THE DYNAMICS AND STATUS OF FEMINISATION IN INDIAN AGRICULTURE

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ABSTRACT

This paper tries to explore the extent and dimension of the rising phenomenon of feminisation in Indian agriculture using unit level NSSO data (70th round) and Agriculture Census for 2005-06, 2010-11. The paper revolves around the trend of women participation in agriculture, determinant factors behind increased incidence of feminisation on farms, low recognition and symbiotic association between property rights, productivity and poverty. As per NSSO estimates, 49.79 per cent females in the working age (15-49) operated land during 2013 while their share has grown marginally i.e., 1.08 per cent from 2005 to 2011. This rising trend of feminisation in terms of operated holders has been predominant only in few States, viz. Meghalaya, Andhra Pradesh, Rajasthan, Odisha and Uttarakhand, and has been more significant in case of small/ marginal landholdings. The data analysis further concluded that majority of the females who operated land served merely as unpaid family worker (28.27 per cent), depicting that their contribution is significant but they are not being acknowledged accordingly. Lack of recognition, ownership rights, socio-economic set-up and certain other factors restrict them in achieving high productivity at farm level. The study confirms that assuring property rights to women farmers would aid in increasing productivity and reduce poverty level. Considering policy recommendations, it suggests for asset control to women and promoting cooperative farming which may improvise socio-economic conditions and generate higher farming returns.

Keywords: Feminisation of Agriculture, Unpaid Family Worker, Ownership Rights, Productivity, Poverty.

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Introduction

During the last few decades, roles of gender have witnessed a shift in agriculture labour markets wherein women not only do 'post-harvest work' but also work effectively on field. Women largely serve as unpaid family worker and their number has risen over the period. But, lack of recognition of their contribution has led to their exclusion from various benefits (Samanta, 1995) affecting productivity and leading towards feminisation of poverty. The increased involvement of women in agriculture is out-migration of males from low paid agriculture to high paid industry. Further, they stated that feminisation in agriculture is a result of casualisation of work, unprofitable crop production and distress migration. Agricultural intensification, commercialisation, change in economic setup, extreme poverty, male migration, illiteracy among women and change in social norms have lead to an increase in women participation in agriculture and allied activities (Agarwal, 2003 and Garikipati, 2001). There is an increase in percentage of women engaged in agriculture as it is an occupation which provides work opportunities irrespective of their age, level of education, or any formal training (Goswami, 2013). Further, Srivastava and Srivastava (2009), Tenaw et.al (2009), and Lal and Khurana (2011) have shown that women's participation in agriculture has risen over the years, but they continue to serve merely as labourers or unpaid family workers and not as owners. This is primarily due to strong patriarchal society, lack

of ownership rights, gender-biased inheritance laws, inappropriate government policies and programmes are some of the factors which have influenced and made feminisation in agriculture ineffective (Agarwal et al., 2013). Furthermore, studies on ownership titles and its linkage with productivity, poverty and other socio-psycho-economic issues among women have highlighted that gender discrimination tend to prevail in policy and societal setting and this affects their overall socio-economic development.

Based on the above background, the study focuses primarily on two aspects. Firstly, to assess the dynamics (magnitude and trend) of feminisation in India's agrarian set-up. In this context, we have estimated the extent of women labour force in agriculture, their principal status and have also ascertained the change in women participation as land operators during 2005-2011 at national, State and district levels. Secondly, the paper elaborates upon various challenges and determinant factors affecting women participation in agriculture at macro and micro level. The above objectives are ascertained by using primarily secondary level data from Agriculture Census of 2005-06 and 2010-11, and 70th round unit level data of NSSO on Situation Assessment Survey of Agriculture Households, 2013. Using 70th round unit level data of NSSO in 2013, we have deciphered percentage of female participating in operating¹ land, their principal activity status as well as the primary industry (as per NIC, 2008) to which they have contributed. States have been classified into six zones (as per the zones set up for zonal councils by Government of India)² for better understanding. Further, using district-wise data from Census of 2005-06 and 2010-11, we have estimated the frequency distribution based on size groups, which aids in exploring the feminisation trend in districts, i.e., negative (min-0 percent), low (0.01-2.00 percent), moderate (2.01-5.00 percent) and high (5.00-max).

Feminisation in Indian Agriculture: Extent and Trends

Driven by changing economic pattern in the country, rural men have migrated to cities in search of better employment leaving farm responsibilities in the hands of women. Women, who had never before stepped out of their home are illiterate and have burden of performing domestic duties along with farming work, are actively involved in agriculture and dealing with new challenges. The estimates of the NSSO database on "Situation Assessment Survey of Agricultural Households in India" represented in Table 1 reveal that out of total sample size of 35,200 households having 1,88,645 individuals, 96.92 percent of the population in the working age of 15-49 years operated land while 3.25 percent did not.

Out of the 96.92 per cent who operated land, 50.21 were males while 49.79 were females, showing almost equal participation. Operated land in this context refers to the person working on agriculture land or contributing in some way as in involved in producing seedlings, sawing, weeding, transplanting, threshing and harvesting. As per Census, women constitute nearly twothird of agrarian workforce and data show that their share has increased from 39.2 per cent to 41.9 per cent during the period 1999-2000

Operated Land	Male	Female	Total
Yes	117560512	116560828	234121340
	(50.21)	(49.79)	(100)
	(97.02)	(96.83)	(96.92)
No	36,09,453	3 3,821,620	74,31,073
	(48.57)	(51.43)	(100)
	(2.98)	(3.17)	3.08
Total	121169965	120382448	241552413
	(50.16)	(49.84)	(100)
	(100)	(100)	(100)

Table 1: Gender-wise Frequency Distribution of Operated Land in Working Age (15 to 49 Years)

Source*Estimated from Situational Assessment of Agricultural Households in India Survey NSSO 70th Round (2013).

and 2004-05 (Agrawal et al., 2013). Over the years, feminisation trend has increased in rural areas as men have shifted to non-farm rural employment, while females have not been able to diversify activities and have remained stuck in agriculture sector. According to Oxfam India report (2013), in rural areas, 62.8 per cent of working women quote agriculture as their primary occupation; in contrast, the share is 43.6 among men.

Studies suggest that though the proportion of female agricultural workers is high but it does not signify women control over farms (Duvvury, 1989; Srivastava and Srivastava, 2009). They tend to work merely as unpaid family labour or invisible workers (Ghosh and Ghosh, 2014). For traversing their role in labour force, we focused on their working status and found that literature suggests correctly. The computed NSSO estimates as per usual activity status (principal and subsidiary) which relates to the activity status of a person during the 365-day reference period preceding the date of the survey found that women served two major roles, viz. as unpaid family worker and the other as fulfilling all domestic duties. This has been clearly represented in Table 3, which shows the State-wise percentage share of females based on their activity status.

Table 3 portrays that on all-India basis, an average of 28.27 per cent females in the working age (15-49 years) worked as unpaid family worker (worked as helper in household enterprise) followed by 21.74 per cent engaged in domestic duties in addition to free collection of goods, vegetables, roots, firewood, sewing, etc., for household use while 19.03 per cent attended only domestic duties. Overall, there are 16 States wherein females work majorly as unpaid family worker, 10 States where they contribute in other related activities apart from domestic duties. In 10 States, they primarily

S. No.	Name	Unpaid Family Worker	Domestic + Other	Domestic duties
1	Jammu & Kashmir	2.73	39.1	20.4
2	Himachal Pradesh	46.03	2.21	4.05
3	Punjab	6.87	37.96	26.23
4	Chandigarh	0.00	45.47	29.97
5	Uttarakhand	47.12	8.12	3.37
6	Haryana	25.77	31.85	16.48
7	Delhi	2.11	24.24	23.78
8	Rajasthan	39.9	17.79	8.54

 Table 3: State-wise Percentages of Females (working age 15-49) as per Principal Activity

 Status (Unpaid family worker, Domestic duties and Domestic + other duties)

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9	Uttar Pradesh	18.39	31.17	25.97
10	Bihar	12.86	27.03	35.01
11	Sikkim	63.81	0.17	1.7
12	Arunachal Pradesh	17.29	13.03	8.76
13	Nagaland	7.7	27.32	21.61
14	Manipur	22.08	18.28	21.59
15	Mizoram	53.23	15.22	5.53
16	Tripura	10.06	18.28	21.59
17	Meghalaya	49.64	3.66	4.68
18	Assam	20.06	40.11	20.76
19	West Bengal	7.57	40.56	28.99
20	Jharkhand	34.81	32.06	12.97
21	Odisha	26.28	19.1	32.43
22	Chhattisgarh	57.53	11.99	4.99
23	Madhya Pradesh	45.28	19.4	11.85
24	Gujarat	47.98	7.36	19.98
25	Daman & Diu	16.61	24.12	20.46
26	Dadra & Nagar Haveli	18.92	76.73	22.88
27	Maharashtra	53.32	1.41	17.88
28	Andhra Pradesh	50.69	1.97	15.71
29	Karnataka	45.12	5.75	18.21
30	Goa	30.44		28.84
31	Lakshadweep	1.18	20.6	37.33
32	Kerala	12.34	8.31	40.52
33	Tamil Nadu	28.08	2.29	25.85
34	Puducherry	3.18	51.42	23.64
35	A&N Islands	1.35	37	9.57
36	Telangana	63.16	0.02	13.06
	All India (Average)	28.27	21.75	19.03

Table-3 contd.,

Source*Estimated from Situational Assessment of Agricultural Households in India Survey NSSO 70th round (2013).

undertake domestic duties. Himachal Pradesh, Uttarakhand, Haryana, Rajasthan, Meghalaya, Chhattisgarh, Madhya Pradesh, Gujarat, Maharashtra, Andhra Pradesh, Karnataka, Tamil Nadu and Telangana States had highest share of females working as unpaid family workers. Such high share of women as unpaid family worker has been affirmed by Siddqui (2015) wherein he stated that that though NSSO data estimates show that there is a decline in rural women as unpaid family worker - from 24 per cent in 2004-05 to 15 per cent in 2011-12 - in reality this is not true. Women's status as sheer unpaid family worker is not a very positive thing as it showcases a shift of female workforce from paid wage employment to unpaid family worker, a kind of worsening scenario for women employment (Rawal and Saha, 2015). Another interpretation from Table 3 is that the situation is same for women in all the States irrespective of their development status. The most progressive States of the country such as Maharashtra, Southern States as well as the North-East region wherein women hold a better position show high percentage of women involved merely as unpaid family worker. Rawal and Saha (2015) state that the prime cause of women serving women as unpaid family labour can be non-accessibility to different employment opportunities, especially in rural areas. On the supply side, women's prime responsibilities tend to be household work (Srivastava and Srivastava, 2009), therefore, confining them to serve on their own farms or household enterprise as unpaid worker.

Further, in order to decipher the industry/ enterprise in which these women serve as unpaid family labour, we cross tabulate the principal status code with the principal industry. Such computation (as in Table 4) divulged that 16 States (Himachal Pradesh, Uttarakhand, Rajasthan, Haryana, Mizoram, Madhya Pradesh, Karnataka, Tamil Nadu, etc.) wherein women are contributing as unpaid family labour, are clustered majorly in agriculture sector i.e. crop and animal production, hunting and related service activities (as per National Industrial Classification, 2008). Almost 100 per cent unpaid female workers in rural areas of Uttarakhand, Haryana, Rajasthan, Tamil Nadu, Sikkim, Madhya Pradesh, Gujarat, etc., are engaged in agricultural activities.

Table 4: State-wise Frequency of Females as Unpaid Family Workers Involved in Crop Production and Related Activities (Crop & Animal Prod. NIC=1)

S. No.	States	Frequency (per cent)
1	Himachal Pradesh	99.13
2	Uttarakhand	100
3	Haryana	100
4	Rajasthan	99.98
5	Sikkim	99.33
6	Mizoram	99.87
7	Meghalaya	99.27
8	Jharkhand	99.82
9	Chhattisgarh	99.09
10	Madhya Pradesh	99.57
11	Gujarat	99.53

12	Maharashtra	99.07
13	Andhra Pradesh	95.88
14	Karnataka	99.03
15	Tamil Nadu	99
16	Telangana	99.74

Source* Estimated from NSSO 70th round, Schedule 33, Unit level data, Situation Assessment of Agriculture Households (70th Round).

Research by other scholars has also confirmed the proposition that women play a significant role in agriculture as unpaid family labour. Sinha (2011) mentioned that the distribution of the female workers, who helped in family enterprises without regular salary or wages over all industrial classifications, reveal that in rural India, agriculture, forestry and logging accounts for 90 per cent of the total female helpers in household enterprises which has been aptly showcased in Table 4. Tracing out the reasons for increased involvement of females as unpaid family worker in agriculture sector, Abraham (2013) argued that such a trend was witnessed in response to hold up falling household incomes in agriculture in a period marked by agrarian crisis. Literature suggests that there are both demand and supply side factors affecting female labor outcomes. Socioeconomic structures are a determinant factor. Shrinking employment opportunities in the formal sector and structural changes have lead to an increase in the sub-contracting of work and home-based work. Sinha (2010) stated that at times, it is their preference or poverty or lack of skill, education or unavailability of jobs

elsewhere that persuades females to remain in agriculture and with this employment status. Most female cultivators are members of a family that owns the land, rather than being the owners themselves (Kishwar and Vanita, 1985 as cited in John E. Dunlop and Victoria A. Velkoff, 1999). So, basically they are accounted as workers in the labour surveys but in reality are invisible with no access to a regular stream of cash income.

The above tables clearly show that females contribute significantly to agriculture sector as paid or unpaid family worker. But, increase in their involvement over the years is also an area of concern. So, as to assess the change and to examine the trend and magnitude of feminisation in agriculture, we used agriculture census database (2005-06 and 2010-11) and computed (as represented in Table 5) the change in proportion of femaleoperated landholdings during 2005-06 and 2010-11 for all States in India. After analysing the data, we observed that majority of the States have witnessed a steady rise in number and area cultivated by female farmers. Overall, the average increase in women proportion at all-India level is just 1.08 per cent. As per 2011, the States which have high shares of women working as operated landholders in all class category are Meghalaya (34.49), Andaman & Nicobar Islands (29.08), Andhra Pradesh (25.39), Goa (23.16), Tamil Nadu (21.50), Kerala (19.61), Karnataka (18.97), Gujarat (14.61), Bihar (14.06) and Haryana (12.05). Considering, the category of marginal farmers, it is observed that the

Table 5: Difference in Proportion of Women Operated Landholdings between 2005-06 and 2010-11

State	Marg	Marginal	Small	all	Semi Medium	edium	Med	Medium	Lar	Large	All Class	lass
	Number	Area	Number	Area	Number	Area	Number	Area	Number	Area	Number	Area
A & N Islands	6.89	6.88	6.89	2.17	4.96	5.66	8.31	8.25	-2.50	-1.32	5.59	5.97
Andhra Pradesh	2.94	3.42	2.94	3.77	3.49	3.38	3.30	3.25	2.53	2.10	3.42	3.99
Arunachal Pradesh	-0.76	0.15	-0.76	-0.87	0.16	0.00	0.39	09.0	1.35	1.57	-0.35	0.52
Assam	0.25	0.25	0.25	0.51	0.37	0.33	-0.14	-0.12	-0.13	0.00	0.32	0.25
Bihar	1.79	1.36	1.79	0.75	1.59	1.61	-0.08	-0.02	3.28	3.70	1.73	1.38
Chandigarh	-0.83	-1.53	-0.83	-2.22	2.20	2.48	-3.15	-3.94	0.00	0.00	-1.21	-1.60
Chhattisgarh	1.36	1.19	1.36	0.97	0.92	0.92	96.0	0.98	0.82	0.87	1.33	1.24
Dadra & Nagar Haveli	1.50	1.76	1.50	-0.67	1.00	1.20	-0.72	-1.49	3.36	6.12	0.94	0.59
Daman Diu	3.39	3.64	3.39	5.00	4.95	5.86	7.48	8.75	-2.88	-2.87	3.54	4.20
Delhi	-1.29	-1.66	-1.29	-1.36	-0.88	-0.78	0.08	0.08	-2.55	-2.76	-1.22	-0.93
Goa	2.01	3.00	2.01	3.36	0.61	0.89	2.52	3.27	4.01	7.44	1.64	7.67
Gujarat	0.34	0.15	0.34	0.11	0.20	0.19	0.07	0.05	-0.41	-2.00	0.28	-0.05
Haryana	0.22	-0.07	0.22	1.16	-0.58	-1.02	0.87	0.77	2.13	1.42	0.47	0.49
Himachal Pradesh	0.27	-0.04	0.27	0.03	0.17	0.15	0.13	0.12	-0.17	-0.09	0.28	0.12
Jammu & Kashmir	0.02	-0.14	0.02	-0.09	0.44	0.47	0.51	0.47	0.36	-0.20	0.11	0.17
Karnataka	2.24	0.68	2.24	0.98	0.91	0.92	0.87	0.91	1.26	1.38	1.66	1.14
Kerala	0.37	-0.06	0.37	-0.73	-0.22	-0.28	-1.23	-0.97	-1.12	-0.55	0.39	-0.24
Lakshadweep	-0.09	0.32	-0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.09	0.13
Madhya Pradesh	2.91	2.76	2.91	1.92	1.66	1.62	1.37	1.30	1.74	1.45	2.41	1.94
Maharashtra	-0.68	-0.97	-0.68	-1.06	-0.82	-0.88	-0.36	-0.31	0.49	0.83	-0.58	-0.49
Manipur	0.18	-0.07	0.18	0.28	1.65	1.38	0.39	0.10	0.00	0.00	0.58	0.53
Meghalaya	13.83	10.14	13.83	11.29	15.44	15.88	13.97	14.05	-21.92	-5.73	13.51	13.06
Mizoram	0.49	0.11	0.49	-0.82	0.63	1.06	5.67	5.97	4.17	3.59	0.37	0.56
Nagaland	1.41	2.30	1.41	-1.64	-0.47	0.33	2.72	2.32	1.23	2.80	1.26	2.47
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Odisha	0.46	0.40	0.46	0.40	0.68	0.66	0.76	0.80	0.88	0.29	0.53	0.54
Puducherry	4.58	-2.48	4.58	-2.05	-2.98	-4.07	-2.73	-3.49	0.68	1.71	3.89	-1.79
Punjab	0.31	0.35	0.31	0.39	0.07	0.06	0.13	0.14	0.13	-0.03	0.21	0.10
Rajasthan	3.85	3.59	3.85	2.76	2.15	2.12	1.77	1.71	1.11	1.03	2.82	1.82
Sikkim	-3.86	-3.82	-3.86	0.77	-0.38	-0.18	-0.08	-0.21	-1.75	-5.53	-1.97	-1.24
Tamil Nadu	0.41	0.51	0.41	0.32	0.53	0.53	0.70	0.70	0.74	0.62	0.47	0.64
Tripura	-0.15	0.07	-0.15	0.80	1.71	1.65	1.51	0.93	4.65	3.58	0.00	0.79
Uttar Pradesh	0.63	0.32	0.63	0.32	0.21	0.17	0.24	0.24	-0.13	-0.31	0.59	0.31
Uttarakhand	2.56	2.95	2.56	1.81	0.51	0.56	0.41	0.33	-0.14	-0.57	2.26	1.90
West Bengal	0.15	0.20	0.15	-0.16	-0.36	-0.34	0.01	-0.06	0.00	0.00	0.10	0.03
All India	1.04	0.93	1.04	1.03	0.83	0.82	0.73	0.73	0.79	0.75	1.08	1.02
Source: Estimated from Agriculture Census- Number and Area of Operational holdings by Size Group, 2005-06 and 2010-11, Ministry of	m Agricul	ture Censi	dmuN -sr	er and Ar	ea of Ope	erational h	ioldings b	y Size Gro	oup, 2005	5-06 and 2	2010-11, N	1 inistry of

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In order to get a clear view of feminisation trend, we have classified the States into zones as presented in Table 6 and estimated the average change in women-operated landholdings during 2005-06 and 2010-11.

Table 6: Region-w	vise Difference in Number and Area of Female Land Operators during 2005-06 to 2010-11 (in per cent)	ence in l	Number ä	and Area	a of Fema	ale Land	Operato	rs durin <u>c</u>	j 2005-0(6 to 201	0-11 (in p	er cent)
Zones	Març	Marginal	Small	all	Semi-Medium	ledium	Medium	ium	Large	ge	All Class	lass
	Number	Area	Number	Area	Number	Area	Number	Area	Number	Area	Number	Area
North Zone	0.64	0.36	0.37	0.34	0.74	0.71	0.04	-0.12	0.59	0.36	0.44	0.18
North Central Zone	1.32	1.15	0.65	0.69	0.62	0.63	0.41	0.39	0.44	0.30	1.15	0.92
North East Zone	2.18	1.85	1.44	1.36	2.78	2.95	3.50	3.41	-1.52	0.83	2.24	2.60
East Zone	2.88	2.87	2.28	2.30	2.23	2.35	2.59	2.52	0.21	-0.33	2.76	2.45
West Zone	1.31	1.52	1.38	1.35	1.19	1.45	1.80	2.06	0.91	1.90	1.16	2.39
South Zone	1.74	0.40	0.48	0.38	0.29	0.08	0.15	0.07	0.68	0.88	1.62	0.64
Average	1.68	1.36	1.10	1.07	1.31	1.36	1.41	1.39	0.22	0.66	1.57	1.53
Source* Estimated from Agriculture Census 2005-6 and 2010-11, Ministry of Agriculture, Government of India	om Agricult	ture Censi	us 2005-6 a	ind 2010-	11, Ministr	y of Agric	culture, Gov	/ernment	of India.			

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hike in number of female farmers is highest for Meghalaya (13.82), followed by Andaman &Nicobar Islands (6.88), and Puducherry (4.58). The above-mentioned States are ensued by Rajasthan, Daman-Diu, Andhra Pradesh, Madhya Pradesh and Uttarakhand.

Although female participation is highest in South Zone with 24.57 per cent females as land operators followed by Western (18.01), North-Eastern (11.73), Eastern (10.93), North Central (10.25) and Northern regions (7.37). But, considering the increase in female land operators during 2005-2011, situation is different with data revealing that it is the East zone which registered the highest rise in feminisation with 2.76 per cent followed by North-Eastern (2.24), South (1.62), West (1.16), North-Central (1.15) and North (0.44) zones. Size group-wise also, eastern zone leads in case of marginal, small and large landholdings while North-East zone dominates in semi-medium and medium landholdings.

Further, in order to understand the scenario clearly at district level, Table 7 has been prepared which presents the frequency distribution of districts on the basis of change witnessed during the period between 2005-06 and 2010-11.

Table 7 supports the supposition that the trend of feminisation in agriculture is not predominant. We have classified the change into four categories, viz. Negative, Low, Moderate and High with reference to landholding size. Anatomising the data, we found that on number basis, out of total 522 districts, 120 have witnessed negative or no change in women-operated landholdings during the stated time period. 239 districts depict low rise followed by 128 in moderate category and 35 in high category. As far as area cultivated by women is concerned, a similar pattern is seen with 144 districts falling in negative category, 237 in low. Moderate and high categories have 97 and 44 districts, respectively. Thus, Tables 6 and 7 reveal that there has been minimal rise in womenoperated land in India.

Reasons behind Ineffective Feminisation

The question that arises after assessment of data is that despite women's significant contribution their importance has not been recognized. In order to explore the probable reasons, we studied several scholarly articles and have attempted to summarize the answers. Strong patriarchal society, lack of ownership rights, gender biased inheritance laws, inappropriate government policies and programmes are some of the factors which have influenced and made feminisation in agriculture ineffective (Agarwal et.al, 2016). Our data estimates depict that Matrilineal inclined States, viz. Meghalaya, have registered a rise of more than 5 percent in women operated landholdings but still 49.64 percent females serve merely as unpaid family worker. Kelkar (2013) suggests that this rise may be due to the inheritance and customary laws in

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			Number	ber					Area			
	Marginal	Small	Semi- Medium	Medium	Large	AII	Marginal	Small	Semi- Medium	Medium	Large	All
Negative (min-0)	145 (27.78)	168 (32.1)	158 (30.27)	206 (39.46)	269 (51.5)	120 (22.99)	166 31.80)	172 (32.95)	163 (31.23)	214 (41.00)	292 (55.94)	144 (27.59)
Low (0.01- 2.00)	225 (43.10)	228 (43.68)	221 (42.34)	135 (25.86)	143 (27.39)	239 (45.79)	206 (39.46)	225 (43.10)	223 (42.72)	137 (26.25)	119 (22.80)	237 (45.40)
Moder- ate (2.01- 5.00)	115 (22.03)	96 (18.39)	83 (15.90)	82 (15.71)	40 (7.66)	128 (24.52)	110 21.07	93 (17.82)	85 (16.28)	81 (15.52)	49 (9.39)	97 (18.58)
High (5.00 -max)	37 (7.09)	30 (5.75)	60 (11.49)	99 (18.97)	70 (13.41)	35 (6.70)	40 (7.66)	32 (6.13)	51 (9.77)	90 (17.24)	62 (11.88)	44 (8.43)

N.B-Figures in brackets are in percentage.

Source: Estimated from Agriculture Census Data 2005-06 and 2010-11, District level-Number and area of operational holdings by Size Group, Ministry of Agriculture, Government of India.

these societies. Women in Khasi society have traditionally been the legal owners of land. Khasi people have more egalitarian gender relations in terms of women's mobility and access to market, and women are generally not constrained by patriarchal relations. The customary laws in such States have actually created a sense of economic independence among females (De and Ghosh, 2005) and promoted their participation at various levels. Assessing the reasons for Eastern zone's hierarchy in this context, Sikkim Development Report, 2014 divulges that Sikkim have had high female work participation rate and the society there does not restrict women's participation in economic activities. In case of Odisha, male migration remains to be the crucial factor in promoting feminisation in agriculture. Focusing on States like Haryana where cost of production has increased after green revolution, women labourers are hired to reduce cost (Das, 2015). There also exists few States, viz. Kerala, Punjab and West Bengal where women participation has reduced. According to Ghosh and Ghosh (2014) reason for such reverse trend is increased participation in non-agricultural activities. Assessing the South Indian States, the data reveal that the most progressive State of South India i.e., Andhra Pradesh scores better than other States with reference to women participation in agriculture but it also does not show high level of change. Almost all the districts of State have registered a moderate rise (ranging between 2.01 per cent to 5 per cent) in womenoperated landholdings during 2004-05 to 2010-11. Upadhayay (as cited in Kadoth, 2006) found that in rural Andhra Pradesh, among poor families, the dowry usually consisted of agricultural land. This has granted women a basic resource and improvised their condition. The condition seems to be better with government's initiatives such as a scheme run by Scheduled Caste Development Corporation, which provides subsidised loans to women belonging to scheduled caste category for purchasing land (Thorner, 2002). A similar approach is followed by Rajasthan. The State offers incentives to landowners for land that is registered jointly or in the name of the woman head of the household only, thereby rewarding women contribution. Research inputs from other southern States viz., Kerala, which boasts of high literacy and demographic dominance of women, is not different from other States regarding access to productive resources such as land, control and ownership.

Chandy (1995) and AIDWA (2003) studies regarding dowry and inheritance mention that even after the change in succession law among the Christians, women have not been rightly benefitted. In Karnataka, women who are part of a household that does own land often have access to land, but very few have actual ownership rights. Brown et al. (2002) states that daughters are not supposed to get inheritance rights as they have had their share into family's wealth in terms of dowry. In Karnataka, the government has not historically titled government-granted land in the names of women separately or even jointly with their husbands which is another factor in preventing women control over land. Further, examining the agriculture census data, we found that the increase in operational holdings by women in Assam has been quite low or negative in 12 out of total 26 districts incorporated. A study by Khan (2013) on women in agriculture in Assam found that they continue their struggle to find freedom from dependent controlling and patronising-relationships. Women face such problems due to lack of education, proper training, and family's restriction on women working outside their homes. A district level study by Deb (2011) concludes that N.C. Hills witnessed the highest participation of females in farming exercises, followed by Jorhat and Dibrugarh. It is so because N. C. Hills is "inhabited by aborigines, the social customs and traditions of whose pose no inhibitions for the participation of females in farming." Therefore, we may say that only few districts in Assam have gender-friendly base. Focusing on the trend of feminisation in agriculture in West Bengal, Bagchi (2005) shows that women participation is low in agriculture in the State because women prefer doing homebased work. In addition, the land that a family owns is most commonly titled in the name of the male head of household, and women rarely purchase land on their own because of cultural gender role constraints and their lack of independent financial resources (Brown and Chowdhary, 2002). There are several other

factors behind low and ineffective feminisation of agriculture in West Bengal. Majority of women in West Bengal live in households that are absolutely landless or live in households that own less than 0.2 hectares. Furthermore, faulty inheritance and customary practices do not allow daughters, widows, divorced women to inherit or have right to claim their father/ husband's land. Another reason for low female involvement in agriculture is that women do not generally have the resources or access to credit necessary to purchase land in their own. Similar situation seems to prevail in other parts of the country. Odisha also faces the problems in this regard as there are significant gaps between women's land rights and their actual ownership (Agarwal, 1994). Women in Uttarakhand also do not have property in their name, but still have to perform all domestic duties besides working in the fields and grazing the animals (Pandey, 2009). Gujarat also depicts an identical picture with regard to land ownership by women. Study in 10 districts of the State revealed that only 11.1 per cent of the women held land titles. According to a study by Uttar Pradesh planning department, only about 6.5 per cent of women have legal rights to land in the State when compared to 87.6 per cent men land owners in the rural areas. Devi et.al (2016) indicates that sociocultural attributes in the State have served as inhibiting factors behind low land ownership and control. Lack of awareness about rights, illiteracy, insecurity of husband, physical health and dual burden of domestic and farm duties

have been cited as the key reasons for not passing land titles to them.

Conclusion

Rapid movement of men out of agriculture has created a vacuum in agriculture labour market which is being fulfilled by female participation in India. But, this feminisation in agriculture has not been able to reap fruits as women work only as invisible workers and not as decision-makers. Empirical evidences and literature review show that land ownership status of women is low which has acted as a hurdle in promoting agriculture growth, productivity and has ultimately resulted in feminisation of poverty. Therefore, it is necessary that we recognise women as owners, so that they can avail benefits and services such as access to credit, equal wages, and access to opportunities for honing their skills and thereby contribute towards holistic development. The feminisation of agriculture has taken place with reference to increase in women workforce on farms but has not been achieved in terms of rise in control and management of land by them. Such trend has resulted in reduced productivity, growth and has lead to feminisation of poverty. The study suggests that a gender sensitive socio-cultural environment wherein the rights of women are not trespassed and they are provided appropriate education, skills, counseling and equality in social status would have a positive impact on productivity and poverty levels. When women would get legal rights, they may avail all technical, financial and social services.

In addition to this, organising women into cooperatives can also prove to be fruitful for them. According to a report by FAO (2012), women producers benefit largely by cooperatives. They serve as networks of mutual support and help them to 'grow their social capital, improve self-esteem and self-reliance', acquire greater knowledge, entrepreneurial skills, 'voice in decision-making and collectively negotiate better contract terms, prices, and access to a wide range of resources' (Agarwal, 2010 and Prakash, 2003). Cooperatives empower women which indirectly promotes them in proclaiming land rights. Therefore, conferring ownership titles to women and promotion of cooperative farming could turn the consequences of feminisation of agriculture in country's favor.

Notes

- 1. Operational landholding data is considered as no other sex-disaggregated data with reference to ownership of agriculture land is available. An Operational holder is the person who has the responsibility for the operation of the Agricultural holding and who exercises the technical initiative and is responsible for its operation. He may have full economic responsibility or may share it with others. The operational holder may be Individual/Joint/ Institutional (Agriculture Census, 2010-11). An assessment of operated landholdings during the stated time period would help us in understanding their contribution and the change in number and area operated by women.
- 2. The Northern Zone (comprising of the States of Jammu and Kashmir, Himachal Pradesh, Haryana, Punjab, Rajasthan and Chandigarh), the North Central Zone (Madhya Pradesh, Bihar, Uttarakhand, Uttar Pradesh and Delhi), the North-Eastern Zone (Arunachal Pradesh, Assam, Manipur, Meghalaya, Nagaland, Mizoram and Tripura), the Eastern Zone (Odisha, Sikkim, West Bengal, Chhattisgarh and Andaman-Nicobar islands), the Western Zone (Gujarat, Goa, Maharashtra, Dadra and Nagar Haveli and Daman-Diu) and the Southern Zone (Andhra Pradesh, Tamil Nadu, Kerala, Karnataka, Telangana, Lakshadweep and Puducherry).

References

Agarwal, B. (1994), "Gender and Command over Property: A Critical Gap in Economic Analysis and Policy in South Asia," *World Development*, Elsevier Science, Vol. 22, Issue 10, pp 1455 – 78

Agarwal, B. (2003), "Gender and Land Rights Revisited: Exploring New Prospects via the State, Family and Market," Journal of Agrarian Change_(UK), Vol. 3, No. 1&2, pp184-224

Agarwal, B. (2010), "Rethinking Agricultural Production Collectivities," *Economic and Political Weekly* Vol. 45, No. 09

Agrawal, R., D. Rao and G. P. Joshi (2013), Feminisation of Indian Agriculture: Issues and Challenges, *Madhya Pradesh Journal of Social Sciences*, Vol. 18, No.1, Retrieved from https://www.questia.com/library/journal/1G1-412800304/feminisation-of-indian-agriculture-issues-and-challenges

Abraham, V. (2013), Missing Labour Force or De-Feminisation of Labour Force in India, Working paper 452, Centre for Development Studies, Retrieved from: http://cds.edu/wp-content/uploads/2013/09/wp452.pdf

All India Democratic Women's Association (AIDWA), (2003), Expanding Dimensions of Dowry, New Delhi.

Bagchi, J. (2005), The Changing Status of Women in West Bengal 1997-2000: The Challenge Ahead, Sage Publications, India

Brown, J and S. D. Chowdhary (2002), "Women's Land Rights in West Bengal: A Field Study," RDI Reports on Foreign Aid and Development #116, Rural Development Institute, Available at http://www.landesa.org/wp-content/uploads/2011/01/RDI_116.pdf

Chowdhary, P. (2009), Gender Discrimination in Land Ownership, Land Reforms in India, Vol. 11, Sage Publications, New Delhi.

Chowdhury, A. and J. K. Sundaram (2011), Poor Poverty: The Impoverishment of Analysis, Measurement and Policies, Bloomsbury Publication; London, United Kingdom

Chandy, A. (1995), A Community in Peril: Christian Women's Struggle for Equal Inheritance, New Delhi: Indian Social Institute.

Das, L (2015), Work Participation of Women in Agriculture in Odisha, *IOSR Journal Of Humanities And Social Science (IOSR-JHSS)*, Vol. 20, Issue 7, pp 66-78

Deb, S. (2011), Economic Reforms and Farms Feminization in Assam-A Conundrum or Reality, Research Articles, NIT, Silchar.

Devi, S, N. Kunwar and S. Kumari (2016), "Inhibiting Factors Responsible Land and Property Ownership of Farm Women," *International Journal of Advanced Research*, Vol. 4, Issue 5

Dunlop, J and Velkoff, V. A. (1999), Women and the Economy in India, International Programs Centre, US Census Bureau, The Official Statistics.

Duvvury, N. (1989), Women in Agriculture A Review of the Indian Agriculture, *Economic and Political Weekly*, Vol.24, Issue No.43

FAO (2012), Agricultural Cooperatives and Gender Equality, International Year of Cooperatives Issue Brief Series, Rome, Italy

Garikipati, S (2006), Feminization of Agricultural Labour and Women's Domestic Status: Evidence from Labour Households in India, Research Paper Series, No. 30, University of Liverpool Management School, Great Britain.

Ghosh, M. and A.Ghosh (2014), Analysis of Women Participation in Indian Agriculture, *IOSR Journal Of Humanities and Social Science*, Vol. 19, Issue 5, Retrieved from http://iosrjournals.org/iosr-jhss/papers/Vol19-issue5/Version-4/A019540106.pdf

Goswami, C. (2013), Female Agricultural Workers in Assam: A Case Study of Darrang District, *International Journal of Scientific and Research Publications*, Vol. 3, Issue 2, Retrieved from : http://www.ijsrp.org/research-paper-0213/ijsrp-p14110.pdf

ICAR (2012), Empowering Women in Agriculture, Chapter 16, DARE/ICAR Annual Report and also available at http://www.icar.org.in/files/reports/icar-dare-annual-reports/2011-12/gender-issues-AR-2011-12.pdf

Kadoth, P. (2006), "Producing a Rationale for Dowry? Gender in the Negotiation of Exchange at Marriage in Kerala, South India, Working paper 16, Asia Research Centre, LSE, London

Kelkar, G. (2013), "The Fog of Entitlement: Women and Land in India," Paper Presented at Annual World Bank Conference on Land and Poverty, Washington D.C, U.S.A. Retrieved from: http://www.landesa.org/wp-content/uploads/The-Fog-of-Entitlement-Women-and-Land-in-India-261-Kelkar.pdf

Khan, M. K. (2013), "Women in Agriculture of Assam", *The International Journal of Engineering and Science*, Vol. 2, Issue 3, Retrieved from http://www.theijes.com/papers/v2-i3/D023019021.pdf

Landesa (2012), Women's Secure Rights to Land Benefits, Barriers, and Best Practices, Issue Brief, Retrieved from http://www.landesa.org/wp-content/uploads/Landesa-Women-and-Land-Issue-Brief.pdf

Lal, R. Khurana, A. (2011), Gender Issues: The Role of Women in Agriculture Sector, *Zenith International Journal of Business Economics and Management Research*, Vol.1, Issue 1

Nayak, S. (2016), "Whither Women-A Shift from Endowment to Empowerment," Edupedia Publications, New Delhi

Oxfam (2013), "When Women Farm India's Land: How to Increase Land Ownership," Policy Brief No.8, India, Retrieved from https://www.oxfamindia.org/sites/default/files/Policy%20Brief%20No%208-land%20rights. pdf

Pandey, B. (2009), "Women's Alienation Land Less Development," Friedrich Ebert Stiftung, India, Retrieved from http://library.fes.de/pdf-files/bueros/indien/07177.pdf

Prakash, D. (2003), "Rural Women and Food Security," Rural Development and Management Centre, New Delhi, India

Rawal, V. Saha, P (2015), "Women's Employment in India: What do Recent NSS Surveys of Employment and Unemployment Show?," Statistics on Indian Economy and Society, Retrieved from http://archive. indianstatistics.org/misc/women_work.pdf

Ramesh, A. S. and Madhavi, C. (2009), "Occupational Stress among Farming People," *Journal of Agriculture Sciences*, [Vol. 4, No.3]

Samanta, R. S. (1995), "Women in Agriculture: Perspective, Issues and Experiences," M.D. Publications, New Delhi

Sinha, S. (2011), "Nature and Trends of Female Unpaid Work in India," Value of Work: Updates on Old Issues, Inter-Disciplinary Press, Oxford, UK.

Srivastava, N and Srivastava, R. (2009), "Women, Work and Employment Outcomes in Rural India," Paper Presented at the FAO-IFAD-ILO Workshop on Gaps, Trends and Current Research in Gender Dimensions of Agricultural and Rural Employment: Differentiated Pathways out of Poverty, Retrieved from http://www.fao-ilo.org/fileadmin/user_upload/fao_ilo/pdf/Papers/17_March/Srivastava_Final.pdf

Siddiqui M. Z, Dutt, K. Lockie, S. Pritchard B. (2015), "Reconsidering Women's Work in Rural India," Analysis of NSSO Data, 2004–05 and 2011–12, *Economic and Political Weekly*, Vol.24, Issue 43.

Tenaw, S. Islam, K. M., Parviainen. T (2009), "Effects of Land Tenure and Property Rights on Agricultural Productivity in Ethiopia, Namibia and Bangladesh," Discussion Paper No.33, Department of Economics and Management, University of Helsinki, Retrieved from http://www.fao.org/fileadmin/user_upload/fsn/docs/ HLPE/Discussion_Paper_33.pdf

Thorner, A. (2002), "Land, Labour and Rights," Anthem Press, London.