

# CLOSING THE GENDER WAGE GAP IN INDIAN AGRICULTURE

*Recognizing women's contributions through equal wages*

**Sabina Dewan**, JustJobs Network

## **JustJobs Network**

JustJobs Network (JJN) is a private, nonpartisan organization finding evidence-based solutions to one of the most pressing challenges of our time: How to create more and better jobs worldwide. JJN produces empirical research on good job creation, focusing its work on the critical knowledge gaps in the global employment landscape.



# INDIA



3.6

Unemployment Rate



33.6

GINI



18.1

Wage and salaried  
workers, total (% of  
total employed)



9200

GDP per person  
employed  
(constant 1990 PPP \$)



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## Introduction

From raising families to weeding and harvesting, women in rural India balance the demands of their domestic lives with agricultural work. Notwithstanding their importance, women's contributions are grossly undervalued—especially relative to men in the sector.

Female agricultural workers in India are relegated to the least desirable farm activities. They are denied access to critical tools, such as technology, information and training, constraining their productivity and undermining the sector's economic performance. Women are often deprived of benefits such as days off. Most notably, they receive lower wages than men for the same work.<sup>1</sup>

Underpinned by deep-seated patriarchy, these conditions reflect a lack of women's

empowerment, that adversely affecting everything from their family's health outcomes to the educational attainment of their children.

The undervaluing of the contributions of women in the agricultural sector has ramifications beyond the family. Research on microfinance

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and the impact of public cash transfers confirms that when low-income women are given more resources, they tend to spend them in better ways than do men – on necessary expenditures like medical services, health and nutrition needs, and school fees.

Such expenditures benefit their families, enhance the productive capacity of the future workforce, and generate aggregate demand that ultimately advances the economy.<sup>2</sup>

Realizing the promise of India as an emerging market economy entails recognizing the burden of work and responsibility on women in agriculture, removing the obstacles that constrain their productivity, and adequately compensating women in the sector toward ultimately closing the gender pay gap.

This chapter provides an overview of the wage differentials between men and women in India's agriculture sector and explores explanations for why female work continues to be undervalued. It ends by proposing concrete policy measures to help close the gender wage gap in Indian agriculture.

## Women in agriculture

Agriculture's value-added as a share of India's Gross Domestic Product (GDP) was 17 percent in 2014, down 11 percentage points from two decades earlier.<sup>3</sup> The share of those in agriculture as a percentage of the total employed workforce also declined, from 60 percent in 1994 to 47 percent in 2012, marking a tremendous structural shift in the Indian economy – a consequence of government reforms undertaken in the early 1990s. Nevertheless, with almost half of employed persons continuing to work in agriculture, the sector remains extremely important to India's labor market.

***Six out of every 10 employed women work in the sector where the wages are the lowest.***

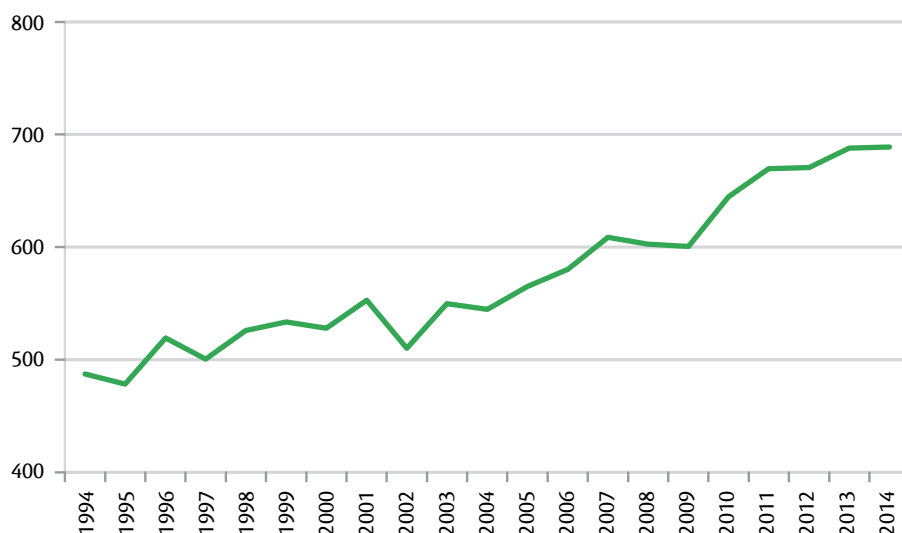
Agriculture value-added per worker (in constant 2005 US\$) increased from US\$ 487 in 1994 to US\$ 689 in 2014 (see **Figure 1**). But the decline in agriculture's value-added as a share of GDP, coupled with the high share of employment in the sector,<sup>4</sup> reflects the fact that agriculture is still labor-intensive and low-productivity relative to other parts of the economy.

Of the three economic sectors – agriculture, industry, and services – agriculture therefore has the lowest wages.

Agriculture constitutes the largest share of female employment. Six out of every 10 employed

Figure 1

### Agriculture value added per worker Constant 2005 (US\$)



Source: World Bank. World Development Indicators.

women work in the sector where the wages are the lowest.<sup>i</sup> (see **Figure 2**)

While the share of both women and men employed in agriculture fell between 1994 and 2012, it has fallen at a faster rate for men than for women because men are more likely to access better job opportunities in other sectors. The compound annual growth rate (CAGR)

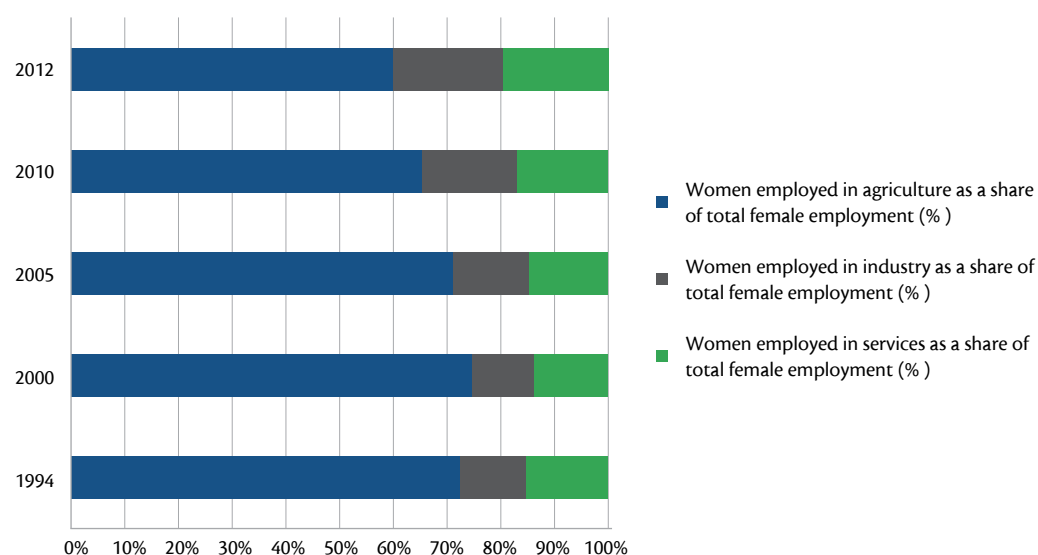
calculated for female agriculture employment as a percentage of female employment was -1.05 during this time period. The CAGR for male agriculture employment as a percentage of male employment was -1.42. Overall, the CAGR for employment in agriculture, male and female workers put together, stood at about -1.36 percent.<sup>ii</sup>

<sup>i</sup> 21 percent of employed women worked in industry and 19 percent in services in 2012. By contrast, 43 percent of all employed men worked in agriculture, 26 percent in industry, and 31 percent in services. (Source: World Bank. World Development Indicators.)

<sup>ii</sup> Since there are more men in total employment than women, and since the proportion of men has increased over the time period examined in this chapter, the growth rate for total employment is heavily weighted toward male employment.

Figure 2

### Sectoral Composition of Female Employment



Source: World Bank. World Development Indicators.

At the same time, female employment in the industrial sector as a share of total employment in the sector declined from 22 percent in 1994 to 20 percent in 2012. Female employment in services as a proportion of total services employment also declined from 18 percent to 17 percent. Male employment in these sectors rose accordingly – corroborating the fact that men tend to have greater access to better opportunities in other sectors than women do.

This out-migration of men has led to conjecture on the feminization of agriculture in India. Yet examination of the data over the last couple of decades suggests that agriculture continues to be a male-dominated sector. In the Indian experience, agriculture's share of female employment has declined, as has the number of female agricultural workers as a fraction of total agricultural workers. This is driven by the decline in female labor force participation (LFP).<sup>iii</sup> LFP

*iii There is a significant amount of literature exploring the reasons behind the decline in India's female labor force participation. One reason is that women are staying in education longer. Another is that as economies move from low-income to lower-middle and upper-middle-income status, women who once worked out of necessity drop out of the labor force, sometimes working in the care economy that is not captured in labor market statistics (See: JustJobs Network and Fafo Institute for Applied International Studies. 2014. JustJobs Index.).*

## India relative to other countries

It is useful to compare India's experience to that of other emerging economies. Between 1990 and 2008 in Brazil, while female employment in agriculture as percentage of total female agriculture fell by 0.1 percent, those for males fell by 1.7 percent and total decrease for agricultural employment was 1.5 percent. This shows that agricultural share of male employment has decreased much more rapidly than that for women in Brazil as well.

The experience in Vietnam corresponds to India's as well; the percentage of employed men working in agriculture fell more rapidly than for women between 1996 and 2012. However, Indonesia witnessed the opposite trend during the same time period: the share of employed women working in agriculture fell by 2.7 percent, while for men the share fell by just 2.5 percent.

## CAGR Brazil, Indonesia, Vietnam

Country	CAGR %, male agricultural employment as % of total male employment	CAGR %, female agricultural employment as % of total female employment	CAGR %, agricultural employment as % of total employment
Brazil	-1.7	-0.1	-1.5
Indonesia	-2.5	-2.7	-1.8
Vietnam	-2.6	-2.2	-2.4

**Source:** World Bank. World Development Indicators.

among women went from 37 percent in 1994 to 28 percent in 2012 (see **Figure 3**).<sup>5</sup>

This is significant because studies suggest that – holding other factors such as productivity, seasonal changes, and trade constant – rural wages should rise as rural working populations decline, due to a tighter labor market.<sup>6</sup> There is a greater demand for workers as the labor force shrinks. Outward migration of men to pursue

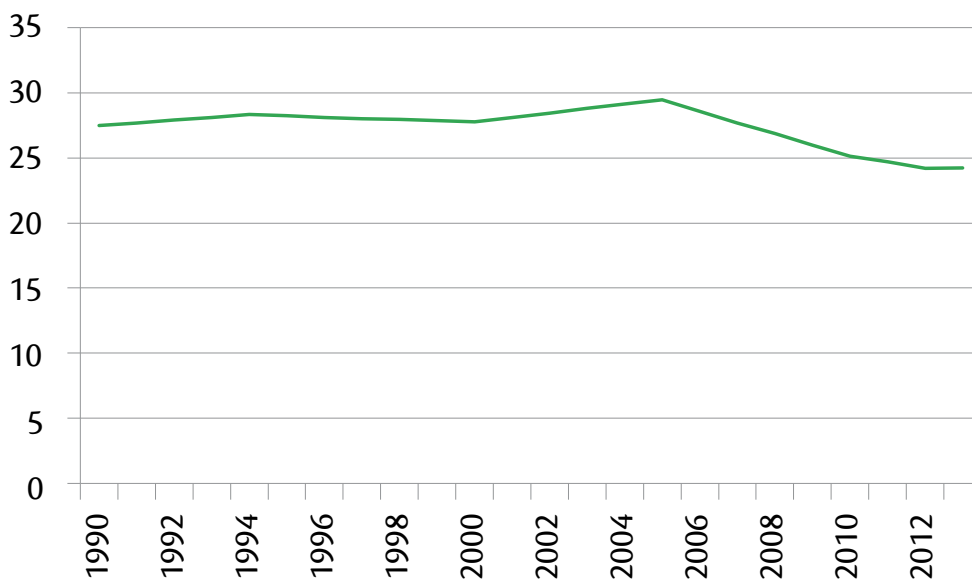
other opportunities and the declining labor force participation of women results in a decrease in labor supply; as such, the remaining workers – men and women – should see their wages go up.

There has in fact been an increase in agricultural wages in India – fuelled by a shrinking labor force along with rises in productivity, and potentially the Mahatma Gandhi National Rural Employment Guarantee Act (NREGA).<sup>iv</sup> Between 2004 and

*iv The Mahatma Gandhi National Rural Employment Guarantee Act is an employment guarantee scheme that provides a hundred days of wage-employment per financial year to rural households in which adult members volunteer to perform unskilled manual work.*

Figure 3

**Female labor force participation rate India (%)**



**Source:** World Bank. World Development Indicators.

2010, average of wages in selected agricultural occupations grew at a compound annual growth rate of 11 percent.<sup>7</sup>

But an increase in wages across the board do not close the gender wage gap in India's agricultural

sector. Achieving parity in wages requires specific measures to improve wage rates and levels paid to women.



## Persistent wage gaps in agriculture

Within agriculture, women's labor is valued less than men's. More women than men are hired as casual laborers with only short-duration contracts as opposed to longer-term, secure waged work. In 2004-2005, 29 percent of female rural workers, compared to 23 percent of male rural workers, were casual laborers.<sup>8</sup> Casual workers do not have job security; they enjoy fewer rights and protections and have limited economic mobility. Among casual workers, women's wages were estimated to be 69 percent of male wages in 2004-2005.<sup>9</sup>

Women are also relegated to the least desirable tasks in agriculture, such as weeding, that tend to pay less. Men meanwhile participate in ploughing and harvesting. Evidence suggests that women tend to get fewer days off and are rarely paid

government-mandated minimum wages.<sup>10</sup> In 2007, 95 percent of female agricultural wageworkers received less than a minimum wage.<sup>11</sup>

Beyond this, studies based on time-use surveys suggest that women shoulder a larger burden of tasks and responsibilities than men.<sup>12</sup>

National statistics do not capture the full scale of women's work in agriculture.<sup>13</sup> Many women are unpaid family workers who work for no remuneration in a relative-owned or -operated enterprise. Women also combine housework with non-crop agricultural activities, such as tending to livestock or processing and storage, that are often unaccounted for in agricultural employment statistics.<sup>14</sup>

## Why is women's work undervalued?

These facts point to a deep-seated preference for men over women in agricultural employment that fuels the undervaluation of women's work in agriculture. A combination of economic and cultural reasons drive this preference.

A key empirical observation about female wages in development economics is a negative

correlation between fertility and female wages.<sup>15</sup> This observation points to the fact that women's fertility is valued more than their employment.

Rural households value childbearing over women's wage income. Children are seen as insurance for old-age care. In the absence of any elderly care services, particularly in a sector such

as agriculture with a high degree of informality, children act as caretakers. Moreover, children become extra hands for family farm and wage labor activities.

In this context, women's work becomes secondary and undervalued – considered supplementary as opposed to primary income.

Differences in the nutritional levels of workers could be another reason motivating the gender pay gap. If one assumes that nutritional level is an important proxy for a laborer's productivity, and that productivity in part determines market wage, the pervasive female nutritional deficit in India could explain why men's wages remain persistently higher than women's. This is an economic consequence of deep-rooted patriarchy, as women's high malnutrition rates are driven by their "second-class status" within the family.

**Table 1** illustrates the difference between the wages that men and women earned in various agricultural occupations between 2006-2010.

The data reveal occupations where the real wage differential has actually increased – unskilled rural laborers being the most important; occupations where the real wage spread has fluctuated over the four years; and the few instances where the real wage spread has narrowed.

The nutritional deficit and the household's preference for women to bear children over participating in wage labor are manifestations of deep-seated cultural norms that discourage female employment. Cultural norms and traditions in India have historically discounted women's economic contributions.

Women have less access to land, credit, technology and market information, inhibiting their upward mobility for work. This also corroborates with the finding that as households improve their economic standing, the preference is for women to stay at home. Research suggests this is one of the reasons behind the declining female workforce participation rate.

***National statistics do not capture the full scale of women's work in agriculture. Many women are unpaid family workers who work for no remuneration in a relative-owned or -operated enterprise.***

## Conclusions and policy recommendations

India's agricultural sector relies on its female workforce. Women shoulder the disproportionate burden of carrying out household work in addition to the least desirable economic activities of the sector, yet their contributions remain undervalued. At the same time, they are denied the tools – skills training, information, and financial agency – to become more productive economic agents. Allowing gender disparities in the conditions of work to persist, especially the gender wage gap, reinforces patriarchal norms, discourages women from working, and perpetuates a loss of valuable productive potential.

But addressing the disparity in agricultural wages of men and women through targeted policies first requires data. Evidence on the complex roles that women play, the agricultural activities they engage in, and their conditions of work – especially wages – has improved. Yet the information is dated and short-term, frequently based on anecdotal rather than nationally representative empirical evidence. More consistent, longer-term and nuanced investigation is required to understand how the gender wage gap reacts to economic, social and political shifts over time.

Beyond this, greater efforts are needed to facilitate the transition of women from casual labor to more regular wage labor<sup>16</sup> which offers better

security, benefits and potential opportunities for mobility. On the one hand this entails reducing the load of housework by providing piped water and electricity, for instance.<sup>17</sup> On the other hand, it involves generating opportunities for regular wage labor that are specific to women's needs and aspirations.

Employment guarantee schemes that pay the minimum wage or better, targeting women during the off-season, can help. Research in rural Tamil Nadu, for example, shows that the National Rural Employment Guarantee Act's fixed, regular and gender-neutral wages have benefited rural women.<sup>18</sup> Audits of NREGA do however suggest that the participation of women in such schemes is also contingent on the provision of ancillary services such as childcare on the worksite.<sup>19</sup>

While general enforcement of labor laws is low, it is even worse when it comes to women's working conditions. More stringent efforts must be undertaken to ensure that employers comply with minimum wage laws and other labor protections and entitlements for women.

In addition, national skills development policies must specifically address the training needs of women in the sector. The present draft of the National Policy for Skill Development sets a target of 30 percent participation of women in

Table 1

### Real wage differentials in agricultural professions 2007-2010 (INR per day)

	Year	2007	2008	2009	2010
Ploughing	Men	81.8	91.4	102.9	120.9
	Women	42.4	50.0	55.4	70.4
	Difference in nominal wages	39.4	41.4	47.5	50.4
	<b>Difference in real wages</b>	<b>10.1</b>	<b>9.8</b>	<b>10.3</b>	<b>9.4 ↓</b>
Sowing	Men	73.3	79.3	90.0	104.5
	Women	51.4	57.2	65.0	79.5
	Difference in nominal wages	21.9	22.1	25.0	25.1
	<b>Difference in real wages</b>	<b>5.6</b>	<b>5.2</b>	<b>5.4</b>	<b>4.7 ↓</b>
Weeding	Men	65.0	70.1	80.2	92.8
	Women	52.8	58.3	68.0	78.9
	Difference in nominal wages	12.2	11.8	12.1	13.8
	<b>Difference in real wages</b>	<b>3.1</b>	<b>2.8</b>	<b>2.6</b>	<b>2.6 ↓</b>
Transplanting	Men	69.2	73.8	83.3	98.3
	Women	56.4	61.9	71.4	86.7
	Difference in nominal wages	12.7	11.9	11.9	11.6
	<b>Difference in real wages</b>	<b>3.2</b>	<b>2.8</b>	<b>2.6</b>	<b>2.2 ↓</b>
Harvesting	Men	68.5	75.2	87.1	102.8
	Women	55.7	62.3	71.6	85.0
	Difference in nominal wages	12.8	12.9	15.5	17.9
	<b>Difference in real wages</b>	<b>3.3</b>	<b>3.1</b>	<b>3.3</b>	<b>3.3 ↓</b>
Winnowing	Men	66.2	71.1	81.2	96.3
	Women	51.0	56.1	65.1	79.0
	Difference in nominal wages	15.1	15.0	16.2	17.3
	<b>Difference in real wages</b>	<b>3.9</b>	<b>3.5</b>	<b>3.5</b>	<b>3.2 ↓</b>

	Year	2007	2008	2009	2010
Threshing	Men	67.4	73.5	85.1	100.2
	Women	54.4	59.4	67.7	82.1
	Difference in nominal wages	13.0	14.1	17.4	18.1
	<b>Difference in real wages</b>	<b>3.3</b>	<b>3.3</b>	<b>3.8</b>	<b>3.4 ↑</b>
Picking	Men	67.5	72.5	81.1	97.0
	Women	51.1	58.2	66.4	78.9
	Difference in nominal wages	16.4	14.3	14.7	18.0
	<b>Difference in real wages</b>	<b>4.2</b>	<b>3.4</b>	<b>3.2</b>	<b>3.4 ↓</b>
Herdsman	Men	43.5	47.6	53.5	62.2
	Women	34.4	37.8	41.3	46.7
	Difference in nominal wages	9.0	9.9	12.2	15.6
	<b>Difference in real wages</b>	<b>2.3</b>	<b>2.3</b>	<b>2.6</b>	<b>2.9 ↑</b>
Well Digging	Men	99.5	107.0	116.3	140.8
	Women	53.6	58.3	63.5	75.4
	Difference in nominal wages	45.9	48.6	52.8	65.4
	<b>Difference in real wages</b>	<b>11.7</b>	<b>11.5</b>	<b>11.4</b>	<b>12.2 ↑</b>
Cane Crushing	Men	72.5	77.9	87.3	98.4
	Women	47.1	54.9	61.2	75.5
	Difference in nominal wages	25.4	23.0	26.0	22.9
	<b>Difference in real wages</b>	<b>6.5</b>	<b>5.4</b>	<b>5.6</b>	<b>4.3 ↓</b>
Unskilled Labour	Men	66.8	73.3	86.4	101.9
	Women	50.0	55.6	65.7	77.7
	Difference in nominal wages	16.8	17.8	20.8	24.2
	<b>Difference in real wages</b>	<b>4.3</b>	<b>4.2</b>	<b>4.5</b>	<b>4.5 ↑</b>

vocational training courses by 2017.<sup>20</sup> But the proposed tools to achieve the target – “hostels for women, scholarships, transport, training materials and loans” – are the same as they were for the previous policy, when they proved to have little impact.<sup>21</sup>

The National Skills Development Corporation and the Ministry for Skill Development and Entrepreneurship can provide incentives for female trainees in the agricultural sector, especially in activities that tend to be reserved for men. This should be coupled with incentives for employers to hire women as regular wage laborers and pay them the minimum wage or better, equal to their male counterparts.

***Greater efforts are needed to facilitate the transition of women from casual labor to more regular wage labor that offers better security, benefits and potential opportunities for mobility.***

Debates over minimum wage as a strategy for stemming growing income inequality are dominating airwaves across the globe. Yet the

wage inequalities that persist between women and men, and have for decades, are given insufficient attention. Taken together, these interventions toward ensuring equal pay for women in agriculture will not only help families, but economies as well. In the long run they will help

change the deep-seated cultural norms that impede social and economic progress in India.

## Endnotes

<sup>1</sup> SOFA Team and Cheryl Doss. 2011. *The Role of Women in Agriculture*. (Rome: FAO). Accessed on August 15, 2015. <http://www.fao.org/docrep/013/am307e/am307e00.pdf>; Nisha Srivastava and Ravi Srivastava, 2009. *Women, work and employment outcomes in Rural India*. (FAO, IFAD, ILO). Accessed on August 15, 2015. [http://www.fao-ilo.org/fileadmin/user\\_upload/fao\\_ilo/pdf/Papers/17\\_March/Srivastava\\_Final.pdf](http://www.fao-ilo.org/fileadmin/user_upload/fao_ilo/pdf/Papers/17_March/Srivastava_Final.pdf)

<sup>2</sup> Deena M. Burjorjee, Rani Deshpande and C. Jean Weidemann. 2002. *Supporting Women's Livelihoods: Microfinance that Works for the Majority*. (United Nations Capital Development Fund - Special Unit for Microfinance). Accessed on August 15, 2015. <http://www.microfinancegateway.org/sites/default/files/mfg-en-paper-supporting-womens-livelihoods-microfinance-that-works-for-the-majority-a-guide-to-best-practices-2002.pdf>

<sup>3</sup> World Bank. *World Development Indicators*.

<sup>4</sup> Ramesh Chand, Raka Saxena and Simmi Rana, *Estimates and Analysis of Farm Income in India 1983-84 to 2011-2012*

<sup>5</sup> World Bank. *World Development Indicators*.

<sup>6</sup> Steve Wiggins and Sharada Keats. 2014. *Rural Wages in Asia*. (London: Overseas Development Institute).

<sup>7</sup> Based on simple average of wage figures of selected occupations collected by the Labour Bureau. See: Ministry of Labour and Employment. 2011. *Wage rates in rural India (2009-10)*. (Shimla/Chandigarh: Labour Bureau).

<sup>8</sup> Nisha Srivastava and Ravi Srivastava, *ibid*.

<sup>9</sup> *ibid*.

<sup>10</sup> *ibid*.

<sup>11</sup> National Commission for Enterprises in the Unorganized Sector. 2007. *Conditions of Work and Promotion of Livelihood in the Unorganized Sector*. (New Delhi: National Commission for Enterprises in the Unorganized Sector). Accessed on August 15, 2015. [http://nceuis.nic.in/condition\\_of\\_workers\\_sep\\_2007.pdf](http://nceuis.nic.in/condition_of_workers_sep_2007.pdf)

<sup>12</sup> SOFA Team and Cheryl Doss, *ibid*.

<sup>13</sup> S. Vepa. 2005. *Feminisation of Agriculture and Marginalization of Their Economic Stake*. In *Economic and Political Weekly*.

<sup>14</sup> *ibid*.

<sup>15</sup> Debraj Ray. 1998. *Development Economics*. (New Delhi: Oxford University Press)

<sup>16</sup> S. Vepa, *ibid*.

<sup>17</sup> Marzia Fontana and Cristina Paciello. 2010. *Gender dimensions of rural and agricultural employment: Differentiated pathways out of poverty*. (Rome: FAO).

<sup>18</sup> Grace Carswell, Geert De Neve. 2013. *Women at the Crossroads: Implementation of Employment Guarantee Scheme in Rural TamilNadu*. In *Economic and Political Weekly*.

<sup>19</sup> S. Narayanan. 2008. *Employment Guarantee, Women's work and Childcare*. In *Economic and Political Weekly*.

<sup>20</sup> National Skill Development Agency. 2014. *Draft of National Policy for Skill Development (2015)*. Accessed on August 15, 2015. <http://www.nstda.gov.in/resources/Draft%20NPSD%20submitted%20to%20MoSDE.pdf>; National Skill Development Agency. 2009. *National Policy for Skill Development (2009)*. Accessed on August 15, 2015. <http://www.nstda.gov.in/resources/Draft%20NPSD%20submitted%20to%20MoSDE.pdf>

<sup>21</sup> *ibid*.