

Female Workers in Punjab: Trends and Diversification

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Abstract

Females are almost half of the human population and an important human resource. But their contribution to the economy is hardly acknowledged. This paper examines the trend of work participation rate of female workers in Punjab for the period 1971-2011. Also, the distribution of workers among industrial categories in 1971 and 2001 has been compared in order to understand the nature of work they had been involved in. Gibbs and Martin diversification index has been used to access the diversification of female workers among industrial categories of work. For all this, secondary data has been taken from Census of India, Statistical Abstract of Punjab and various books and journals. Female main work participation rate of Punjab had been very low in the country since 1971. The changing definition of workers during different census years and also the decadal situations had been influencing the participation rate of females at different points of time. Even in 2001, more than half of the female workers had been working in primary sector. But during the period under study, female workers got more diversified and therefore, more evenly distributed among the industrial categories.

KEYWORDS: Trends, Diversification, Industrial Categories, Census

1. Introduction

Females can never be viewed as separate from work as they are continuously engaged in performing activities from dawn to dusk. These activities may range from managing large businesses, working in manufacturing industry or agricultural fields to performing household chores, taking care of children and elderly in the family. However, the contribution of their work, in many fields, remains unacknowledged and unaccounted. Even studies on workers/ workforce sometimes exclude females altogether when discussing about economic work as it is considered to be a male prerogative. Such an approach not only neglects the role of females as an important economic contributor but also presents a partial picture of the overall workforce.

According to Census of India 2011, a worker is a person who has participated in any economically productive activity at any time during reference period which is one year preceding the date of enumeration. But most of the works done by females within the premises of their homes are not considered to be of economic value. Recently, Census has been trying to incorporate many unpaid and hidden activities within the purview of economic work. Furthermore, efforts have also been made to net in hidden female workers, especially those who work from home or work with other family members etc. Census enumeration and definition of economic work along with various economic, social and cultural factors affect the work participation rate of females from time to time.

Punjab, an economically advanced state of India, had traditionally a very low female work participation rate, well below the national average (Table 1). Though it has increased with time, it is still very low as compared to other Indian states. It was mere 1.2 per cent in 1971 which was the lowest among all the states of the country (Table 1). It remained the lowest among all the states till 2001 when it jumped to 13th last rank in the country as far as female main work

participation rate is concerned. The rank dwindled again in 2011 as the female main work participation rate increased to 9.1 per cent which was the lowest in India after Lakshadweep, Jammu and Kashmir, Bihar, Uttar Pradesh and West Bengal. The low economic participation of females in Punjab could be linked to purdah system during past time (Gosal and Krishan 1965) and taboos on economic participation of females among higher classes (Gosal 1991, Mooney 2010). So, a study on females' economic participation assumes importance not only due to their increasing participation in work but also due to increasing awareness among females about their economic freedom. The present paper aims to study the trends of female main workers in Punjab from 1971-2011 along with changes in the per cent share of their distribution in ten major industrial categories of work. The paper also throws light on the diversification of female workers from 1971-2001.

2. Data Sources and Methodology

Secondary data has been taken from Primary Census Abstract, General Population Tables and Economic Tables of India and Punjab, 1971-2011; Census of India, Statistical abstract of Punjab and various journals and books. Female work participation rate in terms of number of female workers as per cent to female population has been calculated. Further, per cent share of female workers in industrial categories has been calculated and compared. Also, diversification of female workers has been calculated using Gibbs and Martin diversification index (Gibbs and Martin 1962). The formula of calculating the index is $1 - \sum x^2 / (\sum x^2)$, where x is the number of workers in each industrial category. If the workers are concentrated in one industry the index value is zero, and if they are evenly distributed throughout every industry, the index value is 1. So, an increase in value from 0 to 1 indicates increasing diversification from concentration. It is to be noted that for n number of categories, the maximum score is $(n - 1) / n$. Here, we have 10 industrial categories, so the maximum score would be 0.9 (Hammond and McCullagh, 1978).

3. Results and Discussion

3.1 Trends in Female Workforce Participation: 1971-2011

Female main workers are those who have worked for six months or more during the reference period (which is one year from the date of enumeration). This concept was introduced in 1981, so, for 1971, data of female (total) workers has been used here. In 1971, the female work participation rate was 1.2 per cent (Figure 1). Such a low participation rate could be attributed to the taboos on female movement and work participation along with partial definition of work which excluded those who were engaged in economic work but not as their main activity. In 1981, female main work participation rate increased to 2.3 per cent. This increase could be credited to the boom in green revolution (Gill 1987, Sain and Sharma 1999-2000, Singh 2000) which lead to an increased demand of females in farm as well as non-farm activities. Secondly, the inclusion of those who worked on farm or in family enterprise paid or unpaid; also added to the female work participation rate. The female main work participation rate increased further to 2.8 per cent in 1991. The slight increase in the work participation rate of females was due to their increased participation in dairy sector (Sidhu and Singh 2004, H.S. Sidhu 1999-2000, Sain and Sharma 1999-2000).

The next decade 1991-2001 brought a sharp rise in female main work participation rate as it touched 12.4 per cent in 2001 after a whopping increase of 9.6 per cent points from the previous census year (Figure 1). This increase was attributed to the special efforts of Census of India to

count hidden female workers and also to the changed definition of workers which included those who look after cattle for even domestic consumption of milk.

But during 2001-2011, there was a decline in female main work participation rate as it fell to 9.1 per cent with a reduction of 3.3 per cent points. This decreased rate could be understood in the light of stagnation of agriculture and economy which hampered its capacity to absorb the growing labour force (Singh 2004, Ghuman 2008), especially the educated youth who started going away from agriculture to service sector in the want of better wages and better standard of living (Chand 1999, Singh 2000). A decline in the number of livestock in the state during this time also affected the female work participation rate (Figure 2).

3.2 Industrial Distribution of Female Workers

While study of female work participation rate gives an idea of the numerical strength of female workers, the study of their share in industrial categories helps in understanding the nature of work being done by them. Census of India gives 10 major industrial categories for which data is available. These categories include cultivators; agricultural labourers; livestock, forestry, fishing, hunting and plantation, orchards and allied activities; mining and quarrying; household industries; non-household industries; construction; trade and commerce; transport, storage and communication and other services.

The data reveals that in 1971, farm workers together embraced 16.5 per cent of the female workers out of which 5.6 per cent were cultivators while 10.9 per cent were agricultural labourers (Figure 2). Definition of worker in 1971 Census prevented a large number of females working on farm from being enumerated. Livestock and allied activities gave employment to only a small part of females i.e. 0.7 per cent. Though, sizeable number of cattle in Punjab had been largely taken care of by females of the household, yet most of them were not considered workers, not even by definition at that time, thus, their share in data remained small only. The share of female workers in mining and quarrying had been less than even one per cent not only in 1971 but also during the whole period (1971-2001) as there is hardly any mineral wealth in the state. Manufacturing sector also employed sizeable number of female workers. Household industry had 7.2 per cent of female workers whereas their share in non-household industry was even larger i.e. 9.2 per cent. Collectively, they had a large chunk of 16.4 per cent. Since construction is a male dominated activity, it employed only 0.8 per cent of females. In the service sector, trade and commerce had a sizable proportion of female workers i.e. 2.8 per cent whereas transport, storage and communication had only 0.9 per cent of them. The largest share of female workers was attributed to 'other services' i.e. 61.9 per cent, as it is a collection of a number of activities.

In 2001, there was a boost in the number of female workers as there was change in the definition of workers and also census enumerated many hidden female workers. Cultivators' share increased to 13 per cent as those working on family farms came to light and were enumerated as workers. The share of female agricultural labour also increased to 11.8 per cent (Figure 2). Coming to livestock and allied activities, the share of female workers grew unprecedentedly to 32.1 per cent. The obvious reasons for this high growth were firstly, the inclusion of those females as workers who were involved in taking care of cattle to produce milk even for domestic consumption and secondly, to the fruitful efforts of census enumerators which helped in limelighting those females who were working hard in households for taking care of cattle. The share of female workers in household industry decreased to 5.6 per cent and to 7.6 per cent in

non-household. Set back of industry during the previous decade lead to the lower participation of females in this sector. A slight increase in the share of female workers in construction, which is a location based activity could be due to various developmental projects going on in the state. The increase in share of females in trade and commerce to 3.7 per cent could be attributed to an increase in demand of goods with the changing time and the changed perception of people towards female workers engaged in trade. However, their share in transport and storage declined to 0.5 per cent. Furthermore, their share in other services also declined to 24.8 per cent. This decline was basically due to an increase in the share of female workers in livestock and allied activities which led to fall in the share of females in this industry (there was an increase in the absolute numbers and the decline is only in per cent share).

3.3 Diversification of Female Workers in Industrial Categories

The above description of the trend of per cent share of female workers gives us a fair idea of how they are placed in the economy and what works they have been doing and how the share of female workers has changed over time. But it is important to see their concentration or diversification in different industries during a point of time and also if they went towards diversification or concentration through out the time. To calculate the diversification index, data from economic tables, Census of India (1971 & 2001), has been used. Gibbs Martin index of diversification has been calculated for the major 10 industrial categories of the main workers. In case of female workers of Punjab, for 1971, the diversification index value for 10 industrial categories is 0.59 (Table 2). In 2001, it rose to 0.79 which indicates that the female workers are getting more evenly distributed among various industrial categories through time. This is a positive sign as it means that they have been taking more and more varieties of jobs rather than opting for conventional female oriented jobs and breaking the old age tradition.

4. Conclusions

Female work participation rate in Punjab has increased over time but still lags far behind at the national level. The participation of females in the economic activity had been affected by different situations at different points of time. Additionally, the changing definition of worker during different census years also had an effect on their participation rates. While boom in agriculture with the advent of green revolution increased the participation rate of females in 70's, industrial shut down due to terrorism had a negative impact on female workers during 80's. Later in 90's, stagnation of economy on one hand and changed definition of workers on the other hand had a perceptible effect on female work participation rate. The most visible impact was on the females involved in livestock rearing whose share really swelled in 2001. Their share in cultivators and agricultural labourers also increased along with trade and commerce. However, females' share in manufacturing decreased along with transport, storage and other services. Though the distribution of female workers had changed over time, but they had been more evenly distributed among all the major industrial categories in 2001 as compared to 1971.

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Tables and Figures

Table 1: Female Main Work Participation Rate, India: 1971-2011

S. No.	Union Territories/States	1971*	1981	1991	2001	2011
1	Andaman and Nicobar Islands	4.5	5.1	8.0	10.0	12.5
2	Chandigarh	5.7	8.9	10.3	13.2	14.5
3	Dadra and Nagar Haveli	39.0	26.1	31.3	25.3	14.1
4	Daman and Diu			12.0	13.2	12.7
5	Delhi	4.8	6.5	7.2	29.6	9.5
6	Lakshadweep	13.6	5.6	5.9	10.8	5.3
7	Puducherry	10.9	11.0	14.3	14.8	14.7
8	Andhra Pradesh	24.1	27.0	30.0	25.4	27.5
9	Arunachal Pradesh	51.3	40.6	35.6	28.5	26.5
10	Assam	4.7		12.6	9.8	10.8
11	Bihar	8.9	9.1	10.0	8.9	8.2
12	Chhattisgarh				22.3	20.8
13	Goa	15.4	15.1	16.8	8.4	16.6
14	Gujarat	10.3	11.0	13.7	14.9	13.1
15	Haryana	2.4	4.7	6.0	14.6	9.7
16	Himachal Pradesh	20.8	18.7	19.4	13.4	18.4
17	Jammu and Kashmir	3.9	5.9		21.1	5.7
18	Jharkhand				8.0	9.9
19	Karnataka	14.2	19.0	22.7	10.1	23.4
20	Kerala	13.5	12.8	12.8	21.1	12.4
21	Madhya Pradesh	18.7	22.4	22.8	4.8	18.1
22	Maharashtra	19.7	24.0	26.5	17.5	25.4
23	Manipur	23.6	34.6	32.7	22.2	25.3
24	Meghalaya	34.6	33.3	30.7	21.4	22.8
25	Mizoram	39.5	32.3	34.0	23.7	28.0
26	Nagaland	45.2	42.5	37.3	31.9	31.3
27	Odisha	6.8	10.7	12.1	8.7	9.2
28	Punjab	1.2	2.3	2.8	12.4	9.1
29	Rajasthan	8.3	9.3	13.0	17.0	17.6
30	Sikkim	41.9	34.7	28.6	18.6	24.3
31	Tamil Nadu	15.1	22.4	25.1	24.0	24.9
32	Tripura	4.8	9.0	10.1	10.9	10.5
33	Uttar Pradesh	6.7	5.4	7.5	6.4	7.6
34	Uttarakhand				16.4	16.2
35	West Bengal	4.4	5.8	8.0	9.1	9.0
36	India	12.1	14.0	15.9	14.7	15.2

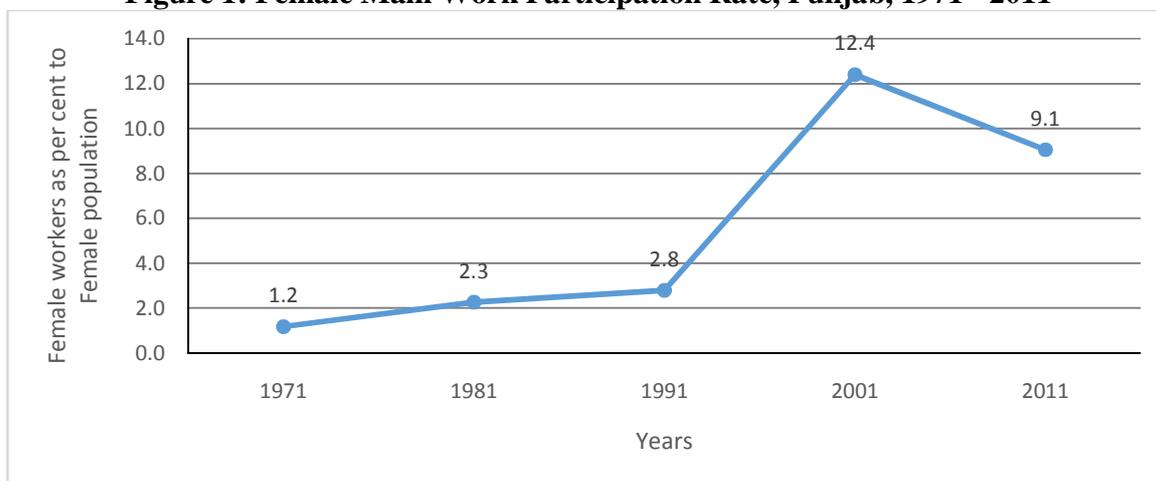
37	Rank of Punjab	Last	Last	Last	13th Last	6th Last
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Source: Primary Census Abstract, India (1981, 1991, 2001 b, 2011); 1971*Female total work participation rate

S. No	Year	Index of Diversification
1	1971	0.59
2	2001	0.79

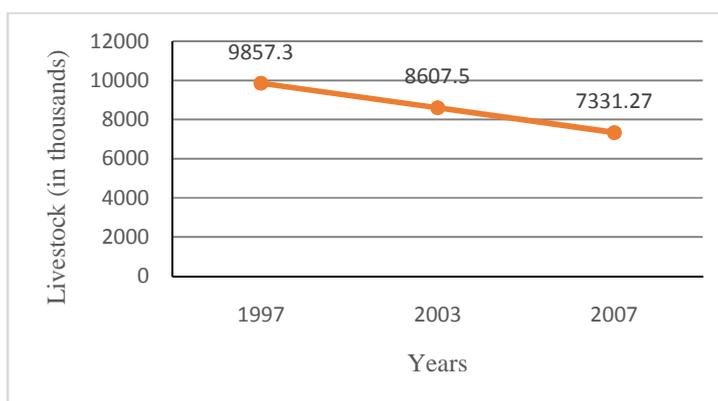
Source: Calculated from Economic Tables of India, 1971
Economic Tables of Punjab 2001a

Figure 1: Female Main Work Participation Rate, Punjab, 1971*-2011



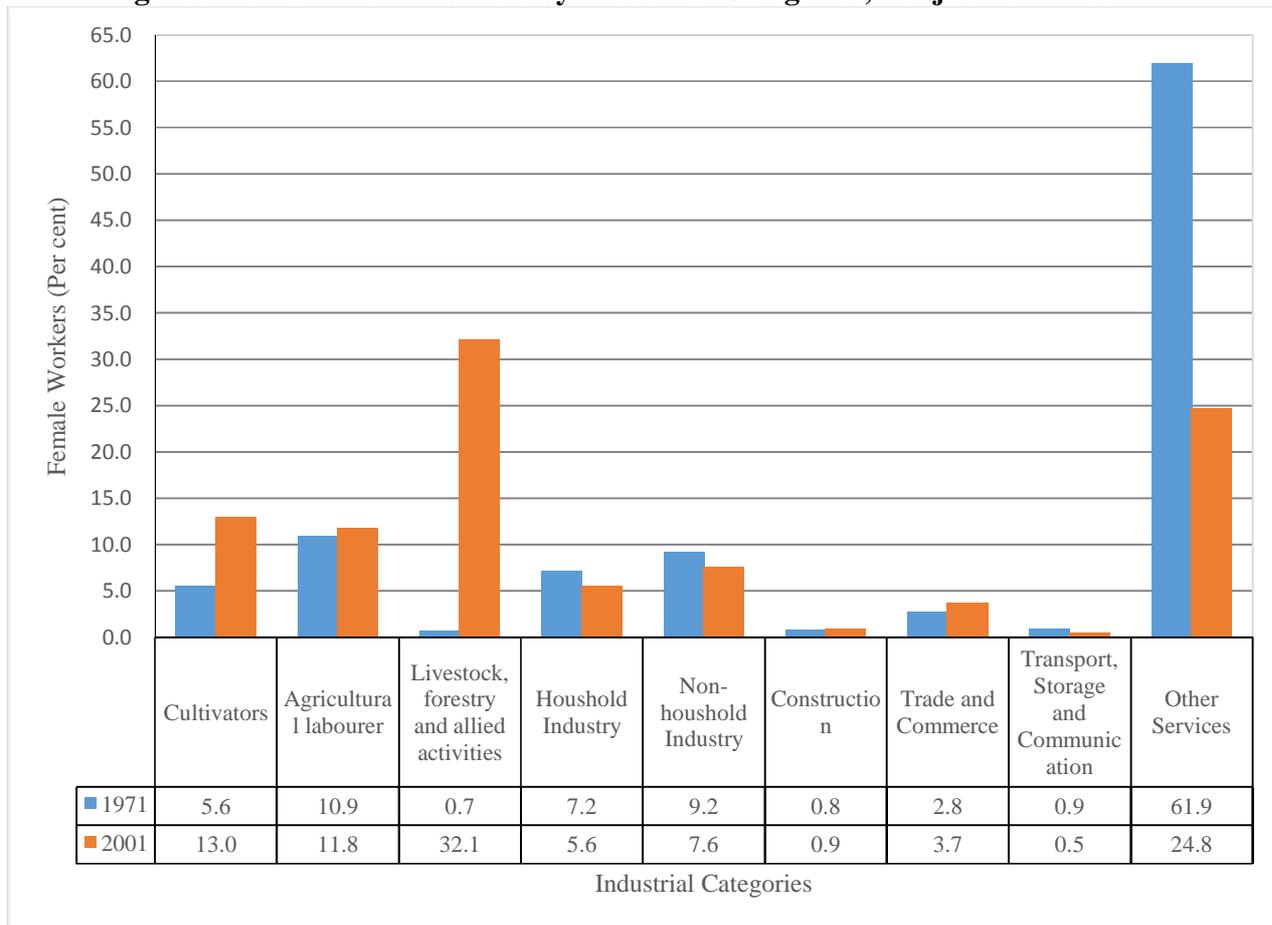
Source: Primary Census Abstract, India (1981, 1991, 2001 b, 2011)

Figure 2: Livestock in Punjab: 1997-2007



Source: Table 10.1, Statistical Abstract of Punjab, 2013

Figure 3:Female Main Workers by Industrial Categories, Punjab: 1971-2001



Source: Economic Tables of India, 1971; Economic Tables of Punjab 2001 a