable employment

⁵¹ Where we observe a positive coefficient for urban women.

⁵² A positive coefficient for rural women.

opportunities for women, particularly in the context of declining agricultural employment and lack of alternate employment options, particularly non-farm work.

Given the complex nature of women's labour force participation, the analysis underscores the importance of concerted efforts at multiple levels to address macro, sectoral and regional challenges and the relevance of labour policies. In other words, a multifaceted and comprehensive framework for policy action is necessary, and such policies will contribute to the availability of stable and well-paying jobs. The aim should be to narrow the gender gap in the labour market, and reshape social norms and attitudes that surround the role of women at work. There is greater need for substantial efforts to address all the socio-economic constraints holding back women, and create quality jobs for women in the economy.

Policymaking should take a holistic and integrated approach to not only improve women's labour force participation, but also their overall labour market outcomes by enhancing access to skill development, technical and vocational training programmes, access to affordable childcare and maternity benefits, provision of family-friendly policies, provision of safe and convenient transport, and access to better paid formal jobs or entrepreneurship opportunities. The analysis also highlights the need for substantial efforts to promote a growth pattern that creates employment opportunities for all and ensures that women can take advantage of these new and growing opportunities. Policymakers should give special attention to not just women's entry into the labour market, but their long-term attachment, as it provides the track for women to take part in top ranks and hold positions of power.

References

- Afridi, F., T. Dinkelman and K. Mahajan (2016). 'Why are Fewer Married Women Joining the Work Force in India? A Decomposition Analysis over Two Decades', IZA Discussion Paper No. 9722. Institute of Labor Economics (IZA).
- Afridi, F., M. Bishnu and K. Mahajan (2019). 'What Determines Women's Labor Supply? The Role of Home Productivity and Social Norms'. IZA Discussion Paper No. 12666. Institute of Labor Economics (IZA).
- Alonso, C., M. Brussevich, M. E. Dabla-Norris, Y. Kinoshita and M. K. Kochhar (2019). Reducing and Redistributing Unpaid Work: Stronger Policies to Support Gender Equality. International Monetary Fund.
- Andres, L. A., B. Dasgupta, G. Joseph, V. Abraham and M. Correia (2017). Precarious Drop: Reassessing Patterns of Female Labor Force Participation in India. The World Bank.
- Banerjee, Abhijit, Marianne Bertrand, Saugato Datta and Sendhil Mullainathan (2008). 'Labor Market Discrimination in Delhi: Evidence from a Field Experiment', *Journal of Comparative Economics*, 37(1): 14–27.
- Benería, L. and G. Sen (1981). 'Accumulation, Reproduction, and "Women's Role in Economic Development": Boserup Revisited', *Signs*, 7(2): 279–98. Retrieved 12 April 2021 from <http://www.jstor.org/stable/3173878>
- Bernhardt, A., E. Field, R. Pande, N. Rigol, S. Schaner and C. Troyer-Moore (2018). 'Male Social Status and Women's Work', *AEA Papers and Proceedings*, 108: 363–67.
- Bhalla, S. and R. Kaur (2011). 'Labour Force Participation of Women in India: Some Facts, Some Queries' (No. 38367). London School of Economics and Political Science, LSE Library.
- Chatterjee, U., R. Murgai and M. Rama (2015). 'Job Opportunities along the Rural–Urban Gradation and Female Labor Force Participation in India', Policy Research Working Paper (No. 7412). The World Bank.
- Chatterjee, E., S. Desai and R. Vanneman (2018). 'Indian Paradox: Rising Education, Declining Women's Employment', *Demographic Research*, 38: 855–78.
- Chaudhary, R. and S.S. Verick (2014). 'Female Labour Force Participation in India and Beyond', ILO Asia–Pacific Working Paper Series.
- Chowdhury, S. 2011. 'Employment in India: What Does the Latest Data Show?', *Economic and Political Weekly*, 46(32): 23–26.
- Chowdhury, A. R., A. C. Areias, S. Imaizumi, S. Nomura and F. Yamauchi (2018). Reflections of Employers' Gender Preferences in Job Ads in India: An Analysis of Online Job Portal Data. The World Bank.
- Das, M. B. (2006). 'Do Traditional Axes of Exclusion Affect Labor Market Outcomes in India? Social Development Papers No. 97, South Asia Series. Washington, DC: The World Bank.
- Das, M. B. and S. Desai (2003). 'Are Educated Women Less Likely to be Employed in India? Social Protection Discussion Paper No. 313. Washington, D.C.: The World Bank.
- Das, Maitreyi Bordia and Ieva Zumbyte (2017). 'The Motherhood Penalty and Female Employment in Urban India'. Policy Research Working Paper No. 8004. Washington, D. C.: World Bank. <https://openknowledge.worldbank.org/handle/10986/26347> License: CC BY 3.0 IGO.
- Das, M. S., S. Jain-Chandra, M. K. Kochhar and N. Kumar (2015). Women Workers in India: Why so Few among so Many? (Nos. 15–55). International Monetary Fund.

- Deshpande, Ashwini (2019). 'The Visible and Invisible Barriers to Indian Women Working', *The India Forum*, 2 August. <https://www.theindiaforum.in/article/visible-and-invisible-barriers-women-working-india>
- (2021, forthcoming). 'Gender Gaps in the Indian Economy and Women's Economic Empowerment: A Landscape Assessment', IWWAGE Working Paper.
- Deshpande, Ashwini and Naila Kabeer (2019). (In)visibility, Care and Cultural Barriers: The Size and Shape of Women's Work in India'. Discussion Papers Series in Economics (DP No.04/19). Haryana: Ashoka University, Department of Economics.
- Deshmukh, Neerad, Sonalde Desai, Santanu Pramani, and Dinesh Tiwari (2019). 'Improving Measurement of Women's Work Participation: Sensitivity of Work Participation Rates to Questionnaire Design,' NCAER National Data Innovation Centre Measurement Brief No. 2020-1. New Delhi: NCAER.
- Dutta, D. (2019). 'No Work is Easy! Notes from the Field on Unpaid Care Work for Women', in *Mind the Gap*, pp. 98-125. New Delhi: Oxfam India.
- Eswaran, M., B. Ramaswami and W. Wadhwa (2013). 'Status, Caste, and the Time Allocation of Women in Rural India', *Economic Development and Cultural Change*, 61(2): 311-33.
- Fletcher, Erin K., Rohini Pande and Charity Troyer Moore (2017). 'Women and Work in India: Descriptive Evidence and a Review of Potential Policies', HKS Faculty Research Working Paper Series RWP18-004, December.
- Gaddis, I. and S. Klasen (2013). 'Economic Development, Structural Change, and Women's Labor Force Participation', *Journal of Population Economics*, 27(3): 639-81.
- Himanshu (2017). 'Growth, Structural Change and Wages in India: Recent Trends', *The Indian Journal of Labour Economics*, 60(3): 309-31.
- (2019): 'The Seriousness of the Problem of Unemployment in India', *Livemint*, 1 August. <https://www.livemint.com/opinion/columns/opinion-the-seriousness-of-the-problem-of-unemployment-in-india-1564679281965.html>
- Hirway, I. and S. Jose (2011). 'Understanding Women's Work Using Time Use Statistics: The Case of India', *Feminist Economics*, 17(4): 67-92.
- ILO (2018). 'Care Work and Care Jobs: For the Future of Decent Work'. Geneva: International Labour Organization.
- (2019). 'A Quantum Leap for Gender Equality: For a Better Future of Work for All'. Geneva: International Labour Organization.
- Jain-Chandra, M. S., M. K. Kochhar, M. M. Newiak, Y. Yang and M. E. Zoli (2018). *Gender Equality: Which Policies Have the Biggest Bang for the Buck?* International Monetary Fund.
- Jensen, Robert (2012). 'Do Labor Market Opportunities Affect Young Women's Work and Family Decisions? Experimental Evidence from India', *Quarterly Journal of Economics*, 127(2): 753-92.
- Kanjilal-Bhaduri, S. and F. Pastore (2018). 'Returns to Education and Female Participation Nexus: Evidence from India', *The Indian Journal of Labour Economics*, 61(3): 515-36.
- Kannan, K. P. and G. Ravindran (2019). 'From Jobless to Job-loss Growth, Gainers and Losers during 2012-18', *Economic and Political Weekly*, 54(44), 9 November.
- Kapoor, R. (2019). 'Understanding India's Jobs Challenge', *The India Forum*, 10 September.
- Kapsos, S., A. Silberman and E. Bourmpoula (2014). 'Why is Female Labour Force Participation Declining So Sharply in India? ILO Research Paper, No. 10.

- Khera, D. (2019). 'Get the Women into the Workforce', Deccan Herald, 17 June. <https://www.deccanherald.com/opinion/in-perspective/get-the-women-into-the-workforce-741013.html> (Last accessed on 7 May 2020).
- Klasen, Stephan (2019). 'What Explains Uneven Female Labor Force Participation Levels and Trends in Developing Countries?' *The World Bank Research Observer*, 34(2): 161–97, August. <https://doi.org/10.1093/wbro/lkz005>
- Klasen, S. and J. Pieters (2012). 'Push or Pull? Drivers of Female Labor Force Participation during India's Economic Boom', IZA Discussion Paper Series, Working Paper No. 6395. Institute of Labor Economics (IZA).
- _____ (2015). 'What Explains the Stagnation of Female Labor Force Participation in Urban India?' Policy Research Working Paper 7222. Washington, D.C.: World Bank Group.
- Lahoti, Rahul and Hema Swaminathan (2013). 'Economic Growth and Female Labor Force Participation in India', Working Paper No. 414. Bangalore: Indian Institute of Management.
- (2016) 'Economic Development and Women's Labor Force Participation in India', *Feminist Economics*, 22(2): 168–95, April.
- Levenson, Rachel and Layla O'Kane (2019). *Gender Inclusion in Hiring in India: Learnings from Shortlist: A Market Leader*. Published in partnership with Shell Foundation and DFID.
- Mahapatro, S. R. (2013). 'Declining Trends in Female Labour Force Participation in India: Evidence from NSSO', MPRA Paper No. 44373. <https://mpra.ub.uni-muenchen.de/44373/> (Last accessed on 2 June 2020).
- Majid, Nomaan (2019). 'Structural Change and Employment in India', ILO/SIDA partnership on employment, Working Paper No. 1, December.
- Mazumdar, I. and N. Neetha (2011). 'Gender Dimensions: Employment Trends in India, 1993–94 to 2009–10', *Economic and Political Weekly*, 46(43): 118–26.
- Mehrotra, S. and J. K. Parida (2017). 'Why is the Labour Force Participation of Women Declining in India?' *World Development*, 98: 360–80.
- (2019). *India's Employment Crisis: Rising Education Levels and Falling Non-agricultural Job Growth*, CSE Working Paper No. 23, October.
- Mehrotra, S. and S. Sinha (2017). 'Explaining Falling Female Employment during a High Growth Period', *Economic and Political Weekly*, 52 (39).
- Mehrotra, S., J. Parida, S. Sinha and A. Gandhi (2014). 'Explaining Employment Trends in India, 1993–2012', *Economic and Political Weekly*, 49(32), 9 August.
- Mitra, A. and A. Okada (2017). 'Region and Gender Specific Labour Market Participation in India: A Study on Inter-State Variations and Determinants' GSID Discussion Paper (206), 1–50.
- Najeeb, Fatima, Matias Morales and Gladys Lopez-Acevedo (2020). 'Analyzing Female Employment Trends in South Asia', Policy Research Working Paper No. 9157. Washington, D.C.: World Bank. <https://openknowledge.worldbank.org/handle/10986/33362> License: CC BY 3.0 IGO.
- Neetha, N. (2014). 'Crisis in Female Employment: Analysis Across Social Groups', *Economic and Political Weekly*, 49(47): 50–59.
- Neff, D., K. Sen and V. Kling (2012). 'The Puzzling Decline in Rural Women's Labor Force Participation in India: A Reexamination', GIGA Working Papers. German Institute of Global and Area Studies.
- Oxfam (2020). *Time to Care: Wealth Inequality and Unpaid Care Work for Women in India*. New Delhi: Oxfam India.

- Paliath, S. (2020). 'As Growth Slows, Govt Labour Policies Have Limited Impact on Job Creation', *IndiaSpend*, 8 January. <https://www.indiaspend.com/as-growth-slows-what-govt-must-do-to-spur-jobs-industry/> (Last accessed on 27 April 2020).
- Raveendran, G. (2016). 'The Indian Labour Market: A Gender Perspective', *Progress of the World's Women 2015–2016. UN Women Discussion Papers Series*.
- Sanghera, T. (2019). 'How Unpaid Work Keeps India's Women Poor and Unequal', *IndiaSpend*, 25 March. <https://www.indiaspend.com/how-unpaid-work-keeps-indias-women-poor-and-unequal/> (Last accessed on 6 May 2020).
- SCOPE–ILO (2018). 'Women in Leadership and Management in Public Sector Undertakings in India'. New Delhi.
- Shah, M. and B. M. Steinberg (2015). 'Workfare and Human Capital Investment: Evidence from India', National Bureau of Economic Research, Inc., NBER Working Papers, 21543.
- Spence, M. (1973). 'Job Market Signalling', *Quarterly Journal of Economics*, 87(3): 355–74.
- Sudarshan, R. M. (2014). 'Enabling Women's Work', *ILO Asia-Pacific Working Paper Series*.
- Sorsa, P., J. Mares, M. Didier, C. Guimaraes, M. Rabate, G. Tang and A. Tuske (2015). 'Determinants of the Low Female Labour Force Participation in India', *OECD Economics Department Working Paper No. 1207*.
- Swaminathan, M. (2020). 'Contemporary Features of Rural Workers in India with a Focus on Gender and Caste', *Indian Journal of Labour Economics*, 63: 67–79. <https://doi.org/10.1007/s41027-020-00210-z>
- UN Women (United Nations Entity for Gender Equality and the Empowerment of Women) (2018). 'Promoting Women's Economic Empowerment: Recognizing and Investing in the Care Economy', 2018 Issue Paper. New York: UN Women.
- Unni, J. (2017). 'Gender, Skill and Employability in India', *Economics*, 127: 753–92.
- Unni, J. and S. Sarkar (2012). *Education and Employment: Do the Education Level/Skills of our Youth Match Relevant Jobs?* Anand: Institute of Rural Management.
- Winkler, A. (2016). 'Women's Labor Force Participation', *IZA World of Labor* 289 doi: 10.15185/izawol.289
- World Bank (2012). *World Development Report: Gender Equality and Development*. <https://elibrary.worldbank.org/doi/abs/10.1596/978-0-8213-8810-5>
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Annexure

Figure A1:

Percentage of persons participating in unpaid and paid activities in a day (15–59 years) (Time Use Survey, 2019)

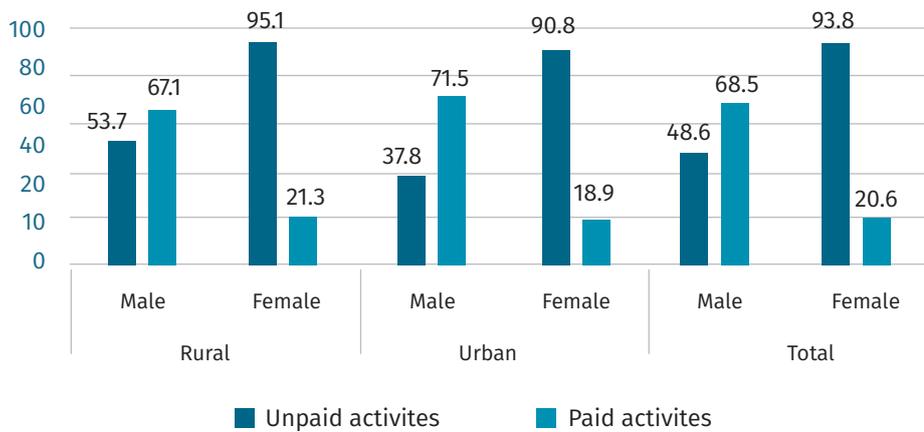


Figure A2:

Average time spent (minutes per day) in unpaid and paid activities (15–59 years) (Time Use Survey, 2019)

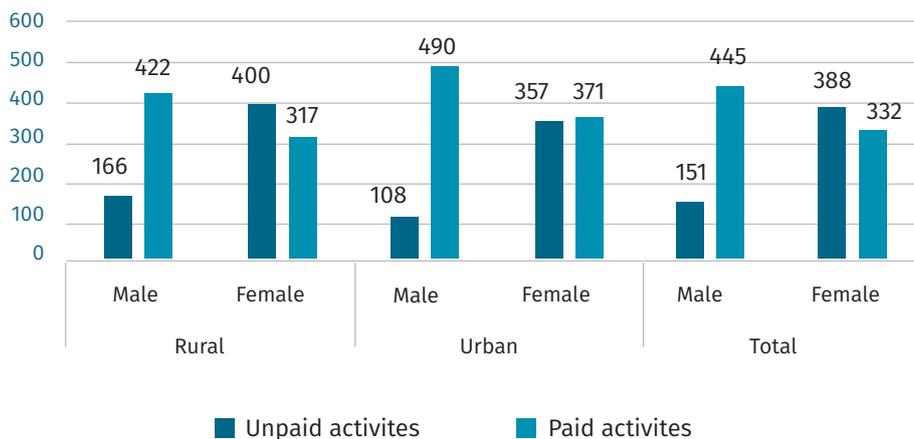


Figure A3:
Female labour force participation by education levels, rural areas: 1993–94 to 2018-19

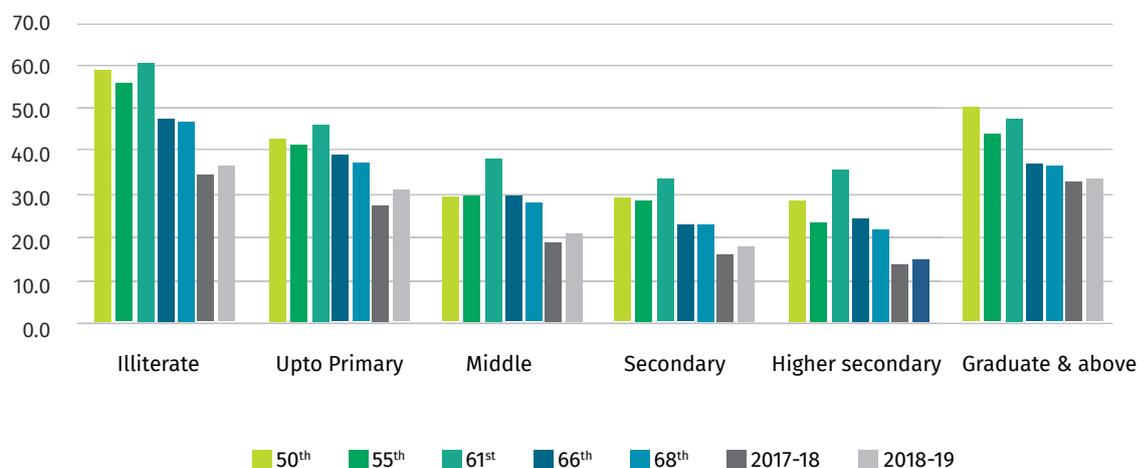


Table A1:
Unemployment rate for youth and adults, UPSS (%)

Category	Rural			Urban			Total		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
<i>2018-19 PLFS</i>									
Youth (15-24)	22.5	18.0	21.6	25.0	32.7	26.6	23.3	22.7	23.1
Adult (25 & above)	2.3	1.6	2.1	3.9	5.7	4.2	2.8	2.7	2.7
15 & above	5.5	3.5	5.0	7.0	9.8	7.6	6.0	5.1	5.8
<i>2011-12 NSSO</i>									
Youth (15-24)	6.9	5.8	6.6	11.2	16.9	12.5	8.1	8.2	8.1
Adult (25 & above)	0.5	0.8	0.6	1.4	2.7	1.6	0.8	1.2	0.9
15 & above	1.7	1.6	1.7	3.0	5.3	3.4	2.1	2.3	2.1

Table A2:
Percentage change between 2011–12 and 2018–19

	Rural			Urban			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Agriculture	-6.9	-4	-6.9	-0.7	-3	-1.1	-5.6	-7.5	-6.7
Mining & quarrying	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1
Manufacturing	-0.7	-0.5	-0.7	-0.2	-3.8	-0.9	-0.4	-0.3	-0.4
Electricity & water supply	0.1	0.1	0.1	-0.1	-0.5	-0.2	0	0	0
Construction	2.7	-0.9	2.1	0.9	-0.1	0.6	2.1	-0.8	1.6
Trade	1.6	0.9	1.6	-0.7	0.5	-0.6	1	1.2	1.3
Transport	1.2	0	1.1	0.2	0.1	0.1	1	0.1	0.9
Accommodation & food services	0.3	0.3	0.3	-0.3	0.2	-0.2	0.1	0.4	0.3
Other services	1.8	4.1	2.5	1.3	6.7	2.6	1.9	6.9	3.1

Table A3:
Distribution of self-employed workers in India (15–59 years) (%)

	Rural			Urban			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
	<i>50th round (1993–94)</i>								
Own-account worker	65.2	26.2	50.6	72.8	52.9	68.3	66.7	29.0	53.5
Self-employed	3.7	1.2	2.7	7.1	1.6	5.8	4.3	1.2	3.2
Unpaid family worker	31.2	72.7	46.7	20.2	45.5	25.8	29.0	69.8	43.2
	<i>61st round (2004–5)</i>								
Own-account worker	68.3	24.3	50.8	74.5	50.3	69.0	69.7	27.2	54.1
Self-employed	1.7	0.7	1.3	6.3	1.4	5.2	2.7	0.8	2.0
Unpaid family worker	30.0	75.1	47.9	19.3	48.3	25.8	27.6	72.0	43.9
	<i>68th round (2011–12)</i>								
Own-account worker	72.2	30.4	58.2	76.6	59.8	73.1	73.3	34.7	61.5
Self-employed	2.2	0.5	1.6	6.3	0.9	5.2	3.2	0.6	2.4
Unpaid family worker	25.7	69.1	40.2	17.1	39.2	21.7	23.5	64.7	36.1

	<i>PLFS (2017-18)</i>								
Own-account worker	78.1	31.4	66.1	79.3	65.8	76.7	78.4	37.2	68.4
Self-employed	3.0	0.7	2.5	9.0	2.2	7.7	4.4	1.0	3.6
Unpaid family worker	18.9	67.8	31.4	11.7	32.0	15.6	17.2	61.8	28.0
	<i>PLFS (2018-19)</i>								
Own-account worker	78.7	35.2	66.6	77.4	68.7	75.7	78.4	40.6	68.6
Self-employed	3.3	0.8	2.6	11.2	3.3	9.6	5.2	1.2	4.2
Unpaid family worker	17.9	64.0	30.7	11.4	28.0	14.6	16.4	58.2	27.3

Table A4:
Percentage distribution of rural women workers by status of employment for each industry of work (15-59 years)

Industry	Own- account worker	Employer	Unpaid family worker	Regular salaried	Casual labour	Total
Agriculture	17.3	0.6	50.0	1.2	31.0	100.0
Mining & quarrying	7.4	0.0	7.7	11.3	73.6	100.0
Manufacturing	65.8	0.4	10.6	14.1	9.1	100.0
Electricity & water supply	15.5	0.0	0.0	77.0	7.6	100.0
Construction	0.2	0.0	0.3	0.5	99.0	100.0
Trade	49.1	0.7	33.0	16.2	0.9	100.0
Transport	10.9	0.2	0.0	81.7	7.2	100.0
Accommodation & food services	22.6	0.1	39.4	32.0	5.9	100.0
Other services	7.0	0.2	2.4	88.3	2.1	100.0
Total	20.9	0.5	38.0	11.6	28.9	100.0

Table A5:
Percentage distribution of urban women workers by status of employment for each industry of work (15–59 years)

Industry	Own-account worker	Employer	Unpaid family worker	Regular salaried	Casual labour	Total
Agriculture	27.3	1.5	35.5	3.7	31.9	100.0
Mining & quarrying	5.9	8.4	0.4	55.6	29.7	100.0
Manufacturing	50.1	1.7	11.4	27.5	9.3	100.0
Electricity & water supply	21.0	0.0	7.8	70.9	0.3	100.0
Construction	0.3	0.0	1.2	9.7	88.9	100.0
Trade	37.9	1.6	20.9	35.5	4.0	100.0
Transport	8.8	0.0	0.0	81.2	10.1	100.0
Accommodation & food services	17.3	1.2	32.8	31.4	17.3	100.0
Other services	8.4	0.8	1.7	87.0	2.1	100.0
Total	23.2	1.1	9.4	55.9	10.3	100.0

Table A6:
Labour force participation of women by marital status (15–59 years) (%)

Marital status	2018–19			2011–12		
	Rural	Urban	Total	Rural	Urban	Total
Never married	12.4	19.9	15.1	20.7	20.8	20.8
Currently married	30.5	21.2	27.7	39.9	20.4	34.4
Widowed	54.3	44.1	50.8	64.1	46.0	58.4
Divorced/separated	70.5	61.0	66.5	70.8	62.6	67.5
Total	28.3	22.5	26.5	37.8	22.2	33.1

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