

**Female Participation in Economic
Activity and the Structure of Female
Workforce in North-Western India:
A Geographical Interpretation**

Dissertation submitted to the Jawaharlal Nehru University,
in partial fulfilment of the requirements for
the award of the Degree of
MASTER OF PHILOSOPHY

RUPINDER KAUR

**CENTRE FOR THE STUDY OF REGIONAL DEVELOPMENT
SCHOOL OF SOCIAL SCIENCES
JAWAHARLAL NEHRU UNIVERSITY
NEW DELHI-110067
1986**

JAWAHARLAL NEHRU UNIVERSITY

CENTRE FOR THE STUDY OF REGIONAL DEVELOPMENT
SCHOOL OF SOCIAL SCIENCES

Telegram : JAYENU

Telephones : 652282

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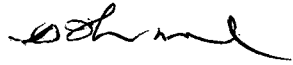
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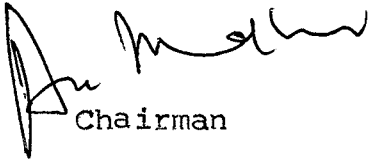
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Certified that the dissertation entitled "Female Participation in Economic Activity and the Structure of Female Workforce in North-Western India: A Geographical Interpretation", submitted by Rupinder Kaur, in fulfilment of six credits out of the total requirements of twentyfour credits for the degree of Master of Philosophy (M.Phil) of the University is, to the best of my knowledge, a bonafide work and may be placed before the examiners for evaluation.

Dated 21.7.86

Dated 21-7-86


(ALJAZUDDIN AHMAD)
Supervisor


Chairman

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(RUPINDER KAUR)

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INTRODUCTION

I.1 Statement of the Problem

Inequality between sexes is inbuilt in the minds of men and women. From childhood itself the boys and girls are trained in such a way that these inequalities become deep-rooted and even women usually accept this as given and natural. Comparatively lower status of women vis-a-vis men in almost all developing countries constitutes an important social problem. This inequality between sexes, infact, is a result of variety of socio-economic and cultural factors. \Social and cultural values vary in different groups of people and regions and in turn these values influence the rights and roles of women in different ways. These rights and roles of women are closely affected by the stage of development of the society. In India, an important component of upper caste values has been the seclusion of women and their withdrawal from work outside the home. Even in the case of lower castes, or classes, any improvement in their economic condition has generally led to their adoption of these values, which became the main reason for deteriorating the women's involvement in work.

Status of any section of population in a society is intimately connected with its economic position and ulti-

mately associated with the rights and obligations assigned to them. Marx and Engels pointed out that "the emancipation of women and their equality with men are impossible and must remain so as long as women are excluded from socially productive work and restricted to work which is private".¹ Boserup has observed that in regions where women do most of the agricultural work, it is the bridegroom who must pay bridewealth. On the other hand, where women are less actively engaged in agriculture, marriage payments come usually from the girl's family.²

In the traditional village community in India, the women played an important role in the process of earning a livelihood for the family. In a family-based agriculture and household industry they were almost equal partner in the productive work. But the advent of Industrial Revolution in England and competition with the British manufactured goods led to the decline of Indian household industries and increased pressure on agriculture. Women had to face the competition from the male side due to relative increase in labour supply. Even after Independence, as a result of development of modern industry, share of household indus-

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1. K. Marx and F. Engels, Selected Works, Vol. I, Progress Publishers, Moscow, 1977, p. 501.
 2. E. Boserup, Women's Role in Economic Development George Allen and Unwin, London, 1971, p. 48.

tries declined. All this resulted in a continuous decline of women's share in work force.

✓However, since Independence, there are noticeable changes in the character of female participation in social labour. With the development of education, new job opportunities became available to the Indian women. Their share has risen manifold among the school teachers and medical personnel. Now-a-days, presence of women can be felt in almost all types of jobs in the tertiary sector. However, these changes have touched only a very small minority among the female population. On an aggregate level there has been decline in female participation in work force, though the structure of female workforce is changing. But the impact of these changes has been different in different regions of India depending upon various factors such as the level and pattern of economic development, socio-cultural values and education level etc. Keeping into view all these changes it becomes necessary to study the level of participation of women in economic activities and the structure of female work force in different areas at diverse level of economic development.

I.2 Objectives of the Study

This dissertation is a preliminary exercise to look into the levels of female participation in economic activity in the states of north western India. The main objectives

are as follows :

- (i) to study the spatial variation in female work participation rate at all-India level and at the level of districts and tehsils in the north western states;
- (ii) to study the nature of female participation in different categories of work as identified by the census of India, at the state level in India and the district level of the states in north western India; and
- (iii) to make an attempt to explain the variations in female participation in economic activity, with the help of a set of socio-economic variables.

I.3 Hypotheses

The following hypotheses have been proposed to be tested:

- (1) Agricultural development will have a negative impact on female work participation.
- (2) Presence of small land holdings are expected to be positively related with female work participation.
- (3) The higher the live stock population in an area, and higher the percentage of area under Forest, higher will be the female participation rate.

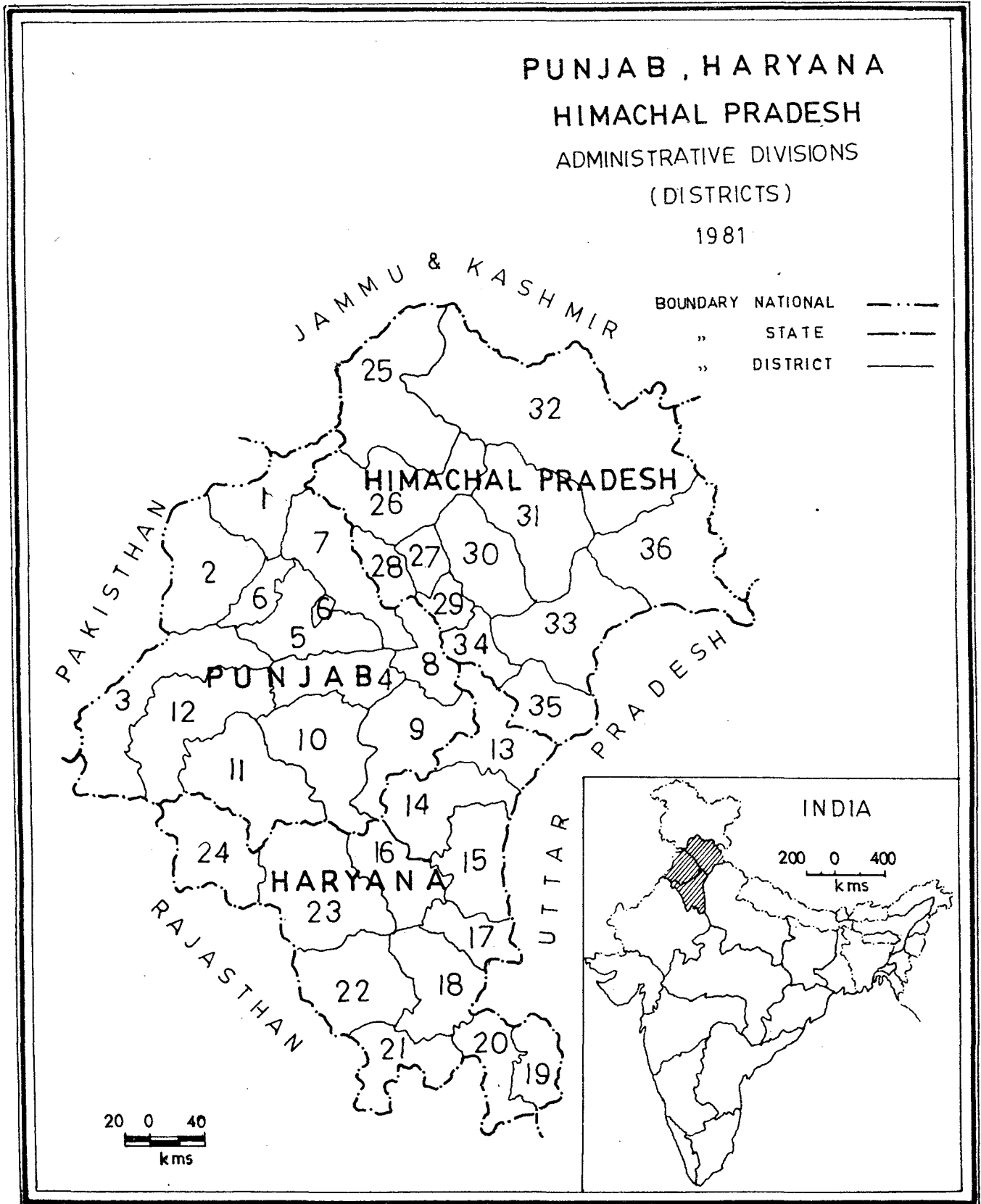
- (4) Female participation rate is expected to be high, where a high percentage of population is living in rural areas and is engaged in agricultural work.
- (5) Female participation rate directly varies with percentage of scheduled caste and scheduled tribe population.
- (6) In the initial stage spread of education adversely affects female participation rate.
- (7) Higher sex ratio of population is likely to enhance the female work participation.
- (8) It is likely that urbanisation will lead to the decrease in female work participation rate.

I.4 Choice of the Study Area

Three states in the north-western part of India viz., Punjab, Haryana and Himachal Pradesh have been selected to study the levels of female participation in economic work and their industrial categories. Although these are basically agricultural states, they are characterised by different levels of economic development. Moreover, Himachal Pradesh, a hilly state compared with monotonous plain areas of Punjab and Haryana, also has strikingly different social customs and values. It is presumed that these differences are likely to influence the attitude towards women's employment and their work patterns. Punjab, the agricultu-

PUNJAB, HARYANA
HIMACHAL PRADESH
ADMINISTRATIVE DIVISIONS
(DISTRICTS)

1981



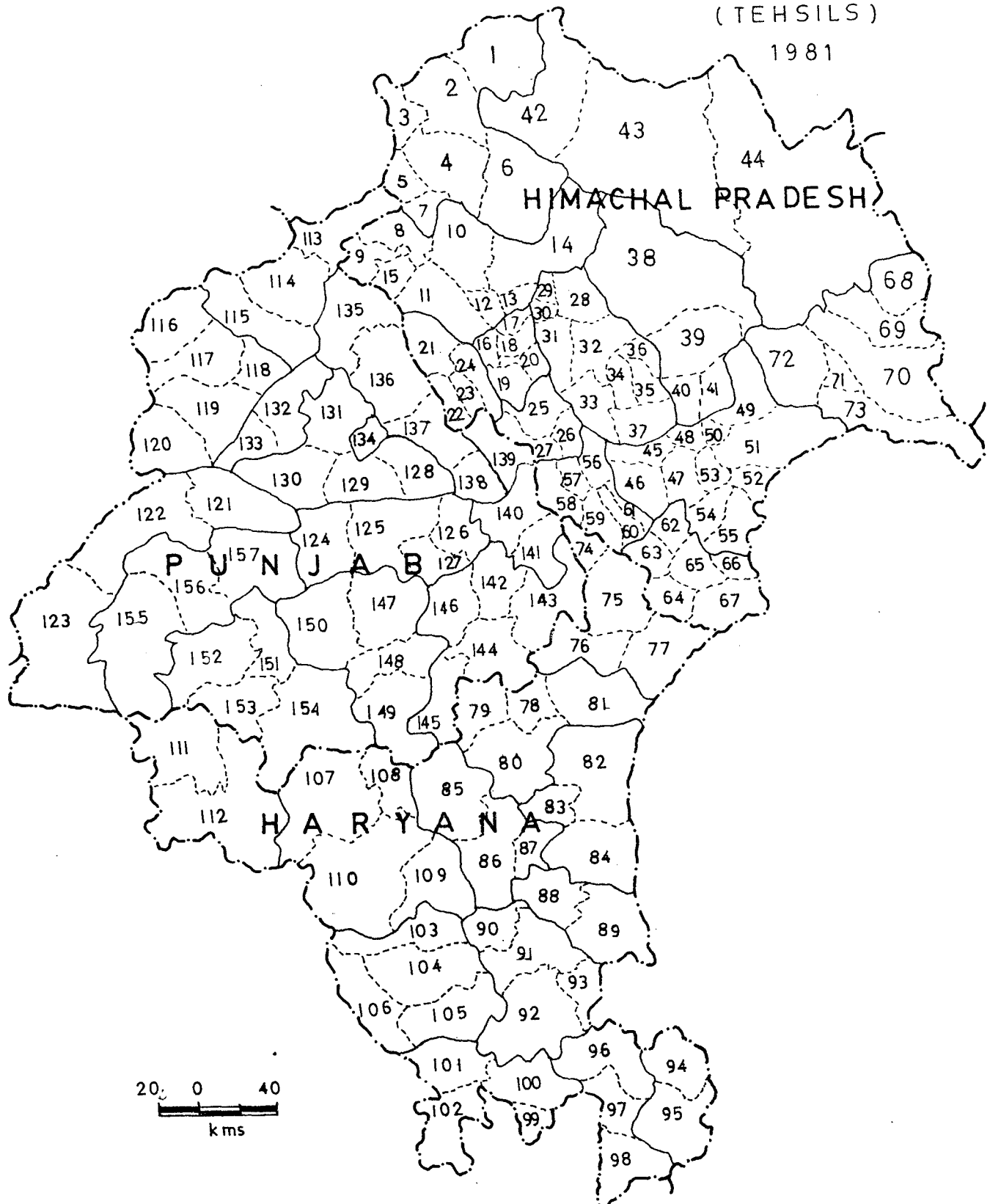
for district names see Appendix A. IV 3 P198

PUNJAB, HARYANA
HIMACHAL PRADESH

ADMINISTRATIVE DIVISIONS

(TEHSILS)

1981



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kms

for tehsils name see Appendix AIV.2

rally most prosperous state in India, has the lowest female participation in economic activity, which was only 2.27 per cent in 1981. The female work participation rate is 4.69 per cent in case of Haryana, which is still in the process of agricultural development. On the other hand, hilly state of Himachal Pradesh presents a totally different situation having very high female participation as compared with these states (i.e. 18.71 per cent).

I.5 Introduction to the Study Area

I.5.a. Punjab :

Punjab constitutes a significant part of the great plains of India. With the exception of scattered and low ranges of the shivaliks situated along its northern and north-eastern boundary in Gurdaspur, Hoshiarpur, and Roopnagar, in fact, there is no large diversification in this tract. Constituted of the alluvium deposited by Ravi, Satluj and Beas, the region is among the most fertile areas of India.

The state roughly covers about 1.6 per cent of the total land of the country, having about 2.5 per cent of the entire country's population. Agriculture dominates the economic scene in Punjab. The agricultural prosperity attained in Punjab rests primarily on the development of assured and perennial sources of irrigation, otherwise,

having a semi-arid climate. It is having around 87 per cent of gross cropped area under irrigation as compared to around 30.78 per cent of national average in 1979-80. With 84 per cent of the total geographical area under cultivation, as against only 42 per cent of the entire country is under plough in 1981-82. Punjab leads in the field of agriculture as far as land, people and production ratio is concerned. The cropping intensity in Punjab is also high i.e. 158 per cent in 1979-80. Similarly the consumption of fertilizer in this state is as high as 104 kg. per hectare. With about 15 tractors per 1000 cultivated hectares (1978) the state is leading all other states in this respect. Farming is the leading occupation in Punjab, with around 59 per cent of the total workers engaged in agriculture.

With the provision of institutional and infrastructural facilities, the Punjab economy experienced a very high growth rate, which is 5.18 per cent during the period of 1960-61 to 1977-78, higher than the national growth rate, which is only 3.4 per cent per annum. Per capita income of Punjab is also very high (Rs. 1966 in 1977-78) compared to (Rs. 1189 only) national average.

Because agriculture is the main source of income, majority of the population (i.e. 72.32 per cent) lives in rural areas. Density of population in the state is 333 persons per square kilometre, which is higher than the

national average i.e. 292 person per square kilometre. Very low sex ratio is found in Punjab, which is only 879 females per 1000 males. It is less than the all India average i.e. 934 females per 1000 males. Literacy rate among females is 33.69 per cent as compared with 47.16 per cent in case of males. Moreover, female literacy comes down in rural areas to 27.63 per cent, whereas in urban areas it is 49.72 per cent. Scheduled caste population constitutes 26.87 per cent of the total population.

Percentage of working male population is 53.14 per cent i.e. higher than the other states of Haryana, Himachal Pradesh and even than that of India's working population. On the other hand only 2.27 per cent of the female population is working, which is lowest in India. Because of this sex ratio* of workers is also very low i.e. 38 as compared with India's figure of 253.

I.5.2 Haryana :

This state is also a part of the Indo-gangetic plain of the subcontinent. With the exception of outer Shiwalik ranges in Ambala district (north-east) and Aravali ranges in Mahendragarh and Gurgaon districts (south) the entire Haryana is a broad level plain. Haryana, as is evidenced from the archaeological findings and historical records,

*female workers per 1000 male workers.

was a land of many rivers and because of the existence of these water bodies, Haryana was known as green land. At present only 3.76 per cent area of the state is under forest and only perennial river flowing not exactly through Haryana, but along its eastern border is Yamuna.

Haryana is an agriculture-dominated state with around 82 per cent area under cultivation. But a successful agriculture in a state like Haryana with its peculiar problems without artificial application of water is not possible. Rainfall in this desert like area is irregular and uncertain, both in time and space. Only 52.55 per cent of the net sown area is irrigated in Haryana which is quite low as compared with 80 per cent in the case of Punjab.

Haryana with 1.44 per cent geographical area of India contributes 5 per cent of the agricultural production of our country at present. About 60 per cent of Haryana's income is derived from its agriculture. According to 1981 census, 61 per cent of the total population of the state is engaged directly in agriculture. But around 50 per cent of land holdings are even less than 2 hectares.

Due to large proportion of population engaged in agriculture, around 78 per cent of the total population is living in rural areas. About 19 per cent of the total population are scheduled castes. Density of population in

Haryana is 292 person per square kilometre. Haryana is having very low sex ratio, i.e. only 870 females per 1000 male) population, even less than that of Punjab. Male literacy rate of Haryana (48.20 per cent) is above the national average, whereas female literacy is only 22.27 per cent. In rural areas, further gap between male, female literacy increases (i.e. 43.44 per cent and 15.37 per cent respectively). Gap is less in urban areas. Nearly 50 per cent of the male population in Haryana is working against very low percentage of female (i.e. 4.69) workers. Sex ratio of working population is also very low, i.e. 83 women are enumerated as workers for per 1000 male workers. About half of the female population is counted as cultivators, whereas 22 per cent females of the total female workforce are agricultural labourers.

I.5.3 Himachal Pradesh :

Himachal Pradesh is a hilly and mountainous tract with altitude ranging from about 450 metres to 6500 metres above the sea level. In this part of Himalaya the elevation increases generally from south to north and from west to east.

Agriculture is the main occupation of the people in Himachal Pradesh including horticulture and animal husbandry. Nearly 72.36 per cent of the inhabitants of Himachal Pradesh

are directly engaged in agriculture for their sustenance. This sector of economy contributes around 48 per cent to the state domestic product. Because of highly rugged topography only around 10 per cent area of the state is brought under cultivation, whereas Punjab and Haryana are having 83.53 per cent and 82.54 per cent respectively of the total land under cultivation. In Himachal Pradesh around 16 per cent of the cultivated land receives irrigation, which is quite low compared with other two states. So cultivation depends upon the vagaries of rain fall. Consequently in areas with low rainfall and having no irrigation facilities, the possibilities of agricultural development are quite limited. The varied climatic conditions, different soils and topographic features result in different agro-economic practices and cropping pattern with wide range of food as well as fruit crops.

Himachal is a state of small land holders and according to recent Agricultural Census of 1976-77 about 77 per cent holdings were less than 2 hectares in size.³ The average size of the holding in the state is 1.6 hectare. Because fields are very small in size and scattered, so both farming and livestock management are based on primitive technology.

3. In fact, about 55 per cent of the operational holdings are even less than one hectare in size.

Forests are the important natural sources of the state and they provide timber, fuel, fodder and number of other products. Around 28 per cent of the total area is under forest which also contributes one third of the total revenue of the state and provide employment to a sizeable population. Due to the backwardness of the state in the field of industry as well as limited commercial activities, urban sector of the economy is not developed. That is why only 7.6 per cent of the total population lives in urban areas and 92.39 per cent of population is rural based. Density of population is quite low in Himachal Pradesh (77 persons per square km). The state is having 24.62 per cent scheduled castes and 4.61 per cent scheduled tribes in the total population.

Himachal Pradesh is having a relatively high sex ratio of population (i.e. 973 females per thousand males), which is higher than that of Punjab and Haryana and even the national average. Around 31 per cent of the female population and 53 per cent of the male population is literate, but there is a large gap between rural and urban female literacy i.e. 29.36 per cent and 60.04 per cent respectively. Working women constitute around 19 per cent of the female population. Sex ratio of workers in the state is quite high 367 (female worker per 1000 male workers), which is very high compared with Punjab and

Haryana and even than the national average. Around 90 per cent of the females are cultivators and very negligible proportion (1.71 per cent) are agricultural labourers.

I.6 Data Base and Methodology

The main data source of female work participation in India is the decennial census of India. But the major limitation of this census data is frequent definitional changes. During the census of 1891-1921, the main economic questions were related to livelihood or occupation of means of subsistence of each worker. In actual practice, however, even persons who were not working but were receiving income from land property etc. were considered as economically active. It is only in 1931 census that the concept of income was introduced and the population was divided into 'earners', 'working dependents' and 'non-working dependents'. More or less this categorisation continued upto 1951. In 1961 census the persons classified as 'workers' were either seasonally employed who had done "some regular work of more than one hour a day throughout the greater part of the working season....", or were employed during any of the fifteen days preceeding the day of enumeration. Since the criterion of being seasonally employed was broad enough to include many of the marginal workers, the 1961 census included many women as workers. But in the 1971 census the defi-

nition of worker was particularly biased against the inclusion of women. Only those who reported themselves as participating in economically productive work as their main activity, in terms of time spent, were considered as workers. Change in the definition of 'worker' has affected male participation only marginally. Their participation rate has decreased from 57.11 per cent in 1961 to 52.53 per cent in 1971.⁴ But the change has affected female participation substantially. The percentage of female workers to total female population declined from 27.96 per cent in 1961 to 13.18 per cent in 1971.⁵ In 1981 census 'worker' has again been defined as participating in any economically productive activity. The workers have been divided into 'main workers' who have worked for more than 183 days in a year and 'marginal workers' who have worked less than 183 days in a year.

Thus due to frequent changes in definition, data on female work participation is not comparable overtime. It becomes difficult to analyse the trend of female work participation rate and to relate it to various socio-economic and cultural changes taking place in the various parts of the country.

4. Leela Gulati, "Occupational Distribution of Working Women: An Inter State Comparison", Economic and Political Weekly, Vol. X, No. 43, October 25, 1975, p. 1693.

5. ibid.

the country. This limits our main interest to the spatial variation of female work participation rate in a selected region on the basis of 1981 census. Since the study is an analysis of cross-section data, changes in definition of a worker will not affect it.

So the study is mainly based on published secondary information available from 1981 census. The tables from where the data has been derived include 'General Population Tables', and 'Primary Census Abstract' of Punjab, Haryana and Himachal Pradesh. The economic variables to explain the female participation rate have been taken from 'Statistical Abstract' of Punjab and Haryana, whereas data regarding Himachal Pradesh is taken from R. Swarup and B.K. Sikka's study on Agricultural Development in Himachal Pradesh and 'Statistical outline of Himachal Pradesh 1981'.

The spatial variation in female work participation rates will be shown with the help of maps*. To show the extent of variation of district level in different components of female workforce, quartile method⁶ will be used for mapping. To analyse the data we will use frequency tables and frequency

* Because of very small area covered by the union territories of Chandigarh (CHD), Delhi (DLI), Dadra and Nagar Haveli (DNH), Goa, Daman and Diu (GDD), Pondicherry (POD), Lakshadweep (LKS), and Andaman and Nicobar Islands (ANI), and to avoid inconvenience of space we have shown boxes representing these union territories on the side of each of the India maps.

6. In this method we arrange the data in decending order and then it is divided into four equal parts, which also shows the upper as well as the lower limit of data. In this way internal variation in data becomes more clear.

diagrams). Further to establish the relationship of female participation and different socio-economic variables, the methods of coefficient of correlation and step-wise regression will be used.

The following socio-economic variables have been chosen to see their relationship with rural female work participation rate :

- (1) Number of tractors per 1000 hectares of cultivated land (X_1).
- (2) Number of tubewells per 1000 hectares of cultivated land (X_2).
- (3) Fertilizer (kilograms per hectare) (X_3).
- (4) Cropping intensity (X_4).
- (5) Percentage of net area irrigated to net area sown (X_5).
- (6) Live-stock per 1000 population (X_6).
- (7) Proportion of area under forest (X_7).
- (8) Percentage of small holdings (less than 2 hectare) (X_8).
- (9) Concentration of land holdings (gini-coefficient) (X_9).
- (10) Percentage of agricultural workers to total rural workers (X_{10}).
- (11) Percentage of rural population to total population (X_{11}).
- (12) Density of population per square kilometre (X_{12}).

- (13) Percentage of scheduled caste and scheduled tribe population to total population (X_{13}).
- ~~(14)~~ Female literacy rate (X_{14}).
- ~~(15)~~ Sex ratio, (X_{15}).

For the urban female participation rate the following variables have been identified :

- (1) Percentage of urban population to total population (Y_1).
- (2) Growth of urban population (Y_2).
- (3) Percentage of 'other workers' to total workers (Y_3).
- (4) Density of population per sq. km. (Y_4).
- (5) Percentage of scheduled caste and scheduled tribe population to total population (Y_5).
- (6) Female literacy rate (Y_6).
- (7) Sex ratio (Y_7).

The study has been divided into seven chapters. The second chapter, which follows presents a review of literature on the subject of female work participation. In the third chapter we have discussed the patterns of female participation in some of the countries in the world to have an idea about the India's position in this respect on the world map. We have also discussed the female participation rate⁷ in rural and urban areas and their share in the

7. In the present study we have calculated the crude participation rate (i.e. percentage of female workers to total female population) of female work force.

work force in states and union territories of India. Chapter-IV deals with the micro level analysis of female participation and its share in work force for rural as well as urban areas separately in reference to the study area mentioned above. In this chapter we have discussed all the components of female work force firstly at district level and then at the tehsil level. In the fifth chapter we have tried to explain the female participation at the district level for selected states with the help of some socio-economic and demographic variables. Chapter VI gives us a broad picture of the distribution of female workers in four industrial categories viz., 'cultivators', 'agricultural labourers', 'household industry' and 'other workers' at the state level and district level for rural and urban areas. 'Cultivator' as defined by census, a person engaged as employer or family worker in cultivation of land owned or held from government or private person for payment in money, kind or cash, whereas 'agricultural labourer' is a person who works in another person's land for wages. 'Household industry' is defined as an industry conducted by the head of the household or any other member at home. All other workers, except who are engaged in the above mentioned categories, are enumerated under the 'other workers' category. The last chapter gives the summary and conclusions with main findings of the study.

AN OVERVIEW OF LITERATURE

Work has different significance for different societies. In a developed capitalist economy work is considered as a symbol of personal identity. Women in these countries, work to enhance their social status. On the contrary in third world underdeveloped countries leisure is a sign of social status. In such societies, economic necessity is a powerful motive that accounts for the participation of women in the work force. In these cases, women work because they have to work. With regard to underdeveloped societies, Banerjee¹ has pointed out that "women work to make up the differences between subsistence requirement and the total earning of the family".

II.1 Female Work Participation: Concepts and Definitions

It is very difficult to draw a line between those women whose economic contribution has been substantial and those whose contribution, apart from their domestic duties, has been minor or negligible. The enumeration of a female

1. N. Banerjee, "Woman Workers and Development", Social Scientist, Vol. 6, No. 8, March 1978, p. 8.

as a non-worker generally does not mean that she is not contributing anything to the economy nor does the enumeration of a female as a worker reveals the extent and the intensity of employment. In Pranab Bardhan's² opinion, the extent of female participation on account of the restrictive nature of the standard definition of 'gainful' work is an underestimate. In particular it excludes, apart from household chores, various collection activities from village common property. He observes that, "if a woman harvests grains on the family farm and brings them home for consumption, she is a part of the labour force, but if she catches fish in a nearby pond and brings it home for consumption or picks up firewood from the village bushes and brings it home for fuel, she is not".³ Nirmala Banerjee⁴ has also recognised that measurement of women's employment presents some additional problems. Even if the majority of women can be described as engaged in household tasks, the category 'housework' is very much an extended one for poor women. If a woman using her own labour produces from freely available materials certain kinds of goods and services which the family otherwise, would have had to purchase, at a price in the market,

2. P.K. Bardhan, Land Labour and Rural Poverty, Oxford University Press, Delhi, 1984, p. 23.

3. ibid.

4. N. Banerjee, Women Workers in the Unorganised Sector, Sangam Books, Hyderabad, 1985, p. 9.



then she has in principle earned that amount of real income for the family.

Similarly Kalpana Bardhan⁵ viewed that women's work participation, which ^{is} massive by time criterion but mostly at low productivity and technologically deprived work, is underestimated in the collection of statistics and unpaid or underpaid in the market. She remarked that "within the family, their productive labour is devalued and delinked from the control of or claim to the family resources it helps to accumulate. They do vast amounts of work necessary for farming mostly in the pre and post harvest operations that are done in the home yard rather than the field"⁶.

Actually women are over employed rather than unemployed. As Krishna Ahooja Patel pointed out, "women work larger hours, in market and non-market activities, in industrialised countries and the urban sector of developing countries and more obviously in the rural areas of Asia, Africa and Latin America"⁷. Rural women do wide range of activities which sustain the household. In addition to cooking of food, household cleaning and child care,

5. K. Bardhan, "Women's Work, Welfare and Status: Forces of Tradition and Change in India", Economic and Political Weekly, Vol XX, No. 50, Dec. 14, 1985, p.1208.

6. ibid.

7. Krishna Ahooja-Patel, "Women Technology and Development Process", Economic and Political Weekly, Vol. XIV, Sept. 8, 1979, p. 1549.

they may have to spend several hours in fetching and carrying heavy loads of water and fuel. In peasant families generally the care of animals is also their responsibility. Moreover, they often help in crop production also. Thus daily working hours of rural females are generally higher than those of their counterparts. Similar are the views expressed by M.N. Srinivas.⁸

Thus, distinction of employed and un-employed and measurement of level of employment poses a serious problem in the case of women. Amartya Sen⁹ has recognised three aspects of employment. Firstly, he distinguishes the 'income aspect' i.e. employment gives income to the employed. Secondly, the 'production aspect' i.e. employment yields an output. Lastly, the 'recognition aspect' which means the employment gives a person the recognition of being engaged in something worth his while. Problem of concept of employment is relatively simple in developed countries where wage employment is wide spread. But in the economies where the wage system is weak and where 'self-employment' and 'unpaid family labour' are common, the concept becomes vague. The criterion of being paid a

8. M.N. Srinivas, The Changing Position of Indian Women, Oxford University Press, Delhi, 3rd impression 1986, p. 11.

9. Amartya Sen, Employment, Technology and Development, Oxford University Press, Delhi, 1975, p. 5.

wage does not apply, and that of productivity is difficult to use since it is not easy to separate out the productive contribution of any particular member of the family in the total family enterprise. In such cases identification of a person as worker or non-worker becomes difficult. Problem is more severe in the case of women. In agrarian economies, mostly the work women do, in household industry and processing of agricultural products, is unpaid and therefore unrecognised. This non-recognition of women's work further limits their access to education and training and they get concentrated in unskilled and low-productive household jobs. It has been estimated that in 1972-73 about 45 per cent of the total number of working women were unpaid helpers in family farms.¹⁰ Furthermore, a large majority of women workers in India (77.5 million out of 88.9 million) are in rural areas mostly in unorganised sector. Only 2.5 million women or 2.9 per cent of the female work force are in organised sector.¹¹

The issue of the extent of female participation in work force also becomes complicated because definition of a worker varies from country to country and even for a

10. Revised Draft - Sixth Five Year Plan, 1978-83, Planning Commission, Government of India, p. 142.

11. Pushpa Sunder, "Characteristics of Female Employment, Implication of Research and Policy", Economic and Political Weekly, Vol. XVI, May 9, 1981, p. 863.

single country it varies from census to census. Thus it turns out to be very difficult to interpret the census figures of working women and to find suitable explanations for variations of overtime. Bina Aggarwal¹² has pointed out that on the one hand there are countries such as Turkey and Thailand, where all women in agricultural households are included in the labour force and on the other hand, there are countries where all farmer's wives are counted as housewives, not included in labour force.

There is another reason responsible for undercounting of female workers. In under-developed countries, female work participation in non-domestic work is substantially influenced by social and cultural factors. In most of these countries generally women's place is considered the home. Because the information regarding the work participation of the family members is obtained from the head of the household or other male members, answers to the questions relating to women's work status and her availability for work, tends to reflect a male perspective rather than their actual work status thus leading to the underestimation of female work participation.

12. Bina Aggarwal, "Work Participation of Rural Women in Third World", Economic and Political Weekly, Vol. XX, No. 51 & 52, December 1985, p. A-157.

A similar problem is faced by the researchers in India because definition of worker changed drastically from one census to another. These changes influenced the women more than that of men. Danial and Alice Thorner¹³ have rightly remarked that due to changes in definition of a worker in every census of India since 1881, the occupational figures for females are more difficult to interpret than those of males. This is because of the fact that to a large extent, in the Indian family economy, the role of women has been and still is auxiliary to that of the men of the household. Accordingly the problem of identification of a worker is more difficult in this category of 'family helpers' and it is these workers which are more affected by the changes in definition.

II.2 Social and Cultural Factors

In Indian society caste system had played a significant role in determining one's rights and obligations. Physical and menial jobs were assigned to the lower caste or class whereas, jobs of high prestige and means of production were controlled by the higher caste and class. Andre Beteille¹⁴ has substantiated this point that "the

13. Danial and Alice Thorner, Land and Labour in India, Asia Publishing House, Bombay, 1962, (Reprinted 1974), pp. 75-76.

14. Andre Beteille, Studies in Agrarian Social Structure, Oxford University Press, Delhi, 1974, p. 28.

manner in which work is allocated among the different members of the community or its division of labour is a matter of social organisation rather than of technology.² S.C. Dube¹⁵ has also pointed that division of labour in the Indian community is governed by a variety of factors such as caste, sex, age and social status. Under the caste system several occupations have been preserved as caste monopolies. Similarly, "masculine and feminine pursuits are clearly distinguished: a woman doing man's work is laughed at; a man undertaking any specially feminine tasks provides a favourite theme for popular gossip".

Women's position and roles assigned to her in society is greatly influenced by the value system and cultural norms of a particular caste or class to which she belongs. Darling¹⁶ writing in 1920's about the united Punjab presented a brilliant picture of the behaviour of Rajputs and Jats towards female participation in work force. He wrote that "...the Rajput's regard for his izzat forbids him to take any help from his wife. She can do nothing outside the house and very little within. She cannot even draw water from the well and being a

15. S.C. Dube, Indian Village, Allied Publishers, Bombay, Indian Edition, 1967, pp. 168-169.

16. M.L. Darling, The Punjab Peasantry in Prosperity and Debt, Oxford University Press, London, 1947, p. 33.

'lady', must have servants to help her in all domestic tasks.¹⁷ The wife of the Jat does almost as much as her husband and sometimes more, but the wife of the Rajput is an economic burden. Whereas "Jatni" is an economic treasure".¹⁷

S.C. Dube,¹⁸ on the basis of a study of a village from Telangana region of the Andhra Pradesh, discovered that social status is an important determinant in the division of work in the community. He divided the village community into four social groups. At the top level he found that rich and influential men from high castes never do "anything which is regarded as humble or otherwise classed as menial work". Women at this level "do not have to do any work outside their homes and are not expected to earn for the up keep of the family". Below this group comes the other well to do families belonging to the agricultural and occupational castes. Among them also labourers are hired for heavy manual labour, but men folk do not object to ploughing their own fields, nor avoid out-of-door work. The women in their case, "mainly look after the management of their household affairs and are never expected to earn for the family's support". In the third group, women assist the menfolk in their agricultural

17. ibid, p. 35.

18. S.C. Dube, (1967), op. cit., pp. 174-75.

activities mostly in their family fields but during busy agricultural season they can work for wages as well. In the poor families, on the other hand, women have to work very hard. Besides doing their quota of work in the running of the home and assisting the husband in agriculture and caste occupation, they have to accept occasional work for wages. Among some of the lower castes, women are expected to work and earn for the upkeep of the family.

Female work pattern is stratified by social hierarchy as well as by asset inequalities. Kalpana Bardhan¹⁹ has pointed out that tribal and the untouchable women constitute the largest and most visible section of India's working women and on the average they belong to even poorer families than male wage labourers. She observed that these women seem to be less subject to patriarchal restrictions. It is concluded by various researchers that female work participation in rural India is positively correlated with presence of scheduled caste and scheduled tribe population. Pranab Bardhan²⁰ while explaining the total number of days

19. Kalpana Bardhan, op. cit., p. 2207.

20. P.K. Bardhan, "Some Employment and Unemployment characteristics of Rural Women: An analysis of N.S.S. Data for West Bengal", Economic and Political Weekly, Vol. XIII, No. 12, March 1978, pp. 421-26.

in all kinds of gainful work in the reference week per adult mentioned that low caste and tribal women participate more. D.N. Reddy²¹ also found high correlation between rural female participation rate and proportion of female agricultural workers.

Social and cultural factors are well reflected in women's social status and their participation in production system. Boserup²² recognised that the social variables of caste status and of ethnic group in India are highly correlated, and women with the different work characteristics can often be identified as belonging to different ethnic groups. She pointed out that infact India is a meeting place for peoples with different cultural traditions and this is reflected in the work pattern of its women as well as of its men.

It is generally considered that high female participation rate and high sex ratio is the result of women's comparatively respectable status in the southern India. On the other hand, Boserup²³ found that in some of the farming communities in northern India, where women do

21. D.N. Reddy, "Female work Participation : A Study of Inter-State Differences, A Comment", Economic and Political Weekly, Vol. X, No. 23, 1975, p. 902.

22. E. Boserup, Women's Role in Economic Development, George Allen and Unwin, London, 1971, p. 70.

23. ibid., pp. 48-49.

little work in agriculture and the parents know that a daughter will in due course cost them the payment of dowry, it was customary in earlier times to limit the number of surviving daughters by infanticide. There is also a tendency to care more for sick boys than for sick girls and it is believed that milk is not good for girls, but good for boys. The low sex ratio is possibly the result of this low status of women in north India.

Status is a relative concept. A woman of labour class enjoys a certain degree of autonomy in the house but a low status in the wider setting. A housewife in a well to do home may be enjoying an overall high status, but may be distinctly inferior partner in the house. Kalpana Bardhan²⁴ having similar views explained that, having little land or other property to be controlled and inherited patrilineally, labour families seem to be much less subject to patriarchal restrictions at the family level. But even for those having little land or other independent means of production, jobs are sex typed and caste typed differentiated by wages and status. Prestige attached to a particular job is also determined by the job of husband.

24. K. Bardhan, op. cit., p. 2210.

D.R. Gadgil²⁵ remarked that the usual close correspondence between economic position and traditional social ranking in Indian rural society has been one of the most persistent aspects of Indian socio-economic structure. Ability to keep away manual work has been an important distinguishing sign of socio-economic status. Therefore, non-participation of women in any work and particularly manual work outdoors is everywhere considered as value.

Religion and caste system also had a considerable impact on socially accepted rights and roles of women.
In Hinduism marriage and motherhood are the most honourable and religiously valuable achievements and to bear a son is proper role. Gore²⁶ points out that in the traditional Hindu family, it is uncommon for a woman to accept employment outside home. The problem of status, concept of appropriateness of certain roles for women because of innate qualities and disabilities attributed to them, fear of neglect of home and children, and fear of being unconventional are the customary objections raised against the idea of outside employment. As pointed out by Tara Ali Baig,²⁷ in fact in the Hindu caste system work as

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25. D.R. Gadgil, Women in the Working Force in India, New Delhi, 1965, p. 7.
26. M.S. Gore, Urbanisation and Family Change, Bombay, 1968, p. 159.
27. Tara Ali Baig, India's Women Power, New Delhi, 1976, pp. 175-76.

such, generally continues to subconsciously have lower status.

Some old traditions and prejudices also effect the women's condition. As it is considered that a widow brings misfortune, this prejudice seriously limits opportunities for widows to remarry or find jobs. In the prevailing situation many of them becomes exiles. According to an official statistics, in Banaras alone there are about 20,000 widow resettlers from West Bengal, Maharashtra and southern India.²⁸

'Status' refers to a position in a social system which is distinguishable from and at the same time related to other positions through its designated rights and obligations. Social structure, cultural norms and value system are important determinants of women's roles and their position in society. But the status or position of a woman in a society is not a static one. Various changes in the society do effect their position. M.N. Srinivas²⁹ points out that those sections of the society (from lower and middle castes) which have prospered, obtained access to education, jobs and power, during British rule or more so since Independence, emulate the life-style of the urban middle classes who are largely recruited from the higher

28. Report of the Committee on the Status of Women in India, (1974), ICSSR, New Delhi, p. 79.

29. M.N. Srinivas, Changing Position of Women, Oxford University Press, 1978, pp. 14-16.

castes.³⁰ This has radical effect on the lives of women. It immures them and imposes restrictions on their extra-mural movements.

In agrarian economies, generally, prosperity and high income leads to the withdrawal of women from work force, especially physical work outdoors. M.L. Darling³¹ observed that in canal colonies of central Punjab (now in Pakistan), rising standards of living^{of} peasant cultivators enabled their women to enjoy and expect more leisured style of life. A similar conclusion is drawn by Tara Ali Baig.³² She found that withdrawal of wives from work is a common symptom of improved economic conditions. Pushpa Sundar³³ is of the opinion that women's participation in work force depends on her husband's or family's income and employment status. Women going out to work is indicative of a lower social status. Boserup³⁴ also found that a rise in male earnings would normally have the effect of making leisure more attractive and would thus discourage married women from entering the labour market. But at

30. He calls this process as 'Sanskritization'.

31. M.L. Darling, op. cit., p. 118.

32. Tara Ali Baig, op. cit., p. 175.

33. Pushpa Sundar, op. cit., pp. 865-866

34. E. Boserup; op. cit., p. 146.

the same time she hypothesised that higher female earnings to men's will create more favourable conditions for their entrance in the labour market.

Process of "Sanskritization" has invariably affected the women's condition. Seclusion of women, earlier which was a value of upper caste and class, now is being adopted by the lower castes who have climbed the economic ladder. Yurlova³⁵ has stated that when well to do members of lower castes went to progress up the caste hierarchy they introduce restrictions for women in their families which they have not adhered to previously. She remarked that the position of ^{man} a largely depended on his wife. To marry a girl from a higher caste and to ensure the material welfare of the family without drawing one's wife into labour activities has always been considered a matter of prestige.

II.3 Economic Development and Female Work Participation

Boserup³⁶ in her classic work has aptly remarked,

"Economic and social development unavoidably entails the disintegration of the division of labour

35. E. Yurlova, "Social Aspects of Female Employment", in India: Problems of Development, Oriental Studies in the USSR No. 4, Moscow, 1981, p. 187.

36. E. Boserup, op. cit., p. 5.

among the two sexes traditionally established in the village. With modernization of agriculture and with migration to the towns, a new sex pattern of productive work must emerge, for better or worse. The obvious danger is, however, that in the course of this transition women will be deprived of their productive functions, and the whole process of growth will thereby be retarded. Whether this danger is more or less grave, depends upon the widely varying customs and other preconditions in different parts of the underdeveloped world".

As the experience of developed countries shows, an outcome of the economic development is increased importance of industry vis-a-vis agriculture. Another consequence is shift of population from rural to urban areas. Industrialisation, and as consequence development of agriculture, leads to the change in production structure and skill requirements of the economy. On the other hand, in regions of low socio-economic development, most men are engaged in unskilled jobs. The women do not find it difficult to join work force in such kind of activities. But the changes from traditional unorganised production structure with labour intensive technology to modern organised production structure with capital intensive technology will have an impact on the employment situation. Women, as compared with men, having fewer avenues open to them for acquiring skill are generally affected more adversely. Thus as a result of economic development, large number of women usually withdraw from work because lack of education

and skill does not permit them to join new occupations requiring higher skill.

Effect of economic development on female participation has been studied by several scholars. Dholakia and Dholakia³⁷ visualised that the expansion of the non-agricultural sector leads to major shifts in the pattern of employment towards more organised and disciplined jobs in modern industries. The requirement of relatively skilled labour in the modern industrial sector and relatively low wages offered by the employers for unskilled labour are likely to reduce the scope of employment for females, and thereby induce the withdrawal of females from such areas of employment. Another study by Krishna Ahooja Patel³⁸ found that as a result of the introduction of rice mills in Jawa, 12 million work hours of women were lost, depriving women of their only source of income. Similarly in Jammu and Kashmir, with the introduction of machines to spin yarn, the livelihood of 20,000 ~~women~~ was seriously affected. Further, because women having no or limited access to technological inputs at all levels, the output of their productive labour has either remained constant

37. B.H. Dholaka and R.H. Dholakia, "Inter-State Variation in Female Labour Force Participation Rates in India", The Indian Journal of Labour Economics, Vol. XX, No. 4, Jan. 1978, pp. 300-01.

38. Krishna Ahooja Patel, op. cit., p. 1551.

or has decreased in contrast to that of men. Boserup³⁹ also observed that in course of agricultural development men's labour productivity tends to increase while women's remains more or less static. This is due to the fact that it is usually the men who learn to operate the new type of equipment. While women continue to work with the old hand tools. The corollary of the relative decline in women's labour productivity is a decline in their relative status within agriculture.

In fact Krishna Ahooja Patel⁴⁰ recognised that the technological process has the dual effect of widening women's employment opportunities and at the same time pushing them into less skilled and less mechanised occupations. On the basis of an I.L.O. report she remarked that whenever a new machine is installed in textile industry (which is a larger employer of women in many countries), the tendency on the whole is to substitute male workers for female workers.

Vina Mazumdar⁴¹ pointed out that the fruits of development are unevenly distributed between men and women.

39. E. Boserup, op. cit., p. 53.

40. Krishna Ahooja Patel, op. cit., p. 1552.

41. Vina Mazumdar, Role of Rural Women in Development, (ed.), Allied Publishers, New Delhi, 1978.

She is of the opinion that programmes for women have been marginal in economic development activities initiated in agriculture, animal husbandry, handicrafts and small scale industries etc. Kamla Nath⁴² remarked that unless counter-vailing influences come into play, economic development with its accompanying urbanisation, spread of education, and growth of industries, will be accompanied by a progressive decline in the participation rate for women. Arjun Singh⁴³ found that increase in labour productivity is negatively related with female participation in work force. He also observed that number of labour saving mechanical innovations have negative impact on female participation.

In backward societies with a large agricultural sector and household industries, women can combine their domestic work with outside employment because of the flexibilities in the work schedule. But once the factory industry emerge as the major sector, it becomes difficult for women to easily reconcile their household duties with factory employment where work schedule is generally much more rigid. Since females work generally in those occupations in which household responsibilities can be adjusted

42. Kamla Nath, "Women in Working Force in India", Economic and Political Weekly, Vol. III, No. 31, Aug. 3, 1968, pp. 1205-13.

43. Arjun Singh, "Female work Participation, Green Revolution and Mechanization - The Punjab case", in the Indian Society of Agricultural Economics (ed.), Problems of Farm Mechanization, Seminar, 1972, pp. 128-40.

with productive work, Gadgil⁴⁴ notes that the availability of such jobs influences the extent of female participation in work force.

In post-Independence period in India with the rapid increase in the modern and organised sector of industry the share of household industry declined. A Report⁴⁵ ~~noted~~ noted that the women were the greatest victims of this process of economic transformation. Many of these household industries, where women used to get employment, like hand weaving, oil pressing, rice pounding, leather and tobacco processing etc. had to face stiff competition from factory production.

In fact, this process of the decline of handicraft industries started much earlier. Till the middle of the 20th century, most of the present under-developed countries were the colonies and a large majority of them were ruled by Britishers. With the setting of Industrial Revolution in Britain, especially from the starting of the 19th century, English industrial manufacturers started invading the markets of these colonies with manufactured goods. This lead to the destruction of household artisan industries

44. D.R. Gadgil, op. cit., p. 26.

45. Towards Equality: Report of the Committee on the Status of Women in India, (Ministry of Education and Social Welfare, New Delhi, 1974).

in these countries. In India, as remarked by R.P. Dutt,⁴⁶ the handloom and the spinning wheel were the pivots of the structure of the old society. But the invasion of English manufacturers broke up the "Indian handloom and destroyed the spinning wheel".⁴⁷ British "steam and science" uprooted the "domestic union of agricultural and manufacturing pursuits"⁴⁸ on which the village system had been built. This destruction of Indian handloom and other artisan industries (to which R.P. Dutt called "deindustrialisation") and relatively slow growth of modern industries affected the employment pattern in India.

Nirmala Banerjee⁴⁹ has pointed out that the decline in women's employment was a part of the general process of loss of industrial employment that affected the entire Indian population during the nineteenth and the early twentieth century. The once flourishing cottage industries in India suffered a severe set-back through the loss of both foreign and domestic markets because of stiff competition from British manufactured goods. The traditional textile industry of India was one of the worst

46. R.P. Dutt, India Today, Manisha, Calcutta (2nd edition), 1970, p. 90.

47. ibid.

48. ibid.

49. Nirmala Banerjee, op. cit., 1985, pp. 13-14.

affected by this process. Women textile workers suffered relatively more because the spinning yarn industry where they worked was almost entirely wiped out by competition from imported and mill made yarn.

As it has been remarked earlier, an important concomitant of economic development is growth of urbanization. N. Banerjee^{50(a)} has noticed that in India between 1911 to 1961 there has been a growing tendency of (a) concentration of population in the large cities; (b) a lower and, for sometime, a falling sex-ratio in towns, especially in large cities; and (c) a marked decline overtime in work opportunities for women in the larger cities resulting in a clear trend showing that the larger the city, the lower the female work participation rate. Keeping into view these facts a Government committee concluded that if economic development meant greater urbanization, it would lead to a fall in work participation rates, particularly in the case of women.^{50(b)}

Differences in the occupational pattern, variation in the educational requirements for entry into jobs, and

50(a). *ibid.*, p.17

50(b). Report of the Committee of Experts on Unemployment Estimates, Government of India, Planning Commission, Delhi, 1970, Quoted in N. Banerjee, *ibid.*

differences in the levels of income, according to D.N. Reddy,⁵¹ are the possible reasons responsible for lower urban female work participation rates in India. The relatively high wages offered to male workers in most of the activities located in urban areas, he says, may reduce the economic pressure on women to work. Wahan and Venkatasappa⁵² observed that as compared with rural areas, in the urban sector, opportunities to participate in the labour force are limited not only because of the extreme competition for limited jobs but also because the nature of jobs available in these areas is such that women are required to travel greater distances for work as well as to be away from home for longer period. Added to these factors the structure of the urban society is such that the mother has to bear the direct responsibility of the household as well as upbringing of the children. Ambannavar⁵³ notes that the process^{of} urbanization, which has resulted in the decline of female work participation rate, is not accompanied by structural changes in employment

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51. D.N. Reddy, "Female Work Participation in India, Problems and Policies", Indian Journal of Industrial Relations, Vol. XV, No. 2, October 1979, p. 200.
52. P. Wahan, T. Venkatasappa, "Female Labour Force Participation Rates in Karnataka", Indian Journal of Labour Economics, Vol. XX, No. 4, Jan. 1978, pp. 340-41.
53. J.P. Ambannavar, "Changes in Economic Activity of Males and Females in India, 1911-61", Demography, Vol. 4, 1975, pp. 344-64.

which might have been favourable to women's participation in work.

A.K. Sengupta⁵⁴ reached to a different conclusion. He remarked that in India the dual process of urbanization and industrialization has given rise to a new situation. It tends to disrupt traditional family life. Apart from this the accelerating pace at which the standard of living is rising has brought economic strain on the family and it is now becoming increasingly difficult for a family to pull on. This naturally forces the women to secure jobs in greater number especially in the case of middle class families.

Thus most scholars agree with the proposition that once economic development (accompanied with industrialisation and urbanisation) starts, it leads to a decline in the female work participation rates. Changed work patterns, relatively lower education and skill level of the women, and lack of mobility etc. has been considered as factors responsible for their lower participation rates. Rigidity in factory employment which makes it relatively difficult to be combined with motherhood and family life, results in the withdrawal of female labour. But on the

54. A.K. Sengupta, Indian Women - Her Position and Problems in Modern Times, pp. 54.55.

other hand along with industrialisation, service sector of the economy also expands thus increasing opportunities for female employment. Moreover, after a time lag, economic development influences the whole socio-cultural milieu and creates favourable attitudes towards female education and employment. Furthermore, creation of certain institutions such as child care centres, increases the mobility of women^{and} facilitate them to take part in productive work. This possibly explains the relatively higher rate of female work participation in developed countries. Thus female work force participation rate may follow a widely recognized U-shaped pattern in relation to development. Female activity rates are expected to be highest in the backward regions, to be least in areas at a intermediate stages of development and to rise again in the most developed regions.

II.4 Agricultural System, Technology and Women's Role in Production

A great diversity is found in agricultural systems and technologies associated with it in various regions of the world. Some scholars have observed relationship between agricultural systems and female participation in work force. Boserup⁵⁵ distinguishes between male and female

55. E. Boserup, op. cit., pp. 16-17.

farming systems. According to her, Africa is the region of female farming where in many tribes, nearly all the tasks connected with food production continue to be left to women. In most of these tribal communities, the agricultural system is that of shifting cultivation. In this ~~type~~ type of agriculture, to prepare new plots every year tree felling is nearly always done by men, but to women fall all the subsequent operations: the removal and burning of the felled trees; the sowing or planting in the ashes; the weeding of the crop; the harvesting and carrying in the crop for storing or immediate consumption. She further says that this type of female farming is also practised in certain parts of Latin America and Asia (including India amongst tribals), where farming systems are similar to those of shifting cultivation.⁵⁶

But with the introduction of plough, Boserup⁵⁷ argues, agricultural work is distributed between two sexes in a very different way. In regions of extensive plough cultivation, male family labour force dominates. In these areas, the land is prepared for sowing by men using plough and draught animals, and thorough land preparations leave little need for weeding the crop, which is usually the women's task. Therefore, women contribute mainly to

56. ibid., pp. 23-24.

57. ibid., pp. 24-25.

harvest work and to care of domestic animals. Nevertheless, in regions of intensive cultivation of irrigated land where population pressure is high, she recognised, that both men and women must put hard work into agriculture in order to support a family on a small piece of land.⁵⁸

Similarly, P.K. Bardhan⁵⁹ points out that, as against shifting cultivation, in region of settled agriculture, agriculturists are primarily men, and except for some dispossessed groups at the bottom of the social hierarchy, women's role in field work on farms is not extensive.

M.N. Srinivas⁶⁰ remarked that green revolution technology and higher prices for agricultural produce have both resulted in higher incomes for the upper layers of rural society and this in turn has generated new types of economic activity. An outcome of this increased income due to green revolution technology is withdrawal of females from labour force.

D.N. Reddy⁶¹ consider that the overall conditions of production in agriculture are likely to exercise a decisive influence on female activity. In an area where subsistence agriculture still predominates and where consequ-

58. ibid., p. 35.

59. P.K. Bardhan, 1984, op. cit., p. 22.

60. M.N. Srinivas, op. cit., pp. 15-16.

61. D.N. Reddy, op. cit., p. 205.

ently the labour productivity is low, the economic need for female participation in earning the family livelihood would be greater. On the other hand, an area with higher productivity agriculture is likely to weaken the economic pressure on the need for female activity to supplement family income, and strengthen the social attitude that would equate female activity with lower status.

Sometimes, female work participation is also associated with ecological variations in crop production. According to P.K. Bardhan,⁶² in India, in all the states of east and south India (except Karnataka) the predominant crop is paddy which, unlike wheat and dry-region crops, tends to be relatively intensive in female labour. Transplantation of paddy is an exclusively female job in many paddy areas; besides, female labour plays a very important role in weeding, harvesting, threshing, and various kinds of processing of paddy.

Commercialisation of agriculture also influences the activity pattern of females. Vina Mazumdar⁶³ observed that female participation in work is higher in subsistence farming. Even in case of labour intensive cash crops women have to work hard but have little control over cash

⁶² P.K. Bardhan, 1984, op. cit., p.210.

⁶³ Vina Mazumdar, 1978, op. cit.

earnings. In plantation agriculture they (women) provide a source of cheap labour. But on the other hand, in mechanised cash cropping where men operate the equipment and take care of cash income, women occupy increasingly more subordinate position.

Likewise, Boserup⁶⁴ also concluded that it is the cash crops that the men are taught to cultivate by modern methods. These crops are gradually being improved by means of systematic research and other government investment, while the cultivation of the women's food crops is favoured by no government support or research activities. Such a development, she pointed out, has the unavoidable effect of enhancing the prestige of men and of lowering the status of women.

II.5 Role of Education

As we have noted earlier, an important result of economic development is decline of old type of jobs and emergence of new professions requiring skill acquired through education and training. Hence for shifting to the new occupations education becomes a necessary requirement and lack of it in case of some strata of the population puts them into a disadvantageous position. In underdeveloped countries through literacy rates in general are lower but women are far behind men in the field of education.

64. E. Boserup (1970), op. cit., p. 56.

Though higher educational levels of women does not automatically lead to their increased participation in work force yet it increases the opportunities available to them.

A report⁶⁵ consider that the pattern of educational development coupled with the changes in the economy has inevitably affected the economic opportunities of women. But the paradox of women employment, according to the report, is that while illiteracy drives many out of employment education does not necessarily lead to their employment. On the other hand, the impression is gathered by Boserup⁶⁶ and Yurlova⁶⁷ that in developing countries the development of education, along with other measures, has resulted in a sharp rise in the share of females in certain professions in tertiary sector such as teaching and medical activity (specially nurses). But their share in scientific and administrative jobs is negligible. According to Krishna Ahooja Patel,⁶⁸ even the international data indicates that with the exception of some eastern European countries and USSR the proportion of women in most countries in scientific profession is low.

65. Towards Equality, op. cit.

66. E. Boserup, op. cit., pp. 125-34.

67. E. Yurlova, op. cit., pp. 180-81.

68. Krishna Ahooja Patel, op. cit.; 155/

As stated earlier education, by increasing the opportunities of employment available to women, plays a crucial role in improving their status. Asok Mitra⁶⁹ et al suggested that to stem the deteriorating position of women's employment (as a result of changing occupations), certain reservations seem unavoidable. The first series of reservations for women, according to them, must be in the field of education and training in general and technical education.

Several studies have taken literacy rate as one of the explanatory variables of female participation in work force. D.N. Reddy⁷⁰ observed a strong J-shaped relationship between level of education and female participation in India. He found that the activity rates for illiterate females in both urban and rural areas are higher than those for females with middle school education. There is a gradual decline in the participation rates with increase in education upto middle school level. Thereafter, participation rates show a steep rise. Similarly, Wahan and Venkatadasappa⁷¹ concluded that participation rates increases with education in rural as well as urban areas and the degree of participation is particularly high in case of women holding vocational diplomas or degrees

69. Asok Mitra, The Status of Women Literacy and Employment, ICSSR Programme of Women's Studies-II, Allied Publishers, New Delhi, 1979, p. 14.

70. D.N. Reddy, op. cit., pp. 198-200.

71. Wahan and Venkatadasappa, op. cit., p. 342.

compared to those holding an ordinary graduate or post-graduate degree. Dholakia and Dholakia⁷² also found a significant positive relationship between female work participation rate and overall literacy rate. But the district-wise study of Orissa by Sahoo and Mahanty⁷³ does not show any significant correlation between female work. Arjun Singh⁷⁴ in the case^{of} study Punjab has discovered that literacy among females is negatively related with female participation.

Education can play an important role towards emancipation of women. But for that concerted effort has to be made and educational system has to be moulded to fulfil this requirement. Report of the committee on the status of women⁷⁵ has pointed out "if education is to promote equality for women, it must make deliberate, planned and sustained effort so that the new value of equality of the sexes can replace the traditional value system of inequality". But the report adds that the present Indian educational system has not even attempted to undertake this

72. B.H. Dholakia and R.H. Dholakia, op. cit., pp. 302-04.

73. B. Sahoo and B.K. Mahanty, "Female Participation in Work in Orissa: An Inter-district Comparison", The Indian Journal of Labour Economics, Vol. XX, No. 4, Jan. 1978, pp. 332-33.

74. Arjun Singh, op. cit., p. 131

75. Report of the Committee on the Status of Women in India, Government of India, Ministry of Social Welfare, 1974.

responsibility. Similarly, Kumud Sharma⁷⁶ has also pointed out that the educational system has by and large, failed to integrate the message of sex equality effectively in the curricular and teaching system. In almost all the South Asian countries, Myrdal⁷⁷ remarked, the educational system even at the primary level, is heavily biased against girls, and throughout the region the literacy rate is lower among women than among men.

There are various socio-cultural and economic reasons responsible for the relatively lower literacy rates of women in backward countries. While investigating the Indian case, Asok Mitra⁷⁸ found three main factors responsible for lower female literacy rate. First and foremost is the reluctance to give girls and women freedom of movement and acknowledge the equality of the sexes in most communities. Second is the urge to keep women in economic subjection as long as is possible. Literacy and education, he feels, is the greatest subversive force against this subjection. Third factor is the compulsion to marry girls while still young so that they continue to be Q m S

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76. K. Sharma, S. Hussain and A. Saharya, Women in Focus, a community in search of equal roles, Sangam Books, Hyderabad, p. 32.
77. Gunnar Myrdal, Asian Drama: An Inquiry into the Poverty of Nations, Abridged, Penguin, Middlesex (England), 1972, p. 321.
78. Asok Mitra, op. cit., p. 8.

economic and social subjection for the rest of their lives.

According to Boserup,⁷⁹ the fear of being unable to find a husband which should be more educated than the wife is an important factor which contribute to the drop out of girls after the age of nineteen. Similar is the view expressed by M.N. Srinivas⁸⁰ that parents want their daughters to get only so much education as will give them the utmost advantage in the marriage market. In fact, he considers, that colleges and universities provide respectable "waiting places" for girls who wish to get married. Gunnar Myrdal⁸¹ in the context of south Asian countries, remarked that popular attitudes dating back to pre-colonial times, are responsible for the lower female literacy rates. He noticed that three main Asian religions⁸² cared little for the education of girls and generally placed women in an inferior position, though Buddhism was more egalitarian in this as in other respects.

II.6 Role of Demographic Factors

Various demographic factors also influence the female participation in work force. Women's role as bear-

79. E. Boserup, op. cit., p. 122.

80. M.N. Srinivas, op. cit., pp. 23, 24.

81. G. Myrdal, op. cit., p. 321.

82. Viz., Hinduism, Islam and Buddhism.

ing and rearing of children interfere with their economic role. But much depends upon the nature of economic activity and development level of the society. In a backward agrarian economy, where people generally work either in household industry or family based agriculture, women, inspite of high fertility rates, are able to participate in productive work. On the other hand, with the development of factory industries it becomes difficult for women to easily reconcile their child bearing and rearing duties with factory employment where work schedule is generally much more rigid. But with further development population tends to shift away from rural areas towards urban industrial and commercial centres. Whereas in backward agrarian economy, high mortality rates, low cost of rearing children and their help in family farms at an early age, religious beliefs, early marriage etc. are the factors responsible for high birth rate. On the other hand in advanced societies, very low mortality rates with better health facilities, high cost of child bearing and changed nature of work patterns etc. decrease the fertility rate and family size becomes small. At this stage again it becomes possible for women to take part in economic activities. Other demographic factors such as population density, proportion of small children, number of adult women per family etc. can also influence the female participation in work force.

Quite a few studies have taken into account certain demographic factors in explaining the female work participation. D.N. Reddy⁸³ remarked that there is a strong inverse relationship between female participation rate and fertility in economically developed countries, while such a relationship is either weak or absent in developing countries. Similarly Dholakia and Dholakia⁸⁴ found that average size of household is inversely related with female participation rate.

Patil and Dholakia⁸⁵ in a study of Ahmedabad slums found the number of children upto the age 10 does influence the female participation in the upward direction. This, they explain, is due to the fact that increased burden of the children forces the mother to take part in economic activities. Against this Sahoo and Mahanty⁸⁶ expected that female participation rate will have inverse relation with percentage of population for the age group 0-14. But districtwise data of 1971 census for the state of Orissa does not show any significant correlation.

83. D.N. Reddy, op. cit., pp. 197, 98.

84. B.H. Dholakia and R.H. Dholakia, op. cit., pp. 301-03.

85. B.B. Patil and R.H. Dholakia, "Female Labour Force Participation Rate, Direct Verification of some Hypotheses, " The Indian Journal of Labour Economics, Vol. XX, No. 4, Jan. 1978, pp. 311, 15.

86. B. Sahoo and B.K. Mahanty, op. cit., pp. 330-34.

P.K. Bardhan⁸⁷ tried to explain the female participation rate in cultivator and agricultural labour households in rural West Bengal with number of variables including demographic ones. He found that of babies and small children (in the 0-4 age group) in the household has a significantly negative coefficient, indicating the usual child-care constraint on women's participation in the labour force. The number of children (in the age 5-14 age group) who are currently in domestic work, has a positive coefficient suggesting how children (particularly female) doing domestic work ease the constraint on adult women in these families for work outside. Similarly he observed that proportion of women participating in labour force from a given family improves when there are more adult women in it. This he presumes is due to the reason that they share in the household chores and thereby ease the constraint on participation.

D.N. Reddy⁸⁸ visualised that density of rural population will be inversely related with female activity rate. He feels that with the higher density of population in an area, there will be greater pressure on the available employment opportunities and in the ensuing competition

87. P.K. Bardhan, 1984, op. cit., pp. 26-27.

88. D.N. Reddy, op. cit., p. 206.

men are likely to be preferred to women thus leaving less opportunities for women to be employed. Given the low chances of non-agricultural employment for women, the higher the overall labour pressure on land the lower is likely to be the female participation in work. But the regression results on the basis of data from 15 states show that coefficient of density of rural population, against Reddy's expectation, is positive thus showing direct relationship between female work participation and density of rural population.

II.7 Geographical Interpretation of Female work Participation

There exist large variations in socio-economic conditions as well as value system and cultural norms of different countries and various regions of each country. This socio-economic and cultural heterogeneity influences female participation disproportionately in different regions. Thus conclusions drawn on the basis of aggregative data are falacious and misleading.

Recently, this aspect of female employment is receiving more attention. S. Raju⁸⁹ has aptly remarked that

89. Saraswati Raju, Sita in the City: A Socio-Geographical Analysis of Female Employment in Urban India, University of Syracuse, Discussion paper, 1981.

tendency on the part of researchers to base their analysis on grossly aggregated data tend to obscure sub-regional variations resulting from highly localised historical and cultural conditions. Leela Gulati⁹⁰ also recognised the geographical dimension of the problem for correct generalisation. She pointed out that, "the overall figure for a country of the size of India can be quite misleading for drawing one's conclusion as to the factors underlying that figure". D.K. Nayak⁹¹ felt that the women cannot be seen as homogeneous group both vertically and horizontally. He considers that the geographical appraisal is of primary importance.

Various researchers reached to a conclusion that there exists regional variations in social attitude towards female. Boserup⁹² observed that the India-Pakistan sub-continent can be divided into two rather sharply demarcated regions with strikingly different patterns of female employment. In north India and Pakistan the pattern of female work participation resembles that of the west Asian and North African Arab countries, while central and south

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90. Leela Gulati, "Female Work Participation: A Study of Inter-State Differences", Economic and Political Weekly, Vol. X, No. 1 and 2, January 1975, pp. 40-41.
91. D.K. Nayak, Female participation in Economic Activity in Rural Areas: A Geographical Perspective with Reference to Selected Regions in India, Dissertation submitted to the Jawaharlal Nehru University, unpublished, 1982, p. 43.
92. E. Boserup: (1970), op. cit., pp. 71-72.

India have a pattern more similar to South-East Asia, where female work participation rates are very high. She concluded that the influence from West Asian culture was strong in the northern part of the sub-continent and only slight in the southern part. Leela Gulati⁹³ also pointed out, while explaining the low female work participation in North India, that it is influenced by Muslim domination political as well as cultural for several centuries. Purdah system which was adopted from Muslims, she says, is a major constraint for work out side the home.

Billing and Arjun Singh⁹⁴ described that the employment pattern of women in India is largely determined by concepts of social values and status having a bearing on the economic and caste differences. Thus the ways in which farm tasks are shared between males and females vary among sub-cultures. S. Raju⁹⁵ is also of the opinion that variation in the social attitude towards females working

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93. Leela Gulati, "Female Work Participation: A Study of Inter-State Differences," Economic and Political Weekly, Vol. X, No. 1 January 2, 1975, p. 35.
94. Billing and Arjun Singh, "Mechanization and the Wheat Revolution - Effects on Female Labour in Punjab," Economic and Political Weekly, Vol. V, No. 52, December 26, 1970, p. A-169.
95. S. Raju, "Regional Patterns of Female Participation in the Labour Force of Urban India", The Professional Geographer, Vol. XXXIV, No. 1, February 1982, pp. 42-48.

out side the family may be offered at least a partial explanation for the regional variations in the level of female employment. She found negative correlation between the proportion of Muslims in the female population and the proportion of workers in the privileged female population. The absence of taboos and prejudices against females working out doors and in the fields, according to Mukherji,⁹⁶ form an important factor in determining female participation in economic activity.

Scholars have attempted to relate the regional variations in female participation rate with large number of socio-cultural, economic and demographic indicators. Reddy⁹⁷ tried to explain the variations in female participation rate with the help of certain variables such as irrigated area, average annual rainfall, crops grown, agricultural labour productivity at the state level as well as the district level. Sahoo and Mahanty⁹⁸ used literacy rate, urban population, irrigated area, non-agricultural workers, small holdings, per capita rural income etc.

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96. A.B. Mukherji, "Female Participationⁱⁿ Rural Agricultural Labour in Andhra Pradesh - A Study in Population Geography", The Deccan Geographer, 12(1), January-June 1974, pp. 1-25.
97. D.N. Reddy, "Female Work Participation: A Study of Inter-State Differences, A Comment", Economic and Political Weekly, Vol. X, No. 23, 1975, pp. 902-05.
98. B. Sahoo and B.K. Mahanty, 1978, op. cit., pp. 328-36.

as explanatory variables explaining female participation rate. Similar exercise is carried out by Kamla Nath⁹⁹ explaining the geographical differences in work participation rate among women in different states and districts. Conclusions reached by these and many other studies¹⁰⁰ differ substantially.

The purpose of the present exercise is to verify some of the hypotheses on the basis of cross section data of 1981 census. An attempt will be made to explain the female participation in economic activity with the help of some socio-economic variables. The three states from north-western region has been selected for this purpose. Simple correlation and stepwise regression method has been applied to verify the relationship of selected variables with female participation rate.

99. K. Nath, 1970, op. cit., pp. 846-49.

100. For example see :

(a) B.B. Patil and R.H. Dholakia, "Female Labour force Participation Rates: Direct Verification of Some Hypotheses, The Indian Journal of Labour Economics, Vol. XX, No. 4, January 1978, pp. 308-18.

(b) B.H. Dholakia and R.H. Dholakia, (1978), op. cit., pp. 241-60.

(c) N. Reddy, "Female Work Participation in India, Problems and Policies", Indian Journal of Industrial Relations, Vol. XIV, No. 2, October 1979, pp. 196-212.

(d) D.K. Nayak (1982), op. cit.

FEMALE PARTICIPATION IN ECONOMIC ACTIVITY : GENERAL PATTERNS

As discussed earlier, it is difficult to estimate and to interpret the statistics of female labour force. According to the United Nations, "A nation's labour force, or economically active population is defined as consisting of those persons who furnish the supply of labour for production of goods and services".¹ But for women in particular it is difficult to distinguish activities which conform to this definition. Women who are working as housewives in their own homes are not considered as belonging to the labour force, even though their services are having immense economic value. On the other hand if a servant is paid for that job, which a house wife is doing, he or she is included in the labour force.

III.1 Inter-Country Comparison of Female Work Participation

In fact there are differences in definitions of workers used by different countries. So our inter-country comparison will be subject to this limitation.

1. The Economic Roles of Women in ECE Region, United Nations, New York, 1980, p. 3.

Socio-economic and political set up of different countries play an important role in determining the rate of female work participation in economic activity. Level of development, agricultural system, intensity of mechanization, social structure, culture and value system etc. are important variables to explain the women's role and their position in a society.

The Table-III.1 based on the 'year Book of Labour Statistics' shows that the communist countries have higher female work participation rate vis-a-vis all other countries. Nearly half of the female population (48 per cent) is working in USSR. Even in Czechoslovakia and Romania female work participation rates (46.7 per cent and 45.1 per cent respectively) are higher compared to the other developed capitalistic economies like United States (40.3 per cent), Canada (39.9 per cent), Japan 36.3 per cent) and France (33.5 per cent).

Within agrarian economies also wide differences exist. As the Table-III.1 shows Islamic countries like Algeria, Egypt, Pakistan, Iran, Kuwait and Behrain have very low percentage of working females (varying between 3.5 per cent to 11.1 per cent). As it is widely argued, cultural norms and value system such as observance of 'purdah' by women prohibits them to work out side the home.

Table-III.1

Work Participation Rate in Some Countries of the World

Country	Census Year	Participation Rate (percent)	
		Female	Male
USSR	1979	48.1	55.7
Czechoslovakia	1980	46.7	56.2
Thailand	1980	45.7	50.4
Denmark	1981	45.7	58.7
Roumania	1977	45.1	55.2
USA	1982	40.3	57.3
Canada	1981	39.9	59.3
Hong Kong	1981	37.2	62.1
Japan	1980	36.3	61.9
Ethopia	1980	35.3	54.6
Singapore	1982	34.2	60.4
German Federal Republic	1982	33.9	59.1
France	1982	33.5	53.8
Korea	1982	29.7	46.8
Indonesia	1978	28.4	51.0
Philippines	1978	27.5	46.3
El Salvador	1980	24.0	47.5
Sri Lanka	1980-81	21.2	53.1
Argentina	1983	20.1	56.6

contd...../-

Table-III.1 cont...

Country	Census Year	Participation Rate (per cent)	
		Female	Male
Chile	1981	18.5	46.7
Zambia	1981	17.3	45.2
India	1981	14.0	51.6
Behrain	1981	11.1	61.6
Kuwait	1980	10.7	54.3
Iran	1976	8.9	48.1
Pakistan	1983	7.9	52.3
Egypt	1980	5.7	47.7
Algeria	1977	3.5	36.8

Source: Year Book of Labour Statistics 1983, International Labour Office, Geneva.

Their proper place is considered home. On the other hand South East Asian countries have high percentage of working women to their population. Countries like Philippines, Indonesia, Singapore and Thailand have female participation rates ranging between 27.5 per cent to 45.7 per cent. In addition to the favourable socio-cultural attitudes towards working women, this might be because of the predominance of rice cultivation and plantation in the region, in which women play an important role. But India having many patterns of female work participation influenced by diverse cultures and ethnicity, ranks quite low as compared to other countries having overall female work participation rate of around 14 per cent.

Another important aspect which the Table-III.1 brings out is the maximum disparity in male female participation rates in economic activity in the Islamic world and relatively less gap in the communist world.

III.2 Female Work Participation in India in Retrospect

Considering the case of India, during the first half of the present century, opportunities for Indian women to participate in economic activities were more or less stagnant whereas females as well as total population was increasing since 1921. As a result of this, women work force as percentage of the population decreased rapidly during this period. The Table-III.2 based on population census, clearly brings out this fact.

Further, the table shows a considerable rise in female employment in 1961 (by almost 19 million) and a sharp drop in 1971 (by 28 million). Most of the researchers believe that both rise and the drop were caused by changes in definitional criteria.² Asok Mitra³ remarked that there

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2. For example see :
- (a) D.R. Gadgil, Women in the Working Force in India, New Delhi, 1965, pp. 2, 5; and also see:
 - (b) Report of the Committee on the Status of Women in India, New Delhi, 1974, p. 152.
3. Asok Mitra, Literacy and Employment: The Status of Women, Indian Council of Social Science Research (ICSSR), New Delhi, 1979.

Table-III.2
Women Workers in India (1911-81)

Year	Total No. of women (million)	Number of working women (million)	Female participation rate
1911	124	41.8	33.7
1921	123	40.0	32.5
1931	136	37.6	27.6
1951	175	40.5	23.1
1961	213	59.4	27.9
1971	264	31.3	11.9
1981*	321	45.0	14.0

Source: E. Yurlova, "Social Aspects of Female Employment", in India: Problems of Development, Oriental Studies in the USSR 1981, No. 4, Moscow, 1981, p.181.

*Census of India, 1981.

was no marked change in the earlier trend of falling female work force participation rate.

It is amazing that number of women engaged in economically productive work during last 70 years has remained by and large at the same level, although the female population itself has increased more than two fold. Actually, the decline in women's employment was a part of the general process of loss of industrial employment that affected

the entire Indian population during the nineteenth and the early twentieth century. With the invasion of Indian markets by British industrial manufacturers, since the Industrial Revolution in Britain, Indian handicraft industries started declining. Added to this was the competition with the goods produced in Indian factories since the early 20th century. The worst affected was the traditional textile industry. Banerjee⁴ observed that as a result of this, women textile workers suffered relatively more because the spinning yarn industry where they worked was almost entirely wiped-out by competition from imported and mill-made yarn. Women's overall non-agricultural employment till 1961 never regained the absolute level it had reached in 1911, whereas for men, it only meant a temporary set-back. After 1921, non-agricultural male employment rose both in absolute numbers and in proportion to total male employment.⁵ According to J.N. Sinha,⁶ out of the non-agricultural jobs that women lost during the period 1911 to 1961, only 8 per cent could be accounted for by specific female tasks becoming obsolete, and in the remaining 92 per cent cases, women were simply replaced by men in their past occupations.

4. N. Banerjee (1985), op. cit., pp. 13-14.

5. Ibid., p. 14.

6. J.N. Sinha, The Indian Working Force, Census of India, 1961, Vol. I, Monograph 11, Delhi 1972.
Quoted in N. Banerjee, ibid., p. 14.

Not only that women did not retain their share in their traditional occupations, but also they got little place in the newly developing industries in the country.

Some progress has been made at various levels by variety of Government and non-government measures to improve the women's condition after Independence. As a result of this women are now working in all spheres of economic and social life, where prior to Independence they had not participated at all or their participation had been rather limited. Now-a-days one can see an increasing number of women working in different fields. However, these changes have so far touched comparatively a narrow section of the female population and the overall percentage of women in the work force has been declining.

III.3 Geographical Distribution of Female Working Population in India

A glance at the map-III.1* showing female participation rates reveals the extent of diversity within a single country. As observed by Boserup⁷ these varying levels of female participation in India in fact represents different types of cultural traditions.

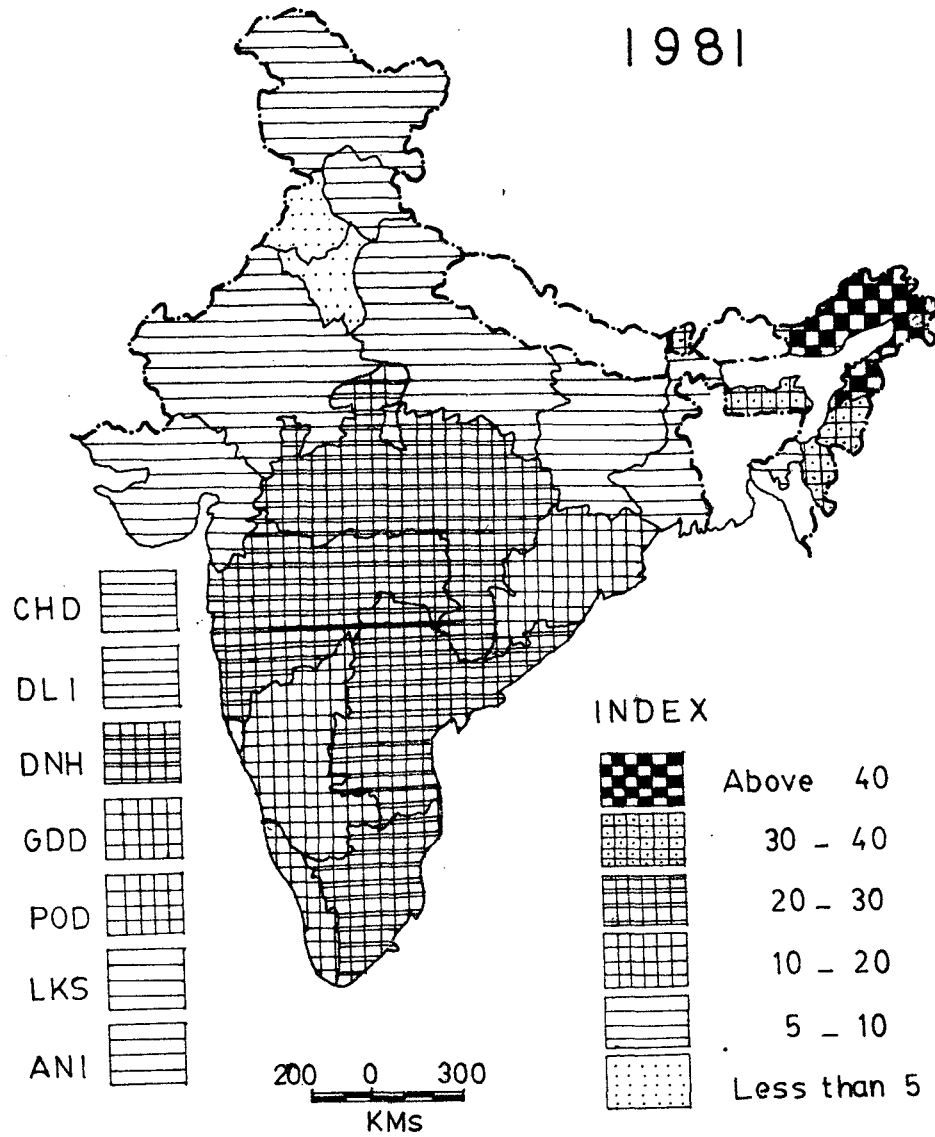
7. E. Boserup (1970), op. cit., p. 70.

*Because of very small area covered by the union territories of Chandigarh (CHD), Delhi (DLI), Dadra and Nagar Haveli (DNH), Goa, Daman and Diu (GDD), Pondicherry (POD), Lakshadweep (LKS), and Andaman and Nicobar Islands (ANI), and to avoid inconvenience of space we have shown boxes representing these union territories on the side of each of the Indian maps.

INDIA

PERCENTAGE OF FEMALE
WORKERS TO TOTAL FEMALES

1981



MAP III.1

Map shows that a very high proportion of female workers to their population is found in the north-east region, Nagaland having the highest participation rate of 42.45 per cent and Arunachal Pradesh, 40.55 per cent. The other states and union territory of north-east region⁸ like, Manipur, Meghalaya, Sikkim and Mizoram have female participation rate varying between 30 to 40 per cent. Perhaps it is mainly because of high concentration of tribal population in this region which is responsible for higher female participation rate. Tribal culture and value system is such that it does not prohibit women from out door work. Moreover, agriculture in this region is mainly subsistence family based agriculture and capitalistic system is not able to penetrate to a substantial level which can destroy their traditional organisation of society. Thus, in this type of system generally whole family, including women, work for their sustenance.

But inspite of showing very high female participation rate, the north-east region of India represents a very small share of total female work force. As the Table-III.3 shows, these six states and union territories having female participation rate over 30 per cent, account for

8. Due to the disturbed conditions, 1981 census was not conducted in Assam.

just less than 2 per cent of the total female labour force of the country.

Table-III.3

Participation Rate of Female Main Workers in States and Union Territories of India: 1981

Percentage	No. of States and union territories	Percentage of Female workers in states and Union Territories to total female work force
40 +	2	0.60
30 - 40	4	1.30
20 - 30	5	56.57
10 - 20	7	19.64
5 - 10	10	20.87
Below 5	2	1.02

Total	30	100.00

The second region showing high female work participation rate lies in the peninsular India. These four states of Andhra Pradesh, Maharashtra, Tamilnadu, Madhya Pradesh and union territory of Dādra Nagar Haveli have female work participation rate ranging between 20 to 30 per cent. Table-III-3 shows that this region has high

concentration (around 57 per cent) of India's female work force. These four states and union territory of Dadra Nagar Haveli together with Gujarat, Orissa, Karnataka and Kerala have around three-fourth of India's total female work force. So female workers are concentrated in southern and central India. One reason of this concentration and relatively higher (as compared with north India) participation rate may be the concentration of tribal population in this region. Secondly, it may also be because of generally respectable attitude towards women in this region. Thus they do not find it difficult to work out side the home, whereas in north India, the seclusion of women and the 'purdah' system, become obstacle for women to work out side the four walls of their houses. In the north Indian states, except Himachal Pradesh, female participation rate is very low, i.e. less than 10 per cent. Punjab and Haryana are having female participation rate even lower than this (i.e. 2.27 per cent and 4.69 per cent respectively). These northern states altogether (except Himachal Pradesh) having participation rate of female workers less than 10 per cent, have roughly 21 per cent share of female workers in the total female work force in India.

III.4 Rural Female Main Workers in India

Proportion of rural female main workers to rural female population (16 per cent) is higher than that of

total India's female work participation rate (13.99 per cent). (It means rural women participate more in country's economic development vis-a-vis urban women.) Another aspect of rural female participation rates is the great regional diversity. Participation rates of states and union territories vary between 1.72 per cent to 47.50 per cent (see Appendix-A.III.1).

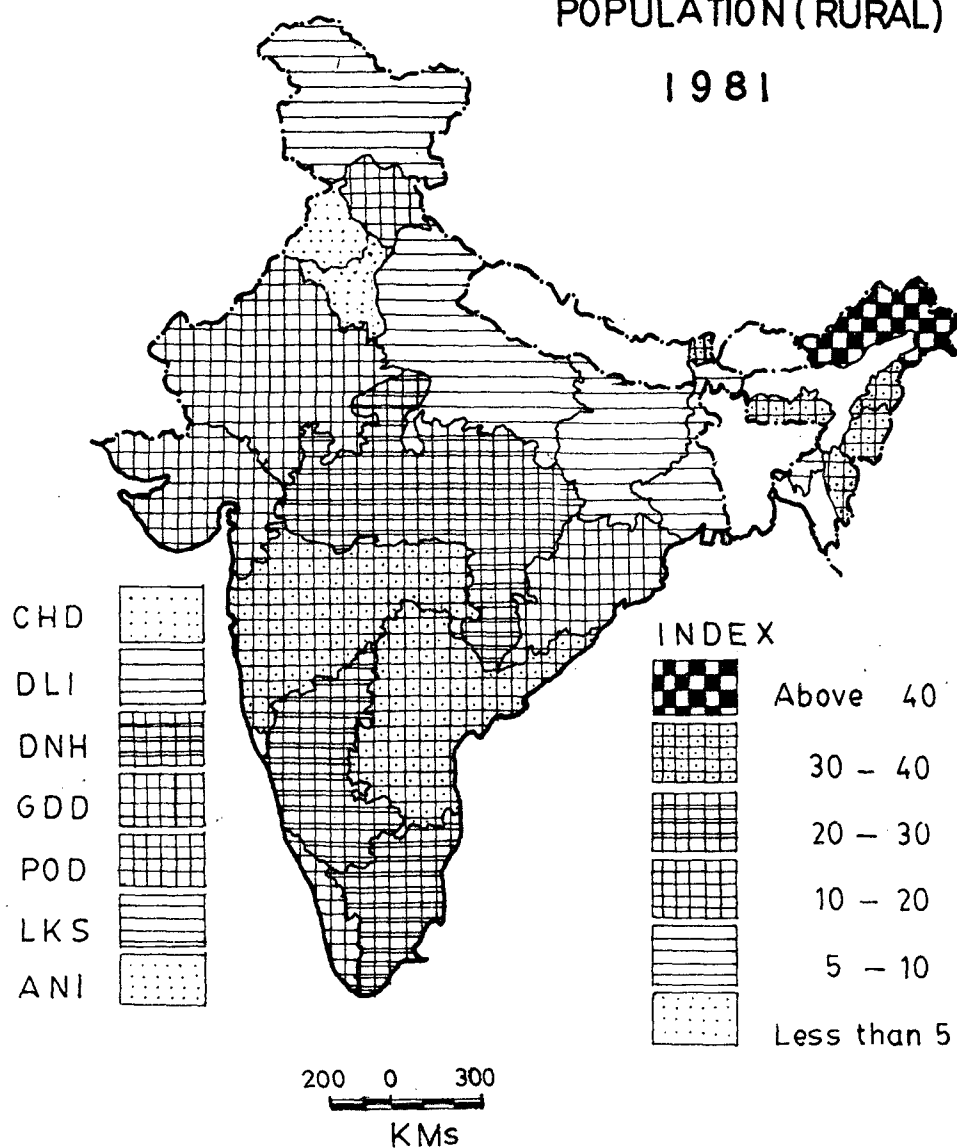
(In spite of the introduction of new green revolution technology in some parts since mid-sixties, still a very large part of the Indian agriculture is a traditional agriculture. Secondly, though capitalist relations in agriculture are emerging, but predominantly it is family based cultivation. In such a situation it is comparatively easy for rural women to take part in productive activities, wherever socio-cultural values permit it. Moreover, they can easily combine their household duties with agricultural work on their own fields which is not possible in the case of most urban jobs.)

(Except Kerala and Tripura all other north-east and south Indian states have female participation rates above the national average. Map-III.2 showing the proportion of rural main workers to rural female population, depicts that the north-east region is still occupying the highest rank. Again Nagaland and Arunachal Pradesh with 47.50 per cent and 42.24 per cent rural female participation

INDIA

PERCENTAGE OF FEMALE WORKERS TO TOTAL FEMALE POPULATION (RURAL)

1981



MAP III.2

rate respectively, lead the other states. But as the Table-III.4 shows that these are having very low share (even less than 1 per cent) in India's rural female work force. In next two categories i.e. participation rates between 30 and 40 per cent and 20 to 30 per cent, comes remaining north-east and south Indian states, union territories of Mizoram and Dadra Nagar Haveli (except Kerala and Tripura) and Madhya Pradesh (see Map-III.2). These two groups together account for almost two third of the total rural female workers in India (see Table-III.4).

Table-III.4

Participation Rate of Rural Female Main Workers in States and Union Territories of India: 1981

Percentage	No. of States and union territories	Percentage of rural female workers in states and union territories to total rural female work force
40 +	2	0.67
30 - 40	6	33.78
20 - 30	4	31.94
10 - 20	7	15.38
5 - 10	7	17.39
Below 5	4	0.84

Total	30	100.00

On the other hand north Indian states of Jammu and Kashmir, Uttar Pradesh, Bihar and West Bengal and Tripura and union territory of Lakshadweep and Delhi have low female participation rate (between 5 to 10 per cent) but it is having around 17 per cent share in the India's women work force. Punjab and Haryana, where the impact of green revolution is the most, are having the lowest rural female participation rate i.e. less than 5 per cent. Additional reason for low participation rate in Punjab and Haryana other than the general socio-cultural barriers in north India, may be that as a result of increased income, the agricultural families in this region has started withdrawing female labour force from out-door work, the process to which M.N. Srinivas⁹ calls 'sanskritization',

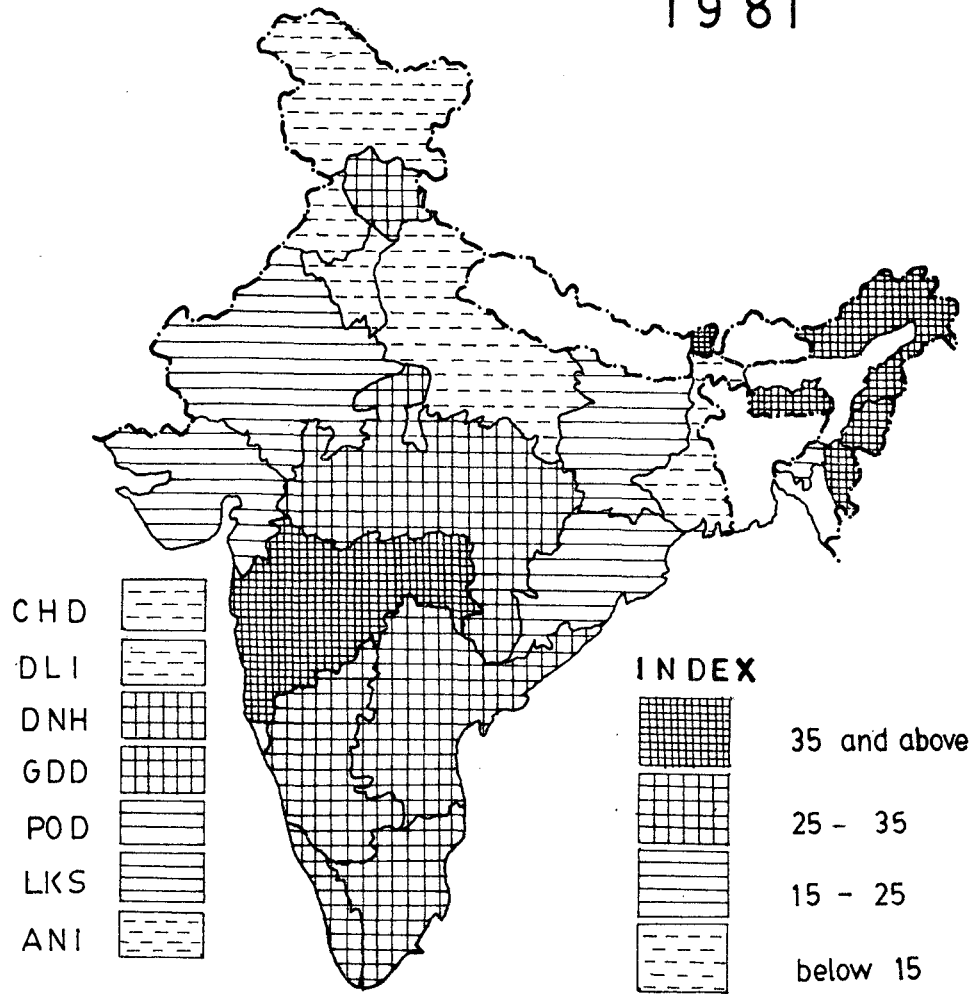
III.5 Female Share in Rural Work Force

Now considering the share of female workers in total rural work force, again we find that in addition to north-east region it is only Maharashtra where women constitute more than 1/3rd in rural work force (see Map-III.3). These seven states and union territories together account for 18 per cent of India's rural female workers (Table-III.5). Second important region of 8 states and union territories

9. M.N. Srinivas, The Changing Position of Women, Oxford University Press, Delhi, 3rd impression, 1986, pp. 14-16.

INDIA

PERCENTAGE OF FEMALES IN RURAL WORKFORCE 1981



200 0 300

 kms

MAP III.3

where share of the female workers in total work force varies between 25 to 35 per cent and which have more than half of the India's rural female work force includes Himachal Pradesh and Madhya Pradesh in addition to southern states (see Map-III.3 and Table-III.5). In the remaining 15 states and union territories, in Gujarat, Rajasthan, Orissa and Bihar among others, female workers form 15 to 25 per cent of the work force and in Jammu and Kashmir, Punjab, Haryana, Uttar Pradesh and West Bengal it is even less than 15 per cent (see Map-III.3 and Table-III.5).

Table-III.5

Percentage of Female Main Workers in Rural Work Force in States and Union Territories of India: 1981

Percentage	No. of states and union territories	Percentage of Rural female workers in states and union territories to total rural female work force
35 +	7	18.02
25 - 35	8	53.06
15 - 25	6	18.05
Below 15	9	10.87

Total	30	100.00

III.6 Rural Female Marginal Workers

A significant number of women in rural areas are categorised as marginal workers because women are concentrated in agricultural activities, which are mainly seasonal. Proportion of rural female marginal workers to rural female population is 7.18 per cent for India, which is almost equal to the urban female participation rate of main workers. It varies between 30.97 per cent in Jammu and Kashmir to 0.50 per cent in Chandigarh (see Appendix-A.III.1).

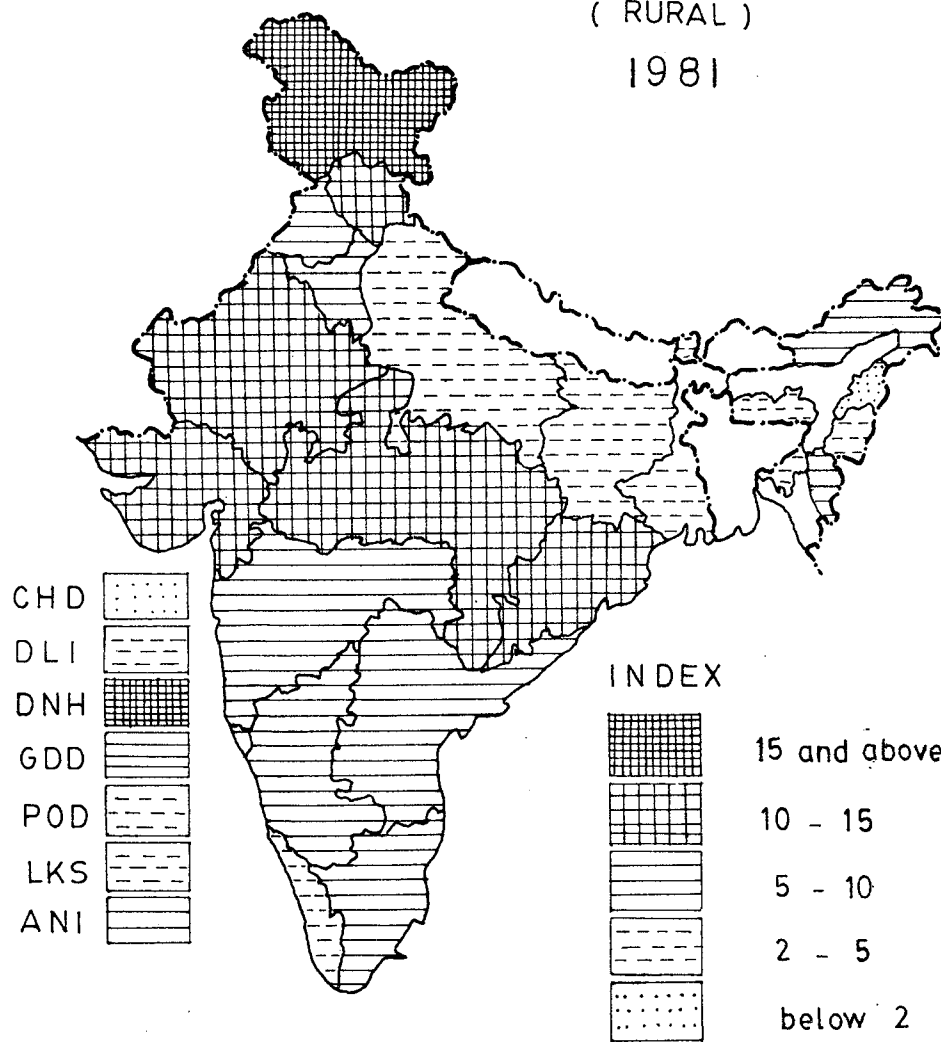
Map-III.4 and Table-III.6 brings out the distribution of participation rates of marginal rural female workers. As the map shows in addition to Jammu and Kashmir and union territory of Dadra Nagar Haveli where participation rates of marginal rural female workers are above 15 per cent, in the states of Rajasthan, Gujarat, Madhya Pradesh, Himachal Pradesh and Orissa, the participation rates are ranging between 10 to 15 per cent. These states with above 10 per cent participation rate account for around 43 per cent of the total marginal rural female work force of the country (see Table-III.6). In the next category of participation rates of 5 to 10 per cent comes the states of Maharashtra, Karnataka, Andhra Pradesh, Tamilnadu, Punjab, Haryana and union territories of Arunachal Pradesh, Mizoram, Andaman Nicobar Islands and Goa Daman and Diu which

INDIA

PERCENTAGE OF FEMALE
MARGINAL WORKERS TO
TOTAL FEMALE POPULATION

(RURAL)

1981



MAP III.4

Table-III.6

Participation Rate of Rural Female Marginal Workers in States and Union Territories of India: 1981

Percentage	No. of states and union territories	Percentage of rural female workers in states and union territories to total marginal rural female work force
15 +	2	3.93
10 - 15	5	38.64
5 - 10	10	35.58
2 - 5	11	21.84
Below 2	2	0.01

Total	30	100.00

altogether have around 36 per cent of India's rural female marginal work force. Remaining 13 states and union territories with below 5 per cent participation rate have around one-fifth of the total marginal rural female work force of the country.

III.7 Female share in Rural Marginal Workers

Women as marginal workers in rural area constitute around 85 per cent of the total rural marginal work force

in India. It means this concept of marginal workers is confined mainly to women. Proportion of marginal rural women workers to total rural marginal workers is as high as 95.28 per cent in Haryana. The states of Haryana, Rajasthan, Gujarat, Karnataka and Andhra Pradesh have more than 90 per cent of the rural marginal work force as females, and these states together account for around 37 per cent of the total rural female marginal work force (see Map-III.5 and Table-III.7). On the other hand high concentration

Table-III.7

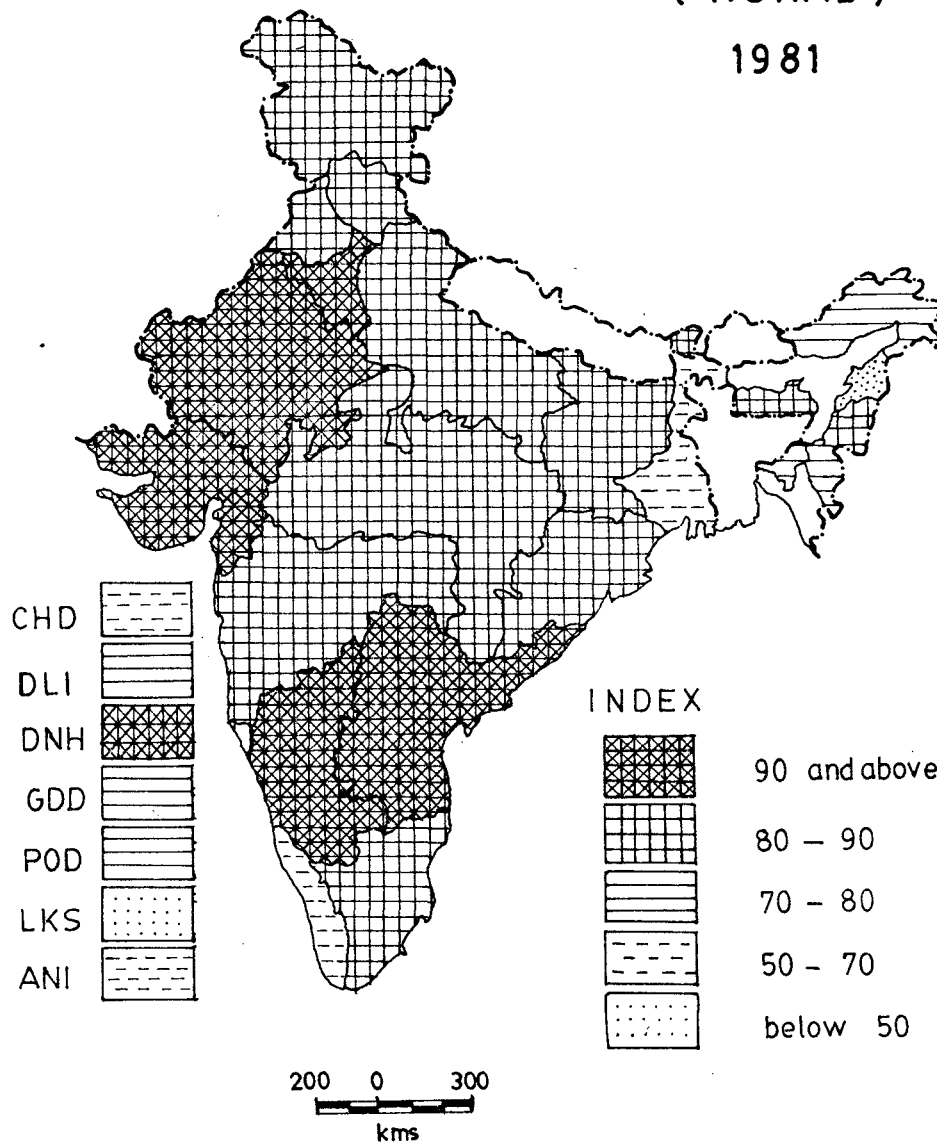
Percentage of Female Workers in Rural Marginal Work Force in States and Union Territories of India: 1981

Percentage	No. of states and union territories	Percentage of rural female workers in states and union territories to total rural marginal work force
90 +	6	36.80
80 - 90	12	57.08
70 - 80	6	0.60
50 - 70	4	5.50
Below 50	2	0.02

Total	30	100.00

INDIA

PERCENTAGE OF FEMALES IN TOTAL MARGINAL WORKERS (RURAL) 1981



MAP III.5

of rural female marginal workers is (around 57 per cent) in the states such as Tamil Nadu, Orissa, Maharashtra, Madhya Pradesh, Bihar, Uttar Pradesh, Punjab, Himachal Pradesh, and Jammu and Kashmir, Sikkim, Meghalaya, and Manipur, where share of the rural female marginal workers in the total rural marginal workers ranges between 80 to 90 per cent. Remaining 12 states and union territories with below 80 per cent share of the females in marginal rural work force, just account for around 6 per cent of the female marginal rural workers.

III.8 Female Participation Rates: Urban

As discussed in the earlier chapter, most scholars agree with the proposition that once economic development (accompanied with industrialisation and urbanisation) starts, it leads to a decline in the female work participation rates. Changed work patterns, relatively lower education and skill level of the women and lack of mobility etc. have been considered as factors responsible for their lower work participation rates. Rigidity in factory employment, which makes it relatively difficult to be combined with motherhood and family life, results in the withdrawal of female labour. But on the other hand, along with industrialisation, service sector of the economy also expands thus increasing opportunities for female employment. Moreover, after a time lag, economic development influences

the whole socio-cultural milieu and creates favourable attitudes towards female education and employment.

At present India is at the stage where negative impact of development and urbanisation on female employment dominates and its positive aspect has not shown significant countering results. Data from 1981 census shows that proportion of urban female workers to urban female population is very low, (i.e. 7.28 per cent) which is even less than half of the rural female participation rate in economic activity.

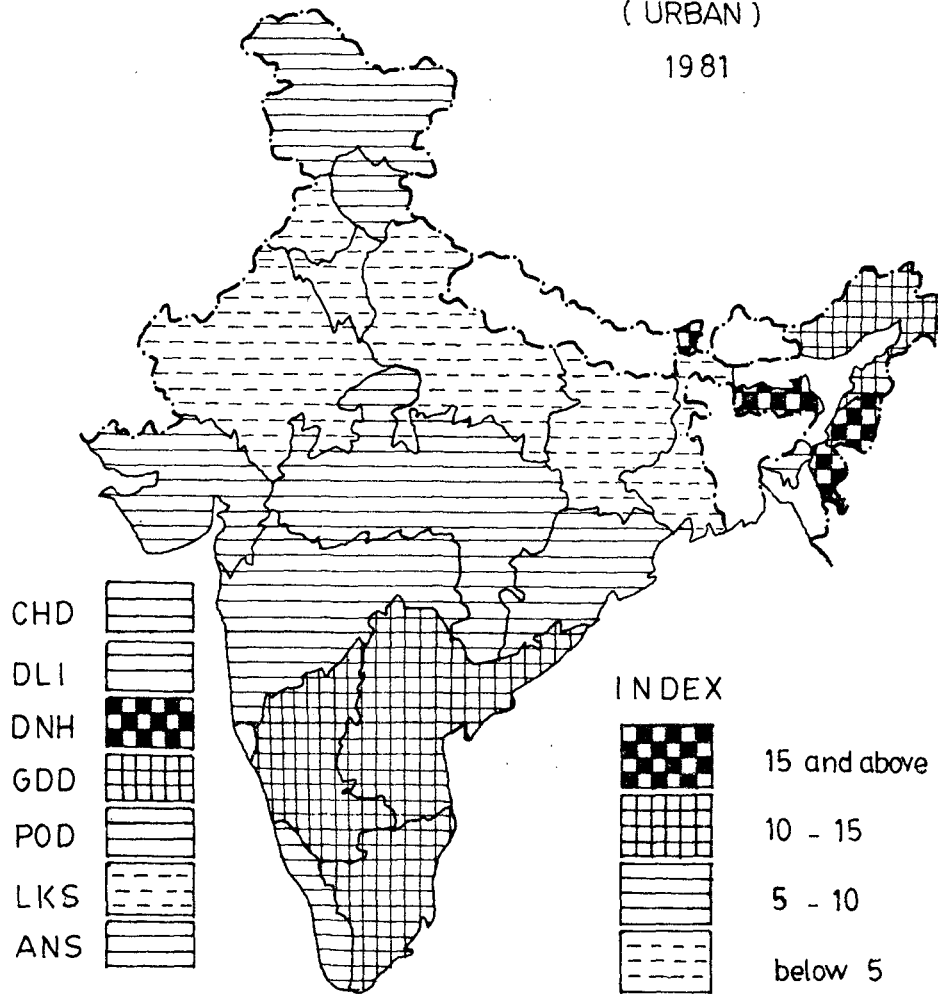
But urban India shows less variation compared to rural India in female work participation rates. It ranges between 2.99 per cent to 22.71 per cent (see Appendix-A. III.1). This may be due to the fact that impact of differences in cultural norms and values influencing female participation rate is less in urban centres as compared with rural areas.

Even in the case of urban female participation rate Map.III.6 shows that north eastern states of Sikkim, Meghalaya, Manipur and union territories of Mizoram and Dadra Nagar Haveli are at the top, having female participation rate above 15 per cent. But the Table-III.8 shows that these states are having very low share in India's urban female work force, which is less than 2 per cent. The

INDIA

PERCENTAGE OF FEMALE
WORKERS TO FEMALE
POPULATION
(URBAN)

1981



MAP III.6

Table-III.8

Participation Rate of Urban Female Main
Workers in States and Union Territories
of India: 1981

Percentage	No. of states and union terri- tories	Percentage of urban female workers in states and union territories to total urban female work force
15 +	5	1.38
10 - 15	6	38.50
5 - 10	12	41.08
Below 5	7	19.04

Total	30	100.00

next higher urban female participation region, having participation rate between 10 to 15 per cent comprises of southern and north-eastern states like Andhra Pradesh, Tamilnadu, Kanataka, Nagaland and union territories of Goa Daman and Diu and Arunachal Pradesh (see Map-III.6). These six states and union territories together account for over 38 per cent of India's urban female work force (see Table-III.8). The other 12 states and union territories, where urban female participation rate varies between 5 to 10 per cent are Gujarat, Maharashtra, Madhya Pradesh, Orissa,

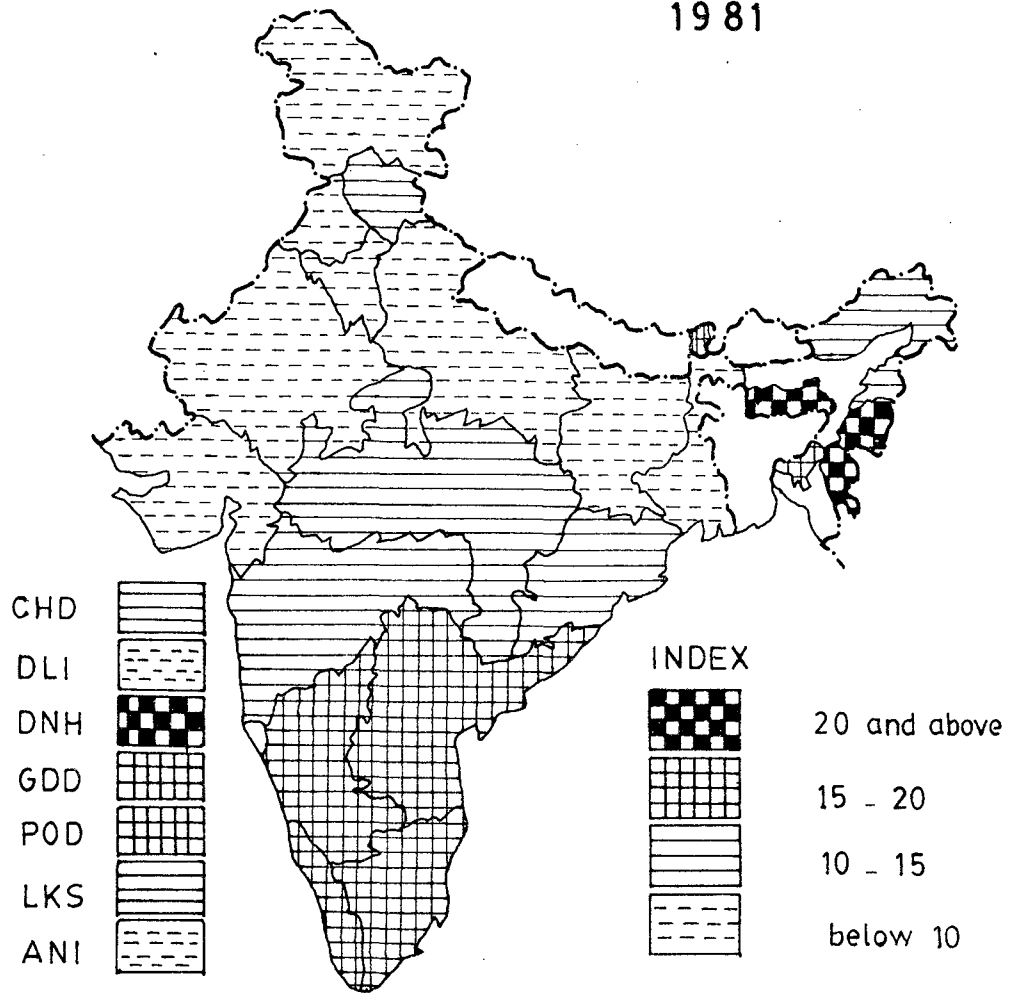
Jammu and Kashmir, Himachal Pradesh, Kerala, Tripura, Delhi, Chandigarh, Pondicherry and Andaman Nicobar Islands, which have 41 per cent of the country's urban female work force (see Map-III.6 and Table-III.8). Rest of the north Indian states have very low participation rate (i.e. less than 5 per cent) and comparatively low share (around 19 per cent) in India's urban work force.

III.9 Female Share in Urban Work Force

Census data shows that women constitute very low percentage in India's urban work force, which is only around 12 per cent. North eastern part of India still has higher rank in female's share in urban work force, which is above 20 per cent, but its share in the total urban female workers is almost insignificant (see Map-III.7 and Table-III.9). The next in the rank comes 8 states and union territories of Sikkim, Tripura, Goa Daman and Diu, Pondicherry in addition to four states of Andhra Pradesh, Karnataka, Kerala and Tamilnadu where share of the female urban workers in the total urban work force varies between 15 to 20 per cent and these states account for 43 per cent of India's urban female work force (see Map-III.7 and Table-III.9). Northern states, except Himachal Pradesh have very low share of females in urban work force and have around 28 per cent of urban female workers of India.

INDIA
 PERCENTAGE OF FEMALES
 IN URBAN WORKFORCE

1981



MAP III.7

Table-III.9

Percentage of Female Main Workers in
Urban Work Force in States and Union
Territories of India: 1981

Percentage	No. of states and union terri- tories	Percentage of urban female workers in states and union territories to total urban female work force
20 +	4	1.32
15 - 20	8	43.18
10 - 15	8	27.59
Below 10	10	27.91

Total	30	100.00

III.10 Urban Marginal Female Workers

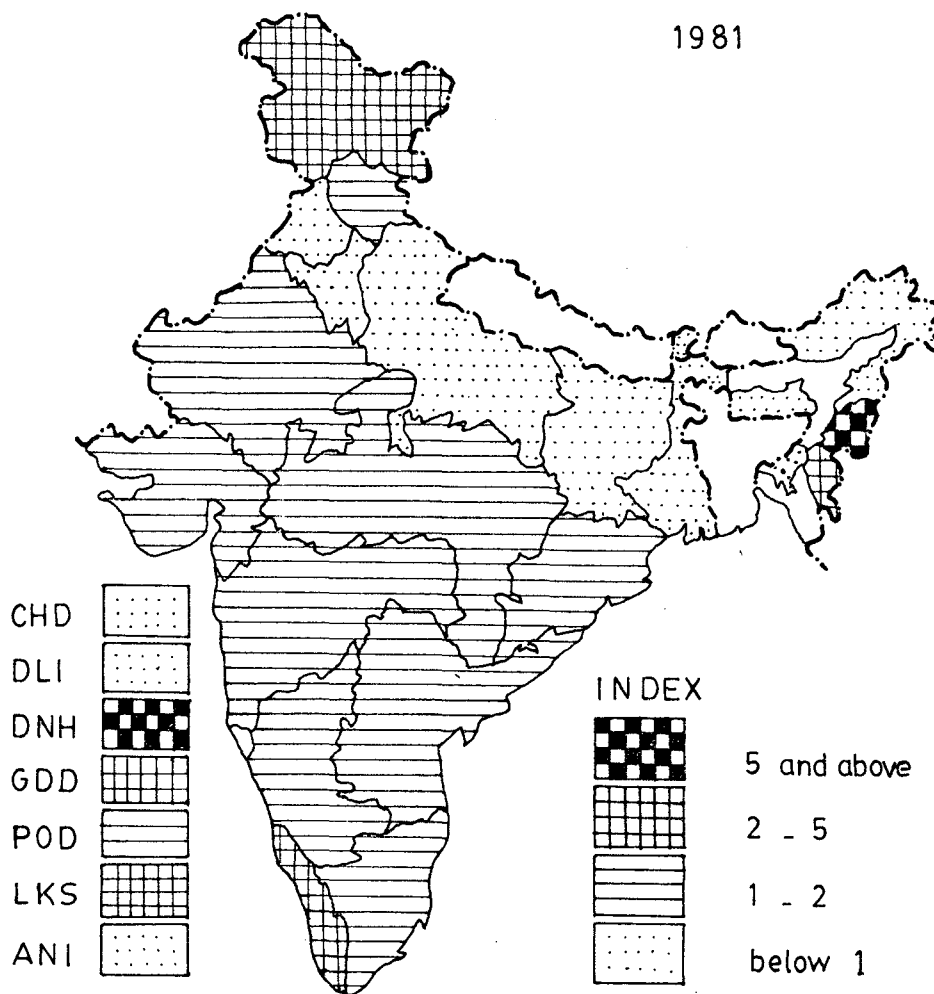
Percentage of urban female marginal workers to urban female population for India is very low, which is only 1.04 per cent. This may be because of the absence of part time jobs available for women in urban centres. Class intervals of ~~Map III-8~~ shows less regional variation compared with rural participation rates of marginal female workers. Only Manipur and Dadra Nagar Haveli show participation rate above 5 per cent.

Map-III.8 and Table-III.10 show that although proportion of urban female marginal workers to urban female

INDIA

PERCENTAGE OF FEMALE MARGINAL
WORKERS TO TOTAL FEMALES
(URBAN)

1981



MAP III.8

Table-III.10

Participation Rate of Urban Female Marginal Workers in States and Union Territories of India: 1981

Percentage	No. of states and union territories	Percentage of urban female workers in states and union territories to total marginal urban female work force
5 +	2	1.46
2 - 5	5	10.73
1 - 2	9	58.45
Below 1	14	29.36

Total	30	100.00

population is low in states of Rajasthan, Gujarat, Madhya-Pradesh, Maharashtra, Orissa, Andhra Pradesh, Karnataka and Himachal Pradesh, but these states are having high proportion of India's urban female marginal work force, which is around 58 per cent. Even the north Indian belt having very low participation rate of urban female marginal workers has around 30 per cent share in India's urban marginal female work force.

Thus women in urban areas, whenever they are part of work force, join only full time jobs. The category of

of marginal workers is mainly confined to the rural areas. It is also likely that enumeration of marginal workers, specially in the case of urban middle classes when women are doing some less remunerative part time odd household jobs (below their prestige), may be an underestimate.

III.11 Female Share in Urban Marginal Workers

Table-III.11

Percentage of Female Workers in Urban Marginal Work Force in States and Union Territories of India: 1981

Percentage	No. of states and union territories	Percentage of urban female workers in states and union territories to total urban marginal work force
80 +	4	21.48
70 - 80	4	22.34
60 - 70	9	23.99
40 - 60	8	32.04
Below 40	5	0.15

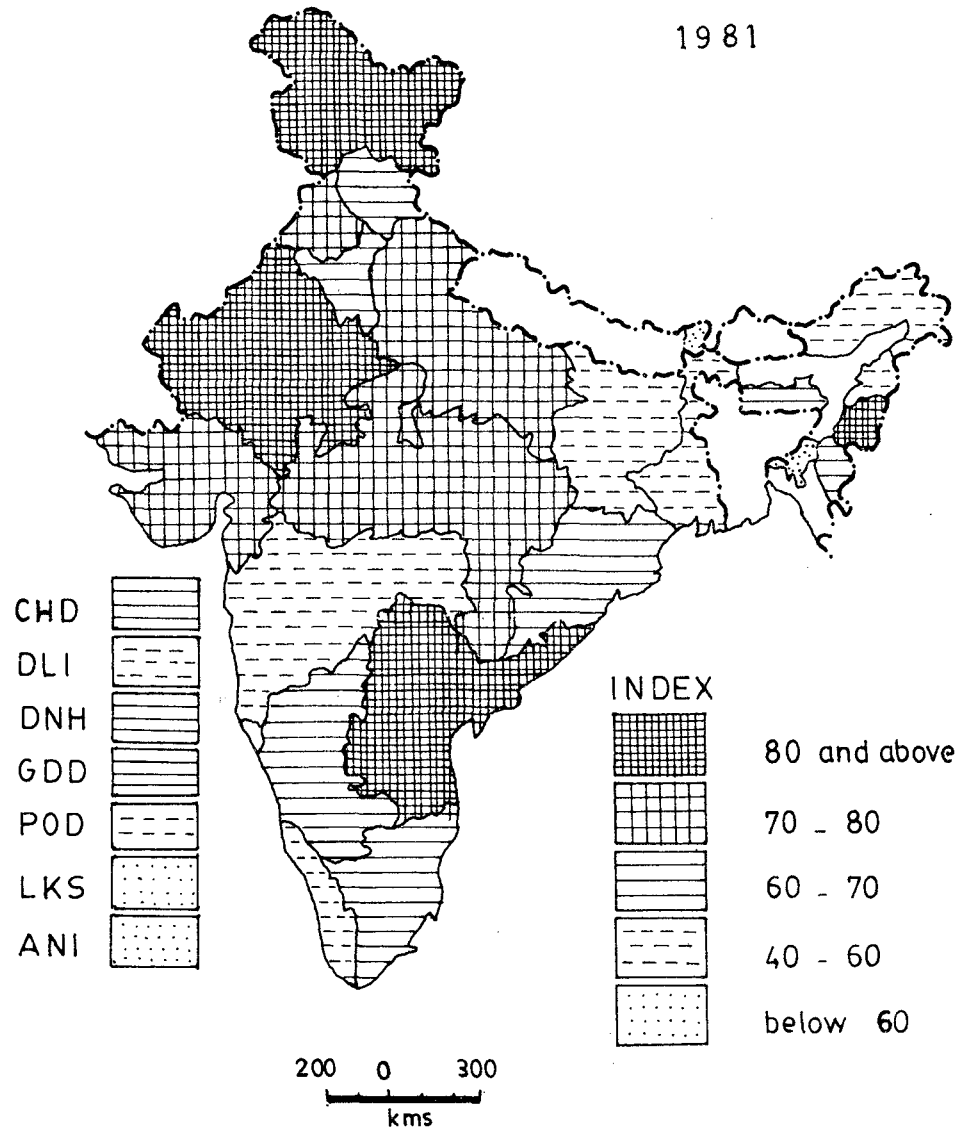
Total	30	100.00

Proportion of urban female marginal workers to total urban workers is recorded around 63 per cent, which is lower when compared with rural area. Map-III.9 shows that states of Jammu and Kashmir, Manipur, Rajasthan and Andhra Pradesh has female's share in urban marginal work

INDIA

PERCENTAGE OF FEMALES
IN TOTAL MARGINAL WORKERS
(URBAN)

1981



MAP III.9

force above 80 per cent and these four states together with Gujarat, Madhya Pradesh, Uttar Pradesh and Punjab where proportion of females in urban marginal work force ranges between 70 to 80 per cent, account for around 44 per cent of the country's urban marginal female work force. (See Table-III.11). Remaining 22 states and union territories out of total 30 with the share of females below 70 per cent in the urban marginal work force account for the remaining around 56 per cent of urban marginal work force (see Table-III.11).

III.12 Conclusion

From the forgoing discussion one can summarise that at the global level amongst the communist and advanced capitalist countries, female participation is higher in the former case. Possibly here it is the difference in political set-up which influences the participation rate. In the third world, Muslim countries with cultural norms and value system prohibiting the women's free movements outdoor, show a very low female participation rate. Even the disparity in male female participation is highest in these countries. Considering the case of India we find a declining trend in the female participation rate since the starting of the 20th century. Decline of handicrafts where most women found jobs and lack of skill required by the new industries led to the decline of female employment.

A look at the geographical distribution of female working population in India shows that female participation rate is high in the north-east region having the concentration of tribal population, though these areas represent a very small proportion of the total female labour force. Around 75 per cent of the total female workers comes from peninsular India, where compared to north India with low female participation rate, proportion of tribal population is higher and which was also comparatively less influenced by the Islamic culture. Distribution of female workers in rural and urban India separately also show the similar trend. It is the north east and peninsular India which has the higher participation rate and concentration of female main workers. But the overall female participation rate and regional diversities are higher in rural areas as compared with urban areas.

Female participation rate of marginal workers is also higher in rural areas (around 7 per cent) as compared with urban areas (around 1 per cent). In fact around 85 per cent of the rural marginal workers are females. Distribution pattern of marginal female workers is slightly different than that of main workers. The higher participation rate and concentration of female marginal workers is in Jammu and Kashmir, Himachal Pradesh and central India followed by south India in rural areas, and

to substantial extent in urban areas. Another common feature is that participation rate of female marginal workers is lowest in the three north Indian states of Uttar Pradesh, Bihar and West Bengal in both urban and rural areas.

FEMALE PARTICIPATION IN ECONOMIC ACTIVITY:
A MICRO LEVEL SPATIAL ANALYSIS

In the previous chapter we have seen inter-state variations in the female participation rates. We found that north India is the region with relatively low female participation rate as compared with north-eastern and southern states. But there exist wide variations in female work participation even in northern India. On the one side there are certain hilly districts of Uttar Pradesh and Himachal Pradesh where female participation rate is very high and in some cases touches the figure of 50 per cent. On the other side, female participation rate is below 2 per cent in most districts of Punjab. With reference to our study area of three states viz. Punjab, Haryana and Himachal Pradesh, we find quite different patterns of female work participation in economic activity in rural areas. The Punjab where agriculture is developing very fastly, is having only 1.72 per cent of the total women as workers.

It is very difficult to identify the exact reasons behind such a low level of participation. This low participation is in spite of the fact that around one-fourth of

the population in the state is scheduled caste population and they are mainly landless labourers. An important reason might be the increasing mechanisation in agriculture, which reduced the man power requirement, and also women's inability to handle the mechanical tools.

But in addition to demand factor, supply factor may also be an important reason responsible for low female participation rate. With the increase in irrigational facilities and introduction of high yielding varieties, agricultural production increased many a times. Because of this, the general rising level of income might have led to the withdrawal of women as well as of men from manual work.

Similarly, Haryana is also having low female participation rate (4.89 per cent) compared with Himachal Pradesh, which is having 19.38 per cent females as part of the work force. So the Punjab and Haryana, with a plain topography and well developed agriculture, present a quite contrary picture compared to a hilly state, where agricultural productivity is very low, farm size relatively small and with no proper irrigation system. Due to all these reasons, agricultural system is quite different in Himachal Pradesh. All the agricultural operations are carried on by the traditional methods, which require human labour in large number. So the family labour including children and

women fulfil the labour requirement. Moreover, the hilly areas have totally different socio-cultural environment which is conducive for female's participation in economic activities.

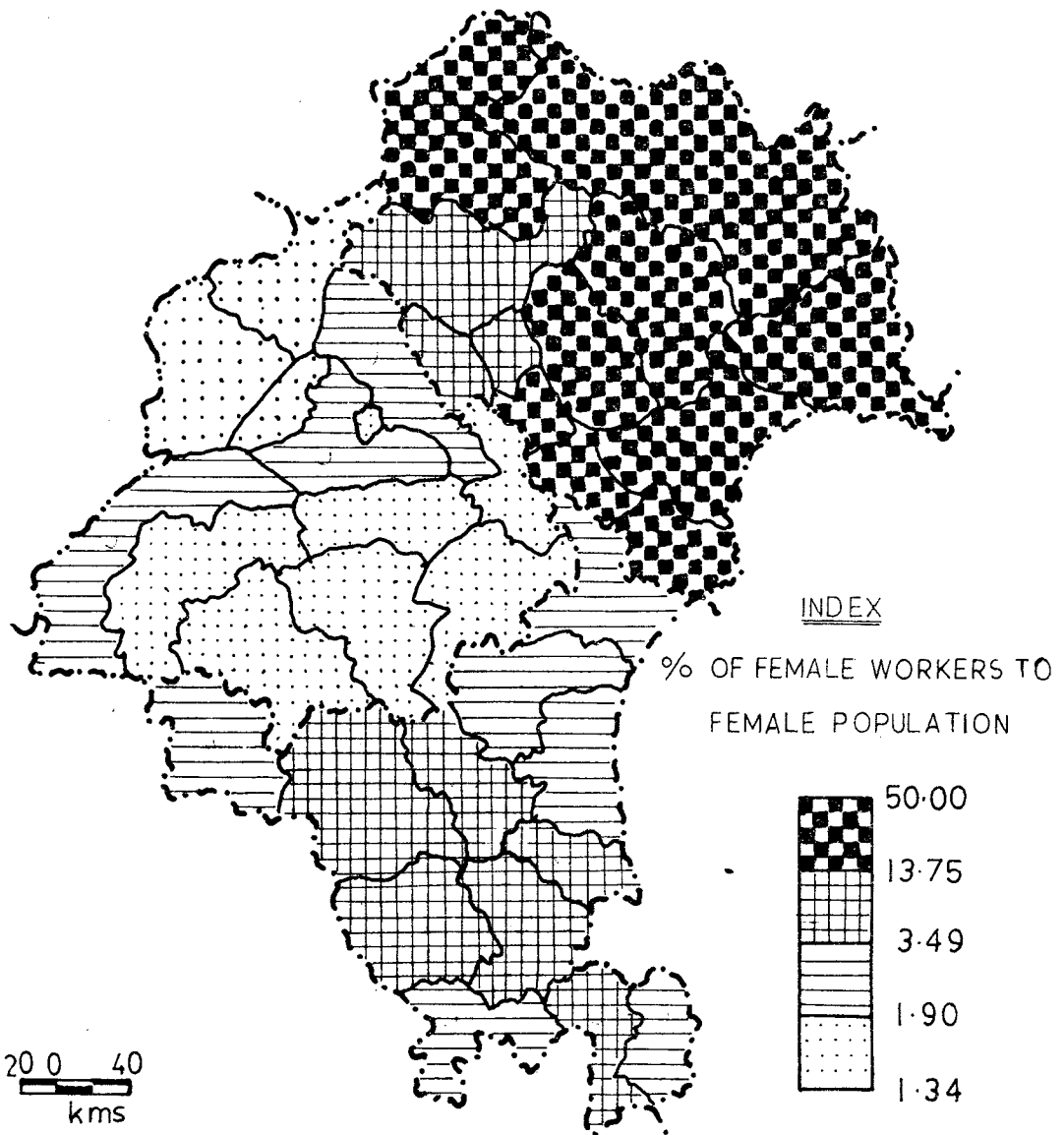
IV.1 District-Level Pattern (Rural)

Map-IV.1 showing the rural female participation rate brings out quite diversified pattern at the district level. It shows that most of the districts of Himachal Pradesh, except Kangra, Una and Hamirpur, have female participation varying between around 13 per cent to 50 per cent (see Table-IV.1). Percentage of female workers to female population is as high as 50 per cent for Lahul Spiti district and for Kinnaur it is 46.77 per cent. But it is very low for Una district of Himachal Pradesh, which is only 3.59 per cent. Whereas all the districts of Punjab have female participation rate even below this.

Census data for districts of Punjab and Haryana shows less intra state variability in rural female participation rate compared with districts of Himachal Pradesh (see Appendix-A.IV.1). Map-IV.1 shows that none of the districts of Punjab and Haryana belong to the highest percentage category of female participation rate. Map also shows that all the districts of Haryana and only Hoshiarpur, Jalandhar and Ferozpur districts of Punjab have female

FEMALE PARTICIPATION RATE (1981)

RURAL



MAP IV.1.

Table-IV.1

Rural Female Work Participation Rate in Districts of Punjab
Haryana and Himachal Pradesh 1981

Participation Rate (percentage)	Districts
13.75 - 50.00	Lahaul & Spiti, Kinnaur, Simla, Kulu, Mandi, Sirmaur, Bilaspur, Solan and Chamba.
3.49 - 13.75	Hamirpur, Bhiwani, Kangra, Soni- pat, Rohtak, Jind, Hissar, Gurgaon and Una.
1.90 - 3.49	Faridabad, Karnal, Sirsa, Mahendra- garh, Kurukshetra, Jalandhar, Ferozepur, Hoshiarpur, Ambala.
1.34 - 1.90	Rupnagar, Amritsar, Ludhiana, Kapurthala, Faridkot, Sangrur, Bathinda, Gurdaspur, Patiala.

participation rate above 2 per cent and all other districts of Punjab have female participation rate even below 2 per cent.

Whereas hilly districts of Himachal Pradesh where population density is quite low and farming is difficult, have high female participation rate, compared with valley areas, which have intensive cultivation on irrigated land and density of population is comparatively high in these areas.

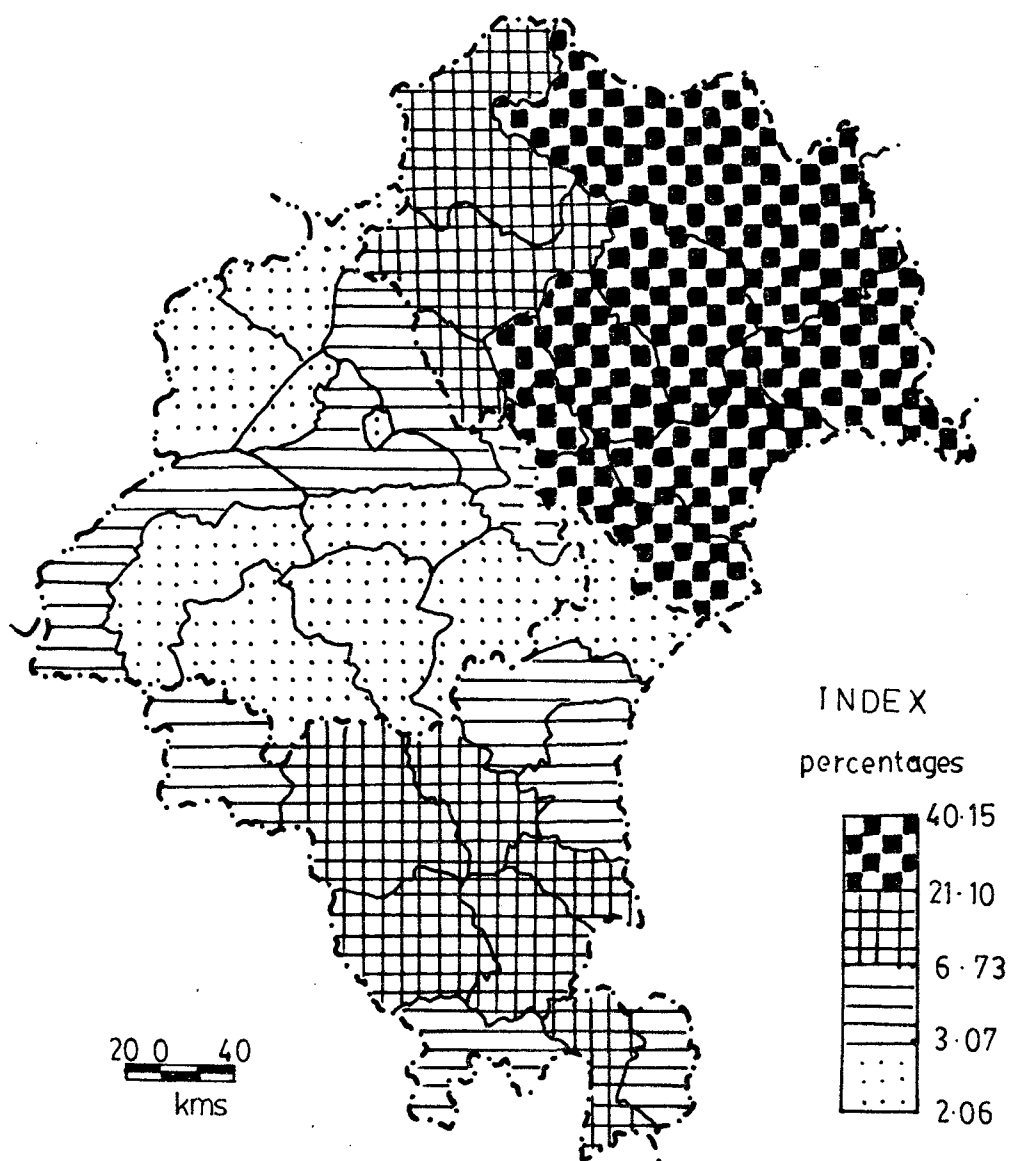
IV.2 Share in the Workforce

Proportion of female workers in rural workforce is also lower for Punjab, and Haryana (2.76 and 8.09 per cent respectively) as compared with Himachal Pradesh (28.03 per cent). It also brings out that proportion of female workers in rural workforce is higher than the proportion of female workers to their population. As it appears from Map-IV.2, there are very small variations in female's share in work force in the districts of Punjab as compared with Haryana. Still higher variations exist in the districts of Himachal Pradesh. Kinnaur district of Himachal Pradesh has 40.15 per cent share of female workers in the rural workforce, whereas Una district has only 7.86 per cent (see Appendix-A, IV.1).

A glance at map-IV.2 reveals that all the districts of Himachal Pradesh except Chamba, Kangra and Una, have high share of females in rural workforce, ranging between 21.10 to 40.15 per cent. The remaining districts of Himachal Pradesh and Hissar, Bhiwani, Jind, Sonapat, Rohtak and Gurgaon districts of Haryana have female's share in workforce ranging between 6.73 and 21.10 per cent. All other districts of Punjab and Haryana (except Gurgaon) have female's share in rural workforce even less than 6 per cent. Except Hoshiarpur, Jalandhar and Ferozpur districts of Punjab, all other districts have female's share in workforce even below 3 per cent.

FEMALE WORKERS AS PERCENTAGE
TO ALL WORKERS (RURAL)

1981



MAP IV.2

Table-IV.2

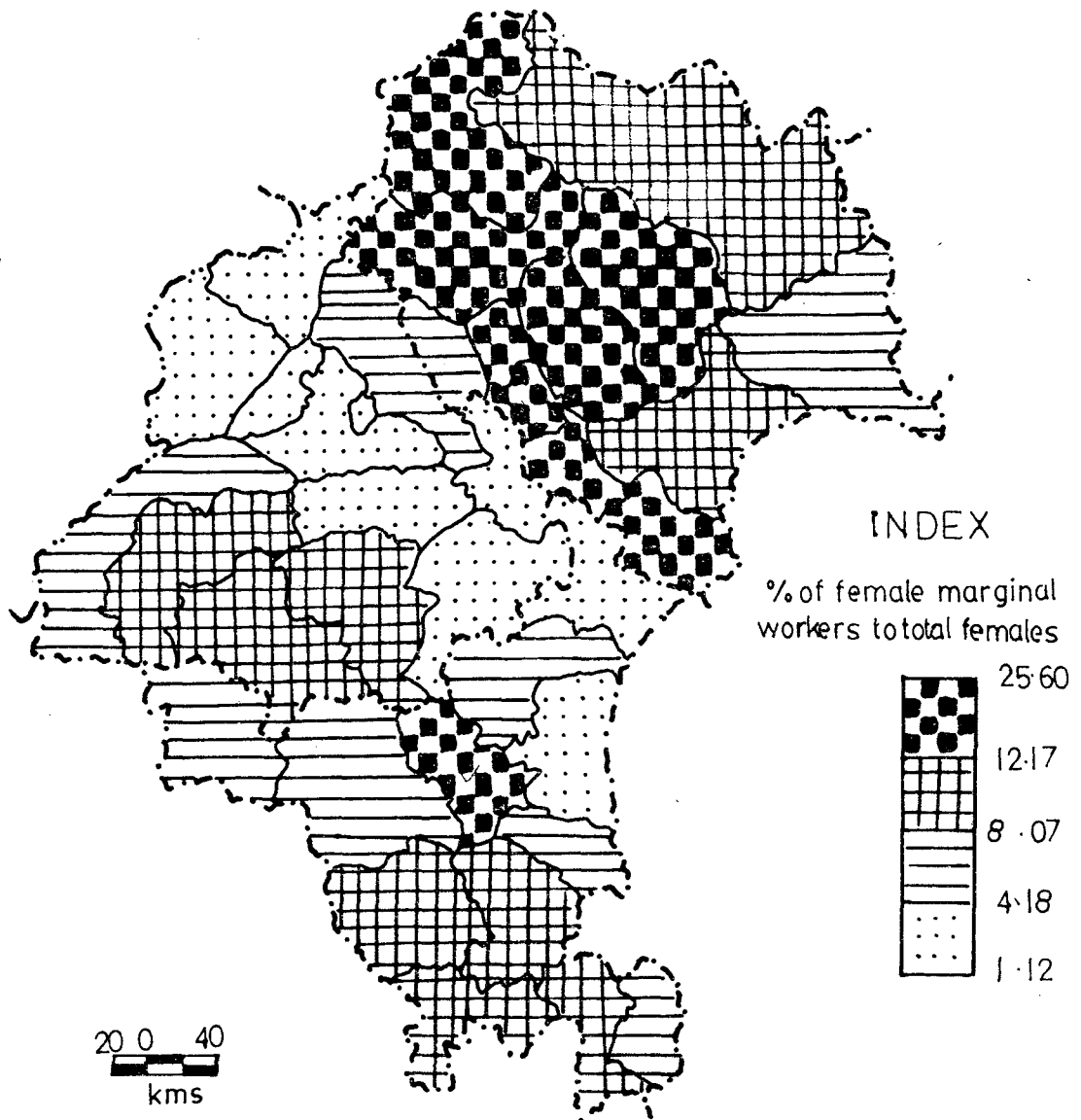
Percentage of Rural Female Workers to Rural Workers in
Districts of Punjab, Haryana and Himachal Pradesh 1981

Percentage	Districts
21.10 - 40.15	Kinnaur, Simla, Mandi, Kulu, Lahul Spiti, Hamirpur, Bilaspur, Solan, Sirmaur.
6.73 - 21.10	Chamba, Kangra, Bhiwani, Sonipat, Rohtak, Jind, Hissar, Una, Gurgaon.
3.07 - 6.73	Faridabad, Karnal, Mahendra- garh, Sirsa, Hoshiarpur, Jalandhar, Kurukshetra, Ferozepur, Ropar.
2.06 - 3.07	Ambala, Kapurthala, Amritsar, Ludhiana, Gurdaspur, Farid- kot, Sangrur, Bathinda, Patiala.

IV.3 Female Marginal Workers

Participation rate of rural female marginal workers is higher in Punjab and Haryana than the participation rate of female main workers. There exists less variation in participation rate of female marginal workers among these states, i.e. 5.18, 7.14 and 13.98 per cent for Punjab, Haryana and Himachal Pradesh respectively. Map.IV.3 indicates the distribution of participation rates of female marginal workers. It shows that most of the districts of Himachal Pradesh except Lahul Spiti, Simla, Kinnaur and Una have high participation rate of female marginal workers ranging between 12.77 per cent and 25.60 per cent. Only one district of Haryana belongs to this category (see Table-IV.3). It seems that the districts of Himachal Pradesh, which have high female participation rate of main workers, have lower female participation of marginal workers, viz. Lahul Spiti, Kinnaur and Simla. Whereas Southern districts of Haryana and Faridkot, Bathinda and Sangrur districts of Punjab have female participation rate as marginal workers ranging between 8 per cent to 12 per cent. This relatively high participation rate of female marginal workers in these districts is possibly explained by the specific cropping pattern of this region. These districts of Punjab and Haryana are main cotton growing districts. Cotton picking being mainly the women's job, they get employment during

FEMALE MARGINAL WORKERS (RURAL) 1981



MAP IV.3

Table-IV.3

Rural Female Work Participation as Marginal Workers
in Districts of Punjab, Haryana, Himachal Pradesh
in 1981

Percentage	Districts
12.17 - 25.60	Chamba, Hamirpur, Bilaspur, Mandi, Solan, Kulu, Uind, Kangra, Sirmaur.
8.07 - 12.17	Lahul Spiti, Mahendragarh, Bhiwani, Bathinda, Simla, Rohtak, Gurgaon, Faridkot, Sangrur.
4.18 - 8.07	Sonipat, Una, Ferozepur, Kurukshetra, Hissar, Faridabad, Hoshiarpur, Sirsa, Kinnaur.
1.12 - 4.18	Ludhiana, Ropar, Jalandhar, Karnal, Amritsar, Patiala, Kapurthala, Gurdaspur, Ambala.

cotton picking season which provides employment for around two months thus enabling them to be enumerated as marginal workers. Ambala and Karnal districts of Haryana and the remaining districts of Punjab except Hoshiarpur and Ferozepur have female's marginal participation even below 4 per cent.

IV.4 Share in Marginal Work Force

Proportion of rural female marginal workers to total rural marginal work force is slightly higher for Punjab and Haryana compared to Himachal Pradesh, i.e. 85.37, 84.41 and 81.08 per cent respectively (see Appendix-A.IV.1).

It is very clear from these figures that in these areas marginal workers category is mainly confined to women only. Female's share in rural marginal work force is the highest in Faridkot (91.56 per cent) district of Punjab. All the districts of Punjab except Gurdaspur and Hoshiarpur have female's share in marginal work force above 80 per cent. Map-IV.4 shows that the dry belt comprising Sirsa, Bathinda and Faridkot districts have high female's share in rural marginal work force (i.e. above 90 per cent). All the districts of Haryana except Ambala, Sonipat and Rohtak have above 85 per cent share of female marginal workers in the total marginal work force (see Table-IV.4).

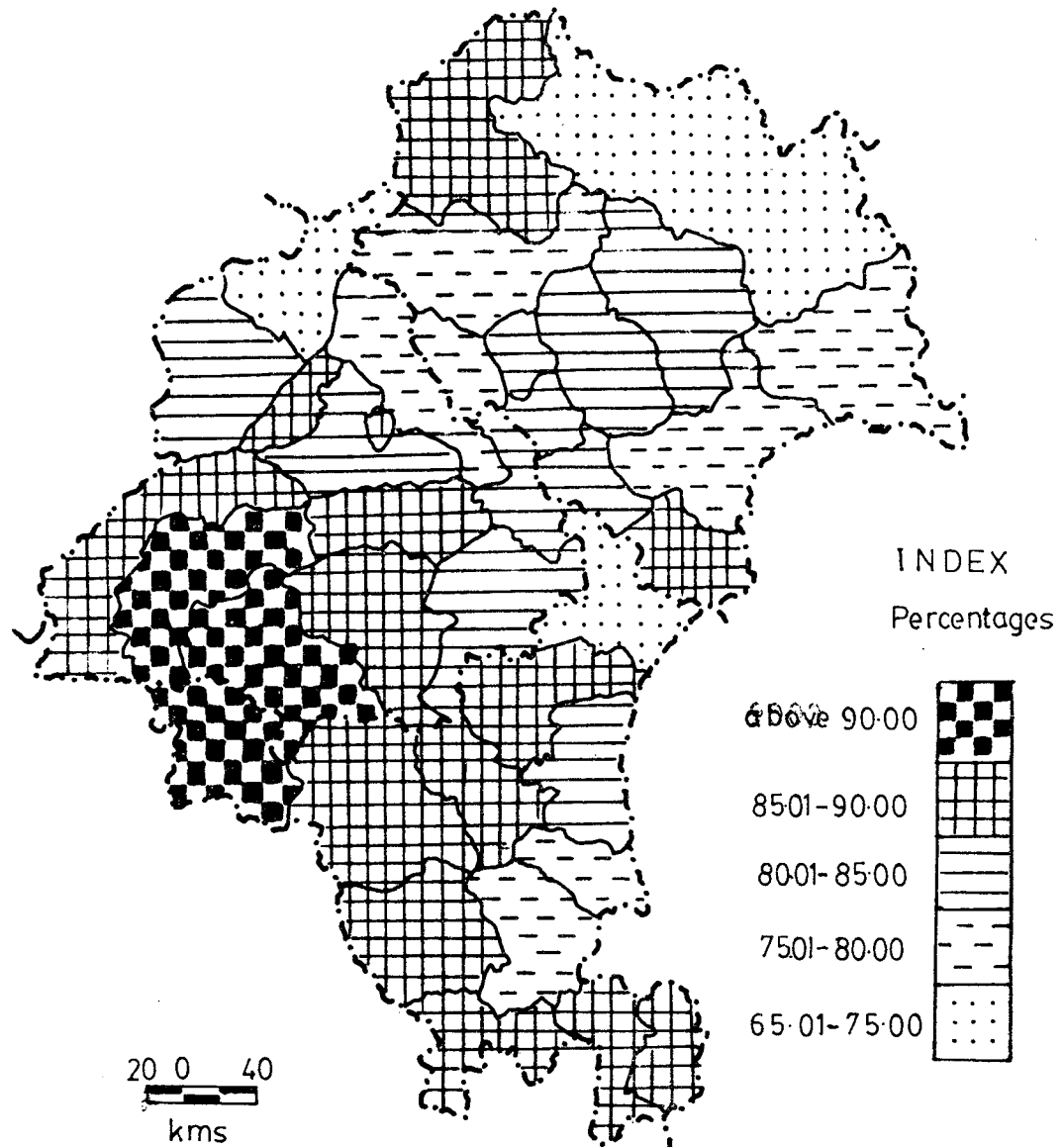
Table-IV.4

Percentage of Rural Female Marginal Workers to Total Rural Marginal Workers in Districts of Punjab, Haryana and Himachal Pradesh 1981

Percentage	No. of Districts	Districts
Above 90.00	3	Faridkot, Bathinda, Sirsa.
85.01-90.00	13	Kapurthala, Sangrur, Ludhiana, Jind, Faridabad, Hissar, Ferozepur, Sirmour, Kurukshetra, Gurgaon, Mahendragarh, Chamba, Bhiwani.
80-01-85.00	10	Patiala, Solan, Karnal, Kulu, Hamirpur, Ropar, Mandi, Jalandhar, Bilaspur, Amritsar.
75.01-80.00	7	Rohtak, Kinnaur, Kangra, Sonipat, Una, Simla, Hoshiarpur.
65.01-75.00	3	Gurdaspur, Lahul Spiti, Ambala
Total	36	

FEMALE MARGINAL WORKERS AS %
TO ALL MARGINAL WORKERS

(RURAL) 1981



MAP IV.4

Data shows that in Ambala, Gurdaspur and Lahul Spiti districts, male's share in marginal work force increases, which is more than one fourth. Compared with Punjab and Haryana, Himachal Pradesh has low share of marginal female workers (see Appendix.A.IV.1) where most women work throughout the year.

IV.5 Urban Female Participation

Urbanisation is generally considered as responsible for lower female work participation. Some scholars are of the opinion that higher male earnings in urban areas lead to withdrawal of females from the work force. But it is not the supply factor which brings down the participation rate. Infact the demand factor is more important. The changed production structure demands different type of labour force, for which women do not fit having traditional skill and lower educational level etc. Therefore, they cannot compete in the urban labour market.

However, in our study, Punjab presents quite contrary picture. It is having higher urban participation rate i.e. 3.71 compared to its rural female participation rate of 1.72 per cent. It might be because of higher urban literacy rate that women are able to get jobs in various fields such as teaching, medical and various other office jobs.

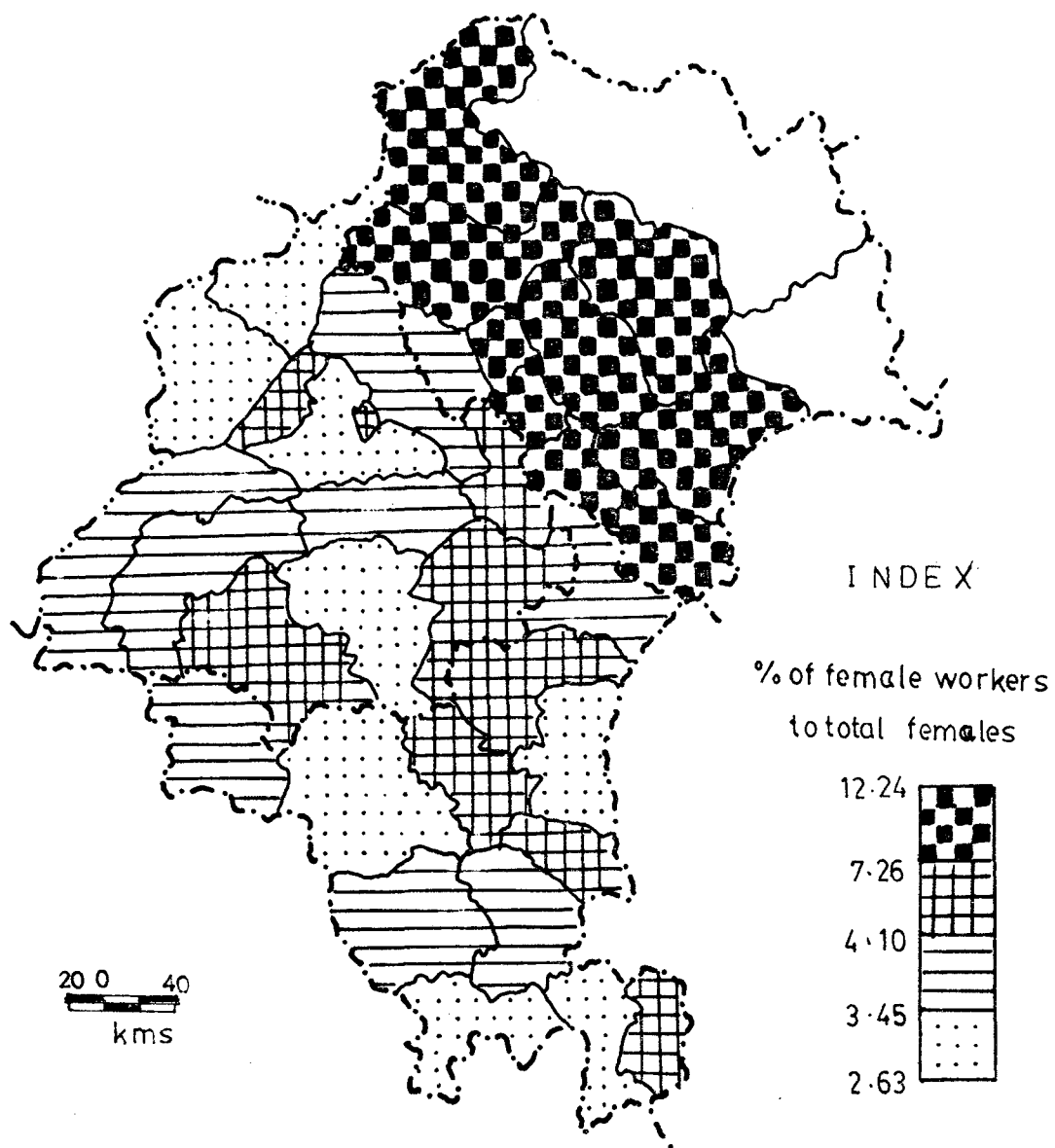
But inspite of the fact, Punjab still holds the lower position compared to Haryana and Himachal Pradesh regarding the urban female participation rate which is 3.71, 4.47 and 9.59 per cent respectively. We can also see that urban female participation rate is still higher in Himachal Pradesh even compared to the rural female participation rate in Punjab and Haryana (see Appendix-A.IV.1). This may be because of the traditional attitude towards women's employment in these states. Moreover, in Himachal Pradesh, primary sector still predominates in urban areas which can still absorb, the female population.

Urban areas show less variability in female participation rate compared to rural areas. Urban participation rate of female population ranges between 12.24 per cent for Simla and 2.63 per cent for Hissar (see Appendix-A.IV.1).

Map-IV.5 clearly brings out that all the districts of Himachal Pradesh, except Una district (Lahul Spiti and Kinnaur districts do not have urban population) have urban female participation rate above 7 per cent, and none of the districts of Punjab and Haryana belong to this category. Bathinda, Patiala, Ropar and Kapurthala districts of Punjab and Kurukshetra, Jind, Sonapat and Faridabad districts of Haryana have female participation ranging between 4 to 7 per cent. All other districts of Punjab and Haryana have female participation in urban areas even less than 4 per

FEMALE PARTICIPATION RATE

(URBAN) 1981



MAP IV.5

cent (see Table-IV.5). But at the same time all the districts of Punjab have higher urban female participation rate compared to rural female participation rate, which is quite a opposite trend compared to other states.

Table-IV.5

Urban Female Work Participation Rate in Districts of Punjab, Haryana, and Himachal Pradesh 1981.

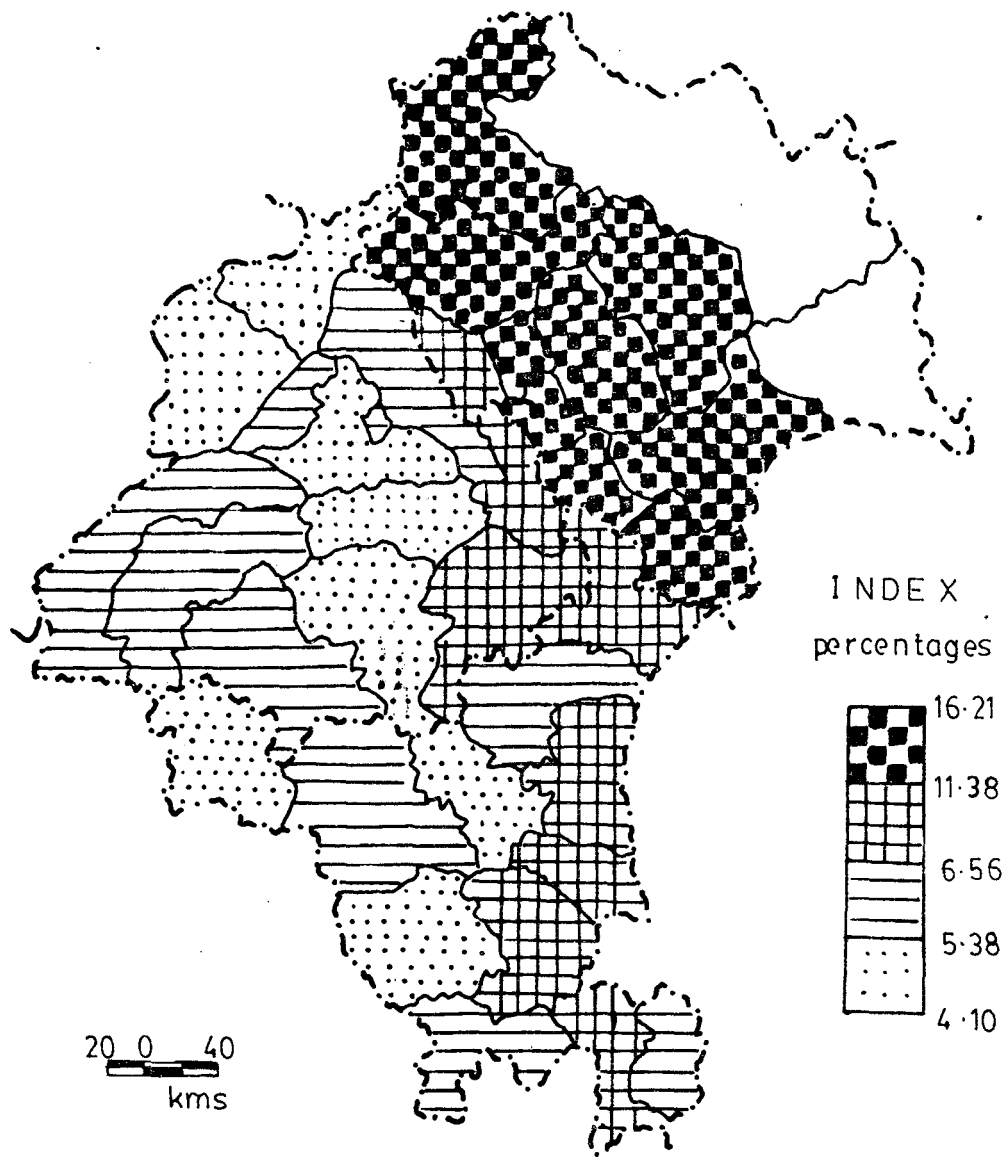
Percentage	Districts
7.26 - 12.24	Simla, Bilaspur, Kulu, Chamba, Kangra, Solan, Hamirpur, Mandi and Sirmaur.
4.10 - 7.26	Rupnagar, Patiala, Kurukshetra, Jind, Sonapat, Faridabad, Bathinda and Kapurthala.
3.45 - 4.10	Rohtak, Sirsa, Hoshiarpur, Ferozepur, Una, Ambala, Ludhiana, Faridkot and Bhiwani.
2.63 - 3.45	Sangrur, Jalandhar, Amritsar, Gurgaon, Gurdaspur, Karnal, Mehentragarh and Hissar.

IV.6 Share in Urban Work Force

Proportion of urban female workers to urban work force is also low in Punjab and Haryana vis-a-vis Himachal Pradesh. All the districts of Himachal Pradesh except Una, have higher share of female workers in the urban work force, ranging between 11.38 to 16.21 per cent (see Map-IV.6 and Appendix-A.IV.1). None of the districts of

FEMALE WORKERS AS PERCENTAGE
TO ALL WORKERS (URBAN)

1981



MAP IV.6

Punjab and Haryana belong to this highest percentage category. Map-IV.6 shows that except Ropar and Patiala districts of Punjab and Ambala, Karnal, Sonipat, Rohtak and Gurgaon districts of Haryana, all other districts have female's share in urban work force lower than 6 per cent. But at the same time all the districts of Punjab have higher share of urban female workers in the work force compared to the rural female's share in work force (Table-IV.6).

Table-IV.6

Percentage of Urban Female Workers to Total Urban Workers in Districts of Punjab, Haryana and Himachal Pradesh 1981

Percentage	Districts
11.38 - 16.21	Bilaspur, Kangra, Chamba, Hamirpur, Solan, Simla, Kulu, Mandi, Sirmaur.
6.56 - 11.38	Ropar, Patiala, Karnal, Rohtak, Sonipat, Gurgaon, Ambala, Una.
5.38 - 6.56	Hoshiarpur, Bathinda, Kapurthala, Ferozpur, Kurukshetra, Faridkot, Mehendragarh, Hissar, Faridabad
4.10 - 5.38	Gurdaspur, Sangrur, Ludhiana, Jalandhar, Jind, Amritsar, Bhiwani, Sirsa.

IV.7 Female Marginal Workers (Urban)

Participation rate of females as marginal workers is very low in urban areas as compared with rural areas (see (Appendix-A.IV.1)). Low extent of variation is found

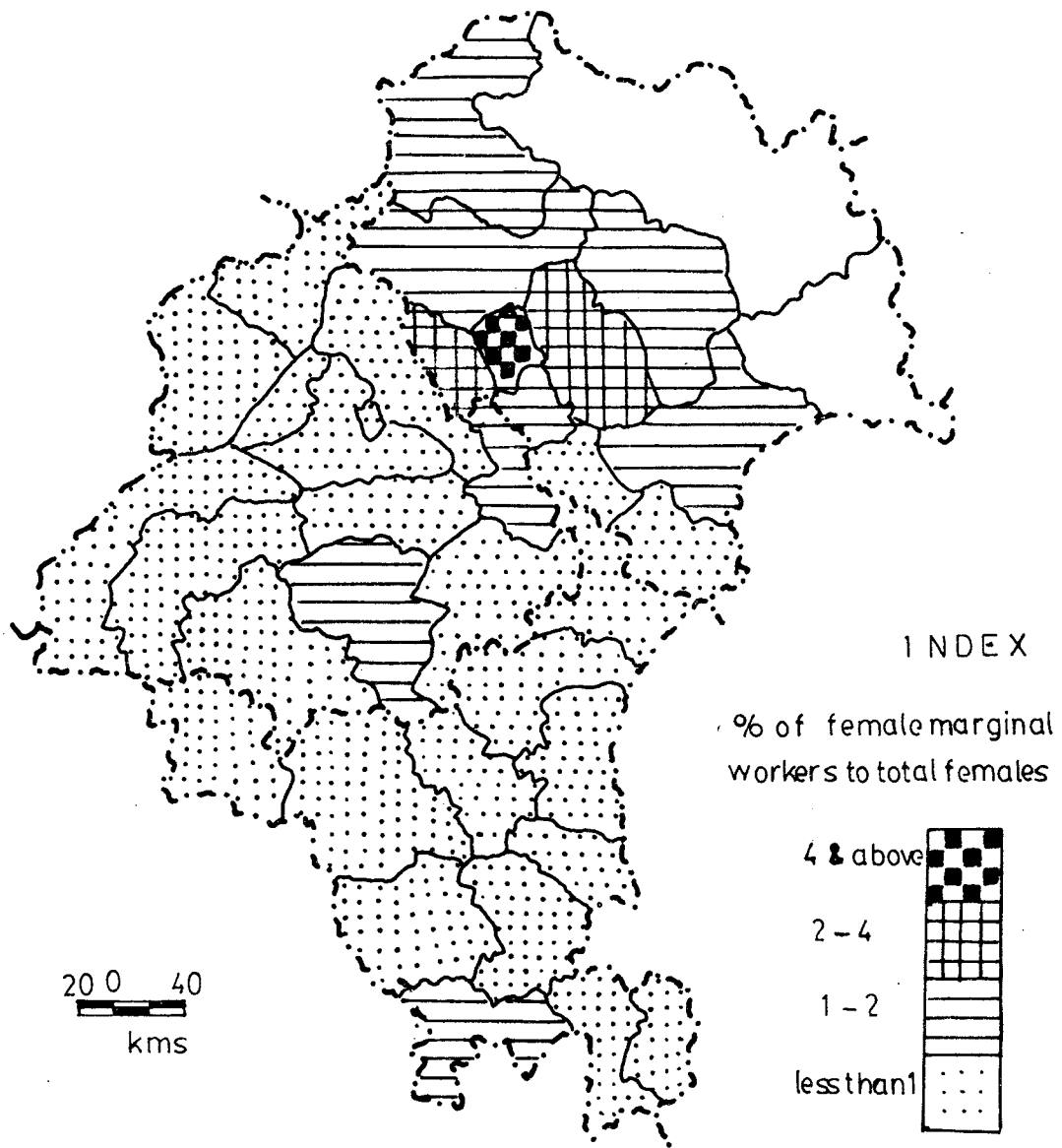
among the states. In Punjab and Haryana, the participation level of female marginal workers is very low (i.e. even less than half per cent of urban population). Participation rate of urban female marginal workers is 1.67 per cent in Himachal Pradesh. Map-IV.7 shows that except two districts of Punjab (Ropar and Sangrur) and one district of Haryana (Mahendragarh) all other districts have marginal participation rate less than one per cent. It means very low variation is found compared to Himachal Pradesh. Hamirpur is the only district of Himachal Pradesh having marginal participation rate above 4 per cent and two districts of Mandi and Una are having between 2 to

Table-IV.7

Urban Female Participation Rate of Marginal Workers in Districts of Punjab, Haryana and Himachal Pradesh 1981

Percentage	No. of Districts	Districts
< 1	23	Gurdaspur, Amritsar, Ferozepur, Ludhiana, Jalandhar, Kapurthala, Hoshiarpur, Patiala, Bathinda, Faridkot, Ambala, Kurukshetra, Jind, Karnal, Sonapat, Rohtak, Faridabad, Gurgaon, Bhiwani, Hissar, Sirsa, Solan, Sirmaur.
1 - 2	8	Rupnagar, Sangrur, Mahendragarh, Chamba, Kangra, Bilaspur, Kulu, Simla.
2 - 4	2	Una and Mandi.
4 and above	1	Hamirpur
Total	34	

FEMALE MARGINAL WORKERS (URBAN) 1981



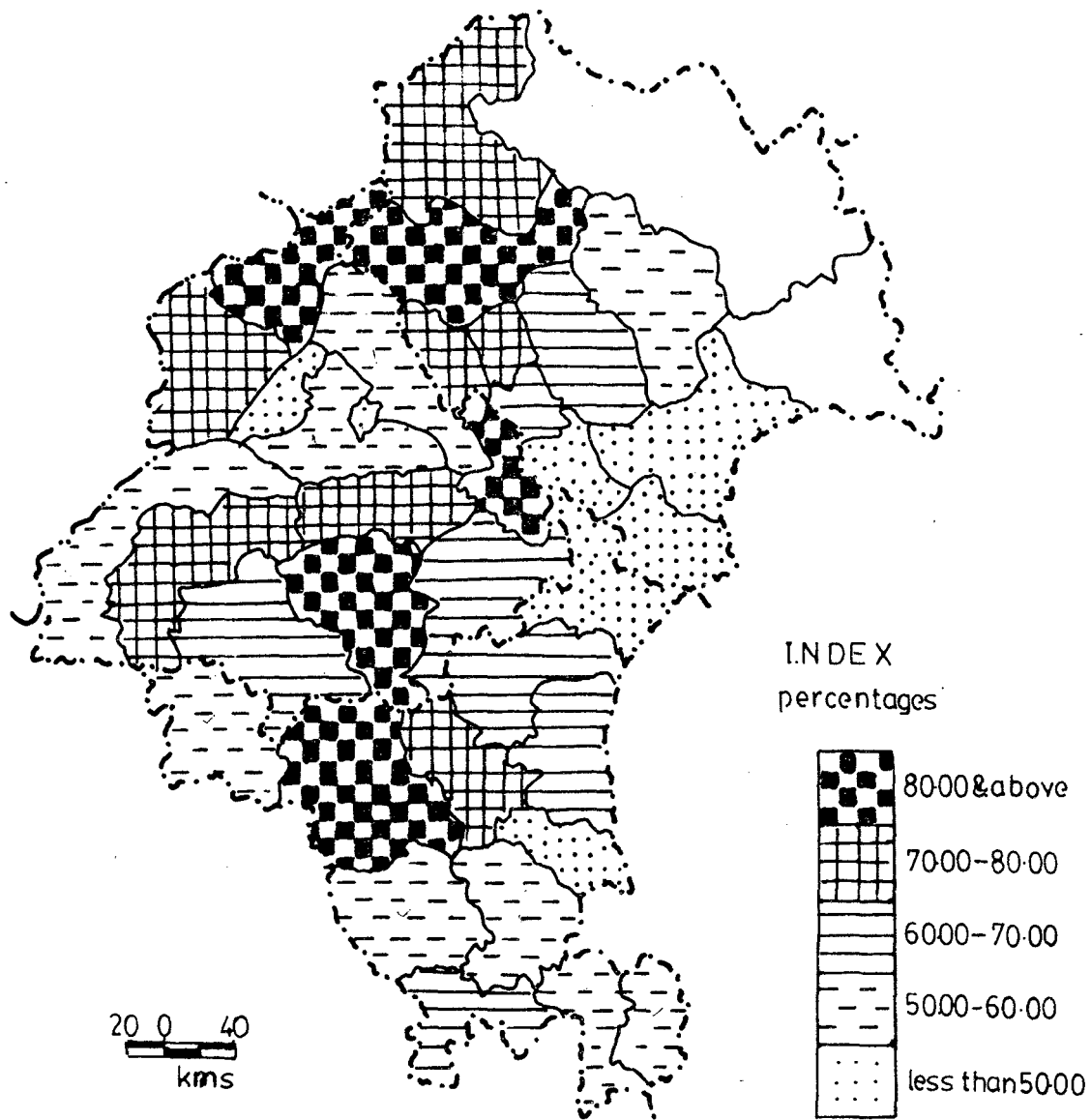
MAP IV. 7

4 per cent. All other districts of Himachal Pradesh have female participation of marginal workers below 2 per cent. Table-IV.7 also shows that 23 districts out of 34 districts have marginal participation rate of urban female workers even less than 1 per cent, and in the case of 8 districts it ranges between 1 to 2 per cent.

IV.8 Share in Marginal Work Force

Proportion of female marginal workers in the total urban marginal work force is high in Punjab (71.68 per cent) compared to that of Haryana and Himachal Pradesh (i.e. 60.30 and 63.56 per cent respectively). Map-IV.8 showing distribution of share of females in urban marginal work force, presents higher inter-district variation compared to the participation rate of marginal female workers. Gurdaspur, Ropar and Sangrur districts of Punjab, Hissar district of Haryana and Kangra district of Himachal Pradesh account for above 80 per cent share of female marginal workers. On the other hand, Simla, Solan and Sirmour district of Himachal Pradesh, Ambala and Sonapat districts of Haryana and Kapurthala district of Punjab have share of female marginal workers less than 50 per cent. Female's share in urban marginal work force is lower as compared to female's share in rural work force. Table-IV.8 shows that 15 districts out of 34 districts account for even less than 60 per cent share, whereas in rural areas most of the

FEMALE MARGINAL WORKERS AS %
TO ALL MARGINAL WORKERS
(URBAN) 1981



MAP IV. 8

districts had more than 60 per cent share of female marginal workers in the total marginal work force.

Table-IV.8

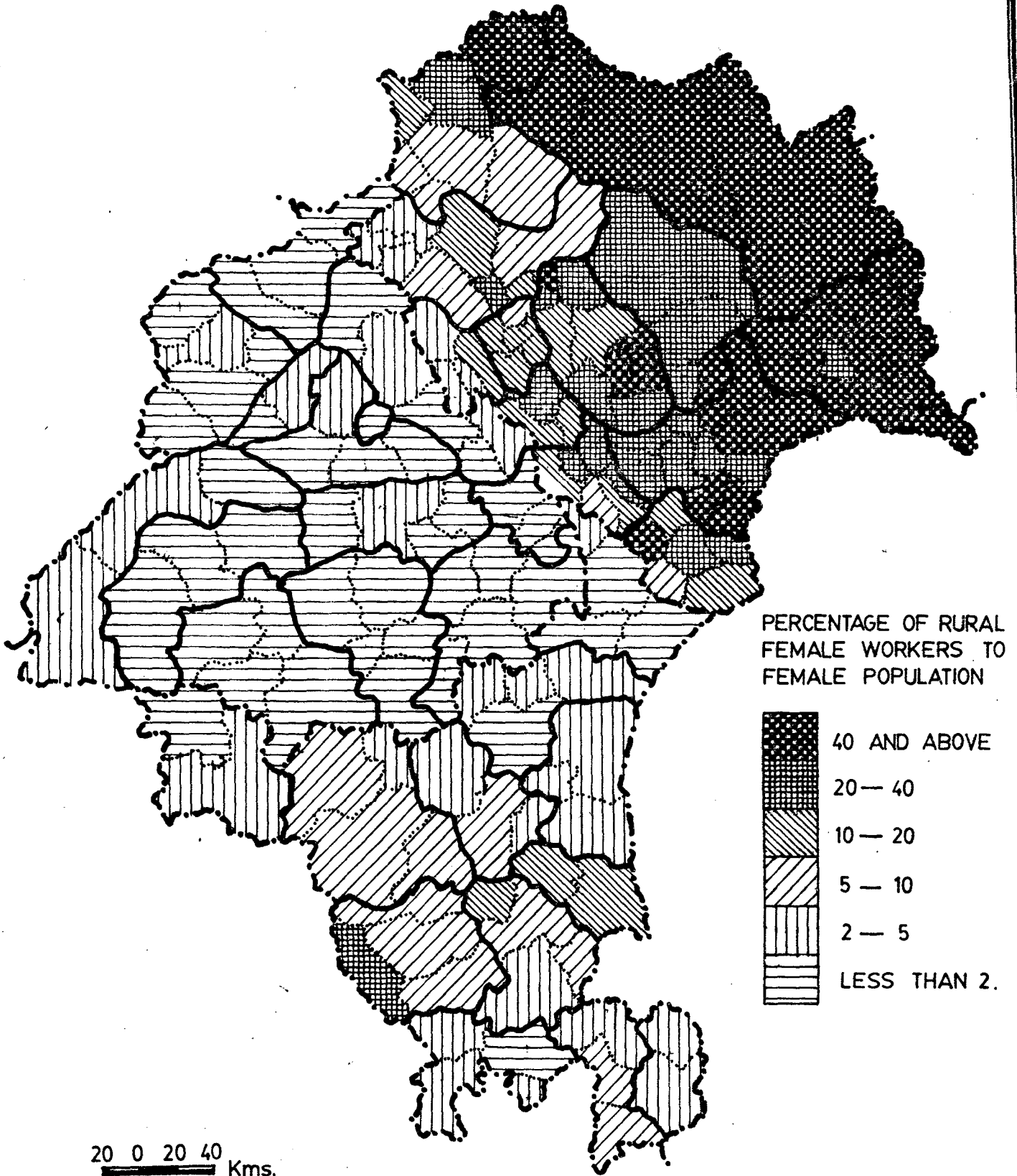
Share of Female Marginal Workers in Urban Marginal Work Force in Districts of Punjab, Haryana and Himachal Pradesh 1981

Percentage	No. of Districts	Districts
< 50	6	Kapurthala, Ambala, Sonapat, Simla, Solan and Sirmaur.
50 - 60	9	Ferozepur, Jalandhar, Hoshiarpur, Rohtak, Faridabad, Gurgaon, Bhiwani, Sirsa, Kulu.
60 - 70	7	Patiala, Bathinda, Kurukshetra, Karnal, Mahendragarh, Bilaspur, Mandi.
70 - 80	7	Amritsar, Ludhiana, Faridkot, Jind, Chamba, Una, Hamirpur.
80 and above	5	Gurdaspur, Rupnagar, Snagrur, Hissar, Kangra.
Total	34	

IV.9 Tehsil Level Pattern of Female Participation (Rural)

Tehsil-level map (IV.9) of rural female participation in work shows great extent of diversity compared to the district level map. All tehsils of Lahul Spiti and Kinnaur districts except one tehsil and most of the

FEMALE PARTICIPATION RATE (RURAL — 1981)



20 0 20 40
Kms.

MAP 179

tehsils of Simla have female participation rate above 40 per cent. Whereas some tehsils of Himachal Pradesh adjoining Punjab state show very high diversity and comparatively low level of female participation rates. On the other hand Punjab and Haryana have very low female participation even at the tehsil level. Only one tehsil of Bhiwani district of Haryana belong to the second category ranging between 20 to 40 per cent female participation rates, whereas all other tehsils of Haryana (except 2 tehsils of Sonipat and one tehsil of Rohtak districts) have female participation even less than 10 per cent. But at the same time, it seems that as we go down from state to district level and still when we take tehsil as a unit, female participation level increases in some lower level units. There exists great variation in the female participation rates at tehsil level. It varies between 1.10 to 56.75 per cent (see Appendix-A.IV.2). But on the other hand all tehsils of Punjab have female participation rate below 5 per cent. Even at the tehsil level it shows very low female participation and less variation.

Figure-IV.1 shows the concentration level of female participation at the tehsil level. Forty-four out of total 157 tehsils have female participation rate even below 2 per cent. These are mainly in Punjab, very few in Haryana and none of them is found in Himachal Pradesh (see Map-IV.9). Another 33 tehsils are having female participation

RURAL

FIG. IV.1

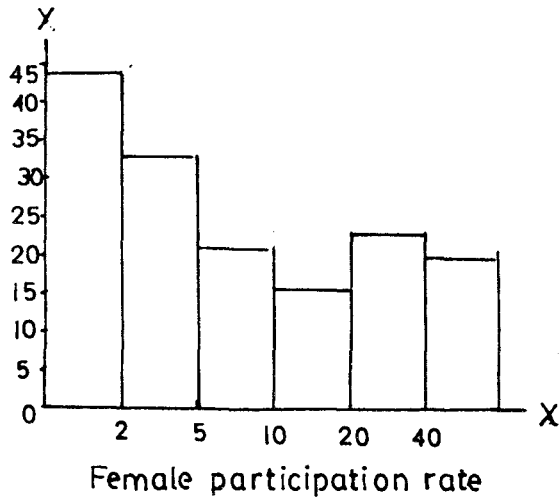


FIG. IV.3

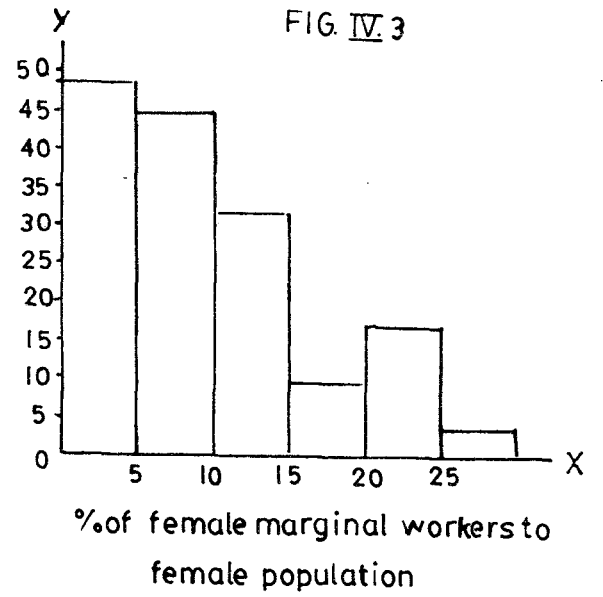


FIG. IV.2

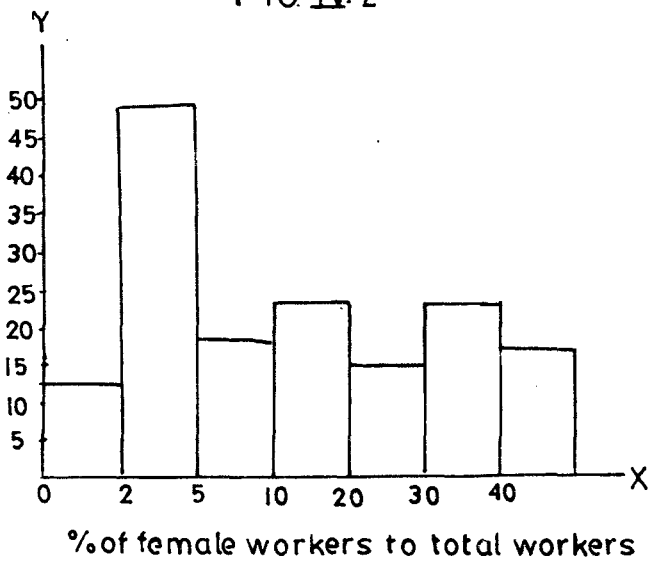
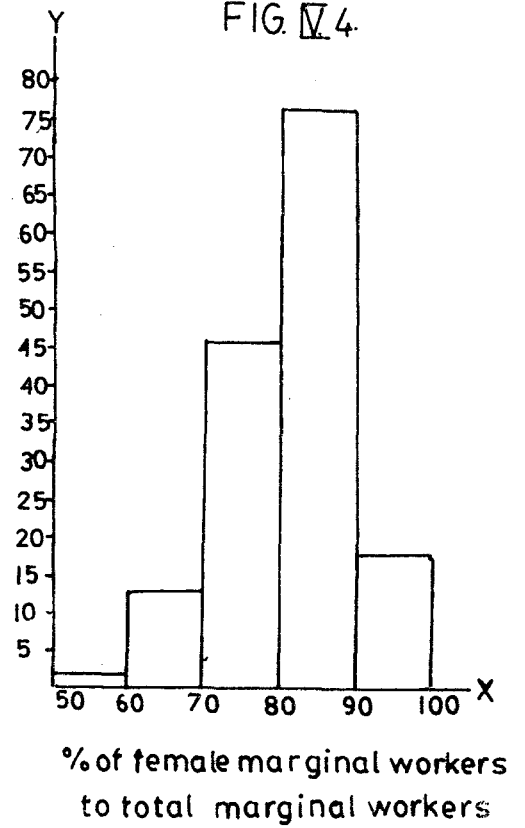


FIG. IV.4



Y axis number of tehsils

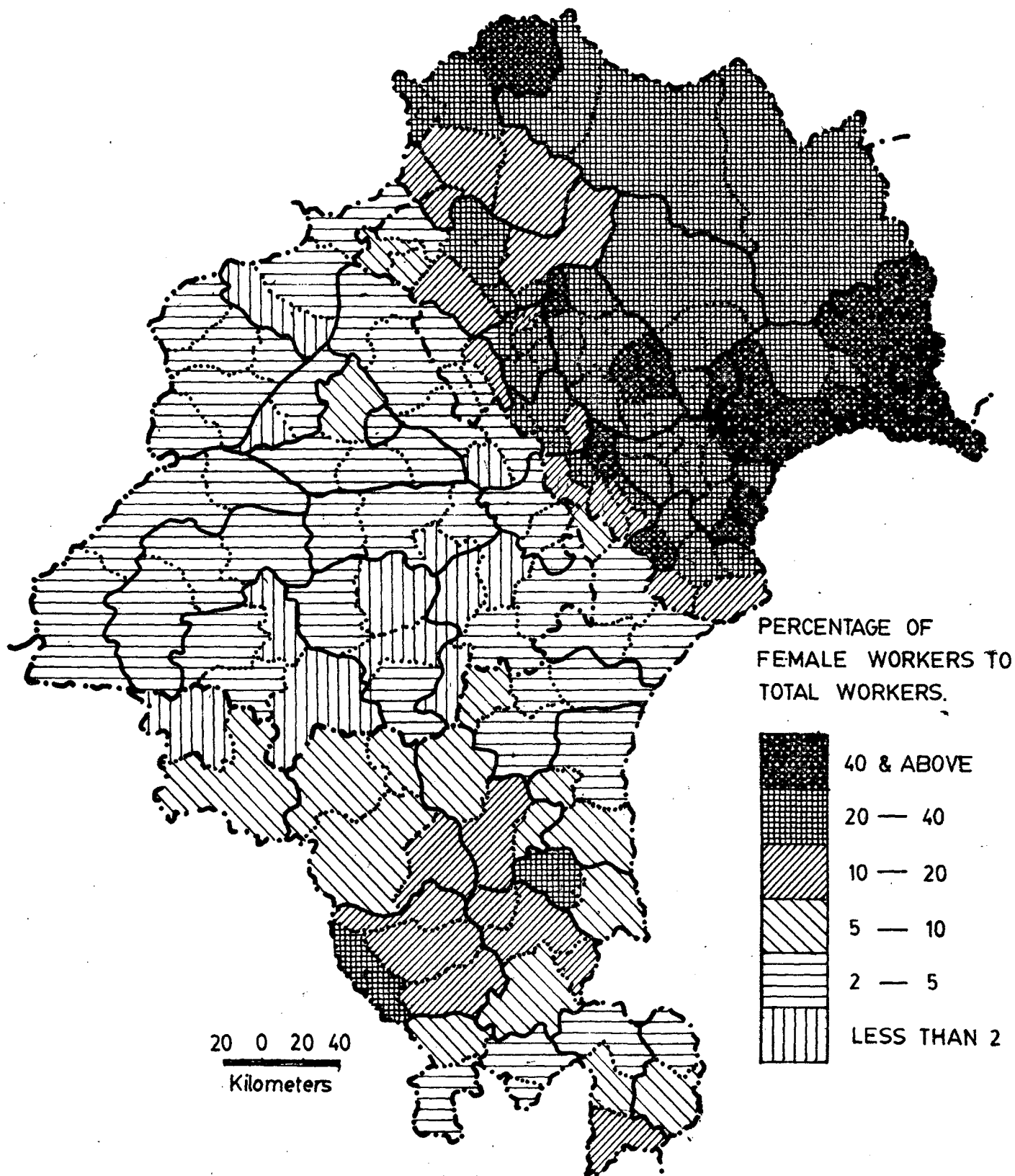
ranging between 2 to 5 per cent. Most of them are found in Haryana and very few in Punjab and Himachal Pradesh. On the other side 23 tehsils having female participation ranging between 20 to 40 per cent are mainly in Himachal Pradesh and 20 tehsils are having female participation rate even above 40 per cent.

Concentration of female participation in few pockets, might be influenced by certain specific socio-cultural traditions, and more over by particular economic conditions of that area.

IV.10 Share in Work Force

As we compare the map-IV.8 with map-IV.10, it seems that female's share in work force is higher than their participation rates at the tehsil level. Pattern is slightly changed in Lahul & Spiti district of Himachal Pradesh. Very few tehsils of Punjab and Haryana have female's share in rural work force less than 2 per cent. Most of the tehsils of Punjab have female's share in work force ranging between 2 to 5 per cent. Situation is quite different in Himachal Pradesh where most of the tehsils have female's share above 20 per cent. But Una district of Himachal Pradesh has the pattern more similar to Hoshiarpur district of Punjab. In some tehsils of Ambala, Kurukshetra and Karnal districts of Haryana, which are more

FEMALE WORKERS AS PERCENTAGE TO
ALL WORKERS (RURAL)
1981



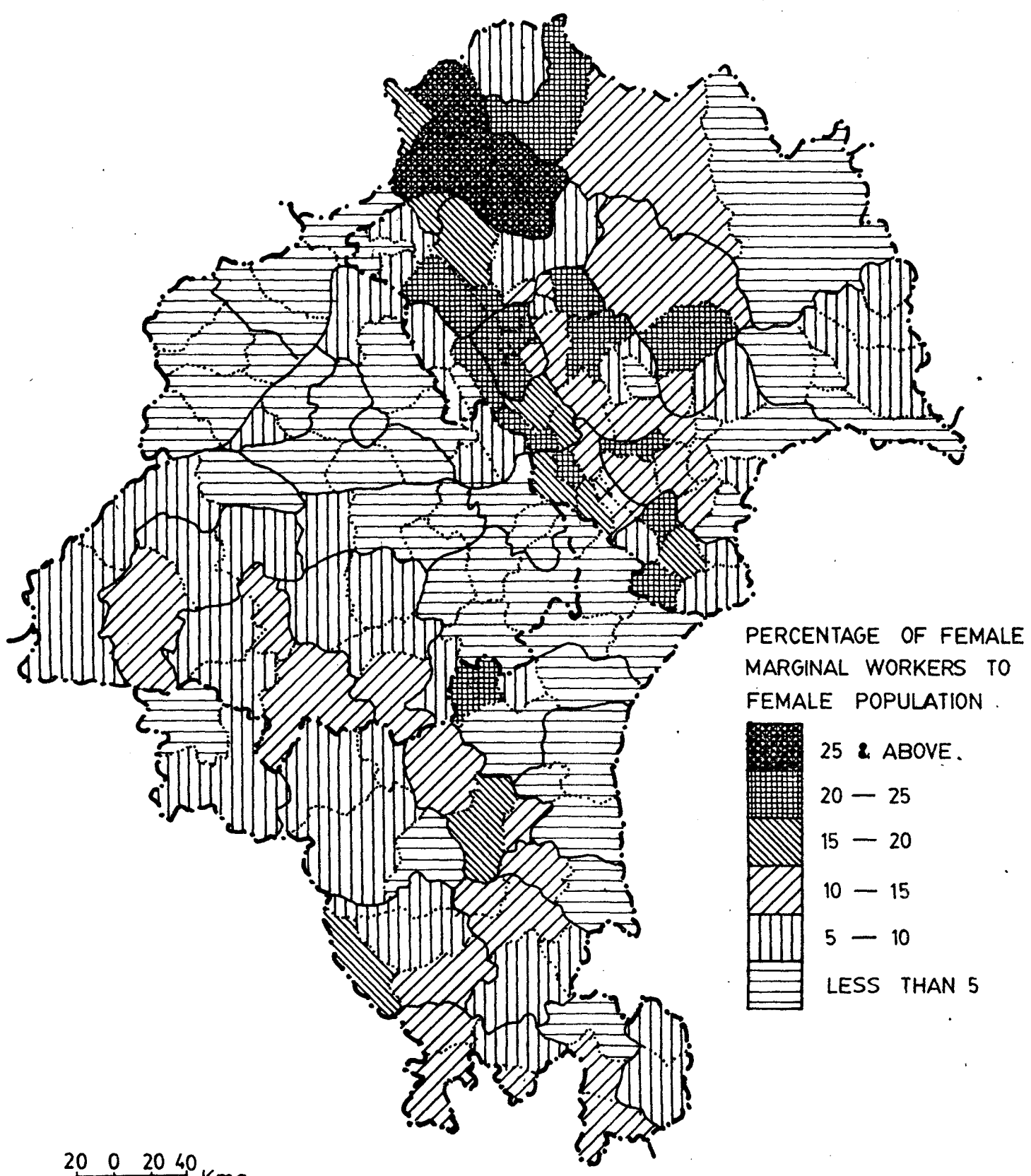
MAP IV.10

developed areas due to good irrigation etc., female's share in work force is low. But in the central part of Haryana, a pocket comprising some tehsils of Jind, Hissar, Rohtak, Panipat and all the tehsils of Bhiwani, have high female's share in work force ranging between 10 to 40 per cent. Map-IV.10 shows that Haryana presents more diverse patterns of female's share in work force compared with Punjab and Himachal Pradesh. Figure-IV.2 brings out that most of the tehsils are having female's share in work force varying between 2 to 5 per cent in contrast to the female participation rates which in most cases are less than 2 per cent. Figure also reveals that in nearly half of the tehsils female's share in work force is less than 10 per cent.

IV.11 Female Marginal Workers

It is quite clear from the map-IV.11 that Himachal Pradesh leads even in terms of its participation rates of female marginal workers. Four tehsils of Chamba district have female participation even above 25 per cent. At the same time Himachal Pradesh is showing great extent of variation in participation rates of female marginal workers. It seems that the areas which had high participation rate of female main workers, have relatively low participation of marginal workers. The tehsils having high participation rate of marginal female workers are mainly found in the lower altitude areas.

FEMALE MARGINAL WORKERS RURAL 1981



MAP IV.11

Most tehsils of south-western parts of Punjab and Haryana are having high participation rates of female marginal workers (see Map-IV.11). Tehsils of Ferozepur, Faridkot, Bathinda and Sangrur, where, compared to central Punjab, agriculture is relatively backward with low productivity and high concentration of land holdings which enforces women to participate in agricultural activities. Participation rate in these areas ranges between 5 to 15 per cent. So in these parts of Punjab women workers are mainly enumerated as marginal workers.

On the other hand, most of the tehsils of Gurdaspur, Amritsar, Jalandhar, Ludhiana, Patiala and Ropar districts of Punjab and Ambala, Kurukshetra and Karnal districts of Haryana even have participation rate of female marginal workers below 5 per cent.

Figure-IV.3 also shows that around one-third tehsils are concentrated in the lower range of female participation rate as marginal workers. These are mainly found in Punjab and Haryana having participation rate below 5 per cent. Another 45 tehsils are having female participation rate between 5 to 10 per cent. Figure shows that a large majority of the tehsils are having female participation below 15 per cent and most of them are lying in Punjab and Haryana. On the other hand, most of the tehsils of Himachal Pradesh have female participation rate as marginal workers above 15 per cent.

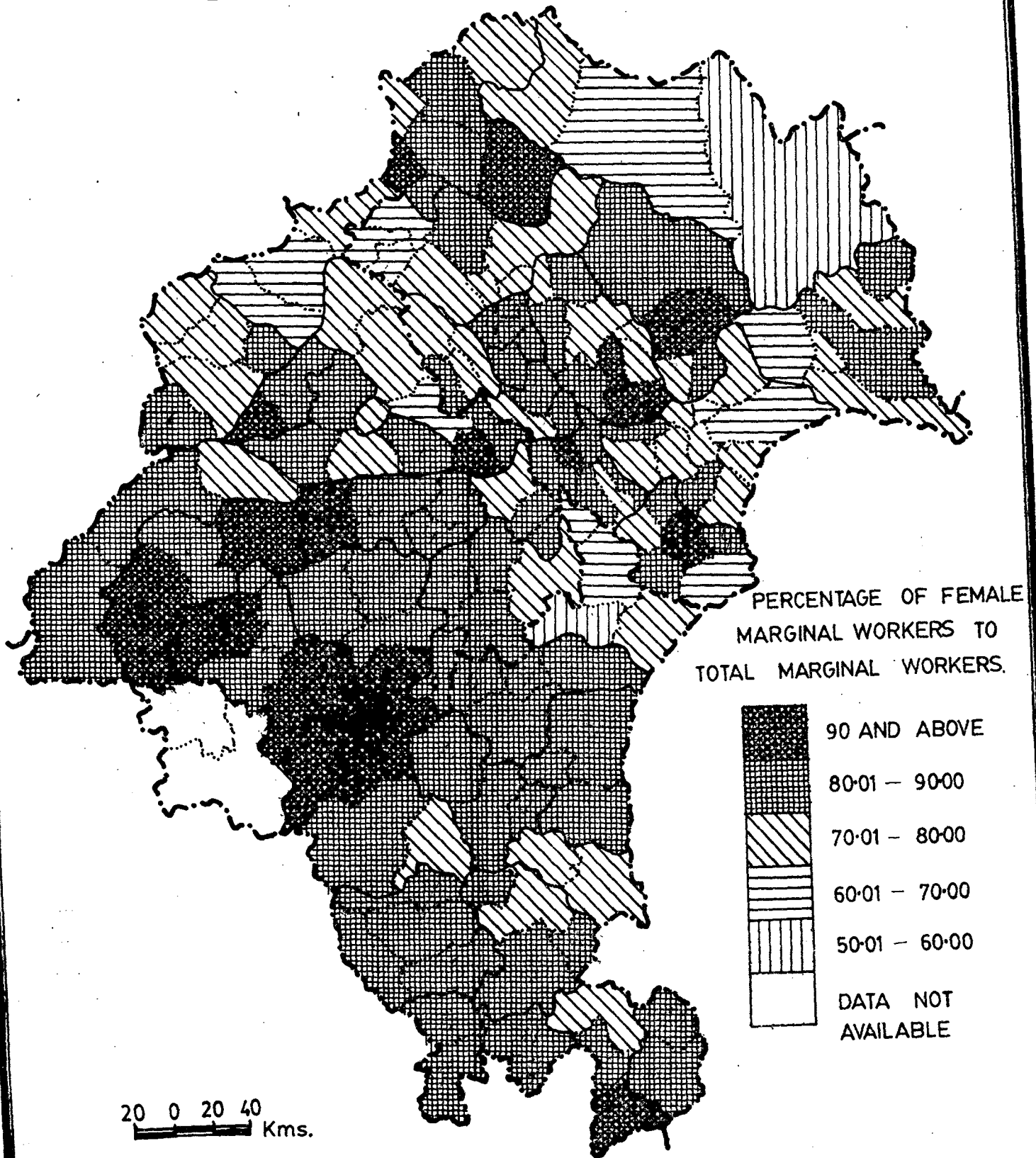
IV.12 Share in Marginal Work Force

Map-IV.12 reveals that all the tehsils of southern Punjab and majority of the tehsils in Haryana have female's share in marginal work force ranging between 80 to 90 per cent. Figure-IV.4 also shows that in terms of their share in marginal work force, around one-half of the tehsils are concentrated in this category. As is clear from the map the concept of marginal workers is mainly confined to women in Punjab and Haryana. In Himachal Pradesh, males share in marginal work force is comparatively higher although the participation rate of female marginal workers is also relatively high in Himachal Pradesh. Tehsils having female's share in marginal work force ranging between 60 to 80 per cent are mainly found in Himachal Pradesh. At the same time Himachal Pradesh also presents great extent of spatial variation (in share of female marginal workers to total marginal work force), as compared with Punjab and Haryana.

IV.13 Tehsil Level Pattern of Female Workers (Urban)

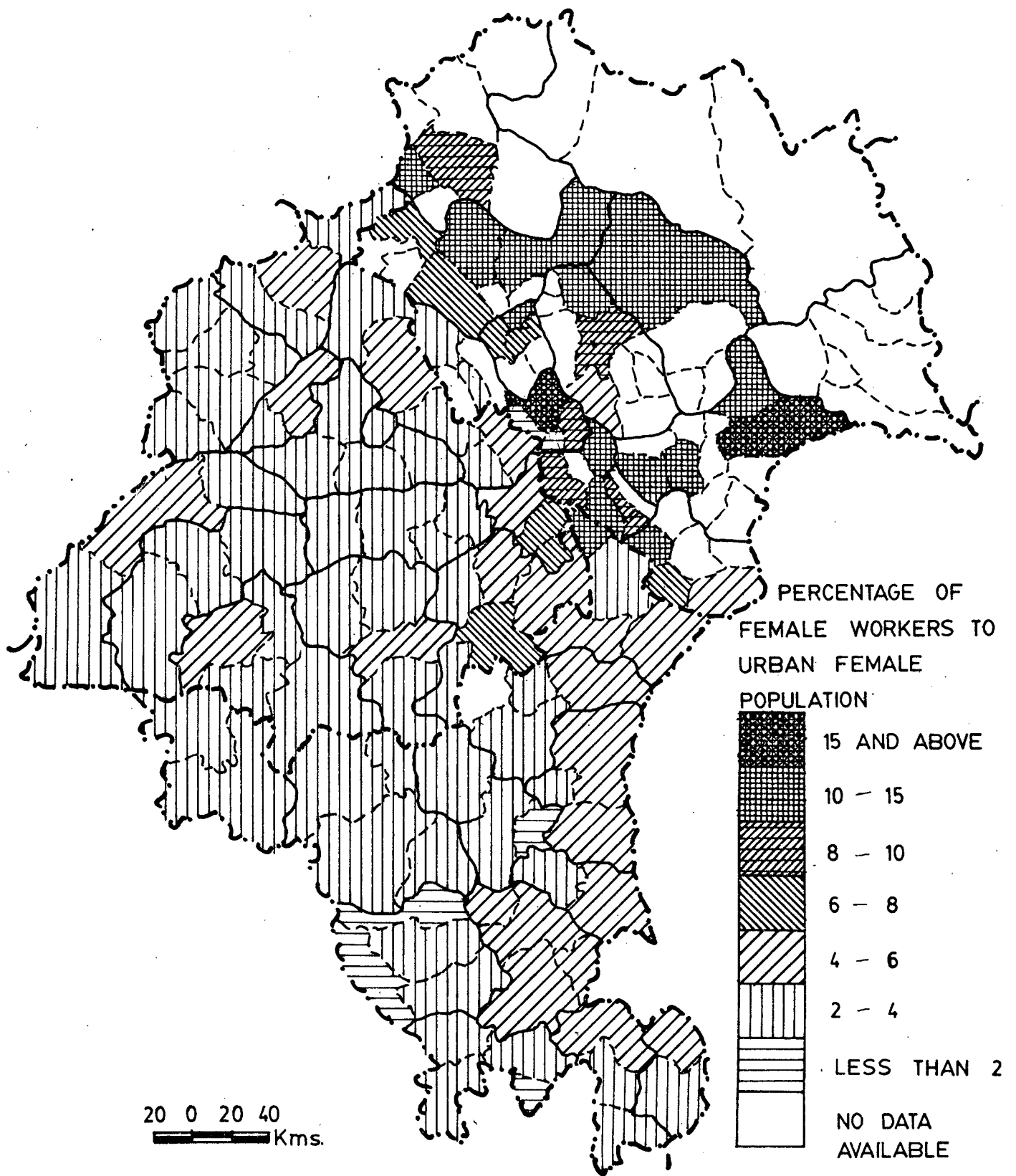
Map-IV.13 clearly shows that female participation rate of urban female workers is above 2 per cent in all the tehsils of Punjab. But very few tehsils of the state viz. Gurdaspur, Hoshiarpur, Kapurthala, Anandpur Sahib, Roopnagar, Ferozpur, Bathinda and Sangrur have female participation rate ranging between 4 and 6 per cent and only in

FEMALE MARGINAL WORKERS AS PERCENTAGE TO
ALL MARGINAL WORKERS (RURAL 1981)



MAP IV.12

FEMALE PARTICIPATION RATE URBAN (1981)



MAP IV.13

case of Patiala and Kharar tehsils it ranged between 6 and 8 per cent. It is mainly because of the provision of higher education facilities for females at the district headquarters which helps them to acquire the professional skill etc. Thus resulting in a higher female participation rates.

In Haryana the tehsils around Delhi and along the G.T. Road have relatively high female work participation rate ranging between 4 and 6 per cent. It might be because of the development effect and also due to the increased interaction with metropolis city which raises the general social awareness of the people thus resulting in a relatively higher participation of females in work. Most of the other tehsils have female participation ranging between 2 and 4 per cent. Some of the tehsils of Bhiwani, Jind and Mahendragarh districts have female work participation even below 2 per cent.

Himachal Pradesh presents quite opposite pattern of urban female work participation at tehsil level. In this state very few tehsils have urban female population and around half of them have female participation rate above 10 per cent (see Map-IV.13). The high female participation rate in urban areas of Himachal Pradesh is possibly because of two reasons. Firstly, many of the tehsils have

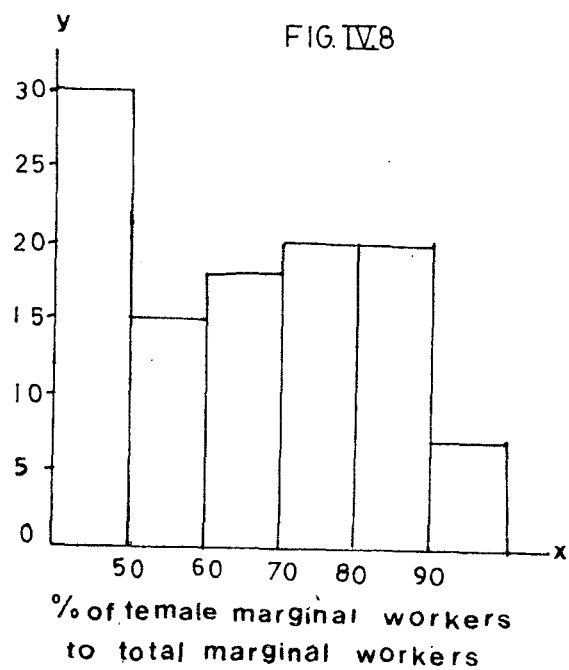
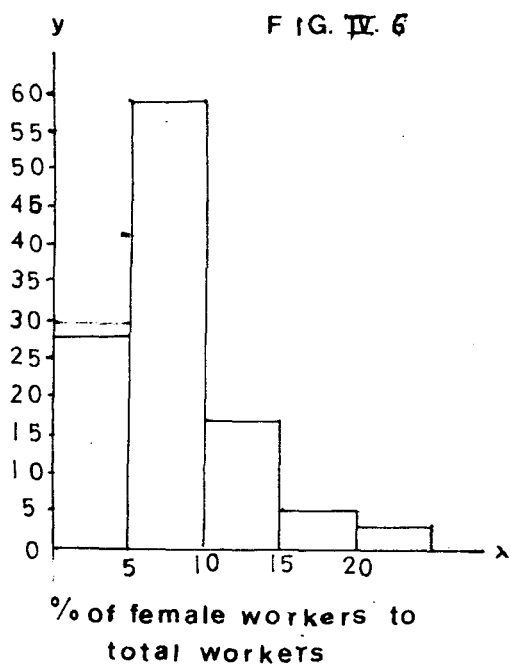
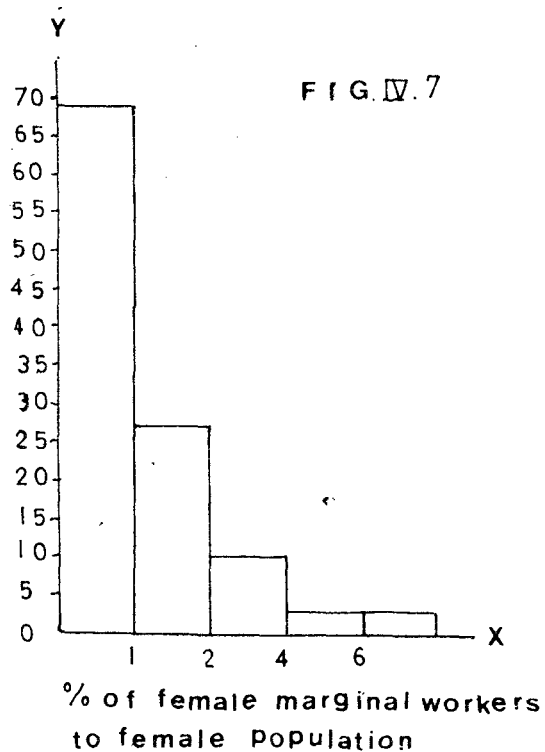
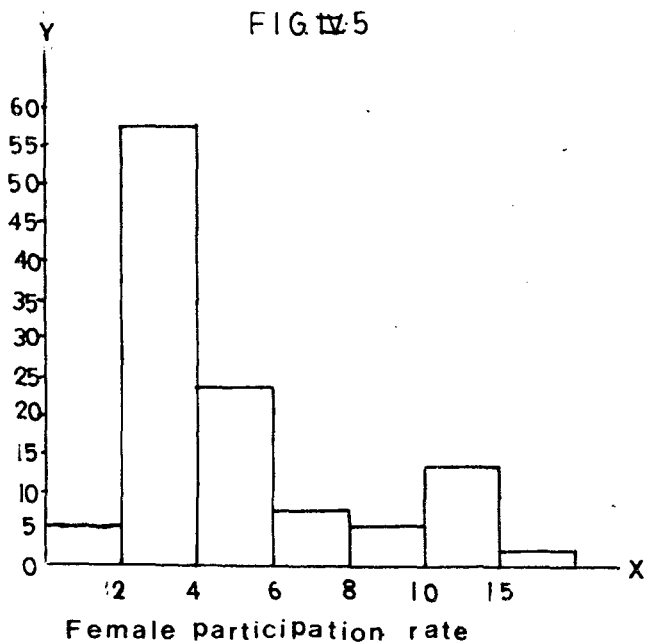
very small urban centres, (30 out of total 47 towns of Himachal Pradesh have population below 5000, only one town fall in category ^{of} IInd class towns) which still provide opportunities to female workers in the primary sector. Secondly, the development of some hill spots as tourist places, which provide various types of professional services and educational facilities to the upper classes might be responsible for higher female participation rates.

For all the three states, figure-IV.5 shows that only 15 out of total 112 tehsils ^{have} female participation above 10 per cent, whereas around half of the tesils have female participation rate ranging between 2 and 4 per cent. Another 23 tehsils have the participation rate between 4 and 6 per cent.

IV.14 Share in Work Force (Urban)

Map-IV.14 shows that the degree of variation in female's share in work force is relatively lower. We also observe that the female's share in work force is higher than their participation level in the tehsils of Punjab, Haryana and Himachal Pradesh (see Appendix-A.IV.2). In Punjab, except few tehsils with below 5 per cent and one with above 10 per cent female's share the rest of the tehsils have female's share ranging between 5 and 10 per cent. In Haryana, tehsils around Delhi and along the eastern

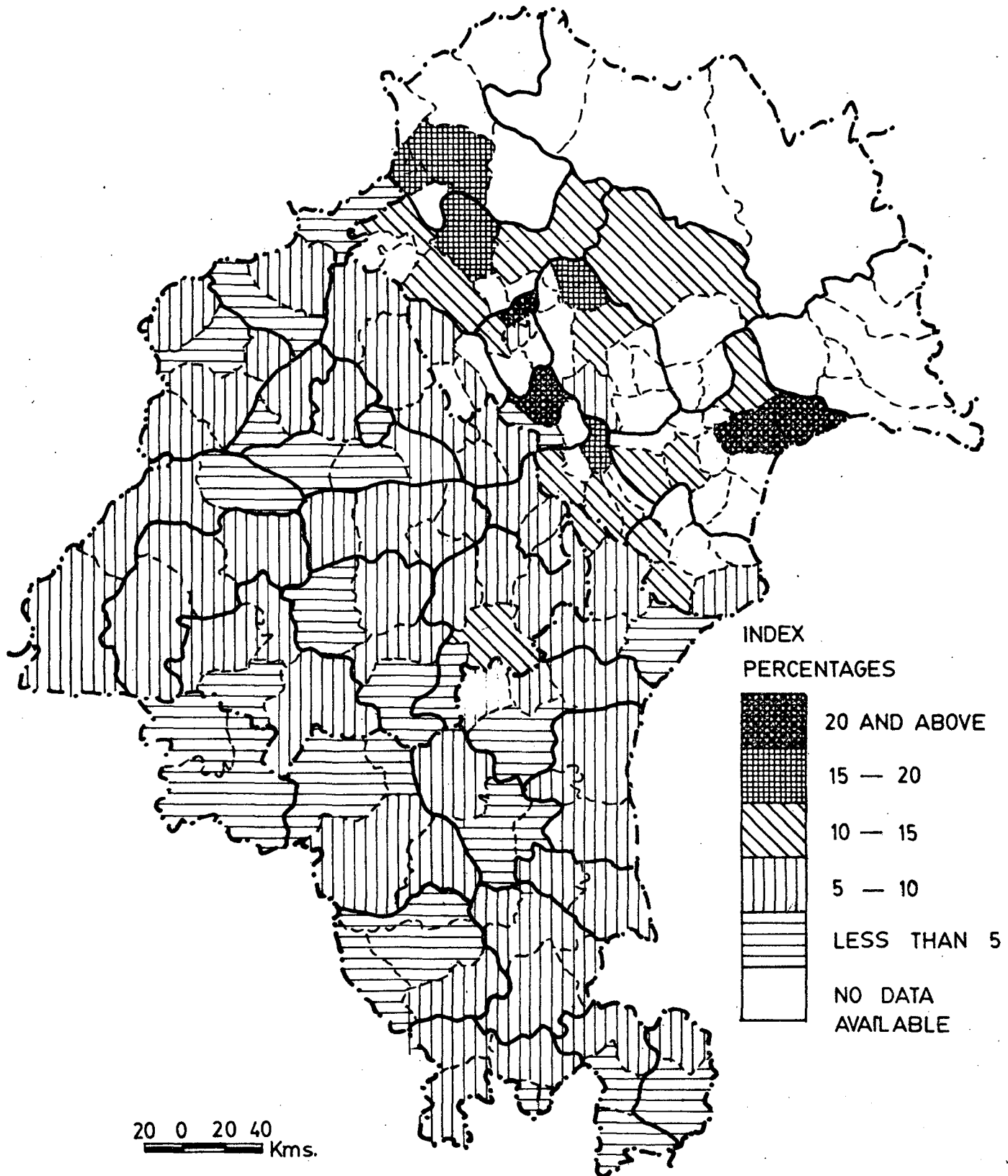
URBAN



y axis number of tehsils

FEMALE WORKERS AS PERCENTAGE TO ALL WORKERS (URBAN)

1981



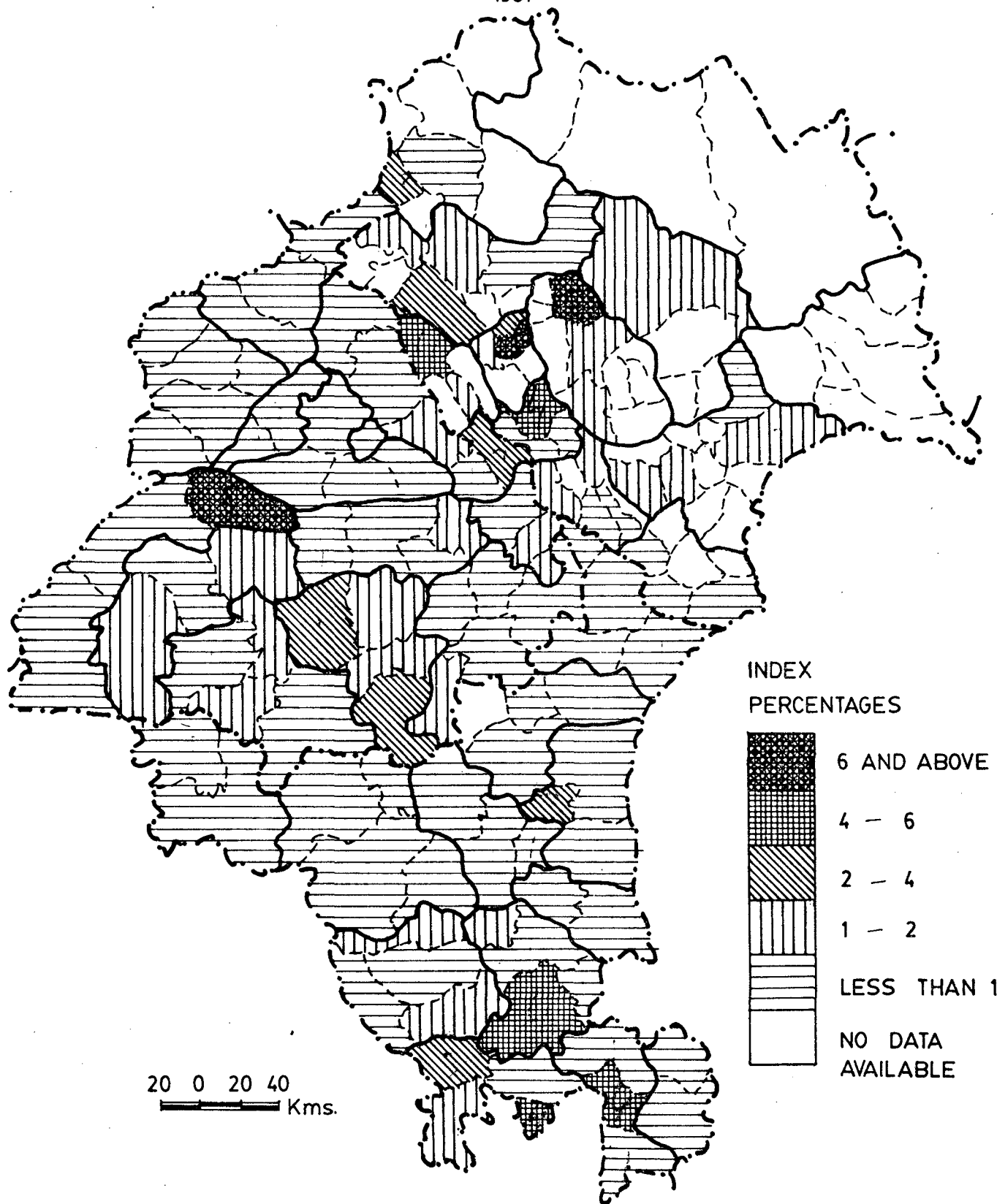
border of the state have females share ranging between 5 and 10 per cent. Whereas most of the tehsils in Himachal Pradesh show female's share in work force ranging between 10 and 15 per cent and some of the tehsils have their share even above 15 per cent.

Relatively lower variation in female's share in work force, becomes clear from the Figure-IV.6. The figure shows that 59 out of 112 tehsils fall in the category ranging between 5 and 10 per cent, 28 tehsils have below 5 per cent and 17 tehsils belong to the category of 10 to 15 per cent. Only 8 tehsils out of 112 have female's share in work force above 15 per cent.

IV.15 Female Marginal Workers (Urban)

Female work participation as marginal workers is very low at the tehsil level. (See Map-IV.15 and Figure-IV-7). More than half of the tehsils have participation rate of marginal workers below 1 per cent and 96 tehsils out of total 112 tehsils have participation rates below 2 per cent. Participation of urban female marginal workers at the tehsil level gets concentrated in few tehsils. Zira tehsil of Ferozpur district account for even above 6 per cent participation rate. Majority of the tehsils of Punjab and Haryana have participation rate of urban female marginal workers below 1 per cent. A few tehsils of Punjab

PERCENTAGE OF FEMALE MARGINAL WORKERS
TO TOTAL FEMALES (URBAN)
1981



20 0 20 40
Kms.

MAP IV.15

account for 1 to 2 per cent and very few have between 2 and 4 per cent also. But in Haryana some of the tehsils have female participation rate between 4 and 6 per cent. Interestingly, none of the districts of Punjab and Haryana has female participation of marginal workers above 2 per cent (see Appendix-A.IV.1).

IV.16 Share in Urban Marginal Work Force

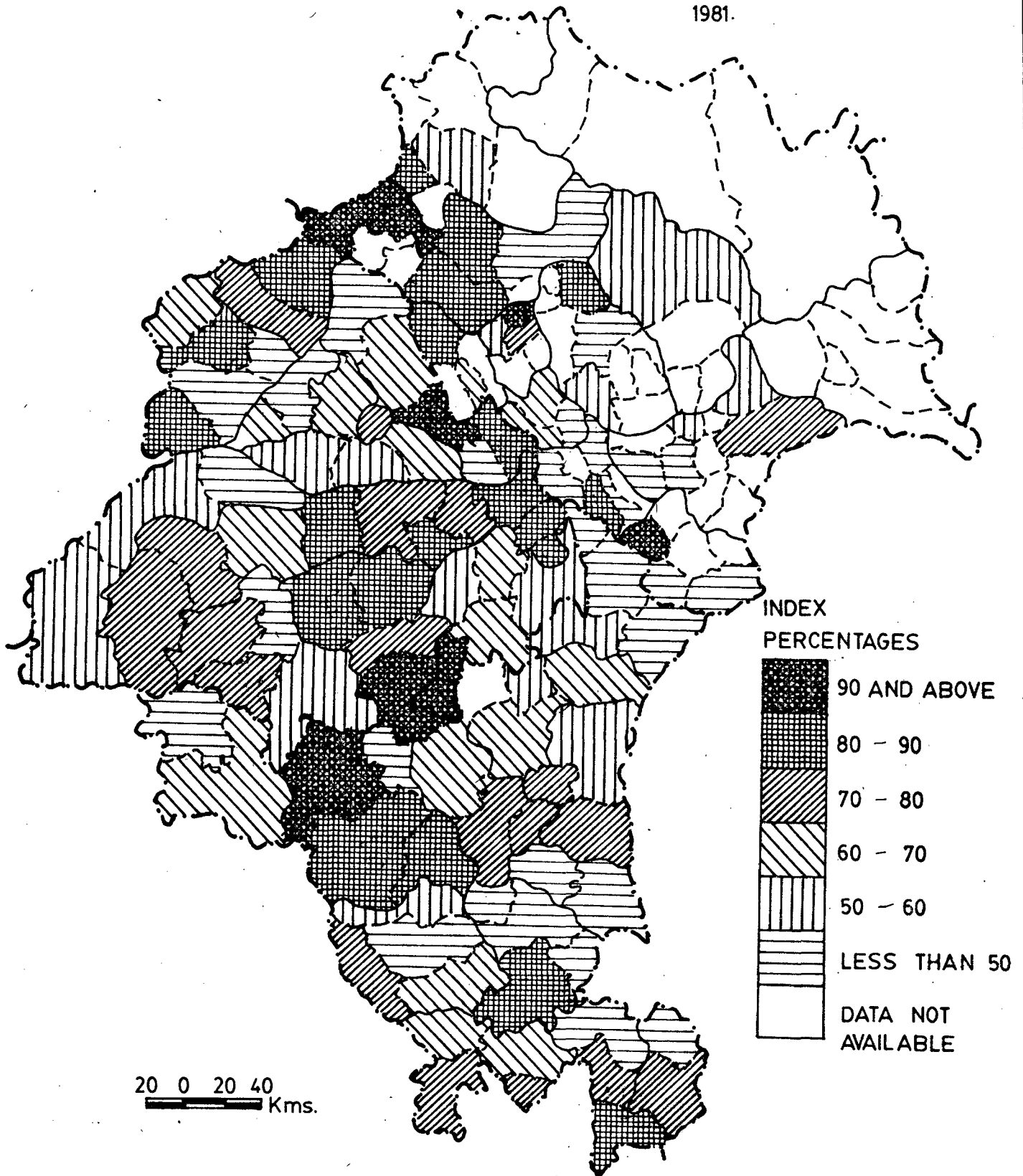
As we have already noted that the share of male workers in marginal work force increases in urban areas compared with rural areas. Figure-IV.8 shows that 30 tehsils out of 112 have female's share in marginal work force in urban areas, below 50 per cent and more than half of the tehsils have below 70 per cent.

Map-IV.16 reveals quite diverse pattern of share of marginal female workers. Most of the tehsils in Haryana and Himachal Pradesh have female's share in marginal work force below 80 per cent.

IV.17 Conclusion

From the forgoing analysis of district and tehsil level data we have discovered that in general, female work participation rates are very high in hilly districts of Himachal Pradesh as compared with Punjab and Haryana. Agriculture in hilly areas of Himachal Pradesh is relatively

FEMALE MARGINAL WORKERS AS PERCENTAGE TO
ALL MARGINAL WORKERS (URBAN)
1981.



backward with low land and labour productivity. With small fields, farming is mainly carried out with traditional hand tools and women have to participate in such labour intensive cultivation in order to fulfil the subsistence needs of the family. On the other hand, even in Himachal Pradesh, in low lying areas with high density of population and intensive cultivation of irrigated lands, female participation rate is comparatively lower.

(In the state of Punjab, with highly developed agriculture, where the role of machines has increased tremendously, agriculture provides very low opportunities to the females thus resulting in a very low female participation rate. In Haryana, the areas with relatively backward agriculture under dry conditions and low irrigation level comprising the districts of Hissar, Jind, Bhiwani, Sonapat and Rohtak, has relatively higher participation rate of rural female workers //

There exist less inter-district variations in rural female participation rates in Punjab and Haryana as compared to Himachal Pradesh. Another conclusion which emerges is that female's share in the rural work force is higher than their participation rate at the state level.

As against main workers, the participation rate of rural female marginal workers is higher in Punjab and Haryana than in Himachal Pradesh. In fact, females are

enumerated mainly as marginal workers in Punjab. The districts of Himachal Pradesh which are having high participation rate of female main workers have relatively low participation rate of marginal female workers. Relatively dry regions of Punjab and Haryana comprising Sirsa, Hissar have high share of female marginal workers. It seems that marginal category of workers in rural areas is confined to women only, men's share being very low.

Although Punjab is having relatively low urban female participation rate as compared to Haryana and Himachal Pradesh, it is higher than its rural participation rate, which is an exception. But on the other hand Himachal Pradesh is having urban female participation rate even higher than the rural participation of Punjab and Haryana. Urban female participation rates show less spatial variation than rural areas. Proportion of female workers in urban work force is also high in Himachal Pradesh. Participation rate of marginal female workers is very low in urban areas compared to the rural areas, even less than half per cent in Punjab and Haryana.

Tehsil-level data show great extent of variation. Parts of Himachal Pradesh adjoining Punjab show high diversity and low level of rural female participation. Increase in the extent of variation in the rural female participation rates is because of high concentration of

female workers in some tehsils. We have observed that as we study the phenomenon at the lower aggregative level, the participation rate of female workers in some cases increases and gets concentrated in few areas. This might be because of some specific socio-economic conditions of those areas.

In terms of their share in work force, Una district of Himachal Pradesh shows more similar pattern to Hoshiarpur district. In Haryana some tehsils of the developed districts Ambala, Kurukshetra and Karnal have low share in work force. But a contiguous region in the relatively backward area comprising some tehsils of Jind, Hissar, Rohtak, Panipat and all the tehsils of Bhiwani district have high share of females in work force. At the tehsil level Haryana presents more diverse patterns in terms of the share of female workers in work force.

Even in terms of marginal participation rates at the tehsil level, Himachal Pradesh leads the other states. But at the same time it also shows great extent of variation. Low lying areas of Himachal Pradesh have relatively high marginal participation rates. South western parts of Punjab and Haryana have relatively high marginal participation rates. Marginal concept of workers is mainly confined to women in Punjab and Haryana, but this is not the case in Himachal Pradesh.

Urban female workers at the tehsil level are concentrated in few pockets. In Haryana, tehsils around Delhi and along the G.T. Road have high female participation rates as well as female's share in work force. Whereas in Himachal Pradesh very few tehsils have urban population, and most of the towns have below 5000 population. But wherever there is a urban population (which again is more like rural areas) female's participation rate there, is relatively high.

Marginal participation rate of female workers in urban areas at tehsil level is extremely low, 96 tehsils out of 112 tehsils have below 2 per cent female participation rate.

CORRELATES AND DETERMINENTS OF FEMALE WORK PARTICIPATION:
AN EXPLORATION

In the third world countries, the level of female participation in economic activity is influenced by social and cultural factors in addition to economic factors. As pointed out by Gadgil¹ and Reddy,² the farm employment of women largely depends on the social sentiment of the community. Traditionally if a community associates female activity with lower social status, then even the women in 'Harijan' castes also do not work in the field. Similarly, a report of the committee on the status of women³ did recognise the importance of society's stage of development and socio-cultural attitudes towards women's economic role and their opportunities for participation in economic activity.

But the problem of quantification in the case of certain factors make the task of explaining variations in

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1. D.R. Gadgil (1965), op. cit., p. 9.
 2. D.N. Reddy, (1979), op. cit., pp. 204-05.
 3. ICSSR, Status of Women in India - A Synopsis 1971-74, Allied Publishers, New Delhi.

the level of female participation in economic activity difficult. Some of the important cultural factors influencing female participation such as traditional attitude towards female work participation, cultural norms and value system etc. can not be quantified and hence can not be taken as explanatory variables. Even data for certain quantifiable variables such as per capita income are not available at district level. So in these cases we have to satisfy ourselves with their substitutes only for which data are available.

The following socio-economic variables have been chosen to see their relationship with rural and urban female work participation rate separately :

- (1) Number of tractors per 1000 hectares (X_1)
- (2) Number of tubewells per 1000 hectares (X_2)
- (3) Fertilizer use per hectare (Kgs.) (X_3)
- (4) Cropping Intensity (X_4)
- (5) Percentage of net area irrigated to
net area sown (X_5)
- (6) Live stock per 1000 population (X_6)
- (7) Proportion of area under forest (X_7)
- (8) Presence of small holdings (less than
2 hectares) (X_8)
- (9) Concentration of land holdings
(gini-coefficient) (X_9)
- (10) Percentage of agricultural workers to
total rural work force (X_{10})

- (11) Percentage of rural population to total population (X_{11})
- (12) Density of population per square kilometre..... (X_{12})
- (13) Percentage of Scheduled Caste and Scheduled Tribe population to total population (X_{13})
- (14) Female literacy rate (X_{14})
- (15) Sex ratio (females per 1000 males) (X_{15})

Correlates of Urban Female Participation Rate

- (1) Percentage of urban population to total population (Y_1)
- (2) Growth of urban population (Y_2)
- (3) Percentage of 'Other workers' to total workers (Y_3)
- (4) Density of population per square kilometre (Y_4)
- (5) ✓ Percentage of Scheduled Caste and Scheduled Tribe population to total population (Y_5)
- (6) ✓ Female literacy rate (Y_6)
- (7) ✓ Sex ratio (Y_7)

The nature of relationship of these variables with female work participation rate, individually or in a group, will confirm or reject our hypotheses set-out in Chapter-I.

V.1 Variables Affecting Female Work Participation Rate in Rural Areas:

V.1.1 Agricultural Development and Female Work Participation Rate :

Agricultural development of an area is likely to have an adverse effect on female participation rate. This



may happen due to the following reasons. Firstly, with the increase in output the general income level increases, which discourages the physical work for both male and female, because a physical labour is considered as a sign of low status. Secondly, with development, an economic burden to earn livelihood, which pushes females into labour force is also being reduced. This may happen even in the case of landless scheduled caste women in case the wage rate of their husband's increases. Thirdly, the agricultural development in green revolution pockets of India has also resulted in the mechanisation of agricultural operations. But the researchers reached to different conclusions regarding the labour displacing (or absorbing) effects of mechanisation and other components of green revolution technology. However, these changed methods are likely to put women in disadvantageous position vis-a-vis men in the labour market. Women who usually get less opportunities to acquire skill and training in operating machinery will suffer more due to change in the production methods.) As Boserup⁴ has observed, the subsistence agriculture carried out with traditional hand tools provides the employment to a large number of women whereas with capitalist farming the opportunities for women to participate in agriculture has diminished.

4. E. Boserup, (1970), op. cit..

In the absence of agricultural output data and income figures, variables taken as indicators of agricultural development are, number of tractors per 1000 hectares (X_1); number of tubewells per 1000 hectares (X_2); fertilizer used per hectare in kilograms (X_3); cropping intensity (X_4); and percentage of net area irrigated to net area sown (X_5). Though districtwise per acre output (weighted average of all crops) and income figures for rural areas would have further strengthened our analysis, but it is appropriate to assume that higher or lower intensity of above mentioned five variables, in a particular area, will increase or decrease per acre output and labour productivity and accordingly affect the income level of agricultural families. Thus, it is supposed that relationship of female work participation rate with these five variables will also capture the impact of output and income changes.

On the basis of above discussion we put forth a hypothesis that agricultural development will have a negative impact on female work participation. (Table-V.1 presents the results of correlation between female work participation rate and explanatory variables, on the basis of district level data for three states viz. Punjab, Haryana and Himachal Pradesh. The table shows that signs of the coefficients of correlation between female work participation rate and these variables (X_1 to X_5) representing

Table-V.1

Coefficients of Correlation between Female
Participation Rate and Explanatory Variables
(Rural)

Explanatory variable	Coefficient of correlation	t-value
X ₁	-0.580	4.150**
X ₂	-0.569	4.034**
X ₃	-0.525	3.599**
X ₄	-0.336	2.079*
X ₅	-0.368	2.311*
X ₆	0.811	8.077**
X ₇	0.156	0.919
X ₈	0.592	4.281**
X ₉	-0.083	0.485
X ₁₀	0.359	2.243*
X ₁₁	0.658	5.093**
X ₁₂	-0.780	7.263**
X ₁₃	0.681	5.421**
X ₁₄	-0.122	0.714
X ₁₅	0.119	0.700

Note: degrees of freedom in each case are 34.

* significant at 5 per cent level of significance

** significant at 1 per cent level of significance

agricultural development are negative as expected in our hypothesis. Furthermore, the coefficients of correlation are significant in all the cases at 5 per cent (or even 1 per cent in first three cases) level of significance. Thus our hypothesis stands confirmed and we can conclude that agricultural development (at least in the initial stages) displaces female labour and results in their lower participation in economic activity.

V.1.2 Livestock Population, Area under Forest and Female Work Participation Rate :

Women have been considered as the secondary bread winners. Their role in economic activities in rural areas has been of a helper to the main male workers. They usually perform the tasks (in addition to help in the cultivation of crops) such as care of household animals and grazing of these animals in the fields especially in regions with higher percentage of area under forest. Moreover, in the regions where area under forest is the significant proportion of the geographical area, forest may yield certain products which are used for various household requirements such as fuel for energy and fodder⁵ for animals. It is likely that women will play a major role

5. natural grass etc.

in such collection activities⁶ and will be busy in such activities almost throughout the year. Thus it is postulated here that livestock population per 1000 human beings and percentage area under forest will be positively correlated with female work participation rate.

Results from Table-V.1 shows that livestock population (variable X_6) is positively and highly correlated with female work participation rate. But same is not true in the case of area under forest (variable X_7). Though sign of the coefficient of correlation is positive, even in this case, as expected in our hypothesis, but it is insignificant. A likely reason of this weak correlation may be due to non-recording of these females as workers. As mentioned earlier in Chapter-II, Bardhan⁷ and Banerjee⁸ has also pointed out that these collection activities from village common property are generally not considered as 'gainful' work in census enumerations. However, our hypothesis is at least partially confirmed and we can say that livestock population is positively associated with female work participation rate.

V.1.3 Small Holdings and Female Participation Rate :

Small operational holdings are generally cultivated

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6. especially in the case of areas with higher concentration of tribals.
 7. P.K. Bardhan, (1984), op. cit., p. 23.
 8. N. Banerjee, (1985), op. cit., p. 9.

with the help of family labour. Hired labour is employed rarely. Lack of sufficient income in their case generally compel them to employ all their family resources, including women and children, to extract maximum possible from land. Moreover, work by females in their family farms with their own menfolk is not as strongly resented as in the case of hiring out of labour on other's fields. But the same is not true in case of bigger farmers. They generally restrict their women exclusively to household work. Thus it is likely that higher number of smaller holdings will result in a higher female work participation rates.

The Table-V.1 shows that the coefficient of correlation between percentage of small holdings (variable X_8) and female work participation rate is (0.592) positive and significant at 1 per cent level of significance. This confirms our hypothesis that the presence of small holdings are expected to be positively related with female work participation rate.

V.1.4 Concentration of Holdings and Female Work Participation Rate :

More egalitarian distribution of land generally means that land holdings are concentrated in middle sizes and mostly cultivated by the family based farms. As argued above, in such a situation the role of females in family

farms may be higher. On the other hand concentration of land in bigger holdings thus resulting in more unequal distribution of land means that cultivation will be carried out mainly with hired labour. This may discourage the female participation in work force in rural areas. This suggests that there will be negative relation between concentration of holdings and participation rate of female workers.

To measure the concentration of land holdings we have calculated the gini-coefficients for all the districts separately of the three states. The coefficient of correlation between female work participation rates and gini-coefficients (variable X_9) is negative but insignificant (see Table-V.1). Thus, there seems no significant negative relationship between concentration of land holdings and female work participation rate and our hypothesis regarding this is not confirmed.

V.1.5 Agrarian Economy and Female Work Participation Rate:

Higher dependence of population on agriculture is taken as an indicator of backwardness of economy. In agriculture it is generally easy for women to join the labour force. With the development of modern secondary and tertiary activities it becomes difficult for women to

get jobs in these sectors of the economy where requirements of skill and training are generally higher and women due to lack of training opportunities available to them, generally lag behind men. Moreover, when men do relatively better jobs in these sectors, it becomes difficult for women to do jobs of lower prestige. Thus it is expected that with the shift of population to secondary and tertiary sectors, there will be a decline (at least at the initial stages) in the female work participation rate, and participation rate is presumed to be high where high percentage of work force is engaged in agricultural work,

To see the weight of agricultural sector we have taken proportion of cultivators and agricultural labourers to total rural work force for all the districts of three states as an indicator. Another indicator taken to see the impact of agrarian economy is the percentage of rural population to total population. Table-V.1 brings out that coefficients of correlation between female work participation rate on the one hand and percentage of agricultural workers⁹ to total rural workers (variable X_{10}) and percentage of rural population to total population (variable X_{11}) on the other, turns out to be 0.359 and 0.658 respectively which are positive and significant thus confirming our expectation.

9. cultivators and agricultural labourers.

V.2 Variables Affecting Female Work Force
Participation Rate in Rural as well as
Urban Areas

V.2.1 Population Density and Female Work
Participation Rate :

It is expected that high density of population will be negatively related to female participation rate. It is because of the reason that higher population density will result in a higher pressure on land and other limited resources. This higher pressure on limited employment opportunities will result in competition between men and women for jobs. General opinion among the researchers is that in such a situation women are discouraged from staying in the labour market.

Density we have measured by taking population per square kilometre. As expected, analysis of our district-wise data for Punjab, Haryana and Himachal Pradesh shows that there is a strong negative correlation (-0.780 and -0.652 in rural and urban areas respectively) between female work participation rate and population density (variable X_{12} and Y_4 respectively in rural and urban areas; see Table-V.1 and Table-V.2).

V.2.2 Scheduled Castes and Scheduled Tribe Population
and Female Work Participation Rate :

It is generally considered that the scheduled castes as well as scheduled tribe population, two socially deprived

Table-V.2

Coefficients of Correlation between Female Participation Rate and Explanatory Variables: (Urban)

Explanatory variable	Coefficient of Correlation	t-value
Y ₁	-0.630	4.587**
Y ₂	-0.262	1.536
Y ₃	-0.538	3.609**
Y ₄	-0.652	4.861**
Y ₅	0.232	1.348
Y ₆	0.725	5.962**
Y ₇	-0.550	3.721**

Note: Degrees of freedom in each case : 32.

* Significant at 5 per cent level of significance

** significant at 1 per cent level of significance

groups of the society having no or very less independent sources of income, is the most visible section of the labour force. Economic necessity pushes this strata of population into workforce irrespective of their age and sex. (Pranab Bardhan¹⁰ in a study, found a significant positive relationship between female participation in work force and tribal as well as low caste households.) However,

10. P.K. Bardhan, (1984), op. cit., p. 26.

Leela Gulati¹¹ analysing inter-state variations in female work participation rate, did not observe such relationship. In fact state is a big aggregative unit and it hides very many intra-state differences. We propose to verify the hypothesis that female participation rate directly varies with percentage of scheduled castes and scheduled tribe population.

In our analysis, we have combined the scheduled castes and scheduled tribe population, because only in Himachal Pradesh both scheduled castes and scheduled tribe people are present, whereas Punjab and Haryana have only scheduled castes population. We observe that in rural areas percentage of scheduled castes and scheduled tribe population to rural population (variable X_{13}) shows a significant positive correlation (0.681) with rural female participation rate (see Table-V.1). No such relationship is found for urban areas (see variable Y_5 , Table-V.2). Though coefficient of correlation in urban areas is also positive, but it is insignificant. It may be due to the fact that relatively organised production structure of urban economy and requirements of education and skill restricts the entry of scheduled castes and tribal women

11. Leela Gulati, 'Female Work Participation: A Study of Inter-State Differences', Economic and Political Weekly, Vol. X, No. 1, January 1975, pp. 35-42.

in urban work force whereas in rural areas, agriculture provides enough opportunities for unskilled female labour from lower strata of the population.

V.2.3 Literacy Rate and Female Work Participation :

Female education plays an important role in opening new opportunities of employment to them. Various vocational courses enhance the skill of female workers thus making them fit for better jobs. But on the other hand increase in educational attainment enhances the status of women. This may lead to the withdrawal of females from unskilled jobs. At the initial stages of development and with the spread of non-technical education among women, rate of withdrawal is likely to be much higher than entrance into new jobs. Thus at the stage of development which India has attained, overall improvement in literacy rate is likely to affect female participation rate adversely.

But our data do not confirm this hypothesis. In rural areas the coefficient of correlation between literacy rate (variable X_{14}) and female work participation rate is (-0.122) insignificant though negative as expected (Table-V.1). On the other hand, in urban areas the relationship between literacy rate (variable Y_6) and female work participation rate is (0.725) positive and highly significant.

It seems that in urban areas the positive impact of education has more than neutralised its negative impact.

V.2.4 Sex Ratio and Female Work Participation :

One of the important reasons of low sex-ratio in northern states in India is due to the low status of women in this region. As observed by Boserup¹² in northern India where women do little work in agriculture and the custom of dowry is widespread, it was customary in earlier times to limit the number of surviving daughters by infanticide. This, in addition to less care of female children, might have resulted in lower sex ratio in northern India. Infact lower or higher sex-ratio represents lower or higher status and economic value of women in society. Thus, sex-ratio is an important indicator of women's social status and their participation in economic activities. We can thus hypothesize that sex-ratio will be positively related with female participation rate.

No such tendency is shown by districtwise data for rural areas where the coefficient of correlation between female participation rate and sex-ratio (variable X_{15}) is though positive (0.119), but insignificant (Table-V.1). We observe opposite behavior in case of urban areas. Here, the coefficient of correlation is (-0.559) negative and significant at 1 per cent level of significance (see variable

12. E. Boserup, (1970), op. cit., pp. 48-49.

Y_7 , Table-V.2). Thus, women participation in work force is higher in those urban centres where their number per 1000 males is less than others.

V.3 Factors Affecting Female Work Force Participation Rate in Urban Areas

V.3.1 Urbanisation and Female Work Participation Rate:

It is pointed out that the process of urbanisation accompanied by industrialisation and expansion of non-agricultural sector leads to the decline in the work participation rate of women. Changed occupational structure, educational and skill requirements of urban jobs and relatively lower educational qualification of women prevents them from joining these jobs. The relatively high wages offered to male workers in most of the activities located in urban centres may also reduce the economic pressure on women to work. Thus it is likely that urbanisation will lead to the decrease in the female work participation rate.

We have taken three indicators of urbanisation i.e. percentage of urban population (variable Y_1), growth of urban population (variable Y_2), ^{and} percentage of 'other workers' in total workers (variable Y_3). Analysis of urban data shows that coefficients of correlation between female participation rate and these three variables are with

negative sign (Table-V.2). Except in the case of variable Y_2 (growth of urban population) where coefficient of correlation is insignificant, in other two cases these are significant at 1 per cent level of significance thus confirming substantially our hypothesis.

From the forgoing correlation analysis, following conclusions emerge. In rural areas female work participation is positively associated with variables such as live stock per 1000 population, proportion of small holdings, agricultural workers as per cent to total rural workers, percentage of rural population and scheduled population as per cent of the total population. On the other hand negative relationship is found in rural areas between female work participation rate and five variables (X_1 to X_5) representing agricultural development as well as density of population.

In urban areas of these states, coefficients of correlation between female work participation rate and percentage of urban population, percentage of other workers, population density, and sex ratio turns out to be negative. It is only in the case of literacy rate that the significant positive relationship is found with female work participation rate.

V.4 Regression Results

Coefficient of simple correlation between female

work participation rate and each explanatory variable separately gives relationship in each case where other variables are not taken into consideration. Multiple Regression method removes this drawback where we will see the impact of multiple explanatory variables together on dependent variable i.e. female work participation rate. Regression coefficient of a particular independent variable is the partial coefficient correlation measuring the change in dependent variable with respect to a unit change in that independent variable when all other variables are kept constant.

V.4.1 Step-wise Regression (Rural) :

Step-wise multiple regression results for rural areas are presented in Table-V.3. In the first step, explanatory variable taken is X_6 (livestock per 1000 population). This comes out to be very important explanatory variable and explanatory power (R^2) of the equation-I is 81 per cent. Regression coefficient of X_6 showing positive relation between livestock and female work participation is highly significant. In equation-II, the variable entered is X_1 (i.e. number of tractors per 1000 hectares of cultivated area) which slightly improves the explanatory power of the regression equation. Regression coefficient of X_1 has expected negative sign but significant only at 10 per cent level of significance. Similarly in step third, fourth and fifth new variables entered

Table-V.3

Step-wise Regression (Rural)

Equation Number	Constant term	Regression Coefficients					Coefficient of determination R^2	Adjusted coefficient of determination \bar{R}^2	F-value
		Livestock X_6	Tractors X_1	Scheduled Population X_{13}	Area under forest X_7	Literacy rate X_{14}			
I	-7.5461	0.0226** (8.077)					0.811	0.811	65.239
II	-1.9442	0.0194** (6.199)	-0.2873 (1.966)				0.833	0.827	37.303
III	-2.5503	0.0091 (1.904)	-0.4688** (3.140)	0.3606* (2.670)			0.866	0.857	31.861
IV	-0.4747	0.0115* (2.368)	-0.5167** (3.509)	0.3080* (2.293)	-0.1987 (1.754)		0.879	0.866	26.215
V	-5.4433	0.0164** (3.041)	-0.5426** (3.802)	0.1935 (1.345)	-0.3574 ^o (2.561)	0.2704 (1.827)	0.891	0.876	23.222

No. of observations 36

* Significant at 5 per cent level of significance

** significant at 1 per cent level of significance

are scheduled population (X_{13}), area under forest (X_7) and literacy rate (X_{14}) which further improve the explanatory power of the regression equation. In equation-V, adjusted coefficient of determination \bar{R}^2 is 0.876 showing that around 88 per cent of the variations in female work participation rate are explained by the variables such as livestock per 1000 population (X_6); number of tractors per 1000 hectares of cultivated area (X_1); proportion of scheduled population (X_{13}); and literacy rate (X_{14}). Behaviour of variables (X_6), X_1 and X_{13} is as expected in our hypotheses. But in case of X_7 i.e. area under forest, regression coefficient turns out to be negative against our expectation of positive relationship. Even simple correlation between female work participation rate and area under forest, though insignificant was positive. Thus seen in the context of other variables, variable X_7 influences female work participation rate adversely. Similarly regression coefficient of literacy rate (variable X_{14}) in rural areas, which has shown negative correlation (though insignificant see Table-V.1) with female work participation rate, turns out to be positive but significant only at 10 per cent level of significant when its impact is studied together with other four variables (see Table-V.3).

V.4.2 Stepwise Regression (Urban) :

Table-V.4 gives the results of stepwise multiple regression for urban areas of the three states. Here, the most important variable which is entered in the first step is literacy rate. Equation-I shows that regression coefficient of literacy rate (Y_6) is positive and highly significant showing that literacy rate in this region has a significant positive impact (as against our expectation) on female work participation rate in urban areas. This positive relationship of literacy with female work participation rates remains highly significant in all the five equations, when other variables are also entered. R^2 in equation-I is 0.725 which is quite high. Explanatory power of the regression equations increases with the subsequent entering of variables and in equation-IV, with four explanatory variables, adjusted coefficient of determination \bar{R}^2 reaches the highest value of 0.900 thus explaining the 90 per cent variations in the female work participation rate.

Next variable entered in equation-II is percentage of 'other workers' (Y_3). Regression coefficient of variable Y_3 is negative and remains significant at 1 per cent level of significance in all the subsequent equations except V where it is significant at 10 per cent level of significance only. Negative regression coefficient of variable Y_3 shows that increase in percentage of other

Table-V.4

Step-wise Regression (Urban)

Equation Number	Constant term	Regression Coefficients					Coefficient of determination R ²	Adjusted coefficient of determination \bar{R}^2	F-value
		Literacy rate Y ₆	Percentage of other workers Y ₃	Sex ratio Y ₇	Population density Y ₄	Percentage of urban population Y ₁			
I	-8.6370	0.2771** (5.962)					0.725	0.725	35.545
II	-3.2211	0.2650** (8.016)	-0.1427** (5.700)				0.877	0.873	51.509
III	6.8939	0.2306** (6.557)	-0.1354** (5.654)	-0.0101* (2.139)			0.894	0.887	39.822
IV	9.4884	0.1938** (5.214)	-0.1137** (4.613)	-0.0103* (2.316)	-0.0004* (2.187)		0.910	0.900	34.831
V	10.9694	0.1798** (4.312)	-0.0825 (1.735)	-0.0117* (2.420)	-0.0004 (1.942)	-0.0388 (0.769)	0.912	0.899	27.590

No. of observations 34
at

* significant/5 per cent level of significance

** significant at 1 per cent level of significance

workers (other variables remaining constant) decreases the female work participation. Similarly sex ratio (Y_7) is also negatively associated with female work participation rate (against our expectation as was the case in simple correlation, see Table-V.2). Population density variable (Y_4) entered at the fourth step has significant negative relationship with female work participation rate only in equation-IV. Fifth variable entered is percentage of urban population, but regression coefficient in this case is insignificant. Infact, enterance of fifth variable does not improve the explanatory power of the equation.

Thus from the forgoing stepwise regression analysis we can conclude that in rural areas, two most important explanatory variables which enhance the female work participation rate are livestock population and proportion of scheduled population. On the other hand number of tractors per 1000 hectares of cultivated land turns out to be an important variable decreasing the female work participation rate. In urban areas, important explanatory variable with positive impact on female work participation rate is literacy rate (Y_6) whereas percentage of 'other workers' (Y_3) and sex ratio (Y_7) are other two important explanatory variables with negative influence on female work participation.

STRUCTURE OF FEMALE WORK FORCE :
A MICRO-LEVEL SPATIAL ANALYSIS

Vi.1 Introductory Statement

The occupational structure of society is intimately related with the wider structure of society. The occupational activity to earn one's livelihood involves an individual with other individuals, thus establishing social relationship with them.

In India, agriculture was an open occupation in the sense that any body irrespective of his caste or religion could take to it. But there were such differences as between owning the land and tilling it. What type of activity would be allotted to an individual was largely determined by his birth in a family and caste.

But in contemporary Indian society, there is a change in occupational relations and occupational structure. The change, to an extent, has cut the relationship between occupation on the one hand and the family, caste and village community on the other.

Some scholars say that female participation in the non farm service sector, such as employment in public health,

in education and clerical jobs is fastly increasing. Because of the liberalisation of traditional social norms hitherto disfavouring women's employment and growing desire to live better, earning literate women in the service group are welcome in urban as well as in rural families.

But in the developing agrarian economies agriculture forms an important source of employment for the population. Moreover as we study the occupational structure of female work force in this type of economy, another fact comes out is that due to certain social, cultural and economic factors, the demand for female labour is concentrated in few jobs. These comprise generally a narrow range of low income, low skilled and low productivity jobs as compared with men who have a wide range of occupations to adopt.

From the analysis of the 1981 census data pertaining to occupational structure, we observe that around 80 per cent of women workers are concentrated in agriculture as compared with men whose share is around 63 per cent in India. Another well known hypothesis proved here is that women work out of sheer economic necessity. As our data shows, around 46 per cent of women workers are agricultural workers as compared with men who constitute only 19 per cent as agricultural labourers. Women's share in other

services to total workers is around 16 per cent whereas men's share in this category is around 34 per cent.

It is very difficult to conclude definitely, but census data indicates that female share as cultivators is decreasing and on the other hand share of female agricultural workers is increasing. As it is remarked by Kamla Nath,¹ the 1961 figures where women workers constituted 55.7 per cent as cultivators and 23.9 per cent as agricultural workers has changed in 1981 where 33.20 per cent among women workers are cultivators and 46.18 per cent as agricultural workers. But as pointed out by Danial and Alice Thorner,² it is difficult to interpret the occupational figures for females in India. Overtime due to the frequent changes in census definition of a worker since 1881.

VI.2 Occupational Structure of Female Work Force in India 1981

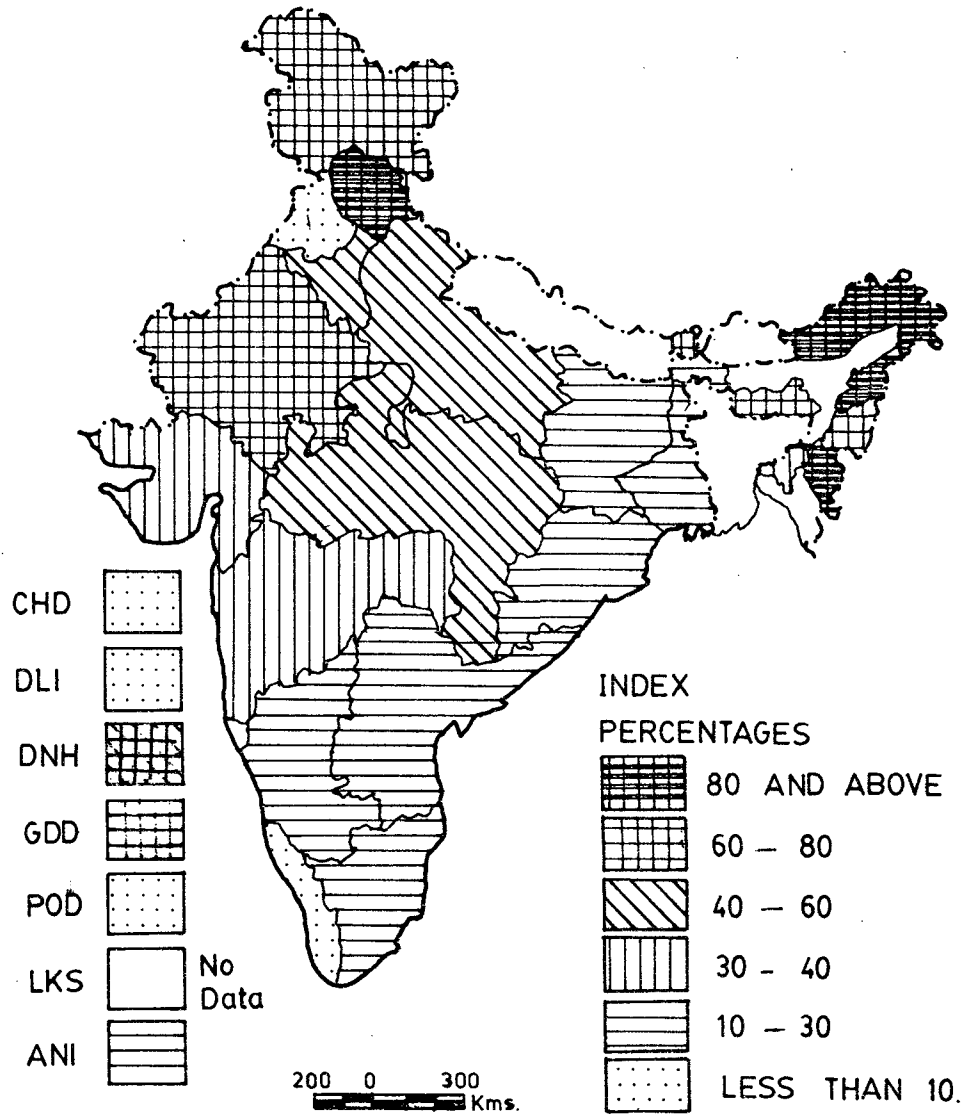
VI.2.1 Female Cultivators :

Map-VI.1 exhibit that the percentage of female cultivators to total female work force is highest in north east region of India. In this region agriculture is mainly

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1. Kamla Nath, "Women in Service Occupation", Economic and Political Weekly, Vol. II, No. 1, Jan. 7, 1967, pp. 25-30.
 2. Danial Thorner and Alice Thorner, Land and Labour in India, Asia Publishing House, New Delhi, 1962, p. 75.

INDIA

PERCENTAGE OF FEMALE CULTIVATORS TO TOTAL FEMALE WORKERS 1981



MAP VI.1

subsistence agriculture and productivity is very low. As a result of this women have to share the agricultural work, whereas men go for other jobs such as hunting and labour etc. Another reason is that in tribal culture, women inherit property and enjoy freedom of doing out door work.

Proportion of female cultivators is recorded as high as 80 per cent and above in the north east region (see Map-VI.1). Nagaland is having the highest share of female cultivators (93.92 per cent) followed by Arunachal Pradesh (92.69 per cent), Himachal Pradesh (89.57 per cent) and Mizorum (86.31 per cent) (see Appendix-VI.1). The other states of Jammu and Kashmir, Rajasthan, Meghalaya, Manipur and Sikkim are having high share of cultivators among the female workers ranging between 60 to 80 per cent (Map-VI.1). But on the contrary as Table-VI.1 shows, that these 10 states and union territories having highest share of cultivators in female work force (above 60 per cent) constitutes only around 14 per cent of India's total female cultivators. Whereas Uttar Pradesh, Haryana, Madhya pradesh, Gujarat, Maharashtra and Tripura having female cultivator's share in female work force ranging between 30 to 60 per cent constitute around 50 per cent of India's total female cultivators. On the other hand states of Punjab and Kerala have the minimum share of female cultivators even less

Table-VI.1

Percentage of Female Cultivators to Total Female Work Force in States and Union Territories of India: 1981

Percentage	No. of states and union territories	Percentage of female cultivators in states and union territories to total female cultivators
80 +	4	4.51
60 - 80	6	9.93
40 - 60	3	27.81
30 - 40	3	22.66
10 - 30	8	34.45
Below 10	5	0.64

Total	29*	100.00

*No female cultivator was found in Lakshdweep (U.T.)

than 6 per cent (see Appendix-A.VI.1).

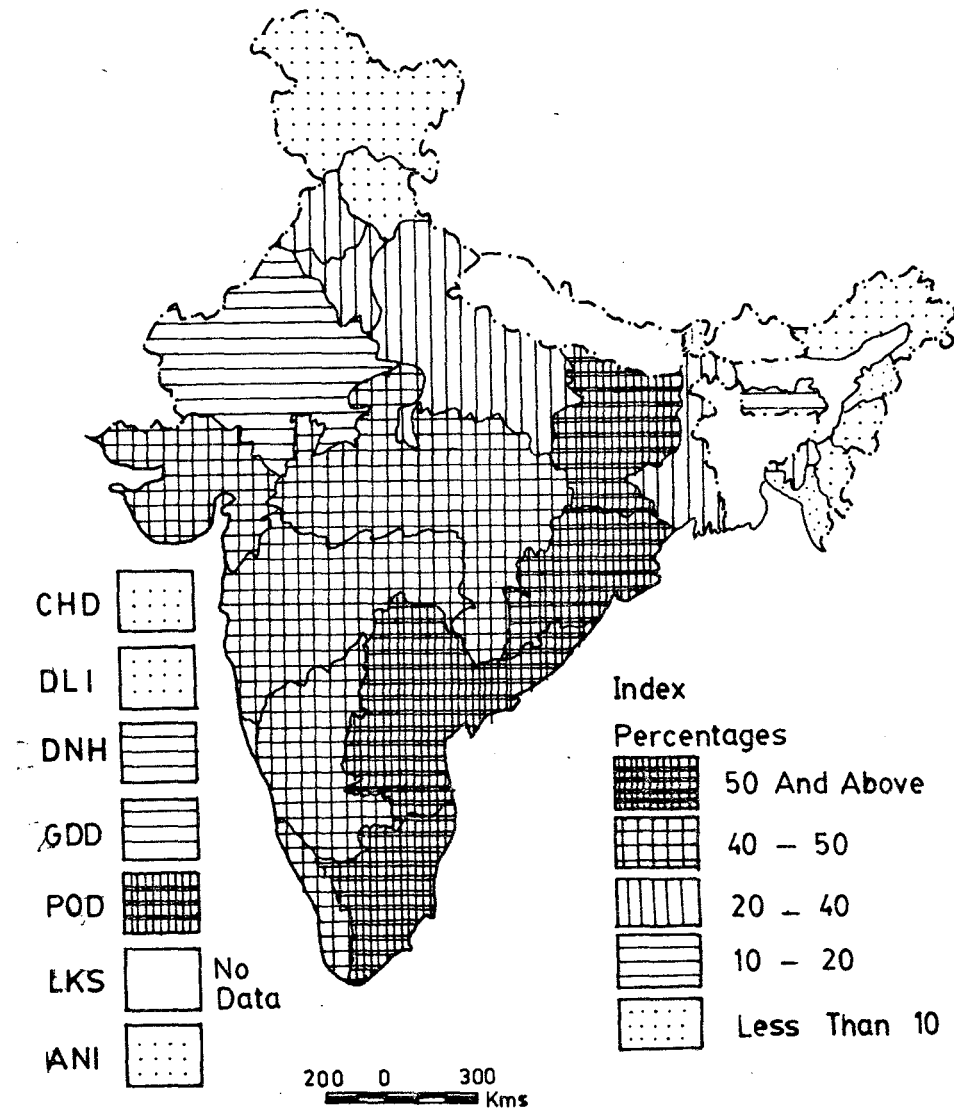
VI.2.2 Female Agricultural Labourers :

As we have already mentioned, agricultural labourers category constitutes quite substantial percentage of female workers. The proportion of female agricultural labourers is highest in Bihar i.e. 63.33 per cent. Map-VI.2 showing the distribution of share of agricultural labourers in the

INDIA

PERCENTAGE OF FEMALE AGRICULTURAL LABOURERS TO TOTAL FEMALE WORKERS

1981



MAP VI-2

female work force, presents a quite opposite trend as compared with the map showing share of female cultivators. Proportion of agricultural female labourers is very low in the tribal region of North-East, Jammu and Kashmir, Himachal Pradesh and also in semi-arid region of Rajasthan. It seems that in these areas women work only on their family forms.

On the other hand states of Bihar, Andhra Pradesh, Orissa, Tamil Nadu and Union Territory of Pondicherry which had low share of female cultivators, have highest share of agricultural labourers i.e. above 50 per cent (Map-VI.2). As it is clear from the Table-VI.2 this contiguous belt has

Table-VI.2

Percentage of Female Agricultural Labourers to Total Female Workforce in States and Union Territories of India, 1981

Percentage	No. of states and Union territories	Percentage of female agricultural labourers in states and union territories to total female agricultural labourers
50 +	5	47.20
40 - 50	5	42.99
20 - 40	5	8.28
10 - 20	4	1.35
Below 10	10	0.18

Total	29*	100.00

* No female agricultural labourer was found in Lakshdweep (U.T.)

also maximum concentration of female agricultural labourers. These states altogether constitute around 47 per cent of India's total female agricultural labourers. In fact, the central and southern India having the share of agricultural labourers above 40 per cent in the female workforce, account for around 90 per cent share of India's total female agricultural labourers. Remaining north and north eastern India together has very low proportion of female agricultural workers.

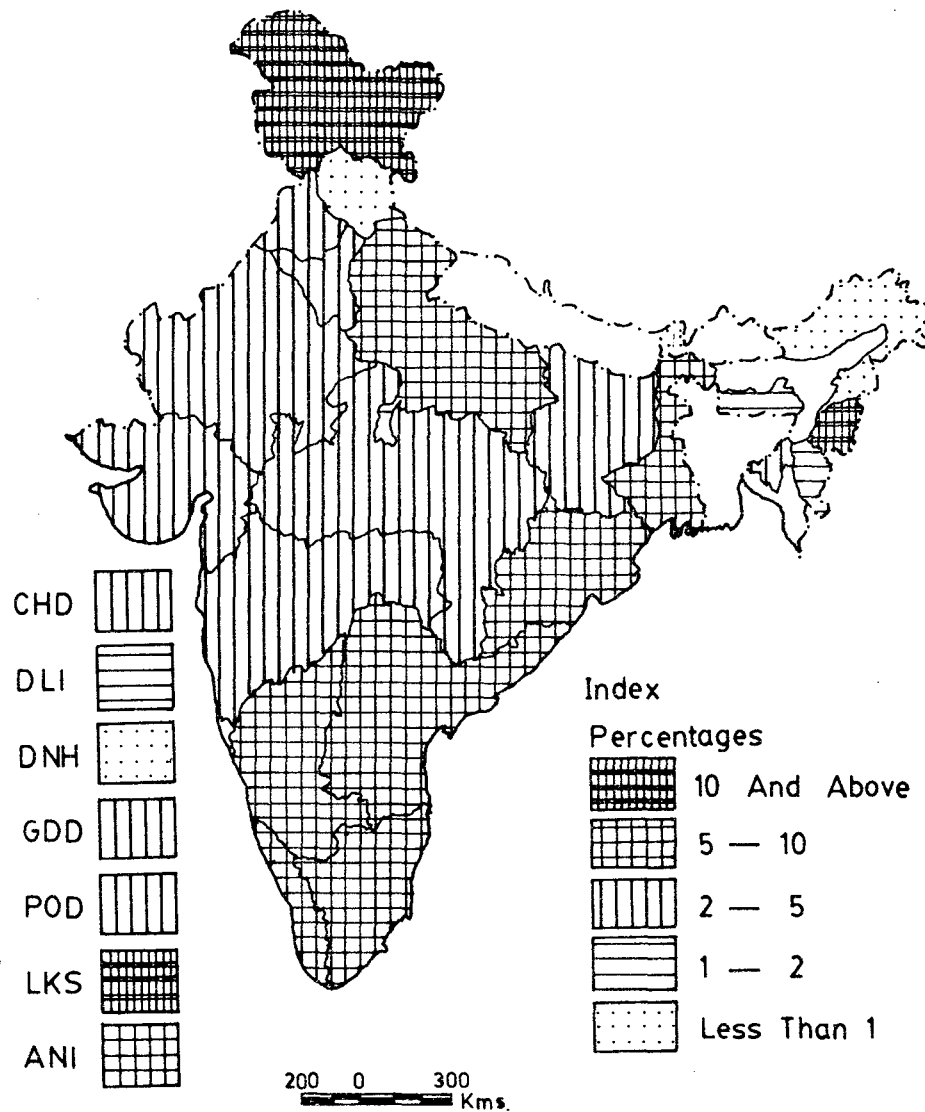
VI.2.3 Female Workers in Household Industry:

Share of female household industry workers in total female workers is just 4.59 per cent. This has been a result of various changes taking place in India since the starting of the nineteenth century. As remarked earlier, competition with British manufactured products and development of modern Indian industries especially since Independence has led to the continuous decline of household industry. In this process, women workers suffered more because the traditional textile industry where women workers were concentrated, was one of the worst affected. Moreover, due to higher pressure on existing jobs and competition with men, women were being thrown out of the labour market.

Map-VI.3 showing the distribution of share of female household industry workers in total female work force reveals

INDIA

PERCENTAGE OF FEMALE WORKERS IN HOUSE HOLD INDUSTRY TO TOTAL FEMALE WORKERS 1981



that Lakshdweep, Manipur and Jammu & Kashmir occupy the highest position with above 10 per cent female workers in household industry. But their share in India's female workers in household industries is just 3.25 per cent (see Table-VI.3). The female household industry workers are

Table-VI.3

Percentage of Female Workers in Household Industry to Total Female Workforce in States and Union Territories of India, 1981

Percentage	No. of States and union territories	Percentage of Female Workers in Household Industry in states and union territories to total female workers in Household industry
10 +	3	3.25
5 - 10	8	67.58
2 - 5	10	28.68
1 - 2	3	0.29
Below 1	6	0.20

Total	30	100.00

concentrated mainly in Uttar Pradesh, Orissa, West Bengal and Southern states of Andhra Pradesh, Karnataka, Kerala and Tamilnadu with share of female household industry workers in total female workers ranging between 5 and 10 per cent, and contributing around 68 per cent of the total

female household industry workers. All other states and union territories with below 5 per cent share of female household industry workers account for even less than 30 per cent share of the total female household industry workers of India

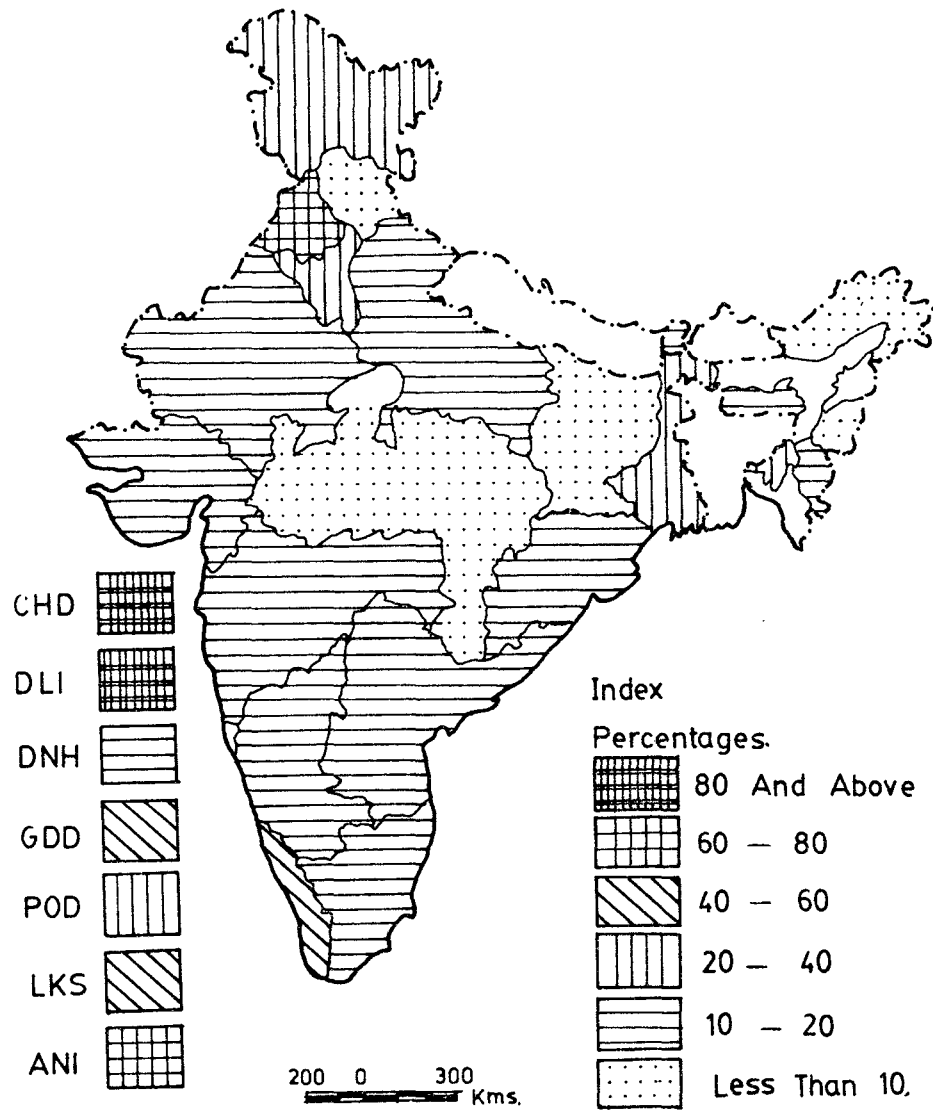
VI.2.4 Female Workers in 'Other Services' :

This category includes vast range of services; services of higher prestige to the lowest rank. So it becomes very difficult to find out the reasons of higher or low share of female workers in this category. While looking at data, it seems that areas having higher proportion of urban population for example, Chandigarh and Delhi have the highest share of female workers in 'other services', which is 98.69 per cent and 95.63 per cent respectively (Appendix-A.VI.1). Punjab is also having high share of female workers in this category (63.95 per cent). Whereas Himachal Pradesh, Arunachal Pradesh, Nagaland, Manipur, Bihar and Madhya Pradesh have lowest share of female workers in 'other services', i.e., even less than 10 per cent (see Map-VI.4).

Table-VI.4 and Map-VI.4 show that 12 states and union territories although having low share of female workers in 'other services' category ranging between 10 to 20 per cent, have around 64 per cent of India's total female workforce in 'other services' category.

INDIA

PERCENTAGE OF FEMALE WORKERS IN OTHER SERVICES TO TOTAL FEMALE WORKERS. 1981.



MAP VI:4

Table-VI.4

Percentage of Female Workers in Other Services to Total Female Workforce in States and Union Territories of India: 1981

Percentage	No. of States and Union territories	Percentage of Female Workers in other services in states and union territories to total female workers in Other Services
80 +	2	2.64
60 - 80	2	1.62
40 - 60	3	10.62
20 - 40	5	10.14
10 - 20	12	64.04
Below 10	6	10.94

Total	30	100.00

VI.3 Occupational Structure of Female Workforce in Punjab, Haryana and Himachal Pradesh 1981

In Punjab, an agriculturally developed state, majority of the women workers (nearly 64 per cent) are concentrated in 'other workers' category. It is very difficult to say that, in which particular service they are concentrated because all types of services are combined under this category. But various other sources provide

us information that, women are coming forward in every field. Because of increasing literacy among women especially in urban areas, they are joining certain jobs such as teaching, medical and other office jobs in significant numbers. On the other hand 25.29 per cent of the women workers in Punjab are agricultural labourers, which mainly belong to scheduled castes and land less peasants. Moreover, female's share in this category is higher than that of male's share.

In Himachal Pradesh, where still traditional methods of agriculture are practised because of mountainous area, women are mainly engaged in cultivation on their own fields. Because of low productivity men migrate to other areas to earn their livelihood, and 89.57 per cent of the women workers are cultivators and only 7.99 per cent are in 'other workers' category and very few of them are agricultural labourers.

On the contrary, situation in Haryana is altogether different, because agricultural development has not reached to that extent as in Punjab. Here, almost half of the women are engaged in cultivation, whereas, 'agricultural workers' and 'other workers' category account for 22 per cent and 26.32 per cent respectively. Household industry in Haryana accounts for very low percentage of women workers.

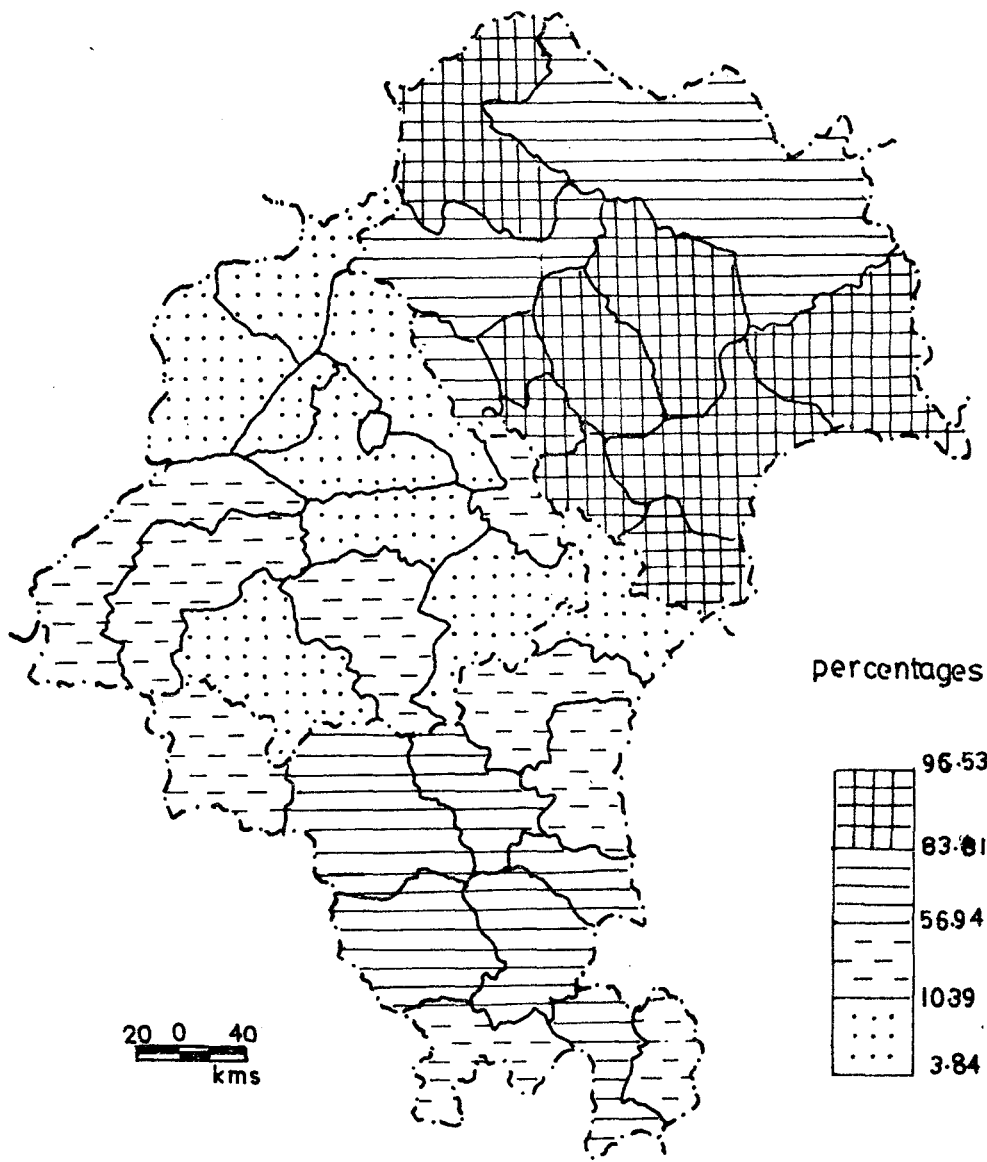
VI.3.1 Female Cultivators in Rural Areas :

We have already mentioned that women in Himachal Pradesh are predominantly engaged in cultivation. District-wise data shows that in the case of all the districts of Himachal Pradesh, female cultivators' share in the rural women workforce is above 70 per cent (see Appendix-A.VI.2). There exists large variations in the share of cultivators in female workforce. In Mandi district of Himachal Pradesh, women cultivators in rural areas are as high as 96.53 per cent of the total rural female workforce as compared with 3.48 per cent in Amritsar district. In fact 9 out of the 12 districts of Himachal Pradesh have more than 83.81 per cent of the female work force as cultivators (see Table VI.5 and Map-VI.5). In Haryana, the districts of Bihwani, Jind, Rohtak, Gurgaon, Sonipat and Hissar, have the share of female cultivators ranging between 83.81 and 56.94 per cent, whereas majority of the districts of Punjab have even less than 10.39 per cent share of female cultivators (see Table-VI.5 and Map-VI.5).

There also exists great variation within Punjab and Haryana, but very low intra-state variation in Himachal Pradesh are found in the proportion of rural female cultivators (see Appendix-A.VI.2).

PERCENTAGE OF FEMAME CULTIVATORS
TO TOTAL FEMALE WORKERS

(RURAL)



MAP V.5

Table VI.5

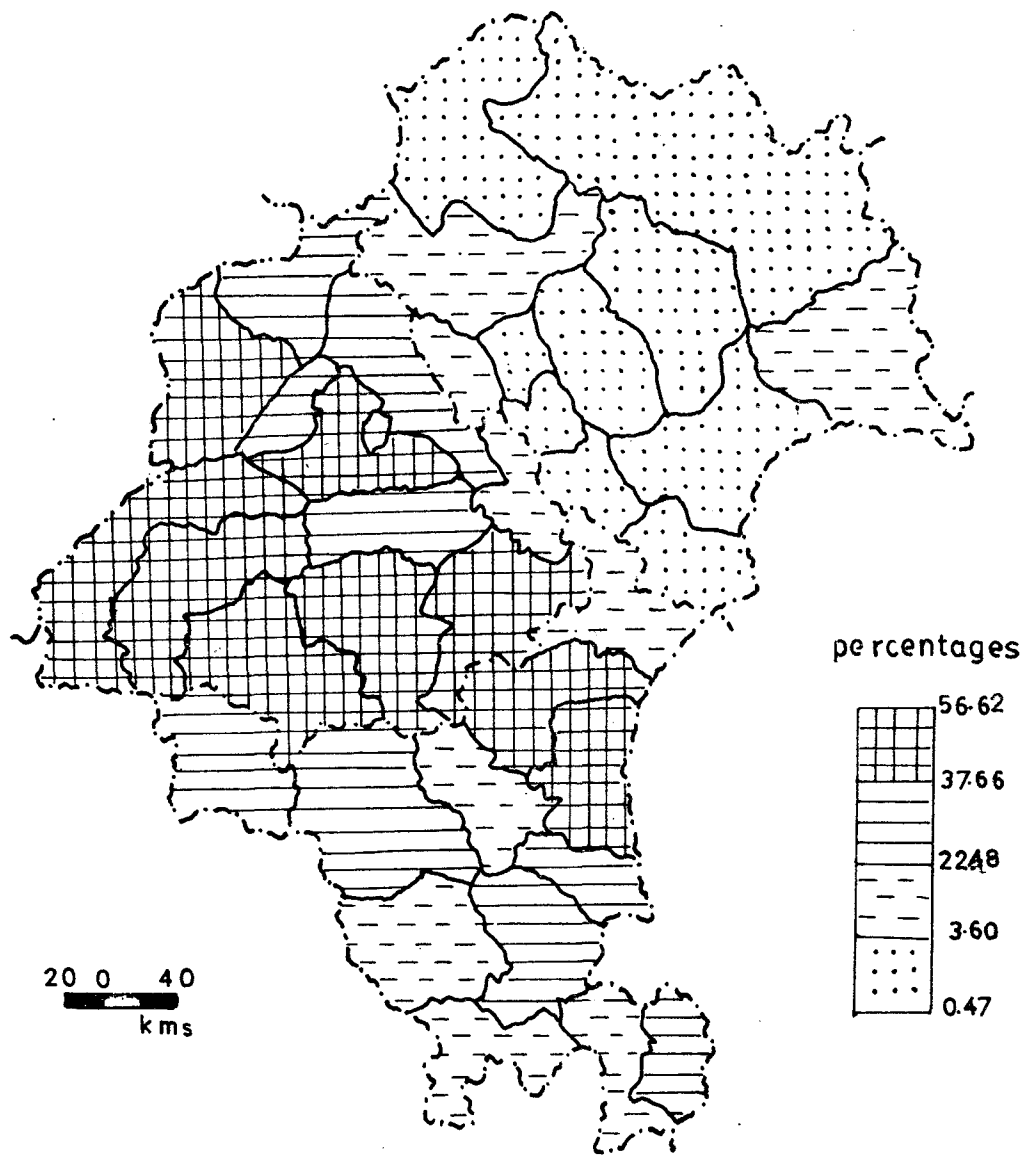
Percentage of Rural Female Cultivators to Rural Female Workers in Districts of Punjab, Haryana and Himachal Pradesh 1981

Percentage	Name of Districts
83.81 - 96.53	Mandi, Bilaspur, Kulu, Sirmaur, Simla, Hamirpur, Chamba, Solan, Kinnaur.
56.94 - 83.81	Bihwani, Kangra, Una, Lahul and Spiti, Jind, Rohtak, Gurgaon, Sonipat, and Hissar.
10.39 - 56.94	Mahendragarh, Faridkot, Sirsa, Karnal, Ferozpur, Kurukshetra, Ropar, Sangrur and Faridabad.
3.48 - 10.39	Hoshiarpur, Ambala, Bathinda, Patiala, Kapurthala, Ludhiana, Jalandhar, Gurdaspur, Amritsar.

VI.3.2 Female Agricultural Labourers in Rural Areas :

Distribution of female agricultural labourers as proportion of female workforce shows that there are considerable inter-district variations. Proportion of female agricultural labourers varies between 0.47 per cent in Chamba district of Himachal Pradesh and 56.62 per cent in Karnal districts of Haryana. Table VI.6 and Map-VI.6 show that most of the central districts of Punjab and Haryana, with developed agriculture, show higher proportion of agricultural labourers varying between 37.66 per cent and 56.62 per cent. On the other extreme, 9 out of 12 districts of Himachal Pradesh, a state with relatively

PERCENTAGE OF FEMALE AGRICULTURAL
LABOURERS TO TOTAL FEMALE WORKERS
(RURAL)



MAP VI.6

backward agriculture, exhibit a very small proportion (between 0.47 and 3.60 per cent) of female agricultural labourers. Remaining districts of Himachal Pradesh and some other backward districts of Haryana and Rupnagar district of Punjab lie in the third quartile (from above) with proportion of agricultural labourers in the female workforce varying between 3.60 and 22.48 per cent.

Table-VI.6

Percentage of Rural Female Agricultural Labourers to Rural Female Workers in Districts of Punjab, Haryana and Himachal Pradesh, 1981

Percentage	Name of Districts
37.66 - 56.62	Karnal, Ferozpur, Jalandhar, Kurukshetra, Bathinda, Amritsar, Faridkot, Sangrur and Patiala.
22.48 - 37.66	Hoshiarpur, Ludhiana, Kapurthala, Sirsa, Gurdaspur, Hissar, Faridabad, Sonapat and Rohtak.
3.60 - 22.48	Mahendragarh, Gurgaon, Ambala, Ropar, Jind, Bhiwani, Kinnaur, Kangra and Una.
0.47 - 3.60	Lahul & Spiti, Simla, Kulu, Solan, Bilaspur, Hamirpur, Sirmaur, Mandi and Chamba.

VI.3.3 Female Workers in Household Industry :

In general, female workers in household industries accounts for a low proportion of total female workforce. Among these three states, their proportion is highest in

Punjab which is 5.72 per cent. In Himachal Pradesh female household industry workers account for just 1 per cent of the total rural female workforce.

Looking at the districtwise distribution (Table-VI.7 and Map-VI.7), we find that in 8 districts from central and

Table-VI.7

Percentage of Rural Female Workers in Household Industry To Rural Female Workers in Districts of Punjab, Haryana, and Himachal Pradesh, 1981

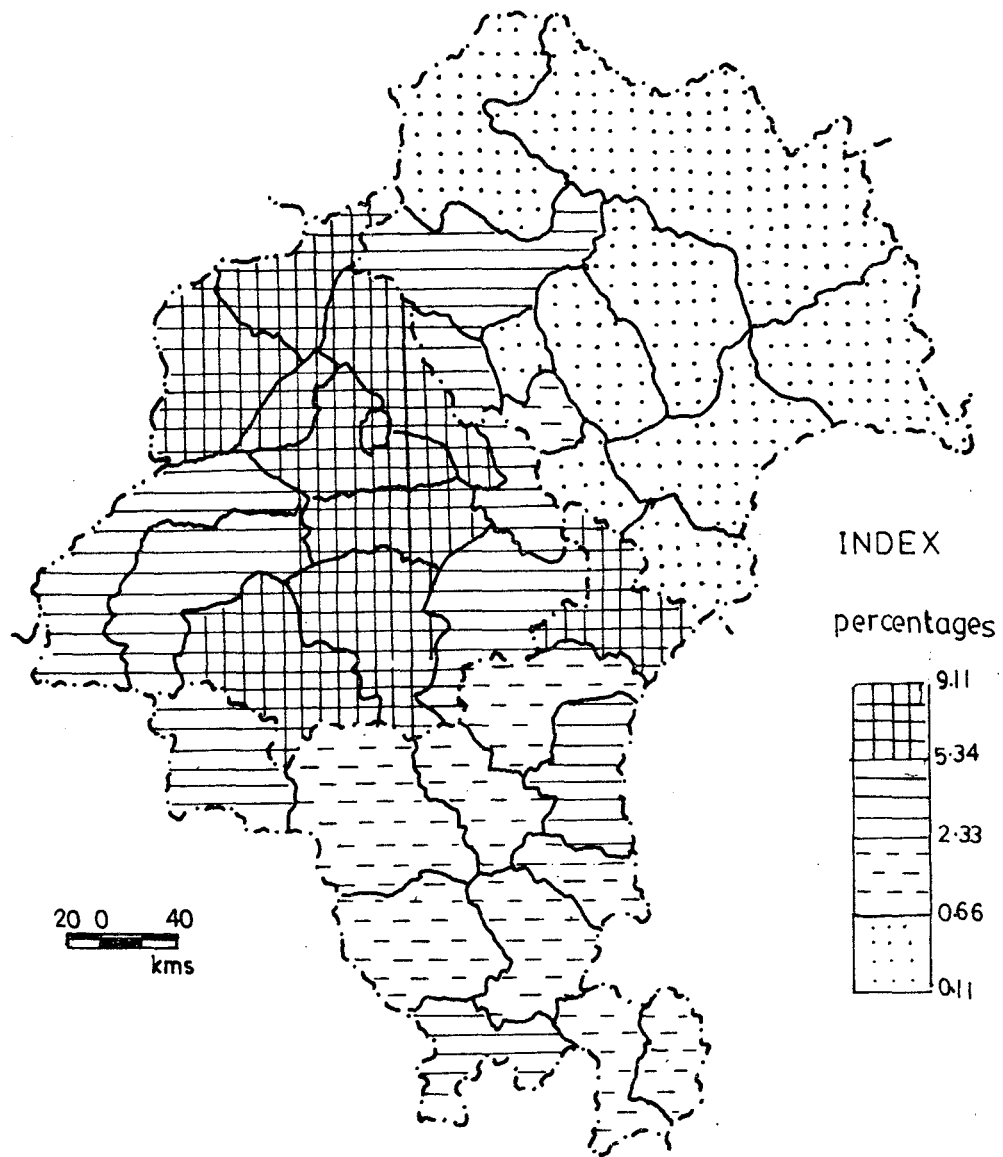
Percentage	Name of Districts
5.34 - 9.11	Ambala, Hoshiarpur, Sangrur, Bathinda, Gurdaspur, Jalandhar, Ludhiana, Amritisar and Kapurthala.
2.33 - 5.34	Mahendragarh, Faridkot, Patiala, Rupnagar, Una, Sirsa, Ferozpur, Karnal and Kangra.
0.66 - 2.33	Kurukshetra, Gurgaon, Sonapat, Roh-tak, Faridabad, Hissar, Jind, Bhiwani and Bhiwani.
0.11 - 0.66	Solan, Hamirpur, Chamba, Sirmaur, Kinnaur, Mandi, Kulu, Simla and Lahul & Spiti.

northern Punjab and Ambala district of Haryana, proportion of female household industry workers varies between 5.34 and 9.11 per cent. All the districts of Haryana, except Ambala, lie in the two middle quartiles with share of female household industry workers varying between 0.66 and

PERCENTAGE OF FEMALE WORKERS IN HOUSE-HOLD
INDUSTRY TO TOTAL FEMALE WORKERS

(RURAL)

1981



MAP VII.7

5.39 per cent. But on the other hand 9 out of the 12 districts of Himachal Pradesh lie in the lowest quartile with share of female household industry workers varying between 0.11 and 0.66 per cent.

VI.3.4 Rural Female Workers in 'Other Workers' Category :

There exist sharp inter-state as well as intra-state variations in the share of 'other workers' category in rural female workforce. Punjab is showing the highest proportion of female workers in 'other workers' category. As the Table-VI.8 and Map-VI.8 indicates, 8 districts from

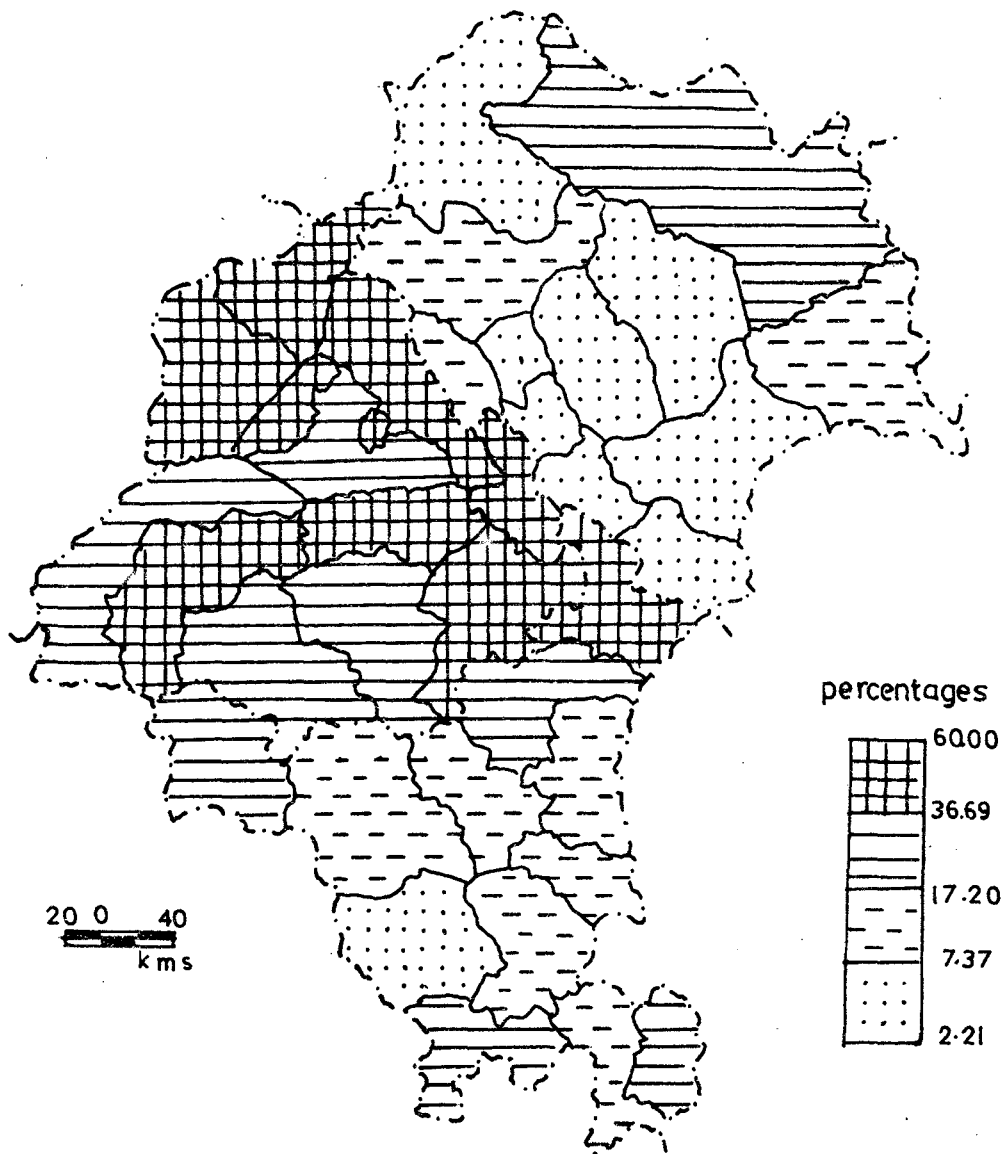
Table-VI.8

Percentage of Rural Female Workers in Other Services in Districts of Punjab, Haryana and Himachal Pradesh, 1981

Percentage	Name of Districts
36.69 - 60.00	Ambala, Gurdaspur, Rojpar, Ludhiana, Kapurthala, Patiala, Hoshiarpur, Amritsar, and Faridkot.
17.20 - 36.69	Sangrur, Bathinda, Jalandhar, Kurukshetra, Lahul & Spiti, Ferozpur, Mahendragarh, Sirsa and Faridabad.
7.37 - 17.2	Una, Gurgaon, Karnal, Kangra, Sonapat, Rohtak, Hissar, Jind and Kinnaur.
2.21 - 7.37	Chamba, Solan, Bhiwani, Simla, Sirmaur, Kulu, Hamirpur, Mandi and Bilaspur.

central and northern Punjab with Ambala district of Haryana belong to the highest quartile with the share of 'other workers' category varying between 36.69 and 60.00 per cent.

PERCENTAGE OF FEMALE 'OTHER WORKERS'
TO TOTAL FEMALE WORKERS
(URBAN)



MAP VI.8

Other than Ambala and Bhiwani, all other districts of Haryana belong to the middle, quartile with the share of 'other workers' category varying between 7.37 and 36.69 per cent. In majority of the districts in Himachal Pradesh, share of the female 'other workers' lie between 2.21 and 7.37 per cent. In fact all, except Lahul & Spiti districts of Himachal Pradesh belong to the lowest two quartiles.

VI.4 Occupational Structure of Urban Female Workers

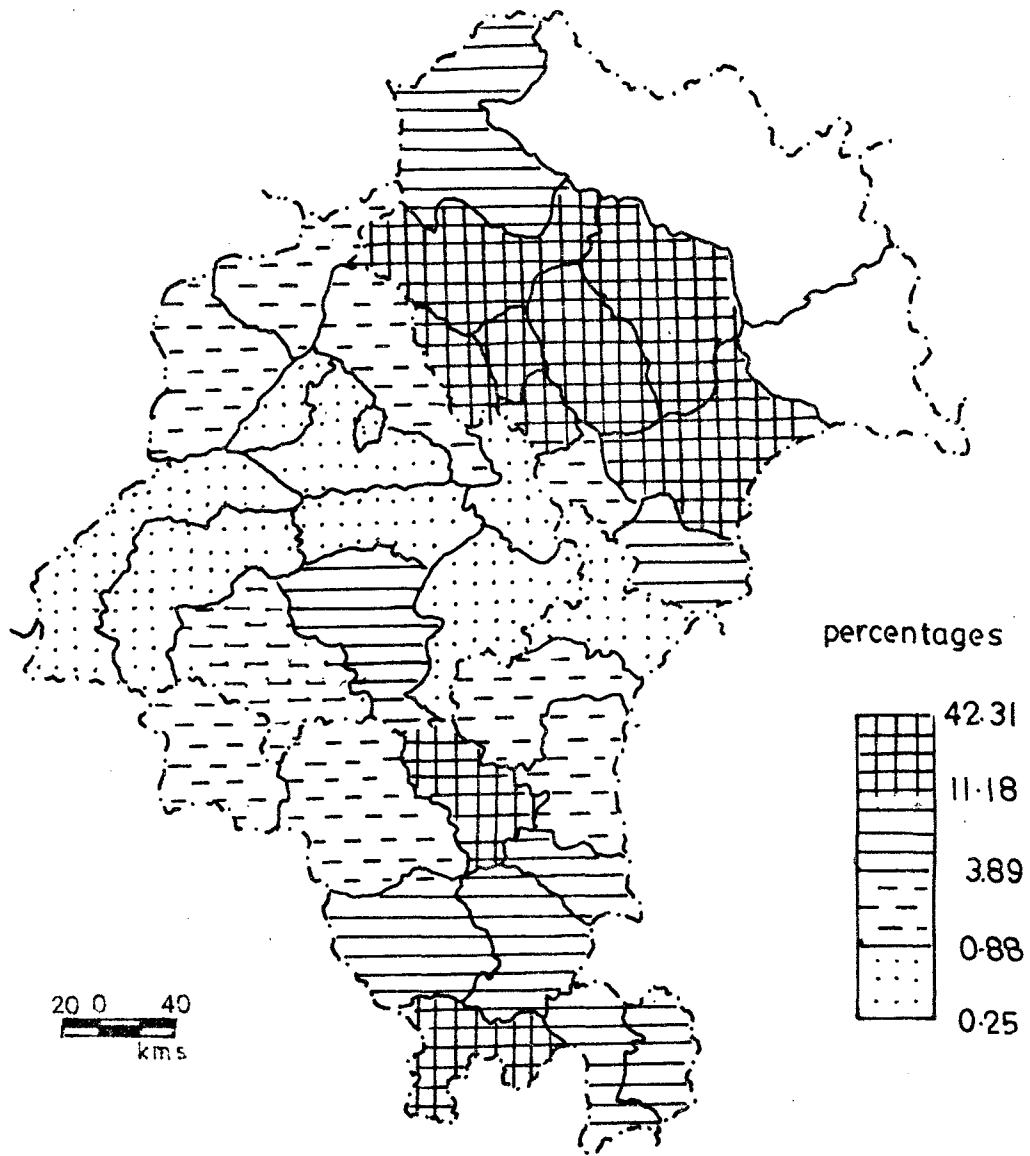
VI.4.1 Female Cultivators :

Urban areas generally provide employment in industrial and service sector. But the occupational structure of our study area shows that still around 13 per cent women workers are engaged as cultivators in urban areas of Himachal Pradesh. Of course the share of the female cultivators is quite low in Haryana and Punjab where it accounts for 4.23 and 1.21 per cent respectively.

Areas having low level of urbanisation seem to have higher proportion of cultivators. It is as high as 42.31 per cent in Bilaspur district of Himachal Pradesh. As the Table-VI.9 and Map-VI.9 reveal, majority of the districts of Himachal Pradesh with Jind and Mahendragarh districts of Haryana are having share of female cultivators ranging between 11.18 and 42.31 per cent. Most of the districts of Haryana state lie in two middle quartiles with share of female cultivators ranging between 0.88 and 11.18 per cent.

PERCENTAGE OF FEMALE CULTIVATORS
TO TOTAL FEMALE WORKERS

(URBAN) 1981



MAP VI.9

Table-VI.9

Percentage of Urban Female Cultivators to All Urban Female Workers in Districts of Punjab, Haryana and Himachal Pradesh, 1981

Percentage	Name of Districts
11.18 - 42.31	Bilaspur, Hamirpur, Jind, Kangra, Una, Kulu, Mahendragarh, Mandi and Simla.
3.89 - 11.18	Rohtak, Chamba, Faridabad, Sonapat Sangrur, Bhiwani, Sirmaur and Gurgaon.
0.88 - 3.89	Hissar, Amritsar, Sirsa, Solan, Kurukshetra, Karnal, Gurgaon, Hoshiarpur and Bathinda.
0.25 - 0.88	Faridkot, Ferozpur, Ludhiana, Patiala, Rupnagar, Kapurthala, Jalandhar, Ambala.

On the other hand 7 out of 12 districts of Punjab, have cultivators share between 0.25 and 0.88 per cent of the female workforce.

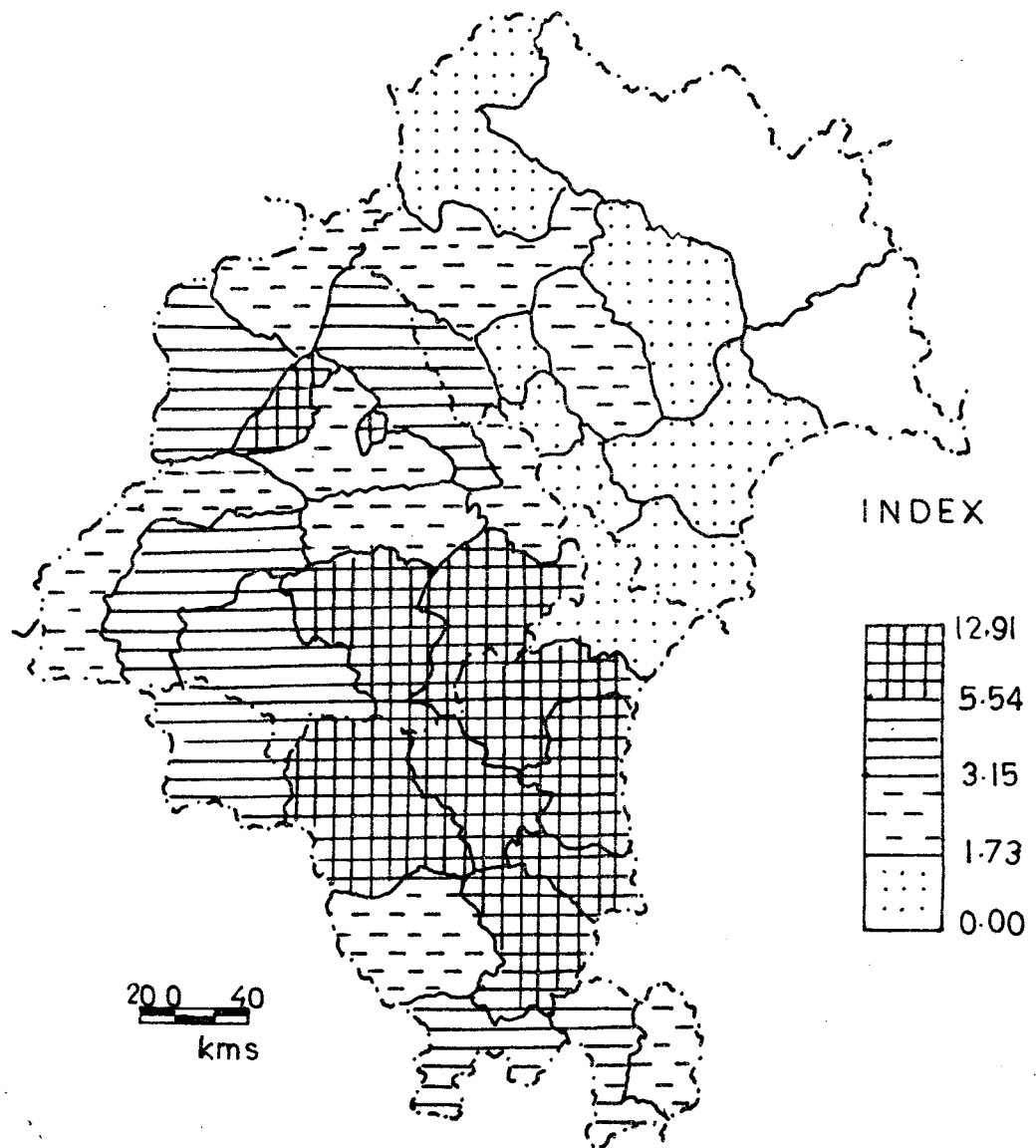
VI.4.2 Urban Female Agricultural Labourers :

Share of female agricultural labourers in urban areas is relatively lower. In Himachal Pradesh their share is even less than 1 per cent. But in Punjab and Haryana they account for 4.09 and 5.49 per cent respectively.

A glance at the Map-VI.10 and Table-VI.10 reveals that most of the districts of Himachal Pradesh have very

PERCENTAGE OF FEMALE AGRICULTURAL
LABOURERS TO TOTAL FEMALE WORKERS

(URBAN)



MAP VI.10

Table-VI.10

Proportion of Female Agricultural Workers to Urban Female Workforce in Punjab, Haryana and Himachal Pradesh, 1981

Percentage	Name of Districts
5.54 - 12.91	Karnal, Kapurthala, Kurukshetra, Hissar, Sangrur, Sonapat, Rohtak, Patiala and Jind.
3.15 - 5.54	Faridkot, Sirsa, Gurgaon, Hoshiarpur, Una, Amritsar, Bathinda and Mahendragarh.
1.73 - 3.15	Ferozepur, Jalandhar, Gurdaspur, Faridabad, Ludhiana, Rupnagar, Bhiwani, Mandi and Kangra.
0.00 - 1.73	Kulu, Ambala, Simla, Chamba, Hamirpur, Solan, Bilaspur and Sirmour.

low proportion of female agricultural labourers. In fact, two districts Bilaspur and Sirmour do not have a single female agricultural labourer. We have already observed in section VI.3.2 of this chapter that even in rural areas of Himachal Pradesh, share of female agricultural labourers in total rural workforce is quite low. On the other side six districts of Haryana and three districts of Punjab lying in the highest quartile form more or less a contiguous belt comprising central and southern parts of the two states (see Map-VI.10 and Table-VI.10).

Districtwise figures also show higher variation in Haryana compared to other states. Karnal district is having

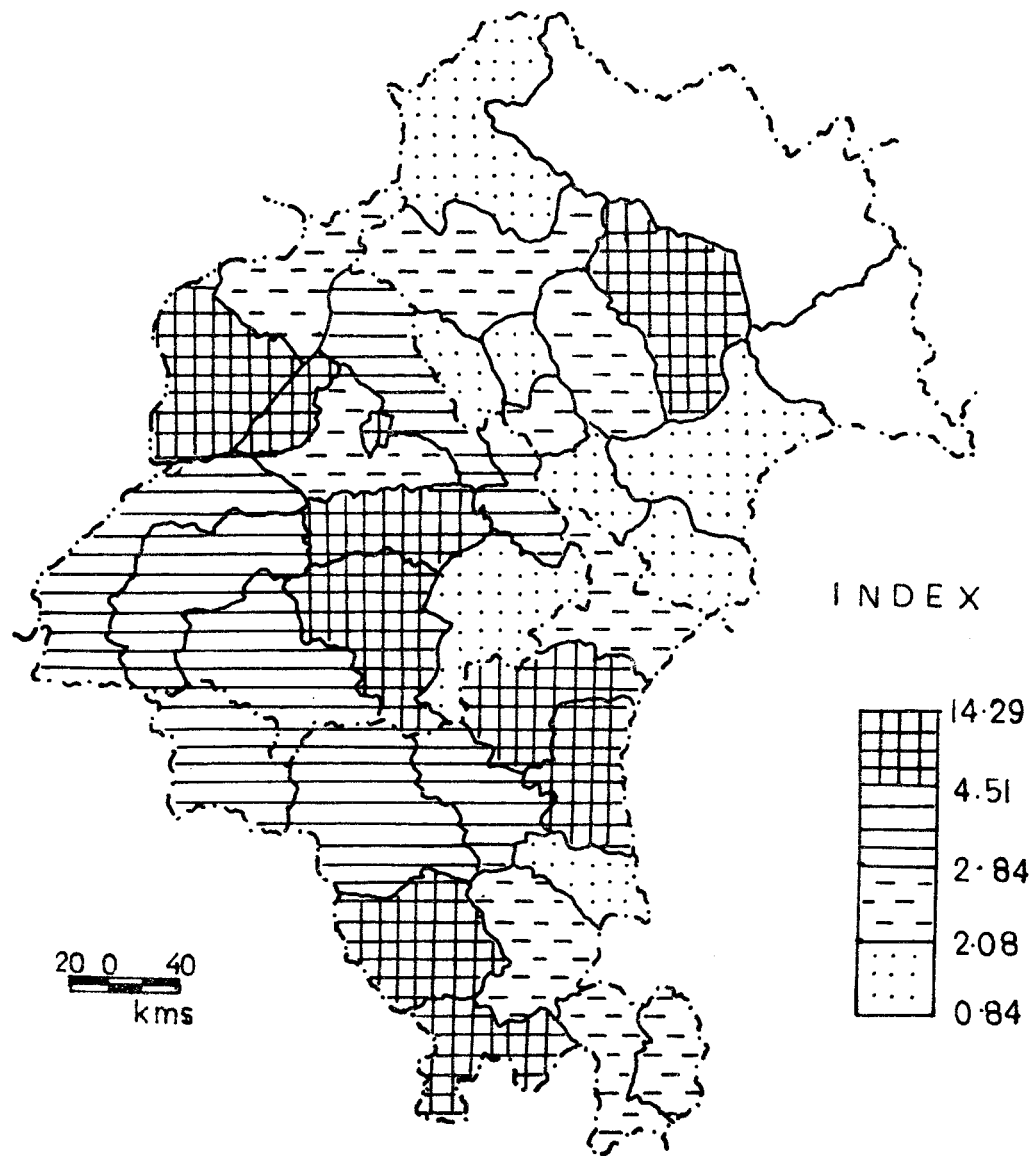
the highest proportion (i.e. 12.91 per cent) of female agricultural labourers in the total female workforce. On the other extreme, proportion in the case of Ambala district is just around 1 per cent (see Appendix A-VI.2).

VI.4.3 Urban Female Workers in Household Industry :

Household industry, which was very important source of employment in earlier times, has declined in its importance. Now it accounts for a very low proportion of female workers even in urban areas. Share of female household industry workers in the total urban female workforce is only 3.89, 3.80 and 1.84 per cent respectively in Haryana, Punjab and Himachal Pradesh. It also shows low variation within these states. Except for Mahendragarh district of Haryana, which is having 14.29 per cent of the female workers in household industry, in no other cases it crosses 7 per cent (see Appendix-A.VI.2). In Punjab highest share of household industry workers is 6.31 per cent in Ludhiana. Possibly woolen industry is providing employment to household women in large number in Ludhiana.

Table-VI.11 and Map-VI.11 shows that no clear trend emerges from the distribution of districts on the basis of share of household industry workers in female workforce. Districts from all the three states are found in highest as well as lowest quartile. But, Punjab and Haryana districts are in general, found in Higher quartiles whereas, concentration of Himachal districts is in lower quartiles.

PERCENTAGE OF FEMALE WORKERS IN HOUSE-HOLD
INDUSTRY TO TOTAL FEMALE WORKERS
(URBAN)



MAP VI.11

Table-VI.11

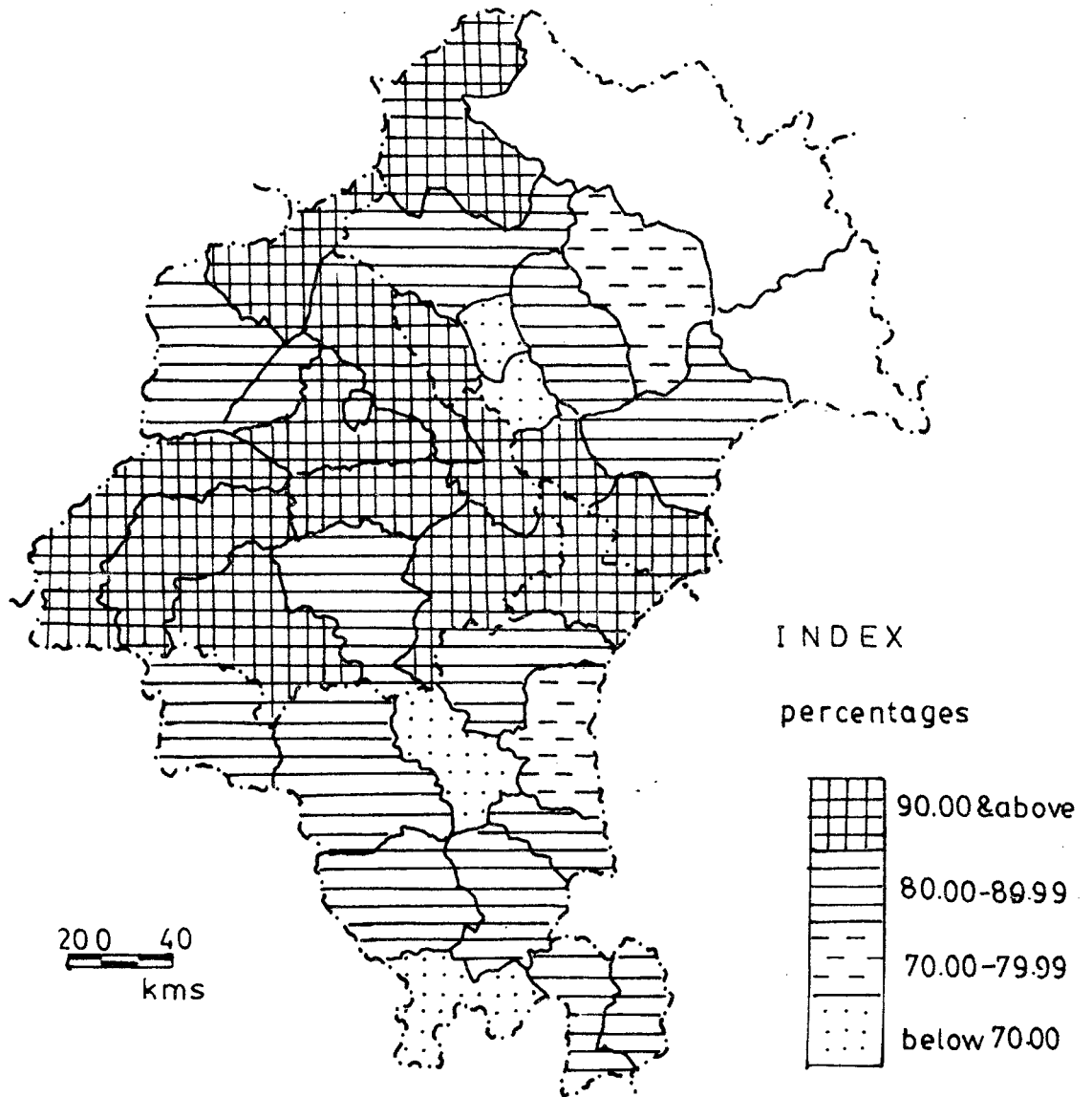
Share of Female Household Industry Workers in Urban Female Workforce in Districts of Punjab, Haryana and Himachal Pradesh, 1981

Percentage	Name of Districts
4.51 - 14.29	Mahendragarh, Karnal, Ludhiana, Sangrur, Kurukshetra, Amritsar, Kulu, Kapurthala and Bhiwani.
2.84 - 4.51	Hissar, Ferozpur, Bathinda, Faridkot, Hoshiarpur, Sirsa, Rupnagar and Jind.
2.08 - 2.84	Kangra, Jalandhar, Ambala, Rohtak, Faridabad, Mandi, Gurdaspur, Gurgaon, and Bilaspur.
0.84 - 2.08	Solan, Patiala, Sirmaur, Chamba, Sonapat Hamirpur, Una and Simla.

VI.4.4 Urban Female Workers in 'Other Workers' Category :

Census data pertaining to 'other workers' category in urban areas shows that Punjab is having the highest proportion (90.90 per cent) of female workers in this category, whereas it is 86.39 and 84.10 per cent for Haryana and Himachal Pradesh respectively. Map-VI.12 and Table-VI.12 show that all the districts of Punjab except Amritsar, Kapurthala and Sangrur, have female's share in this category above 90 per cent. Ambala district of Haryana, Chamba, Solan and Sirmaur districts of Himachal Pradesh also belong to this percentage category. Remaining three districts of Punjab also have share of 'other workers' above 80 per cent.

PERCENTAGE OF FEMALE OTHER WORKERS
TO TOTAL FEMALE WORKERS
(URBAN)



MAP VI.12

Table-VI.12

Share of Female Workers in 'other Services' in Urban Female Workforce in Districts of Punjab, Haryana and Himachal Pradesh, 1981

Percentage	Name of Districts
90.00 and above	Solan, Ambala, Rupnagar, Sirmaur, Gurdaspur, Jalandhar, Ferozepur, Chamba, Bathinda, Patiala, Hoshiarpur, Ludhiana, and Faridkot.
80.00- 89.99	Faridabad, Sirsa, Bhiwani, Gurgaon, Amritsar, Sonapat, Simla, Kurukshetra, Kapurthala, Hissar, Rohtak, Mandi, Sangrur and Una.
70.00- 79.99	Kulu and Karnal.
Less than 70.00	Mahendragarh, Jind, Hamirpur and Bilaspur

On the other hand, Hamirpur and Bilaspur districts of Himachal Pradesh and Jind and Mahendragarh districts of Haryana have share of 'other workers' category in total urban female labour force below 70 per cent. None of the districts of Punjab belong to this category. Most of the Haryana districts are concentrated in the percentage group of 80 to 90 per cent.

In fact the category of 'other workers' is a residual category including all workers other than cultivators, agricultural labourers and workers in household

industry. Thus it becomes difficult to explain the lower or higher prevalence of workers in this category.

VI.5 Conclusion

To sum up, traditionally in India, occupational structure of society has been intimately related with caste and religion. Sex also played and still plays, a role in determining the division of occupations. Because of a peculiar value system and cultural norms prevalent in India, women were generally preferring only those jobs where their interaction with other men was low. Since then there has been some welcome change in the occupational distribution between men and women. Educated middle class women are entering into hitherto male dominant service sector jobs. But their share in the total female employment is meagre.

As far as spatial distribution is concerned, in north-east region, the share of female cultivators to female work force is very high. Prevalence of subsistence agriculture and low productivity in this region compels the women to take part in cultivation to supplement their family incomes. But the share of this region in total India's female cultivators is very low.

Agricultural labourers also constitute quite substantial proportion of female workers. Distribution pattern of agricultural labourers is quite opposite to that of

cultivators. Very low percentage of female agricultural labourers are found in north-east, Jammu and Kashmir and Himachal Pradesh. Central and Southern states have high share of female agricultural labourers in female work force and also higher percentage in the total India's female agricultural labourers.

As far as household industries ^{are} concerned, very low proportion of female workers in India are found in this category. 'Other workers' category also account for very less proportion of female workers except in Punjab, Delhi and Chandigarh union territories.

Now coming to our study area, in Himachal Pradesh, women are mainly in cultivators category whereas in Punjab female workers are mainly concentrated in 'other workers' category. Around one-fourth of the female workers in Punjab and Haryana are agricultural labourers. Female cultivators in Haryana are concentrated in Jind, Rohtak, Gurgaon, Sonapat and Hissar. Percentage of female cultivators in the total rural female workers vary greatly among the districts. Inter-district variations are less in the percentage of female agricultural labourers in Himachal Pradesh as compared with Punjab and Haryana.

Female rural workers in household industries account for a low share in the total rural workers and there exist low inter-district variations. But inter-state as well as

intra-state variations are higher in the case of proportion of 'other workers' category in total female workers.

Significant proportion of female cultivators in urban areas is found in all the districts of Himachal Pradesh and Jind and Mahendragarh districts of Haryana. In other districts of Haryana and Punjab their share is relatively low.

A contiguous belt comprising southern districts of Haryana and Punjab and northern districts of Haryana have higher share of female agricultural labourers in female workforce in urban areas. Haryana also displays large variation in female agricultural labourers at district level. Household industry account for lower percentage of females even in urban areas. Females have higher share in 'other workers' category in most districts of the Punjab.

CONCLUSIONS

Inequality between sexes is one of the most important problems faced by the world in general and the developing countries in particular. Status of women in a society is substantially determined by their economic position and the role played by them in productive activities. Participation of women in economic activity is, in fact, a result of variety of socio-economic and cultural factors. Social and cultural values and stage of economic development, vary in different groups of people and in turn these values and economic differences influence the rights and roles of women in different ways.

In the traditional village community in India, the women played an important role in the process of earning a livelihood for the family. But with the advent of industrial revolution in England and more so as a result of development of modern industry in India since Independence, Indian household industries, the important employers of female work force, have declined thus resulting in a decrease in female work participation rates. However, with the development of education since Independence, certain new job opportunities became available to Indian women

but these opportunities have benefitted only a small section of the female population. On the aggregative level there has been a decline in female participation in work. Furthermore, the impact of these changes has been different in different regions of India depending upon various factors such as the level and pattern of economic development, socio-cultural values and norms and educational level etc. Keeping in view these changes, the aim of the present study has been to explain the spatial variations in the female participation in work force in north western region of India.

The present study is an analysis of cross-section data, on the basis of 1981 census. The purpose of the study has been to examine the extent of female participation and occupational structure at the district and the tehsil level. An attempt has also been made to explain the variations in female participation in economic activity, with the help of selected socio-economic variables. Simple correlation and step-wise regression method has been applied to verify the relationship of these variables with female work participation rate.

It is observed that at the global level, amongst the communist and advanced capitalist countries female participation rate is high amongst the communist countries than the capitalist country. Possibly, it is the diff-

erence in political set up which influences the participation rate. Among the third world, Muslim countries, with cultural norms and the value system prohibiting the women's free movements outdoor, show a very low female participation rate. Even the disparity in male female participation is highest in these countries. Considering the case of India we find a declining trend in the female participation rate since the start of the twentieth century. Decline of handicrafts where most women found jobs and lack of skill required by the new industries led to the decline of female employment.

(A look at the geographical distribution of female working population in India show that female participation rate is high in the north-east region having the concentration of tribal population though these areas represent a very small proportion of the total female labour force. Around 75 per cent of the total female workers come from peninsular India, where, compared to north India with low female participation rate, proportion of tribal population is higher and which was also comparatively less influenced by Islamic culture. Distribution of female main workers in rural and urban India separately also show the similar trend. It is the north east and peninsular India which has the higher participation rate and concentration of female main workers. | But the overall female participation rate and regional diversities are higher in rural areas as compared with urban areas. |

Female share of marginal workers is also higher in rural areas (around 7 per cent) as compared with urban areas (around 1 per cent). In fact, around 85 per cent of the rural marginal workers are females.) Distribution pattern of marginal female workers is slightly different than the main workers. The higher concentration of female marginal workers is in Jammu and Kashmir, Himachal Pradesh and Central India followed by south India in rural areas and to a substantial extent in urban areas. Another common feature is that the proportion of female marginal workers is lowest in the three north Indian states of Uttar Pradesh, Bihar and West Bengal in both rural and urban areas.

Analysis of district and tehsil-level data for the three states of Punjab, Haryana and Himachal Pradesh also brings out certain interesting results. We have observed that in general, female work participation rates are very high in hilly districts of Himachal Pradesh as compared with Punjab and Haryana. Agriculture in hilly areas of Himachal Pradesh is relatively backward with low land and labour productivity. With small fields, farming is mainly carried out with traditional tools and women have to participate in such labour-intensive cultivation in order to meet the subsistence needs of the family. On the other hand, even in Himachal Pradesh, in low lying areas, with high density of population and intensive cultivation of

irrigated lands, female participation rate is comparatively lower.

In the state of Punjab, with highly developed agriculture, where the role of machines has increased tremendously, agriculture provides very low opportunities to the females thus resulting in a very low female participation rate. In Haryana, the areas with relatively backward agriculture under dry conditions and low irrigation level, comprising the districts of Hissar, Jind, Bhiwani, Sonapat, and Rohtak, have relatively higher female participation rates in rural areas.

There exist less inter-district variation in rural female participation rates in Punjab and Haryana as compared to Himachal Pradesh. Another conclusion which emerges is that female share in the rural workforce is higher than their participation rates at the overall state level.

As against main workers, the share of rural female marginal workers is higher in Punjab and Haryana than in Himachal Pradesh. In fact, females are enumerated mainly as marginal workers in Punjab. The districts of Himachal Pradesh which are having high participation rate of female main workers have relatively low share of marginal female workers. Relatively dry region of Punjab and Haryana comprising Sirsa and Hissar have high share of female

marginal workers. It seems that marginal category of workers in rural areas is confined to women only, men's share being very small.

Although Punjab is having relatively low urban female participation rate as compared to Haryana and Himachal Pradesh, it is higher than its rural participation rate, which is an exception. On the other hand, Himachal Pradesh is having urban female participation rate even higher than the rural participation of Punjab and Haryana. Urban female participation rates show less spatial variations than the rural areas. Proportion of female workers in urban workforce is also higher in Himachal Pradesh. Share of marginal female workers is very low in urban areas as compared to rural areas.

Tehsil-level data show great extent of variation. Areas of Himachal Pradesh adjoining Punjab show very high diversity and low level of rural female participation. Increase in the extent of variation in the rural female participation rates is because of high concentration of female workers in some tehsils. It is observed that as we study the phenomenon at the lower aggregative level, the participation rate of female workers in some cases increases and gets concentrated in few areas. This might be because of some specific socio-economic conditions of those areas.

In terms of their share in work force, Una district of Himachal Pradesh shows the pattern more similar to Hoshiarpur district of Punjab. In Haryana some tehsils of the developed districts of Ambala, Kurukshetra and Karnal have low female share in work force. But a contiguous region in the relatively backward area comprising some tehsils of Jind, Hissar, Rohtak, Panipat and all tehsils of Bhiwani have high share of females in workforce. At the tehsil level Haryana presents more diverse patterns in terms of the share of female workers in work force.

Even in terms of the share of marginal workers at the tehsil level, Himachal Pradesh leads the other states. But at the same time it also shows great extent of variation. Low lying areas of Himachal Pradesh have relatively high share of marginal workers. Similarly south-western parts of Punjab and Haryana also have relatively high share of marginal workers.

Urban female workers at the tehsil level are concentrated in few pockets. In Haryana, tehsils around Delhi and along the G.T. Road have high female participation rate as well as female's share in work force. Whereas in Himachal Pradesh very few tehsils have urban population and most of the towns have a population of less than 5000. But there are urban centres with a relatively high female participation.

Marginal female workers in urban areas at tehsil level is extremely low - 96 tehsils out of 112 have below 2 per cent.

In the developing third world countries, the level of female participation in economic activity is influenced by social economic and cultural factors. An attempt has been made to relate some of the variables representing these factors with female participation level. Correlation between female workers participation rate and these variables verifies some hypotheses set up in this study. Female work participation rate in rural areas is positively associated with variables such as, livestock per 1000 population, proportion of small holdings, agricultural workers as per cent of total rural workers, percentage of rural population and the share of scheduled population. On the other hand, negative relationship is found between female work participation rate and set of five variables (X_1 to X_5) representing agricultural development as well as density of population.

In urban areas of these states, coefficients of correlation between female participation rate and percentage of urban population, percentage of other workers, population density and sex-ratio turn out to be negative. It is only in the case of literacy rate that significant positive relationship is found with female participation rate.

Results of step-wise regression bring out the fact that in rural areas, two most important explanatory variables are livestock population and the proportion of Scheduled population. On the other hand, number of tractors per 1000 hectares of cultivated land turns out to be an important variable decreasing the female work participation rate. In urban areas, literacy rate (Y_6) is an important explanatory variable. The percentage of other workers (Y_3) and sex ratio (Y_7) are other two important explanatory variables with negative influence on female work participation rate.

Traditionally in India, occupational structure of society has been intimately related with caste and religion. Sex also played, and still plays, a role in determining the division of labour. Because of a peculiar value system and cultural norms prevalent in India, women were generally preferring only those jobs where their interaction with other men was minimum. Since then there has been some welcome change in the occupational structure of men and women. Now, educated middle class women are entering into hitherto male-dominant service sector jobs. But their share in the total female employment is meagre.

As far as spatial distribution is concerned, the share of female cultivators to female workforce is very high in the northeast. Prevalence of subsistence agri-

culture and low productivity in this region compels the women to take part in cultivation to supplement their family incomes. But the contribution of this region to the overall female cultivators of India is very low.

Agricultural labourers also constitute quite substantial proportion of female workers. Distribution pattern of agricultural labourers is quite opposite to that of cultivators. Very low percentage of female agricultural labourers are found in the north-east, Jammu and Kashmir and Himachal Pradesh. Central and southern states have high share of female agricultural labourers in female work force and also higher percentage in the total India's female agricultural labourers.

As far as workers in household industry are concerned, very low proportion of female workers in India are found in this category. 'Other workers' category also accounts, for very low proportion of female workers except in Punjab and the union territory of Delhi and Chandigarh.

Of the states of the study area, women are mainly engaged as cultivators in Himachal Pradesh. The female workers are concentrated in the category of 'other workers' in Punjab. Around one-fourth of the female workers in Punjab and Haryana are agricultural labourers. Female cultivators in Haryana are concentrated in Jind, Rohtak,

Gurgaon, Sonapat and Hissar. Percentage of female cultivators in the total rural female workers vary greatly among the districts. Inter-district variations in the share of female agricultural labourers are low in Himachal Pradesh as compared to Punjab and Haryana.

Female rural workers in household industry account for a low share in the total female rural workforce and there exist low inter-district variations. But inter-state as well as intra-state variations are high in the case of proportion of 'other workers'.

Significant proportion of female cultivators in urban areas is found in all the districts of Himachal Pradesh and Jind and Mahendragarh districts of Haryana. In other districts of Haryana and Punjab their share is relatively low.

A contiguous belt comprising southern districts of Haryana and Punjab and northern districts of Haryana has a higher share of female agricultural labourers in urban areas. Haryana also displays large variations in female agricultural labourers at the district level. Workers in household industry account for lower percentage of females even in urban areas. Females have a high share in the category of 'other workers' in most of the districts of Punjab.

Thus in Himachal Pradesh and in some parts of Haryana where female participation is high, female workers are mainly concentrated in agriculture in which per capita productivity is low and work is done under adverse conditions. More developing agriculture, organised sector of industry and modern service sector which give higher returns, are still a monopoly of man.

If women's condition is to be improved and they are required to play an important role in the development of third world countries, steps have to be taken to improve the competence of women vis-a-vis men. One such step should be that more opportunities should be provided to them to improve their skill and education. Training in modern farming techniques through extension services, and reservation in technical service sectors is likely to improve the position of women.

APPENDIX-A.III.1

FEMALE WORK PARTICIPATION RATES (1981)

L.C.	State/ U.T.	Percentage of female worker to female popula- tion	Percentage of rural female workers to		Percentage of urban female workers to		Percentage of rural female marginal workers to		Percentage of urban female marginal workers to	
			rural female popula- tion	total rural workers	urban female popula- tion	total urban workers	female popula- tion	total rural margi- nal workers	urban popula- tion	total urban marginal workers
1	2	3	4	5	6	7	8	9	10	
1.	INDIA	13.99	16.00	22.45	7.28	11.65	7.18	85.20	1.04	63.16
2.	Andhra Pd.	27.02	31.95	34.55	10.49	11.79	8.08	92.62	1.32	80.24
3.	Bihar	9.06	9.70	15.74	4.17	7.33	4.95	81.78	0.61	51.79
4.	Gujarat	11.03	13.46	19.50	5.49	9.06	13.40	93.42	1.03	74.44
5.	Haryana	4.69	4.89	8.09	3.99	6.34	8.36	95.28	0.46	60.30
6.	Himachal Pd.	18.71	19.38	28.03	9.59	12.46	13.98	81.08	1.67	63.56
7.	J & K	5.91	6.12	9.40	5.11	8.25	38.97	86.29	4.27	85.03
8.	Kernataka	18.95	22.28	27.85	10.53	16.93	8.39	91.40	1.29	69.95
9.	Kerala	12.77	13.47	25.28	9.67	19.66	4.25	52.09	2.09	41.27
10.	M.P.	22.35	25.78	30.82	8.31	13.56	10.00	89.83	1.32	70.54
11.	Maharashtra	23.98	31.39	36.53	9.11	13.37	9.46	85.94	1.03	55.85

contd...../-

Appendix-A.III.1 cont...

1	2	3	4	5	6	7	8	9	10
12. Manipur	34.59	38.85	44.16	22.71	34.93	4.54	85.77	5.90	82.43
13. Meghalaya	33.29	37.05	39.65	15.61	22.96	4.99	82.95	0.51	67.58
14. Nagaland	42.45	47.50	45.08	10.52	12.39	0.80	49.12	0.41	49.75
15. Orissa	10.70	11.07	16.72	7.65	11.74	10.01	86.35	1.84	67.73
16. Punjab	2.27	1.72	2.76	3.71	5.83	5.18	85.37	0.49	71.68
17. Rajasthan	9.32	10.58	16.18	4.45	7.83	14.40	92.00	1.43	81.00
18. Sikkim	34.69	38.01	37.00	15.21	15.10	3.36	80.31	0.37	34.21
19. Tamil Nadu	22.36	27.85	32.03	11.01	17.16	5.70	86.36	0.96	69.05
20. Tripura	8.95	9.03	14.63	8.25	15.03	4.25	72.33	0.48	30.90
21. Uttar Pradesh	5.39	5.90	9.38	2.99	5.07	3.14	84.56	0.47	70.72
22. West Bengal	5.81	6.19	10.74	4.66	7.26	2.70	58.09	0.94	45.67
23. Andaman Nico- bar	5.07	4.45	60.02	6.89	8.04	7.56	69.27	0.31	21.04
24. Arunachal Pradesh	40.55	42.24	39.41	11.20	10.51	5.40	78.64	0.48	49.28
25. Chandigarh	8.93	3.10	3.52	9.30	11.73	0.54	61.11	0.16	31.26
26. Dadra Nagar Haveli	26.14	26.68	32.09	18.12	23.78	15.63	93.88	8.72	66.28

contd...../-

Appendix-A.III.1 cont...

1	2	3	4	5	6	7	8	9	10
27. Delhi	6.52	6.10	9.58	6.55	9.10	2.65	71.58	0.14	42.94
28. Goa Daman Deo	15.05	16.19	27.03	12.53	19.03	8.80	75.42	2.70	66.39
29. Lakshadweep	5.58	6.36	16.73	4.65	11.00	4.93	38.44	2.00	37.12
30. Mizorum	32.33	36.78	39.76	18.45	26.22	6.03	70.01	3.43	68.49
31. Pondicherry	11.03	14.35	22.42	8.02	15.40	3.74	75.04	1.28	57.85

APPENDIX-A.IV.1
 WISE RATES
 DISTRICT FEMALE WORK POPULATION (1981)

Sl. No.	State/ District	RURAL				URBAN			
		Percentage of rural female workers to		Percentage of rural female marginal workers to		Percentage of urban female workers to		Percentage of urban female marginal workers to	
		female population	total rural workers	rural female population	total rural marginal workers	urban population	total urban workers	urban female population	total urban marginal workers
1	2	3	4	5	6	7	8	9	
	<u>PUNJAB</u>	1.72	2.76	5.18	85.37	3.71	5.83	0.49	71.68
1.	Gurdaspur	1.39	2.49	1.78	68.84	3.00	5.32	0.30	88.49
2.	Amritsar	1.82	2.86	3.28	80.28	3.19	4.99	0.17	71.91
3.	Ferozpur	2.06	3.11	6.76	86.43	3.82	6.24	0.40	50.73
4.	Ludhiana	1.76	2.77	4.06	88.74	3.58	5.17	0.34	74.92
5.	Jalendhar	2.14	3.70	3.37	81.18	3.21	5.17	0.11	58.35
6.	Kapurthala	1.68	2.87	2.69	89.69	4.14	6.34	0.15	24.27
7.	Hoshiarpur	2.04	3.75	5.29	75.25	3.96	6.52	0.41	54.53
8.	Rupnagar	1.88	3.07	3.42	81.56	5.62	8.54	1.29	86.19
9.	Patiala	1.34	2.06	3.04	84.67	5.12	7.98	0.28	67.23
10.	Sangrur	1.50	2.15	8.11	89.60	3.25	5.22	1.78	84.76
11.	Bathinda	1.41	2.11	11.07	90.06	4.18	6.35	0.89	66.92
12.	Faridkot	1.57	2.40	8.50	91.56	3.57	5.87	0.95	73.38

contd...../-

Appendix-A.IV.1 cont...

1	2	3	4	5	6	7	8	9
<u>HARYANA</u>	4.39	8.09	7.41	84.41	4.47	6.34	0.46	60.30
1. Ambala	1.92	3.07	1.12	65.84	3.59	7.23	0.15	46.21
2. Kurukshetra	2.17	3.49	6.49	85.76	5.02	5.88	0.30	64.81
3. Karnal	3.22	5.14	3.33	84.55	2.99	7.81	0.46	64.53
4. Jind	6.49	10.10	13.06	87.96	4.42	5.08	0.70	71.04
5. Sonapat	8.53	14.00	8.02	77.28	4.39	7.31	0.12	37.66
6. Rohtak	7.39	12.95	9.49	79.56	4.05	7.75	0.82	57.54
7. Faridabad	3.38	3.68	5.40	87.91	4.22	5.38	0.35	51.54
8. Gurgaon	4.65	7.78	8.59	85.69	3.14	7.30	0.65	55.85
9. Mahendragarh	2.30	4.80	11.54	85.64	2.91	5.61	1.74	67.77
10. Bhiwani	9.42	15.42	11.23	85.15	3.45	4.80	0.37	55.56
11. Hissar	6.02	9.29	6.31	87.90	2.63	5.45	0.41	84.52
12. Sirsa	2.68	4.22	4.95	90.05	3.99	4.10	0.34	52.96
<u>HIMACHAL PRADESH</u>	19.38	28.03	13.98	81.08	9.59	12.46	1.67	63.56
1. Chamba	13.87	18.98	25.60	85.35	10.28	15.49	1.80	76.47
2. Kangra	9.05	17.27	12.28	77.39	10.13	16.01	1.74	83.92
3. Hamirpur	13.63	30.15	19.93	83.24	9.40	13.54	4.86	78.82
4. Una	3.59	7.86	7.19	76.81	3.62	6.59	2.66	73.82

contd...../-

Appendix-A.IV.1 cont...

1	2	3	4	5	6	7	8	9
5. Bilaspur	18.51	29.35	16.43	80.39	12.08	16.21	1.70	64.71
6. Mandi	27.75	36.95	15.15	81.36	8.20	11.42	2.11	62.39
7. Kulu	34.72	36.76	13.37	84.29	10.50	11.64	1.50	58.56
8. L & S	50.00	36.72	12.06	67.55	-	-	-	-
9. Simla	38.18	38.71	9.55	76.57	12.24	11.83	1.12	47.74
10. Solan	17.09	24.24	14.67	84.67	9.94	12.03	0.85	46.21
11. Sirmaur	20.52	23.22	12.27	86.12	7.26	11.38	0.39	28.40
12. Kinnour	46.77	40.15	4.29	77.54	-	-	-	-

APPENDIX-A.IV.2

TEHSILWISE PARTICIPATION RATES OF FEMALE WORKERS (1981)

Tehsils	Location code	RURAL				URBAN			
		Percentage of rural female workers to		Percentage of rural female marginal workers to		Percentage of urban female workers to		Percentage of urban female marginal workers to	
		rural female population	total rural workers	female population	total rural marginal workers	female population	total urban workers	female population	total urban marginal workers
1	2	3	4	5	6	7	8	9	10

HIMACHAL PRADESH

CHAMBA

Kilar (Pangi) T.	1	46.93	42.72	9.10	71.07	-	-	-	-
Tista (Chauran) T.	2	27.05	26.69	26.08	87.03	-	-	-	-
Salum S.T.	3	16.75	20.74	19.84	79.84	-	-	-	-
Chamba T.	4	8.26	13.46	30.37	84.42	9.93	15.50	0.67	59.46
Chauri Khas T.	5	7.44	12.31	27.77	90.65	10.93	15.47	3.88	84.15
Brahmpur T.	6	9.43	13.76	28.97	90.13	-	-	-	-
Sihunta S.T.	7	7.74	13.10	18.60	80.91	-	-	-	-

KANGRA

Nurpur T	8	2.31	4.69	5.01	60.88	7.24	12.38	1.11	96.88
Indora S.T.	9	3.29	5.25	2.39	63.14	-	-	-	-
Kangra T.	10	13.77	23.91	15.91	82.63	10.97	17.46	1.78	82.17

contd...../-

Appendix-A.IV.2 cont....

1	2	3	4	5	6	7	8	9	10
Deragopipur T.	11	7.31	14.76	23.46	79.02	7.57	12.30	2.89	87.10
Khudian S.T.	12	21.38	28.48	23.88	75.64	-	-	-	-
Chambagraon S.T.	13	12.65	30.20	12.34	78.03	-	-	-	-
Palmpur T.	14	9.66	19.17	5.76	75.64	11.34	13.41	-	-
Fatehpur S.T.	15	3.33	6.60	6.00	63.84	-	-	-	-
<u>HAMIRPUR</u>									
Nadaun S.T.	16	13.96	31.08	21.38	82.71	7.78	13.53	1.24	51.52
Tirasujan Pur S.T.	17	7.14	19.18	20.64	86.44	13.91	26.21	2.14	93.75
Hamirpur T.	18	11.18	26.56	21.76	82.78	7.41	8.88	7.80	79.33
Barsar T.	19	16.14	32.02	22.72	84.51	-	-	-	-
Bhoranj S.T.	20	15.72	33.72	14.42	81.12	-	-	-	-
<u>UNA</u>									
Amb T.	21	2.99	6.97	5.24	71.62	3.34	7.30	4.80	81.68
Harozia S.T.	22	2.74	5.96	5.04	88.81	-	-	-	-
Una T.	23	3.16	6.51	2.24	75.81	3.69	6.35	1.77	66.67
Bangana T.	24	6.74	14.12	21.72	76.84	-	-	-	-
<u>BILASPUR</u>									
Ghumarwin T.	25	21.72	35.21	15.38	81.45	23.00	29.05	5.71	67.54

contd...../-

Appendix-A.IV.2 cont...

1	2	3	4	5	6	7	8	9	10
Bilaspur Sadari T.	26	11.55	17.99	15.98	83.06	8.66	11.97	0.20	43.75
Nainadevi S.T.	27	15.15	22.11	23.46	73.29	1.69	2.07	1.69	66.67
<u>MANDI</u>									
Jogindernagar T.	28	24.70	35.88	24.07	80.82	13.72	16.67	7.73	83.89
Laobharol S.T.	29	41.39	58.12	12.64	79.27	-	-	-	-
Sandhol S.T.	30	37.63	54.94	7.77	76.24	-	-	-	-
Sarkaghat T.	31	19.11	34.50	10.22	81.46	-	-	-	-
Mandi T.	32	17.43	26.73	23.83	79.63	9.73	12.95	1.38	49.25
Sundarnagar T.	33	20.54	27.87	10.98	84.36	5.27	8.02	1.46	57.94
Chachyot S.T.	34	48.19	45.48	5.76	90.81	-	-	-	-
Thuna	35	52.44	46.43	4.99	74.95	-	-	-	-
Balichowki S.T.	36	56.75	45.96	9.73	79.53	-	-	-	-
Karsog T.	37	36.91	38.68	12.09	91.08	-	-	-	-
<u>KULLU</u>									
Kullu	38	33.06	35.57	12.35	81.33	10.50	11.64	1.50	58.56
Banjar T.	39	27.88	31.22	23.64	93.12	-	-	-	-
Ani T.	40	34.46	37.32	13.52	79.88	-	-	-	-
Nermand T.	41	47.27	44.38	6.66	84.70	-	-	-	-

contd...../-

Appendix-A.IV.2 cont...

a	1	2	3	4	5	6	7	8	9	10
<u>LAHUL & SPITI</u>										
Udaipur S.T.	42	40.50	34.29	21.62	73.52	-	-	-	-	-
Lahul T.	43	50.98	38.89	13.23	64.68	-	-	-	-	-
Spiti T.	44	56.49	35.55	2.30	53.63	-	-	-	-	-
<u>SIMLA</u>										
Seoni T.	45	20.41	31.96	24.52	87.28	-	-	-	-	-
Simla T.	46	23.95	27.50	12.09	77.16	11.77	11.52	1.12	46.93	
Theog T.	47	33.34	37.23	11.19	74.29	12.17	11.20	1.00	42.86	
Kumharsain S.T.	48	29.86	33.77	10.21	71.34	-	-	-	-	-
Rampur T.	49	45.09	42.46	6.24	74.22	11.44	10.99	0.82	55.56	
Nankhari S.T.	50	45.44	46.02	3.42	69.54	-	-	-	-	-
Rohru T.	51	52.25	45.57	4.18	68.58	28.75	20.63	1.57	73.68	
Jubbal T.	52	37.30	38.85	9.34	73.23	-	-	-	-	-
Kotkhair T.	53	35.54	37.57	12.34	75.18	-	-	-	-	-
Chaupal	54	42.01	37.34	11.89	83.96	-	-	-	-	-
Nerua S.T.	55	54.81	42.13	4.22	76.92	-	-	-	-	-
<u>SOLAN</u>										
Arki T.	56	29.83	42.28	10.47	80.30	10.23	17.71	1.14	40.91	
Ramshahr S.T.	57	23.17	30.06	21.74	91.27	-	-	-	-	-

contd...../-

Appendix.A.IV.2 cont...

1	2	3	4	5	6	7	8	9	10
Nala Garh T.	58	13.32	18.60	17.80	85.83	8.98	11.49	1.17	37.66
Kasauli T.	59	6.50	10.76	16.51	87.57	14.33	13.17	0.91	86.21
Solan T.	60	10.30	13.88	10.62	78.33	8.75	11.25	0.71	43.38
Kandaghat T.	61	23.30	30.71	12.35	81.33	-	-	-	-
<u>SIRMAUR</u>									
Rajgarh T.	62	18.52	22.28	24.33	89.91	-	-	-	-
Pachhad T.	63	42.04	40.41	8.92	78.07	10.50	11.20	0.48	100.00
Nahan T.	64	8.59	12.59	20.22	85.73	7.54	12.35	0.41	26.57
Renuka T.	65	28.36	28.77	17.02	91.37	-	-	-	-
Shalai T.	66	24.70	23.97	8.23	87.09	-	-	-	-
Paontasahib T.	67	12.56	15.55	6.20	62.18	5.79	8.45	0.30	33.33
<u>KINNAUR</u>									
Hangrang S.T.	68	51.54	43.67	8.56	87.03	-	-	-	-
Poo T.	69	45.54	47.39	9.95	74.46	-	-	-	-
Morang T.	70	49.80	45.30	7.18	87.47	-	-	-	-
Kalpa T.	71	31.17	26.52	2.26	75.00	-	-	-	-
Nichar T.	72	50.35	39.38	2.65	69.33	-	-	-	-
Sangla T.	73	54.50	50.43	1.70	71.30	-	-	-	-

contd...../-

Appendix-A.IV.2 cont...

1	2	3	4	5	6	7	8	9	10
<u>HARAYANA</u>									
<u>AMBALA</u>									
Kalka	74	3.87	5.71	0.64	61.98	10.17	12.65	0.11	37.50
Naraingarh	75	1.82	2.99	1.39	65.70	3.77	6.72	0.20	42.22
Ambala	76	1.50	2.49	0.62	57.31	4.56	8.12	0.16	50.41
Jagadhari	77	1.85	2.87	1.49	70.11	4.80	3.19	0.13	41.53
<u>KURUKSHETRA</u>									
Pehowa	78	2.34	3.71	6.27	85.94	3.95	6.44	0.24	54.29
Guhla	79	3.47	5.21	20.26	85.80	-	-	-	-
Kaithal	80	1.28	2.07	4.00	88.52	2.48	4.15	0.23	69.09
Thaneswar	81	2.34	3.91	2.78	82.18	4.33	6.97	0.35	64.40
<u>KARNAL</u>									
Karnal	82	2.51	4.04	4.12	84.12	5.43	8.48	0.39	56.82
Assandh	83	3.20	5.08	3.19	83.89	3.46	5.66	2.85	75.53
Panipat	84	4.38	6.92	3.16	85.55	4.67	7.19	0.34	70.06
<u>JIND</u>									
Narwana	85	4.28	6.80	11.48	88.42	3.77	6.15	0.95	66.88
Jind	86	9.59	14.53	15.42	88.11	2.70	4.67	0.52	76.33
Safidon	87	4.50	7.11	11.23	86.16	1.78	3.19	0.74	74.29

contd...../-

Appendix-A.IV.2 cont...

1	2	3	4	5	6	7	8	9	10
<u>SONIPAT</u>									
Gohana	88	15.53	23.30	14.43	77.35	2.94	5.30	0.41	15.63
Sonipat	89	4.71	8.15	4.52	77.11	4.73	7.70	0.14	41.21
<u>ROHTAK</u>									
Maham	90	12.94	19.60	13.83	82.75	4.76	8.86	1.12	34.25
Rohtak	91	9.03	14.68	10.67	77.06	4.33	7.64	0.26	34.17
Jhajjar	92	3.72	7.55	7.73	80.45	4.23	8.06	3.91	80.72
Bhadurgarh	93	8.45	14.23	9.19	80.21	4.69	7.66	0.23	45.98
<u>FARIDABAD</u>									
Ballabgarh	94	2.39	4.29	5.25	87.66	4.47	5.60	0.21	39.12
Palwal	95	3.84	6.26	5.47	88.02	2.40	4.22	0.89	72.69
<u>GURGAON</u>									
Gurgaon	96	2.22	4.15	3.89	76.49	4.53	7.83	0.49	48.43
Nuh	97	6.20	9.70	13.14	86.09	2.03	3.71	2.70	79.70
Ferozpur Jhirka	98	7.22	10.90	12.54	90.36	2.29	3.81	0.25	84.62
<u>MAHENDRAGARH</u>									
Bawal	99	2.32	4.80	11.05	86.12	1.18	2.19	5.81	78.60
Rewari	100	1.81	3.91	6.51	81.41	2.88	5.05	0.89	64.86

contd...../-

Appendix-A.IV.2 cont.!!!.

1	2	3	4	5	6	7	8	9	10
Mahendragarh	101	3.19	6.48	14.51	89.80	3.48	6.67	3.64	62.54
Narnaul	102	2.09	4.32	14.80	84.46	3.64	6.31	1.06	71.57
<u>BHIWANI</u>									
Bawinkhera	103	9.80	15.39	8.61	84.02	1.12	2.17	1.16	55.26
Bhiwani	104	6.73	11.76	8.93	87.33	3.10	4.90	0.12	42.75
Dadri	105	6.84	12.96	12.91	83.49	3.32	5.87	1.01	63.68
Loharu	106	21.66	29.30	15.49	86.88	1.81	3.21	0.09	75000
<u>HISSAR</u>									
Fatehabad	107	5.88	8.76	7.44	90.86	2.50	3.91	0.65	90.85
Tohana	108	3.96	5.91	7.40	97.32	2.27	3.86	0.06	47.06
Hansi	109	6.72	10.99	4.55	76.71	3.71	6.05	0.70	87.43
Hissar	110	6.25	9.58	6.45	89.00	3.88	5.99	0.32	81.40
<u>SIRSA</u>									
Dabwali	111	1.10	1.81	1.44	N.A.	2.37	3.92	0.13	15.13
Sirsa	112	3.25	5.37	6.23	N.A.	2.70	4.14	0.40	67.76

contd...../-

Appendix-A.IV.2 cont...

1	2	3	4	5	6	7	8	9	10
<u>PUNJAB</u>									
<u>GURDASPUR</u>									
Pathankot	113	1.76	3.28	3.80	73.12	2.53	4.70	0.44	92.71
Gurdaspur	114	1.36	2.53	1.35	65.96	4.26	7.63	0.45	85.89
Batala	115	1.18	1.99	0.96	63.63	2.85	4.80	0.10	78.48
<u>AMRITSAR</u>									
Ajnala	116	1.71	2.59	2.75	78.23	3.05	5.11	0.09	62.50
Amritsar	117	2.20	3.53	3.08	78.90	3.14	4.85	0.15	83.30
Bababakala	118	1.89	3.16	4.78	85.10	3.06	5.00	-	-
Tarntaran	119	1.65	2.67	2.42	74.73	3.64	6.42	0.44	42.18
Patti	120	1.63	2.38	4.39	84.85	3.66	5.86	0.47	87.50
<u>FEROZPUR</u>									
Zira	121	1.65	2.44	2.15	75.15	2.85	4.40	10.43	46.67
Ferozpur	122	2.06	3.07	7.01	83.88	4.87	8.19	0.77	50.46
Fazilka	123	2.32	3.58	9.42	89.81	3.12	5.03	0.14	52.75
<u>LUDHIANA</u>									
Jagraon	124	1.74	2.80	5.31	92.15	3.20	5.41	0.74	84.88
Ludhiana	125	2.17	3.39	4.55	86.95	3.63	5.08	0.27	71.00

contd...../-

Appendix.A.IV.2 contd.....

1	2	3	4	5	6	7	8	9	10
Samrala	126	1.47	2.33	3.03	88.20	3.99	6.23	1.30	77.16
Khana	127	1.15	1.80	1.96	84.55	3.36	5.57	0.28	86.41
<u>JALANDHAR</u>									
Nawa Shahr	128	1.85	3.30	3.25	80.85	3.45	5.94	0.13	60.00
Phillaur	129	1.53	2.64	2.43	76.67	2.95	4.61	0.12	57.14
Nakodar	130	1.68	2.79	4.30	86.38	2.46	4.07	0.76	56.58
Jalandhar	131	3.15	5.46	3.55	80.02	3.27	5.23	0.05	61.08
<u>KAPURTHALA</u>									
Kapurthala	132	2.04	3.55	1.83	87.21	5.53	9.34	0.17	15.65
Sultanpur	133	1.20	1.90	7.87	94.34	2.80	4.63	0.41	68.18
Phagwara	134	1.18	2.06	0.84	76.65	3.02	4.18	0.06	71.43
<u>HOSHIARPUR</u>									
Dasua	135	1.96	4.01	6.01	72.09	3.81	6.45	0.29	35.63
Hoshiarpur	136	2.50	4.47	4.28	73.66	4.13	6.60	0.43	62.07
Garhshankar	137	1.96	3.44	3.13	68.52	3.98	6.79	1.18	100.00
Balachaur	138	1.18	1.90	9.95	91.15	3.01	5.57	0.13	40.00
<u>PUPNAGAR</u>									
Anandpur Sahib	139	2.22	3.95	7.86	83.32	5.26	8.03	2.29	86.38

contd...../-

Appendix.A.IV.2 cont...

1	2	3	4	5	6	7	8	9	10
Rupnagar	140	1.73	2.85	1.47	71.16	4.88	7.76	0.69	80.81
Kharar	141	1.74	2.62	1.37	85.13	6.35	9.36	1.02	88.54
<u>PATIALA</u>									
Fatehgarh Sahib	142	1.12	1.72	3.76	85.74	4.32	6.50	0.04	69.23
Rajpura	143	1.43	2.29	1.44	79.01	4.28	6.42	0.15	53.06
Patiala	144	1.57	2.42	3.79	89.33	6.64	10.72	0.25	64.69
Samana	145	1.19	1.82	5.72	82.12	2.04	3.46	1.16	94.53
Nabha	146	1.20	1.79	1.83	86.37	3.80	5.45	0.07	24.30
<u>SANGRUR</u>									
Maler Kotla	147	1.19	1.76	6.16	88.10	3.30	5.37	1.33	80.82
Sangrur	148	1.38	1.93	7.43	89.79	4.27	6.84	1.17	75.71
Sunam	149	1.83	2.50	8.46	91.45	3.02	4.91	2.07	93.76
Barnala	150	1.63	2.39	10.41	89.19	2.49	3.91	2.68	86.49
<u>BATHINDA</u>									
Rampura Phul	151	1.25	1.87	9.12	88.54	3.35	5.23	1.25	45.61
Bathinda	152	1.82	2.77	14.16	91.38	5.31	7.63	0.87	77.06
Talwandi Sabo	153	1.59	2.43	8.95	87.94	2.71	4.25	1.36	76.80

contd...../-

Appendix.A.IV.2 cont...

1	2	3	4	5	6	7	8	9	10
Mansa	154	1.50	1.70	10.74	90.19	3.09	5.16	0.47	56.88
<u>FARIDKOT</u>									
Moga	155	1.80	2.74	5.03	92.31	3.90	6.31	1.15	69.29
Faridkot	156	1.73	2.63	7.05	86.56	3.94	6.50	0.53	70.53
Muktsar	157	1.55	2.36	13.01	93.03	3.03	5.01	1.17	77.79

Appendix-A.IV.3

LIST OF DISTRICTS

Location Code	Districts	Location Code	Districts
0	<u>PUNJAB</u>	19	Faridabad
1	Gurdaspur	20	Gurgaon
2	Amritsar	21	Mahendragarh
3	Ferozepur	22	Bhiwani
4	Ludhiana	23	Hissar
5	Jalandhar	24	Sirsa
6	Kapurthala		<u>HIMACHAL PRADESH</u>
7	Hoshiarpur	25	Chamba
8	Rupnagar	26	Kangra
9	Patiala	27	Hamirpur
10	Sangrur	28	Una
11	Bathinda	29	Bilaspur
12	Faridkot	30	Mandi
	<u>HARYANA</u>	31	Kulu
13	Ambala	32	Lahul & Spiti
14	Kurukshetra	33	Simla
15	Karnal	34	Solan
16	Jind	35	Sirmaur
17	Sonapat	36	Kinnaur
18	Rohtak		

APPENDIX-A.V.1

DISTRIBUTION OF EXPLANATORY VARIABLES (RURAL)

Sl. No.	Districts	Rural Participation rate	No. of tractors per 1000 hect.	No. of T.Ws. per 1000 hect.	Fertilizer kg./hect.	Cropping intensity	Net area irrigated p.c.	Live stock per 1000 population	Area under forest (p.c.)
		(x_1)	(x_2)	(x_3)	(x_4)	(x_5)	(x_6)	(x_7)	
1	2	3	4	5	6	7	8	9	
1.	Gurdaspur	1.39	10.00	38.46	111.31	168	66.00	481.16	3.91
2.	Amritsar	1.82	16.13	45.45	114.22	163	97.10	401.10	2.99
3.	Ferozpur	2.06	29.41	18.52	108.26	154	87.70	649.18	1.18
4.	Ludhiana	1.76	34.48	111.11	148.24	174	90.6	458.19	2.37
5.	Jalandhar	3.14	31.25	37.04	123.48	160	90.50	468.47	1.18
6.	Kapurthala	1.68	26.32	142.86	155.56	140	88.40	582.30	1.23
7.	Hoshiarpur	2.04	14.93	76.92	71.81	152	41.10	573.48	24.16
8.	Rupnagar	1.88	16.13	76.92	73.31	155	42.10	494.24	19.14
9.	Patiala	1.34	28.57	125.00	117.11	172	76.50	550.26	2.36
10.	Sangrur	1.50	20.00	66.67	88.17	164	88.60	720.30	1.38
11.	Bathinda	1.41	16.95	17.86	56.44	150	73.90	622.41	1.80
12.	Faridkot	1.57	29.41	62.50	114.20	150	85.60	470.24	2.09
13.	Ambala	1.92	11.41	79.15	119.42	151	40.60	441.30	17.75
14.	Kurukshetra	2.17	14.89	142.87	158.87	170	76.20	636.00	2.86

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Appendix-A.V.1 cont...

Sl. No.	Districts	Small holdings (upto 2 hect.) p.c.	Gini-coefficient	Agricultural workers as p.c. of the total workers	Percentage of rural population	Density per km ²	p.c. of scheduled population	Literacy rate	Sex ratio
		(x ₈)	(x ₉)	(x ₁₀)	(x ₁₁)	(x ₁₂)	(x ₁₃)	(x ₁₄)	(x ₁₅)
		10	11	12	13	14	15	16	17
1.	Gurdaspur	54.2	0.46	55.95	78.31	339	25.15	32.23	908
2.	Amritsar	39.7	0.46	53.70	67.03	298	30.83	26.08	876
3.	Ferozpur	35.5	0.49	69.52	77.21	174	21.82	17.94	885
4.	Ludhiana	31.5	0.41	43.84	57.99	285	32.29	36.69	879
5.	Jalandhar	37.5	0.45	46.70	64.68	344	41.68	36.80	905
6.	Kapurthala	32.8	0.41	53.46	70.03	239	30.73	33.19	919
7.	Hoshiarpur	49.4	0.46	57.39	85.56	280	32.29	39.20	922
8.	Rupnagar	55.8	0.45	51.53	78.42	280	26.32	34.10	866
9.	Patiala	33.7	0.47	57.56	70.41	247	26.95	24.36	964
10.	Sangrur	28.7	0.41	70.98	77.19	216	27.87	18.86	854
11.	Bathinda	26.3	0.43	68.94	77.32	186	29.17	14.72	867
12.	Faridkot	38.9	0.49	68.97	76.08	193	34.12	22.14	878
13.	Ambala	55.93	0.56	44.87	67.10	254	29.38	24.30	865
14.	Kurukshetra	49.51	0.52	69.44	83.54	255	22.32	16.53	864

contd...../-

Appendix-A.V.1 cont...

	1	2	3	4	5	6	7	8	9
15. Karnal		3.22	11.86	118.83	157.77	152	89.50	536.20	2.85
16. Jind		6.49	7.84	34.31	51.28	162	66.80	664.13	2.24
17. Sonapat		8.53	13.47	57.84	66.60	161	73.00	536.98	3.54
18. Rohtak		7.39	12.03	20.57	27.04	139	59.80	479.82	2.26
19. Faridabad		3.38	7.90	54.32	42.77	146	47.90	429.00	2.79
20. Mahendragarh		2.30	3.96	54.09	19.38	142	31.40	482.18	3.29
21. Gurgaon		4.65	7.90	54.32	26.27	168	38.30	429.00	5.45
22. Bhiwani		9.42	2.49	41.01	6.37	154.	31.70	690.29	1.74
23. Hissar		6.02	6.21	16.80	41.66	157.	65.00	542.99	1.33
24. Sirsa		2.68	7.57	22.18	59.66	131	72.60	606.73	1.17
25. Chamba		13.87	0.05	-	5.08	156	8.68	2280.25	36.44
26. Kangra		9.05	1.05	1.55	14.60	168	29.44	741.71	44.48
27. Hamirpur		13.63	0.05	1.66	13.94	173	3.76	699.42	12.78
28. Una		3.59	3.03	14.12	14.80	167	5.63	716.58	20.58
29. Bilaspur		18.51	0.25	3.02	17.13	182	7.74	896.99	10.22
30. Mandi		27.75	0.58	0.24	14.00	175	15.11	1318.37	37.14
31. Kulu		34.72	0.03	-	11.60	157	7.33	1371.78	-
32. L & S		50.00	0.34	-	51.59	108	100.00	2307.38	6.28

contd...../-

Appendix-A.V.1 contd.....

	10	11	12	13	14	15	16	17
15. Karnal	53.98	0.54	59.13	73.82	267	20.32	15.76	849
16. Jind	42.92	0.50	74.01	86.20	247	20.41	8.03	854
17. Sonapat	60.51	0.52	59.40	82.04	320	17.95	20.09	869
18. Rohtak	57.13	0.56	58.83	80.17	284	18.16	21.28	885
19. Faridabad	64.38	0.50	41.93	59.18	302	18.21	9.21	850
20. Mahendragarh	54.31	0.54	59.79	86.93	280	17.00	17.23	938
21. Gurgaon	61.96	0.52	58.39	80.09	256	13.88	12.87	882
22. Bhiwani	45.25	0.51	70.00	83.98	153	18.53	12.15	908
23. Hissar	39.13	0.49	68.93	80.71	194	23.34	10.28	872
24. Sirsa	35.31	0.54	70.61	79.56	133	26.86	13.04	887
25. Chamba	85.2	0.40	70.20	93.16	45	52.60	10.44	938
26. Kangra	83.8	0.63	65.91	95.06	165	20.65	39.09	1022
27. Hamirpur	76.1	0.53	73.68	95.02	273	24.01	44.56	1170
28. Una	77.9	0.64	68.11	92.28	195	22.62	39.78	1037
29. Bilaspur	76.6	0.51	78.51	95.32	204	29.06	33.68	1013
30. Mandi	78.3	0.46	78.93	92.67	152	30.27	24.98	1017
31. Kulu	82.7	0.44	82.29	92.91	40	32.19	16.19	936
32. L & S	71.6	0.46	52.92	100.00	2	76.29	15.44	767

contd...../-

Appendix-A.V.1 cont...

1	2	3	4	5	6	7	8	9
33. Simla	38.18	0.28	-	18.40	149	6.42	1189.07	16.93
34. Solan	17.09	0.68	11.20	8.48	152	17.85	1028.47	21.44
35. Sirmour	20.52	2.95	3.47	13.82	174	24.64	1345.83	10.28
36. Kinnaur	46.77	3.09	1.48	8.12	121	53.89	1600.94	0.41

Appendix-A.V.1 cont...

	10	11	12	13	14	15	16	17
33. Simla	65.4	0.50	70.51	84.31	85	29.43	23.74	923
34. Solan	58.4	0.49	68.05	89.24	141	33.69	25.68	949
35. Sirmaur	58.9	0.56	75.26	91.26	100	32.74	16.30	876
36. Kinnaur	71.9	0.47	67.92	100.00	9	85.50	20.71	885

APPENDIX-A.V.2

DISTRIBUTION OF EXPLANATORY VARIABLES (URBAN)

Sl. No.	Districts	Urban participation rate	Percentage of urban population (Y ₁)	Growth of urban population (Y ₂)	p.c. of other workers (Y ₃)	Density per km ² (Y ₄)	p.c. of S.C.&S.D population (Y ₅)	Literacy rate (Y ₆)	Sex ratio (Y ₇)
1.	Gurdaspur	3.00	21.69	496	41.79	5295	18.44	49.62	904
2.	Amritsar	3.19	32.97	360	43.84	4576	16.80	51.48	860
3.	Ferozpur	3.82	22.79	409	28.67	3826	17.77	45.34	879
4.	Gudhiana	3.58	42.01	826	52.45	4840	13.98	54.75	832
5.	Jalandhar	3.21	35.32	456	49.89	4358	26.39	53.03	871
6.	Kapurthala	4.14	29.97	344	44.48	4610	18.24	50.62	850
7.	Hoshiarpur	3.96	14.44	287	38.92	2370	22.21	53.34	871
8.	Rupnagar	5.62	21.58	1111	45.11	2000	17.33	56.79	844
9.	Patiala	5.12	29.59	386	41.17	4213	10.65	55.98	862
10.	Sangrur	3.25	22.81	456	26.28	4362	17.37	35.37	882
11.	Bathinda	4.18	22.68	1447	28.94	2112	19.69	39.40	855
12.	Faridkot	3.57	23.92	1040	28.99	3810	23.90	41.78	894
13.	Ambala	3.59	32.90	385	51.56	4265	11.47	56.49	883
14.	Kurukshetra	5.02	16.46	467	28.39	4154	9.96	47.15	859
15.	Karnal	2.99	26.18	686	37.60	5386	11.31	48.79	868
16.	Jind	4.42	13.80	1005	23.63	3589	12.05	38.43	858

contd...../-

Appendix.A.V.2 cont...

1	2	3	4	5	6	7	8	9
17. Sonipat	4.39	17.96	415	37.19	4109	11.50	49.63	851
18. Rohtak	4.05	19.83	358	38.13	5452	14.02	49.38	874
19. Faridabad	4.22	40.82	1164	55.47	2163	11.95	44.05	762
20. Gurgaon	3.14	19.91	596	38.52	2983	15.50	48.94	873
21. Mahendragarh	2.91	13.07	189	36.31	4298	12.70	42.47	883
22. Bhiwani	3.45	16.02	3.08	27.99	3368	16.83	38.87	849
23. Hissar	2.63	19.29	781	28.84	3925	16.09	44.07	846
24. Sirsa	3.99	20.44	575	27.44	4521	19.08	42.29	841
25. Chamba	10.28	6.84	205.58	27.88	1135	21.85	57.37	902
26. Kangra	10.13	4.94	302.48	28.82	1320	13.20	56.93	917
27. Hamirpur	9.40	4.98	409.41	22.53	1524	16.20	59.08	818
28. Una	3.62	7.72	516.35	28.61	699	20.54	51.17	926
29. Bilaspur	12.08	4.68	362.91	18.78	933	20.34	59.46	805
30. Mandi	8.20	7.33	457.78	18.98	2496	18.69	62.96	802
31. Kulu	10.50	7.09	457.78	16.37	1449	22.62	61.11	713
32. Sirmaur	7.26	8.74	428.90	22.80	1732	20.10	56.84	851
33. Simla	12.24	15.69	511.92	27.88	2309	17.02	66.46	667
34. Solan	9.94	10.76	307.30	29.97	1856	21.18	58.61	780

APPENDIX - A.VI.1

Structure of Female Work Force (1981)

States and Union Territories	Cultiva- tors	Agricul- ture workers	House hold industry	Other workers
1	2	3	4	5
INDIA	33.20	46.18	4.59	16.03
1. Andhra Pradesh	23.79	59.07	5.14	12.00
2. Bihar	25.54	63.33	2.76	8.37
3. Gujarat	30.02	48.08	2.48	19.42
4. Haryana	49.26	22.00	2.42	26.32
5. Himachal Pradesh	89.57	1.71	0.73	7.99
6. J & K	63.50	2.19	10.63	23.68
7. Karnataka	24.75	49.72	6.51	19.02
8. Kerala	4.95	43.55	7.64	43.86
9. Madhya Pradesh	47.28	40.61	3.93	8.18
10. Maharashtra	38.48	45.61	2.40	13.51
11. Manipur	63.10	7.29	20.17	9.44
12. Meghalaya	70.49	10.91	1.01	17.59
13. Nagaland	93.92	0.32	0.33	5.43
14. Orissa	24.50	54.24	5.69	15.57
15. Punjab	5.90	25.29	4.86	63.95
16. Rajasthan	66.75	15.67	2.82	14.76
17. Sikkim	79.52	3.06	0.74	16.68

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£	1	2	3	4	5
18.	Tamilnadu	22.76	53.43	6.30	17.51
19.	Tripura	38.27	32.07	2.45	27.21
20.	Uttar Pradesh	47.83	35.23	5.21	11.73
21.	West Bengal	14.67	39.43	7.50	38.40
<u>Union Territories</u>					
1.	Andaman Nicobar	12.40	2.25	9.56	75.79
2.	Arunchal Pradesh	92.69	1.99	0.13	5.19
3.	Chandigarh	0.08	0.41	0.82	98.69
4.	Dadra Nagar H.	73.43	15.12	0.59	10.86
5.	Delhi	1.44	1.25	1.68	95.63
6.	Goa Daman	27.10	18.48	3.35	51.07
7.	Lakshadweep	-	-	48.29	51.71
8.	Mozorum	86.31	2.16	1.05	10.48
9.	Pondicherry	3.07	56.16	3.56	37.21

APPENDIX-A.VI.2

PERCENTAGE OF WORKERS IN DIFFERENT OCCUPATIONS IN RURAL AND URBAN AREAS IN 1981

Sl. No.	State/ District	RURAL				URBAN			
		Culti- vators	Agricul- tural workers	House- hold industry	Other workers	Culti- vators	Agricul- tural workers	House- hold industry	Others workers
	<u>PUNJAB</u>	9.72	42.59	5.72	41.97	1.21	4.09	3.80	90.90
1.	Gurdaspur	5.20	30.92	6.81	57.07	1.15	2.65	2.22	93.98
2.	Amritsar	3.48	46.82	5.91	43.79	3.01	4.18	4.66	88.15
3.	Ferozpur	22.52	54.41	3.09	19.98	0.58	2.95	3.74	92.73
4.	Ludhiana	5.67	35.90	5.89	52.54	0.55	2.22	6.31	90.92
5.	Jalandhar	3.35	53.62	5.90	35.13	0.38	2.88	2.81	93.93
6.	Kapurthala	7.21	35.25	5.61	51.93	0.39	9.66	4.54	85.41
7.	Hoshiarpur	9.92	36.79	7.42	45.87	1.05	4.47	3.08	91.40
8.	Rupnagar	18.56	20.72	4.15	56.57	0.45	1.91	2.94	94.70
9.	Patiala	8.44	38.52	4.39	48.65	0.51	5.58	1.81	92.10
10.	Sangrur	14.45	42.61	7.25	35.69	4.86	7.48	5.07	82.59
11.	Bathinda	9.55	43.38	6.84	35.23	0.88	3.53	3.42	92.17
12.	Faridkot	10.85	46.65	4.81	37.69	0.88	5.23	3.41	90.48

contd...../-

Appendix-A.VI.2 cont...

1	2	3	4	5	6	7	8	9
<u>HARYANA</u>	59.39	25.71	2.09	12.81	4.23	5.49	3.89	86.39
1. Ambala	9.35	21.04	9.11	60.00	0.25	1.04	2.75	95.96
2. Kurukshetra	22.19	50.35	2.32	25.14	1.49	7.86	4.95	85.70
3. Karnal	27.14	56.62	2.49	13.75	1.35	12.91	6.54	79.20
4. Jind	70.02	20.44	1.07	8.47	22.94	5.54	2.86	68.66
5. Sonapat	61.13	26.40	1.93	10.54	4.89	5.83	1.43	87.85
6. Rohtak	65.71	22.63	1.76	9.90	7.75	5.75	2.55	83.95
7. Faridabad	51.99	28.18	1.60	18.23	5.09	2.63	2.38	89.90
8. Gurgaon	63.51	21.78	2.06	12.65	4.18	4.48	2.13	89.21
9. Mahendragarh	53.15	22.32	50.06	19.47	12.78	3.36	14.29	69.57
10. Bhiwani	83.39	11.04	0.83	4.74	4.31	1.78	4.51	89.40
11. Hissar	60.72	28.70	1.59	8.99	3.51	1.75	4.10	84.78
12. Sirsa	43.28	33.68	3.71	19.33	2.36	5.07	2.99	89.68
<u>HIMACHAL PRADESH</u>	95.35	1.74	0.69	5.22	13.10	0.96	1.84	84.10
1. Chamba	91.79	0.47	0.60	7.14	5.30	0.58	1.44	92.68
2. Kangra	82.74	3.85	2.33	11.08	15.09	1.73	2.82	80.36

contd...../-

Appendix-A.VI.2 cont...

1	2	3	4	5	6	7	8	9
3. Hamirpur	94.96	1.08	0.63	3.33	38.36	0.45	1.35	59.85
4. Una	76.15	3.63	4.05	16.17	14.23	4.32	0.94	80.51
5. Bilsapur	95.99	1.13	0.67	2.21	42.31	-	2.08	55.61
6. Mandi	96.53	0.56	0.46	2.45	12.06	1.74	2.32	83.88
7. Kullu	94.86	1.33	0.31	3.50	14.19	1.35	4.59	79.87
8. L & S	72.65	3.56	0.11	23.68	-	-	-	-
9. Simla	94.02	1.80	0.19	3.99	11.18	0.59	0.84	87.39
10. Solan	91.39	1.32	0.64	6.65	1.90	0.14	1.90	96.06
11. Sirmour	94.74	0.96	0.51	3.79	4.24	-	1.45	94.31
12. Kinnour	84.22	7.70	0.48	7.60	-	-	-	-

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