

**FEMALE PARTICIPATION IN ECONOMIC ACTIVITY
IN RURAL AREAS
A GEOGRAPHICAL PERSPECTIVE
WITH REFERENCE TO SELECTED REGIONS IN INDIA**

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DEBENDRA KUMAR NAYAK

**CENTRE FOR THE STUDY OF REGIONAL DEVELOPMENT
SCHOOL OF SOCIAL SCIENCES
JAWAHARLAL NEHRU UNIVERSITY
NEW DELHI-110067, INDIA
1982**

JAWAHARLAL NEHRU UNIVERSITY

CENTRE FOR THE STUDY OF REGIONAL DEVELOPMENT
SCHOOL OF SOCIAL SCIENCES

Gram : JAYENU


Telephone : 652282
652114

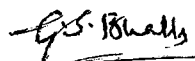
New Mehrauli Road,
NEW DELHI-110067.

We certify that the dissertation entitled
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Kumar Nayak in fulfilment of six credits out of the
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work and may be placed before the examiners for
evaluation.

Dated 21.7.82

Dated 21-7-82


(A. AHMAD)
Supervisor


(G.S. BHALLA)
Chairman

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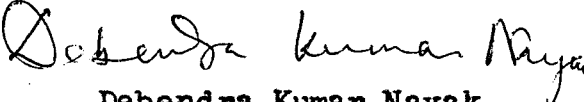
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..... to emancipate women and make her equal of man is and remains an impossibility as long as the woman is shut out from social productive labour and restricted to private domestic labour. The emancipation of women will only be possible when woman can take part in production on a large social scale and domestic work no longer claims anything but an insignificant amount of her time..
.....

Engels, Origin of the Family.

Chapter-I

INTRODUCTION

1.1 STATEMENT OF THE PROBLEM

A proper understanding of the participation of rural women in the work force is of crucial importance because of their vital contribution in the development process. Development in any society is not possible without full participation of all sections of the population.

Women's participation in the work force in the third world countries in general and in India, in particular, acquires greater significance for the reason that, these countries, with a colonial inheritance are faced with the problem of underdevelopment. All these countries are passing through a period of transition and are marked by differential impact of the developmental process, endogenetic as well as exogenetic. Another feature common to all these countries is that these are overwhelmingly rural in character. In India about 80 per cent population lives in rural areas; and the rural women constitute a significant proportion of the total work force. In 1971 women constituted 17.36 per cent of the total work force while in 1981, the proportion has increased to 20.88 per cent. Working women in the rural areas are perhaps the most silent participants in economic life. They mostly belong to the lower strata of the society.

In her pioneering work, Ester Boserup observed that:

Economic and social development unavoidably entails the disintegration of the division of labour among two sexes traditionally established in the village. With modernisation of agriculture and with migration to towns a new sex pattern of productive work must emerge. The 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 on the widely varying customs and other pre-conditions in different parts of the underdeveloped world.¹

The variation in the female work force participation even in a predominantly agricultural space-economy like India is enormous. In spite of the fact that its overwhelming population lives in rural areas, and it is rural women who actually form the bulk of working women, the urban women have attracted more attention by social scientists than their rural counterpart. This is perhaps due to a greater 'visibility'² of urban working women.

1.2 OBJECTIVE OF THE STUDY

- 1) One of the main objectives of the dissertation is therefore, to get an insight into the nature and extent of female participation in the work force in rural areas in different regions characterized by different levels of development and by various social and cultural milieu.

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1. Ester Boserup, Women's Role in Economic Development, George Allen and Unwin, 1970 (Preface).
 2. Vina Majumdar (ed.), Role of Rural Women in Development, Allied Publishers, 1979.

- ii) Secondly, it is realised that a macro-analysis of female participation in economic activity does not give a true picture. Therefore, an attempt has been made to examine the variation in female participation in lower aggregative units such as states, districts, taluks and villages.
- iii) Thirdly, the dissertation intends to explore the existing variation in the industrial classification of working women in these regions and to examine the differential relationship among different industrial categories themselves and with their participation rates in general.
- iv) Finally, the dissertation attempts at finding explanation to the variation in female participation in economic activity in different regions. An attempt has also been made to examine some of the popular explanations with regard to rural female participation in the work force, using geographic tools and techniques.

Keeping in mind the above objectives, the female participation in economic activity has been studied for four regions in India. These are Punjab and Haryana, West Bengal, Andhra Pradesh and Maharashtra. The study includes the differential participation rates of rural females at different levels such as states, districts, taluks and villages,

their contribution in the total work force, male female disparity in work participation and the degree of worklessness among women in the working age group. The distribution of women workers in different sectors of the economy as well as in various industrial categories has also been studied with reference to the study area. An attempt has also been made to examine the influence of various explanatory variables which are likely to influence female participation rate and cause spatial variation in it. The nature of these variables are economic, demographic and socio-cultural. Since agriculture is the most important economic activity in rural areas, it is assumed that the conditions in agriculture would mostly influence the female participation in work. While the economic factors may affect the demand for female labour, the non-economic factors are supposed to influence the supply of female labour.

1.3 HYPOTHESES

The following hypotheses have been proposed to be tested in the dissertation:

- 1) The growth in agricultural output generally implies a higher earning for peasant families and leads to withdrawal of women from work force.
- ii) The land-man ratio affects both supply and demand for labour. A higher pressure on cultivated land, ceteris paribus, would mean a higher supply of labour

and will adversely affect the employment prospects for females. The female participation in such areas will tend to be low.

- iii) Agricultural development in terms of mechanisation, intensity of cultivation, adoption of modern inputs and irrigation would have a negative impact on female participation. Higher cropping intensity, although, demands more labour, is expected to be inversely related with female participation in economic activity and directly related with growth of agricultural output and agricultural development.
- iv) A high concentration of land is likely to accelerate the process of withdrawal of female family workers, while it induces a higher level of employment of female agricultural labourers.
- v) Areas characterised by a proliferation of non-agricultural economic activity will normally experience a shortage of male workers, and consequently, the agricultural activities in such areas will attract the female workers.
- vi) Higher the proportion of workers engaged in the primary sector, the higher would be female participation in economic activity.
- vii) It is assumed that high sex-ratio will be positively associated with female participation in work.

- viii) Urbanisation in general is expected to influence adversely the rural female participation rate. Urbanisation, on the other hand, will induce the development of the tertiary sector which will attract a large proportion of female workers.
- ix) A higher proportion of children below 5 years of age would generally restrict the female participation in work.
- x) High incidence of literacy among the females is expected to be inversely related with the female preference for agricultural work. The overall effect of literacy is therefore, expected to be negative on the female participation in the work force. However, the relationship may be positive if the tertiary sector is well-developed.
- xi) Higher the proportion of married females in the total female population, the lower would be the female participation, whereas the higher the proportion of widowed, divorced and separated females higher would be the female participation rates.
- xii) The female participation rate is expected to be high if the proportion of scheduled castes and scheduled tribes among the females is high.

1.4 CHOICE OF THE STUDY AREA

For the present analysis, five states have been chosen and are clubbed into four regions on the basis of agricultural productivity and the growth of output in agriculture. The assumption behind this choice is that, in rural areas, agriculture is the primary occupation and, therefore, productivity and growth of output can be taken as a proxy for income generation. These two indicators are thought as better substitutes to per capita income as the latter may ^{be} misleading³ in the rural context. Lower agricultural labour productivity in general would mean lower incomes of even the male cultivators or other workers. Low earnings of the male worker may necessitate female work participation in order to earn more income⁴ for supporting themselves and their families.

The five states chosen for the study include Punjab and Haryana in the north-west; West Bengal in the east; Andhra Pradesh in the south and Maharashtra in the west. Punjab and Haryana have a uniformly high productivity and growth of agricultural output; West Bengal has a medium level of agricultural productivity, while Andhra Pradesh and Maharashtra have low to negative growth of agricultural output and productivity. The former two regions have a very low level

3. D. Narasimha Reddy, "Female Work Participations: A Study of Inter-State Differences, A Comment," Economic and Political Weekly, Vol. 10, No. 23, June 7, 1975, pp. 902-905.

4. Ibid., p. 902.

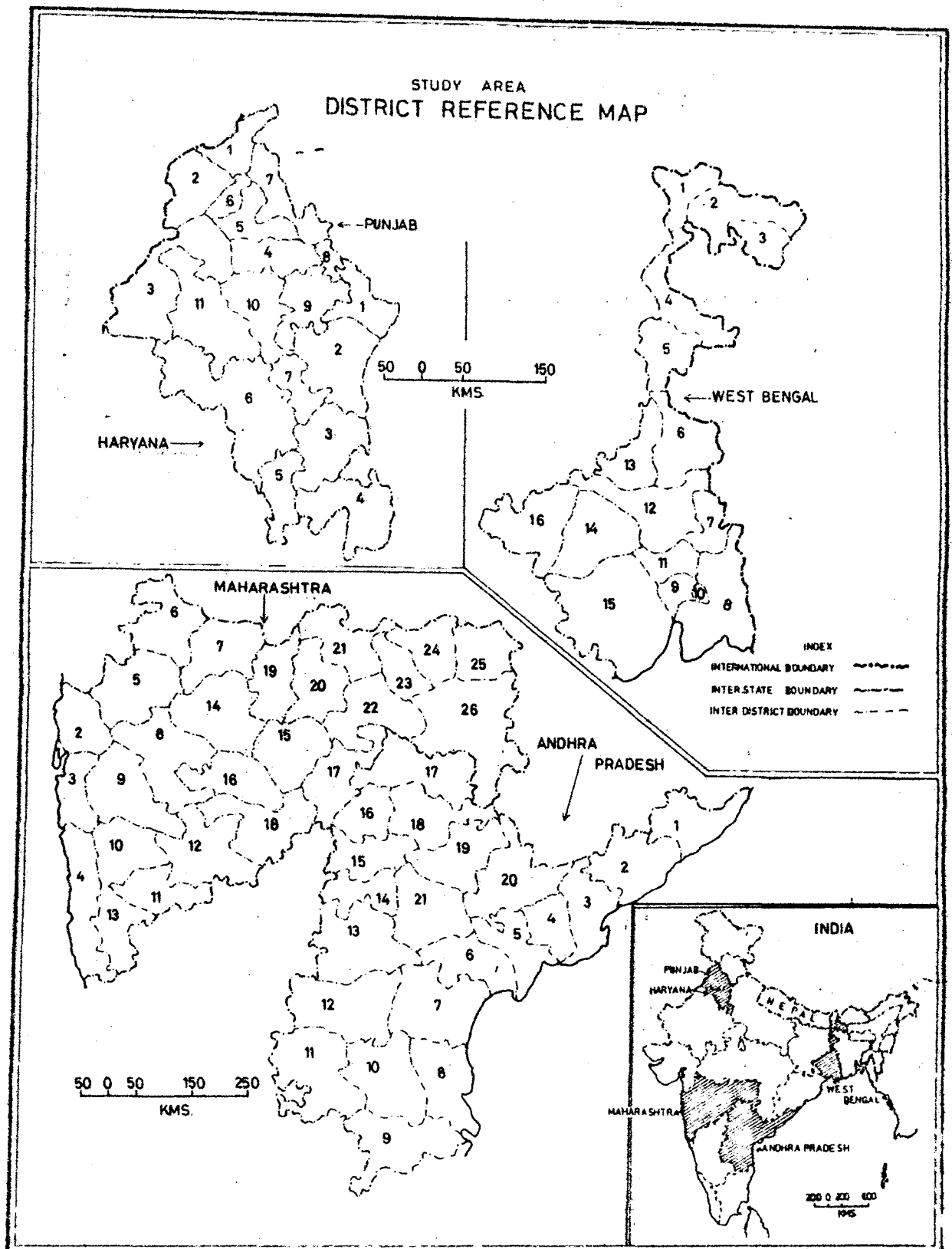


Fig. 11

(For key to district identification see Appendix 1)

of female participation in economic activities at state level, whereas the latter two states have a very high participation at state level. The following is a detailed account of the four selected regions chosen for study.

1.4.1 Punjab and Haryana

All the districts of Punjab and Haryana have been considered in the study. All the districts show a high growth of agricultural production. The average growth has been around 7 per cent. This is the region which has benefited maximum from the "Green Revolution." In terms of the economic indicators this region has a very high cropping intensity (the index being 1.51) and a large irrigated area (63.57 per cent). The region is also characterised by high intensity of cultivation (the index is 6.09) and has witnessed a high degree of mechanisation and modern inputs. This region has been characterised by a medium level of concentration of land holding (the gini coefficient is 0.53). The average size of holding is 3.2 hectares. The primary sector accounts for a relatively less proportion of total work force (79 per cent) followed by tertiary sector (12.5 per cent) and secondary sectors (8.4 per cent). The dominant crop cultivated is wheat in this region.

In the demographic sphere, the region has a very low rural sex-ratio (869). The urban proportion in the population

is around 21 per cent. The region has experienced a growth rate of population to the tune of 20.71 per cent in the preceding decade to 1971. The ratio between children below 5 years age group is 710 per 1000 women in the reproductive age group (15-49).

In comparison to other regions, this region is characterised by a relatively higher rural female literacy (17.18 per cent). 24.7 per cent of the female population belong to scheduled caste category. This region is conspicuous by the absence of tribal population.

The female participation in this region is extremely low, i.e., 1.42 per cent of the total female population according to 1971 census. In 1961 the proportion of female workers in the female population was 53.44 per cent,⁵ indicating a massive decline in both number and percentage of female workers.

1.4.2 West Bengal

Except Calcutta, sans rural population, all the districts of this state have been taken into account in the present study. Quite a few districts in this state, benefiting from the "Green Revolution" show a medium level of

5. A large decline may have been due to definitional change. However, in this region the decline is the heaviest, obviously not due only to definitional change, because the percentage for 1971 census has been corrected by including non-workers with secondary activity. Report of the Committee on Unemployment.

growth of output in agriculture (2.46 per cent). With a relatively higher cropping intensity (1.51) this region has the maximum pressure on gross cropped area (more than 8 persons per hectare). The average size of holding is the lowest (1.23 hectare) with a low level of irrigation (20.35 per cent of all cultivated area). The intensity of cultivation is of low degree indicating lesser use of mechanisation and modern inputs. About 82 per cent of the working population is engaged in the primary sector. The secondary sector employs little higher working population (8 per cent) compared to other regions. Tertiary sector accounts for about 10 per cent of the total working population. The concentration of holding is low (gini co-efficient is 0.47 only). Rice is the predominant crop cultivated in this region.

Rural sex ratio is relatively more favourable to women with 942 women per 1000 males. The level of urbanisation is the lowest. Only 15.28 per cent of the population live in the urban areas.⁶ The growth of population (25 per cent) has been the highest in the preceding decade consequently burdening the women in the working age group with a larger rearing responsibility. There are 797 children of below 5 years age group to 1000 women in the reproductive age group.

6. For the state as a whole, the proportion of urban population is much higher, but when Calcutta, the totally urban district with a very high density of population is excluded, it results in a depression of urban proportion of the population in the state as a whole.

The region is also marked by a low level of female literacy (14 per cent). Scheduled caste and scheduled tribe females account for 24.34 per cent and 7.05 per cent of the total female population.

West Bengal is also marked by a very low level of female participation rate. In 1971 only 4.58 per cent of the women population are reported to be gainfully employed. West Bengal thus ranks 20 among the states in terms of female employment in India.⁷ The decline in female participation is also massive; 53.46 per cent in 1961 to 4.58 in 1971.

1.4.3 Andhra Pradesh

All the 21 districts of this state come under study. Most of the districts have experienced a very low growth in agriculture and in a number of districts it has been negative. Except for some of the coastal districts this state has by and large remained resistant to "Green Revolution" effects. The average overall growth rate in agriculture is close to zero (-0.55 per cent). The cropping intensity is low (1.12), but the land-man ratio is also low with about 4 persons per hectare of gross cropped area. The average size of holding is 2.6 hectares in Andhra Pradesh and only 33 per cent of the net area sown are benefitted by irrigation. Characterised

7. The total ranks are 23, taking into account 23 states and union territories of India. These are: Andhra Pradesh, Assam, Bihar, Gujarat, Himachal Pradesh, Jammu and Kashmir, Kerala, Madhya Pradesh, Maharashtra, Mysore (Karnataka), Nagaland, Orissa, Punjab (including Haryana), Rajasthan, Tamil Nadu, Uttar Pradesh, West Bengal, Andaman Nicobar Islands, Delhi, Goa, Daman and Diu, Manipur, Pondicherry and Tripura.

by a relatively higher intensity of cultivation (0.93), the region has ^{the} highest concentration of holding (the gini coefficient is 0.59). The primary sector accounts for 82.7 per cent of the total work force, whereas, secondary and tertiary sectors share almost equally, the remaining 17.3 per cent of the work force. The dominant crop cultivated is rice.

The level of urbanisation in this region is low with about 18 per cent of the population living in urban areas. The rural sex-ratio is the highest in this region (982 females per 1000 males). With a low population growth (19 per cent) in the previous decade the ratio of children below 5 years to the women in the working age group is the lowest in this region (618 children per 1000 women in the reproductive age group).

The level of literacy among the rural women is the minimum in this region. Only 10.23 per cent of all women are literate. Scheduled caste and scheduled tribe women constitute 14.87 per cent and 4.45 per cent of all women in the state.

The worker-rate of women is the highest in this region. According to 1971 census 27.36 per cent women are gainfully employed placing Andhra Pradesh 2nd in the rank. The decline in the female participation rate has been much less conspicuous. According to 1961 census 64.32 per cent of all women were gainfully employed in this region.

1.4.4 Maharashtra

All districts except Bombay which is completely urban in character have been considered in the study. This region is marked by a very low to negative productivity and agricultural growth of output (-4.11 per cent). This region has been hit by recurring droughts, as the level of irrigation is extremely low (6.42 per cent only). While the intensity of cropping is the lowest (0.10) Maharashtra has the largest size of holding (4.70 hectare). The pressure of population on gross cropped area is also the lowest, i.e., around 3 persons per hectare. Mechanisation and the use of modern inputs are at a very low level (the intensity of cultivation index is 0.72 only). The gini coefficient of concentration of landholding is 0.51. More than 87 per cent of the working population is in the primary sector while secondary sector and tertiary sectors account for meagre 6.2 per cent and 6.5 per cent of the working population respectively. The dominant crops cultivated in this region are jowar and bajra. Cash crop such as cotton is also cultivated in this region.

This region is characterised by a high sex ratio (979 per thousand males). The level of urbanisation is the highest in this region (21.4 per cent). The growth rate of population has been as high as 22.61 per cent in the preceding decade. As a result there are 703 children below 5 years age-group per 1000 women in the reproductive group.

The rural female literacy is higher than other regions with 17.68 per cent of all women being literate. 6.6 per cent and 8.06 per cent of the female population belong to scheduled caste and scheduled tribe community.

The level of female participation in this state is one of the highest in India, its rank being 3 in terms of female employment. About 25 per cent of all women are gainfully employed. The decline in participation rate since 1961 is also less conspicuous. About 58 per cent of women are reported to have been gainfully employed in 1961.

However, this overall or averaged picture of these four regions conceals within itself the enormous spatial variations in terms of all the indicators discussed above. Therefore, for a better understanding and clearer picture to emerge, district level informations have been used for further analysis.

1.5 DATA BASE, COVERAGE AND LIMITATION

The study is mainly based on published secondary information available from 1971 census and agricultural census for the respective states. The tables from where the data have been derived include Primary Census Abstracts Part II A(ii) and Socio-Cultural Tables, Part II C(ii) for the year 1971. The computed data on agricultural growth of

output has been taken from the book. "Performance of Indian Agriculture"⁸ by G.S. Bhalla and Y.K. Allagh, while the Gini's coefficient of land-holdings has been taken from the book "Population, Food and Land Inequality in India, 1971: A Geography of Hunger and Insecurity."⁹ To work out the intensity of cultivation index, three ingredients used such as, number of tractors, number of pump sets and fertilizers, owe their source to "A District-wise Data Profile by Jawaharlal Nehru University - Planning Commission Project."¹⁰

As a result of definitional changes of 'worker' in 1961 and 1971 census the data on female participation in work for both these time periods are not comparable¹¹ (including the adjusted data and the 1972 resurvey data). Due to this a trend analysis is difficult to give a correct picture; which would otherwise have been very useful. The study, therefore, is a cross-sectional one taking 1971 as the point of time. Although, a cross-sectional study can never be a substitute for trend analysis, the objectives of the paper could be well satisfied if the latter is related to the former.

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8. G.S. Bhalla and Y.K. Allagh, Performance of Indian Agriculture: A District-wise Study, 1979, Sterling Publishers, New Delhi.
 9. Asok Mitra and Shekhar Mukherjee, Population, Food and Land Inequality in India 1971 - A Geography of Hunger and Insecurity, an ICSSR/JNU/FPF Study, Allied Publishers, Delhi.
 10. Indian Agriculture - A District-wise Data Profile, JNU, Planning Commission Project, CSRD, School of Social Sciences.
 11. Planning Commission, Employment and Man Power Planning Division, Report of the Sub-group on Statistics on the Employment of Women, 1977, New Delhi, p.7.

The limitations of the study mainly arise from the inherent difficulties in the enumeration of women as workers in census operations. Thus the data used for female workers cannot be fully reliable. First of all it is difficult to determine whether a woman is a worker in the strict sense of the term. A female may be assisting her husband in the economic activity occasionally or partially without any remuneration in terms of cash or kind. The census does not recognise her as a worker. Secondly, because of social prejudices the female may not be entered as a worker although, she might actually be engaged in gainful economic activity, such as family worker. Thirdly, even if a woman is enumerated as worker, in many cases it is difficult to determine as to which industrial category she belongs. For example, the wife may be working in some household industry and simultaneously helping her spouse in cultivation.¹²

The 1971 census data refer to the main activity status of the population during the reference year (during the reference week) or in the seasonal employment. Therefore, it excludes those women whose main activity is household work and secondary activity is economic work during the reference year and those women whose main activity was not economic work during agricultural season in the reference year, but who did some work as their secondary work.

12. R.C. Chandna (1967), "Female Working Force of Rural Punjab," Man Power Journal 2(4), January-March 1967, pp.48-49.

However, it is hoped that these limitations will not have serious impact on the study since the major concern here is in inter-district variation in the rates.

1.6 ANALYTICAL FRAME

The factors which are likely to exert influence on the regional variation in female participation rates in rural areas can be grouped into three categories, as given below:

- 1) **Economic Factors:** Such as income, mechanisation in agricultural operations, size of holding, concentration of holdings, level of irrigation etc.
- ii) **Demographic Factors:** Such as sex ratio, number of children below 5 years and age distribution of women, population growth and level of urbanisation etc.
- iii) **Socio-Cultural Factors:** Such as level of literacy, marital status of women and the proportion of scheduled castes and scheduled tribes in the female population etc.

In the present study, the following indicators were chosen to examine their influence on the spatial variations in the employment of women.

1.6.1 Economic Indicators

Since agriculture is the most important occupation in the rural areas and the bulk of the working women are engaged in agricultural occupations, the indicators chosen

in the study mostly refer to agriculture. These are as follows:

- i) Percentage of growth of agricultural output (X_1) as a proxy for increase in income;
- ii) Land-man ratio expressed as persons per hectare of gross cropped area (X_2);
- iii) Cropping intensity (X_3) determined by dividing gross cropped area by net cropped area;
- iv) Concentration of landholding (X_4) (gini coefficient);
- v) Mean size of holding (X_5) as a summary statistic;
- vi) Percentage of irrigated area to the net cropped area (X_6);
- vii) Intensity of cultivation (X_7). This indicator is a composite index of number of tractors, number of tube-wells per hectare and amount of fertilizer used per hectare;
- viii) Percentage of male workers in non-agricultural activities to total male workers (X_8);
- ix) Percentage of workers in the primary sector to total workers (X_9);
- x) Percentage of workers in the secondary sector to total workers (X_{10});
- xi) Percentage of workers in the tertiary sector to total workers (X_{11}).

1.6.2 Demographic Indicators:

- i) Sex-ratio (number of females per thousand males) (X_{12});
- ii) Percentage of urban population to total population (X_{13});
- iii) Number of children below 5 years age per thousand women in the reproductive age group (15-49) (X_{14});
- iv) Percentage growth of population (during 1961-71) (X_{15}).

1.6.3 Socio-Cultural Indicators:

- i) Percentage of literate females to total females (X_{16});
- ii) Percentage of married women to total women population (X_{17});
- iii) Percentage of widowed, divorced and separated women to the total women population (X_{18});
- iv) Percentage of scheduled caste females to total females (X_{19});
- v) Percentage of scheduled tribe females to total females (X_{20}).

The impact of structure of literacy in terms of the levels of education on female work participation has also been examined by dividing the literate female population into three broad groups as follows:

- i) Below primary level;
- ii) Above primary level but below higher secondary level;
- iii) Above higher secondary level.

1.7 CHAPTER ORGANISATION AND METHODOLOGY

The study has been organised into six chapters. The first chapter makes an opening statement regarding the nature of the study, objectives hypotheses to be tested, data base, limitations of the study and analytical framework. The second chapter has been divided into three parts. The first part, on the basis of literature available, analyses some theoretical issues concerning female participation in economic activity. The second part mainly organises the studies which have been done on female participation in economic activity in India. In the third part an attempt has been made to examine the impact of socio-economic changes, both endogenetic and government sponsored programmes on economic participation of rural women, on the basis of published literature on this aspect.

The third chapter analyses in detail, for each region separately, the spatial variation in worker-rate of females and their contribution in the total work force at the district level. For a comparison male work participation rates are also analysed and a disparity index of male-female participation rates has been worked out using Sopher's index.¹³

13. David E. Sopher, "A Measure of Disparity," Professional Geographer, Vol. 31, 1974, pp. 377-81.
The formula is as follows:

$$Ds = \text{Log } (X_2/X_1) + \text{Log } (100-X_1)/(100-X_2)$$

X_1 = Female Participation Rate

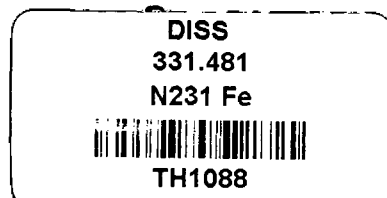
X_2 = Male Participation Rate

Besides the worker-rate has been analysed in relation to rural sex-ratio and the proportion of women in the working age group (15-59). A correlation analysis has been attempted to see the relationship between male and female work participation. The analysis of female work participation has been extended up to taluk and village level (on a sample basis) for a comparison with higher aggregate level, such as the district.

The industrial classification of working women has been analysed in the fourth chapter in terms of census categories. With the help of correlation matrices the relationship between female work participation and their industrial distribution has been analysed for different regions. The district level analysis has been compared with state level pattern.

The influence of explanatory variables on female participation in economic activity has been studied in the fifth chapter. On the basis of correlation analysis, hypotheses have been tested. A step-wise multiple regression analysis has been made to determine the relative importance of explanatory variables and their simultaneous impact on female work participation.

The last chapter gives a brief summary of the study and indicates main findings with a note on further scope for research in the field.



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Chapter-II

FEMALE PARTICIPATION IN ECONOMIC ACTIVITY:

SOME THEORETICAL CONSIDERATIONS -

AN OVERVIEW OF LITERATURE

SECTION-I

2.1 INTRODUCTORY STATEMENT

For obvious reasons, the question "Why a man works?" is not as significant as the question "Why a woman works?". The role of man as the natural bread winners has got recognition in almost all societies, whereas "home" and "family" have been seen as the "appropriate" domain of women. Thus the social practice has created two separate fields of responsibility divided along the sex lines: home for women and the world outside the home for men. The general acceptance of women's role in raising the family, in the bearing and rearing of children, perhaps did not encourage the social scientists to consider women's role directly. Until very recently, the discussion of female participation in economic activity formed a part of very general topics as emancipation and recognition of the rising status of women in society. However, past few years have seen a growing interest among the social scientists in the direct relevance of women's gainful employment outside the home to problems of economic growth in developing as well as developed countries. This is not to say that the economic role of women was not

recognised in the past. In his famous book, "The Subjection of Women"¹ J.S. Mill did recognise the importance of women's economic role and noted that the power of earning is essential to dignity of women.

It has been generally found that the level of female participation in economic activity in many countries is significantly lower than that pertaining to men. However, considerable variations do exist between regions and social classes in work participation of women depending on the stage of development and region-specific cultural and social practice and ideological background. The national committee on the status of women in India observed:

Any appraisal of women's economic roles and their opportunities for participation in economic activities cannot be done in isolation of the society's stage of development, the socio-cultural attitude towards women's role in family and in the wider society and the social ideology concerning basic components of status.²

2.2 CHANGING MODES OF PRODUCTION AND WOMEN'S WORK PARTICIPATION

The nature and type of women's participation in work, no doubt, changes with a change in the mode of production. Marxian scholars, in general, maintain that women's economic participation is largely affected by and is a direct result

1. J.S. Mill (1970), The Subjection of Women, Cambridge, M.I.T. Press.
2. A Synopsis of the Report of the Committee on the Status of Women, (1971-74), ICSSR, 1974, New Delhi.

of the capitalistic family structure. With a model of patriarchy the Marxists analyse the women's economic role in the context of the basic social relations prevailing within the society at any given epoch. Engels,³ for example, accounted for a historical development of the family and the relations to the sexes as they were affected by the development of productive techniques. He insisted that the development of private property created a clear cut division of labour which diminished the value of female production from social use to private use of the household unit. Following Engels, Bebel⁴ maintained the institution of private property and the emergence of class structure to be largely responsible for excluding women from work at a social scale and saw the cause of women intricately intertwined with the revolution of the proletariat. Thus they visualized that in a socialist mode of production women will again enter the work force at a social scale, and the domestic activity would then account for an insignificant amount of time, which would in most cases, be socialised.

The development of capitalist mode of production promotes the exploitation of women by excluding female domestic labour which remains unpaid, although socially

3. Frederich Engels, The Origin of the Family, Private Property and the State, 1884; reprint ed; New York: International Publishers, 1972.

4. August Babel, Women and Socialism, Schocken Books, New York, 1971.

necessary. "Wage" in the form of cash income becomes necessary and thus "employment" for cash income assumes a very important role in capitalist mode of production. Saffoti⁵ holds that the household maintains women as a reserve labour force available to join capitalist production when required as in war time. Furthermore, it eases the social tensions - inherent in capitalism - when unemployment rises, enabling capitalism to survive its chronic cycle of inflation and depression. Miranda⁶ also maintains that the capitalist uses female labour in special crises situations as a means of reducing the costs of production and as seasonal labour especially in commercial agricultural production. Because of their passivity in the labour relations, which prevents them from improving their bargaining position, women's wage labour is particularly suitable to capitalists.

2.2.1 Women Colonialism and Dependency

However, the economic participation of women cannot be seen independent of the constraints of the international economic relations in the form of dependencies and the impact of international political economy. However, a number of

5. Heleieth B. Saffoti, "Female Labour and Capitalism in the United States and Brazil," in Women Cross Culturally: Change and Challenge (ed.) Rohrlich Leavitt, (The Hague: Mouton and Co.), 1975, pp.59-94.
6. Glaucia Vasques de Miranda, "Women's Labour Force Participation in a Developing Society: The Case Study of Brazil," in Women and National Development: The Complexities of Change (ed.), The Wellesley Editorial Committee (The University of Chicago Press), 1977, pp.261-262.

studies reveal how the mode of production affects the work participation of women in the Third World countries, is a part of an international system based on dependency. For example Boserup⁷ categorically asserted that, if not all, in several areas, female participation decreased as a result of colonial influence. Colonialism often differentiated the social and domestic labour. Boserup cites numerous instances, where colonial personnel excluded women from cash crop cultivation and preferred men only after giving them proper training to apply modern techniques. The commodity economy became widespread and the food crop production in which women continued to work became inferior to cash crop production and became a private affair. Glaura Miranda⁸ argues that "..... during the process of dependent capitalist development, rising levels of unemployment and under-employment may be expected to occur simultaneously and to affect women's participation in the labour force more than men's." She goes on to argue that "..... if industrial capitalism relegates women to the periphery of the economy, the capitalism of the dependent nations make their position even more difficult." From the study of Brazilian economy, she concludes that capitalism in dependent countries consists in dislodging workers from agriculture faster than they are being absorbed into industries. Consequently the female

7. Ester Boserup (1970), Women's Role in Economic Development, George Allen and Unwin.

8. Glaura Vasques de Miranda (1977), op.cit.

participation declines with development. A large service sector grows in such a situation and women hold a disproportionate number of jobs usually the low status ones, in this sector.

2.3 SOCIO-ECONOMIC DEVELOPMENT AND WOMEN'S WORK PARTICIPATION

One of the major characteristics of economic development is a reduction in the relative importance of agriculture and an increase in the importance of non-agricultural activities. Urbanisation and industrialisation are important elements in the process of socio-economic development. The structure of production changes as the development proceeds and agriculture naturally loses its importance as a source of work. The manpower gets reallocated in secondary and tertiary sectors of the economy. Agrarian societies with family as the unit of production and household industries being the most important activity transform themselves into industrial societies with modern organised industries. The process destroys the traditional division of labour and individuals and not families serve as units of labour. New skills are required for the changes in the production method.

However, the benefits of development are not equally shared by men and women and several studies, particularly those pertaining to Third World countries, reveal that women are often the victims of development. Boserup⁹ and

9. Ester Boserup (1970), op.cit.

Mies¹⁰ conclude that women's status declines with their diminished productive role in the transition to an urban industrial economy based on wage labour. The productive role of women declines as they are no longer involved in agricultural work and the industries of a peasant economy. This is particularly important where rural to urban migration is involved. According to Boserup, in the traditional society the female participation in cultivation depends on the existing agricultural economy. They are active in swidden cultivation but tend to drop out in plough cultivation, again to join in large numbers in intensive field cultivation. However, within plough agriculture, areas of wet-rice cultivation are expected to show a higher female participation. But a more developed economy, in general proves detrimental to female employment.

The introduction of new technology both in agriculture and in industries, displaces women and restricts their access to new jobs. Laurdes Arispe¹¹ argues that, "During the first stage of industrialisation, the types of industries that are established, mainly textiles and leather, are labour-intensive and provide additional employment for women." But when mechanization advances, employment acquires a

10. M. Mies (1980), "Capitalist Development and Subsistence Reproduction: Rural Women in India," Bulletin of Concerned Asian Scholars, Vol. 12, No. 1 (January-March), pp. 2-14.

11. Laurdes Arispe, "Women in the Informal Labour Sector: The Case of Mexico City," in Women and National Development: The Complexities of Change, (ed.), The Wellesley Editorial Committee (The University of Chicago Press), 1977, pp. 28-29.

predominantly male-bias. Norma S. Chinchilla¹² while analysing the question of female employment maintains that females' exclusion from work participation, or sex segregation in employment, are to be related to the socio-economic changes and the sequential changes in the occupational structure and in the allocation of work by sex. She rejects the idea of studying changes in women's work participation independently from that of man. "Industrial growth and modernisation," she holds, "might actually bring about greater restrictions on the ability of females to contribute directly to family economics and create ideologies that justify the continued work of the majority of women in the home."¹³ Industrialisation almost universally destroys or weakens artisan industries, which are usually in the hands of women. But the economic participation of women then, she argues, depends on whether industrialisation absorbs women displaced from productive roles in home or traditional pre-capitalist economy into manufacturing which is, in turn, dependent upon the total political-economic context in which it occurs, and the extent to which it breaks down feudal or pre-capitalist relations, creates a demand for labour in the dynamic sector of economy and redistributes wealth internally.

12. Norma S. Chinchilla, "Industrialisation, Monopoly Capitalism and Women's Work in Guatemala," in Women and National Development: The Complexities of Change (ed.), The Willesley Editorial Committee (The University of Chicago Press), 1977, p.39.

13. Ibid.

Thus the work participation of women does not respond to government policies as much as it responds to the function that the economy of which they are a part, serves the world system.

Ambannavar¹⁴ from the study of India's urbanisation concludes that the process of urbanisation plays a key role in the decline of the participation of women in the work force. With the growth of industries in urban areas, the rural household industries decline without being accompanied by a structural change in employment which might improve female participation.

Weller¹⁵ observes, on the basis of the historical analysis of the trends in Puerto Rico that participation of women in certain types of gainful employment outside the home increases with economic development, but this does not and perhaps cannot compensate for the decline of employment in the more traditional industries. This may happen in the short run. But the long run effect of industrialisation may raise the overall female labour force participation.

Harold Wilensky¹⁶ categorizes women's participation as a function of the stages of economic development - a

14. J.P. Ambannavar, 1975, "Changes in Economic Activity of Males and Females in India, 1911-61," Demography, 4, pp.51-52.
15. Robert H. Weller, "A Historical Analysis of Female Labour Force Participation in Puerto Rico," Social and Economic Studies, Vol. XVII (March 1968), pp.60-69.
16. Harold Wilensky, "Women's Work: Economic Growth, Ideology and Social Structure," Industrial Relations, Vol. 7, No. 3, 1968, p. 238.

situation clearly derived from western experience. But Youssaf,¹⁷ following Collver and Langlois¹⁸ and Wilbert E. Moore¹⁹ holds that the relation between economic development and overall participation rates of women is indeterminate. The process of reallocation with economic development occurs not only between one economic sector and another, but within specific sectors themselves. Activities such as domestic service, petty trade and primitive types of home industries are superseded by employment related to public services, commerce, the professions and factory work. Consequently neither the total participation rates nor the proportion of female in the total labour force are crucial from an economic stand point, since advancement does not necessarily bring about an increased participation of women in all sectors of the labour force. It is the upgrading of the women's work in modern sectors that is positively associated with economic development and it is certain types of paid work outside the home which increase accordingly. The relation between economic development and women's economic participation is indeterminate in the sense that the process which operates is one of reshuffle rather than

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17. Nadia Haggag Youssef, Social Structure and Female Labour Force Participation in Developing Countries, dissertation submitted in partial satisfaction of the requirements for the degree of Ph.D in sociology in graduate division of the University of California, Berkley.
 18. Andrew Collver and Eleanor Langlois, "The Female Labour Force in Metropolitan Areas: An International Comparison," Economic Development and Cultural Change, Vol. 10 (4), 1962, p. 65.
 19. Wilbert E. Moore, The Impact of Industry (New Jersey: Prentice Hall), 1965, p. 65.

acceleration of overall participation. Youssef, from a study of few Latin American and Middle Eastern countries, concludes that the differences in participation rates between countries exist independently of the economic stage; and the disparity in labour force rates is not due to regional differences in the structure of demand for workers. The variations in the labour force behaviour of women, according to the study, reflect essentially differences in women's reaction to work opportunities.

Assuming certain types of activities appropriate or suitable to women, few authors argue that with socio-economic development availability of such activities would undergo changes implying a corresponding increase or decrease in women's participation in economic activities. De' Souza²⁰ after comparing different regions concludes that the rate of women workers varies with socio-economic development and percentage of people engaged in tertiary occupations. The essence of his argument is that the extent of female participation in economic activity will depend on the extent of the availability of low-prestige jobs. The female participation would be higher if jobs of lower prestige are available in larger numbers. Though controversial tertiary occupations

20. Victor S. De' Souza, "Changing Socio-Economic Conditions and Employment of Women in India," in Trends of Socio-Economic Change in India 1871-1961, Transactions of the Indian Institute of Advanced Study, Vol. VII, Simla, (1969), pp. 443-457.

are taken as indicators of high socio-economic development. With the economic development, the proportion of jobs of higher prestige, expands at the cost of jobs of lower prestige. Consequently, participation of women in economic activity declines. The entire analysis rests on a sociological basis of taking family as a status unit and that the status of dependent members being determined by the occupational status of the head of the family. Thus in regions of low socio-economic development most men are engaged in unskilled jobs of low prestige. The women do not find it difficult to join labour force in these kinds of activities as it does not disturb the prestige consistency of the family. With greater socio-economic development and availability of occupations of higher prestige in large numbers women usually withdraw from work because lack of education and skill does not permit them to avail jobs equal to their husband's prestige. De' Souza's thesis seems well founded, but evidences prove that women's drop out from labour force is not exclusively related to prestige consistency. Andrea Singh²¹ in a study of women in Delhi's squatter colony, for example, finds that a large proportion of the working women did not wish to discontinue work even if their husband's income increased.

21. Andrea Singh, "Women and Family: Coping with Poverty in the Bastis of Delhi," in The Indian City: Poverty, Ecology and Urban Development (ed.), Alfred de Souza (Delhi: Manohar), 1978, pp.77-78.

Societies do change from simple to complex ones along a scale of increasing division of labour and differentiation. Higher levels of technology and more formal institutions as well as greater occupational specialisation are the characteristic features of a complex society. In the process of evolution of a society increasing specialisation makes the labouring group more efficient and as a consequence the overall productivity rises. Simple societies with lesser specialisation and differentiation among the social units are less productive and poorer. Accepting the linkage between specialisation, technology and rewards, Ester Boserup²² concludes that women withdraw from work or get relegated to jobs in the backward sectors of the economy as they fall on the lower side of the productivity gap.

2.4 WOMEN, FAMILY AND WORK

Assuming that women's primary responsibility is home and immediate family, a number of scholars, particularly sociologists look at women's economic participation outside the home as a function of the compromise between the family and the economic system. This school feels that the growth or decline of female labour force outside the home is not only dependent upon the socio-economic development, but more importantly upon variables related to social organisation, particularly the prevailing family system.

22. Ester Boserup, Women's Role in Economic Development (George Allen and Unwin Ltd., 1970).

Collver and Langlois, for example, observe that:

Her key roles have been and remain those of wife, mother and home maker and even when she is not yet married, her expectations of assuming these roles exercise an influence on the character and extent of her economic activities.²³

These two authors on the basis of an adjustment between family and economic status find out four broad patterns of female work participation as follows:

- a) a pattern, typical of highly developed industrial countries with high wages and a desire for better standard of living, on one hand, and the persisting notion of women's place in the home, on the other hand, puts an upper limit on participation rates. Women remain active in the labour market either through postponement of marriage or by working until married couple has children;
- b) a Latin American pattern characterised by low non-domestic participation;
- c) a Caribbean pattern with high participation rates. The family system is weak and unstable with high illegitimacy rates and gives rise to the need for many women to be self sufficient at numerous intervals throughout their life;
- d) an "early marriage and female seclusion pattern" typical of Muslim countries of the middle East. The low participation rate of women in economic activities is seen as a direct result of

23. Andrew Collver and Eleanor Langlois (1962), op.cit., p. 367.

prohibition of public activity, allied with early marriage and need for exclusive attention to husband and children.

It is interesting to note that almost all these patterns are observed in India in its broad regional spectrum. In addition, in the context of India two more patterns are identified: (e) a tribal Indian pattern and (f) a low caste Hindu pattern. In both the cases the participation of females in economic activity is of a very high degree, apparently due to their traditional social ethos and lack of social taboos which inhibit high caste women from accepting work.

It will be seen that fluctuations in wage influences female participation in economic activities. In most families, men are the primary bread winners. As secondary bread winners women often work with the initiation of augmenting family income not of supporting the family. So, women tend to withdraw from labour force, if the wages are high. But when the wages are low, women enter the labour market in order to augment family's income. Paul H. Douglas²⁴ thus concludes from a study of Britain that low wages are associated with high proportion of women at work and in United States of America, high wages were negatively associated with proportion of women at work. But Gadgil²⁵

24. Paul H. Douglas, The Theory of Wages (New York: 1957), pp. 272-74, 290.

25. D.R. Gadgil, Women in the Working Force in India (Bombay: Asia Publishing House), 1965, p. 26.

points out that, since females work primarily in those occupations in which household responsibilities can be easily combined with productive work, the availability of such occupations in any given period would determine the level and extent of female employment outside the home.

A. Chapman Smock²⁶ holds more or less a similar view. Assuming that there are some categories of work 'suited' to women, it is proposed that the female participation would depend more on the fact that whether the 'female sectors' of the economy are expanding or shrinking, than on overall level or rate of economic development. The rate of women's economic participation would also depend on their ability to reconcile to the types of employment available for women with their domestic responsibility.

In predominantly agricultural systems women often have less of a problem reconciling roles, because of the flexibilities in the work schedule..... Industrialisation brings new problems, since the rigidity in factory employment makes it less easily combined with motherhood and family life; as a consequence women have little choice but to retire to home. Along with the expansion of the service sector of the economy, the improved employment prospects for women in the highly industrialised countries are related to a lessening of the conflict between work and family roles.

A 'U' pattern thus emerges in relation to female employment over time.

26. Andrey Chapman Smock, "Determinants of Women's Role and Status," in Women, Role and Status in Eight Countries (eds.), Gille, Janet Zollinger and Andrey Chapman Smock, New York, 1977.

2.5 SOCIAL STRATIFICATION, STATUS AND WOMEN'S WORK

There are few known societies which are not stratified. The influence of social stratification and the consequent 'status' question influences females' work participation. The caste system of India is often quoted as an example of such stratification by a number of scholars. S.C. Dube²⁷ in his study of social pattern of Andhra Pradesh lists four main social groups. In the social graph, at the tip of the hierarchy, women withdraw from any outdoor activity and many observe pardah. Below this group is the local cultivator castes in which women only do domestic duties and never go out as wage earners. In the third group are women of low castes who assist their husbands in their fields. They might go for wages in the busy season when there is a greater demand for labour. At the lowest rank are the poorest of the low caste women, who regularly seek paid employment to support their families. Thus a positive association emerges between the presence of the last two categories in any given region and the female work participation.

M.N. Srinivas²⁸ points out that this pattern was never static and the influence of modernisation and Sanskritization²⁹ complicates the entire situation. Particularly

27. S.C. Dube, Indian Village, London (1956), pp.174-75.

28. M.N. Srinivas (1978), The Changing Position of Indian Women, The T.H. Buxley Memorial Lecture delivered at the London School of Economics 1976 (Oxford University Press), p.15.

29. Sanskritization refers to the acceptance of the values of the upper castes by the lower castes. M.N. Srinivas, who coined this word writes that a mobile jati (sub caste) or

Sanskritization of a caste imposes restrictions on women for extra-mural movements and more so on wage labour which is a mark of low status. The greatly increased opportunities for secular mobility, Srinivas argues, available during the British rule as well as Independent India also meant considerable increase in the quantum of Sanskritization. As more and more members of the lower castes obtained access to education, jobs and power, they felt the need to tread the well worn path to legitimising their newly earned status (by accepting the values and habits of the upper castes).

2.6 DEMOGRAPHIC TRANSITION AND FEMALE PARTICIPATION IN ECONOMIC ACTIVITY

The importance of demographic factors in female participation in economic activity is no less significant. Women's biological role, particularly reproduction, interferes with their economic participation away from home. But the degree of this interference would depend on the nature of economic role they are playing which would depend on the stage of development of a society. Jeanne Ridley,³⁰ proposed an 'U' shaped pattern for female employment in relation to demographic transition which can be parallel to economic transition. He argued that in pre-industrial societies,

a mobile section of a jati changed its occupation, diet, adopted the worship of one or other manifestation of a high Hindu God or his consort, emulated the Brahminical life style and even changed its caste name. A new origin myth was also invented.

30. Jeanne Clare Riddley, "Demographic Change and the Role and Status of Women," The Annals of American Academy of Political Social Sciences, Vol. 375, January 1968, pp. 15-25.

high mortality warranting high natality forced the women to be pre-occupied with the biological role of reproduction. But the economic participation of woman was not much affected as their biological role could be easily combined with their economic role, since the economic activity was centred within the family. With the increase in industrialization, the economic production was removed from home. The men folk could transfer their activities outside the home, because of their miniscule reproductive role, whereas the women's pre-occupation with bearing and rearing functions continued to conflict with their economic role. At a later stage with a fall in infant and child mortality, there was no need to bear a large number of children. At this stage again women could enter the labour force. The advanced countries experienced this stage only after second World War. However, it is observed that in most advanced countries the age-specific female labour force participation is double peaked against a single-peakedness of the same in developing countries;³¹ the peak being reached between 20-29 years; followed by a plateau with a small negative slope for the 30-39 year age group. Single-peakedness involves the absence of re-entry phenomenon so common to advanced countries. This suggests that for a large part of the committed female work force marriage and

31. Guy Standing, "Labour Force Participation and Economic Development," International Labour Organization, Geneva, 1978.

child bearing (in developing countries) does not essentially alter the pattern of participation.³²

Durand,³³ on the other hand, holds that decline in fertility and increase in married women workers rate, although related with each other, both these tendencies may be caused by a third force, like desire to have a higher standard of living or more independence for women. No doubt, demography serves useful tool for analysing participation of women in economic activity when related with other factors.

2.7 GEOGRAPHICAL PERSPECTIVE ON FEMALE PARTICIPATION IN ECONOMIC ACTIVITY

Considering the vast differences in the level and extent of female employment between countries and within each country and region a geographical perspective on the problem becomes necessary for drawing any conclusions or generalisations. In fact, a lack of geographical perspective on the problem led to many falacious conclusions based on the study of a group or a very broad region such as a country. Lack of a geographical perspective led many sociologists³⁴ to conclude that the women are biologically less capable of doing work outside the home. The division of labour between

32. Swapna Mukhopadhyaya, "Women Workers of India: A Case of Market Segmentation in Women in Indian Labour Force," International Labour Organization, 1981, p.107.

33. J.D. Durand, "Married women in the Labour Force," The American Journal of Sociology, Vol. LII, November 1946, pp.217-223.

34. Lionel Tiger, Robin Fox, George Peter Murdock, Taliste Parsons and many other sociologists and anthropologists contended that the division of labour is a function of the difference in the biology of men and women.

the two sexes were attributed to the 'genes' and 'biology'. Obviously these scholars ignored the variations existing at lower levels of spatial units and also at other regions than their universe of study. Successive researchers³⁵ with a geographical perspective rejected the 'biology'-based theories and found cultural traditions to be more important. Oakley³⁶ for example studied different countries such as China, India, Russia, Cuba and Israel and concluded that biology has little or no influence on women's economic role.

Gulati³⁷ while explaining female participation in economic activity in India admitted the need for a geographical perspective on the problem for correct generalisations and observed 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." The Committee on the Status of Women also recognised the need of a geographical enquiry in to the problem of female participation in economic activity.³⁸

35. For example those of Ann Oakley, Bruno Bettelheim and other Marxist Sociologists. They maintain that far from being biological in nature, the division of labour according to sex lines are more of an expression of history and culture which vary in different regions resulting in different type of division of labour and rate of participation in economic activity.

36. Oakley, A., House Wife, Allen Lane, London, 1967.

37. Leela Gulati, "Female Work Participation: A Study of Inter-State Differences," Economic and Political Weekly, Vol. 10, No. 1 and 2, January 11, 1975, pp. 40-41.

38. A Synopsis of the Report of the National Committee on Status of Women, ICSSR, 1975, p. 60.

It observed that "Because of..... differential impact of development, a macro analysis of women's economic participation....cannot tell the whole story."

Since the women cannot be seen as a homogeneous group both vertically and horizontally, the geographical appraisal is of primary importance.

2.8 CONCLUDING STATEMENT

The above references to the debate on women's participation in economic activity makes the complexities of the problem clear. It is evident that social scientists and feminists do not depend on the simplistic theory of biological inferiority of women. There is a welcome shift of attention to the spatial and temporal dimension of the problem of women's participation in work made possible by an attempt to understand the processes which have contributed to womens⁴ participation in economic activity or otherwise.

The debate on the female participation in economic activity leads to two important conclusions. First, the problem is extremely complex than it would apparently seem and simplistic analysis would lead to unrealistic conclusions. In this sense most of the views expressed by scholars can be taken as complementary to each other. Second and perhaps more important. conclusion is that the women's participation in economic activity cannot be looked from the same angle for the developed as well as undeveloped or underdeveloped parts

of the world. As most of the findings prove, in these two blocks, different processes are operating in determining the nature and extent of women's participation in economic activity. The conditions are not the same in both the cases. Thus the mechanical application of any theory derived from Western experience to the Indian reality may lead to fallacious conclusions.

In the preceding section theoretical implications emerging from various national and international studies on the problem of female participation in economic activity have been organised and considered. In the section that follows it is proposed to examine the specific Indian situation as far as female labour participation is concerned. An attempt has been made to summarise and systematically present the methodology adopted and conclusions arrived at by researchers working on different aspects of the problem in the Indian context.

SECTION-II

2.9 THE INDIAN SITUATION

The study of the economic status of women in India is a recent phenomenon³⁹ and it has mainly gained ground after Independence. In a historical survey Sarathi Acharya⁴⁰ laments that:

39. Kalpana Dasgupta (ed.) (1976), Women on the Indian Scene: An Annotated Bibliography, Abhinav, pp.14-15.

40. Sarathi Acharya, "Employment of Women and Men in India - A Historical Review, 1901-1951," The Indian Journal of Labour Economics, Vol.22 (3), 1979, p.138.

During the first half of the century when India was limping towards modernisation, there appeared no concern on women's participation in economically meaningful occupations which is so necessary to guarantee their participation in decision making and equality in declining status.

It is only after 1950s and particularly in 1970s that a large number of studies on the status of women, their participation rates in the work force, wages and alike began to appear, but for the earlier period little material is available except for Mitra,⁴¹ Gadgil⁴² and Ambannavar's⁴³ census analysis and some demographic evidences. But most of these studies are too aggregative and require further dissemination both sectorally and regionally.

2.9.1 Decline in Female Participation Rates

A large number of research studies on women's economic participation mostly based on census informations indicate a distinctly declining trend in female participation in economic activity. It was Gadgil⁴⁴ who probably for the first time drew attention to this fact as early as 1924. He indicated a few tentative and important conclusions as to the nature and extent of women's participation in work in India and the impact of development on them. Mitra,⁴⁵ in his report for

41. Asok Mitra, India's Population Quality and Control, Abhinav, 1978.

42. D.R. Gadgil, Women in the Working Force in India, Asia Publishing House, University of Delhi, 1965.

43. J.P. Ambannavar, "Changes in Economic Activity of Males and Females in India 1911-61," Demography, India, 4(2), 1974, pp. 345-64.

44. D.R. Gadgil, "The Industrial Evolution of India in Recent Times," Oxford, Bombay, 1938.

45. Census of India, 1951, Vol.VI, West Bengal, Part I-A, p.526.

1951, demonstrated how dramatic was this decline between 1901 and 1951 in West Bengal. He distinguished two clear trends: a set of specific livelihood categories in which women's participation steeply and almost linearly declined between 1901 and 1951 and a second set of categories in which the female participation has shown sign of improvements. Sinha⁴⁶ also observed a similar trend between 1901-61 and noted that the absolute level of female employment in non-agricultural sector was lower than even a century earlier. He also points out a trend towards de-industrialisation of female work force. He further demonstrated that women's participation is limited to a few industries only, particularly in the household industries. Ambannavar,⁴⁷ in an illuminating paper provides explanation of the trends and distribution of the employment of men and women in industry by disaggregating the industrial sector into various women-labour absorbing and women-labour rejecting industries and has also discussed the growth, stagnation and technological change in the economy and its impact on women. In a detailed study the Planning Commission⁴⁸ studied the issues pertaining to the replacement of women workers in various occupations, at industry and operational level through the first half of the century. In a recently

46. J.N. Sinha (1961), "The Indian Working Force - Its Growth and Changing Composition," Census of India 1961, Vol. I.

47. J.P. Ambannavar (1974), op.cit.

48. Planning Commission, Women in Employment 1901-56 (1958).

concluded work Mitra, Srimany and Pathak⁴⁹ also have drawn attention to a markedly declining trend in the participation of Indian women in household and non-household activity in both rural and urban areas.

Gail Omvedt, in a recent article⁵⁰ also observes a dramatic decline in female participation in manufacturing, trade and commerce. She holds that:

The colonial and neo-colonial developments have not only destroyed much of the traditional participation of women in trade and artisan and household crafts, but they have also nearly wiped out what was once a significant participation in mining, jute and textile industries.

However, doubts have been raised as to whether the decline in female participation is true or a gamble of changes in the definitions of "worker" in successive census. J.N. Sinha⁵¹ for example holds the female participation in work to be reasonably high and attributes the low rate of 1971 census to "statistical aberrations caused by inadequacy of the conceptual basis for differentiating workers and non-workers." Nevertheless different attempts through field surveys, National Sample Surveys prove that there has been a truly declining trend in female participation in economic

49. Asok Mitra, Adhir K. Srimany and Lalit P. Pathak, Status of Women, Household and Non-Household Economic Activity, Allied Publishers, ICSSR Programme of Women's Studies, New Delhi, 1979, pp.1-9.

50. Gail Omvedt, "Women and Rural Revolt in India," Social Scientist, 6 (1), pp.1-18.

51. J.N. Sinha, "Female Work Participation: A Comment," Economic and Political Weekly, No.16, April 19, 1975, p.672.

activities. The report of the National Committee on the status of women in India⁵² observed that "the impact of changing definitions is only marginal and that the declining participation trend of women has been a continuous one."⁵³ A survey of 150 villages in two taluks of Thana district in Maharashtra; also showed a progressive decline in female participation rates.⁵⁴ Data drawn from independent sources such as this also support the conclusion of declining work participation of women suggested by several recent studies on women's employment.

Mazumdar⁵⁵ rejects the belief that the participation of women in work is on the increase and attributes it to a middle class bias.

The middle class bias that affects our thinking about women is most apparent in our understanding of the trends in women's employment. In spite of the fact that the female work participation rate is declining over the last few decades, most of us have continued to believe that employment opportunities for women have been widened and increased by development. We may observe that the transformation in the levels of middle class women in urban areas and even refer to some government publications on women's employment; which portray a very rosy picture of increasing employment of women in the organised sector of our economy.⁵⁶

52. Status of Women in India: A Synopsis of the Report of the National Committee, ICSSR (1971-74).

53. Ibid., p.62.

54. S.D. Sawant and Ritu Dewan, "Rural Female Labour and Economic Development," Economic and Political Weekly, No.26, June 30, pp.1091-1099.

55. Vina Mazumdar, "Status of Women," Demography India, 4 (2), pp.258-64, 1975.

56. Ibid., p.258.

Sarathi Acharya⁵⁷ attributes this decline to both the supply and demand functions of labour market in Indian economy, the development of which had almost frozen in the early part of 20th century with minor variations in the differential growth patterns, output composition and labour structure. The burden of growing unemployment thus fell on women more than men because "their occupations were rendered redundant..... the impossibility of their gaining a different skill level or social role in the institutional system...."⁵⁸

The decline of rural household industry with increasing urbanisation⁵⁹ and industrialisation have been mostly held responsible for the gradual decline of women's participation in economic activities. However, Mitra⁶⁰ holds that the decline in the rural household industry

..... must be sought not only in the growth of modern industry in towns and cities, but in the sagging demand among poorer sections of the community, wherever they are, whether in the rural or urban areas, accentuated by periods of bumper production when the fall in the prices of agricultural produce does not always make up for the greater amount of produce sold and the increase in the prices of inputs. These causes have perhaps been responsible in recent years for the erosion of staying power among the major lower deciles of the population in urban as well as rural population and struck at both rural and urban household industry. For wherever there has been rural agricultural prosperity since 1951.... there has been a resurgence in the household and small scale industry in rural as much as in urban areas.

57. Sarathi Acharya, op.cit.,

58. Ibid., pp. 159-60.

59. J.P. Ambannavan (1974), op.cit.

60. Asok Mitra (1979), The Status of Women, Literacy and Employment, ICLSR, Allied Publishers, p.52.

The theory that a more developed modern economy inevitably results in a decline in the female participation in the work force has provided the explanation for progressive decline in the female work-rate.⁶¹ However, in case of India, Omvedt⁶² observes that "The underlying process is not that of 'development' or modernisation, rather, it 'seems more accurate to define it as the stagnation of a colonial or neo-colonial economy'."

2.9.2 Spatial Variations in Female Participation

While the temporal analysis of female participation in work has received relatively greater attention, the regional variations in female employment have been either neglected or have been marginally touched. Only recently this aspect of female employment is receiving more attention mostly from Economists, rather than the Geographers.

However, the

tendency in the existing literature on the theme has been either to base the analysis on grossly aggregated data at state level, which tend to obscure sub-regional variations resulting from highly localised historical and cultural conditions, or to study special cases, with little attempt to coordinate these two approaches.⁶³

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61. a) E. Boserup (1970), op.cit.
b) Report of the Committee on the Status of Women in India.
c) Kamala Nath, "Female Work Participation and Economic Development - A Regional Analysis." EPW vol. 5(21) May 23 1970
62. Gail Omvedt, op.cit., pp. 14-15.
63. Saraswati Raju, "Sita in the City: A Socio-Geographical Analysis of Female Employment in Urban India," University of Syracuse Discussion Paper, 1981.

Most authors observe a north-south contrast in female participation in India⁶⁴ as in the distribution of other social variables. Boserup,⁶⁵ for example concludes that the lower participation of female in work in the north India resembles that of West Asian and North African Arab countries, whereas the higher level of female participation in economic activity in Central and South India resembles that of South East Asia. This pattern, she argues, might have resulted due to influence from these two regions. According to her thesis the variation in women's employment in traditional society is the function of the existing agricultural economy. Her thesis is primarily based on 'demand' which causes the variation although she talks of cultural traditions. This has been questioned by Raju⁶⁶ who points out the relationship observed in the contemporary Indian situation: women are segregated in some wet rice areas, such as Bihar and are more actively engaged in certain areas of dry field cultivation. She also cites the paradoxical situation in West Bengal, where men undertake the task of transplanting, which is traditionally associated with females. In Himachal Pradesh the women also plough the land in the absence of male members or because of the inability of the family to hire male labourers.⁶⁷

64. E. Boserup, op.cit., pp.71-72

65. Ibid.

66. Saraswati Raju, op.cit., p.4

67. Report of the Committee on the Status of Women (1974), ICSSR, p.150.

Leela Gulati's⁶⁸ pioneering work on inter-state variations in female participation rates was followed by a series of works on it. Gulati using simple rank correlation techniques could not find any satisfactory explanation for variations in terms of per capita income, cropping pattern, literacy, male participation rates and sex-ratio; and suggested that at highly aggregate level of international comparison the explanation for differences in female work participation rates appear to be in certain broad non-economic factors. Reddy⁶⁹ in a comment held that, "Differences in rural female work participation are co-terminous with the difference in their participation in agriculture and sought agricultural conditions for explaining spatial variations in female employment." Sinha,⁷⁰ rejected demand oriented explanations and attached importance to the cultural homogeneity of the group studied. In another work Sinha⁷¹ suggested that female labour force participation rates decline sharply in prosperous states

68. Leela Gulati (1975), op.cit., pp.35-42.

69. D. Narasimha Reddy, "Female Work Participation - A Comment," Economic and Political Weekly, Vol.10 (182), January 11, 1975, pp.902-905.

70. J.N. Sinha, "Female Work Participation - A Comment," Economic and Political Weekly, Vol.10, No.16, April 19, 1975, pp.672-74.

71. J.N. Sinha, "Rural Employment Planning Dimensions and Constraints," Economic and Political Weekly, Vol.8 (687), Annual Number, 1978, pp.295-313.

where male earnings are high. Dholakia and Dholakia⁷² used both economic and socio-cultural factors for explaining spatial variations. Kamala Nath⁷³ observed that, as far as international variations are concerned, socio-political factors, religion and level of economic development explain the variations to a large extent, but at the state level, she observed no significant relationship between levels of development and the inter-state variations in female participation rates.

Mukherji⁷⁴ and Chandna⁷⁵ give more importance to the cultural history of regions in explaining variations in female participation rates. The absence of taboos and prejudices against females working outdoors and in the fields, according to Mukherji, form an important factor in determining female participation in economic activity.

A few micro-level studies reveal the negative influence of income on female participation rates. Irrigated areas showed lower participation rates than un-irrigated areas.⁷⁶ In Maharashtra, a study of 150 villages

72. Bakul H. Dholakia and Ravindra H. Dholakia, "Inter-State Variations in Female Labour Force Participation Rates," Indian Journal of Labour Economics, January 1978.

73. Kamala Nath, "Female Work Participation and Economic Development - A Regional Analysis," Economic and Political Weekly, May 23, 1970, Vol.5 (21), pp.846-49.

74. A.B. Mukherji, "Female Participation in Rural Agricultural Labour in Andhra Pradesh - A Study in Population Geography," The Deccan Geographer, 12(1), January-June 1924, pp.1-25.

75. R.C. Chandna, op.cit., pp.47-62.

76. G. Parthasarathy and G. Dasaradha Rao, Employment and Unemployment of Rural Labour and the Crash Programme, Andhra University Press, Waltair, 1974.

in two taluks of Thana district showed a higher female participation rates in less developed villages.⁷⁷ Devaki Jain's study of milk producing villages in Kaira district showed that the worker-rate of females was the highest among the poorest non-land owning, and non-buffalo owning households and the lowest in high income yielding big cultivator households.⁷⁸

Omvedt⁷⁹ rejects the explanations of Regional variations in terms of rice growing areas or concentration of Scheduled Tribes or population density and holds 'poverty' as a more systematic explanation:

Where the agricultural productivity, income and wage rates are low, female work participation tends to be high simply because women of the poorest families are forced to work irrespective of male desires.

In addition she argues, cultural factors may play a role: the north and the north east, more highly affected by Islamic culture (though not necessarily Muslims themselves) tend to have lower participation: West Bengal and Punjab have the lowest in India, though one is impoverished and mainly a rice growing state, the other the show-piece of the wheat based 'Green Revolution.' According to Swapna Mukhopadhyaya⁸⁰

77. S.D. Sawant and Rita Diwan, op.cit.

78. Devaki Jain, Women's Quest for Power, Vikash, Ghaziabad, 1980, pp.100-101.

79. Gail Omvedt, op.cit.

80. Swapna Mukhopadhyaya (1981), op.cit., pp.93-119.

to seek unidimensional determinants of female labour force participatory behaviours is nothing but naive. She agrees with Dholakia and Dholakia,⁸¹ in suggesting that both socio-cultural as well as economic demographic factors influence these determinants. From commonsense, she argues, it would be clear that socio-cultural factors play a major role in differential female participation rates as the economic factors affect both male and female equally whereas socio-cultural conditions have very different impact on the two sexes in different regions of the country.

The explanation to the spatial variation in the female participation has been attended either on purely theoretical level or at grossly aggregated level such as states or districts. A need for going to lower levels than districts thus arises for examining the extent of variation in female participation in economic activity.

2.9.3 Occupational Structure

Available material on occupational structure of female work participation is meagre. Most of the studies are based on census industrial classification.

The phenomenal increase in the number of women agricultural labourers as evidenced by 1971 census has

81. Bakul H. Dholakia and Rabindra H. Dholakia, op.cit.

attracted major attention. This has been variously explained by changing production relations⁸² increased skewness of land distribution,⁸³ proletarianisation, marginalisation and pauperisation of the peasantry⁸⁴ and a higher propensity among marginal cultivators to send their womenfolk for wage employment where cultural factors do not hold women back from working for wage. Boserup⁸⁵ suggests that the concentration of women workers in agricultural labourer category is not due to a sex-specific role that the women play. She cites the example of a Mysore village where the men go for wage employment leaving aside the women to look after family farms including ploughing operations.

Nevertheless in the rural sector women workers are much more concentrated in agricultural operations than their male counter parts. A micro level study⁸⁶ of 82 villages in Gujarat by Hirway, reveals that 95 per cent of women workers are engaged in agricultural activities as against 75 per cent of the male folk. The men unlike the women have a much more diversified structure of occupation. In this sense

82. Pranab K. Bardhan, "Labour Supply Functions in a Poor Agrarian Economy," American Economic Review, 69(1), March 1979.

83. Biplab Dasgupta and et. al., Village Society and Labour Use, Oxford University Press, 1977.

84. Gail Omvedt, op.cit.

85. Boserup (1970), op.cit.

86. Hirway, - "Employment Planning According to Labour Force Characteristics: A Case of Rural Women," Indian Journal of Labour Economics, January 1980.

Mukhopadhyaya⁸⁷ and Bardhan⁸⁸ talk of segmented market for women. Bardhan talks about segmentation within female labour market along ethnic lines. From a study of rural West Bengal she found that lower caste, scheduled caste and tribal women mostly go for wage employment in agriculture whereas females from relatively higher castes, but belonging to poorer households do non-farm work.

In the industrial sector also the women are mostly concentrated in the unskilled or semi-skilled occupations, that too in a few occupations only.⁸⁹

Mitra⁹⁰ advances the argument that the occupational structure gets diversified with a higher level of education. However, education can be only a necessary and not a sufficient condition for diversification.⁹¹

2.9.4 Other Considerations

The questions as to the variations in female participation in economic activity and occupational distribution are certainly more complex and census information cannot be taken as a full guarantee for valid generalisations. The

87. Swapna Mukhopadhyaya (1981), op.cit.

88. Pranab K. Bardhan (1979), op.cit.

89. Swapna Mukhopadhyaya (1981), op.cit.

90. A. Mitra (1979), op.cit.

91. Swapna Mukhopadhyaya (1981), op.cit.

influence of different cultural traditions on women's participation is undeniable particularly in terms of social attitude, institutional framework, and traditional norms regarding females. A division of labour according to sex-lines is an universal one, but the nature of such division varies from country to country and from region to region.

De Souza's⁹² thesis regarding prestige consistency in the family as the main force determining whether a woman works or not, may sound appealing in the context of urban occupations, but in rural context it seems less applicable where a higher status would mean non-participation in economic activity.

However, the role of existing social norms, prejudices and restrictions on the female work participation are of crucial importance in determining the rate of female participation, but these are themselves again region specific and are in fact expressions of the micro-cultures. Most researchers have observed that the rice growing areas have a higher female participation in the work force than the wheat growing areas⁹³ and thus relate the latter to the existing agricultural ecology. But subsequent researchers show that the relationship is not as simple as that and there are a

92. Victor S. De' Souza, "Implications of Occupational Prestige for Employment Policy in India," Artha Vijnana, Vol.1 (1959), pp.233-247.

93. L. Gulati (1975), op.cit.

lot of variations within rice growing as well as wheat growing regions. Nath⁹⁴ and Reddy⁹⁵ have found out that "Quite contrary to expert opinion, the female participation appears to be negative function of the area under rice crop."⁹⁶

Boserup,⁹⁷ in her study observed that in the northern India, particularly in Uttar Pradesh, the social resistance to female employment is such that even the poor agricultural labourers do not mind keeping their wives from participating in the wage market.

The presence of the deprived sections such as Scheduled Castes and tribes have always been taken as a good indicator for a higher female employment. It is true that the lower caste (class) females enjoy greater freedom in terms of extra-mural movements and are compelled to work for dire economic necessity. But the very presence of these communities in themselves cannot explain the female employment level since the regional differences cut across the caste (class) differences.

Similarly, the presence of Muslims has been considered as important in relation to female participation

94. Kamala Nath, op.cit.

95. D. Narasimha Reddy, op.cit.

96. Ibid.

97. E. Boserup, 1970, op.cit.

as they are supposed to have very restrictive attitude, and values towards women working outside. Although caste and religious factors cannot be taken as a dependable determinant of the level and extent of female work participation, the influence of caste, religion and region-specific values and norms in either restricting or enhancing the scope for female participation cannot be ruled out.⁹⁸

The above survey of literature shows a growing interest among scholars on the economic role of women in India. However, more specific studies at lesser aggregative levels and micro-studies on the basis of field surveys are greatly desired to test the validity of studies and conclusions based on the analysis of census data.

SECTION-III

2.10 MODERNISATION AND DEVELOPMENT IN RURAL INDIA AND FEMALE PARTICIPATION

2.10.1 Changing Rural Scenerio

One of the purposes of this section is to add time-dimension to otherwise a cross-sectional and static picture to be presented. This should also help in understanding the pattern as an historical aid.

98. Andrea Singh (1978), "Women and the Family in the Indian City," Poverty, Ecology and Urban Development (ed.), Alfred de Souza (Delhi: Manohar), pp.77-78.

A number of significant changes have overtaken in Indian villages and have contributed to its transformation. These changes are not always visible and they have also not maintained an even pace in both time and space. At times there have been rapid changes, at others their impact on the rural society has been imperceptible. But the fact that rural society in India is undergoing transformation cannot be denied. The forces which have brought about qualitative changes in the character and organisation of village life may have been brought to bear upon the rural societies from without by agencies like the government or they may have been intrinsic to the process of societal change itself. Viewed broadly as a process in which human beings are engaged in transforming their conditions of existence, these changes raise some very interesting questions which increasingly attract the attention of researchers.⁹⁹ A major question concerns itself with the nature and extent of women's participation in these changes. It is believed that rural women's role in the productive process has been largely neglected by scholars in the past. It is increasingly realised that the bulk of the rural women have "not only been bypassed in the distribution of the fruits of development but whose traditional roles and status in their own society are also being altered

99. A.R. Desai, Rural India in Transition, Popular, 1979. Also see, the chapter on "Rural Society in Transition," in Rural Sociology in India, (ed.), A.R. Desai, Popular, 1978 (fifth impression).

adversely by the nature of the developmental process."¹⁰⁰ Even in the consciously designed programmes, the programmes for women have been marginal and little efforts have been made to increase their productivity and income earning capacity.¹⁰¹ It is now generally conceded that growth in itself will not necessarily ensure that its benefits will 'trickle down' to the poorest and the weakest; it is not equally appreciated that policies to reduce unemployment and promote expansion of employment opportunities in themselves do not necessarily lead to an improvement in female employment.¹⁰²

2.10.2 Role of Government Sponsored Programmes

The official agencies in India have since Independence undertaken several programmes for rural development. However, programmes for women have been marginal in economic development activities. Little conscious efforts have been made to integrate women in the development process. On the contrary several programmes initiated since Independence have shown

100. See 'Preface' to the book Role of Rural Women in Development (ed.), Vina Majumdar, Allied Publishers, 1978.

101. According to many scholars, the reason for such neglect are due to a "middle class bias" and women's "invisibility" in their economic contribution which have influenced the planners and policy makers.

102. Pushpa Sundar, "Characteristics of Female Employment: Implications of Research and Policy," Economic and Political Weekly, Vol. 16, No. 19, May 9, 1981,

negative results and have, in fact, restricted women's participation in economic activity.¹⁰³

Ironically enough, various measures implemented by official agencies with a view to bringing about rural development have resulted progressively restricting female participation in economic activity. In most cases the models of rural development on which the programmes were based did not contain any special provision for rural women. The only special programme for the rural women was the establishment of a programme called Mahila Mandal conceived of as the institution for making available new ideas and skills to village women. However,

This programme was nothing more than the adoption of a middle class model biased towards home economics and welfare. This was the result of the policy makers' unidimensional view of the women as home-makers and neglect of their contribution in macro-productive work outside the home, whether remunerative or otherwise.¹⁰⁴

Even progressive programmes such as land reforms have proved restrictive to female participation in economic activity. West Bengal provides the classic example. In this context, Pranab K. Bardhan¹⁰⁵ has convincingly argued that the enforcement of land reforms in rural West Bengal has resulted in large scale eviction of tenant farmers and their transformation

103. Rekha Mehra, "The Neglect of Women in India's Rural Development Programmes," ICGSR, Programme of Women's Studies (mimeographed).

104. Ibid.

105. Pranab K. Bardhan, "Labour Supply Functions in a Poor Agrarian Economy," American Economic Review, Vol. 69, No. 1, March 1979.

into wage earners. The process of eviction of tenant farmers in early seventies therefore, has often been associated with a complete withdrawal of female population on tenant cultivated plots from labour force, since cultural factors prevented the women to accept wage employment away from home.

Late sixties and early seventies witnessed an unprecedented accent on food production and agricultural modernisation with a massive increase in facilities like irrigation, mechanisation, coupled with larger and better inputs in terms of seeds, fertilizers, pesticides etc. This development is known as "Green Revolution" which in reality turned out to be a mere "Wheat Revolution" affecting favourably a few states in North West and small pockets in the rest of India. The effects of "Green Revolution" has been restricted to coastal plains of Tamil Nadu and Punjab, Haryana and Western Uttar Pradesh; Eastern Plains of West Bengal, Karnataka and Kerala.¹⁰⁶ On the other hand the extensive "hungry belly" of India remained chronically underdeveloped and areas of submarginal subsistence benefiting little from the so called "Green Revolution."¹⁰⁷ A large

106. Amitabh Kundu and Moonis Raza, Indian Economy: The Regional Dimension, Spectrum Publishers, 1982.

107. Raza and Chattopadhyaya in their study of "Spatial Structure of Modified Underdevelopment" identify three distinct regions in the hinterland of Primary Production. These are (i) "Green Revolution" areas; (ii) Areas of uncertain water supply; (iii) Drought prone areas, each having areas of submarginal subsistence within each

area in Andhra Pradesh and Maharashtra¹⁰⁸ which formed part of the "hungry belly" showed negative growth rates during 1970-73 over 1962-65.¹⁰⁹

In "Green Revolution" areas there has almost been an exclusion of women in the labour force. Punjab and Haryana provide the classic example where according to 1971 census less than 2 per cent of the women are reported to be gainfully employed. The situation is not much different in West Bengal. On the other hand in Andhra Pradesh and Maharashtra more than 25 per cent women are reported to be "working." The fall in the worker-rate of females are phenomenal in "Green Revolution" areas.¹¹⁰ It is widely held¹¹¹ that increased mechanisation and an increased prosperity displaced women from agricultural activities. The increased prosperity in this region has brought a new concept of "social status" which does not

category. The latter two categories constitute the hungry belly of India in the central part.

Baudhyan Chottopadhyaya and Moonis Raza, "Regional Development - The Analytical Frame," Indian Journal of Regional Science, Vol. 7, No. 1, 1975.

108. Maharashtra was hit by severe droughts in this period.

109. G.S. Bhalla and Y.K. Allagh, Performance of Indian Agriculture - A Districtwise Study, Sterling Publishers, 1979.

110. According to the Report of the Committee on employment the percentage of female workers decreased from 53.44 and 58.46 in 1961 to 1.42 and 4.58 in 1971 in Punjab and West Bengal respectively.

111. Changes in technology threatens the jobs women had outside the household since these jobs in general less complicated than men's, and hence more easily substituted by machines. See, Women in the Indian Labour Force, Asian Employment Programme, 1981, p. 13.

encourage the womenfolk to go out to work as wage earners.¹¹² Mechanisation, contrary to the view that it would demand an increased participation has not led to a demand for female labour, on the other hand it has displaced labour and the women have fallen the first victim to such shrinkage in labour requirements.¹¹³

2.10.3 Capitalist Penetration in Rural Economy and Female Participation in Economic Activity

Colonial history of India provides valuable insights into the process of diminishing participation of women in economic activity.¹¹⁴ It introduced a new system of land revenue administration which brought about the disintegration of earlier structure. Land itself entered the market as a commodity with changes in the pattern of land ownership; and the introduction of the concept of private property. Colonial

112. Andre Beteille in his monograph, "Inequality and Social Change" (OUP) suggests a relationship between work and status. Ownership of land he argues, is directly proportionate to avoidance of manual work. This tendency to avoid manual work is more noticeable in areas known for wet rice cultivation. In this context he argues that Harijan women, who are considered superior to their counterparts among tribals, do not work in the fields. Andre Beteille, Inequality and Social Change, Oxford, 1980, pp.21-23.

113. International Labour Organization, Women in the Indian Labour Force (ARTEP), 1981, p.13.

114. Ester Boserup has analysed the role played by commercial farming; particularly plantation introduced by British displaced women from the labour force. Ester Boserup (1970), op.cit., pp.53-57.

subordination also brought India into the orbit of world capitalism and subsequently got integrated into the world capitalist market. ¹¹⁵

The situation remains largely unaltered even after Independence. ¹¹⁶ The forces of capitalism slowly and gradually penetrated into the rural areas and made deep inroads into its primary mode of economy; agriculture. This development has led to a massive pauperisation and marginalisation of large masses of subsistence producers in India. ¹¹⁷ Women have been most severely affected by these processes than men, who may have actually been absorbed into the labour force. Omvedt, ¹¹⁸ analysing the capitalist penetration into agriculture holds that this took place in the post-colonial economy, characterised by 'still-potent' effects of backwardness and various types of semi-feudal elements including caste. Indian agriculture according to the author was predominantly feudal in character before Independence although important elements of capitalism had arisen. Various types of Zamindars, Talukdars, Khots, Malgazars etc. controlled the land. In the post-Independence

115. For a fuller discussion on the subject see, A. Gunder Frank, Capitalism and Underdevelopment in Latin America, Monthly Review, 1969. The Indian experience, it is often argued, has not been much different.

116. Boudhodhan Chatopadhyaya and Moonis Raza, op.cit.

117. Maria Mies (1980), op.cit.

118. Gail Omvedt, "Capitalist Agriculture and Rural Classes in India," Economic and Political Weekly, Vol.16, No.52, December 26, 1981, pp.A140-A359.

period, Zamindari Abolition Acts and Tenancy Acts passed in various states in the 1950s did not give land to the landless or land-poor, rather they resulted in poor tenants being expelled from the land as in richer tenants getting control of the land. This laid a basis for bigger tenants and rich peasant cultivators to come to power in the villages and develop as capitalist farmers. Various other developments such as "Green Revolution", spread of education, co-operative credit societies, land development banks, new institution of Panchayati Raj helped this new class maintain its hegemony in a new way over the increasingly proletarianised and helpless rural majority. But all these developments took place very unevenly. In the ryotwari areas, where strong peasant movements occurred, it proved easier to move against land-lordism and consolidate the gains of the new class. Thus south and western India show a clearer prevalence of capitalist relations of production. In contrast, the east, north-east and central regions remain backward, with a significant amount of semi-feudal relations of production.

".... on the whole, a growth in agricultural production and the transformation of the agrarian relations of production and the transformation of the agrarian relations of production in short the development of capitalist agriculture - even though it remains a backward capitalist agriculture with tremendous hangovers of feudal relations and remnants -

has characterised Indian countryside since Independence.¹¹⁹ Maria Mies in a recent article¹²⁰ analysed the consequences of capitalist development in rural areas and specially its impact on women. She argues that the capitalist penetration had led to the gradual erosion of the material base of women's subsistence production. Although they may produce for a worldwide capitalist market, the form of production usually remain the same as it had been for producing use-values. Secondly, a growing polarisation and inequality between the sexes are important features of such a development. Capitalist penetration, she argues, has, in fact, introduced new elements of patriarchy and sexism. When production for exchange is introduced men are recruited as labourers while women remain responsible for subsistence or household production. When capitalist market relations begin to replace the old local market system men push women out of the market sphere where they used to sell or barter their products. Thirdly, this polarisation between sexes in rural areas has not been an isolated process. It is closely related to the overall process of class polarisation taking place under the impact of capitalist farming.

Growing commercialisation of agriculture, a rise in the production of cash crops, the rise in agricultural prices and the introduction of new technology - all have

119. Ibid., p. 143.

120. Maria Mies (1980), op.cit.

strengthened the position of rich farmers; who have also benefited most from the government expenditures on rural development. On the other hand, more and more small farmers have lost their land through indebtedness, giving a spurt to the number of bonded labourers. Some of the so-called backward castes have been able to rise in recent years to the status of middle peasants. Hitherto, their women used to do agricultural labour, but once they achieved a certain economic status, they subjected their women to seclusion and strict patriarchal norms. The women stop working in fields to prove their enhanced status. Fourthly, pauperised men migrate to cities leaving their wives and children in the countryside. Often the men find it difficult to make enough money to remit to their families left behind. The women without any means of production turn to begging, prostitution or to employment for less than the minimum wage. ¹²¹

Gail Omvedt ¹²² also argues on similar lines and holds that recently there has been an accentuation of the process of marginalisation and ^{pauperisation} polarisation in the countryside; and particularly in agriculture. Marginalisation, however, has affected women much more severely than men. The growing concentration of women in agricultural labour sector, she

121. Ibid., p.10.

122. Gail Omvedt, "Women and Rural Revolt in India," Social Scientist, Vol.6, No.1, 1976.

argues, is the cause of proletarianisation, whereas women have been excluded from industrial work. Far from being a sign of modernisation, development, or a transition to any of these two, she defines this situation as "the stagnation of a colonial or neo-colonial economy."

Mitra, Pathak and Banerjee¹²³ thus define the real character of women's labour force in India (for that matter any capitalist country) as a "Reserve pool of helpless labour." They observe that:

Lacking unionisation, efficient communication, opportunity of collective bargaining and taking advantage of varying seasons, crops and yields and the multiplicity of miniscule, but highly specialised and non-competing skills, which thanks to a situation of abundant labour supply there is always more on offer than can be absorbed at current levels of technology or production, female labour in the rural areas remains the handiest instrument of minimising agricultural production cost.

Thus penetration of capitalism into rural India has generated two quite opposite processes; on the one hand it has displaced women from the work force, on the other, it has compelled women to participate in gainful economic activities. It has restricted women's opportunities for economic participation, at the same time it has pushed them more and more to the backward sectors of the economy.

123. Asok Mitra, Lalit P. Pathak and Shekhar Mukherjee, The Status of Women, Shifts in Occupational Participation 1961-71, An ICSSR/JNU Study, Abhinav, 1980.

2.10.4 Changes in the Demographic Scene

Defying all the initiatives taken by the government through measures like family planning, India's population is increasing at an alarming rate since 1921. The death rate has substantially decreased, whereas the birth rate has not shown any perceptible change. Moreover, the birth rates are greater in the rural areas than in the urban areas. The consequences of such a rapid growth in population has affected women in a variety of ways. The entire responsibility of bearing and the major responsibility of rearing the children falls on the shoulder of the women. This has also reduced the life span of women resulting in a rapidly declining sex-ratio¹²⁴ a phenomenon common to almost all the parts of the country. Excessive child bearing and the burden of rearing a family is responsible for the low level of their skills and it forces them to accept low wages and in most cases reduces their employability. However, increasing urbanisation has opened up opportunities of tertiary employment for the rural women, although higher prestige jobs are only available to an insignificant portion of the working females. A number of studies show that a majority of rural women get absorbed into urban informal sector, particularly in the low paid jobs like domestic service and the like after they migrate to big cities.

124. Asok Mitra, Status of Women: Implications of Declining Sex-ratio in Indian Population, Allied Publishers, ICSSR Programme of Women's Studies, New Delhi, 1979, pp.1-35.

2.10.5 Changes in the Social Sphere

The most important change that has taken place since Independence in the social sphere, is a rapid growth in literacy among women. However, in rural areas the growth is not as impressive as it is in the urban areas. Although a vast majority of rural women are still illiterate, considering the change that has taken place in the number of literate females in the rural areas, the change is no doubt impressive. Paradoxically, it has had a negative impact on the economic participation of women. Literate young women are no longer keen to accept the low paid jobs or to do agricultural work which they were given earlier; and they are neither qualified nor accepted for better ones. The net result of literacy therefore, has been a decline in the female participation in the economic activity.

Another aspect of rural society is still more important. The establishment of British rule and its consolidation brought greater opportunities and mobility to the people. Initially the higher castes benefited out of it. But at a later stage dominant peasant castes and minority groups succeeded in gaining access to education, better professions and the bureaucracy. Independence also brought vastly increased mobility opportunities to Scheduled Castes, Scheduled Tribes and other weaker sections of the society as a consequence of protective discrimination. With higher

incomes accruing to the middle and low castes as a result of higher prices for agricultural produce, and higher production as a result of better agricultural inputs, these sections began to emulate the life style of urban middle classes mostly of higher castes - a process which is similar to the concept of Sanskritisation by M.N. Srinivas¹²⁵ to analyse the process of change in rural India and its impact on women's economic participation. Srinivas points out that, "the greatly increased opportunities for secular mobility available during British rule and in Independent India meant also considerable increase in the quantum of Sanskritization. As more and more members of the lower castes obtained access to education jobs and power, they felt the need to tread the well worn path to legitimizing their newly earned status."

One of the unfortunate effects of this is the moral, ritual and economic subordination of women. Sanskritization coupled with landed wealth contribute to confine women to the four walls of a house.

2.10.6 Concluding Statement

The above survey shows that the effect of social change in rural India has widened the gap between men and women and resulted in a decline in women's participation in economic activities as well as an increasing tendency to

125. M.N. Srinivas (1978), op.cit., p.15.

push them to the backward sectors. A growth of middle class professions and increasing participation of women in these professions should not lead us to conclude that the overall participation is increasing or women are getting absorbed into better sectors of the rural economy.

Chapter-III

WOMEN IN THE WORK-FORCE: INTER-REGIONAL AND INTRA-REGIONAL COMPARISONS

3.1 INTRODUCTORY STATEMENT

Spatial variations in the level of female participation in work have started attracting greater attention only recently. Although sociologists and economists have analysed the conditions and factors which influence the female participation in work, they have paid scanty attention to the regional dimension of the problem and have based their studies primarily to seek explanations at very aggregate levels such as the states. The works of Gulati,¹ De' Souza,² Nath³ and Mukherjee⁴ may be cited as examples of such aggregative analysis or very special cases, without attempting at co-ordinating the two. One of the disturbing trends of such analysis, therefore, has been sweeping generalisations and unending debates on the topic. This has also led to the establishment of simplistic relationship between female participation in economic activity and various 'explanatory factors'.

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1. Leela Gulati (1975), op.cit., pp.35-42.
 2. Victor S. De'Souza (1969), op.cit., pp.440-457.
 3. Kamala Nath (1970), op.cit., pp.846-49.
 4. A.B. Mukherjee (1971), op.cit., pp.13-18.

Although there cannot be two opinions on the question that a great majority of women (for that matter men) apparently work for economic necessities; at the same time the importance of socio-cultural factors cannot be overlooked; particularly while considering the female participation in economic activity. The institutionalisation of 'mother-housewife role'⁵ as the primary role, has been major reason for subordination of women in the labour market. This role has been considered as "proper" for women both in family as well as in the wider society. Secondly in underdeveloped capitalist countries which suffer from chronic unemployment and are marked by labour surplus economies, a typical manifestation of this attitude is the theory of women's marginal role in the economy.⁶

However, in spite of these, large number of women do participate in work particularly those belonging to the lower strata of the society. This proves that the role of taboos, norms and attitudes towards women's work are set off by strong economic necessities. Another interesting aspect of female participation has been its wide variation from region to region. The variation in the level and extent of female participation in economic activity is conspicuous at each level, starting from international level to the level of taluk or village.

5. Ann Oakley, op. cit.

6. "Women Workers in a Changing World," International Labour Conference, 48th Session, I.L.O., 1963, p.19; and Report of the National Commission of Labour, Government of India, 1969, p.379.

3.2 FEMALE PARTICIPATION IN THE MODERN WORLD

Table 3.1 presents the level of female participation in economic activity in selected countries of the world. It is clear from the table that in terms of female participation rate India ranks quite low.⁷ It is obvious from the table that the variation in female participation rate in different countries is of a high degree. The variation is not only well marked between agricultural countries and industrial countries but also within each of these categories themselves. Nath⁸ observes that:

Women's primary obligations revolve around family and home. Their participation in economic activity is contingent upon certain factors, e.g. economic need, institutional restrictions on their employment and the kind of employment available (especially if it can be combined with their primary roles etc.). Therefore, in most of the countries work participation rates are lower among women than among men.

Industrial countries, however, show a much higher worker-rate of female than that of agricultural countries. East European countries with socialist economies show a higher participation of women in work than the western European countries. Gulati, from such a situation wonders if there is any relationship between political systems and female participation rates.⁹ She concludes that, "Possibly the work ethos

7. However, while making such comparisons, it is important to bear in mind that different countries define work participation differently.

8. Kamala Nath, "Women in the Working Force in India," Economic and Political weekly, Vol.3, No.31, August 3, 1968, p.1205.

9. Leela Gulati (1975), op.cit., pp. 35-36.

Table-3.1Female work Participation in Selected Countries

S.No.	Country	Economically active female population (%)
1.	Guinea Portuguese	62.8
2.	Cape Verde	56.7
3.	Zaire	49.6
4.	Rumania	48.0
5.	Bulgaria	45.7
6.	USSR	44.0
7.	German Democratic Republic	39.8
8.	Zanzibar	39.8
9.	Denmark	37.8
10.	Japan	37.6
11.	United Kingdom	32.2
12.	German Federal Republic	30.2
13.	France	29.7
14.	Australia	25.0
15.	East Malasia	24.5
16.	Korea	23.4
17.	Indonesia	23.2
18.	Philippines	21.3
19.	Italy	19.5
20.	Nigeria	16.0
21.	Argentina	16.4
22.	India	13.2
23.	Sri Lanka	13.1
24.	Brazil	13.1
25.	Columbia	11.6
26.	Mexico	10.4
27.	Iran	8.8
28.	Pakistan	8.0
29.	Egypt	4.0
30.	Iraq	2.1
31.	Algeria	1.8

Source: 1972 Yearbook of Labour Statistics, I.L.O.,
Geneva, 1972.

that centrally planned economies encourage is such as promotes female work participation."¹⁰ At the same time one cannot possibly overlook the wide variation in female participation rates within East European countries having centrally planned economies. It ranges from 39.8 per cent for East Germany to 48 per cent for Rumania, both centrally planned economies. But the range is much wider among West European countries (not centrally planned economies) with Italy 19.5 per cent and Denmark 37.8 per cent of the women-folk being engaged in gainful economic activity.

Within the agricultural countries, the countries with Islamic culture have incredibly low female workers-rate not exceeding 10 per cent. The old Islamic culture is often argued¹¹ to have been responsible for such a low rate, which keeps women under veil.

Most of the Latin American countries have a female participation rate ranging between 10 per cent and 20 per cent. Gulati explains this level of female participation to have been associated with catholic tradition of Latin America.¹²

The South East Asian countries show a still higher female participation rate in economic activity varying between 20 per cent and 30 per cent.

10. Ibid., p. 36.

11. Ibid.

12. Ibid.

The non-Muslim African countries show a very high participation of women in economic activity. These according to Boserup are countries with strong female farming traditions.¹³

From an economic point of view Nath argues that:

The variation within the least industrialised countries is explained by the predominance of household enterprises - agricultural and non-agricultural - in which productive work can be conventionally combined with family responsibilities.....¹⁴

3.3 INDIAN SITUATION

Within India, one of the least industrialised countries, having a labour surplus economy, there exists enormous variation in the female participation rates even at state level (Table 3.2). Punjab, Haryana, Jammu and Kashmir, Uttar Pradesh, Orissa, Bengal and Assam show a very low level of female participation in economic activity. These states have less than 10 per cent of the women categorized as workers. Most of the South Indian states have relatively higher participation of women in work ranging between 10 per cent and 20 per cent. This category includes Kerala, Tamil Nadu and Karnataka in the south, Madhya Pradesh in the central part, Bihar in the east and Gujarat in the western part of the country.

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

14. Kamala Nath (1975), op. cit., pp. 1205-1206.

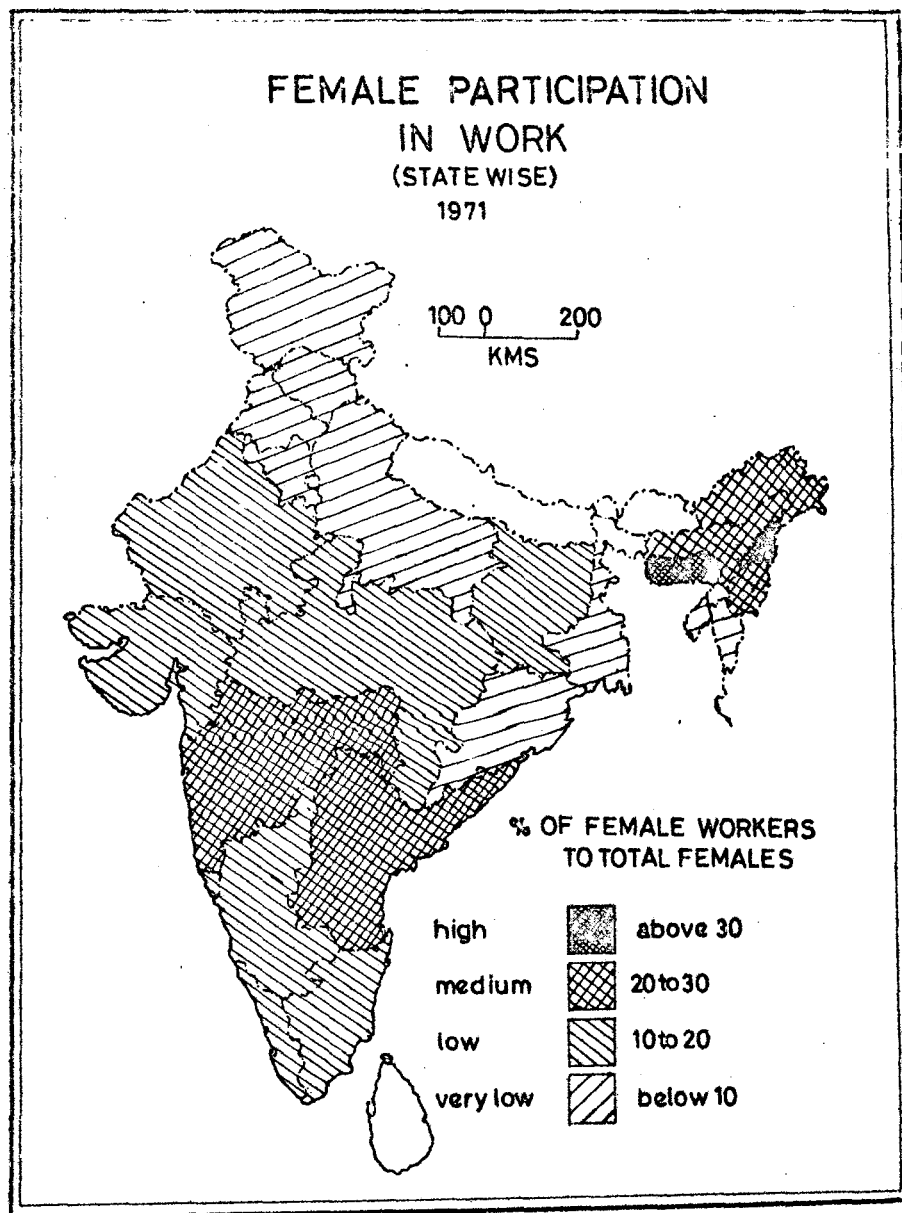


Fig. 3'1

Table-3.2Percentage of Female Workers to Total Females 1971

S.No.	States/Union Territories	% of female workers
	INDIA	13.18
1.	Andhra Pradesh	25.24
2.	Assam	6.15
3.	Bihar	10.58
4.	Gujarat	10.65
5.	Haryana	3.17
6.	Arunachal Pradesh	21.46
7.	Jammu and Kashmir	4.86
8.	Kerala	13.68
9.	Madhya Pradesh	19.77
10.	Maharashtra	21.49
11.	Karnataka	15.13
12.	Nagaland	47.43
13.	Orissa	7.58
14.	Punjab	1.67
15.	Rajasthan	10.42
16.	Tamil Nadu	16.96
17.	Uttar Pradesh	8.78
18.	West Bengal	5.36
19.	Chandigarh	6.35
20.	Delhi	5.15
21.	Manipur	26.00
22.	Meghalaya	36.06
23.	Pondicherry	11.55
24.	Tripura	5.28

Source: Provisional Population Totals, Paper 1 of 1971 - Supplement, Census of India 1971, Series 1.

Andhra Pradesh, Maharashtra and Himachal Pradesh show a high rate of female participation in work. The participation rate ranges between 20 per cent and 30 per cent in these states. Manipur in the north-east also comes in this category.

Nagaland and Meghalaya have the highest level of female participation in work. While in latter the participation rate is 36.06 per cent, in the former the rate is as high as 47.43 per cent.

An important feature which cannot possibly escape the observer's eye is that the southern and north-eastern states in general have a higher female participation rate than the northern states. This has led Boserup to conclude that the influence from West Asian culture was strong in the northern part of the India-Pakistan sub-continent and only marginal in the southern part.¹⁵

3.4 DECLINING PARTICIPATION OF WOMEN IN INDIAN ECONOMY

A macro-analysis reveals that women's participation in economic activity in terms of both worker-rate and their share in the work force has been declining since 1921 (Table 3.3). According to census information the total number of women workers declined from 41.8 million in 1911 to 31.2 million in 1971. In terms of percentage this decline was from 33.7 in 1911 to 11.8 in 1971. The decline

15. E. Boserup (1970), op.cit., pp.71-72.

Table-3.3Female Work Participation in India - 1911-1971

Year	Female workers as % to total females	Female workers as % to total workers
1911	33.7	34.4
1921	33.7	34.0
1931	27.6	31.0
1951	23.3	28.9
1961	27.9	31.5
1971	11.8	17.4

in the share of the women work force in the total work force has been to the tune of 34.4 per cent in 1911 to 17.35 per cent in 1971. The decline seems to have been more percipitous in the recent years. During the decade 1961-71, the percentage of workers among women declined from 27.9 in 1961 to 11.8 in 1971; while their share in the work force declined from 31.5 per cent in 1961 to 17.35 per cent in 1971. The decline has taken place in spite of the fact that there has been insignificant change in the age structure of the female population. This decline has also taken place in the background of an ever increasing female population. During 1961-71, while the male and female population increased by 25 per cent and 24 per cent respectively (20 per cent and 21 per cent in the working age group) and the number of men workers increased by 15.2 per cent, that of women workers declined by 41.4 per cent.

However, this massive decline in the female work force has often been attributed to the changes in the definition of 'workers' in successive census enumerations. Particularly there has been a substantial change in the definition of workers between 1961 and 1971 census. It is also argued that "the census basically measures the level of employment of men and tends to ignore the interchangeable roles of women as housewives and gainful workers. Since many of them are unpaid family workers, exclusions of secondary activity from the definition of workers (as in 1971 census) affects the recording of female employment adversely."¹⁶ That is why a controversy has arisen whether the extremely low figure in 1971 should be attributed to a statistical aberration caused by the inadequacy of the conceptual basis for differentiating "workers" and "non-workers"¹⁷ or to a truly declining trend which has been a continuous one except the figure for 1961.¹⁸ However, available researches on the controversy accept the fact that there has been decline in the female participation in economic activity.

Table 3.4 shows the decline in female participation in economic activity during the decade 1961-71 for different

16. Status of Women in India, A Synopsis of the Report of the National Committee, ICSSR, 1974, p.62.
17. J.N. Sinha (1975), op.cit., p.672.
18. Government of India, op.cit., p.174.

Table-3.4Percentage of Workers Among Females (Rural)

S.No.	State	Year		% decline		
		1961	Rank		1971	Rank
1.	Andhra Pradesh	64.32	(1)	27.36	(2)	36.96
2.	Assam	53.98	(15)	5.58	(15)	48.40
3.	Bihar	56.00	(12)	9.32	(11)	46.68
4.	Gujarat	55.30	(13)	12.07	(10)	43.23
5.	Himachal Pradesh	63.47	(2)	21.76	(5)	41.71
6.	Jammu & Kashmir	59.28	(9)	4.17	(18)	55.07
7.	Kerala	47.42	(19)	14.08	(9)	33.34
8.	Madhya Pradesh	61.58	(4)	20.75	(6)	40.83
9.	Maharashtra	58.07	(11)	24.39	(4)	33.68
10.	Mysore	60.40	(5)	15.77	(8)	44.63
11.	Nagaland	61.04	(7)	47.90	(1)	13.14
12.	Orissa	61.02	(8)	6.83	(14)	54.19
13.	Punjab & Haryana	53.44	(17)	1.42	(19)	52.02
14.	Rajasthan	60.13	(16)	9.27	(12)	50.86
15.	Tamil Nadu	62.4	(3)	17.02	(7)	44.48
16.	Tripura	55.24	(14)	4.76	(16)	50.48
17.	Uttar Pradesh	59.20	(10)	7.27	(3)	51.93
18.	West Bengal	53.46	(16)	4.58	(17)	48.88
19.	Manipur	47.93	(18)	24.95	(3)	22.98

states in India for rural areas only. All the states show a decline in the workers among women. However, the decline has been tremendous in states like Jammu and Kashmir, Orissa, Punjab, Haryana, Rajasthan, Tripura and Uttar Pradesh whereas it has been less precipitous in case of Nagaland, Manipur, Andhra Pradesh, Kerala and Maharashtra. In spite of the fact that the changes in the definition of 'worker' must have been a factor for such a massive decline, the spatial dimension reveals some interesting patterns when a comparison is made between the relative ranks of the states for the two census years (Table 3.4). There has been significant changes in the relative positions of states in terms of female participation in economic activity. Andhra Pradesh, Assam, Bihar, Punjab and Haryana, Tripura and West Bengal did not show any significant change in their ranks in 1971. Kerala, Maharashtra, Nagaland and Manipur showed an improvement in their relative ranks in 1971 while the remaining states showed a lowering in their ranks.

It seems imperative at this stage to go below the state level and analyse the extent of female work participation in detail for at least the states chosen in the study area. This seems inevitable for the reason that the analysis at state level conceals the enormity of variation in female participation at still lower levels. An attempt has been made here to go down till taluk and village level.¹⁹

19. The taluks and villages for each region have been selected using random sample method.

3.5 PUNJAB AND HARYANA

Punjab and Haryana are one of the very few regions in India which has seen an unprecedented growth in agricultural productivity. This region has benefited most from the "Green Revolution" in the post-Independence period. It should be noted here that this region has been marked by a higher investment since the colonial period.²⁰ Agriculture in this region has been mostly capitalistic in nature with growing commercialisation and a greater development in the productive forces. This has resulted in a growing prosperity among the peasant families. Greater mechanisation and irrigational facilities have improved male employment potential whereas it has restricted women's employability. Large number of women who were hitherto worked on owned farms or as agricultural labourers on others farm withdrew from the work force. Instead, part-time servants or labourers (mostly male) were hired to do women's outdoor work. As a result Punjab and Haryana have the lowest²¹ female participation in economic activity in India, their worker-rate being 1.42 per cent only

20. Gail Omvedt, "Capitalist Agriculture and Rural Classes in India," Economic and Political Weekly, Vol. XVI, No. 52, December 26, 1981, Review of Agriculture, p. 145.

21. However, Pushpa Sundar maintains that in Punjab and Haryana withdrawal from the labour force did not necessarily mean more leisure for the women. They continue to make an economic contribution by keeping milch cattle and poultry at home as well as through better home and family maintenance. Nevertheless these women would be enumerated as non-workers particularly as they themselves would report neither available for nor seeking jobs. The participation rate would therefore show a decline.

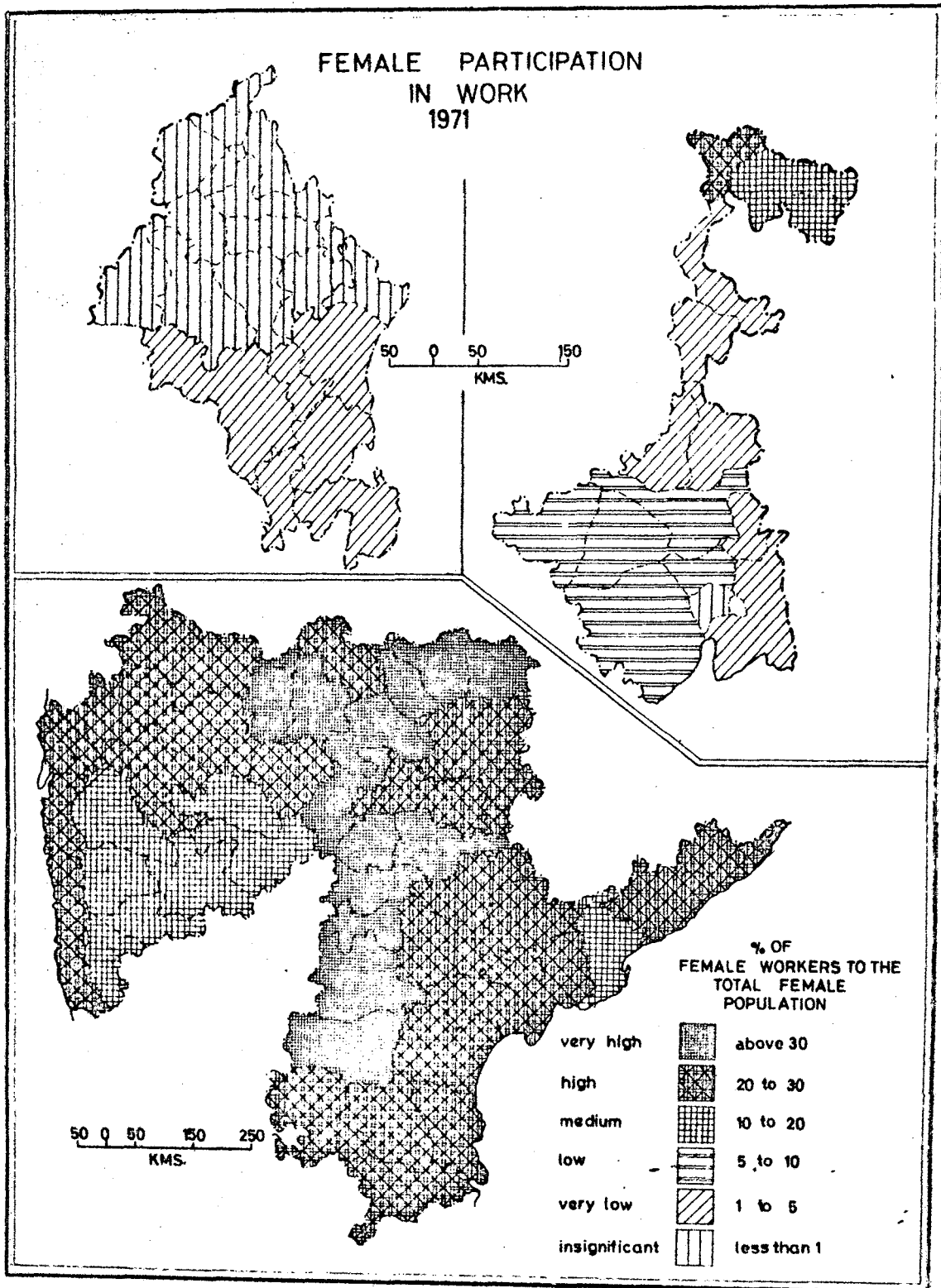


Fig. 3'2

compared to 13.4 per cent at all India level. However, between Punjab and Haryana and within each of these states the variation in female participation is conspicuous. Haryana has a higher worker-rate of females than that of Punjab. In the former the workers among females are 0.72 per cent whereas in the latter they account for only 2.30 per cent of the total female population.

At the district level also there exist considerable variations in the female participation rate as well as their share in the work force (Table 3.5 and 3.6, Fig. 3.6a and 3.6b). Table 3.5 and 3.6 show that 66.7 per cent districts have a female worker-rate of less than 1 per cent and in as much as 88.9 per cent districts the females do not account for more than 5 per cent in the total work force. In Punjab the proportion of workers among women varies between 0.47 per cent in Sangrur to 0.93 per cent at Amritsar as against the state average of 0.72 per cent. Similarly in Haryana, the percentage of female workers varies between 0.99 per cent in Ambala to 4.39 per cent in Mahendragarh. All the districts in Punjab have a participation rate below 1 per cent, whereas except Ambala, all the districts in Haryana have a higher participation rate ranging between 1 per cent and 5 per cent.

In terms of their share in the total work force (Table 3.6, Fig. 3.6b), whole of Punjab and Haryana are

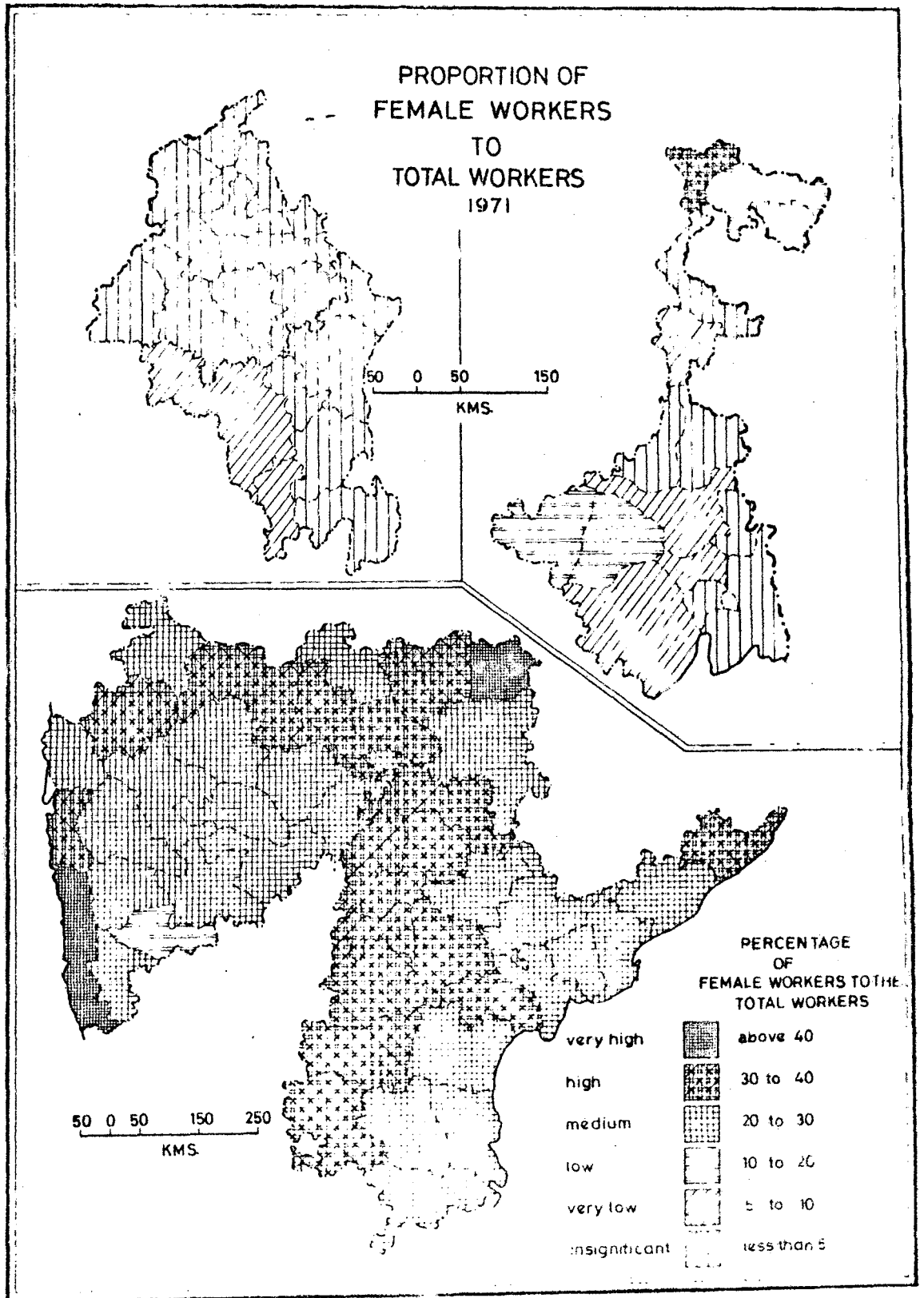


Fig. 3.3

Table - 3.5

Worker-rates of Rural Females

Category	Percentage range	Punjab & Haryana		West Bengal		Andhra Pradesh		Maharashtra	
		No. of districts	%	No. of districts	%	No. of districts	%	No. of districts	%
Very High	Above 30	0	0.00	0	0.00	6	28.57	7	28.00
High	20-30	0	0.00	2	13.33	14	66.67	11	44.00
Medium	10-20	0	0.00	1	6.67	1	4.76	7	28.00
Low	5-10	0	0.00	5	33.33	0	0.00	0	0.00
Very Low	1-5	6	33.33	6	40.00	0	0.00	0	0.00
Insignificant	Less than 1	12	66.66	1	6.67	0	0.00	0	0.00
	Total	18	100.00	15	100.00	21	100.00	25	100.00

Table - 3.6

Share of Female Work Force in the Rural Work Force

Category	Percentage range	Punjab & Haryana		West Bengal		Andhra Pradesh		Maharashtra	
		No. of districts	%	No. of districts	%	No. of districts	%	No. of districts	%
Very High	Above 40	0	0.00	0	0.00	0	0.00	2	8.00
High	30-40	0	0.00	1	6.67	11	52.38	8	32.00
Medium	20-30	0	0.00	0	0.00	10	47.62	14	56.00
Low	10-20	0	0.00	3	20.00	0	0.00	1	4.00
Very Low	5-10	2	11.11	4	26.67	0	0.00	0	0.00
Insignificant	Less than 1	16	88.88	7	48.67	0	0.00	0	0.00
	Total	18	100.00	15	100.00	21	100.00	25	100.00

characterized by extremely low share of female work force in the total work force. The share in all the districts fall below 5 per cent mark, indicating an overwhelmingly large male work force in the total. Fig. 3.2 and 3.3 clearly bring out the north south difference in female participation in work and their share in the work force in Punjab and Haryana.

Unlike female participation, the male participation in economic activity is much higher and consistent in this region. It varies between 42.49 per cent (Gurgaon) and 56.33 per cent (Ferozpur). It is important to note that, Punjab and Haryana with extremely low level of female participation in economic activity show a relatively higher male participation. This has perhaps been due to the reason that the unusual withdrawal of females from the work force has been only female-specific and to a certain extent compensated by a higher male participation.

Table 3.7 and Fig. 3.6c show that the maximum number of districts in Punjab and Haryana have a male participation rate ranging between 45 per cent and 55 per cent. Figure 3.3 reveals that unlike female participation the male participation decreases in an east-to-west direction. Three broad belts of male participation are clear in the map, running in a North-West-South-East direction. Haryana, which has a relatively higher female participation in economic activity shows a relatively lower male participation.

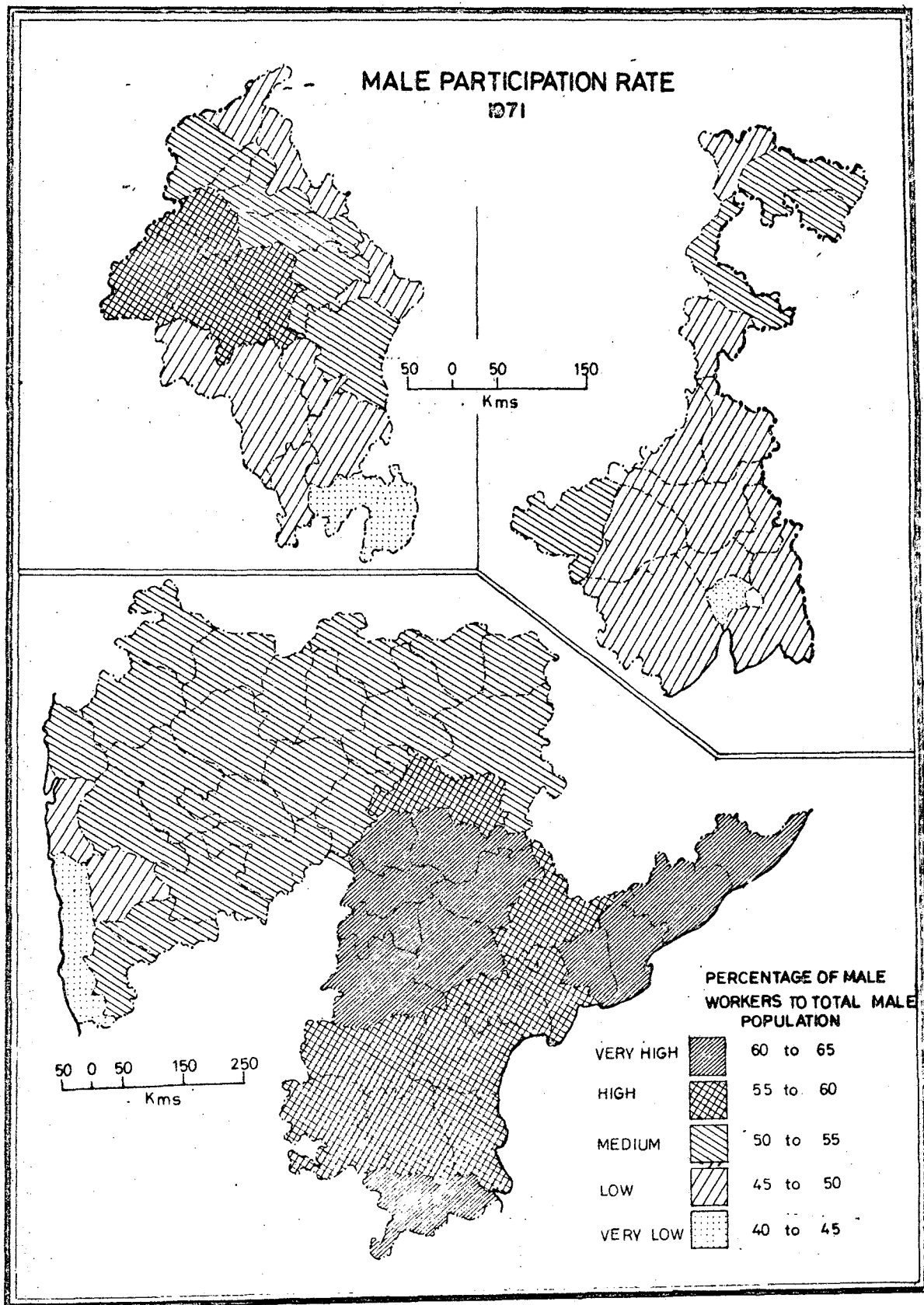


Fig. 34

Table - 3.7

Worker-rate of Rural Males

Category	Percentage range	Punjab & Haryana		West Bengal		Andhra Pradesh		Maharashtra	
		No. of districts	%	No. of districts	%	No. of districts	%	No. of districts	%
Very High	60-65	0	0.00	0	0.00	12	57.14	0	0.00
High	55-60	3	16.67	0	0.00	9	42.86	0	0.00
Medium	50-55	7	38.89	4	26.67	0	0.00	23	92.00
Low	45-50	7	38.89	10	66.67	0	0.00	1	4.00
Very Low	40-45	1	5.56	1	6.67	0	0.00	1	4.00
	Total	18	100.00	15	100.00	21	100.00	25	100.00

Table - 3.8

Female Workers Per 1000 Male Workers

Category	Percentage range	Punjab & Haryana		West Bengal		Andhra Pradesh		Maharashtra	
		No. of districts	%	No. of districts	%	No. of districts	%	No. of districts	%
Extremely High	Above 600	0	0.00	0	0.00	0	0.00	3	12.00
Very High	500-600	0	0.00	0	0.00	6	28.60	7	28.00
Moderately High	400-500	0	0.00	1	6.67	10	47.60	6	24.00
High	300-400	0	0.00	0	0.00	5	23.80	6	24.00
Medium	200-300	0	0.00	0	0.00	0	0.00	3	12.00
Low	100-200	0	0.00	6	40.00	0	0.00	0	0.00
Very Low	50-100	2	11.11	2	13.30	0	0.00	0	0.00
Insignificant	Below 50	16	88.89	6	40.00	0	0.00	0	0.00
	Total	18	100.00	15	100.00	21	100.00	25	100.00

A strong negative relationship ($r = -0.666$) exists between male and female participation rate indicating that the higher the participation of males in economic activity, the lower the rate of female participation and vice-versa. This indicates that females only work in case of dire necessity of doing so or where there is non-availability of male work force rendering female work force still useful. A comparison with sex-ratio (Appendix-3) shows that the districts with a higher sex-ratio have a relatively higher female participation in economic activity.

Table 3.8 shows that a large number of districts (89 per cent) have ratio of less than 50 female workers per 1000 male workers. Only two districts in Haryana, Mahendragarh and Hissar have a ratio of more than 50 female workers per 1000 male workers. Even in these two districts the ratio is less than 100 per thousand male workers.

Whole of Punjab and Haryana are characterised by a high level of disparity in male-female work participation (Table 3.9, Fig.3.6d and 3.5). All the districts in Punjab show a very high level of disparity (above 2.00). The eastern districts in Haryana, namely Ambala, Karnal, Rohtak, Gurgaon and Jind show high disparity index (between 1.5 and 2.0) whereas the western two districts namely Mahendragarh and Hissar have lower disparity level (between 1.0 and 1.5). In the region as a whole the level of disparity decreases

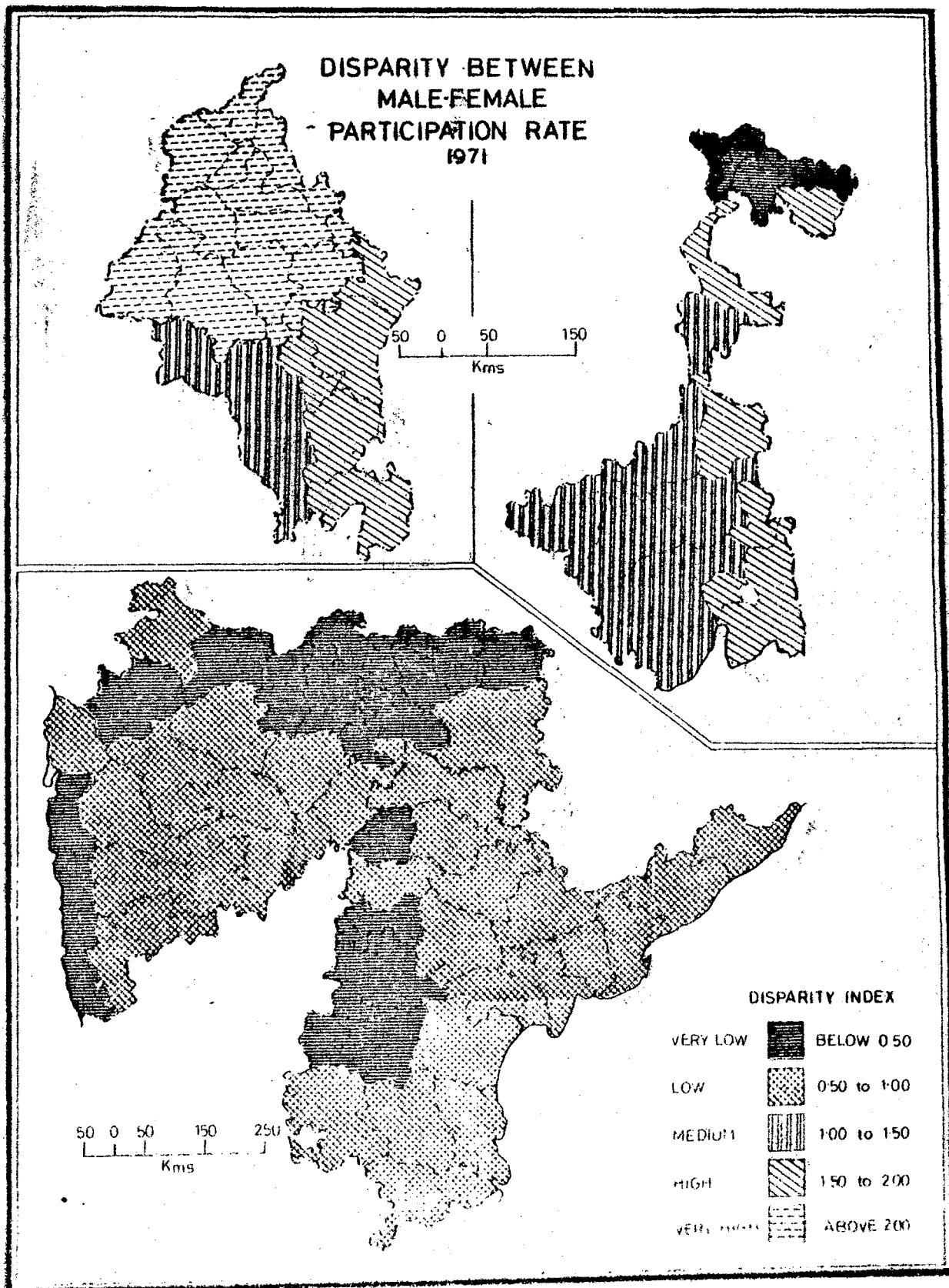


Fig. 3.5

Table-3.9Male-Female Disparity in Work Participation

Category	Disparity index	Punjab & Haryana		West Bengal		Andhra Pradesh		Maharashtra	
		No. of districts	%	No. of districts	%	No. of districts	%	No. of districts	%
Very Low	Less than 0.5	0	0.00	2	13.33	4	19.05	12	44.0
Low	0.5-1.00	0	0.00	0	0.00	17	80.95	13	56.0
Medium	1.00-1.50	2	11.11	7	46.67	0	0.00	0	0.00
High	1.50-2.00	5	27.78	6	40.00	0	0.00	0	0.0
Very High	More than 2.0	11	61.11	0	0.00	0	0.00	0	0.0
	Total	18	100.00	15	100.00	21	100.0	25	100.0

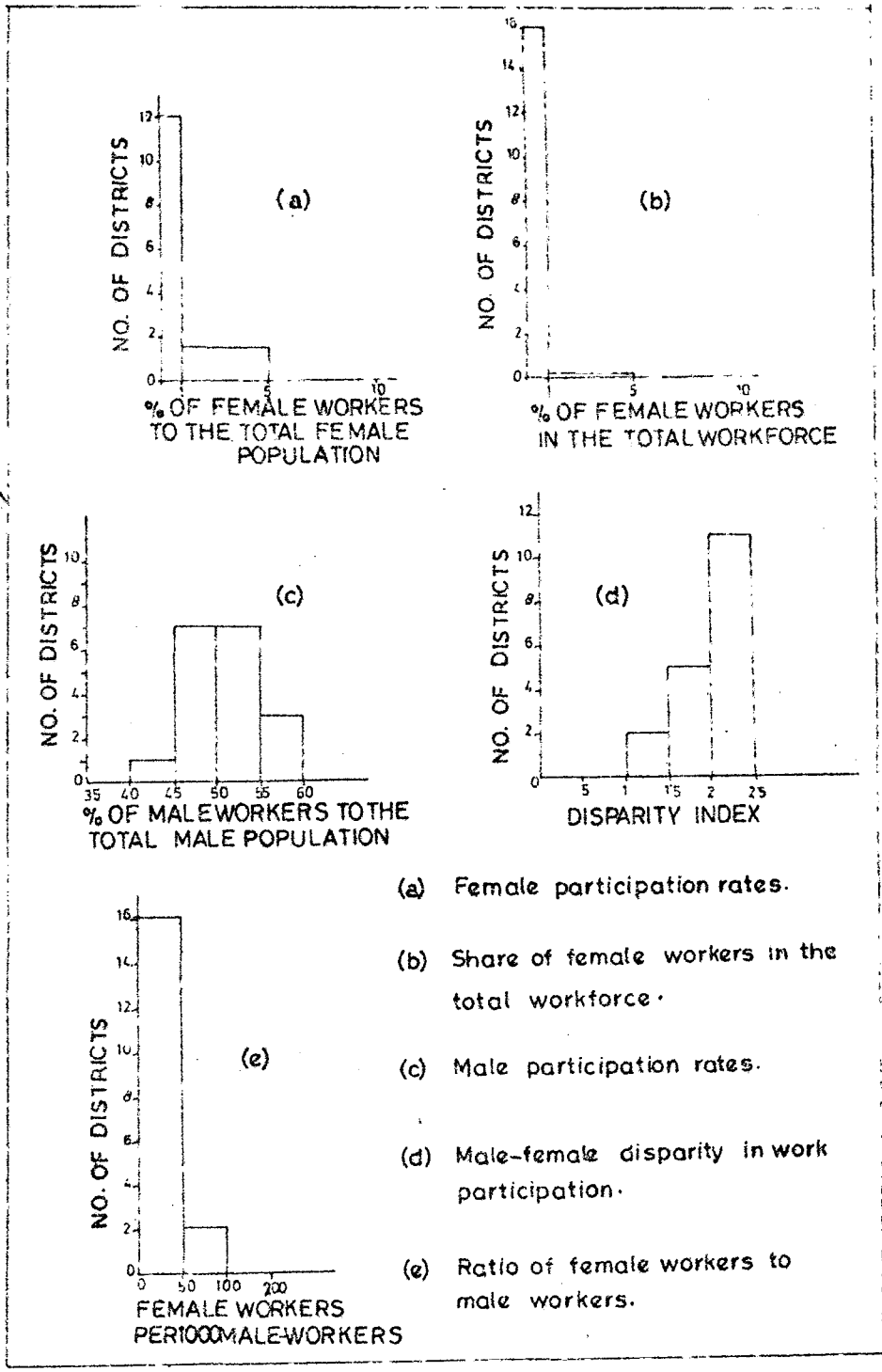


Fig. 3'6 Punjab & Haryana

north to south and from east to west in Haryana. Since there is little variation in male participation rate, the disparity seems entirely a function of female participation rate.

A comparison with the age structure (Appendix 3) of the female population in Punjab and Haryana shows that although there is little variation over districts in the proportion of women in the working age group (15-59), there is considerable variation in the proportion of workers among rural females. Worklessness²² (Appendix 3) among females is the highest in this region. However, in Punjab the degree of worklessness is higher than that in Haryana. In the former, the degree of worklessness among females varies between 45.26 per cent (Roper) and 52.39 per cent (Bhatinda) and in the latter, between 43.03 per cent (Hissar) and 48.71 per cent (Ambala).

The above analysis shows that the pattern of female participation in economic activity changes considerably among the districts. However, the change in case of Haryana is of a higher degree than that of Punjab.

22. The worklessness is defined as the difference between the proportion of female in the age group 15-59 and their proportion as workers.

3.5.1 Taluk and Village Level Patterns²³

At district level proportion of workers among the female is less than 1 per cent in 66.7 per cent of districts whereas only in 50 per cent of sample taluks the worker-rate of females is less than 1 per cent (Table 3.10). In the remaining 50 per cent taluks the rate varies between 1 per cent and 3 per cent. In none of the districts the females accounted for more than 10 per cent of the total work force; at taluk level also it is clear from Table 3.11 that the females account for less than 5 per cent of the total work force in all the sample taluks. However, the percentage of taluks with less than 1 per cent female work force in the total work force is only 19 per cent whereas at district level it goes upto 89 per cent.

At the village level the picture changes dramatically with 45.6 per cent of sample villages having no women categorised as 'worker'. No district or taluk reported zero level of worker-rate for women in Punjab and Haryana. Similarly at least 2 per cent of sample districts show a female worker-rate of more than 10 per cent.

There has been a further accentuation of the variation in the level and extent of female participation in

23. All the taluks of four districts, two each from Punjab and Haryana have been studied. The districts have been chosen randomly. The four districts are: Jullundur, Kapurthala (both from Punjab), Karnal and Rohtak (both from Haryana). All the villages of Phagwara Taluk of Kapurthala district in Punjab have been considered in the study at village level.

Table-3.10
Punjab and Haryana
Worker-rate of Females
Taluk Level

Category	No. of taluks	Percentage
Less than 1%	8	50.00
1-3%	8	50.00
Total	16	100.00

Table-3.12
Punjab and Haryana
Worker-rate of Females
Village Level

Category	No. of villages	Percentage
0	41	45.6
Less than 1%	28	31.1
1-5%	17	18.9
5-10%	2	2.2
More than 10%	2	2.2
Total	90	100.0

Table-3.11
Punjab and Haryana
Share of Female Workers in Work Force
Taluk Level

Category	No. of taluks	Percentage
Less than 1%	3	18.7
1-3%	8	50.0
3-5%	5	31.3
Total	16	100.0

Table-3.13
Punjab and Haryana
Share of Female Worker in Work Force
Village Level

Category	No. of villages	Percentage
0	41	45.6
Less than 1%	25	27.8
1-5%	22	24.4
5-10%	2	2.2
Total	90	100.0

economic activity at village level. The district and taluk level analysis tends to conceal the variation existing at the village level, and give the impression that the female participation in economic activity in Punjab and Haryana is extremely low or insignificant in the region as a whole. Villages being status units and caste segregated, clearly reveal the spatial variation in the level of female participation which otherwise gets shadowed in a district or state-level analysis.

3.6 WEST BENGAL

Plough is still the most important tool of employment²⁴ in West Bengal. The backwardness of agriculture in the state is indicated by the low percentage of cultivated area under irrigation and a low cropping intensity and agricultural modernisation. Excessive population growth in the countryside has accentuated the problem of an already labour-surplus stagnant economy with its post-colonial, semi-feudal relations of production.²⁵ The practice of share-cropping and absentee land-lordism is still prevalent even after the abolition of Zamindari.²⁶ In ryotwari areas also, the majority of land is informally under control of non-cultivating land-lords.²⁷ The

24. T.B. Lahiri, "West Bengal: A Profile of the Region and Identification of Its Sub-Regions," in Economic and Socio-Cultural Dimension of Regionalisation, Census Monograph, No. 7, 1921, pp. 91-118.

25. Gail Omvedt, (1981), op.cit., p. A143.

26. Ibid.

27. Ibid.

entire region suffers from an acute unemployment or under-employment in the background of a backward capitalist agriculture with hangovers of feudal relations and remnants.

The female employment in rural Bengal is one of the lowest in India. According to 1971 census the women workers accounted for a meagre 4.6 per cent of the total female population. One of the peculiarity, already pointed out in the previous chapter of the characteristic female employment in this region is that even "female occupations" such as transplanting is done overwhelmingly by men.

However, this summary picture conceals the variation in the extent of female participation in economic activity and their share in the total work force (Table 3.5 and 3.6; Fig. 3.7a and 3.7b). Even at district level the participation rate ranges between 0.89 per cent in Howrah to 25.9 per cent in Darjeeling. Figure 3.2 and 3.3 show that the northern hilly districts of Darjeeling and Jalpaiguri have a high worker-rate among females as well as a high proportion of female in the work force. The western districts of Midnapore, Burdwan, Bankura, Hooghly and Purulia have a higher proportion of workers among females than the state average; the proportion in this pocket varies between 5 to 10 per cent. The eastern districts with a very low participation rate form a belt in the north-south direction. The proportion of workers among females does not exceed 5 per cent in any of

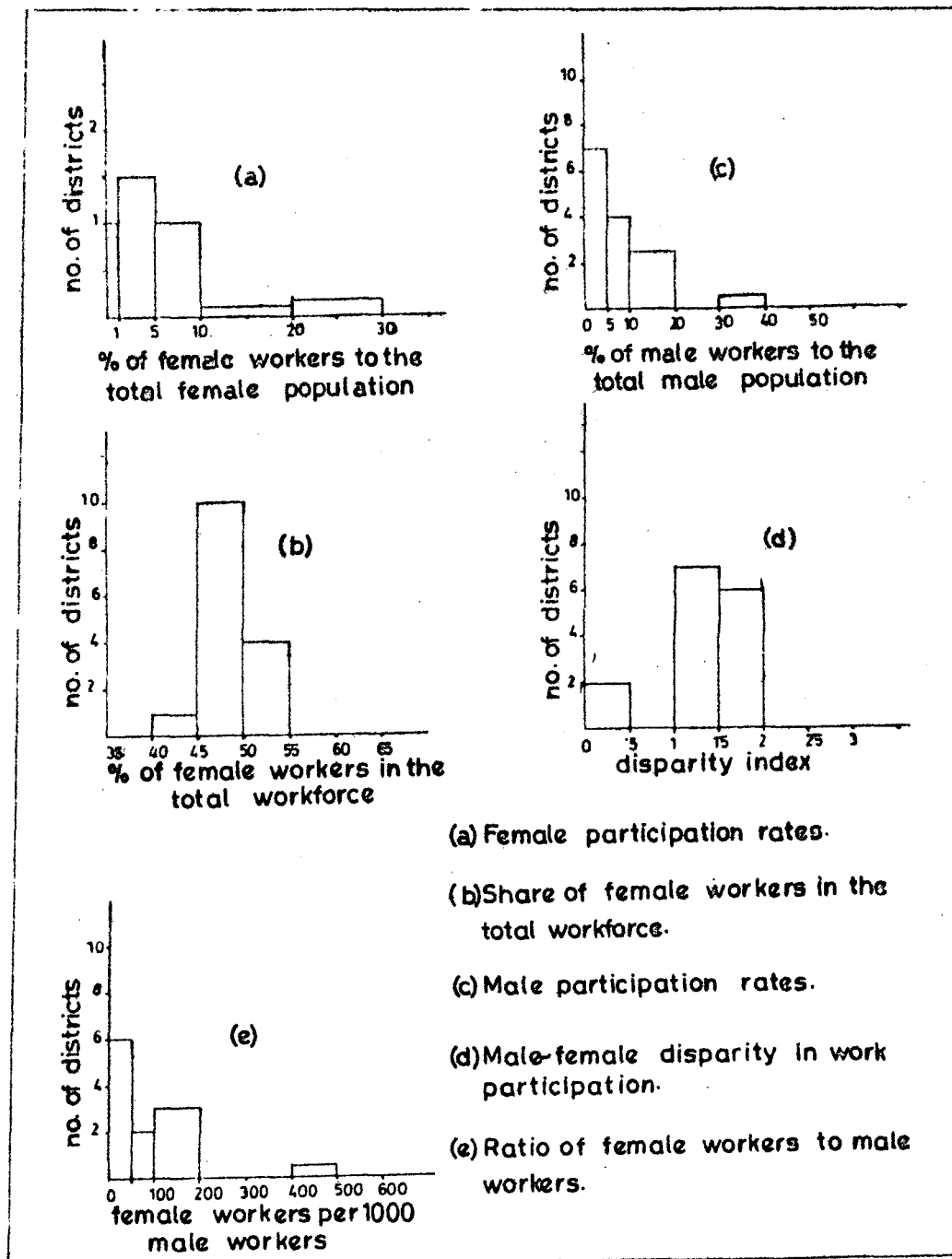


Fig 37 West Bengal

these districts. Howrah has the least participation of women in work with less than 1 per cent female engaged in gainful employment.

Compared to the variation in female participation in economic activity, the rural male participation is much higher and varies little over districts. The worker-rate for males varies between 44.79 per cent in Howrah to 52.79 per cent in West Dinajpur. Interestingly, the male participation in economic activity is relatively lower in Darjeeling where the female participation is the highest and also in Howrah where the female participation is the lowest. The correlation between male participation and female participation is very weak ($r = 0.18$) in West Bengal indicating no relationship between the two.

Table 3.8 shows that excepting one district (Darjeeling) where there are 478 female workers per thousand male workers, nowhere the ratio is more than 200. In 59 per cent of the districts the ratio is between 50 and 200; whereas in about 40 per cent districts the ratio does not go beyond 50 per thousand male workers.

Only 13 per cent districts in this region show a very low disparity in male female work participation rate (Table 3.9, Fig. 3.7d). The districts in the western part of region (Fig. 3.5) have a medium level of disparity whereas the districts in the eastern part show a high level of

disparity between male-female participation rates in work. The two districts which show minimum disparity are Jalpaiguri and Darjeeling in the northern submountain tract.

Except Darjeeling and Jalpaiguri, where the degree of worklessness (Appendix 3) among women is very low (26.96 per cent and 36.24 per cent respectively) the remaining districts are characterised by a high degree of worklessness, ranging between 40 per cent and 47 per cent. The worklessness among women is very high in Howrah and 24-Parganas.

3.6.1 Pattern at the Taluk and Village Levels²⁸

Table 3.14 shows that at taluk level a large number of sample taluk have a female participation rate ranging between 1 per cent and 5 per cent. Table 3.15 shows that the proportion of female work force in the total work force ranges between 5 per cent and 15 per cent in around 68 per cent of sample taluks. This is against only 46.7 per cent districts with a share of female work force in the total work force ranging between 5 per cent and 20 per cent.

At the village level the pattern is still more revealing. At least in one sample village more than 90 per cent of women are reported to be working whereas at

28. All the police stations of Malda, Cooch Behar and Purulia have been considered for study on a sample basis. All the villages of Sital Kutchi police station of Cooch Behar district come under the study at village level. The police stations of West Bengal are comparable to taluks of other states.

Table-3.14West Bengal
Female Worker-Rate (Taluk Level)

Category	No. of taluks	% of taluks
Below 1 per cent	1	4.76
1-5 per cent	15	71.44
5-10 per cent	3	12.28
10-15 per cent	2	9.52
Total	21	100.00

Table-3.16West Bengal
Female Worker-Rate (Village Level)

Category	No. of villages	% of villages
0 per cent	19	28.4
Below 1 per cent	24	35.8
1-5 per cent	20	29.9
5-10 per cent	3	4.5
Above 10 per cent	1	1.4
Total	67	100.0

Table-3.15West Bengal
Share of Female Work Force (Taluk Level)

Category	No. of taluks	% of taluks
1-5 per cent	6	28.5
5-10 per cent	9	42.9
10-15 per cent	5	23.8
Above 15 per cent	1	4.8
Total	21	100.0

Table-3.17West Bengal
Share of Female Work Force (Village Level)

Category	No. of villages	% of villages
0 per cent	19	28.4
Below 1 per cent	17	25.4
1-5 per cent	26	38.8
5-10 per cent	2	2.9
Above 10 per cent	3	4.5
Total	67	100.0

Source: District Census Handbooks of Malda, Cooch-Bihar and Purulia, 1971.

taluk or district level, the proportion never exceeded 40 per cent. On the other hand, in about one third of the sample villages no women is reported to be engaged in gainful employment (Table 3.16 and 3.17). However, only about 5 per cent villages have more than 10 per cent of work force composed of women. The variation in female work-participation gets further accentuated at village level with a few villages having a large majority of women as working and many villages being characterised by the absence of any women workers. The pattern at village and taluk level reveals the fact that the overall picture at state or district level conceals the tendency of concentration of female work participation at lesser aggregative levels.

3.7 ANDHRA PRADESH

A predominantly rice producing region, Andhra Pradesh except for the few coastal districts, is still characterised by remnants of feudal structure. Particularly in Rayalaseema and Telengana region, the feudal oppressions are still prevalent with bonded labour, yeth and begar which has erupted in violent peasant revolts²⁹ in the post-Independence period. The economy is hardly diversified. Increasing population pressure on impoverished rice producing land has compelled large masses of workers to be underemployed or to migrate in

29. Gail Omvedt, 1981, op.cit., p.142.

search of jobs in slack seasons. Growth in the agricultural output and productivity has either stagnated or declined increasing the agonies of the rural landless.

The female participation in economic activity in rural Andhra Pradesh is one of the highest in India. According to 1971 census 27.36 per cent of women are categorised as workers as against only 13.4 per cent at the national level. However, this picture is not uniform at the district level (Table 3.8, Fig.3.2 and 3.8a). The participation of women in economic activity varies between 19.6 per cent in East Godavari and 35.8 per cent in Mehboobnagar.

The eastern districts in the Coastal Andhra have a relatively lower participation of females in work than that of western plateau region. In the former, the worker-rate of women varies between 20 per cent and 30 per cent whereas in the latter, the proportion is more than 30 per cent. In the Telengana region, districts of Mahboobnagar, Hyderabad, Medak, Nizamabad and Karimnagar have a very high female participation in economic activity. Except Kurnool, in the Rayalseema region, where the female participation rate is very high, all other districts have high participation of women in economic activity ranging between 20 per cent and 30 per cent.

The share of females in the work force is also very high in the western districts of Telengana region; the proportion of female work force in the total work force

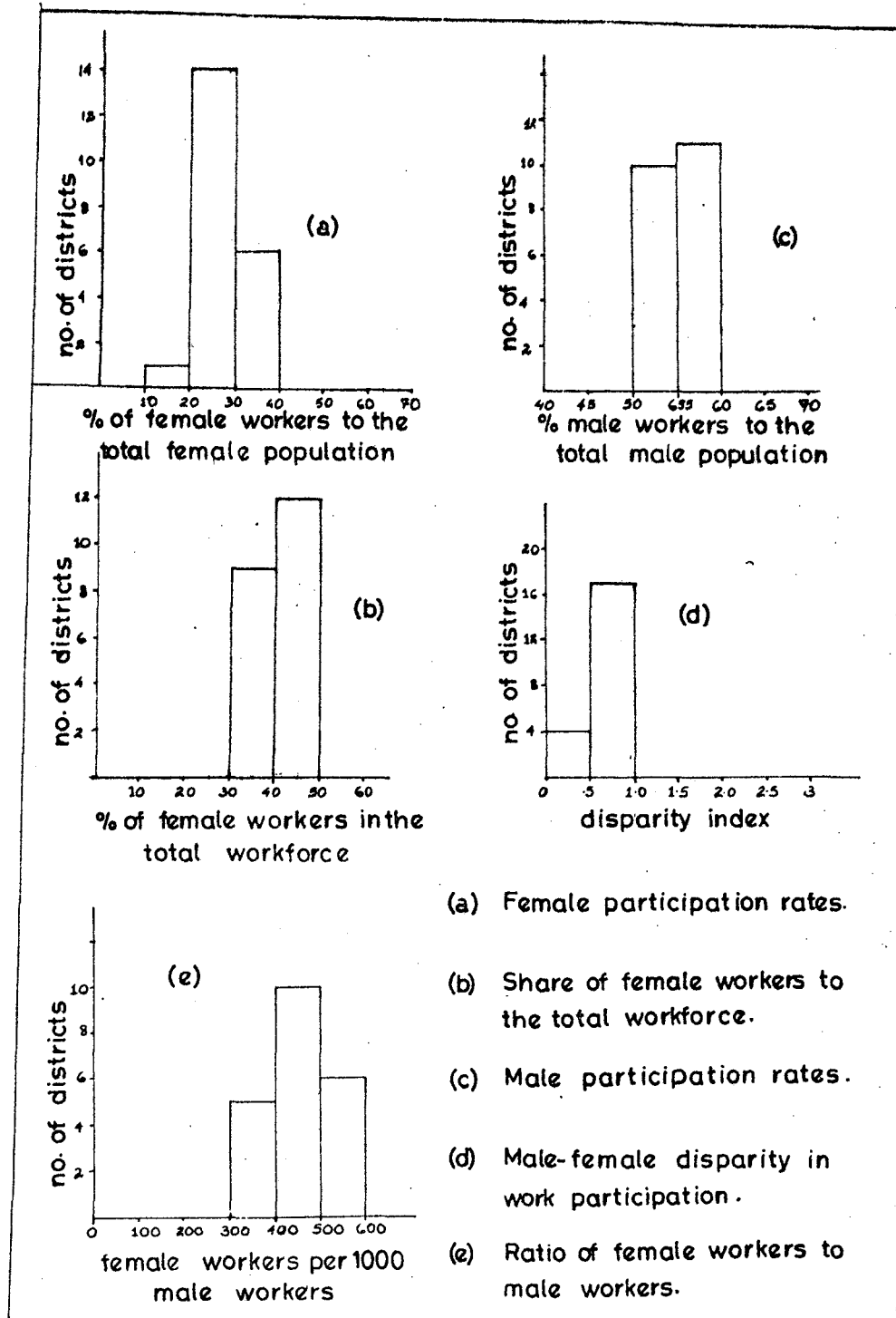


Fig. 38 Andhra Pradesh

ranging between 30 per cent and 40 per cent in this region. In the coastal region the share varies between 20 per cent and 30 per cent. However, in this region Srikakulam and Guntur have relatively higher female work force in the total work force.

In the western part of the region particularly in Telengana, both male and female participation in economic activity is very high, whereas in the coastal region, the male participation is high but worker-rate of females is relatively low (Table 3.7, Fig. 3.8c and 3.3). The worker-rate of males is very high (between 60 per cent and 65 per cent) in as many as 12 out of 21 districts in Andhra Pradesh. Male-female participation in economic activity is positively correlated indicating districts with higher male participation are also marked by higher female participation in economic activity. There seems a general correspondence between a higher sex-ratio and higher female participation of women at district level.

The ratio of female workers per thousand male workers varies between 300 and 600 over this region. In about half of the districts, there are 400 to 500 female workers per one thousand male workers; most of which lie in the western part of the state (Table 3.8 and Fig. 3.8e).

The level of disparity in male-female participation rate is low in Andhra Pradesh (Table 3.9, Fig. 3.8d). Only

4 districts namely Kurnool, Mahboobnagar, Hyderabad and Nizamabad, majority of which are located in the Telengana region show a very low level of disparity in the level of male-female participation in economic activity.

The degree of worklessness among women is very low in the western districts of Karimnagar, Nizamabd, Hyderabad, Mahboobnagar and Kurnool (Appendix 3). The coastal and southern districts have a relatively higher worklessness among women.

At district level an east-west contrast is well marked in Andhra Pradesh in terms of female participation. The cultural differences and the differences in agricultural development is also conspicuous in these two sub-regions.

4.7.1 Patterns at the Taluk and Village Levels³⁰

At taluk level, as it is clear from table 3.18 and 3.19 in about 40 per cent of sample taluks the worker rate of females is more than 30 per cent and in about 8 per cent sample taluks it is more than 35 per cent although at state level the female participation rate does not exceed 28 per cent. In terms of proportion of females work force in the total work force, in about 7 per cent of sample taluks, female account for more than 40 per cent of the total work force.

30. All the taluks of Anantpur, West Godavari and Medak districts come under the sample. The sample villages belong to the Narsapur taluk of West Godavari district.

Table-3.18
Andhra Pradesh
Female Workers-Rate (Taluk Level)

Category	No. of taluks	% of taluks
Below 20 per cent	1	3.7
20-25 per cent	5	18.5
25-30 per cent	10	37.0
30-35 per cent	9	33.3
Above 35 per cent	2	7.5
Total	27	100.00

Table-3.19
Andhra Pradesh
Share of Female Work Force (Taluk Level)

Category	No. of taluks	% of taluks
20-25 per cent	1	3.7
25-30 per cent	7	25.9
30-35 per cent	15	55.6
Above 35 per cent	4	14.8
Total	27	100.0

Table-3.20
Andhra Pradesh
Female Worker-Rate (Village Level)

Category	No. of villages	% of villages
Below 10 per cent	2	2.4
10-20 per cent	17	19.5
20-30 per cent	35	40.2
30-40 per cent	27	31.1
40-50 per cent	5	5.7
Above 50 per cent	1	1.1
Total	87	100.0

Table-3.21
Andhra Pradesh
Share of Female Work Force (Village Level)

Category	No. of villages	% of villages
Below 10 per cent	1	1.1
10-20 per cent	6	6.9
20-30 per cent	27	31.0
30-40 per cent	44	50.7
40-50 per cent	8	9.2
Above 50 per cent	1	1.1
Total	87	100.0

Source: District Census Handbooks of Medak, Anantpur and West Godavari, 1971.

In at least one taluk, their share is more than 50 per cent. At village level (Table 3.20 and 3.21) in about 70 per cent of sample villages the worker-rate of women is more than 30 per cent and their share in the work force is more than 40 per cent in about 10 per cent of sample villages. The share of female work force in the total work force is between 30 per cent and 40 per cent in about half of the sample villages.

One important aspect of the Andhra Pradesh situation is that at all levels the participation is consistently high.

4.8 MAHARASHTRA

Level of agricultural development is at its lowest in Maharashtra, characterised by a negative growth in output and low productivity. Irrigation being virtually absent in most part of the state, the agricultural production has been almost entirely dependent on monsoon. This has resulted in frequent crop failures because of recurring droughts. Almost the entire region depends on single crops. Although the capitalist relations of production is prevalent, this has not necessarily led to a greater mobilisation of the productive forces. At a low level of technology, the agriculture is labour intensive. Agricultural production is mainly oriented to the raising of food crops, while commercial crops of cotton, oilseeds and sugarcane are also important; particularly in the dry parts of the plateau.

In this background of the rural economy, Maharashtra is one of the few states which relies heavily on its female work force for its agricultural production. About 24 per cent of its female population are reported to be gainfully employed; most of them in agriculture. In the total work force of the state, the contribution of women is still higher, i.e., 31.35 per cent. In terms of female participation in economic activity, Maharashtra is much above the country's average which stands at 13.4 per cent only.

The picture changes drastically at the district level. Maharashtra has a fairly uniform distribution of districts in upper three categories of female participation viz., medium, high and very high (Table 3.5, Fig. 3.9a). The worker-rate of women varies between 11.58 per cent in Sangli to 42.13 per cent in Bhandara. All the three categories form contiguous pockets (Fig. 3.2). The districts with very high participation rate (above 30 per cent) are in fact a continuation of that of Andhra Pradesh, in the eastern part of Maharashtra. The districts in the Sahyadri region, viz., Thana, Kolaba and Ratnagiri have a high participation rate (between 20 per cent and 30 per cent). The high participation districts cover a large area in the Sahyadri strip as well as a major chunk in the Tapi-Purna Valley and northern part of Maharashtra plateau. A greater chunk of Maharashtra plateau, particularly towards south of it, has a relatively low participation of women in the economic activity (ranging between 10 per cent and 20 per cent) much below the state average. These include the

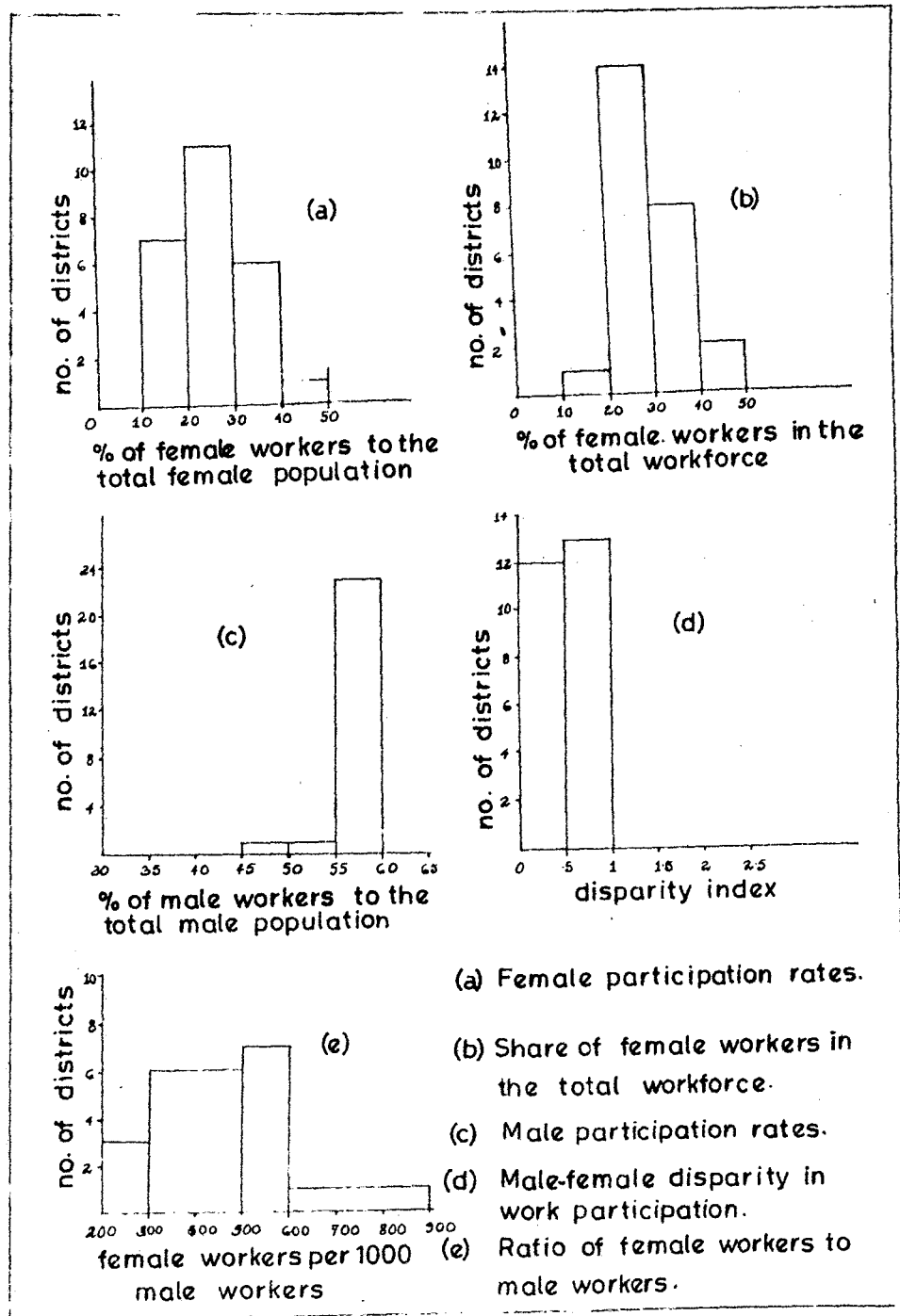


Fig. 39 Maharashtra

the districts of Poona, Satara, Sangli, Sholapur, Kolhapur, Bidar and Osmanabad.

Except Sangli, where the share of female work force in the total work force is below 20 per cent, all other districts have a high share of female in the total work force. Table 3.6 and Fig. 3.9b show that in two districts, viz., Chandrapur and Nasik, women account for more than 40 per cent of the total work force. In about a third of the districts the share varies between 30 per cent and 40 per cent. The northern districts of Nasik, Jalgaon, Buldhana, Akola, Nagpur and Bhandara have a share of female workers in the total work force varying between 20 per cent and 30 per cent and form a contiguous belt running in East to West direction. The southern districts in general have lower proportion of female in the work force than other parts of the state. It is interesting to note that the districts characterised by high female worker-rate are not those where the proportion of female work force is high in the total work force.

Compared to other regions the male participation rate is lower in Maharashtra. The worker-rate of males does not exceed 55 per cent in any of the districts. More than 90 per cent districts have a male worker-rate varying between 30 per cent and 55 per cent. A sharp contrast is marked in the Sahyadri region comprising the districts of Thana, Kolaba and Ratnagiri where the male participation is

relatively lower, but the female participation in economic activity is relatively higher. This situation is best represented in Ratnagiri district where the female participation rate is 29.99 per cent whereas the male participation is unusually low (i.e., 43.53 per cent).

Appendix 3 shows that the work participation of females in Maharashtra is irrespective of the sex-ratio of the rural population. However, most of the districts in Maharashtra are characterised by a higher rural sex ratio.

The ratio of female workers per thousand male workers is more than 600 in three districts of Ratnagiri, Bhandara and Osmanabad. In about half of districts, the ratio varies between 400 and 600.

A correlation analysis between male and female work participation shows that there exists a positive association between the two ($r = 0.30$) indicating that female participation increases with male participation at district level.

The districts with least disparity in the male female work participation form a contiguous belt in the north and west (Fig. 3.5). This category of districts account for 44 per cent of all districts in Maharashtra (Table 3.9 and Fig. 3.9d). The remaining 56 per cent districts most of which lie in the Maharashtra plateau in the southern part of the state have low disparity level (0.5 to 1.00).

The degree of worklessness among women in the working age group varies between 11.9 per cent in Bhandara to 40.82 per cent in Sangli. In the eastern districts of Buldhana, Akola, Amravati, Yeotmal, Wardna, Nagpur and Bhandara, very few women in the working age group remain 'non-worker' (Appendix 3). These are the districts where the worker-rate of women is also higher than the other districts.

4.8.1 Taluk Level and Village Level Patterns³¹

At taluk level, about 16.7 per cent sample taluks have a worker-rate of females ranging between 10 per cent and 15 per cent. An equal percentage of taluks also show a participation rate above 30 per cent. In about one fourth of sample taluks the rate is more than 25 per cent against state average of 24.39 per cent (Table 4.22). Table 4.23 shows that in more than one fourth sample taluks, the contribution of female in the work force exceeds 25 per cent and in 17 per cent of taluks, the share is more than 30 per cent.

A village-level study of North Sholapur taluk shows that although at taluk level the worker-rate of women is only 14.9 per cent, the rate is more than 30 per cent in about 28 per cent of the sample villages. About 45 per cent

31. The sample districts of which all the tehsils have been considered in the taluk level pattern are North Sholapur, South Sholapur and Yeotmal. All the villages of North Sholapur tehsil of North Sholapur district have been chosen for study.

Table-3.22
Maharashtra
Female Worker Rate (Taluk Level)

Category (per cent)	No. of taluks	% of taluks
10-15	4	16.7
15-20	8	33.3
20-25	6	25.0
25-30	2	8.3
Above 30	4	16.7
Total	24	100.0

Table-3.23
Maharashtra
Share of Female Work Force (Taluk Level)

Category (per cent)	No. of taluks	% of taluks
10-15	3	12.5
15-20	8	33.3
20-25	6	25.0
25-30	3	12.5
Below 30	4	16.7
Total	24	100.0

Table-3.24
Maharashtra
Female Worker Rate (Village Level)

Category (Per cent)	No. of villages	% of villages
0	2	4.7
Below 1	1	2.3
1-5	4	9.3
5-10	13	30.2
10-20	11	26.6
20-30	8	18.6
Above 30	4	9.3
Total	43	100.0

Table-3.25
Maharashtra
Share of Female Work Force (Village Level)

Category (Per cent)	No. of villages	% of villages
0	2	4.7
Below 1	3	6.9
1-5	6	14.0
5-10	14	32.5
10-20	9	20.9
20-30	7	16.3
Above 30	2	4.7
Total	43	100.0

Source: District Census Handbooks of North Sholapur, South Sholapur and Yeotmal, 1971.

of sample villages have a worker-rate of less than 5 per cent. In at least 5 per cent of sample villages no woman is reported to be working. The picture remains more or less same in terms of females' share in the total work force. The village level study is more revealing in the sense that the wide variations which are concealed at higher levels are clearly brought out at village level.

3.9 CONCLUDING STATEMENT

The region-wise analysis at various levels reveals that the participation of female in economic activity is not uniform at less aggregative units. The variation is enormous at district level, taluk level and village level. Particularly village level analysis clearly brings out the extent of variation in female work participation with villages having zero or negligible participation of women in economic activity or having a very high worker-rate of females exceeding 80 per cent.³² Analysis at higher aggregative levels tends to conceal these variations.

However, the analysis leads to several important conclusions:

- i) The spatial variation in the female participation in economic activity increases substantially at the lower aggregate units.

32. Such as in West Bengal, the sample village is Bara Kaimari in Sital Kutchi police station in the Kooch Behar district. Out of 778 women 718 of them are reported to be working.

- ii) The northern states have a generally low participation rate of females in economic activity than the southern states in the study area.
- iii) Intra-regional variations seem to be maximum in regions with very low level of female participation, such as in Punjab and Haryana and West Bengal and minimum in the regions of high female participation, such as in Andhra Pradesh and Maharashtra, which show a consistency at every level in terms of female participation rate.
- iv) High worker-rate of females may not necessarily mean a higher contribution in the work force. This is dependent upon male participation rate.
- v) Regions with high female worker-rate are characterised by a high male worker-rate also. The best example is that of Andhra Pradesh.
- vi) Male-female disparity in economic participation decreases in areas of high female participation. This is due to the reason that male participation varies little over space. As a result the level of disparity becomes a function of the level of female participation in work. The disparity

reduces from the agriculturally advanced regions to agriculturally backward regions, along with an increase in the female participation rate.

- vii) It is clear that female participation is low (along with a high male-female disparity in economic participation) in the plain areas of the region under study. The reverse is the case in hilly and plateau areas. The male participation increases in the plain areas, whereas it shows decline in plateau and hilly regions. In the plains more intensive cultivation, mechanisation, etc. replace women from the work-force whereas it increases the employability of men. This has been true of Punjab and Haryana where the women have almost retired from gainful employment. However, the degree to which the withdrawal has taken place seem to have been conditioned by region-specific social, economic and cultural milieu. In the plains of Andhra Pradesh, women still contribute significantly in the work-force.

Finally, the analysis should make it clear that the contribution of women in the work-force is not as insignificant as the data at country or state levels would tend to show.

Chapter-IV

INDUSTRIAL DISTRIBUTION OF WOMEN WORKERS

4.1 INTRODUCTORY STATEMENT

Land is the basic means of production in the countryside and the rural society is based predominantly on agriculture. From the land, a part of nature but made arable by human labour, the rural people produce by means of technique and their labour power, a variety of agrarian produce. However, the nature of rural economy¹ is not and has not remained equal over space. A large quantum of changes has overtaken the rural economy in India and has made it extremely variant over regions with different modes of production at various stages of development. At places, the rural economy is in the stage of subsistence agriculture and at other, it is carried on for the market and profit of the producers, who do not themselves consume their products. The case of rural industries is not very different from agriculture. The household industries continue to be important in some rural areas whereas modern manufacturing industries in the non-household sector are replacing them. The production techniques in both agriculture and industries have given rise to various division of labour among the members of the societies. Secondly the nature of property relations in the countryside is of no less significance in the economic life

1. For a fuller discussion, see A.R. Desai (ed.), Rural Sociology in India (Introduction) (1978), op.cit., pp.21-30.

of the rural people. The distribution of different occupations and the work opportunities available to them largely depends on these two conditions. Moreover, as it has already been mentioned in preceding chapters, the labour force participatory behaviour of men and women within the same conditions vary extremely over space. In the broader context of the nature of rural economy, technique and mode of production, prevailing property relations with its accompanying socio-cultural customs and social mores, it will be worthwhile to give a closer look at the variation in the industrial distribution of women workers in rural India which is so different than that of its men counterparts.

This chapter attempts to analyse the spatial patterns in the participation of women workers in different types of economic activity as recognised by 1971 census. Although, there is no dearth of material on work participation in the Indian census the analysis of occupational distribution has been a difficult task due to changes in the definition from one census to another. This is more so for women because the definitional changes have affected women more than men. For example, marginal workers, such as housewives were counted as secondary workers in 1961 whereas 1971 regarded them as non-workers.

Due to the difficulties involved the analysis of the distribution of women workers according to industrial

categories has usually been avoided by experts in the past.² Daniel and Alice Thorner³ have also referred to this problem as early as 1961 in the following words:

In every census of India, since 1881, the occupational figures for females are more difficult to interpret than those for males. To a large extent in the Indian family economy, the role of women has been and still auxiliary to that of the men of the household. Accordingly, it has always been hard to draw the line between those whose economic contribution has been substantial and those whose work, apart from domestic duties has been minor or negligible. Variations from census to census, either in total female working force or in the number of women recorded as engaged in particular occupations, may reflect shifts in enumeration practice as much as genuine economic changes.

However, quite aware of this limitation involved in such analysis, an attempt has been made here to analyse the industrial distribution of women workers, based on 1971 census classification. However, household and non-household industrial activities are separately analysed due to the different nature of these two industrial categories. For a broader picture to emerge, the nine industrial categories have further been classified into three broad sectors of economy viz., primary, secondary and tertiary. The terms "family workers" and "wage earners"⁴ have been used instead of

2. Leela Gulati (1975), op.cit., p.1092.

3. Daniel Thorner and Alice (1961), Land and Labour in India (New York: Asian Publishing House).

4. Such usages are found in Ester Boserup's Women's Role in Economic Development as well as Government of India's Report of the Committee on the Status of Women (Delhi: Government Printing Press, 1974).

census categories such as 'cultivators' and 'agricultural labourers' respectively. Women working on their family farms are classified as family workers and women who work mainly on somebody else's land for a wage are classified as wage earners. The former category, therefore, refers to those self employed whereas the latter are wage employed. However, the type of work both perform are same, i.e., cultivation involving manual work. But the family workers do also supervise the cultivation work whereas in case of agricultural labourers or wage earners, this responsibility is absent. Another important point to be noted here is that the women workers considered in the analysis are those with the kind of activity they perform as their principal activity and thus excludes "secondary workers."

4.2 CHANGE IN THE INDUSTRIAL DISTRIBUTION OF WORKERS

Table 4.1 shows how little structural changes has occurred in work participation among the various industrial sectors in the past 70 years and even after 1951. Practically no transfer has occurred from agriculture to non-agriculture. Agriculture seems only expanding source of employment for women. In fact, a truly declining trend in female employment in non-agricultural sector is clearly visible. Even within agriculture, during 1961-71 there has been a spectacular increase in the ranks of agricultural labourers

: 120a:

Table-4.1Percentage Distribution of Workers in Each Sex by Industrial Categories 1901-71
All India

Category	Sex	Year						
		1901	1911	1921	1931	1951	1961	1971
Cultivators	Male	53.22	53.22	56.36	50.78	51.90	51.46	46.24
	Female	45.54	43.26	50.57	32.39	45.42	55.72	29.69
Agricultural Labourers	Male	12.39	15.28	13.51	17.95	14.95	13.42	21.25
	Female	25.81	30.65	24.95	39.89	31.39	23.86	50.40
Mining, Quarrying, Livestock, Forestry etc.	Male	4.86	5.41	4.94	5.63	2.79	3.10	2.89
	Female	3.23	3.47	3.57	4.19	3.36	2.00	2.89
Household industry	Male	-	-	-	-	-	5.71	3.37
	Female	-	-	-	-	-	7.85	4.25
Non-household industry	Male	11.37	9.62	9.33	8.99	9.84	5.56	6.61
	Female	12.46	10.51	9.20	8.73	6.94	1.22	2.76
Construction	Male	0.84	1.10	0.91	1.16	1.19	1.41	1.35
	Female	0.67	0.70	0.72	0.77	0.72	0.41	0.65
Trade and Commerce	Male	6.13	5.55	5.87	5.82	6.1	5.29	6.36
	Female	5.89	5.52	5.46	5.09	2.85	1.37	1.78
Transport and Communication	Male	1.59	1.61	1.33	1.43	2.04	2.28	2.85
	Female	0.21	0.19	0.17	0.13	0.30	0.11	0.47
In other Services	Male	9.60	8.21	7.75	8.24	11.08	11.77	9.08
	Female	6.19	5.80	5.36	8.81	9.02	7.35	7.11

Source: Census Reports 1970-71.

among women. This phenomenon is less spectacular for men than women. Construction has remained almost constant while trade, transport, storage and commerce has witnessed substantial displacement of women workers. After 1951 there has been decline in the female workers in the services.

Kothari⁵ holds that the decline in the non-agricultural sector implies that:

Many of the traditional non-agricultural avenues for women have declined. As a result of impact of technology, organisation and urbanisation, some of the classes such as artisans and skilled workers are likely to have relatively improved their position. To that extent there might have been a voluntary withdrawal of female labour from the market as a result of what might be called the income effect.

Table 4.2 and 4.3 show that there has been less precipitous decline of male workers in the family workers category than that of females. In fact there has been an increase in the male family workers category in Andhra Pradesh. In contrast, all regions have shown a large scale decline in the category of family workers in case of females and a corresponding increase in the agricultural wage earners. In Punjab and Haryana, however, the tertiary employment of women in the services sector has shown a substantial increase. The female employment in the household industries has recorded substantial decline in all regions whereas, except Andhra

5. V.N. Kothari, "Long Term Trends in the Employment Pattern in India," Indian Economic Journal, Vol. 7, No. 4, April 1960, p. 415.

Table-4.2

Percentage Distribution of Workers in Each Sex by Industrial Categories 1961
Rural Areas

Category	Sex	All India	Andhra Pradesh	West Bengal	Punjab	Maharashtra
Cultivators	Male	61.11	47.11	53.24	63.10	55.74
	Female	58.88	40.87	41.61	79.47	59.16
Agricultural Labourers	Male	15.77	24.62	19.59	10.09	24.46
	Female	24.82	40.83	23.69	4.73	34.55
Mining, Live-stock, forestry etc.	Male	3.24	4.30	5.68	1.02	3.38
	Female	1.94	1.27	10.08	0.41	0.75
Household industries	Male	5.69	10.40	3.41	7.91	5.06
	Female	7.00	8.03	12.73	8.03	2.66
Non-household industries	Male	1.90	1.65	4.00	2.47	1.86
	Female	0.71	0.55	3.41	0.78	0.29
Construction	Male	0.89	1.06	0.78	1.58	1.21
	Female	0.26	0.42	0.16	0.27	0.36
Trade and Commerce	Male	2.62	3.17	3.64	3.16	2.19
	Female	0.98	2.33	1.79	0.23	0.50
Transport and communication	Male	0.81	0.66	1.20	0.99	0.81
	Female	0.03	0.01	0.06	0.02	0.03
Other Services	Male	7.95	7.03	8.46	9.69	5.28
	Female	5.39	5.69	6.45	6.05	1.69

Source: Primary Census Abstract, 1961.

Table-4.3Percentage Distribution of Workers in Each Sex by Industrial Categories 1971
Rural Areas

Category	Sex	All India	Punjab and Haryana	West Bengal	Andhra Pradesh	Maharashtra
Cultivators	Male	56.00	56.00	45.57	43.70	51.85
	Female	32.64	35.88	14.93	20.82	38.00
Agricultural Labourers	Male	25.21	22.15	33.26	31.89	29.77
	Female	54.39	28.53	54.51	66.22	56.06
Livestock, Forestry etc.	Male	2.53	1.23	2.76	4.74	2.11
	Female	2.56	1.52	14.55	1.00	0.54
Mining	Male	0.42	0.09	1.23	0.44	0.24
	Female	0.33	0.48	0.81	0.31	0.16
Household Industries	Male	3.13	3.37	2.44	5.18	3.23
	Female	3.57	5.78	4.89	3.75	2.37
Non-household Industries	Male	19.07	3.25	3.77	2.49	2.81
	Female	1.56	6.80	2.44	1.09	0.63
Construction	Male	0.82	1.52	0.57	1.20	1.05
	Female	0.38	2.24	0.21	0.60	0.40
Trade, Commerce and Storage	Male	2.77	3.10	3.17	3.50	2.48
	Female	1.01	0.84	1.24	1.85	0.48
Transport and Communication	Male	0.97	1.14	1.46	1.00	0.86
	Female	0.14	0.14	0.38	0.10	0.07
Other Services	Male	5.69	8.00	5.76	5.84	5.40
	Female	3.43	17.89	6.03	4.13	1.30

Source: Primary Census Abstracts 1971.

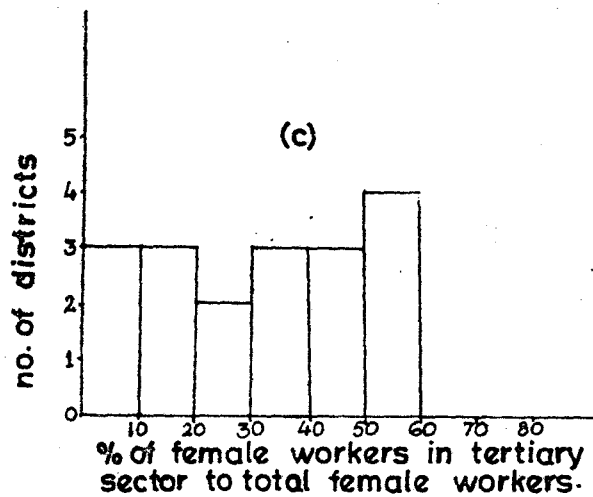
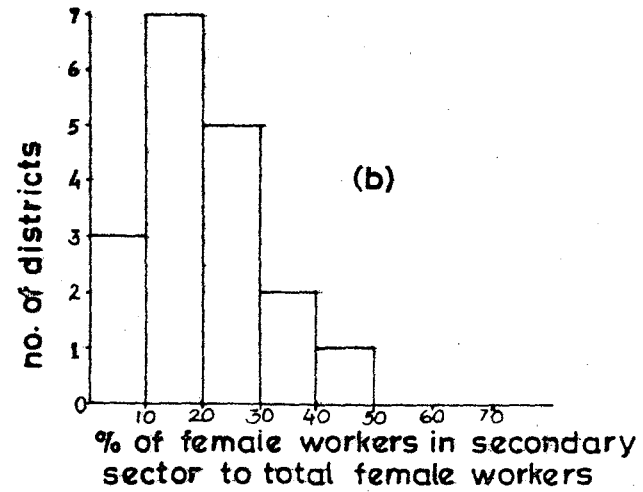
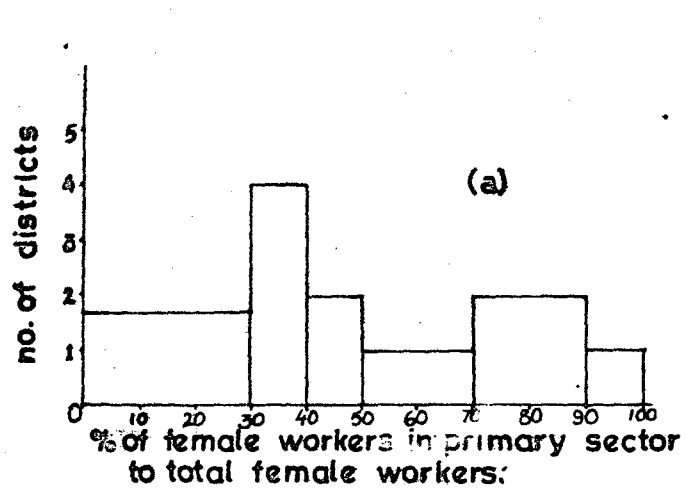
Pradesh, the proportion of women workers has also registered decline in the manufacturing sector. The tables clearly indicate that in all the regions except Punjab and Haryana, there has been a high degree of concentration of women worker in agricultural wage earning sector. For males the degree of this concentration has been less precipitous.

At this stage it seems imperative to go down to still lower levels for analysing industrial distribution of women workers in the selected regions.

In rural areas where agriculture is the principal activity, the bulk of the women workers is concentrated in the primary sector, particularly in 'family workers' or 'wage earners' categories. The other important categories are household and non-household industries in the secondary sector and 'other services' in the tertiary sector. Thus the analysis mainly focuses on these categories and the remaining categories in which the share of women workers is marginal, have received scanty attention.

4.3 PUNJAB AND HARYANA

The proportion of female workers in primary, secondary and tertiary sector is 65.93 per cent, 15.30 per cent and 18.87 per cent respectively in the region as a whole. But at the district level the variation is of a very high degree. The employment of females in the primary sector is 16.89 per



(a) Female workers in primary sector

(b) Female workers in secondary sector

(c) Female workers in tertiary sector

Fig. 4.1 Sectoral distribution of female workers.
Punjab & Haryana

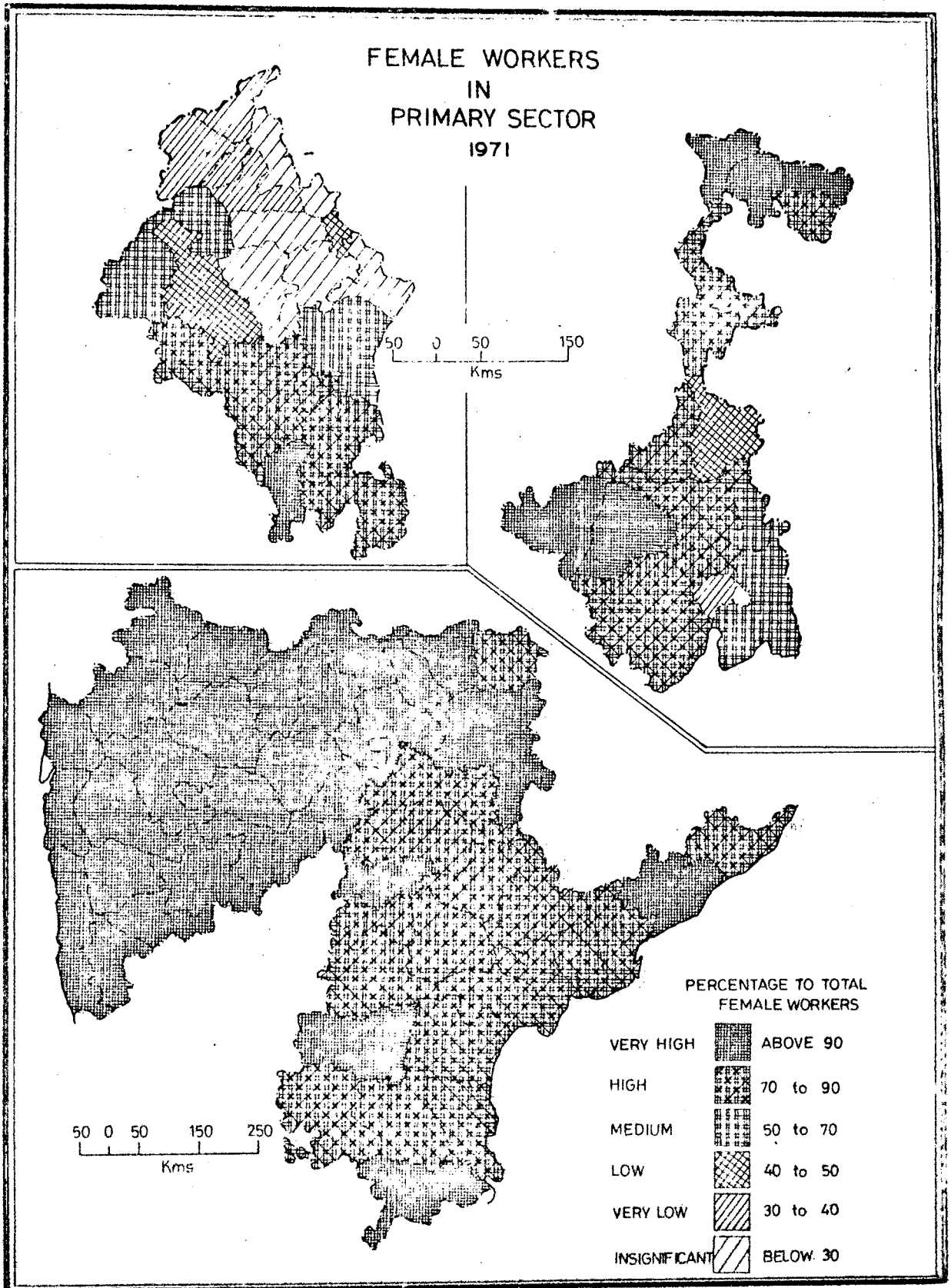


Fig. 4.2

cent in Ludhiana to 92.11 per cent in Mahendragarh. However, in Punjab it ranges between 14.51 per cent (Ludhiana) to 52.98 per cent (Perozpur) whereas in Haryana it varies between 24.71 per cent (Ambala) and 92.11 (Mahendragarh), against the region average of 65.93 per cent only. Table 4.4 and Fig. 4.1a show that five districts in Punjab and Haryana have a very low concentration (below 30 per cent) most of which are in the eastern districts of Punjab. Ambala district of Haryana comes in this category unlike other districts in the state with more than 70 per cent of women workers concentrated in primary sector. At district level it is clear from the figure 4.2 that in Punjab that a very low proportion of female workers are employed in primary sector. The figure 4.2 also vividly brings out the north-south and east west contrast in the region in terms of female work force in primary sector.

The secondary sector (Table 4.5, Fig. 4.1b and 4.3) accounts for a fairly large proportion of women workers in as many as 15 out of 18 districts, their proportion varying between 15 per cent and 50 per cent. Most of these districts lie in Punjab. Only three districts in Western Haryana (Mahendragarh, Hissar and Jind) show a low to very low proportion of women workers in secondary sector; with less than 10 per cent of them being employed in secondary sector. The pattern almost remains same in tertiary employment of

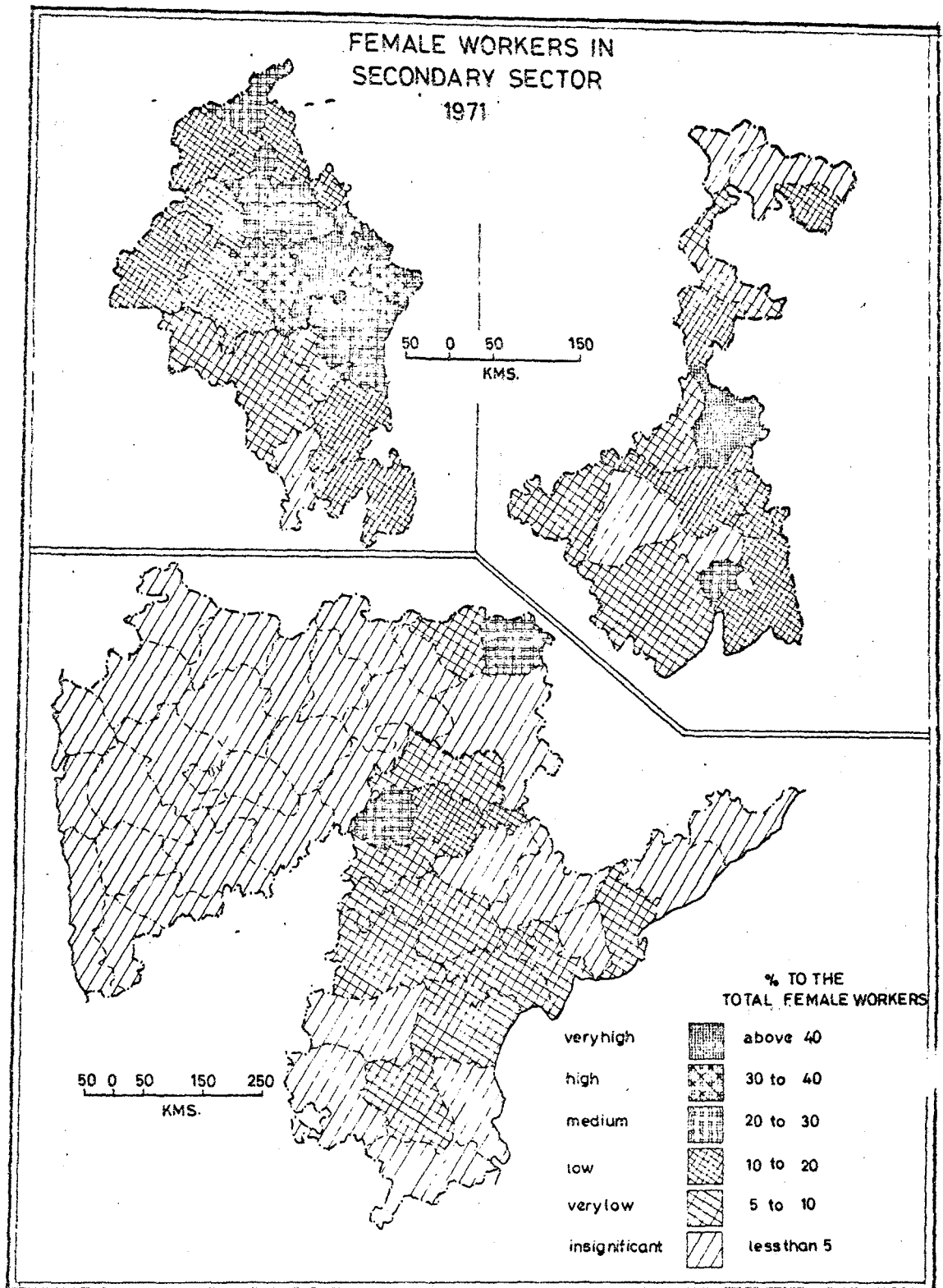


Fig. 4.3

Table - 4.4

Percentage of Female Workers Employed in Primary Sector

Percentage	Punjab and Haryana		West Bengal		Andhra Pradesh		Maharashtra	
	No. of districts	% of districts	No. of districts	% of districts	No. of districts	% of districts	No. of districts	% of districts
Below 30	5	27.8	0	0.0	0	0.0	0	0.0
30-40	4	22.2	0	0.0	0	0.0	0	0.0
40-50	2	11.1	2	13.3	0	0.0	0	0.0
50-70	2	11.1	2	13.3	0	0.0	0	0.0
70-90	4	22.2	7	46.7	17	81.0	1	4.0
Above 90	1	5.6	4	26.7	4	19.0	24	96.0
Total	18	100.0	15	100.0	21	100.0	25	100.0

Table-4.5

Percentage of Female Workers Employed in Secondary Sector

Percentage	Punjab and Haryana		West Bengal		Andhra Pradesh		Maharashtra	
	No. of districts	% of districts	No. of districts	% of districts	No. of districts	% of districts	No. of districts	% of districts
Below 5	1	5.6	4	26.7	9	42.9	23	92.0
5-10	2	11.1	4	26.7	10	47.6	1	4.0
10-20	7	38.9	5	33.3	1	4.8	0	0.0
20-30	5	27.8	1	6.7	1	4.8	1	4.0
30-40	2	11.1	0	0.0	0	0.0	0	0.0
Above 40	1	5.6	1	6.7	0	0.0	0	0.0
Total	18	100.0	15	100.0	21	100.0	25	100.0

Table-4.6

Percentage of Female Workers Employed in Tertiary Sector

Percentage	<u>Punjab and Haryana</u>		<u>West Bengal</u>		<u>Andhra Pradesh</u>		<u>Maharashtra</u>	
	No. of districts	% of districts	No. of districts	% of districts	No. of districts	% of districts	No. of districts	% of districts
Below 5	2	11.1	2	13.3	7	19.0	25	100.0
5-10	1	5.6	7	46.7	14	81.0	0	0.0
10-20	3	16.7	3	20.0	0	0.0	0	0.0
20-30	2	11.1	2	13.3	0	0.0	0	0.0
30-40	3	16.7	1	6.7	0	0.0	0	0.0
Above 40	7	38.9	0	0.0	0	0.0	0	0.0
Total	18	100.0	15	100.0	21	100.0	25	100.0

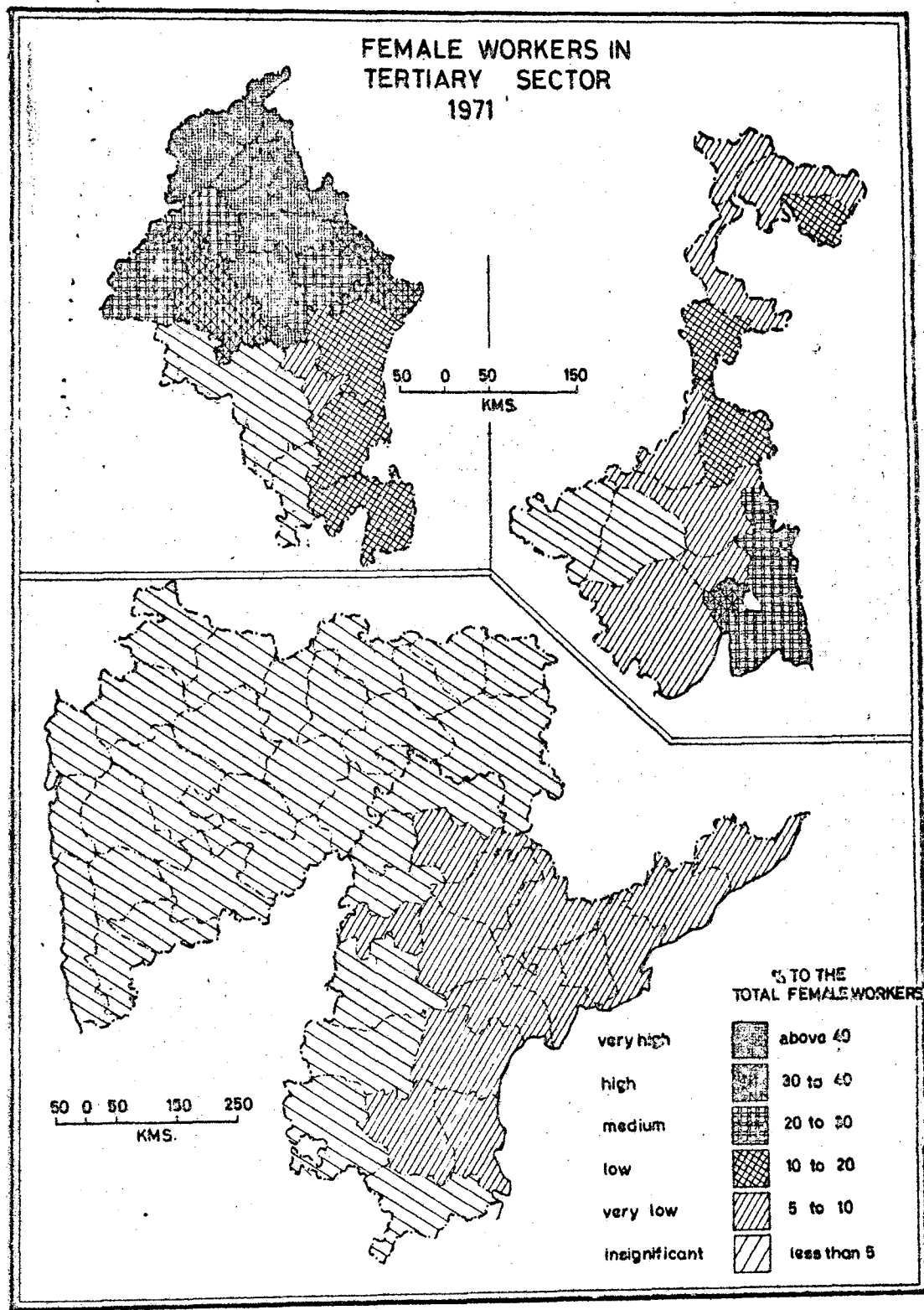


Fig. 44

women workers. Although in the region as a whole the proportion of women workers in tertiary sector is only 18.89 per cent, more than 50 per cent districts show a very high concentration (between 20 per cent and 50 per cent) of women workers in the tertiary sector. (Table 4.6, Fig. 4.1c and 4.4). All districts except Ferozpur, Roper, Patiala and Bhatinda in Punjab have more than 40 per cent women workers employed in the tertiary sector. Only Ambala in Haryana has a high proportion of women workers employed in the tertiary sector (38.02 per cent of all women workers). The western districts of Mahendragarh, Hissar and Jind have less than 10 per cent of all women workers employed in the tertiary sector.

All the districts of Punjab and only one district of Haryana (Ambala) show a very diverse distribution of women workers in different sectors of the economy.

The share of female work force in different sectors is, however, very low (Tables 4.7, 4.8 and 4.9). Contribution of women workers in primary and secondary sectors is less than 10 per cent in all the districts in Punjab and Haryana. It is still lower (i.e. less than 5 per cent) in tertiary sector. However, the share of women workers in all the sectors is higher in Haryana than Punjab.

Table - 4.7

Share of Female Workers in the Primary Sector

Percentage	Punjab & Haryana		West Bengal		Andhra Pradesh		Maharashtra	
	No. of districts	% of districts	No. of districts	% of districts	No. of districts	% of districts	No. of districts	% of districts
Below 1	12	66.7	0	0.0	0	0.0	0	0.0
1-5	4	22.2	6	40.0	0	0.0	0	0.0
5-10	2	11.1	3	20.0	0	0.0	0	0.0
10-20	0	0.0	4	26.6	0	0.0	1	4.0
20-30	0	0.0	1	6.7	4	19.0	6	24.0
30-40	0	0.0	1	6.7	13	62.0	15	60.0
Above 40	0	0.0	0	0.0	4	19.0	3	12.0
Total	18	100.0	15	100.0	21	100.0	25	100.0

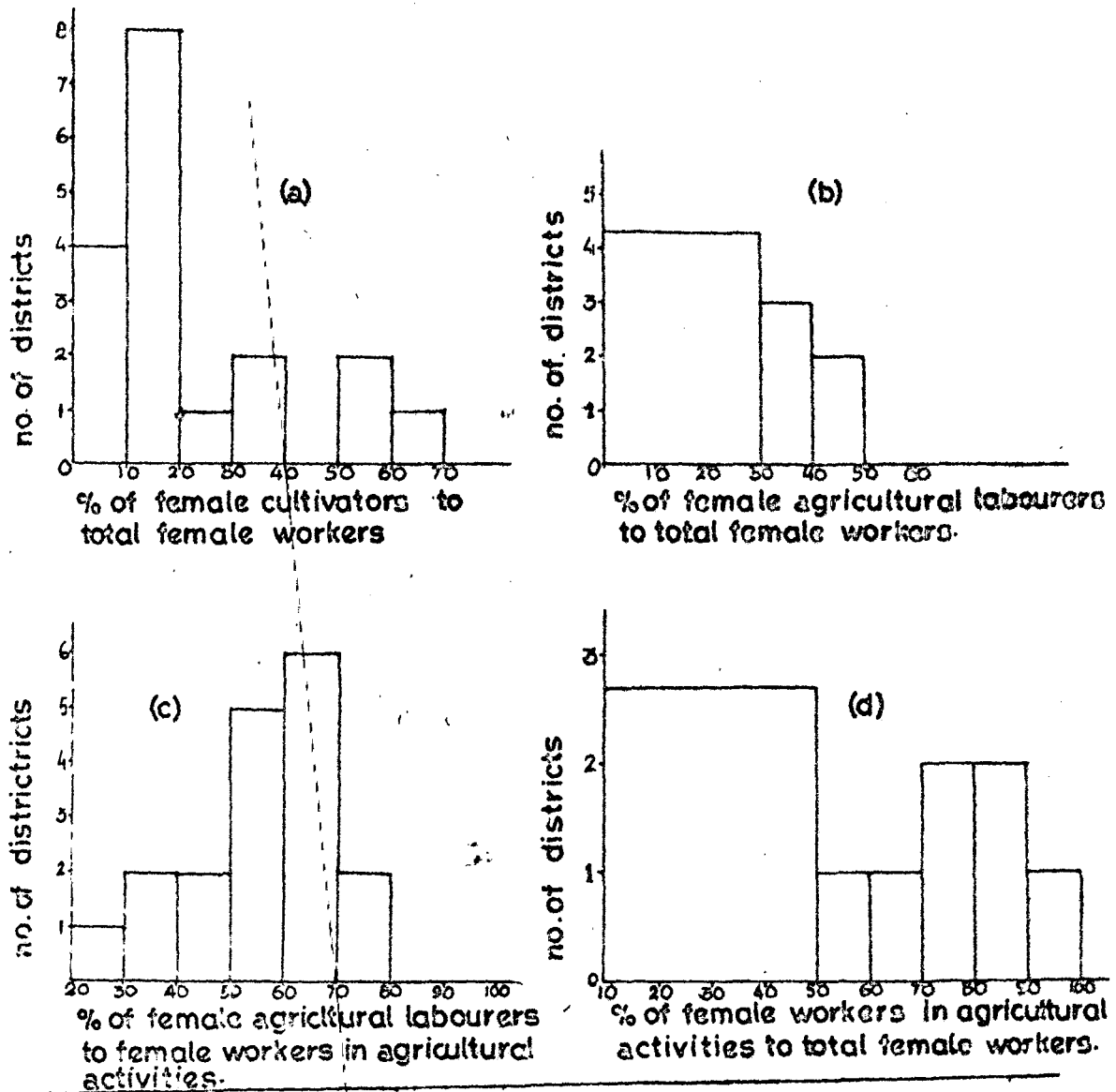
Table - 4.8

Share of Female Workers in the Secondary Sector

Percentage	Punjab & Haryana		West Bengal		Andhra Pradesh		Maharashtra	
	No. of districts	% of districts	No. of districts	% of districts	No. of districts	% of districts	No. of districts	% of districts
Below 5	12	66.7	3	20.0	0	0.0	0	0.0
5-10	6	33.3	6	40.0	0	0.0	5	20.0
10-20	0	0.0	5	33.3	11	32.4	17	28.0
20-30	0	0.0	0	0.0	8	38.1	1	4.0
30-40	0	0.0	1	6.7	1	4.8	0	0.0
Above 40	0	0.0	0	0.0	1	4.8	2	8.0
Total	18	100.0	15	100.0	21	100.0	25	100.0

Table-4.9
Share of Female Workers in the Tertiary Sector

Percentage	Punjab & Haryana		West Bengal		Andhra Pradesh		Maharashtra	
	No. of districts	% of districts	No. of districts	% of districts	No. of districts	% of districts	No. of districts	% of districts
Below 1	10	55.6	0	0.0	0	0.0	4	16.0
1-5	8	44.4	4	26.2	0	0.0	1	4.0
5-10	0	0.0	10	66.7	1	4.8	16	64.0
10-20	0	0.0	1	6.7	11	52.4	4	16.0
20-30	0	0.0	0	0.0	6	28.5	0	0.0
Above 30	0	0.0	0	0.0	3	14.3	0	0.0
Total	18	100.0	15	100.0	21	100.0	25	100.0



(a) Female cultivators. (b) Female agricultural labourers.
 (c) Proportion of female agricultural labourers to total female workers in agricultural activities.
 (d) Female workers in agricultural activities.

Fig. 4.5 Female workers in agriculture. Punjab & Haryana.

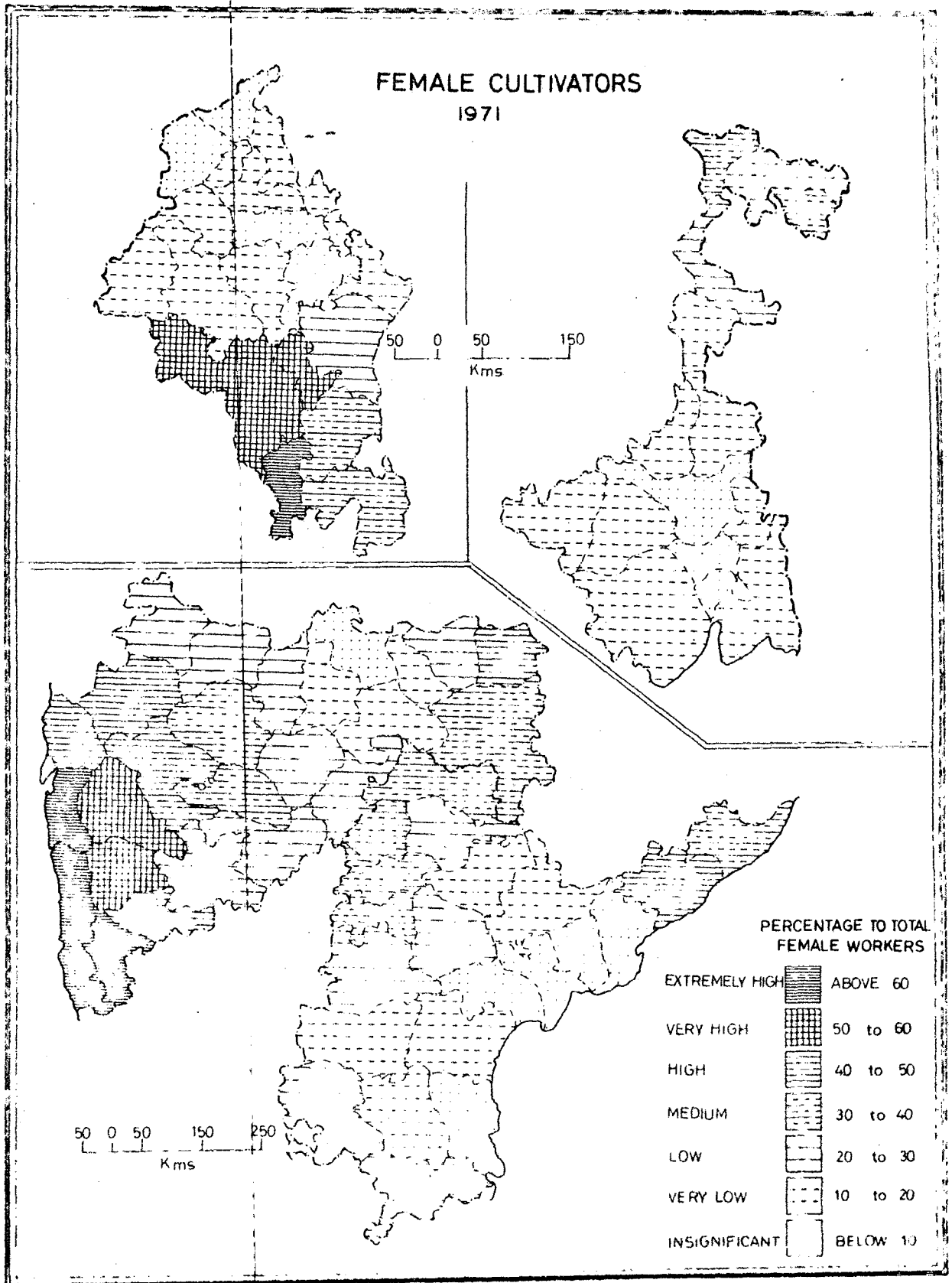


Fig.4.6

4.3.1 Family Workers and Agricultural Wage-Earners

In the region as a whole the family workers outnumber agricultural labourers (Table 4.3). But at district level the pattern changes drastically. Except one district in Punjab in all other districts the proportion of women workers employed as agricultural wage earners exceeds their employment as family workers. In Haryana, only in the western districts of Gurgaon, Mahendragarh, Hissar and Jind, the family workers account for a higher proportion of the total workers.

Table 4.10 and Fig. 4.5a show that two third districts of Punjab and Haryana have less than 20 per cent of their total female work force employed as family workers, in agriculture. In as much as 60 per cent districts the female wage earners account for more than 20 per cent of all women workers (Table 4.11 and Fig. 4.5b). However, in most of the districts of Punjab and Haryana the female agricultural wage earners compared to their male counterparts are few. In 89 per cent of districts the ratio of female agricultural wage earners is less than 100 per thousand male agricultural wage earners (Table 4.12). But in all the districts of Punjab except Sangrur and eastern three districts of Haryana, the female agricultural wage earners account for more than 50 per cent of the total employment of women in agricultural activities (Table 4.13, Fig. 4.5c). However, above 60 per

FEMALE AGRICULTURAL LABOURERS 1971

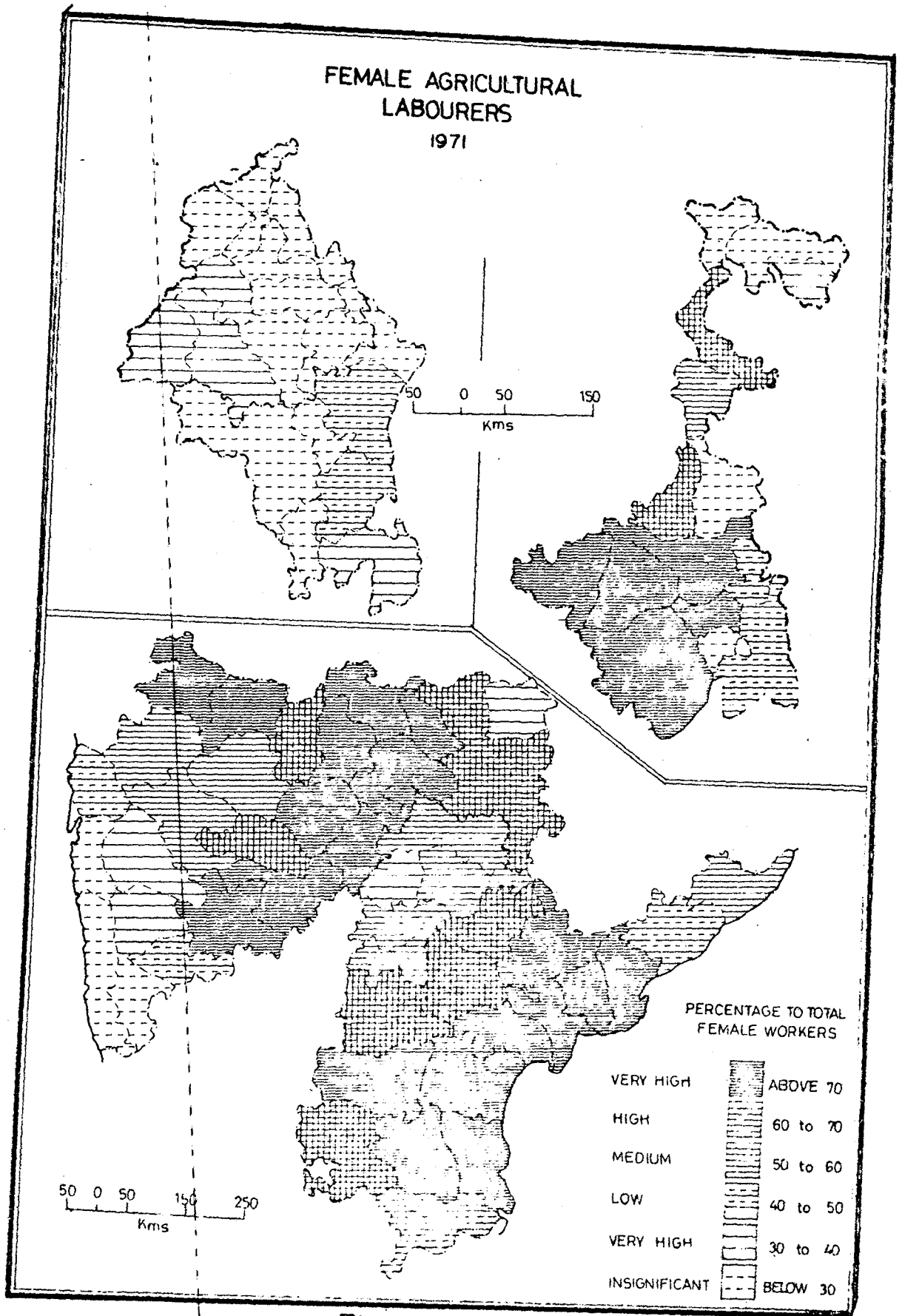


Fig 47

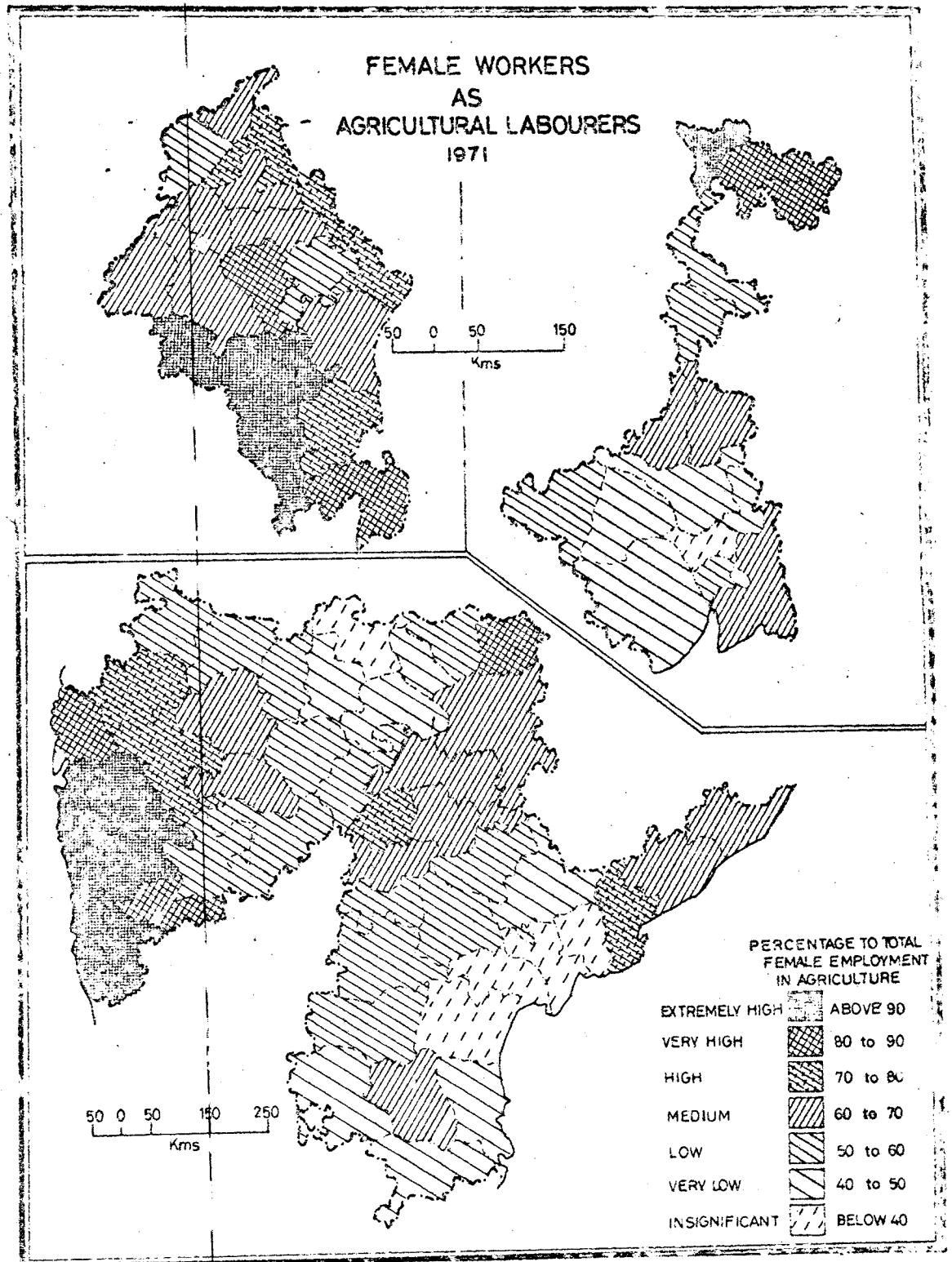


Fig. 4:8

Table-4.10

Percentage of Female Family Workers in Agriculture

Percentage	Punjab & Haryana		West Bengal		Andhra Pradesh		Maharashtra	
	No. of districts	% of districts	No. of districts	% of districts	No. of districts	% of districts	No. of districts	% of districts
Below 10	4	22.2	3	20.0	5	23.8	1	4.0
10-20	8	44.4	9	60.0	5	23.8	3	12.0
20-30	1	5.6	1	6.7	4	19.0	8	32.0
30-40	2	11.1	2	13.3	6	28.6	3	12.0
40-50	0	0.0	0	0.0	1	4.8	5	20.0
50-60	2	11.1	0	0.0	0	0.0	2	8.0
Above 60	1	5.6	0	0.0	0	0.0	3	12.0
Total	18	100.0	15	100.0	21	100.0	25	100.0

Table-4.11

Percentage of Female Wage Earners in Agriculture

Percentage	Punjab & Haryana		West Bengal		Andhra Pradesh		Maharashtra	
	No. of districts	% of districts	No. of districts	% of districts	No. of districts	% of districts	No. of districts	% of districts
Below 30	13	72.2	5	33.3	0	0.0	3	12.0
30-40	3	16.7	1	6.8	1	4.8	3	12.0
40-50	2	11.1	2	13.3	1	4.8	2	8.0
50-60	0	0.0	0	0.0	6	28.5	3	12.0
60-70	0	0.0	2	13.3	4	19.0	4	16.0
Above 70	0	0.0	5	33.3	9	42.9	10	40.0
Total	18	100.0	15	100.0	21	100.0	25	100.0

Table - 4.12

Ratio of Female Wage Earners Per 1000 Male Wage Earners in Agriculture

Category (percentage)	Punjab & Haryana		West Bengal		Andhra Pradesh		Maharashtra	
	No. of districts	% of dis- tricts	No. of districts	% of dis- tricts	No. of districts	% of dis- tricts	No. of districts	% of dis- tricts
Below 100	16	88.9	6	40.0	0	0.0	0	0.0
100-300	2	11.1	6	40.0	0	0.0	0	0.0
300-500	0	0.0	3	20.0	0	0.0	0	0.0
500-700	0	00.0	0	0.0	1	4.8	4	16.0
700-900	0	0.0	0	0.0	8	38.1	11	44.0
Above 900	0	0.0	0	0.0	12	57.1	10	40.0
Total	18	100.0	15	100.0	21	100.0	25	100.0

Table - 4.13

Percentage of Female Wage Earners to Total Female Employment in Agricultural Activities

Category (percentage)	Punjab & Haryana		West Bengal		Andhra Pradesh		Maharashtra	
	No. of districts	% of dis- tricts	No. of districts	% of dis- tricts	No. of districts	% of dis- tricts	No. of districts	% of dis- tricts
Below 30	1	5.6	1	6.7	0	0.0	3	12.0
30-40	2	11.1	0	0.0	0	0.0	2	8.0
40-50	2	11.1	2	13.3	0	0.0	3	12.0
50-60	5	27.8	1	6.7	2	9.6	2	8.0
60-70	6	33.3	2	13.3	5	23.8	3	12.0
70-80	2	11.1	3	20.0	5	23.8	8	32.0
80-90	0	0.0	4	26.7	5	23.8	3	12.0
Above 90	0	0.0	2	13.3	4	19.0	1	4.0
Total	18	100.0	15	100.0	21	100.0	25	100.0

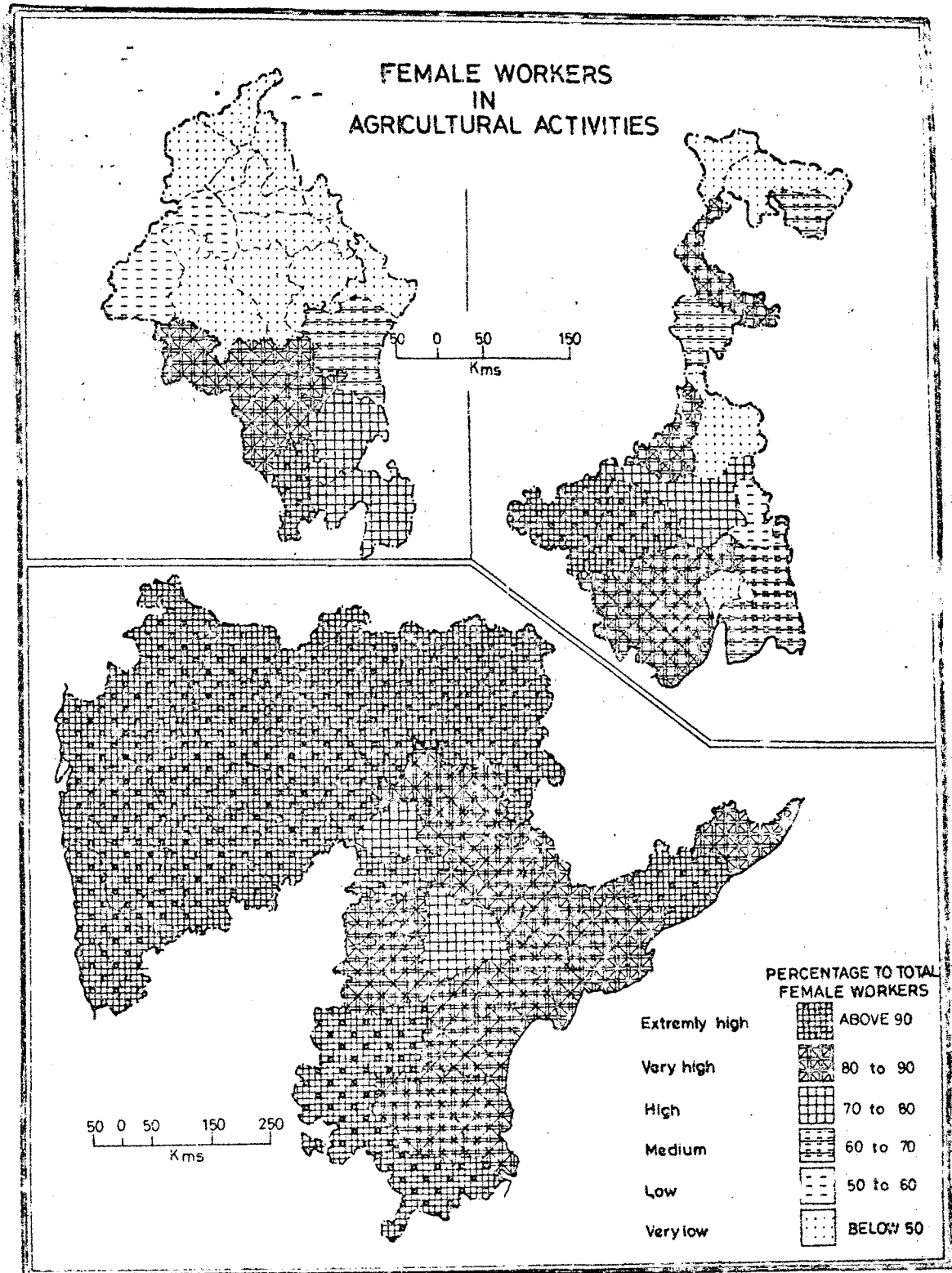
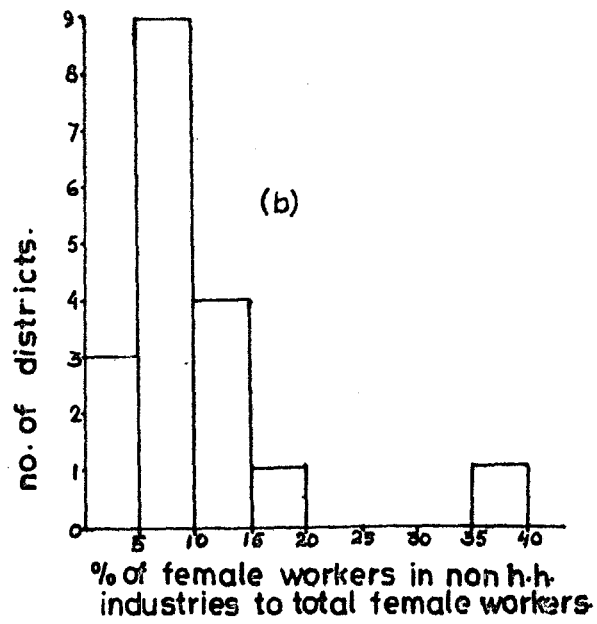
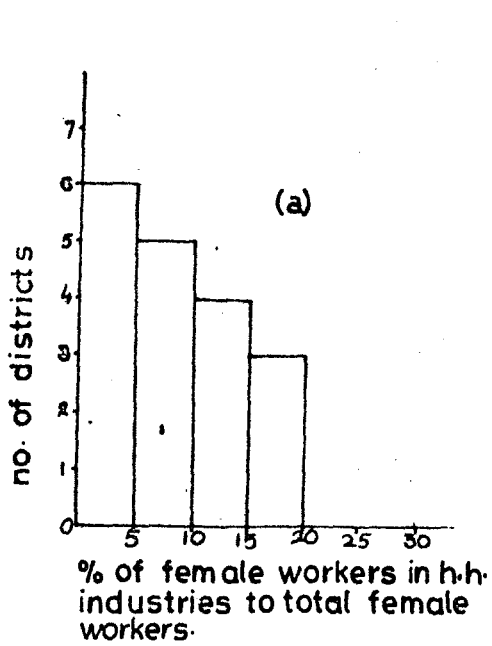
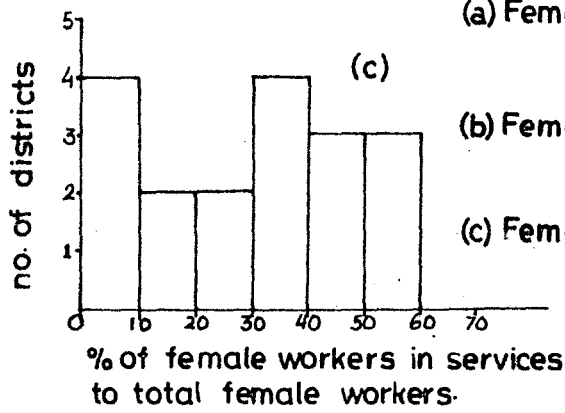


Fig 49



(a) Female workers in household industries.

(b) Female workers in non-household industries.



(c) Female workers in services.

Fig 4.10. Female workers in industries & services.

Punjab & Haryana.

districts in Punjab and Haryana have less than 30 per cent women workers engaged in agricultural activities (Table 4.14, Fig. 4.5d).

Livestock, forestry etc. account for a very meagre share of the women workers in the entire region not exceeding 5 per cent in any district (Appendix 5).

4.3.2 Household and Non-Household Industries

Except two districts in Haryana, the mining and quarrying activities do not account for any significant proportion of women workers in this region. (Appendix 6). Except Ambala and Karnal districts of Haryana, all other districts in this region account for less than 4 per cent of the female working force in construction. The two important categories in which the women workers are concentrated in secondary sector are household and non-household industries.

In the region as a whole the non-household industries employ slightly higher proportion of the female work force than the household industries (6.8 per cent and 5.78 per cent respectively). However, above 60 per cent districts have more than 5 per cent of the total female work force employed in household industries (Table 4.15, Fig. 4.10a) and above 30 per cent districts account for more than 10 per cent of the female work force in the non-household industries (Table 4.16, Fig. 4.10b). Gurudaspur and Sangrur districts of Punjab and

FEMALE WORKERS IN HOUSEHOLD INDUSTRIES 1971

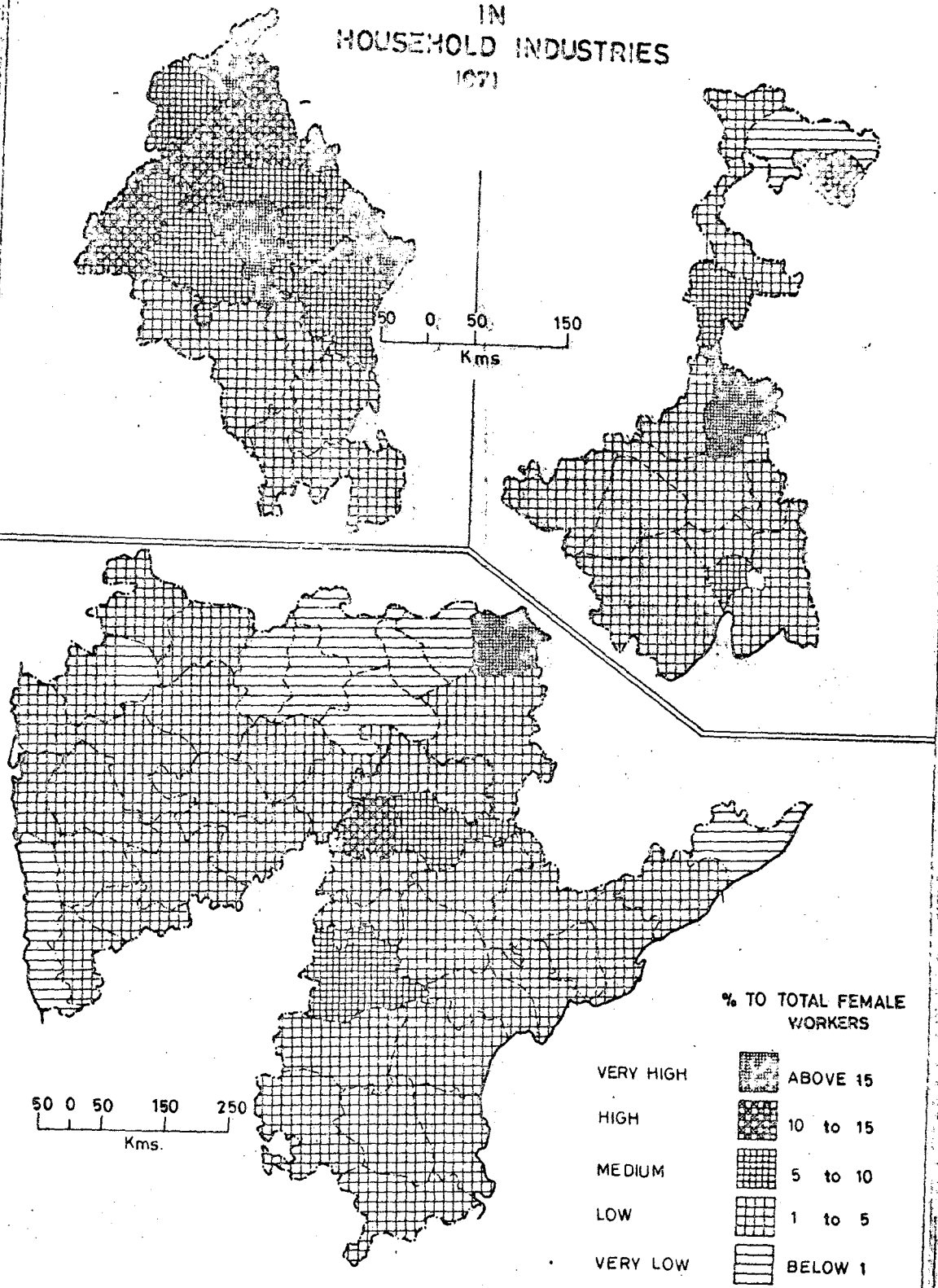


Fig. 4.11

: 135 :

Table - 4.14

Percentage of Female Workers in Agricultural Activities

Category (percentage)	Punjab and Haryana		West Bengal		Andhra Pradesh		Maharashtra	
	No. of districts	% of dis- tricts	No. of districts	% of dis- tricts	No. of districts	% of dis- tricts	No. of districts	% of dis- tricts
Below 50	11	61.0	4	26.7	0	0.0	0	0.0
50-60	1	5.6	1	6.7	0	0.0	0	0.0
60-70	1	5.6	3	20.0	0	0.0	0	0.0
70-80	2	11.1	1	6.7	2	9.5	0	0.0
80-90	2	11.1	4	26.7	14	66.7	0	0.0
Above 90	1	5.6	2	13.2	5	23.8	25	100.0
Total	18	100.0	15	100.0	21	100.0	25	100.0

Table - 4.15
Percentage of Female Workers in Household Industries

Category (percentage)	Punjab & Haryana		West Bengal		Andhra Pradesh		Maharashtra	
	No. of districts	% of dis- tricts	No. of districts	% of dis- tricts	No. of dis- tricts	% of dis- tricts	No. of districts	% of dis- tricts
Below 1	0	0.0	1	6.7	0	0.0	7	28.0
1-5	6	33.3	9	59.9	18	85.7	17	68.0
5-10	5	27.8	3	20.0	2	9.5	0	0.0
10-15	4	22.2	1	6.7	1	4.8	0	0.0
Above 15	3	16.7	1	6.7	0	0.0	1	4.0
Total	18	100.0	15	100.0	21	100.0	25	100.0

Table - 4.16
Percentage of Female Workers in Non-Household Industries

Category (percentage)	Punjab & Haryana		West Bengal		Andhra Pradesh		Maharashtra	
	No. of districts	% of dis- tricts	No. of districts	% of dis- tricts	No. of districts	% of dis- tricts	No. of districts	% of dis- tricts
Below 1	1	5.6	3	20.0	14	66.7	21	84.0
1-5	2	11.1	9	60.0	6	28.6	4	16.0
5-10	9	50.0	2	13.3	1	4.7	0	0.0
10-15	4	22.2	1	6.7	0	0.0	0	0.0
Above 15	2	11.1	0	0.0	0	0.0	0	0.0
Total	18	100.0	15	100.0	21	100.0	25	100.0

Ambala in Haryana have a significant proportion of the women work force employed in household industries (above 15 per cent). On the other hand Patiala and Ludhiana districts of Punjab have more than 15 per cent of women work force employed in non-household industries (Fig. 4.11 and 4.12).

4.3.3 Services

Table 4.17 shows that a very high share of the female work force is employed in "other services" category in Punjab and Haryana (17.89 per cent of all working women and above 90 per cent of all employment in tertiary sector). This category accounts for more than 40 per cent of the total female working force in above 50 per cent of the districts (Table 4.18). Fig. 4.13 shows that the proportion of female work force employed in other services is extremely high in the northern districts of Punjab. Except Ambala, in the remaining districts in Haryana, the proportion is low to very low (less than 10 per cent). However, within service sector the female workers are few in relation to their male counterparts. The ratio of female workers in other services is less than 100 per 1000 male workers in the same category (Appendix 7). The proportion of women work force employed in trade, commerce, transport and communication are insignificant both in the region as well as at the district level.

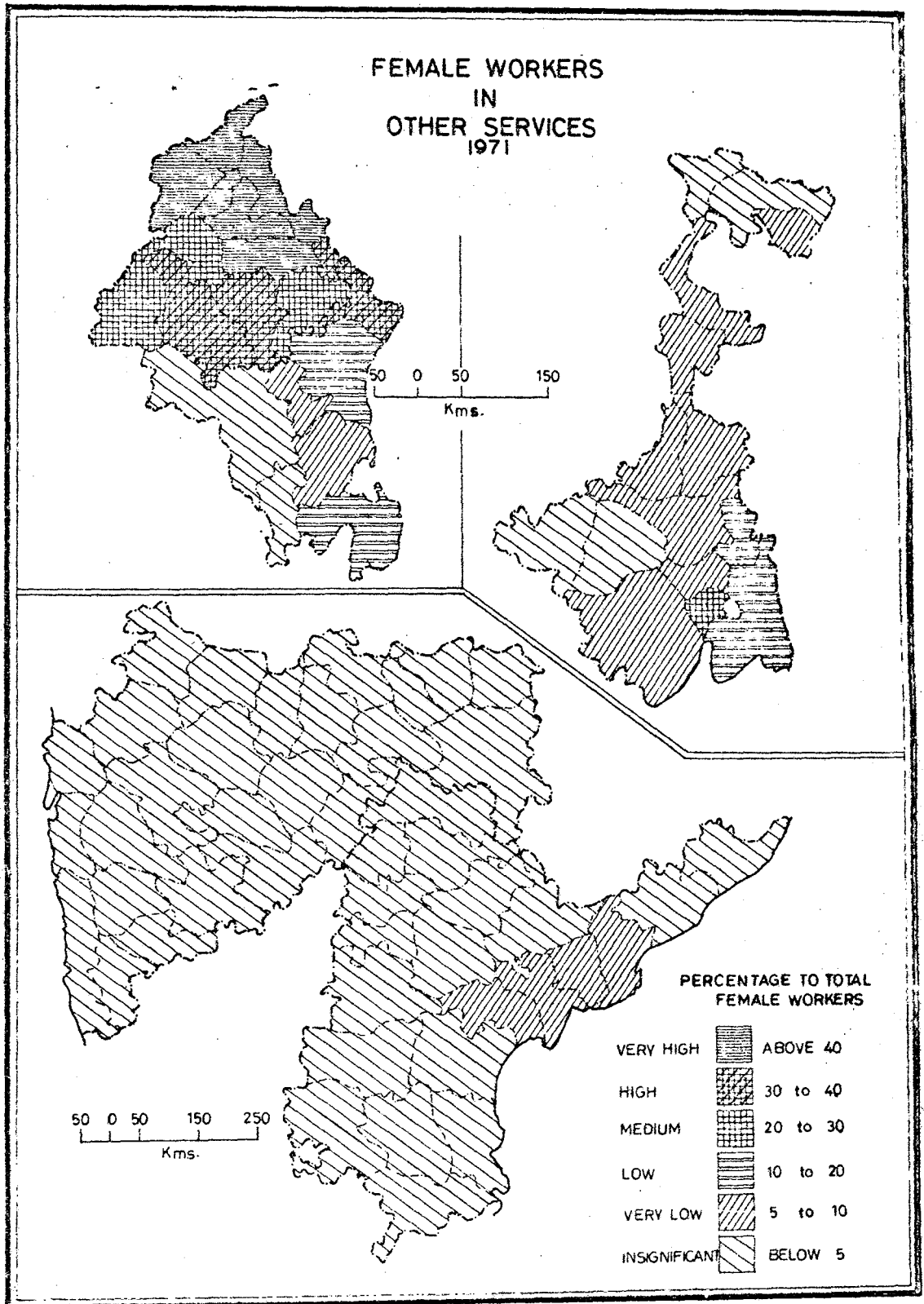


Fig. 413

Table - 4.17

Percentage of Female Workers in Other Services

Category (Percentage)	Punjab & Haryana		West Bengal		Andhra Pradesh		Maharashtra	
	No. of districts	% of dis- tricts	No. of districts	% of dis- tricts	No. of districts	% of dis- tricts	No. of districts	% of dis- tricts
Below 5	2	11.1	4	26.7	17	81.0	25	100.0
5-10	2	11.1	8	53.3	4	19.0	0	0.0
10-20	2	11.1	2	13.3	0	0.0	0	0.0
20-30	2	11.1	1	6.7	0	0.0	0	0.0
30-40	4	22.3	0	0.0	0	0.0	0	0.0
Above 40	6	33.3	0	0.0	0	0.0	0	0.0
Total	18	100.0	15	100.0	21	100.0	25	100.0

Table - 4.18

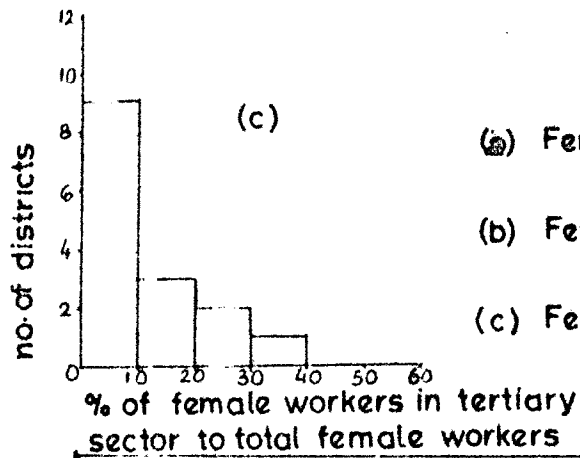
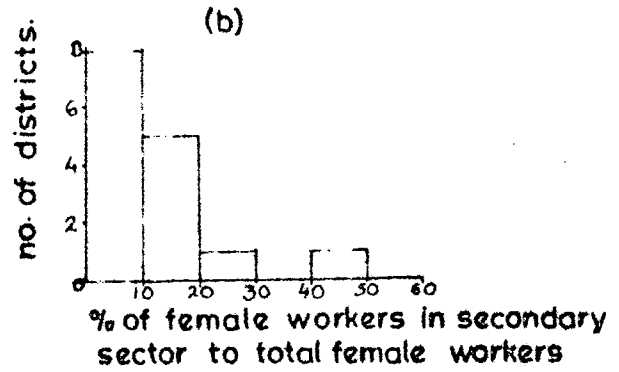
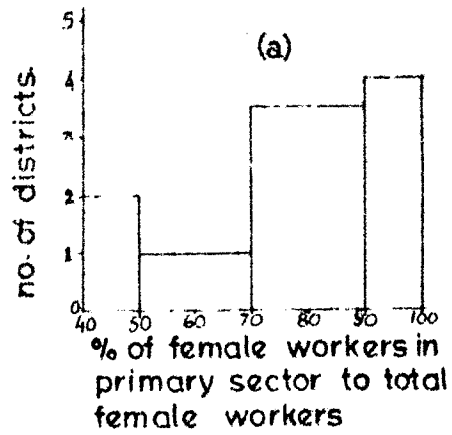
Percentage of Female Workers in Other Services to Total Female
Workers in Tertiary Sector

Category (Percentage)	Punjab and Haryana		West Bengal		Andhra Pradesh		Maharashtra	
	No. of Districts	% of dis- tricts	No. of districts	% of dis- tricts	No. of districts	% of dis- tricts	No. of districts	% of dis- tricts
Below 60	0	0.0	0	0.0	3	14.3	3	12.0
60-70	0	0.0	2	13.3	9	42.9	5	20.0
70-80	0	0.0	6	40.0	7	33.3	10	40.0
80-90	0	0.0	6	40.0	2	9.5	7	28.0
Above 90	18	100.0	1	6.7	0	0.0	0	0.0
Total	18	100.0	15	100.0	21	100.0	25	100.0

In terms of industrial distribution, the intra-regional variations are clear when district level analysis is made. The contrasts are well marked between Punjab and Haryana. Ambala in Haryana has a distinct relationship with Punjab. The east west contrast within Haryana is rather interesting. In Punjab, there has been a fairly diverse distribution of female work force in different sectors as well as industrial categories. Eastern Haryana, particularly district Ambala has this character whereas western Haryana is distinct in terms of high concentration of female work force in primary sector and few industrial categories belonging to this sector.

4.4 WEST BENGAL

The female work force is largely concentrated in the primary sector (84.0 per cent). Secondary and tertiary sectors account for 8.35 and 7.65 per cent of the female work force respectively. Table 4.4 and Fig. 4.14g however, show that 50 per cent districts have a very high concentration of women workers in the primary sector. In the remaining districts the primary sector accounts for 40 to 70 per cent of the total female working force. Western two districts of Bankura and Burdwan and northern hilly districts of Darjeeling and Jalpaiguri show a very high proportion of female work force in the primary sector. The eastern



(a) Female workers in primary sector.

(b) Female workers in secondary sector

(c) Female workers in tertiary sector

Fig. 4.14. Sectoral distribution of female workers

West Bengal

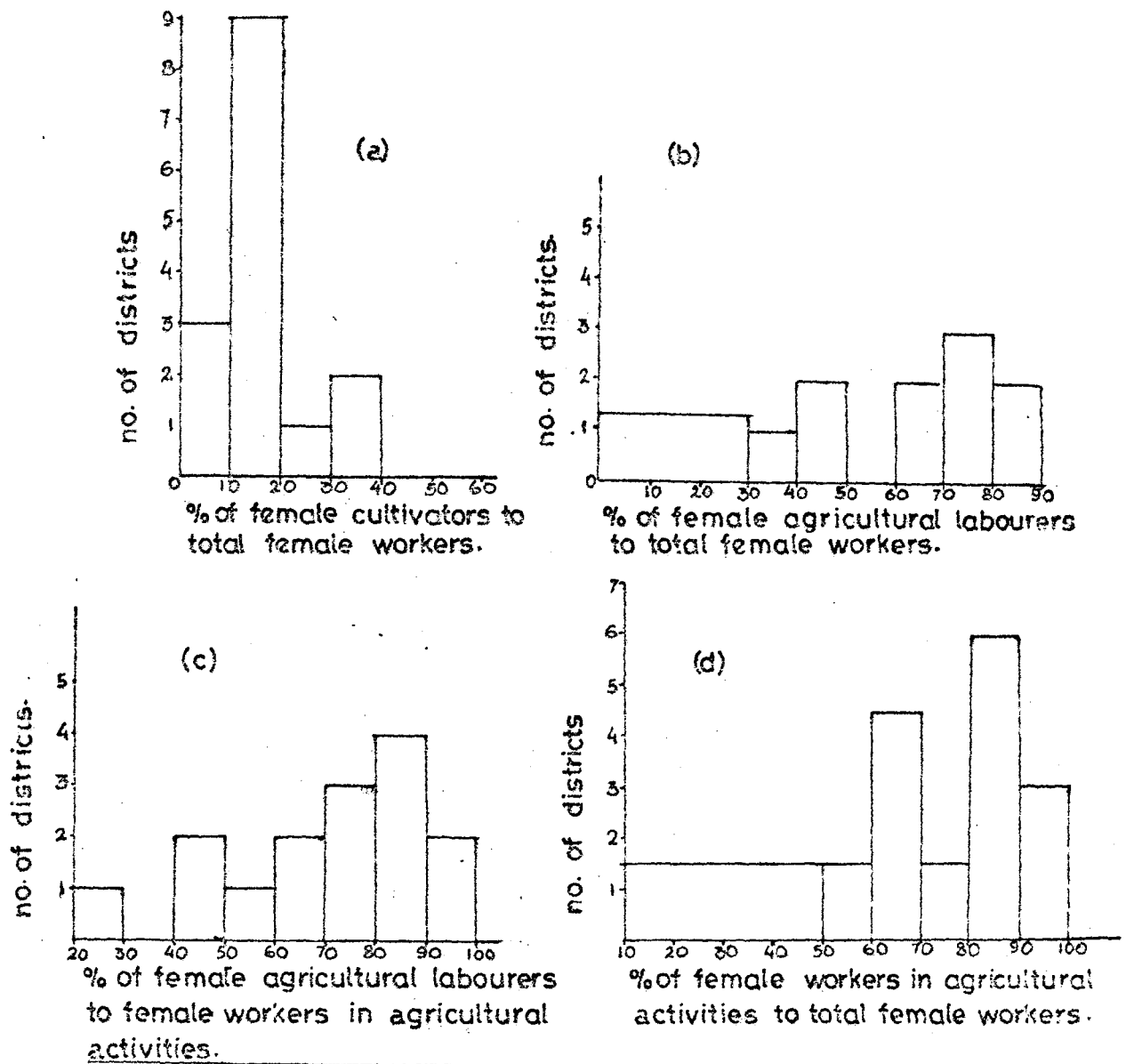
districts in general have a low proportion of female work force in the primary sector (Fig. 4.2). The proportion is as low as 45.85 per cent in Murshidabad and 40.76 per cent in Howrah.

The proportion of female work force in the secondary sector varies between 1.96 per cent in Jalpaiguri to 43 per cent in Murshidabad. Most of the districts (more than 80 per cent) show a higher proportion of female work force in the secondary sector than the state average (Table 4.5 and Fig. 4.14b). The districts having a lower proportion of female work force in the primary sector show a higher proportion of female workers in secondary and tertiary sector (Fig. 4.3 and 4.4). These are mostly located in the eastern part of the state. Howrah, 24-Parganas and Nadia districts have a very high proportion of female work force in the tertiary sector, exceeding 23 per cent.

However, the share of female work force in total work force of the different sectors is very low as that of Punjab and Haryana (Table 4.7, 4.8 and 4.9).

4.4.1 Family Workers and Agricultural Wage Earners

In the region as a whole the female agricultural wage earners account for as much as 54.51 per cent of the total female workers whereas the percentage share of cultivators is 14.93 per cent only. Except for the districts of



(a) Female cultivators

(b) Female agricultural labourers.

(c) Proportion of female agricultural labourers to total female workers in agricultural activities.

(d) Female workers in agricultural activities.

Fig 4.15 Female workers in agriculture. West Bengal.

Darjeeling and Cooch-Bihar the female agricultural labourers outnumber family workers in all the districts. However, at district level there is a large variation in both these categories. Table 4.10 and Fig. 4.15a show that about 80 per cent districts in West Bengal have less than 20 per cent of the female work force employed as family workers in agriculture. On the other hand, 46.6 per cent districts have more than 60 per cent of female work force employed as hired workers (agricultural labourers) in agriculture (Table 4.11 and Fig. 4.15b). Fig. 4.6 and 4.7 show that barring a few, the districts having a high proportion of female work force employed as family workers invariably show a lower proportion of female wage earners in agriculture. Jalpaiguri, Murshidabad and Howrah districts have a low to very low proportion of both female agricultural wage earners and family workers. In Jalpaiguri this is due to the fact that a large proportion of the female work force (more than 80 per cent) is engaged in livestock, plantation, forestry etc., whereas in the latter two districts the employment of women in the primary sector itself is very low.

The ratio of female agricultural wage earners per thousand of male agricultural wage earners is very low except three western districts (Bankura, Midnapur, Purulia) where there are 300 to 500 female wage earners per thousand male wage earners (Table 4.12). The proportion of females

working as agricultural wage earners to the total female employed in agriculture is very high in the western part of the region (above 80 per cent) (Table 4.13 and Fig. 4.8 and 4.15c).

West Bengal shows a large degree of variation in terms of female employment in agricultural activities (Table 4.14 and Fig. 4.9 and 4.15d). In only two districts (Bankura and Purulia) the proportion of women workers in agricultural activities is more than 90 per cent whereas in West Dinajpur, Hooghly, Birbhum and Midnapore the proportion ranges between 80 to 90 per cent.

Two districts in West Bengal, Jalpaiguri and Darjeeling in the northern submountane region have a very high proportion of women workers employed in livestock, gathering, forestry etc. (81.6 per cent in Jalpaiguri and 49 per cent in Darjeeling) (Appendix 5).

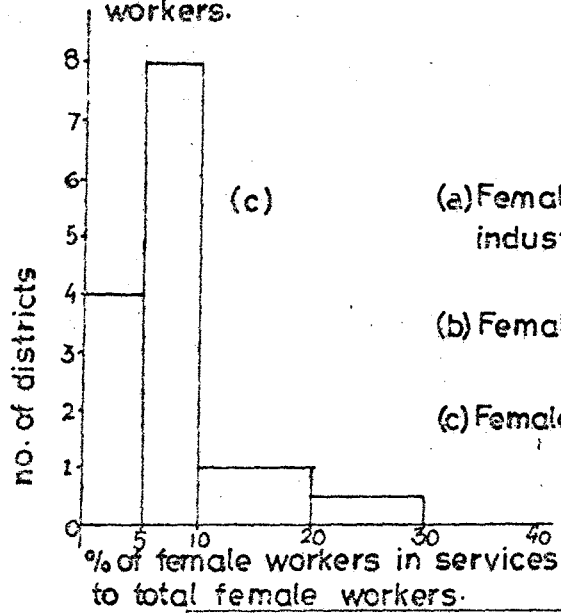
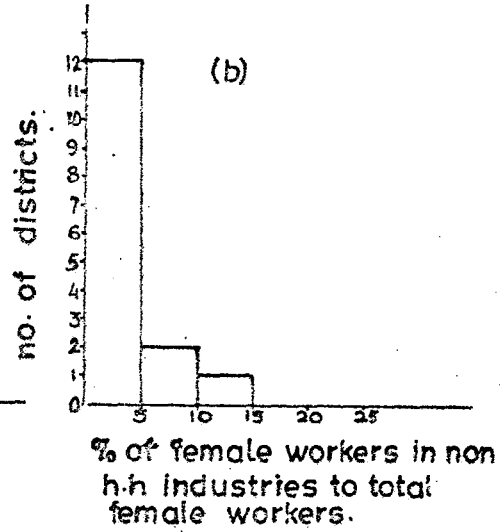
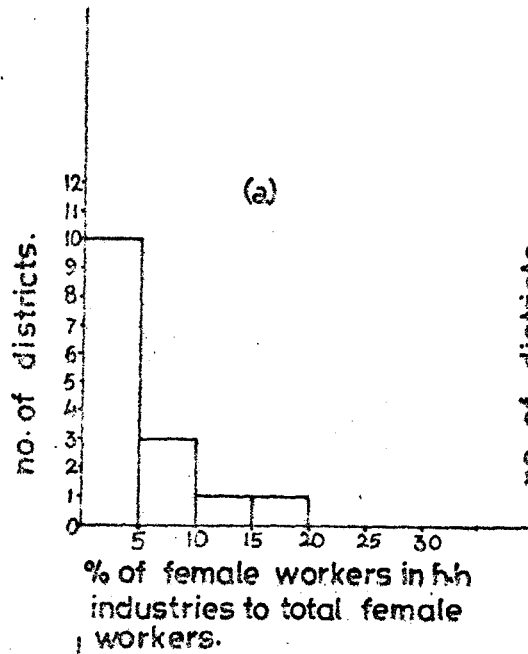
4.4.2 Household and Non-household Industries

In most of the districts in West Bengal, the employment of women workers in the household industries is higher than non-household industries. At the state level household and non-household industries employ 4.89 per cent and 2.44 per cent of all working women in rural West Bengal respectively. However, at district level the picture changes dramatically (Tables 4.15 and 4.16; Figs. 4.11, 4.12, 4.16a and 4.16b). One third of the districts have above 5 per cent of the

female work force employed in the household industries. On the other hand one-fifth of the districts show more than 5 per cent female work force in the non-household industries. Murshidabad has the highest proportion of its female work force employed in the household industries (39.62 per cent). Howrah has 12.95 per cent of women workers employed in non-household industries. Adjoining districts of Nadia, 24-Parganas also show a relatively high proportion of employment of women in non-household industries.

4.4.3 Services

In the region as a whole, "other services" account for a meagre 6.03 per cent of the total women workers. At district level this ranges between 2.18 per cent in Bankura to 28.19 per cent in Howrah. In most of the districts the share of female workers in "other services" as percentage to their total employment in the tertiary activities ranges between 70 per cent and 90 per cent (Table 4.18). Table 4.17 shows that the other services category account for less than 20 per cent of the female workers in all the districts except one. But the share is more than 10 per cent in as much as 66.6 per cent districts. However, in all the districts the ratio of women workers in services per thousand men workers in services is very low (i.e. less than 150) (Appendix 7.).



(a) Female workers in household industries.

(b) Female workers in non household industries.

(c) Female workers in services.

Fig. 4.16. Female workers in industries & services.
West Bengal

Howrah has a very significant proportion of its women work force engaged in trade and commerce. In as many as 4 districts the women's employment in this category ranges between 3 per cent and 5 per cent.

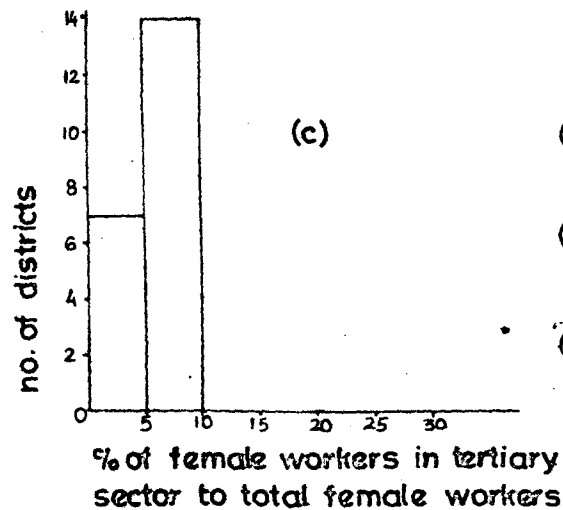
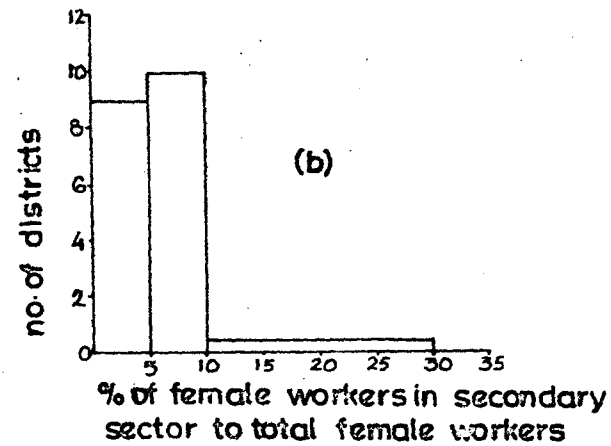
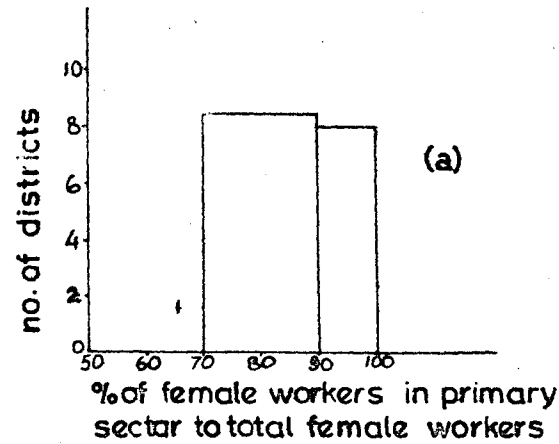
Three regions are distinct in terms of industrial distribution of female work force. The eastern districts surrounding Calcutta have a relatively diversified distribution of female workers in industrial categories whereas in the western part of the state a large concentration in agricultural activities and household industries is clear. The two northern districts of Jalpaiguri and Darjeeling from the third cluster with a very high proportion of the women workers employed in livestock, forestry, plantation etc. Calcutta's urban character seems to have influenced the industrial distribution of female work force in its immediate hinterland.

4.5 ANTIERA PRADESH

At the aggregate level the sectoral distribution of female work force shows that the employment of female workers is highly concentrated in the primary sector (88.14 per cent), secondary and tertiary sectors accounting for a meagre share of the total women work force (5.77 per cent and 6.09 per cent respectively). The variation at the district level is less conspicuous in comparison to Punjab and Haryana and West Bengal. In a majority of districts

the proportion of female work force in the primary sector varies between 70 per cent and 90 per cent, in the secondary sector it is under 20 per cent and between 0.0 to 10 per cent in tertiary sector (Tables 4.4, 4.5 and 4.6; Figs. 5.17a, 5.17b and 5.17c). Vishakhapatnam (Coastal Andhra), Chittoor and Kurnool (Rayalseema) and Medak (Telengana) show an extremely high concentration of women workers in the primary sector (exceeding 90 per cent) (Fig. 4.2). Only two districts, viz., Karimnagar and Nizamabad show a slightly higher proportion of female work force (more than 5 per cent) employed in the secondary sector (Fig. 4.3).

In contrast to Punjab and Haryana and West Bengal the females account for a substantial proportion of the total work force in all the sectors. In as much as 81 per cent districts the women's share in the primary sector is above 30 per cent (Table 4.7). In secondary sector the females' contribution varies between 10 per cent and 30 per cent in 90 per cent of the districts (Table 4.8). Although the proportion of women workers employed in the tertiary sector is low in Andhra Pradesh, they constitute a significant proportion of the work force in the tertiary sector. Their share is more than 30 per cent in about 15 per cent of districts and between 10 per cent and 30 per cent in as many as 81 per cent of the districts (Table 4.9).



(a) Female workers in primary sector

(b) Female workers in secondary sector

(c) Female workers in tertiary sector.

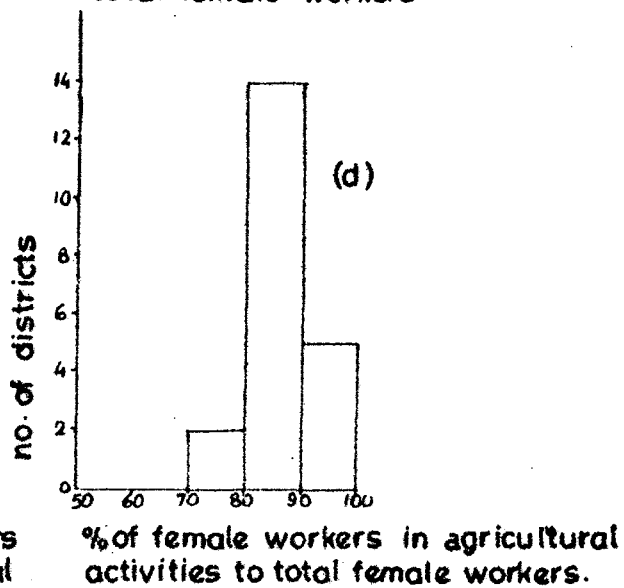
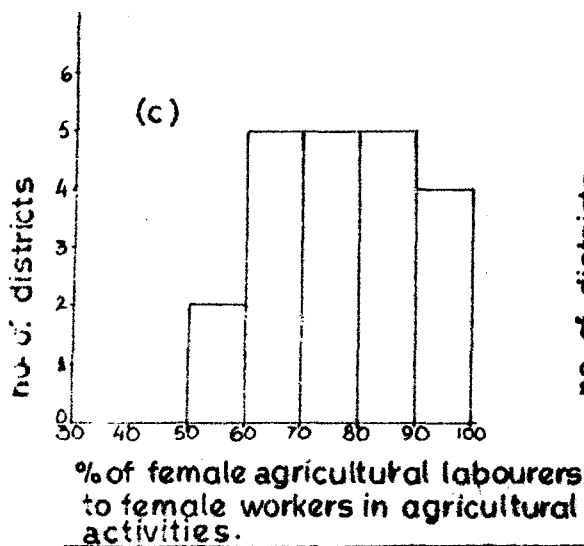
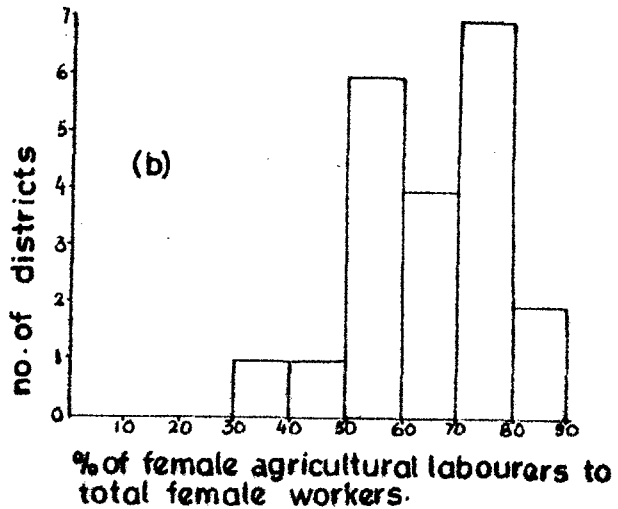
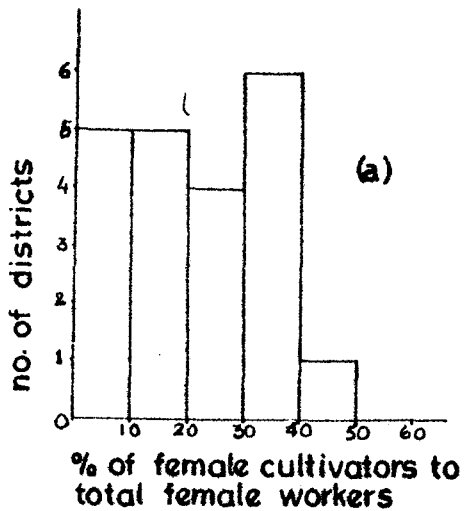
Fig. 4-17. Sectoral distribution of female workers
Andhra Pradesh

Unlike Punjab and Haryana, and West Bengal, none of the sectors of economy is overwhelmingly male-dominated.

4.5.1 Family Workers and Agricultural Wage Earners

At the state level the female agricultural wage earners account for 66.22 per cent of the total female work force against a meagre 20.82 per cent as unpaid family workers. A large proportion of women workers are employed as hired workers in agriculture. At district level also the female agricultural labourers outnumber the 'family workers' in all the districts. However, within each category, there is a large variation at the district level. The proportion of family workers varies between 5.5 per cent in Krishna and 35.1 per cent in Nizamabad (Table 4.10 and Fig. 4.18a). Telengana shows a relatively higher proportion of family workers (between 20 per cent and 50 per cent). Two coastal districts viz., Vishakhapatnam (40.29 per cent) and Srikakulam (32.18 per cent) as well as the southern-most district viz., Chittoor, show a relatively higher proportion of family workers in the total female work force (Fig. 4.6).

Over 60 per cent districts in this region have an equal percentage of women workers employed as wage earners in agriculture (Table 4.11 and Fig. 4.18b). The proportion



(a) Female cultivators. (b) Female agricultural labourers.

(c) Proportion of female agricultural labourers to total female workers in agricultural activities

(d) Female workers in agricultural activities

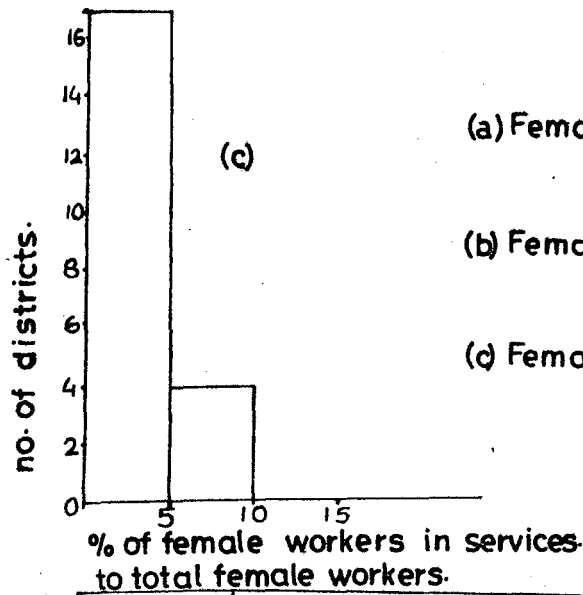
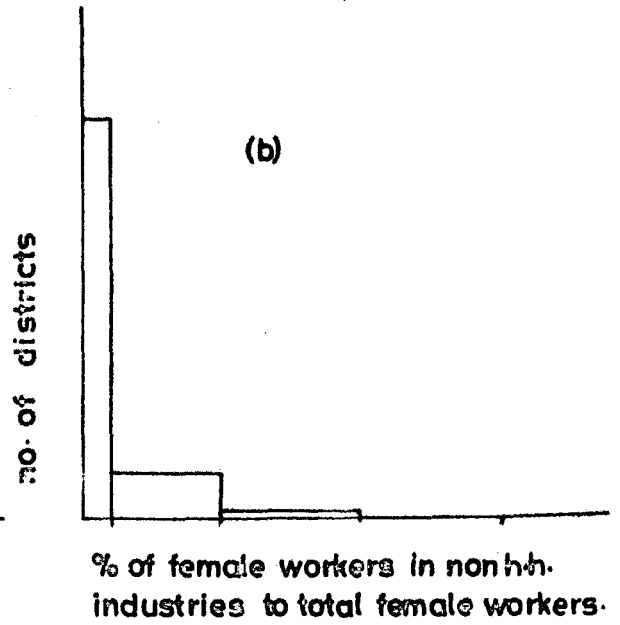
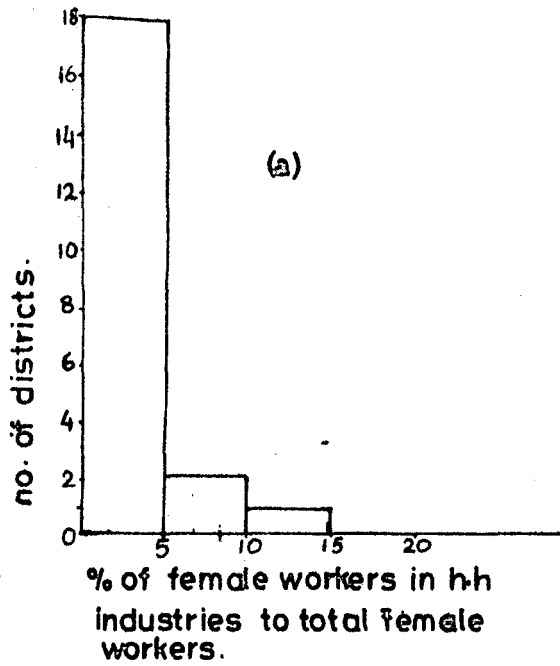
Fig. 4.18 Female workers in agriculture- Andhra Pradesh.

of female agricultural wage earners in the total employment of women in agricultural activities is very high in Andhra Pradesh. In about 18 per cent districts the share is more than 90 per cent (Table 4.13, Fig. 4.8 and 4.18c). Nowhere, the proportion is less than 50 per cent.

The proportion of female work force in agricultural activities is also extremely high in most of the districts (Table 5.14 and Fig. 4.18d). About 90 per cent districts have more than 80 per cent women workers engaged in agricultural activities. Fig. 4.9 shows that only in Nizamabad and Nalgonda districts the proportion of women employed in agricultural activities is between 70 per cent and 80 per cent.

4.5.2 Household and Non-household Industries

The household industries employ a greater proportion of the women work force than the non-household industries in Andhra Pradesh (3.75 per cent in the former and 1.09 per cent in the latter category). The pattern remains unchanged at district level except Guntur where the proportion of female workers employed in non-household industries is more than those employed in household industries. At district level the proportion of women workers in household industries varies between 1 per cent and 5 per cent in all the districts except Mahbubnagar (6.14 per cent), Karimnagar (7.09 per cent) and Nizamabad (12.99 per cent) in the western part of the region (Table 4.15, Fig. 4.11 and 4.19a).



- (a) Female workers in house hold industries.
- (b) Female workers in non household industries.
- (c) Female workers in services.

Fig. 4.19. Female workers in industries & services.

Andhra pradesh

The non-household sector employs less than 5 per cent of the women workers in all the districts except Nizamabad (6.67 per cent) (Table 4.16, Fig. 4.12 and 4.19b). Nizamabad shows a higher concentration of women workers in both the kinds of industrial activity.

5.5.3 Services

Only 4.13 per cent of the female work force is employed in the "services" category at the state level. At district level only 4 districts show a higher proportion of female work force in services category (Table 4.17, Fig. 4.19c) ranging between 5 per cent and 10 per cent. All of these are in the coastal regions: East and West Godavari, Krishna and Guntur (Fig. 4.13).

Andhra Pradesh does not show any conspicuous change in the industrial distribution of woman work force at the district level. The distribution at district level also supports the state level pattern of a highly uneven distribution of women workers in industrial categories. The women work force has been largely concentrated in agricultural activities, particularly in the agricultural labour sector.

4.6 MAHARASHTRA

At the state level the female work force is extremely concentrated in the primary sector. The employment of female workers in primary sector is 94.60 per cent whereas the secondary and tertiary sectors account for only 3.56 and 1.85 per cent of the female work force respectively.

There is not much variation at the district level. The pattern remains almost unchanged (Tables 4.4, 4.5, 4.6; Figs. 4.2 4.3, 4.4). Table 4.7 shows that the share of women work force in the primary work force is very high. The share is more than 40 per cent in three districts of Ratnagiri (51 per cent), Buldhana (40.98 per cent) and Bhandara (42.80 per cent). However, the share of female work force in the secondary and the tertiary sectors is much less than in the primary sector (Tables 4.8 and 4.9).

4.6.1 Family Workers and Agricultural Wage Earners

Family workers and agricultural wage earners account for 56.06 and 38.0 per cent of the female work force respectively. The female workers are mostly concentrated in these two categories, particularly agricultural wage earners. Table 4.10 and Fig.4.20(a) show that a large variation exists in the proportion of family workers at the district level. It ranges between 9.14 per cent in Amaravati and 81.24 per cent in Ratnagiri. Fig. 4.6 shows that ~~the~~ the western part

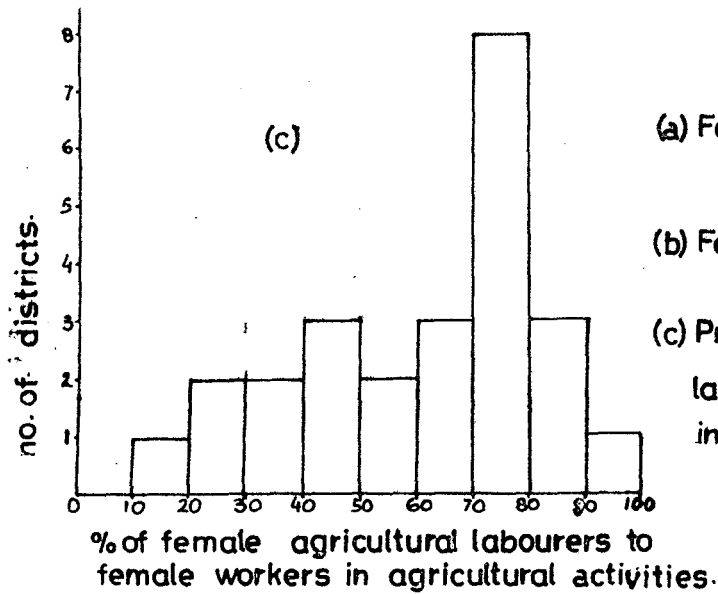
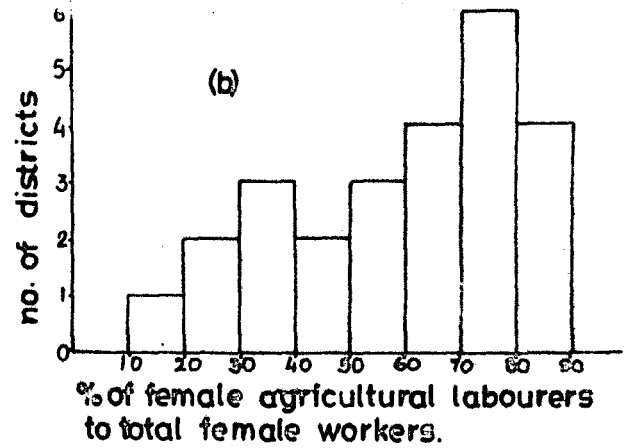
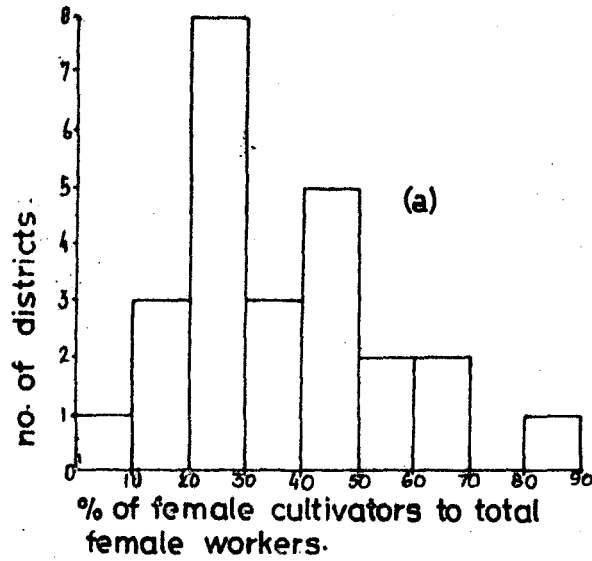
of Maharashtra has a higher proportion of female workers employed as family workers. The proportion gradually reduces to the central part.

On the other hand, 40 per cent districts in Maharashtra have more than 70 per cent of the women work force employed as hired labourers in agriculture (Table 4.11 and Fig. 4.20b). Fig. 4.7 shows that the proportion of female workers employed as agricultural wage earners is extremely high in the central part of the region and reduces towards the west where the family workers are employed in greater proportion.

The ratio of female agricultural wage earners per 1000 male agricultural wage earners is very high in Maharashtra. In as many as 10 districts (Table 4.12) of Maharashtra the ratio of female agricultural labourers per 1000 male agricultural labourers is more than 900. In fact, in the districts of Ratnagiri, Nasik, Wardha, Nagpur, Bhandara and Chandrapur districts the female wage earners in agriculture outnumber their male counterparts.

Table 4.13, Fig. 4.20(c) show that the female agricultural wage earners account for over 70 per cent of the total employment of females in agriculture in about 50 per cent of districts. Fig. 4.8 shows that the proportion increases from western part of the region to the central and eastern part.

All the districts of Maharashtra show an extremely high proportion of female work force employed in agricultural



(a) Female cultivators.

(b) Female agricultural labourers.

(c) Proportion of female agricultural labourers to total female workers in agricultural activities.

Fig.420. Female workers in agriculture. Maharashtra.

activities (Table 4.14). The share is more than 90 per cent in all the districts.

4.6.2 Household and Non-Household Industries

At the aggregate level, the household industries employ only 2.37 per cent of the total female workers whereas the non-household industries employ only 0.63 per cent of all women workers.

At the district level, Table 4.15 shows that except the district Bhandara, the remaining districts of Maharashtra employ less than 5 per cent of women workers in household industries. In the non-household industries only 4 districts, namely, Thana, Ahmadnagar, Nagpur and Bhandara have a slightly higher proportion of female employment ranging between 1 per cent and 5 per cent.

4.6.3 Services

Maharashtra has a meagre 1.30 per cent of its female work force employed in other services. All the districts show an extremely low proportion of female work force employed in services, The percentage share is less than 5 in all the districts (Table 4.17). However, in the tertiary sector the female work force is largely concentrated in other services category (Table 4.18).

The industrial distribution of female workers in Maharashtra shows a large variation at the district level. However, even at the district level the female workers are concentrated in categories such as cultivators or agricultural labourers. The degree of such concentration is the highest in Maharashtra showing extreme dependence of women workers on agricultural opportunities. In industries and services their proportion is negligible.

It is important to note that in Punjab and Haryana, although the women account for a meagre share of the work force, the female workers are fairly well represented in different sectors of the economy as well as in different industrial categories. This is due perhaps to the reason that the women have mostly withdrawn from primary sector (particularly from agriculture) thereby resulting in a depression in the worker-rate of females. However, this phenomenon has improved the relative importance of other categories or there might have been actual shift to other sectors because of restricted opportunities in the agricultural sector. The situation in West Bengal, particularly in the eastern part is more or less similar; but to a lesser extent. In Andhra Pradesh and Maharashtra agriculture seems to be the only important opportunity of work for women.

4.7 INDUSTRIAL CATEGORIES AND FEMALE WORK PARTICIPATION

Tables 4.19, 4.20, 4.21 and 4.22 present correlations between participation rates and different industrial categories. It is clear that except Maharashtra the relation between family workers and participation rates are positive. It is negative in case of Maharashtra. The positive correlation is high and significant in the case of Punjab and Haryana ($R = .957$) moderate in the case of Andhra Pradesh ($r = .554$) and weak in the case of West Bengal ($r = .276$). The negative association in Maharashtra between worker-rate of women and employment as family workers is also weak ($r = -.185$). The relation between worker-rate of females and their employment as agricultural wage earners is positive in Punjab and Haryana and Maharashtra and negative in West Bengal and Andhra Pradesh.

The worker-rate of females is negatively associated with employment of women in industries, both household industries and manufacturing in Punjab and Haryana and West Bengal whereas reverse is the case in Andhra Pradesh and Maharashtra. In all the four regions the crude participation of women in work is negatively associated with their employment in Trade and Commerce and "Other Services". In case of services the negative association is very strong and significant in all regions except West Bengal.

Table - 4.19

Punjab and HaryanaCorrelation Among Industrial Categories in the Employment of Women
Rural Women

	A	B	C	D	E	F	G	H	I	J	K
A	1.00										
B	+0.959***	1.00									
C	0.330	0.397	1.00								
D	-0.262	0.257	-0.329	1.00							
E	0.629***	0.545*	0.132	-0.083	1.00						
F	-0.662**	-0.648**	-0.498*	0.099	-0.432	1.00					
G	-0.469	-0.561*	-0.405	-0.194	-0.250	0.223	1.00				
H	-0.049	-0.063	0.147	-0.139	-0.267	0.518*	0.044	1.00			
I	0.518*	-0.565*	-0.147	-0.010	-0.053	0.245	0.119	0.097	1.00		
J	-0.461	-0.426	-0.068	-0.152	-0.231	0.177	0.030	-0.185	0.286	1.00	
K	-0.810***	-0.851***	-0.663**	-0.057	-0.438	0.541*	0.330	-0.251	0.467	0.435	1.00

*P < .05 ; **P < .01 ; ***P < .001

A = % of female workers; B = Cultivators; C = Agricultural labourers; D = Livestock, forestry, hunting etc.; E = Mining and quarrying; F = Household industry; G = Non-household industry; H = Construction; I = Trade and Commerce; J = Transport and communications; K = Services.

Table - 4.20

Correlation Among Industrial Categories in the Employment of Rural Women
West Bengal

	A	B	C	D	E	F	G	H	I	J	K
A	1.00										
B	0.276	1.00									
C	-.274	-.406	1.00								
D	0.636**	0.008	-.671**	1.00							
E	0.001	-.419	0.352	-.066	1.00						
F	-.337	0.140	-.271	-.233	-.233	1.00					
G	0.568**	0.036	-.241	-.366	-.156	0.075	1.00				
H	0.440	0.208	-.419	0.245	0.072	-.127	0.245	1.00			
I	-.496	0.094	-.398	-.255	-.228	0.328	0.915***	0.287	1.00		
J	0.189	0.170	-.442	0.234	0.181	-.306	0.475	0.610**	0.465	1.00	
K	-.497	0.052	-.347	-.231	-.292	0.097	0.972***	0.316	0.905***	0.481	1.00

*P < .05

**P < .01

***P < .001

A = % of female workers; B = Cultivators; C = Agricultural labourers; D = Livestock, forestry, hunting etc.; E = Mining and quarrying; F = Household industry; G = Non-household industry; H = Construction; I = Trade and commerce; J = Transport and communications; K = Services.

Table - 4.21

Andhra PradeshCorrelation Among Industrial Categories in the Employment of Rural Women

	A	B	C	D	E	F	G	H	I	J	K
A	1.00										
B	0.554**	1.00									
C	-.555**	-.946***	1.00								
D	-.386	-.208	0.171	1.00							
E	0.230	0.020	-.090	-.016	1.00						
F	0.560**	0.445*	-.659**	-.295	0.088	1.00					
G	0.228	0.135	-.389	-.058	0.155	0.644**	1.00				
H	0.002	-.295	0.183	0.155	0.119	-.017	0.060	1.00			
I	-.378	-.214	0.182	0.271	0.083	-.254	-.378	0.236	1.00		
J	-.103	0.198	-.317	-.031	0.046	0.355	0.236	-.306	0.236	1.00	
K	-.682**	-.720***	0.586**	0.066	0.011	0.276	0.133	0.370	0.306	0.073	1.00

*P < .05

**P < .01

***P < .001

A = % of female workers; B = Cultivators; C = Agricultural labourers; D = Livestock, forestry, hunting etc.; E = Mining and quarrying; F = Household industry; G = Non-household industry; H = Construction; I = Trade and commerce; J = Transport and communications; K = Services.

Table - 4.22

MaharashtraCorrelation Among Industrial Categories in the Employment of Rural Women

	A	B	C	D	E	F	G	H	I	J	K
A	1.00										
B	-.185	1.00									
C	0.129	-.984***	1.00								
D	-.246	0.623	-.614**	1.00							
E	0.340	0.007	-.093	-.014	1.00						
F	0.363	0.134	-.295	-.091	0.339	1.00					
G	0.263	0.219	-.344	0.135	0.468*	0.599**	1.00				
H	-.111	0.517**	-.180	0.338	0.153	0.002	0.091	1.00			
I	0.453	0.708***	-.720***	0.818***	0.069	0.043	0.290	0.273	1.00		
J	0.008	0.372	-.430*	0.296	0.552**	0.247	0.481*	0.371	0.494*	1.00	
K	-.545**	0.253	-.265	0.491*	0.220	-.159	0.222	0.355	0.617**	0.271	1.00

*P < .05 ; **P < .01 ; ***P < .001

A = % of female workers; B = Cultivators; C = Agricultural labourers; D = Livestock, forestry, hunting etc.; E = Mining and quarrying; F = Household industry; G = Non-household industry; H = Construction; I = Trade and commerce; J = Transport and communications; K = Services.

Thus with an increase of workers in female population the proportion of women workers employed in trade, transport and services decreases in all the four regions. On the other hand with the increase of workers in the female population the employment of women as agricultural wage earners increases in Punjab and Haryana and Maharashtra and is accompanied by a decrease in West Bengal and Andhra Pradesh. The increase in female workers is associated with an increase in the family workers in all the states except Maharashtra. With increase in the proportion of workers among women, the proportion of women employed in industries increases in Punjab and Haryana and West Bengal, whereas in Andhra Pradesh and Maharashtra it tends to decrease.

In order to understand the positive relationship between total female employment and their employment as agricultural wage earners, it is important to note that, the non-participation in work is associated with a high social status. As a result, those women who actually participate in work do so in a relatively non-competitive environment.⁶ Again this type of employment is an additional avenue of work for most unskilled women workers. Probably due to these reasons, the increase in agricultural wage earners is marked by an increase in the proportion of workers among women in Punjab and Haryana. However, the correlation co-efficient in Maharashtra

6. Ester Boserup (1970), op.cit., p.72.

is not significant, but in Andhra Pradesh and West Bengal, the situation seems reverse. This is further corroborated by the fact that increase in agricultural wage earners is not accompanied by an increase in family workers in all the states except Punjab and Haryana. The values of co-efficient of correlation are $-.406$, $-.946$ and $-.984$ in West Bengal, Andhra Pradesh and Maharashtra, meaning thereby, increase in one category is associated with a very significant decline in the other category. In Punjab and Haryana the female workers in the total work force is extremely low and thus increase in agricultural wage earners is accompanied with an increase in the total work participation of women. However, these two categories belong to two different social statuses. While the former is mostly dominated by less privileged class females, the latter category is generally dominated by more privileged class women.

In order to understand the strong negative relationship between the proportion of women workers in the total women population and the employment of women in the category designated as 'other services', it is important to note that the latter category is generally associated with higher status. The employment in these services needs higher education, skill and professional training. Thus an increase in this category is associated with a significant decline in the proportion of workers in the total female population.

There is a negative relationship between proportion of female workers as agricultural wage earners and their proportion in the "other services" in Punjab and Haryana, West Bengal and Maharashtra. This is perhaps due to the fact that the 'other services' category also includes unskilled and illiterate workers such as domestic servants. The presence of such services in the tertiary sector brings away those workers who would otherwise have been forced to join wage earning sector.⁷ However, a contrasting situation is observed in Andhra Pradesh, where these categories are positively associated. This may have been due to the nature of services available in the service sector in this region. Probably most of the women workers in the service sector join white collar jobs, without competing with those joining as agricultural labourers.

As far as the hired labour in agriculture and industries are concerned there exists a negative relationship in all the four regions. This indicates that, with the increase in the hired labour for industries, there is a decrease of hired female workers in agriculture. The female work participation seems competitive in these two categories. The correlation between the female employment in the non-household industries and household industries is negative in all the states indicating that with an increase of the female work force in the manufacturing sector, there is a progressive decline in

7. Wage earning category is the most elastic in its demand for labour.

the female work force in the cottage industries. Household industries or the cottage industries are traditionally associated with females. Thus increase in this sector reduces the female participation in agricultural labour. The negative relationship between these categories in all the regions may be explained in the above line.

In Punjab and Haryana the worker-rate of females has a very strong positive relationship ($r = 0.957$) with employment of women as family workers in agriculture. While working for a wage is considered to be of lower status one, working on own fields is considered to be associated with high status. Thus a small increase in the proportion of family workers results in a big increase in the total participation rates. On the other hand, the work participation of women is negatively associated with all other industrial categories (except mining and quarrying) in this region. Particularly in industries and services ($r = -.662, -.469, -.810$ for household industries, non-household industries and services respectively),

In West Bengal the worker-rate of females is positively associated with livestock, forestry, fishing, hunting etc., construction and family labour in agriculture and negatively associated with employment in non-household industries, agricultural labour (both of which are overwhelmingly hired in nature) trade, commerce and services.

In Andhra Pradesh, the female work participation is positively correlated with the proportion of women workers as family labourers in agriculture and household industries (both relate to non-wage earning self employment and are associated with higher status) and is negatively associated with their proportion in agricultural labour and 'other services'.

Except services with which female employment is highly negatively correlated, no other category shows any significant relationship with the total female employment in Maharashtra. However, only the employment of women in the household sector has a positive relationship with total female employment in Maharashtra.

4.8 CONCLUDING STATEMENT

The above study of industrial distribution of women workers leads to the following broad conclusions:

- a) In areas of low female participation in work the distribution of women workers in different industrial categories is more diverse than in areas of high female participation in India.
- b) Agricultural labour seems to be the most important industrial category in which most of the women workers are concentrated in all the regions.

- c) Although in Punjab and Haryana, and West Bengal a higher proportion of women workers are employed in non-agricultural activities than Andhra Pradesh and Maharashtra, the actual share of female work force in the total non-agricultural work force is higher in the latter two regions than in the former.
- d) The female participation rate is positively associated with non-wage earning industrial categories, such as cultivating and household industries; and negatively associated with wage earning category, such as agricultural labour.
- e) Female participation is also negatively associated with the employment of women in services.

Chapter-V

SPATIAL VARIATION IN FEMALE PARTICIPATION IN ECONOMIC ACTIVITY - AN ATTEMPT AT EXPLANATION

5.1 INTRODUCTORY STATEMENT

The task of explaining variations in female participation in economic activity is beset with a number of difficulties. First of all, economic motives are not the only determining factors in female employment. Socio-cultural and demographic factors do play significant role in determining whether a woman works or not. Unlike male participation, female participation in work is influenced by social norms, taboos, prevalent value system, customs and social practices which play a very crucial role. Moreover, the nature and role of social values, customs and norms vary over space and are difficult to quantify. Women's biological and reproductive responsibilities are also much more than those of males. All these make the task of explanation of female participation in work more difficult and complex than it is apparent. Viewed thus, the female participation in work is a "reflection of a multi-dimensional interaction of social attitudes, the institutional infrastructure and the traditional norms regarding females, and these vary tremendously in socio-economically and culturally different regions."¹

1. Saraswati Ragu (1981), op.cit., p.13.

out any factor and examine its impact on female participation would be a highly incomplete exercise. However, for the sake of convenience only, factors have been seen independently as well as components in an overall interacting system.

5.2 CHOICE OF INDICATORS

Any attempt at choosing variables which are likely to exert influence on female employment cannot ignore the conditions and structure of the economy, the socio-cultural influences and demographic characteristics. Secondly the female participation in economic activity cannot also be analysed independent of male participation. The choice of variables has also to be looked within the broader framework of actual availability/non-availability of economic opportunities for women. The following indicators have been chosen which are likely to exert influence on female participation in economic activity.

5.2.1 Economic Indicators

- i) Percentage of growth of agricultural output (X_1)
- ii) Land-man ratio (persons per hectare of gross cropped area) (X_2)
- iii) Cropping intensity (X_3)
- iv) Concentration of landholding (X_4) (Gini co-efficient)

- v) Mean size of holding (X_5)
- vi) Percentage of irrigated area to the net cropped area (X_6)
- vii) Intensity of cultivation (X_7)
- viii) Percentage of male workers in non-agricultural activities to total male workers (X_8)
- ix) Percentage of workers in primary sector (X_9)
- x) Percentage of workers in secondary sector (X_{10})
- xi) Percentage of workers in tertiary sector (X_{11})

5.2.2 Demographic Indicators

- i) Sex-ratio (X_{12})
- ii) Percentage of urban population to total population (X_{13})
- iii) Number of children below 5 years age group per thousand women in the reproductive age group (15-49) (X_{14})
- iv) Percentage growth of population (during 1961-71) (X_{15})

5.2.3 Socio-Cultural Indicators

- i) Percentage of literate females to total females (X_{16})
- ii) Percentage of married women in the total women population (X_{17})
- iii) Percentage of widowed and separated women in the total women population (X_{18})

- iv) Percentage of scheduled caste females to total females (X_{19})
- v) Percentage of scheduled tribe females to total females (X_{20}).

The economic variables which have been chosen mostly refer to the agricultural conditions. The rationale of choosing such variables is rooted in the nature of rural economy. In India, as Reddy observes, "..... inter-regional variations in female activity rates are firmly rooted in differences in agricultural factors. Any adequate explanation of the differences in the female participation should be viewed from the root cause of the problem....."²

Agricultural growth of output (X_1) is a proxy for an increase in the earning level for peasant families. Since women are only secondary bread-winners, a general rise in the agricultural output may discourage them to participate in economic activity. Land-man ratio (X_2) indicates the availability of potential work force per unit of cultivated land. This indicator would help understanding the extent of female participation in the face of a competition with the male participation. Mean size of holding (X_5) and level of cropping intensity (X_3), in general, determine the demand for labour, whereas concentration of landholding (X_4) and level

2. D. Narasimha Reddy (1975), op.cit., p.904.

of cropping intensity (X_3), in general, determine the demand for labour whereas concentration of landholding (X_4) may exert influence on women whether they work as family workers or do they work for wages. Intensity of cultivation or modernisation of agriculture (X_7), level of irrigation (X_6) are supposed to influence the overall labour requirements and are often argued to make agricultural activities as predominantly male dominated. Higher percentage of male work force in non-agricultural activities (X_8) may actually transfer a part of field responsibility to women, thereby increasing their participation.

The structure of economy, in terms of its work force in different sectors, i.e., primary (X_9) secondary (X_{10}) and tertiary (X_{11}), determines the level of female employment in either making available/non-available 'suitable jobs' to women.

In the demographic sphere, sex ratio (X_{12}) has been chosen as an important variable affecting the supply of female workers in the given region. The indicator, may also explain, the availability or non-availability of a substantial male work force for work. The level of urbanisation (X_{13}) is important in determining how it has affected the work opportunities for women in the rural areas by producing goods and commodities in organised industries and with increasing complexity of markets and production techniques. The burden

of reproduction (X_{15}) and rearing responsibilities of women (X_{14}) interfere with women's working outside and their importance as variables affecting women's employability is undeniable.

In the socio-cultural sphere, level of literacy (X_{16}) among the females is of crucial significance as it affects the nature of work the women would participate, given the social norms and taboos. Marital status often comple^o the women to either enter the labour force or to withdraw from it. Two indicators thus belong to marital status of women. These are, percentage of married women in the total women population (X_{17}) and percentage of widowed, divorced and separated women (X_{18}). The proportion of scheduled castes (X_{19}) and scheduled tribes (X_{20}) among women represent both socially and economically deprived sections and thereby affecting the general level of female employment in any given region.

All these variables are supposed to cause variation in the female work participation. However, it would be unwise to see their role in a fixed fashion. The interaction between these variables in the broader context of regional cultures has to be emphasised in explaining female work participation.

5.3 ROLE OF ECONOMIC VARIABLES

5.3.1 Agricultural Income

The hypothesis that in rural areas, a higher income, (primarily through agricultural output) would restrict women's participation in gainful employment holds true for Punjab and Haryana and Andhra Pradesh only; but the relationship seems indeterminate in the case of West Bengal and does not hold good in the case of Maharashtra. A strong negative relationship exists between growth of agricultural output and women's participation in economic activity in Punjab and Haryana ($r = -0.716$) and Andhra Pradesh ($r = -0.586$). The positive relationship is moderate in case of Maharashtra ($r = 0.448$) but insignificant in West Bengal ($r = 0.327$). The results indicate that at very low level of productivity an increase in agricultural output does not necessarily restrict women's participation in economic activity. In case of West Bengal, it is important to note that, the districts marked by higher modernisation of agriculture in terms of mechanisation and modern inputs are not those which show a higher growth of agricultural output (Table 5.3, Appendix 8). This may explain the positive relationship existing between agricultural growth of output and the female participation in work. The growth of agricultural output has not been a function of higher mechanisation or irrigation, thereby not rendering the female labour less useful.

Table - 5.1(a)

Correlations Between Female Participation Rates and the Explanatory Variables

Correlation Coefficients

<u>Explanatory variables</u>	<u>Punjab and Haryana</u>	<u>West Bengal</u>	<u>Andhra Pradesh</u>	<u>Maharashtra</u>
X ₁	-.716***	0.327	-.586**	0.448*
X ₂	-.127	-.325	-.262	0.006
X ₃	-.233	-.477	-.543**	-.284
X ₄	-.080	0.095	-.055	-.063
X ₅	0.477	0.399	0.563**	0.135
X ₆	-.570*	0.154	-.567**	-.409
X ₇	-.434	-.421	-.308	-.288
X ₈	-.023	0.207	0.317	-.250
X ₉	0.107	0.256	-.423	0.230
X ₁₀	-.215	-.218	0.430	-.418
X ₁₁	-.027	0.014	0.156	-.097
X ₁₂	0.307	-.069	0.156	0.081
X ₁₃	-.546*	-.402	0.133	0.199
X ₁₄	0.768***	-.532*	0.438*	-.171
X ₁₅	0.597**	-.384	0.464*	-.142
X ₁₆	-.665**	-.235	-.663**	0.391
X ₁₇	0.769***	-.362	0.321	-.429*
X ₁₈	-.014	0.192	-.042	0.111
X ₁₉	-.676**	-.016	0.272	-.690***
X ₂₀	-	0.670**	-.329	0.123

*P < .05
 **P < .01
 ***P < .001

Table-5.1(b)Co-efficient of Correlation

Correlation	Punjab & Haryana	West Bengal	Andhra Pradesh	Maharashtra
i) Family workers in agriculture vs. concentration of landholding	-.043	-.460	-.202	0.788***
ii) Female agricultural wage earners vs. concentration of landholding	-.287	-.434	0.142	-.795***
iii) Proportion of female workers in tertiary activities vs. proportion of urban population	0.603**	0.708**	-.015	0.228
iv) Female participation rate vs. proportion of literate females with low level of literacy	0.489*	-.312	-.501	0.176
v) Female participation rate vs. proportion of literate females with medium level of literacy	-.433	0.325	0.494*	-.175
vi) Female participation rate vs. proportion of literate females with high level of literacy	-.288	-.503	0.203	-.085
vii) Proportion of female workers in tertiary activities vs. proportion of literate females	0.744***	0.425	0.744	-.083
viii) Proportion of scheduled caste females vs. proportion of female workers agricultural wage earners	-.530*	-.100	-.187	0.148
ix) Proportion of scheduled tribe females vs. proportion of female workers as agricultural wage earners	-	-.220	-.016	0.832

*P < .05

**P < .01

***P < .001

5.3.2 Land-man Ratio

Except West Bengal, the land-man ratio does not show significant relationship with female participation in any of the regions under consideration. The correlation coefficient is $-.325$ in the case of West Bengal and is the weakest in the case of Maharashtra (Table 5.1a). Higher pressure of population on the cultivated land means a larger supply of labour. In the face of large male unemployment, the females are likely to be squeezed out of the labour force. However, the negative relationship is not borne out in Maharashtra probably due to the low level of development in agriculture.

5.3.3 Agricultural Development and Modernisation

Agricultural development and modernisation in terms of better irrigation, higher cropping intensity and mechanisation gradually push women out of agricultural pursuits which then become overwhelmingly male-dominated. With mechanisation, the already shrinking "women's work" such as transplanting, weeding and harvesting get further shrunked. Outside agriculture women have limited scope for work. As a result women withdraw from agricultural activities and are relegated to household chores, not to be enumerated as gainfully employed at all. Their participation in economic activity thus becomes extremely occasional.

Table - 5.2
Punjab and Haryana
Matrix of Correlation

Y	1.00												
X ₁	-0.716	1.00											
X ₂	-0.127	-0.000	1.00										
X ₃	-0.233	0.606	-0.005	1.00									
X ₄	-0.080	0.127	0.298	0.299	1.00								
X ₅	0.477	-0.534	-0.273	-0.546	-0.668	1.00							
X ₆	-0.570	0.614	-0.344	0.226	-0.304	0.019	1.00						
X ₇	-0.434	0.298	-0.072	-0.140	-0.546	0.065	0.210	1.00					
X ₈	-0.023	-0.003	0.422	0.434	0.666	-0.683	-0.455	-0.356	1.00				
X ₉	0.107	-0.097	0.434	-0.480	-0.674	0.751	0.401	0.312	-0.990	1.00			
X ₁₀	-0.215	0.117	0.323	0.380	0.557	-0.657	-0.178	-0.247	0.908	-0.911	1.00		
X ₁₁	-0.027	0.043	0.465	0.490	0.686	-0.741	-0.508	-0.324	0.950	-0.963	0.767	1.00	
X ₁₂	0.307	-0.018	-0.103	0.380	0.440	-0.425	-0.375	-0.086	0.397	-0.407	0.217	0.493	1.00
X ₁₃	1.00												
X ₁₄	-0.546	0.454	0.423	0.251	-0.098	-0.267	0.524	0.216	0.125	-0.193	0.329	0.085	
X ₁₅	-0.325	1.00											
X ₁₆	0.768	-0.654	-0.064	-0.367	0.142	0.349	-0.498	-0.479	0.056	0.026	-0.073	0.007	
X ₁₇	0.130	-0.592	1.00										
X ₁₈	0.597	-0.433	0.002	-0.408	-0.140	0.500	-0.276	-0.134	-0.146	0.224	-0.198	-0.221	
X ₁₉	-0.107	-0.335	0.839	1.00									
X ₂₀	-0.665	0.611	0.090	0.522	0.430	-0.641	0.271	0.027	0.376	-0.463	0.472	0.411	
X ₂₁	0.098	0.470	-0.648	-0.691	1.00								
X ₂₂	0.769	-0.781	-0.666	-0.335	-0.177	0.535	-0.463	-0.372	0.028	0.070	-0.012	-0.101	
X ₂₃	-0.094	-0.472	0.744	0.570	-0.660	1.00							
X ₂₄	-0.014	0.33	0.005	0.271	0.283	-0.471	-0.433	0.011	0.506	-0.517	0.326	0.594	
X ₂₅	0.510	-0.238	0.281	-0.475	0.280	-0.185	1.00						
X ₂₆	-0.676	0.474	0.227	0.195	0.050	-0.328	0.495	0.372	0.131	-0.199	0.326	0.098	
X ₂₇	-0.085	0.664	-0.726	-0.569	0.617	-0.582	0.192	1.00					

Y₁ = Dependent Variable (Female Participation rates)
X₁; X₂.....X₁₉ : Independent Variables.

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Table - 5.3

West Bengal
Matrix of Correlation

Y ₁	1.00												
X ₁	0.327	1.00											
X ₂	-0.325	-0.425	1.00										
X ₃	-0.477	0.263	-0.334	1.00									
X ₄	0.095	-0.197	0.014	0.033	1.00								
X ₅	0.339	0.228	0.835	0.254	0.022	1.00							
X ₆	0.154	0.437	0.081	-0.231	-0.203	0.018	1.00						
X ₇	0.421	-0.355	0.912	0.115	0.008	-0.722	0.145	1.00					
X ₈	0.207	-0.156	0.629	0.220	0.414	-0.429	0.165	0.677	1.00				
X ₉	0.256	0.033	-0.599	0.016	-0.100	0.460	-0.328	0.750	-0.659	1.00			
X ₁₀	-0.218	-0.185	0.384	0.009	-0.029	-0.307	0.200	0.608	0.396	-0.776	1.00		
X ₁₁	0.014	0.175	0.497	-0.191	0.202	-0.331	0.399	0.406	0.552	-0.585	0.008	1.00	
X ₁₂	-0.069	0.318	-0.042	-0.168	-0.658	-0.220	0.219	-0.115	-0.432	-0.083	0.126	0.081	1.00
X ₁₃	1.00												
X ₁₄	-0.402	-0.540	0.879	-0.227	0.151	-0.711	0.089	0.815	0.610	-0.615	0.437	0.402	
X ₁₅	-0.196	1.00											
X ₁₆	-0.532	-0.073	-0.085	0.785	0.141	0.243	-0.255	0.076	-0.141	0.165	-0.129	-0.205	
X ₁₇	-0.808	-0.038	1.00										
X ₁₈	-0.384	0.052	-0.529	0.714	0.295	0.438	-0.409	-0.453	-0.537	0.487	-0.375	-0.446	
X ₁₉	-0.373	-0.370	0.742	1.00									
X ₂₀	-0.235	0.109	0.061	-0.207	0.231	-0.534	0.518	0.652	0.526	-0.662	0.450	0.533	
X ₂₁	-0.070	0.709	-0.151	-0.342	1.00								
X ₂₂	0.362	0.068	-0.264	-0.531	-0.244	0.189	-0.086	-0.313	-0.225	0.182	-0.142	-0.125	
X ₂₃	0.384	-0.402	-0.600	-0.348	-0.440	1.00							
X ₂₄	0.192	0.141	-0.221	-0.478	-0.567	-0.292	0.591	0.131	-0.033	-0.208	0.260	0.177	
X ₂₅	0.643	0.188	-0.619	-0.648	0.425	0.035	1.00						
X ₂₆	-0.016	-0.265	-0.176	0.247	0.290	0.510	-0.091	-0.188	-0.029	0.208	-0.263	0.060	
X ₂₇	-0.539	-0.036	0.499	0.400	-0.022	-0.513	-0.232	1.00					
X ₂₈	0.670	0.176	-0.383	-0.163	0.636	0.499	-0.089	-0.395	0.218	0.272	-0.324	0.065	
X ₂₉	-0.516	-0.387	-0.037	0.321	-0.221	0.229	-0.460	0.204	1.00				

Y₁ = Dependent Variable (Female participation rates)
X₁; X₂.....X₂₀ = Independent variables.

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Table - 5.4
Andhra Pradesh
Matrix of Correlation

Y ₁	1.00												
X ₁	-0.586	1.00											
X ₂	-0.262	-0.049	1.00										
X ₃	-0.534	0.276	0.512	1.00									
X ₄	-0.055	-0.013	0.323	0.430	1.00								
X ₅	0.563	-0.259	-0.516	-0.573	-0.398	1.00							
X ₆	-0.567	0.318	0.561	0.839	0.488	-0.743	1.00						
X ₇	-0.308	0.028	0.269	0.592	0.451	-0.243	0.571	1.00					
X ₈	0.317	-0.067	-0.047	-0.207	0.226	0.261	-0.287	-0.094	1.00				
X ₉	-0.423	0.432	-0.008	0.152	-0.215	0.109	-0.045	-0.248	-0.223	1.00			
X ₁₀	0.430	-0.479	-0.040	-0.140	0.216	-0.059	-0.059	0.266	0.243	-0.950	1.00		
X ₁₁	-0.113	-0.286	0.440	0.364	0.309	-0.404	0.524	0.523	0.180	-0.686	0.656	1.00	
X ₁₂	0.156	-0.225	0.388	0.198	0.229	-0.429	0.381	0.053	0.061	-0.308	0.283	0.478	1.00
X ₁₃	0.133	-0.237	0.574	0.133	0.034	0.163	-0.004	0.164	0.218	-0.034	-0.033	0.195	
X ₁₄	0.438	-0.271	-0.739	-0.596	-0.337	0.738	-0.726	-0.296	0.172	0.037	0.017	-0.340	
X ₁₅	0.464	-0.299	-0.475	-0.400	-0.177	0.561	-0.504	-0.048	0.262	-0.300	0.251	0.059	
X ₁₆	-0.663	0.449	0.390	0.857	0.386	-0.439	0.803	0.526	-0.120	0.246	-0.297	0.013	
X ₁₇	-0.030	0.150	-0.497	-0.343	1.00								
X ₁₈	0.231	-0.412	0.138	0.208	0.367	-0.058	0.070	0.355	0.124	-0.355	0.544	0.394	
X ₁₉	0.355	0.003	-0.032	0.215	-0.093	1.00							
X ₂₀	-0.042	-0.074	0.385	0.052	-0.142	-0.043	0.229	-0.178	-0.088	-0.160	0.110	0.292	
	0.632	-0.205	-0.587	-0.420	-0.084	-0.133	1.00						
	-0.272	-0.226	0.084	-0.174	0.100	0.330	-0.105	0.234	0.037	-0.098	0.222	-0.005	
	-0.082	0.133	0.058	0.207	-0.151	0.481	-0.246	1.00					
	-0.329	0.209	-0.050	-0.124	-0.291	-0.201	0.022	-0.308	-0.331	0.253	-0.287	-0.122	
	0.143	-0.092	0.113	-0.064	-0.091	-0.239	0.061	-0.244	1.00				

Y₁ = Dependent Variable (Female participation rates)

X₁; X₂....X₂₀ = Independent variable.

Table - 5.5
Maharashtra
Matrix of Correlation

Y ₁	1.00													
X ₁	0.448	1.00												
X ₂	0.006	0.397	1.00											
X ₃	-0.284	-0.498	-0.501	1.00										
X ₄	-0.063	0.502	0.749	-0.385	1.00									
X ₅	0.135	-0.450	-0.613	0.161	-0.851	1.00								
X ₆	-0.409	0.002	-0.139	0.467	0.177	-0.406	1.00							
X ₇	-0.288	0.282	0.145	-0.096	0.279	-0.530	0.501	1.00						
X ₈	-0.250	0.151	0.550	-0.227	0.557	-0.390	0.346	0.042	1.00					
X ₉	0.230	-0.166	-0.828	0.308	-0.637	0.506	-0.075	-0.041	-0.628	1.00				
X ₁₀	-0.418	0.167	0.525	-0.323	0.566	-0.496	0.326	0.382	0.562	-0.743	1.00			
X ₁₁	-0.097	0.167	0.847	-0.291	0.599	-0.469	-0.024	-0.104	0.581	-0.971	0.593	1.00		
X ₁₂	0.081	0.437	0.324	-0.084	0.542	-0.409	-0.035	-0.053	0.233	-0.011	-0.002	0.019	1.00	
X ₁₃	0.199	0.072	0.347	-0.276	0.111	-0.114	0.033	0.108	0.411	-0.369	0.269	0.367		1.00
X ₁₄	-0.348	1.00												
X ₁₅	-0.171	-0.041	-0.198	-0.148	-0.368	0.233	0.010	0.514	-0.266	0.155	0.083	-0.230		
X ₁₆	-0.632	0.108	1.00											
X ₁₇	-0.142	-0.154	-0.260	-0.001	-0.441	0.384	0.069	-0.023	-0.200	-0.047	0.083	0.038		
X ₁₈	-0.723	0.007	0.681	1.00										
X ₁₉	0.391	0.310	0.299	-0.351	0.490	-0.416	0.009	0.078	0.209	-0.170	0.237	0.158		
X ₂₀	0.337	0.233	-0.457	-0.582	1.00									
X ₁	-0.429	-0.586	-0.428	0.547	-0.522	0.375	0.189	-0.105	-0.218	0.130	-0.135	-0.136		
X ₂	-0.475	-0.116	0.281	0.462	-0.740	1.00								
X ₃	0.111	0.150	-0.280	-0.108	-0.218	0.207	-0.115	0.022	-0.113	0.142	0.021	-0.193		
X ₄	-0.233	0.034	0.196	0.045	0.205	-0.058	1.00							
X ₅	-0.690	0.482	-0.291	0.103	-0.234	0.273	0.151	0.177	0.071	0.200	0.091	-0.288		
X ₆	-0.237	0.250	0.447	0.302	-0.488	0.461	0.003	1.00						
X ₇	0.123	0.116	0.339	0.078	0.010	-0.118	0.107	0.062	0.027	-0.381	0.094	0.458		
X ₈	-0.179	0.118	-0.088	0.209	-0.058	-0.058	-0.339	-0.420	1.00					

Y₁ = Dependent Variable (Female participation rates)
X₁; X₂....X₂₀ = Independent variable.

Availability of irrigation facility or assured water supply facilitates the use of more intensive application of other modern inputs and thereby increases the output and income, reducing the need for employing women to supplement family income. Thus in rural areas, irrigation coupled with double cropping influence the participation of women in two ways. (i) It may discourage some women to work (ii) new technology may substitute men for women.³ Thus negative relationship between the percentage area irrigated and female participation in work exists in all the four regions except West Bengal; where irrigated area is poorly correlated with modernisation of agriculture ($r = 0.145$) and cropping intensity ($r = 0.231$). Even using state level data, Reddy⁴ found a negative relationship between the two. West Bengal has a poor level of irrigation development. However, the state has an abundant supply of water through monsoon rainfall. This may explain the insignificant relationship between irrigated area and female participation in work in this region.

5.3.4 Size and Concentration of Holding

All the regions show a positive relationship between the size of holding and the female participation rate (Table 5.1a). However, the relationship is strong and significant

3. Indira Hirway (1979), op.cit.

4. D. Narasimha Reddy (1975), op.cit.

in Andhra Pradesh and Punjab and Haryana ($r = 0.563$ and 0.477 respectively). This means, larger the size of holding the higher the proportion of female employment. Although, the use of mean size of holding as a summary statistic may itself be questionable, the result shows a contrast to Bharadwaj's⁵ view that smaller holdings use more intensive labour and, therefore, more women labour than those of larger holdings. Using state level informations Gulati⁶ did not find a positive relationship between smallness of land holdings and higher participation of women in work. The matrix of inter-correlation (Tables 5.2, 5.3, 5.4 and 5.5) shows that in all the states except West Bengal mean size of holding is negatively correlated with growth of agricultural output, irrigated area and modernisation of agriculture. In West Bengal also mean size of holding is negatively correlated with modernisation of agriculture. This proves that larger size of holding coupled with low agricultural growth of output, low mechanisation and modernisation of agriculture and less irrigation tends to increase female participation in economic activities in almost every region.

Concentration of landholding does not show any significant relationship with female work participation, nor it

5. Krishna Bharadwaj, Production Conditions in Indian Agriculture, Cambridge University Press, 1974, pp.11-18.

6. Leela Gulati (1975), op.cit.

shows any significant relationship with family workers or agricultural wage earners. Contrary to the hypothesis, in Maharashtra, concentration of holding is positively related with family workers ($r = 0.788$), but negatively correlated with female agricultural wage-earners (Table 5.1b).

5.3.5 Male Work Force in Non-agricultural Activities and Female Participation

No significant relationship exists between female workers and proportion of male workers engaged in non-agricultural activities. However, both are negatively related in Maharashtra, and Punjab and Baryana ($r=0.288$ and $-.023$ respectively) but in both the cases the relationship is statistically insignificant. On the other hand, in West Bengal and Andhra Pradesh the increase in the proportion of male workers in the non-agricultural activity is marked by a higher proportion of workers among females. Mukherji⁷ observed that higher female participation is influenced by the non-availability of male workers engaged in non-agricultural activities. But this does not seem to operate in all the regions. Moreover, Mukerji observed a positive correlation between the proportion of rural male workers in non-agricultural activity and female participation in agricultural labour and not total female employment.

7. A.B. Mukerji (1978), op.cit., p.23.

5.3.6 Sectoral Distribution of Work Force and Female Participation

The female participation is positively correlated with the proportion of work force in the primary sector and negatively related with the proportion in the secondary sector in all regions with the exception of Andhra Pradesh. This supports the view expressed in the Report of the National Committee,⁸ as well as by Ambannavar⁹ and De' Souza,¹⁰ that a more developed primary sector providing lower prestige jobs is conducive to female employment whereas greater industrialisation particularly in the modern sector is detrimental to female participation in work. The positive correlation with the primary sector in Punjab and Haryana, West Bengal and Maharashtra are statistically insignificant whereas the negative correlation with secondary sector is significant only in Maharashtra. In Andhra Pradesh, the female participation is positively correlated with ($r=0.430$, significant at 90 per cent level) employment in the secondary sector whereas it is negatively correlated with primary sector ($r= -0.423$, significant at 90 per cent level). The positive correlation with the secondary sector may have resulted from a higher employment in the household industry,

8. Status of Women in India (ICSSR), 1975.

9. J.P. Ambannavar (1974), op.cit.

10. V.S. De' Souza, op.cit.

such as bidi making¹¹ which is traditionally held by women. A strong positive relationship exists between total female employment and their proportion in household industries ($r = 0.560$, significant at 95 per cent level) in Andhra Pradesh.

The overall employment in tertiary sector does not show any statistically significant relationship with female employment. Only in the case of Punjab and Haryana, the coefficient goes up to 0.307. This region shows a high proportion of women in the tertiary sector and a relatively low share in primary and secondary sectors, compared to other regions. A rise in tertiary occupations seems to enhance female employment in Punjab and Haryana.

5.4 ROLE OF DEMOGRAPHIC VARIABLES

The demographic variables relate both the general economic-demographic situation as well as the biological attributes in terms of reproduction characteristics of women.

5.4.1 Sex-Ratio

Mukerji¹² observed that the sex-ratio of the rural population indicating the excess or deficit of males and females available for labour are positively correlated. Sex-ratio, however, cannot be empirically correlated where male selective outmigration from rural to urban areas within the

11. A significant proportion of women workers are engaged in bidi making in Andhra Pradesh, according to 1971 census.

12. A.B. Mukerji (1975), op.cit., p.20.

region or from rural area of the region to rural area outside the region has resulted in a decrease in the number of males available for agricultural labour, provided that there are no taboos operating against female participation and farming is still subsistence and traditional type. However, the analysis for all the four regions shows that, although a positive relationship exists between sex-ratio and female work participation in all the regions except West Bengal, the correlation coefficients are statistically insignificant. The coefficient of correlation for Punjab and Haryana is 0.307 but tends to be statistically insignificant.

5.4.2 Effects of Urbanisation

Ambannavar,¹³ Majumdar¹⁴ and many other researchers convincingly argue that urbanisation with its accompanying industrialisation, increasing complexity of markets and production techniques has been a relentless force displacing large masses of women from their traditional occupations, make their productive and professional skills obsolete and reduce them to the status of unskilled and unwanted workers. The alternative opportunities which open up due to urbanisation are in terms of services or new industries, which are for a different class of women, educated and with new type

13. J.F. Ambannavar (1974), op.cit.

14. Vina Majumdar (1975), op.cit.

of skills. They can hardly compensate for displaced illiterate rural women with restricted mobility. Thus ceteris paribus, an increase in urbanisation inevitably results in a decline in the proportion of women workers. However, in the study area only Punjab and Haryana and West Bengal conform to this hypothesis with a moderately negative correlation between the proportion of urban people and female participation rate ($r = -0.546$ and $r = -0.402$ respectively). There is a positive relationship between the two in Andhra Pradesh and Maharashtra, but the relationship is statistically insignificant. However, it is important to note that, urbanisation may also provide employment to women in tertiary activities such as domestic services which do not need any skill or white collar jobs such as teaching, nursing and typing etc. - to the educated women who would otherwise have remained jobless. This may explain positive relationship between urbanisation and female participation in Andhra Pradesh and Maharashtra.

Secondly if urbanisation offers such services at least in the tertiary sector, a positive relationship is expected between female work participation in tertiary sector and urbanisation. Table 5.1b shows that except Andhra Pradesh, in all the three regions; the relationship is positive and quite significant in case of Punjab and Haryana and West Bengal ($r=0.603$ and $r=0.708$ respectively).

Both the negative and positive values of correlation are, however, statistically insignificant in the case of Andhra Pradesh and Maharashtra.

5.4.3 Population Growth and Reproductive Functions of Women

A higher population growth results in a preoccupation of women with their biological role of reproduction. But this does not necessarily restrict the employability of women in Punjab and Haryana and Andhra Pradesh, where female employment is positively associated with population growth and ratio of children below 5 years of age group to the women in the reproductive age group (15-49). This may be possible as Ridley¹⁵ points out that, in rural areas, due to the nature of the work the biological reproductive role can easily be combined with an economic role, since economic activities are centred within the family. It is true that in rural areas most of the work women do are simple and family enterprises, where women continue to work with child-care and household chores. Even in many areas the family structure is such that much of the rearing burden is not shared by the mothers personally.¹⁶ This may explain the positive association between the reproductive role and female participation in

15. Jeanne C. Ridley (1968), op.cit., pp.15-25.

16. Leela Gulati (1975), op.cit., pp.35-42.

work in Punjab and Haryana and Andhra Pradesh. Moreover, in Punjab and Haryana a large proportion of women are engaged in tertiary activities which provide facilities such as maternity benefits and definite hours of work as well as holidays. Thus, employment in such regions does not come into conflict with the reproductive functions of the women who are working. But in West Bengal, higher population growth, coupled with a larger bearing and rearing responsibilities seem to come into conflict with female employment which is indicated by a negative correlation between these variables (Table 5.1a). The negative relationship in Maharashtra is, however, insignificant. The matrix of inter-correlation for all the regions shows a high correlation between population growth and the ratio between children below 5 years age group and women in the reproductive age group (15-49).

5.5 SOCIO-CULTURAL VARIABLES

Socio-cultural factors such as marital status, educational status and caste or tribal component of the population exert tremendous influence on female participation in economic activity either positively or negatively. Due to widely varying customs, taboos and norms the role of these factors are also likely to vary over space.

5.5.1 Female Literacy and Work Participation

Perhaps the most important variable affecting negatively the female participation is literacy. Advent of literacy paradoxically has discouraged women to accept work in the fields which are considered of lower prestige. At the same time, the literate women are not so qualified and professionally skilled to be accepted in the modern jobs of so-called 'higher prestige'. Except Maharashtra, which has a higher level of rural female literacy, in the remaining states, the proportion of literate women in the rural population is negatively associated with the proportion of workers among women. The rise of female education in the rural areas has demarcated a line between 'manual work' and 'mental work', the latter being the prerogative of the literates. It has also increased the quantum of sanskritisation.¹⁷ Even in the lower strata of the population this enhances the process of withdrawal of women from the economic participation. The demand for non-agricultural activities, particularly in the white collar jobs is limited in the rural areas, thereby resulting in a depression in the proportion of workers among women.

It is believed that at the lowest level of education females would still go for manual work in agriculture and industries. But with a medium level of education, the

17. M.N. Srinivas (1978), op.cit., pp. 14-15.

employability will be drastically reduced, as they would neither be accepted in modern jobs for lesser skill, nor they can participate in agricultural activities, as a symbol of their newly earned status through literacy. With very high level of education, it is expected that the females may partly be absorbed in the white collar jobs which would keep in terms with their status. Generally these women with a relatively higher level of education join jobs like typing, teaching and nursing. Thus a 'U' shaped pattern has been proposed by various scholars in relation to female literacy level and their employment.

However, the relationship between female literacy at different levels and their work participation shows divergent trends in these four regions. In Punjab and Haryana, with increase in the proportion of literate females in the below primary level category, there is an increase in the proportion of workers, but a negative relationship exists between the proportion of women workers and proportion of literate females with medium (above primary level but below higher secondary) and high (above higher secondary) level of literacy. The negative correlation with the latter category is, however, not statistically significant (Table 5.1b). A similar but statistically non-significant relationship exists in case of Maharashtra. In West Bengal female participation in work is negatively correlated (significantly) with the

proportion of literate females with higher level of literacy, whereas a positive but insignificant relationship exists with medium level of literacy. Both in West Bengal and Andhra Pradesh, increase in the proportion of literate females with low and medium level of education is negatively associated with the proportion of women working; but unlike West Bengal, Andhra Pradesh shows a significant positive relationship between the proportion of women workers and literate females with higher levels of literacy. This pattern shows that no uniform relationship exists between different levels of literacy among females and their participation in the work. The relationship itself gets modified depending on different regional cultures and attitudes to work.

However, overall literacy has a highly positive correlation with the proportion of workers among women in the tertiary sector in Punjab and Haryana, West Bengal and Andhra Pradesh, but tends to be independent in case of Maharashtra.

5.5.2 Marital Status and Female Work Participation

The proportion of married women shows a significant relationship with the proportion of workers among women in Punjab and Haryana and Maharashtra. But the relationship with the proportion of widowed, separated and divorced

women is statistically insignificant in all the four regions. In case of Punjab and Haryana, a strong positive relationship exists between the proportion of married women and that of workers among women, whereas in Maharashtra, the relationship is negative. In West Bengal and Andhra Pradesh, although positive, the coefficient of correlations are not statistically significant. The positive association between married status and work participation of women shows that marriage does not necessarily become restrictive to female participating in work. In rural areas, agriculture is the most important activity and involvement of the whole family is the characteristic features in such pursuits. The nature of rural work does not necessitate the married women to go to long distance for work and most of the works can be combined with household chores. The women who work, do so under the pressure of supplementing family income. The marriage system in India is such that the depressed class women marry in their class/caste only and do not, in most cases, move to economically better off classes, thus without discontinuing their economic activity. This situation is clearer in case of Punjab and Haryana.

5.5.3 Scheduled Component of the Population and Female Work Participation

No significant relationship exists between the proportion of scheduled caste women and proportion of workers among

women in West Bengal and Andhra Pradesh. However, in Punjab and Haryana and Maharashtra, a negative relationship (statistically significant) exists between the two, indicating that increase in the proportion of scheduled caste among females is associated with a decrease in the proportion of workers among women. As far as scheduled tribe women are concerned, a statistically significant and positive relationship is observed in West Bengal. The positive relationship, in Maharashtra, however, is not significant. Proportion of scheduled tribe women have negative relationship with the worker-rate of females in Andhra Pradesh. Although Gulati¹⁸ could not find any definite relationship between female participation and scheduled caste and scheduled tribe component among women using state level informations, the above analysis shows that at least in some regions, definite relationships could be established by using district level data. In Punjab and Haryana, a negative relationship is observed between the proportion of scheduled caste component of women and the proportion of women working as agricultural wage earners.

The above analysis shows that although depressed caste women such as those belonging to scheduled castes and scheduled tribes have much higher female participation in

18. Leela Gulati (1975), op.cit.

work, their proportion in the total women population cannot be taken as a good predictor of female participation in all the regions. This observation is similar to that of Gulati¹⁹ and Raju,²⁰ using state level and district level data respectively. Particularly in north India, Boserup²¹ observed that even agricultural labourers prefer their women stay at home and shun participation in agricultural activities as wage-earners as a sign of improved status. However, at this stage, one has to take note of the limitations of the census data, particularly in case of women working in the unorganised sector of rural economy.

Having analysed the relationship between different variables with female participation in economic activity at district level, it seems pertinent to turn to the simultaneous influence of these variables on female participation in work.

5.6 ANALYSIS OF MULTIPLE AND STEPWISE REGRESSION

The multiple and stepwise regression analysis show an interplay of different combination of factors and their relative importance in explaining the spatial variation in female work participation in different regions. The result of stepwise regression of female participation in work and

19. Ibid.

20. Saraswati Raju (1981), op.cit.

21. Ester Boserup (1970), op.cit., p.75.

different variables: economic, demographic and socio-cultural are presented separately for all the four regions in Tables 5.6, 5.7, 5.8 and 5.9.

5.6.1 Punjab and Haryana

Table - 5.6
Step-wise Regression

Step	Variable	R^2	Increase in R^2	Standard error
1	X_{17} Percentage of married females to total females	0.592	(+)	0.082
2.	X_{12} Sex-ratio	0.721	0.129 (+)	0.006
3.	X_5 Mean size of holding	0.788	0.067 (+)	0.188
4.	X_7 Intensity of cultivation	0.895	0.037 (-)	0.015
5.	X_{16} Percentage of literate females to total females	0.841	0.016 (-)	0.019
6.	X_6 Percentage of irrigated area	0.853	0.012 (-)	0.007
7.	X_{13} Percentage of urban people to total population	0.860	0.007 (+)	0.021
8.	X_1 Growth of agricultural output	0.864	0.004 (+)	0.139

Total variation explained 86.4 per cent.
(The mathematical sign in the parenthesis denotes the the slope of the 'b' coefficient)

Table 5.6 shows that six variables are important in explaining variation in female work participation. These

MARITAL STATUS AND FEMALE PARTICIPATION RATE

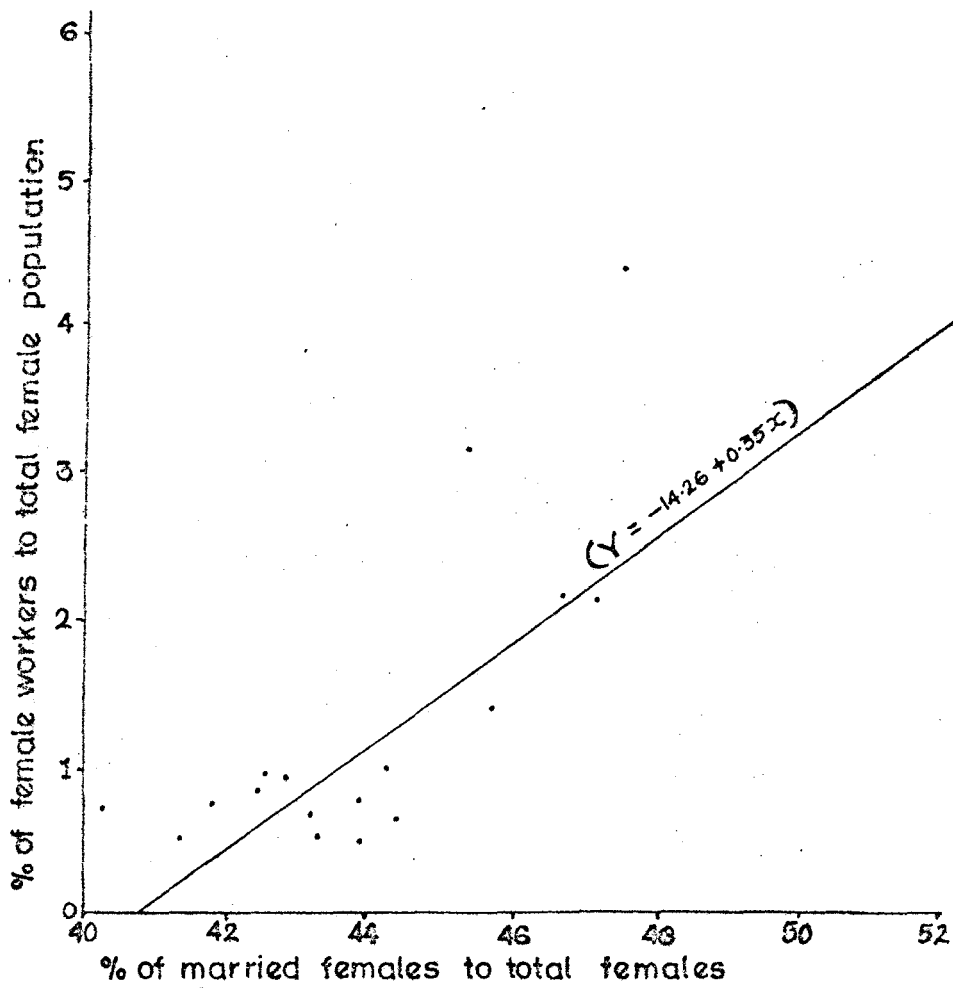


Fig. 51 Punjab and Haryana

are proportion of married females, sex ratio, mean size of holding, intensity of cultivation (modernisation and mechanisation of agriculture). Proportion of literate females and percentage of irrigated area together explaining 85.3 per cent of variation. The remaining two variables viz., level of urbanisation and growth in agricultural output come out less significant variables adding less than 1 per cent each to the total district-wise variation. Proportion of married females in the total female population emerged as the most important variable (Fig. 5.1) explaining as much as 59.2 per cent of total variation. Proportion of married women and rural sex-ratio together explain 72 per cent of the district-wise variation. All the remaining variables together add only 14.3 per cent to the explanation.

$$Y_P = -29.715 + 0.157^* X_{17} + 0.026^{***} X_{12} + 0.582^{**} X_5 \\ -0.044^* X_7 -0.035 X_{16} -0.014 X_6 +0.030 X_{13} + \\ 0.156 X_1$$

Y_P = Female participation rate.

The above equation shows that where proportion of married women in the total women population is more and where the sex ratio is high the female participation in work is high. It is important to note that in Punjab and Haryana, the level of female participation in economic

*Significant at 95 per cent level
 **Significant at 99 per cent level
 ***Significant at 99.9 per cent level.

activity is extremely low. Thus a higher sex-ratio indicating a larger male outmigration leaves behind the married women in rural areas to support the family. In other words, a male selective outmigration compels the peasant women to work.

5.6.2 West Bengal

Table-5.7

Step-wise Regression

Step	Variables entered	R ²	Increase in R ²	Standard error
1.	X ₂₀ Percentage of S.T. women in the total women population	0.449 (+)	-	0.055
2.	X ₁₈ Percentage of widowed/separated/divorced women	0.746 (+)	0.297	0.169
3.	X ₁₆ Percentage of literate women	0.846 (-)	0.100	0.066
4.	X ₈ Percentage of male work force in non-agricultural activities	0.931 (+)	0.085	0.046
5.	X ₇ Intensity of cultivation	0.946 (-)	0.015	1.931
6.	X ₁₂ Sex-ratio	0.951 (-)	0.005	0.017
7.	X ₅ Mean size of holding	0.954 (-)	0.003	1.109

Total variation explained 95.4 per cent
(The mathematical sign in the parenthesis denotes slope of the 'b' coefficient).

SCHEDULED TRIBE FEMALES AND
FEMALE PARTICIPATION RATE

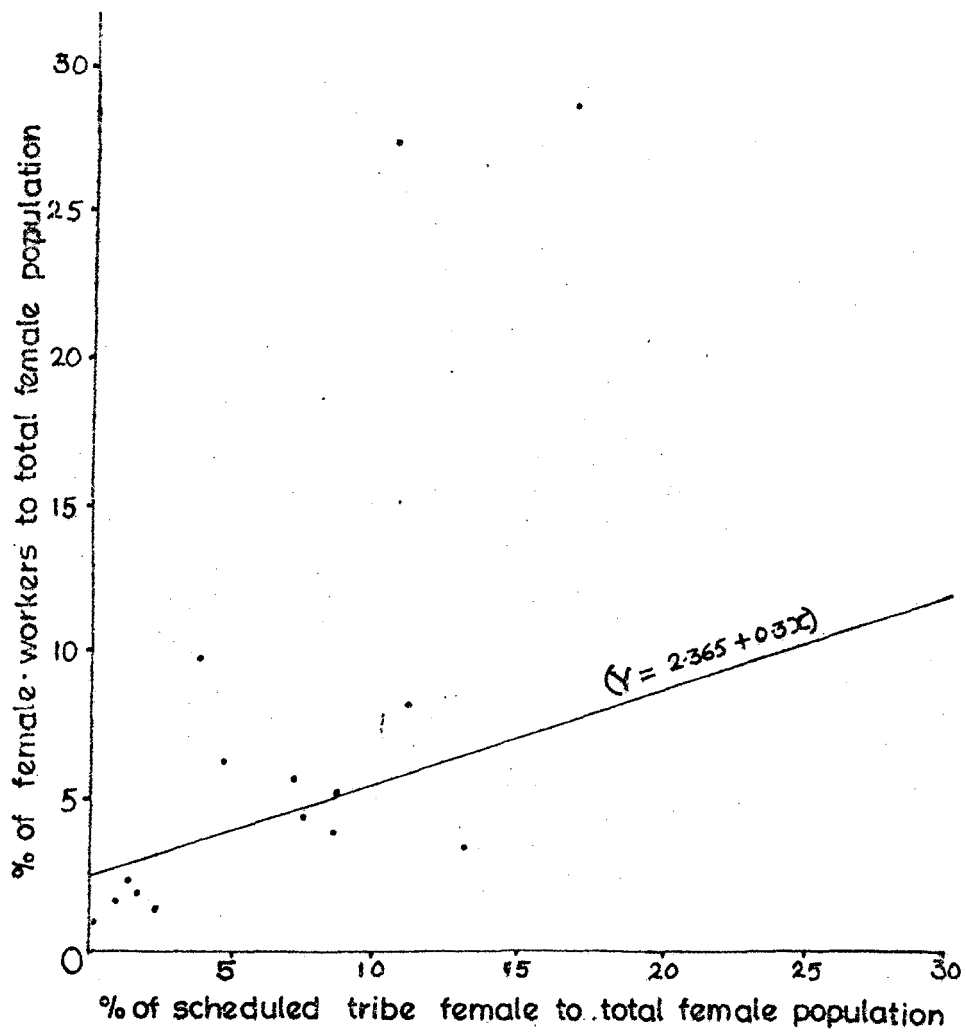


Fig.5.2 West Bengal

Table 5.7 shows that seven variables together explain 95.4 per cent of the total district-wise variation in female work participation in West Bengal. The most important variable which explains 44.9 per cent of the total variation is the tribal proportion among women (Fig.5.2). The next important variable is the proportion of divorced/separated or widowed component of the female population explaining an additional 29.7 per cent of the total district-wise variation in female participation rate. Together, these two variables account for 74.6 per cent of the total district-wise variation. Level of literacy among females comes as next important variable increasing the explanatory power to 84.6 per cent. The employment of male in non-agricultural activities also emerge as the fourth most important variable in explaining female participation. Together these variables explain 93.1 per cent of the district-wise variation in female participation in work in West Bengal. Intensity of cultivation, sex-ratio and mean size of holding are less influential variables together adding only 2.3 per cent to the explanation.

$$Y_P = 19.613 + 0.311^{***} X_{20} + 1.295^{***} X_{18} - 0.358^{***} X_{15} \\ + 0.153^{**} X_8 - 3.729 X_7 - 0.029 X_{12} - 1.256 X_5$$

***Significant at 99.9 per cent level

**Significant at 99 per cent level

*Significant at 95 per cent level.

The above equation shows that areas with high proportion of scheduled tribe women and widowed/separated/divorced women, a larger proportion of male work force in the non-agricultural activities and a low level of literacy for workers are marked with a high level of female participation in economic activity in West Bengal.

5.6.3 Andhra Pradesh

Table - 5.8

Step-wise Regression

Step	Variables	R ²	Increase in R ²	Standard error
1.	X ₁₆ % of literate females	0.440 (-)	-	0.104
2.	X ₂₀ % of tribal females	0.572 (-)	0.132	0.116
3.	X ₁₄ Ratio of children to females in the re-productive age group	0.674 (-)	0.102	0.237
4.	X ₁ Growth in agricultural output	0.744 (-)	0.070	0.317
5.	X ₆ % of irrigated area	0.757 (-)	0.033	0.017
6.	X ₄ Mean size of holding	0.762 (+)	0.005	0.762
7.	X ₉ % of work force in primary sector	0.771 (-)	0.009	0.080

Total variation explained 77.1 per cent
(The mathematical sign in the parentheses denotes the slope of the 'b' coefficient).

Extent of female literacy, proportion of scheduled caste women, child-woman ratio, growth in agricultural output,

LITERACY AND FEMALE PARTICIPATION RATE

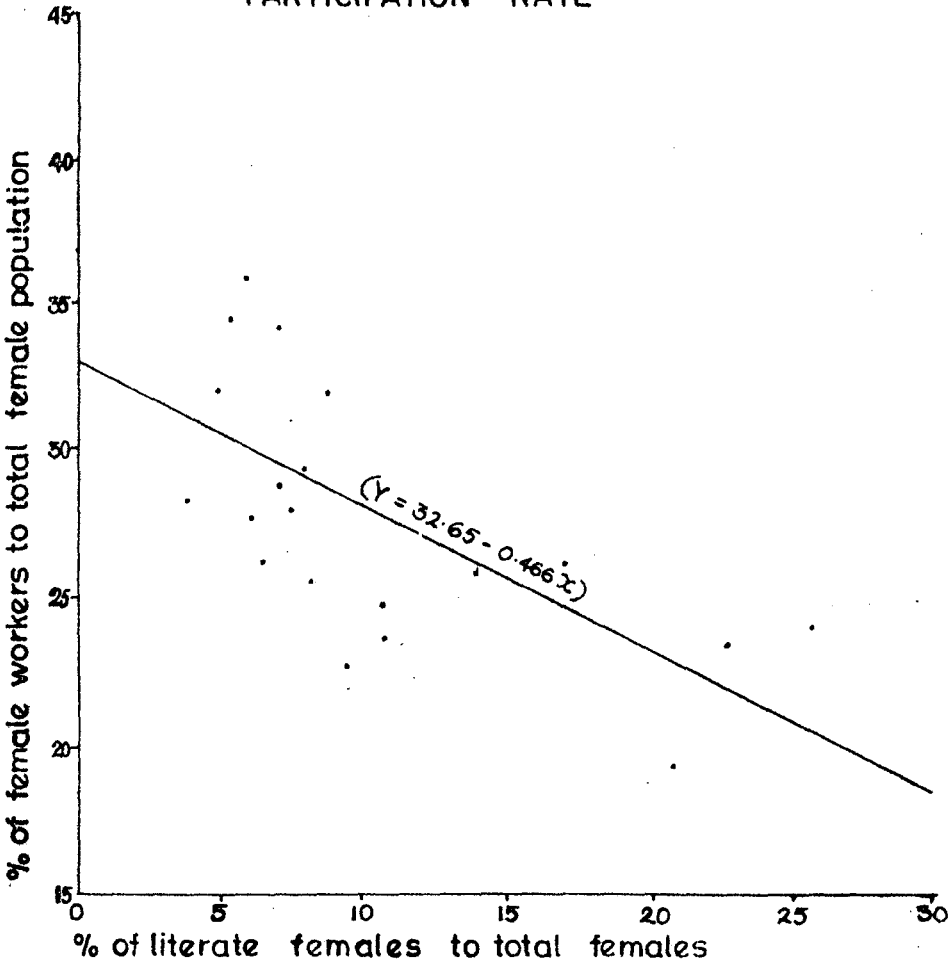


Fig. 5'3 Andhra pradesh

percentage irrigated area, mean size of holding and percentage of work force in the primary sector are some of the variables which come out as important ones simultaneously explaining variation in rural females' participation in economic activity. Together all these variables account for 77.1 per cent of district-wise variation. Literacy is the single most important variable which alone accounts for 44 per cent of the total variation (Fig. 6.3). Addition of the variable i.e., percentage of scheduled component in the female population at the second step increases the explanation to 57.2 per cent. These two variables and the child-woman ratio, growth in the agricultural output and proportion of area under irrigation together explain 75.7 per cent of the variation. The last two variables are insignificant as far as their contribution in the total explanation of the variation is concerned (Table 5.8).

$$Y_F = 26.01 - 0.320^{**} X_{16} - 0.193 X_{20} - 0.031^{**} X_{14} \\ - 0.692^* X_1 - 0.739 X_6 + 1.121 X_4 - 0.099 X_9$$

The equation indicates that with lower literacy level and lesser proportion of tribal proportion of women, lower reproductive burden, in areas of low growth in agricultural output, having higher size of holding and a higher proportion

**Significant at 99 per cent level

*Significant at 95 per cent level

of work force in the primary sector, the female participation is higher in Andhra Pradesh.

5.6.4 Maharashtra

Table-5.9

Step-wise Regression

Step	Variables	R^2	Increase in R^2	Standard errors
1	X_{19} % scheduled caste women	0.476 (-)	-	0.228
2.	X_{10} % work force in secondary sector	0.584 (-)	0.108	0.439
3.	X_1 Growth in agricultural output	0.617 (+)	0.033	0.298
4.	X_4 Mean size of holding	0.669 (+)	0.052	0.715
5.	X_{16} % literate females	0.720 (+)	0.51	0.152

Total variation explained 72.0 per cent.
(The mathematical sign in the parenthesis denotes slope of the 'b' coefficient).

Proportion of scheduled caste females in the total female population comes out as the most important variable (Table 5.9, Fig. 5.4) in explaining the variation in the female participation in work in Maharashtra. This variable explains as much as 47.6 per cent of the total district-wise variation. Addition of the second variable i.e., proportion of the work force in the secondary sector increases the

SCHEDULED CASTE-POPULATION AND
FEMALE PARTICIPATION RATE

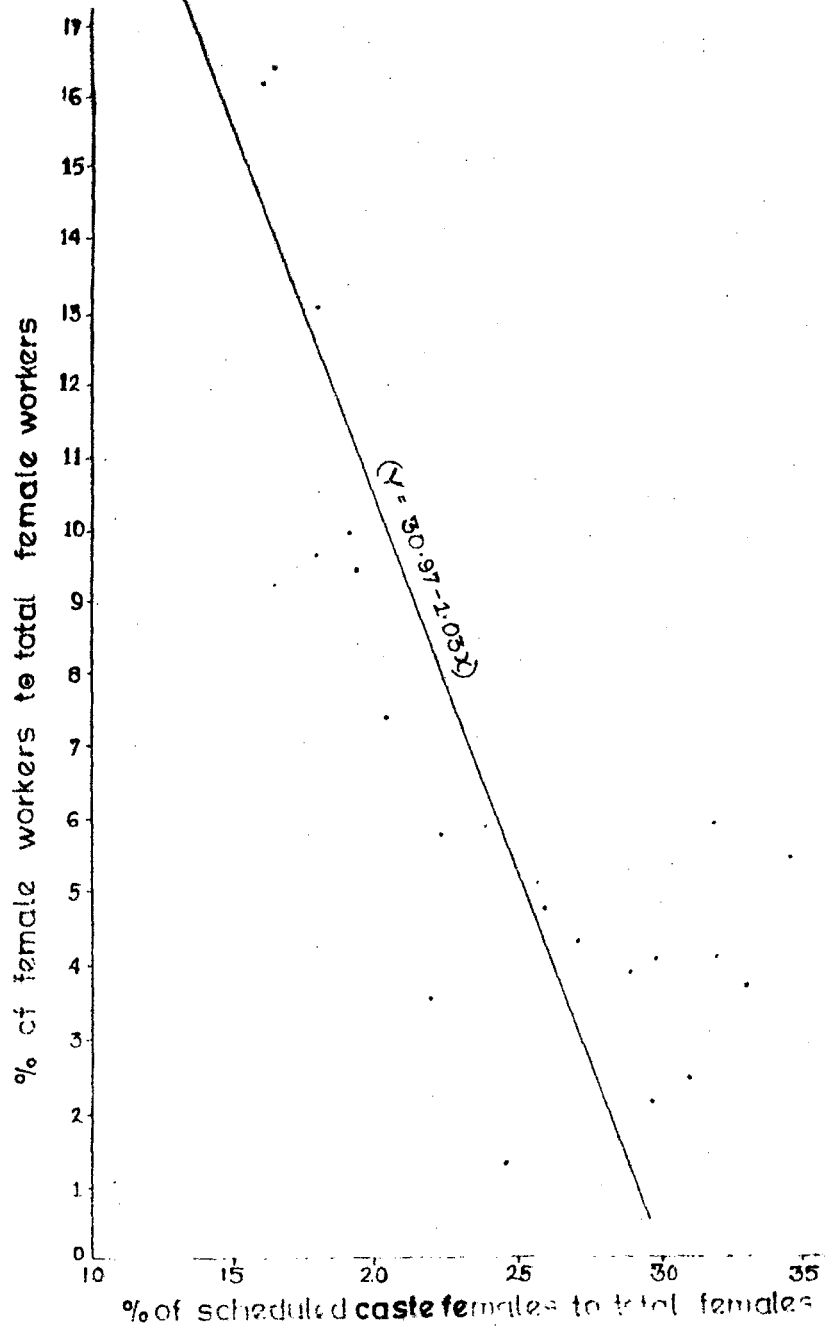


Fig. 54 Maharashtra

explanation to 58.4 per cent. At the 3rd, 4th and 5th steps the variables such as growth in agricultural output, mean size of holding and literacy add 13.6 per cent to the total variation explained. Together all these variables account for 72.0 per cent of the total district-wise variation in female participation in economic activity.

$$Y_F = 22.67 - 0.668^{**} X_{19} - 0.967^* X_{10} + 0.760^* X_1 \\ + 1.804^* X_4 + 0.312 X_{16}$$

The above equation shows that with a lower level of scheduled caste female population, lesser proportion of work force in the secondary sector, low income and with higher size of holding the female participation increases in Maharashtra.

5.7 CONCLUDING STATEMENT

The above analysis shows that socio-cultural and demographic variables emerge as most important factors in explaining spatial variation in female work participation in all the areas studied. The step-wise regression analysis shows that the socio-cultural factors enter as first two variables in all the four regions except Maharashtra, explaining maximum percentage of variation in the level of female participation rate. In case of West Bengal first

three most important variables are non-economic explaining 84.6 per cent variation. Even in Maharashtra ^{Proportion} of scheduled caste comes as the single most important variable explaining 47.6 per cent of the total variation. One important aspect to be noted here is that, the role of economic factors in explaining the variation in female participation rate in this region is much more important than any other region. The role of non-economic factors seems most important in case of West Bengal and Punjab and Haryana.

All the regions have two factors in common in the multiple regression analysis. These are literacy (socio-cultural) and mean size of holding (economic). However, the former factor is important in case of Andhra Pradesh (step 1) only and the latter in case of Punjab and Haryana (step 3).

In agriculturally advanced regions such as Punjab and Haryana and West Bengal the economic factors are much less important whereas in agriculturally less advanced regions of Andhra Pradesh and Maharashtra, the economic factors do play a role in explaining variation in female work participation.

That the non-economic factors are more important in explaining variations in female work participation rate than economic ones, is a conclusion that needs thorough investigation by further research.

Chapter-VI

C O N C L U S I O N

Despite the difficulty involved in analysing female participation rate, its distribution by industrial categories and explanation, certain broad conclusions and generalisations arrived at in this study of the selected regions in India, may be stated.

The generally held view that female participation rates and their share in the work force is very low in India, is not spatially uniform even in areas where the females have almost withdrawn from work. This conclusion gets further strengthened by analysing female participation in work at lesser aggregative levels such as taluks and villages. In West Bengal, for example, the female participation rates are reported to be one of the lowest in India. However, it is not uncommon to have villages with more than 80 per cent women participating in work. At every lower level of analysis the variation in the female work participation gets further accentuated. Particularly at village level, the level and extent of female participation in economic activity seems most revealing. There are villages where no women are reported to be working against villages which have a very high rate of female participation.

However, in general, in the southern states the participation rate is very high compared to that of northern

states at every level. Particularly in Andhra Pradesh the participation rates remain consistent at all levels.

The generally low level of participation in Punjab and Haryana poses some very important questions. Whether this withdrawal of females from the work force irrespective of caste background is voluntary or is an involuntary decline in participation due to technological change or other factors? These issues also throw some pertinent questions on the females' status. However, as Pushpa Sundar holds,¹ this question has to be analysed only in the class background of those women who have withdrawn from the work.

Even the areas in Andhra Pradesh and Maharashtra, where female participation in work is high or very high, it cannot be said to have been due to the presence of scheduled castes or scheduled tribes. The contiguous belt of high female participation covering both Andhra Pradesh and Maharashtra has the least proportion of females belonging to scheduled communities. Shandara district in Maharashtra, which has the highest female participation in work has no tribal population at all. An enquiry into the reasons for such high participation rates in these areas may be an interesting research avenue.

West Bengal is a region where the pattern of female participation is extremely variant over space. In the

1. Pushpa Sundar (1981), op.cit., p.866.

northern districts the female participation rate as well as their contribution in the work force is very high compared to the eastern districts surrounding the urban district of Calcutta. Is it due to the urban influence of Calcutta?

The analysis of industrial distribution of women workers also shows distinct character of Punjab and Haryana as compared to other regions. Although there has been an almost complete exclusion of women from the work force in this region, the few women who work seem to be very diversely distributed in various sectors of the economy. Whether there has been an actual shift of female workers to other sectors or is it due to a depression in the primary sector has to be looked into more closely in the background of broader questions such as work opportunities for women in other sectors than the primary.

In West Bengal, most of the districts show not only low female participation in work, but also a high concentration in the primary sector particularly in the agricultural wage earning activities. This shows a real impoverishment in terms of female participation and restricted opportunities for women in other sectors of the economy.

The female workers are mostly concentrated in agriculture in Andhra Pradesh and Maharashtra and there seems little change in their occupational mobility. In the context

of a very high female participation rates and the drudgery of agricultural operations a majority of women workers are suffering from a burden of which is popularly known as "double day".

That the female participation in work is positively associated with the activities which are unpaid ones such as working on the family farms or in cottage industries shows the participation of women in work increases with the availability of such works in all the regions. On the other hand overall female participation is negatively associated with wage earning activities such as agricultural labour, or services requiring better skills and professional training.

It was observed that the explanation of female participation in economic activity is not possible at the level of aggregative units such as states, as the states differ a lot within themselves in terms of economic, social and cultural milieu. Such explanations should be sought at the level of lower spatial units which would reveal the impact of factors resulting from highly sub-regional and local conditions.

The generally accepted explanation for female participation that the presence of scheduled castes/tribes would influence the participation rates is put for trial

for its differential influence in different regions. This also strengthens the view that the scheduled communities do not behave in a spatial vacuum; they are also influenced by the prevailing values, norms and customs at the sub-regional or local levels.²

It is interesting to note that the explanation for the variation in female participation rests more heavily on non-economic factors than the economic ones. This is more so in areas where agricultural modernisation has reached a high level (such as Punjab and Haryana). However, in areas where agriculture is generally backward economic factors still prove important in explaining the spatial variation in economic activity.

The dissertation raises a number of vital questions which can be answered satisfactorily with the help of further research into this otherwise less explored but socially important field of enquiry.

2. Leela Gulati (1975), op.cit.; and
Sarvaswati Raju (1981), op.cit.

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Appendix-1
District Identification

Location code	Name of the district	Location code	Name of the district
PUNJAB			
1.	Gurdaspur	5.	Krishna
2.	Amritsar	6.	Guntur
3.	Ferozpur	7.	Ongole
4.	Ludhiana	8.	Neillore
5.	Jullundur	9.	Chittoor
6.	Kapurthala	10.	Cuddapah
7.	Hoshiarpur	11.	Anantapur
8.	Ropar	12.	Kurnool
9.	Patiala	13.	Mahbubnagar
10.	Sangrur	14.	Hyderabad
11.	Bhatinda	15.	Medak
HARYANA			
1.	Ambala	16.	Nizamabad
2.	Karnal	17.	Adilabad
3.	Rohtak	18.	Karimnagar
4.	Gurgaon	19.	Warangal
5.	Mahendragarh	20.	Khammam
6.	Hissar	21.	Nalgonda
7.	Jind	MAHARASHTRA	
WEST BENGAL			
1.	Darjeeling	1.	Greater Bombay
2.	Jalpaiguri	2.	Thana
3.	Cooch-Behar	3.	Kolaba
4.	West Dinjapur	4.	Ratnagiri
5.	Malda	5.	Nasik
6.	Murshidabad	6.	Dhulia
7.	Nadia	7.	Jalgaon
8.	24-Parganas	8.	Ahmednagar
9.	Hovrah	9.	Poona
10.	Calcutta	10.	Satara
11.	Hooghly	11.	Sangli
12.	Burdwan	12.	Sholapur
13.	Birbhum	13.	Kholapur
14.	Bankura	14.	Aurangabad
15.	Midnapore	15.	Parbhani
16.	Purulia	16.	Bhir
ANDHRA PRADESH			
1.	Srikakulam	17.	Nanded
2.	Vishakhapatnam	18.	Osmanabad
3.	East Godavari	19.	Buldhana
4.	West Godavari	20.	Akola
		21.	Amravati
		22.	Yeotmal
		23.	Wardha
		24.	Nagpur
		25.	Bhandara
		26.	Chandrapur.

(11)

Appendix-12Worker-rate of Rural Males and Females

Location code	Name of States/ districts	Rural Male	Rural Female	Rural Male workers	Rural Female workers	% of female workers to total female population	% of male workers to total male population
1	2	3	4	5	6	7	8
	PUNJAB						
1	Gurdaspur	517,827	462,338	256,344	3,415	0.73	49.50
2.	Amritsar	699,544	600,486	371,617	5,573	0.93	52.10
3.	Ferozpur	817,433	710,255	460,521	5,303	0.75	56.33
4.	Ludhiana	497,760	427,599	268,232	3,516	0.82	53.88
5.	Jullunder	539,686	477,651	273,530	3,722	0.78	50.68
6.	Kapurthala	173,164	156,680	90,323	776	0.50	52.16
7.	Hoshiarpur	485,853	439,077	237,430	3,676	0.83	48.87
8.	Ropar	249,354	213,056	128,703	1,363	0.64	51.61
9.	Patiala	487,353	411,438	265,585	2,810	0.68	54.50
10.	Sangrur	498,830	414,924	291,720	1,930	0.47	58.48
11.	Bhatinda	569,671	484,902	330,142	2,466	0.51	57.95

1	2	3	4	5	6	7	8
HARYANA							
1.	Ambala	406,889	346,781	205,673	3,432	0.99	47.50
2.	Karnal	887,292	756,912	435,563	10,577	1.40	50.54
3.	Rohtak	798,813	706,784	339,446	14,641	2.07	49.08
4.	Gurgaon	744,657	646,728	344,270	13,764	2.13	42.49
5.	Mahendragarh	326,211	294,761	147,027	12,968	4.39	46.23
6.	Hisar	958,164	834,956	485,216	25,634	3.07	45.07
7.	Jind	298,199	256,702	142,358	6,981	2.72	47.74
WEST BENGAL							
1.	Darjeeling	314,934	286,631	155,144	74,183	25.88	49.26
2.	Jalpaiguri	835,802	746,277	418,261	79,540	10.66	50.04
3.	Cooch-Bihar	685,303	632,228	354,923	9,403	1.49	51.79
4.	West Dinajpur	874,687	811,510	457,065	22,345	2.75	52.79
5.	Malda	791,830	752,801	394,527	25,453	3.38	49.82
6.	Murshidabad	1,374,877	1,316,902	667,653	31,865	2.42	48.56
7.	Nadia	928,278	883,933	438,740	13,916	1.57	47.26
8.	24-Parganas	2,831,628	2,647,534	1,352,194	33,303	1.24	47.75

(1v)

1	2	3	4	5	6	7	8
9.	Howrah	723,234	680,519	323,781	6,031	0.89	44.79
10.	Hooghly	1,088,619	1,023,227	499,647	52,652	5.14	45.89
11.	Burdwan	1,576,425	1,447,759	764,031	81,560	5.63	45.46
12.	Birbhum	836,543	814,594	405,049	35,695	4.38	48.42
13.	Bankura	958,256	921,048	462,245	75,461	8.19	48.23
14.	Midnapur	2,606,610	2,482,481	1,238,551	127,784	5.15	47.51
15.	Furulia	746,526	723,982	393,519	71,135	9.83	52.71
ANDHRA PRADESH							
1.	Srikakulam	1,141,631	1,172,640	689,525	327,858	27.96	60.39
2.	Vishakapatnam	1,085,320	1,094,543	678,028	281,839	26.30	62.47
3.	East Godavari	1,248,690	1,244,690	756,672	244,002	19.60	60.58
4.	West Godavari	980,122	973,799	594,707	235,089	24.14	60.57
5.	Krishna	921,083	892,939	540,226	210,117	23.53	58.65
6.	Guntur	1,081,242	1,052,613	635,151	277,102	26.33	58.79
7.	Onge	858,217	849,150	496,433	210,380	24.78	57.84
8.	Nellore	681,609	674,211	406,568	173,602	25.75	59.64
9.	Chittoor	1,007,241	970,841	615,998	228,733	25.56	61.15

(v)

1	2	3	4	5	6	7	8
10.	Cudapah	690,475	663,149	410,951	150,586	22.71	59.52
11.	Anantpur	892,283	847,248	525,791	248,577	29.34	58.02
12.	Kurnool	800,498	779,143	457,344	247,407	31.75	57.13
13.	Mehbubnagar	882,697	876,063	537,444	313,594	35.80	60.88
14.	Hyderabad	483,210	469,463	292,301	159,874	34.05	60.49
15.	Medak	675,402	667,556	416,942	212,821	31.88	61.73
16.	Nizamabad	548,696	555,190	334,934	192,077	34.60	61.04
17.	Adilabad	545,406	537,855	325,208	151,408	28.15	59.02
18.	Karimnagar	881,192	872,269	544,045	290,450	33.30	61.73
19.	Warangal	826,793	792,891	506,376	219,100	27.63	61.24
20.	Khammam	603,590	580,194	359,493	148,545	25.60	59.55
21.	Nalgonda	862,562	835,487	537,467	239,239	28.63	62.31
MAHARASHTRA							
2.	Thane	748,572	706,343	409,586	173,823	24.61	54.71
3.	Kolaba	534,661	575,752	261,041	145,649	25.30	48.82
4.	Ratnagiri	803,978	1,019,422	350,003	302,369	29.66	43.53
5.	Nasik	865,242	825,507	466,044	241,195	29.22	53.86

(v1)

1	2	3	4	5	6	7	8
6.	Dhulia	698,755	675,690	368,448	148,094	21.92	52.72
7.	Jalgaon	827,895	793,080	419,299	209,391	26.40	50.64
8.	Ahmednagar	1,025,421	992,196	526,756	202,983	20.45	51.36
9.	Poona	932,151	916,104	467,215	178,652	19.50	50.12
10.	Satara	727,533	772,586	342,559	137,620	17.81	47.08
11.	Sangli	638,610	614,312	327,917	71,165	11.58	51.34
12.	Sholapur	843,873	793,415	455,320	130,944	16.50	53.95
13.	Kolhapur	812,165	795,639	426,712	146,754	18.44	52.54
14.	Aurangabad	837,452	804,293	450,150	192,330	23.91	53.75
15.	Parbhani	642,309	622,524	357,060	139,623	22.43	55.59
16.	Bhir	579,000	557,820	308,287	105,049	18.83	53.24
17.	Nanded	594,714	574,863	323,978	110,257	19.18	54.47
18.	Osmanabad	849,833	809,866	445,913	131,735	16.27	52.47
19.	Buldana	529,758	511,412	286,619	178,596	34.92	54.10

(vii)

1	2	3	4	5	6	7	8
20.	Akola	587,656	560,473	317,375	180,583	32.22	54.01
21.	Amravati	574,806	541,720	310,023	156,828	28.95	53.90
22.	Yezmal	624,423	605,305	346,202	200,214	33.00	55.44
23.	Wardha	299,773	288,687	163,351	89,306	30.94	54.49
24.	Nagpur	455,175	432,156	253,478	138,782	32.11	55.68
25.	Bhandara	704,677	700,390	395,326	287,870	41.10	56.10
26.	Chandarpur	743,588	729,449	416,075	199,226	27.31	55.96

(viii)

Appendix-3Share of Female Work-force Participation, Female Workers Per Thousand Male Workers, Male-Female Disparity, Worklessness and Rural Sex-Ratio

Location code No.	Name of the States/ districts	% of female workers to total workers	Rural Female workers per 1000 rural male workers	Male-Female disparity index in economic participation	% of rural female population in 15-49 age group	Degree of worklessness	Rural sex ratio
1	2	3	4	5	6	7	8
PUNJAB							
1.	Gurdaspur	0.73	13.32	2.12	49.3	48.57	893
2.	Amritsar	0.93	15.00	2.08	50.6	49.67	862
3.	Ferozpur	0.75	11.51	2.23	49.3	48.55	868
4.	Ludhiana	0.82	13.10	2.15	52.5	51.68	859
5.	Jullunder	0.78	13.60	2.11	51.5	50.72	885
6.	Kapurthala	0.50	8.60	2.34	49.8	49.30	904
7.	Hoshiarpur	0.83	15.48	2.06	46.6	45.77	904
8.	Ropar	0.64	10.59	2.22	45.9	45.26	859
9.	Patiala	0.68	10.58	2.24	49.3	48.62	844
10.	Sangrur	0.47	6.62	2.47	52.1	51.63	832
11.	Bhatinda	0.51	7.47	2.43	52.9	52.39	851

(ix)

1	2	3	4	5	6	7	8
HARYANA							
1.	Ambala	0.99	16.69	1.96	49.7	48.71	852
2.	Karnal	1.40	24.28	1.86	47.8	46.40	853
3.	Rohtak	2.07	43.13	1.66	48.8	46.53	885
4.	Gurgaon	2.13	39.98	1.53	48.2	46.07	868
5.	Mahendragarh	4.39	88.07	1.27	48.2	43.81	904
6.	Hisar	3.07	52.83	1.41	46.1	43.03	871
7.	Jind	2.72	49.04	1.51	47.5	44.78	861
WEST BENGAL							
1.	Darjeeling	25.88	478.15	0.44	52.84	26.26	910
2.	Jalpaiguri	10.66	190.17	0.92	46.9	36.24	893
3.	Cooch-Behar	1.49	26.49	1.85	42.1	40.61	923
4.	West Dinajpur	2.75	48.89	1.60	47.5	44.75	923
5.	Malda	3.38	64.52	1.45	46.2	42.82	951
6.	Murshidabad	2.42	47.72	1.58	45.8	43.38	958
7.	Nadia	1.57	31.71	1.75	45.7	44.13	952

(x)

1	2	3	4	5	6	7	8
8.	24-Parganas	1.24	24.63	1.86	48.0	46.76	935
9.	Howrah	0.89	18.63	1.96	47.3	46.41	941
10.	Hooghly	5.14	105.38	1.19	47.5	42.36	940
12.	Burdwan	5.63	106.75	1.20	49.1	43.47	918
13.	Birbhum	4.38	88.13	1.31	49.2	44.82	974
14.	Bankura	8.19	163.25	1.02	48.6	40.41	961
15.	Midnapur	5.15	103.17	1.22	48.2	43.05	952
16.	Purulia	9.83	180.76	1.01	53.8	44.01	970
ANDHRA PRADESH							
1.	Srikakulam	27.96	475.48	0.59	54.8	26.84	1027
2.	Vishakapatnam	26.30	415.67	0.67	55.4	29.10	1008
3.	East Godavari	19.60	322.46	0.80	53.9	34.30	997
4.	West Godavari	24.14	395.30	0.69	54.60	30.46	994
5.	Krishna	23.53	388.94	0.66	51.7	27.17	969
6.	Guntur	26.33	436.28	0.60	51.4	25.07	974
7.	Onge	24.78	473.78	0.62	52.1	27.32	989

(x1)

1	2	3	4	5	6	7	8
8.	Hellore	25.75	426.99	0.63	54.1	28.35	989
9.	Chittore	25.56	371.32	0.71	53.4	27.84	964
10.	Cudapah	22.71	366.43	0.70	52.5	29.49	960
11.	Anantpur	29.34	472.76	0.54	50.6	21.26	950
12.	Kurnool	31.75	540.96	0.46	50.6	18.85	973
13.	Mehbubnagar	35.80	583.49	0.44	52.0	16.20	992
14.	Hyderabad	34.05	546.95	0.47	51.4	17.35	972
15.	Medak	31.88	510.43	0.54	52.7	20.62	988
16.	Hirambad	34.60	573.48	0.47	54.1	19.50	1012
17.	Adilabad	28.15	465.57	0.58	52.0	23.85	986
18.	Karimnagar	33.30	533.87	0.51	52.3	19.00	990
19.	Warangal	27.63	432.68	0.62	51.5	23.87	959
20.	Khammam	25.60	413.20	0.63	49.1	23.50	961
21.	Nalgonda	28.63	445.12	0.62	51.6	22.97	969

(x11)

1	2	3	4	5	6	7	8
MAHARASHTRA							
2.	Thana	24.61	424.38	0.57	52.6	27.99	944
3.	Kolaba	25.30	557.95	0.45	46.0	20.70	1077
4.	Ratnagiri	29.66	863.90	0.26	55.1	24.44	1267
5.	Nasik	29.22	517.53	0.45	50.5	21.28	954
6.	Dhulia	21.92	401.94	0.60	50.0	28.08	967
7.	Jalgaon	26.40	499.38	0.46	50.8	24.40	958
8.	Ahmednagar	20.45	385.34	0.61	49.6	29.15	967
9.	Poona	19.50	382.38	0.62	49.9	30.40	983
10.	Satara	18.81	401.74	0.61	51.3	33.49	1061
11.	Sangli	11.58	217.02	0.91	52.4	40.82	962
12.	Sholapur	16.50	287.58	0.77	49.6	33.10	950
13.	Kolhapur	18.44	343.91	0.69	51.9	33.46	980
14.	Aurangabad	23.91	427.25	0.57	50.0	26.09	960
15.	Parbhani	22.43	391.04	0.64	50.7	27.67	969

(x111)

1	2	3	4	5	6	7	8
16.	Bhir	18.83	340.75	0.69	50.1	31.27	963
177	Nanded	19.18	340.32	0.70	50.1	30.92	967
18.	Osmanabad	16.27	295.43	0.75	50.2	33.93	953
19.	Buldana	34.92	623.11	0.34	51.2	16.28	965
20.	Akola	32.22	568.99	0.39	50.3	18.08	954
21.	Amravati	28.95	505.86	0.46	49.4	20.45	942
22.	Yeotmal	33.00	578.32	0.40	49.1	16.00	969
23.	Wardha	30.94	546.71	0.43	49.7	18.76	963
24.	Nagpur	32.11	547.51	0.42	50.7	18.59	949
25.	Bhandara	41.10	728.18	0.26	53.0	11.90	994
26.	Chandarpur	27.31	478.82	0.53	52.0	24.69	981

Appendix - 4

Sectoral Distribution of Female Workers

Location Code No.	Name of the State/ District	Percentage of Female Workers in			Percentage Share of Female Workers		
		Primary sector	Secondary sector	Tertiary sector	in Primary Sector	in Secondary Sector	in Tertiary Sector
1	2	3	4	5	6	7	8
PUNJAB							
1.	Gurdaspur	30.04	26.09	43.87	0.54	3.68	0.58
2.	Amritsar	34.34	14.51	51.37	0.65	2.60	0.76
3.	Ferozpur	52.98	17.35	29.87	0.68	4.26	0.34
4.	Ludhiana	16.89	29.26	53.83	0.29	3.87	0.70
5.	Jullundur	31.43	21.30	47.25	0.61	1.97	0.63
6.	Kapurthala	30.28	12.11	57.60	0.33	1.16	0.50
7.	Hoshiarpur	28.75	18.23	53.02	0.63	2.58	4.07
8.	Ropar	41.01	20.10	38.89	0.59	2.9	0.41
9.	Patiala	26.98	43.77	29.25	0.34	5.71	0.31
10.	Sangrur	24.25	35.6	40.16	0.19	3.39	0.26
11.	Bhatinda	47.93	19.42	32.64	0.40	2.97	0.24

1	2	3	4	5	6	7	8
HARYANA							
1.	Ambala	24.71	37.27	38.02	0.58	5.44	3.31
2.	Karnal	66.15	20.62	13.21	1.93	6.12	2.91
3.	Rohtak	77.22	11.94	10.84	4.28	5.24	2.81
4.	Gurgaon	71.7	14.80	13.51	3.86	4.43	3.30
5.	Mahendragarh	92.11	4.85	3.04	9.39	6.18	1.72
6.	Hissar	87.06	8.14	4.79	5.12	7.18	2.65
7.	Jind	84.95	8.86	6.17	4.73	0.77	3.31
WEST BENGAL							
1.	Darjeeling	92.54	2.11	5.34	36.97	8.0	11.09
2.	Jalpaiguri	92.67	1.96	5.37	21.32	13.60	7.25
3.	Cooch-Behar	70.65	17.06	12.29	2.03	14.05	4.56
4.	West Dinajpur	86.82	7.16	6.02	4.42	6.56	4.67
5.	Malda	72.17	14.92	12.91	5.14	5.91	8.54
6.	Murshidabad	45.85	43.16	10.98	2.52	36.69	6.33
7.	Nadia	61.11	15.22	23.66	2.33	1.85	6.58
8.	24-Parganas	62.27	12.87	24.85	1.85	5.63	5.47

1	2	3	4	5	6	7	8
9.	Howrah	40.76	20.81	38.43	1.22	0.16	4.44
10.	Hooghly	88.14	3.80	8.06	11.04	3.59	5.57
12.	Burdwan	80.98	11.64	7.37	11.09	6.26	6.09
13.	Birbhum	82.53	7.98	9.48	7.92	12.83	7.28
14.	Bankura	93.71	3.63	2.66	15.15	9.36	4.81
15.	Midnapore	86.74	7.43	5.83	9.46	13.60	5.96
16.	Purulia	91.70	5.29	3.01	16.56	11.54	5.63
ANDHRA PRADESH							
1.	Srikakulam	89.20	4.36	6.44	34.18	23.77	20.79
2.	Vishakhapatnam	90.46	3.54	6.00	31.42	16.04	19.60
3.	East Godavari	85.03	5.66	9.30	26.03	16.98	18.58
4.	West Godavari	89.57	22.75	7.68	30.52	13.05	19.97
5.	Krishna	86.67	5.34	7.99	29.50	20.18	21.69
6.	Guntur	87.72	5.61	6.67	32.16	22.67	21.03
7.	Ongole	86.88	6.19	6.93	32.17	20.40	19.50
8.	Nellore	88.33	4.20	7.47	31.71	18.23	22.88

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1	2	3	4	5	6	7	8
9.	Chittoor	92.73	2.67	4.60	28.92	12.48	16.86
10.	Cuddapah	87.64	6.09	6.27	28.70	18.19	18.44
11.	Anantapur	83.27	3.02	3.71	34.33	15.77	17.97
12.	Kurnool	92.55	3.06	4.38	37.86	17.60	19.04
13.	Mehbubnagar	89.73	6.59	3.68	38.61	31.14	20.62
14.	Hyderabad	88.63	6.06	5.31	39.35	21.52	7.41
15.	Medak	90.61	5.46	3.93	39.00	25.24	17.94
16.	Nicamebad	75.22	20.62	4.19	35.99	49.97	17.31
17.	Adilabad	88.00	7700	5.00	33.56	25.92	19.57
18.	Karimnagar	81.47	12.10	6.43	62.80	27.74	34.04
19.	Warangal	88.43	4.75	6.81	67.27	14.32	24.56
20.	Khamam	89.14	3.72	7.14	68.88	13.53	25.45
21.	Nalgonda	85.35	6.57	8.08	67.45	18.43	30.18

1	2	3	4	5	6	7	8
MAHARASHTRA							
2.	Thana	92.95	4.08	2.96	34.89	10.80	9.43
3.	Kolaba	95.46	2.24	2.30	39.57	14.37	10.26
4.	Ratnagiri	96.30	1.58	2.12	51.00	16.78	12.13
5.	Nasik	95.85	2.24	1.91	36.85	16.35	9.81
6.	Dhulia	96.70	1.78	1.53	30.61	13.79	7.63
7.	Jalgaon	96.65	1.77	1.58	36.24	13.92	7.64
8.	Ahmednagar	93.55	3.91	2.53	30.55	14.60	9.57
9.	Poona	94.45	2.89	2.65	34.56	10.00	8.49
10.	Satara	94.27	3.19	2.53	32.46	12.82	7.53
11.	Sangli	92.79	3.61	3.60	19.66	8.64	7.65
12.	Sholapur	94.86	2.75	2.39	24.10	10.58	8.50
13.	Kohlsapur	96.34	2.18	1.48	28.65	7.50	5.81
14.	Aurangabad	95.56	2.44	2.00	32.01	15.91	10.33
15.	Parbhani	96.96	1.81	1.23	29.81	13.15	7.35

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1	2	3	4	5	6	7	8
16.	Bhir	96.83	1.46	1.71	27.13	9.00	8.00
17.	Handed	94.96	3.36	1.68	27.04	18.90	7.33
18.	Osmanabad	96.57	1.93	1.5	24.44	10.09	6.19
19.	Buldhana	98.22	1.12	0.69	40.98	13.30	5.25
20.	Akola	97.99	0.96	1.04	38.70	10.86	0.38
21.	Amravati	97.60	1.14	1.28	35.88	12.23	7.71
22.	Yeotmal	97.91	1.06	1.03	39.09	8.45	0.37
23.	Wardha	97.13	1.42	1.45	38.50	8.42	0.50
24.	Nagpur	92.21	5.21	2.58	39.00	48.77	0.96
25.	Bhandara	78.28	20.47	1.25	42.80	48.08	10.54
26.	Chandrapur	95.19	2.56	2.25	34.92	26.76	4.78

Appendix 5

Industrial Distribution of Female Workers
(Primary Sector)

Location Code No.	Name of the district/ state	% of female cultivators to total female workers	% of female labourers to total female workers	% of female workers to total female employment	% of female agricultural labourers per 1000 male agricultural labourers	% of female workers in agricultural activities to total female workers	% of female workers in livestock etc. to total female workers
1	2	3	4	5	6	7	8
PUNJAB							
1.	Gurdaspur	8.46	19.38	69.61	11.07	27.84	2.20
2.	Amritsar	7.90	25.75	76.53	13.88	33.65	0.70
3.	Firozpur	16.29	35.90	68.79	14.62	52.19	0.74
4.	Ludhiana	6.20	9.30	60.00	4.58	15.5	1.39
5.	Jullundur	10.45	19.18	64.73	10.91	29.63	1.80
6.	Kapurthala	11.72	17.01	59.19	7.60	28.73	1.55
7.	Hoshiarpur	13.87	13.54	50.58	10.51	27.41	1.33
8.	Ropar	19.88	20.32	50.55	12.10	40.10	0.81
9.	Patiala	6.51	19.61	75.07	8.00	26.12	0.85
10.	Sangrur	13.06	9.38	41.80	2.69	22.44	1.81
11.	Bhatinda	14.64	32.52	68.96	9.50	47.16	0.77

1	2	3	4	5	6	7	8
HARYANA							
1.	Ambala	10.29	13.40	56.58	10.00	23.69	1.02
2.	Karnal	21.74	43.50	66.68	43.60	65.24	0.92
3.	Rohtak	36.63	40.05	52.23	98.06	76.68	0.54
4.	Gurgaon	38.10	32.59	46.10	110.51	70.69	1.00
5.	Mahendragarh	67.28	23.28	25.70	180.22	90.56	1.55
6.	Hissar	56.38	27.23	32.57	76.17	83.61	3.46
7.	Jind	54.43	29.55	35.19	82.70	83.98	0.97
WEST BENGAL							
1.	Darjeeling	33.57	9.62	22.28	400.18	43.19	49.35
2.	Jalpaiguri	6.38	5.17	44.76	82.58	11.55	81.12
3.	Cooch-Behar	36.18	31.46	46.51	51.42	67.64	3.01
4.	West Dinajpur	21.51	63.42	74.68	109.68	84.93	1.88
5.	Malda	10.42	58.72	84.93	112.50	69.14	3.03
6.	Murshidabad	16.32	27.83	63.03	34.20	44.15	1.17
7.	Nadia	15.41	41.33	72.84	41.04	56.74	4.38

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1	2	3	4	5	6	7	8
8.	24-Parganas	19.92	40.71	67.15	23.98	60.63	1.64
9.	Howrah	17.01	21.87	56.25	10.82	38.88	1.87
10.	Hooghly	6.55	80.95	92.52	233.03	87.50	0.63
12.	Burdwan	7.60	72.37	90.49	224.17	79.97	1.01
13.	Birbhum	14.32	67.41	82.47	140.96	81.73	0.80
14.	Bankura	13.08	80.06	85.96	367.07	93.14	0.58
15.	Midnapore	12.48	73.60	85.50	235.71	86.08	0.66
16.	Purulia	19.98	71.09	78.19	441.26	91.04	0.77
ANDHRA PRADESH							
1.	Srikakulam	32.18	55.84	76.08	841.21	88.02	1.18
2.	Vishakhapatnam	40.29	49.77	63.44	841.79	90.06	0.40
3.	East Godavari	7.22	77.17	55.26	582.46	84.39	0.63
4.	West Godavari	5.50	83.34	91.44	752.53	88.84	0.72
5.	Krishna	3.29	82.74	93.81	777.00	86.03	0.64
6.	Guntur	8.61	78.15	96.17	861.38	86.76	0.96
7.	Ongole	11.56	71.98	90.07	933.81	83.54	3.34
8.	Nellore	8.76	77.99	86.10	827.30	86.75	1.58

1	2	3	4	5	6	7	8
MAHARASHTRA							
2.	Thana	49.65	42.20	45.95	730.70	91.85	1.11
3.	Kolaba	67.57	25.82	27.65	835.94	93.39	2.07
4.	Ratnagiri	81.24	14.01	14.71	1309.00	95.25	1.05
5.	Nasik	42.40	53.12	55.61	1054.00	95.52	0.31
6.	Dhulia	22.54	73.09	76.58	782.10	96.23	0.47
7.	Jalgaon	22.70	73.67	76.45	892.34	96.37	0.28
8.	Ahmednagar	42.19	50.64	54.55	741.40	92.83	0.72
9.	Poona	58.10	35.41	37.87	856.37	93.51	0.94
10.	Satara	59.34	34.20	36.56	971.37	93.54	0.73
11.	Sangli	47.72	43.85	47.89	511.95	91.57	1.22
12.	Sholapur	20.94	73.10	77.73	662.22	94.04	0.82
13.	Kohlapur	69.34	26.62	27.74	606.51	95.96	0.38
14.	Aurangabad	35.44	59.86	62.81	837.78	95.30	0.26
15.	Parbhani	24.78	72.0	74.89	738.46	96.78	0.17

1	2	3	4	5	6	7	8
9.	Chittoor	30.99	59.55	89.89	795.48	90.54	2.19
10.	Cuddapah	12.09	73.91	65.77	820.21	86.00	1.64
11.	Anantapur	23.32	68.88	85.94	1070.00	92.20	1.07
12.	Kurnool	12.99	70.14	74.71	1076.00	92.13	0.43
13.	Mahbubnagar	23.20	65.99	85.90	1560.00	89.19	0.54
14.	Hyderabad	30.38	57.18	73.99	1400.00	87.56	1.06
15.	Medak	32.91	57.30	63.52	1296.00	90.21	0.40
16.	Nirmal	35.15	39.56	52.95	1102.00	76.71	0.48
17.	Adilabad	30.55	56.83	65.03	993.84	87.38	0.60
18.	Karimnagar	26.55	56.06	66.74	1184.00	83.01	0.46
19.	Warangal	19.64	68.18	77.64	1044.00	87.82	0.69
20.	Khammam	11.92	76.17	86.49	977.25	88.09	1.04
21.	Nalgonda	20.11	63.75	76.02	1061.00	83.86	1.48

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1	2	3	4	5	6	7	8
16.	Bhir	31.33	65.19	67.54	750.22	96.52	0.31
17.	Handed	21.16	73.68	77.69	737.41	94.84	0.12
18.	Osmanabad	20.01	76.38	79.24	668.54	96.39	0.18
19.	Buldhana	28.41	69.65	71.03	962.72	98.06	0.16
20.	Akola	15.41	82.49	84.26	904.96	97.90	0.32
21.	Amravati	9.14	88.09	90.60	816.09	97.23	0.37
22.	Yeotmal	14.58	83.05	85.07	976.09	97.63	0.28
23.	Wardha	13.11	83.59	86.44	1018.00	96.70	0.43
24.	Nagpur	22.32	69.44	75.68	1166.00	91.76	0.45
25.	Bhandara	44.86	33.14	42.49	1102.73	78.00	0.28
26.	Chandrapur	34.48	60.12	63.55	1083.00	94.60	0.58

Appendix-6

Industrial Distribution of Female Workers
(Secondary Sector)

Location code No.	Name of State/ district	Percentage of Female Workers in				
		Mining & quarrying to total female workers	Household industry to total female workers	Household industry per 1000 male workers in household industry	non-household industry to total female workers	Construction to total female workers
1	2	3	4	5	6	7
	1 PUNJAB					
1.	Gurdaspur	0.00	15.99	74.76	3.84	1.26
2.	Amritsar	0.23	3.25	21.28	10.84	0.24
3.	Firozpur	0.00	11.31	48.25	5.28	0.55
4.	Ludhiana	0.00	9.98	29.25	19.25	0.02
5.	Jullundur	0.00	13.97	45.06	7.04	0.29
6.	Kapurthala	0.00	5.41	21.92	6.31	0.39
7.	Hoshiarpur	0.00	10.47	36.11	7.53	0.21
8.	Ropar	0.00	8.22	20.76	10.79	1.10
9.	Patiala	0.07	6.90	23.01	35.12	1.87
10.	Sangrur	0.05	18.55	27.01	13.42	3.58
11.	Bhatinda	0.00	11.88	30.02	5.68	1.87

1	2	3	4	5	6	7
HARYANA						
1.	Ambala	0.12	15.56	79.46	13.58	8.01
2.	Karnal	0.00	5.47	42.28	8.64	6.53
3.	Rohtak	0.00	4.99	46.47	5.14	1.82
4.	Gurgaon	2.19	3.31	32.87	6.70	2.59
5.	Mahendragarh	2.13	1.65	40.28	0.78	0.29
6.	Hissar	0.02	2.98	66.45	3.64	1.50
7.	Jind	0.03	3.27	44.26	3.81	1.76
WEST BENGAL						
1.	Darjeeling	0.01	1.29	608.64	0.30	0.52
2.	Jalpaiguri	0.18	0.85	125.93	0.79	0.15
3.	Cooch-Behar	0.03	12.85	212.83	4.12	0.06
4.	West Dinjapur	0.01	4.97	252.27	2.13	0.05
5.	Malda	0.39	9.71	249.24	4.56	0.26
6.	Murshidabad	0.04	39.62	408.01	2.32	0.18
7.	Nadia	0.00	7.23	59.26	7.83	0.17
8.	24-Parganas	0.06	4.62	61.26	7.74	0.46

1	2	3	4	5	6	7
9.	Howrah	0.00	7.58	43.62	12.95	0.28
10.	Hooghly	0.003	2.21	69.94	1.47	0.10
12.	Burdwan	6.6	1.7	99.84	3.05	0.29
13.	Birbhum	0.33	3.71	139.23	3.78	0.16
14.	Bankura	0.05	2.82	154.62	0.63	0.13
15.	Midnapore	0.007	4.51	222.86	2.77	0.14
16.	Purulia	0.30	3.35	180.94	1.52	0.11
ANDHRA PRADESH						
1.	Srikakulam	0.21	3.87	343.60	0.90	0.08
2.	Visakhapatnam	0.18	3.00	239.90	0.33	0.03
3.	East Godavari	0.23	3.86	263.53	1.35	0.23
4.	West Godavari	0.24	1.35	185.26	0.90	0.26
5.	Krishna	0.36	2.34	247.70	0.87	1.76
6.	Guntur	0.21	1.61	199.24	3.19	0.60
7.	Ongole	0.16	2.58	213.89	2.55	0.90
8.	Nellore	0.66	1.98	231.31	1.29	0.30

1	2	3	4	5	6	7
9.	Chittoor	0.18	1.66	179.52	0.50	0.34
10.	Cuddapah	0.49	4.60	283.85	0.65	0.36
11.	Anantapur	0.04	2.26	192.84	0.08	0.64
12.	Kurnool	0.43	2.30	240.11	0.11	0.22
13.	Mahbubnagar	0.09	6.14	527.37	0.07	0.29
14.	Hyderabad	1.18	3.23	401.49	0.97	0.69
15.	Nedak	0.32	4.52	418.24	0.48	0.13
16.	Nicamabad	0.84	12.99	1316.23	6.67	0.42
17.	Adilabad	0.33	3.09	320.16	3.28	0.30
18.	Karimnagar	0.23	3.72	405.01	3.04	1.73
19.	Warangal	0.26	1.36	235.54	0.35	0.42
20.	Khamam	0.49	4.19	114.79	0.15	1.71
21.	Nalgonda	0.43		268.62	0.36	1.59

(xxx)

1	2	3	4	5	6	7
MAHARASHTRA						
2.	Thane	0.28	1.32	508.88	1.88	0.60
3.	Kolaba	0.08	1.08	465.26	0.30	0.77
4.	Ratnagiri	0.08	0.87	867.33	0.37	0.26
5.	Nasik	0.08	0.93	219.72	0.90	0.32
6.	Dhulia	0.004	1.37	245.76	0.24	0.17
7.	Jalgaon	0.06	1.22	204.59	0.22	0.28
8.	Ahmednagar	0.06	1.43	148.40	2.05	0.37
9.	Poona	0.05	1.70	262.79	0.52	0.62
10.	Satara	0.40	1.82	231.40	0.51	0.47
11.	Sangli	0.08	2.92	194.10	0.35	0.25
12.	Sholapur	0.01	1.76	204.04	0.41	0.57
13.	Kohlapur	0.09	1.70	163.74	0.24	0.14
14.	Aurangabad	0.10	1.28	139.14	0.07	0.98
15.	Parbhani	0.02	1.15	132.06	0.02	0.62

(xxxi)

1	2	3	4	5	6	7
16.	Bhir	0.06	1.20	108.34	0.02	0.17
17.	Nanded	0.09	2.39	290.44	0.48	0.41
18.	Osmanabad	0.03	1.27	160.98	0.24	0.38
19.	Buldhana	0.001	0.81	190.19	0.14	0.18
20.	Akola	0.13	0.45	128.22	0.08	0.29
21.	Amravati	0.01	0.75	170.00	0.22	0.16
22.	Yotmal	0.09	0.45	95.07	0.31	0.22
23.	Wardha	0.20	0.54	96.62	0.28	0.46
24.	Nagpur	1.16	2.83	240.60	1.23	0.48
25.	Bhandara	0.48	17.37	1103.00	2.36	0.58
26.	Chandrapur	0.17	1.54	187.37	0.35	0.50

Appendix-2

Industrial Distribution of Female Workers
(Tertiary Sector)

Location Code No.	Name of State/ Districts	% of Female Workers in		% of Female Workers in Other Services		
		Transport & Communication to total fe- male workers	trade and commerce to total female workers	to total female workers	as % to total female employ- ment in ter- tiary sector	per 1000 male workers in other services
1	2	3	4	5	6	7
PUNJAB						
1.	Gurdaspur	2.78	0.18	40.90	93.26	44.58
2.	Amritsar	1.60	0.32	49.45	96.26	98.08
3.	Firozpur	1.19	0.11	28.51	95.64	86.69
4.	Ludhiana	0.94	0.48	52.41	97.36	82.36
5.	Jullundur	1.24	0.40	45.62	96.53	71.06
6.	Kapurthala	1.55	0.64	55.41	96.20	59.44
7.	Hoshiarpur	0.59	0.08	52.33	98.72	56.28
8.	Ropar	0.59	0.15	38.15	98.11	37.58
9.	Patiala	0.75	0.18	28.33	96.84	49.56
10.	Sangrur	1.14	0.10	38.91	96.90	51.81
11.	Bhatinda	1.22	1.05	30.17	94.78	66.63

1	2	3	4	5	6	7
HARYANA						
1.	Ambala	1.57	0.15	36.31	95.48	45.87
2.	Karnal	0.85	0.13	12.23	92.56	45.44
3.	Rohtak	0.94	0.07	9.83	90.67	35.75
4.	Gurgaon	0.98	0.14	12.39	91.72	44.21
5.	Mahendragarh	0.26	0.02	2.75	90.59	18.56
6.	Hissar	0.30	0.04	4.46	93.00	42.94
7.	Jind	0.89	0.10	5.18	93.04	50.19
WEST BENGAL						
1.	Darjeeling	0.70	0.74	3.90	73.07	128.61
2.	Jalpaiguri	0.59	0.47	4.31	80.29	127.40
3.	Cooch-Behar	2.99	0.47	8.84	71.84	60.01
4.	West Dinajpur	0.84	0.13	5.05	83.94	62.41
5.	Malda	4.09	0.23	8.59	66.53	119.39
6.	Murshidabad	3.53	0.11	7.33	66.79	90.82
7.	Nadia	3.47	0.22	19.96	97.81	121.03

(xxxiv)

1	2	3	4	5	6	7
8.	24-Parganas	4.63	0.60	19.89	80.01	99.17
9.	Howrah	9.24	1.01	28.19	73.34	88.51
10.	Hooghly	1.17	0.35	6.54	81.06	101.65
12.	Burdwan	0.88	0.80	5.69	77.12	95.65
13.	Birbhum	1.63	0.43	7.42	78.23	86.24
14.	Bankura	0.38	0.10	2.18	81.99	59.69
15.	Midnapore	0.48	0.13	5.23	89.63	80.17
16.	Purulia	0.39	0.25	2.37	78.76	77.68
ANDHRA PRADESH						
1.	Srikakulam	2.78	0.10	3.56	55.24	257.09
2.	Visakhapatnam	2.23	0.23	3.56	59.18	256.56
3.	East Godavari	2.84	0.14	6.32	67.93	308.54
4.	West Godavari	1.57	0.14	5.96	77.70	353.09
5.	Krishna	1.56	0.02	6.41	80.29	378.61
6.	Guntur	1.61	0.02	5.04	75.58	340.20
7.	Ongole	1.87	0.12	4.93	71.19	308.95

(xxxiv)

1	2	3	4	5	6	7
8.	Nellore	2.62	0.15	4.70	62.89	336.29
9.	Chittoor	1.58	0.07	2.96	84.23	220.08
10.	Cuddapah	1.61	0.07	4.59	73.14	278.32
11.	Anantapur	1.26	0.02	2.44	65.63	246.28
12.	Kurnool	1.28	0.03	3.06	69.91	286.87
13.	Mahbubnagar	1.30	0.04	2.34	63.49	321.47
14.	Hyderabad	1.82	0.06	3.43	64.53	270.23
15.	Nedak	0.93	0.26	2.93	74.69	304.24
16.	Nicamabad	0.75	0.06	3.18	75.85	309.33
17.	Adilabad	0.74	0.03	4.23	84.61	313.30
18.	Karimnagar	0.62	0.03	4.79	74.44	420.76
19.	Warangal	2.06	0.26	4.49	65.90	365.45
20.	Khamam	2.23	0.08	4.85	67.67	380.59
21.	Nalgonda	3.87	0.10	4.11	50.84	396.43

1	2	3	4	5	6	7
MAHARASHTRA						
2.	Thana	0.89	0.28	1.79	60.49	130.24
3.	Kolaba	0.84	0.07	1.39	60.47	119.44
4.	Ratnagiri	0.85	0.05	1.22	57.48	133.57
5.	Nasik	0.40	0.04	1.47	76.88	130.44
6.	Dhulia	0.39	0.02	1.12	73.59	98.23
7.	Jalgaon	0.48	0.02	1.07	67.85	91.44
8.	Ahmednagar	0.59	0.04	1.90	74.91	131.49
9.	Poona	0.65	0.06	1.95	73.42	117.58
10.	Satara	0.78	0.34	1.40	55.46	75.76
11.	Sangli	0.95	0.03	2.62	72.67	98.67
12.	Sholapur	0.79	0.07	1.54	64.14	108.32
13.	Kohlapur	0.48	0.03	0.97	65.42	63.88
14.	Aurangabad	0.32	0.10	1.68	83.79	151.58
15.	Parbhani	0.23	0.002	1.00	81.43	104.53

1	2	3	4	5	6	7
16.	Bhir	0.33	0.04	1.38	80.29	104.33
17.	Nanded	0.31	0.01	1.36	80.96	103.65
18.	Osmanabad	0.39	0.002	1.12	73.80	78.25
19.	Buldhana	0.14	0.004	0.51	78.37	62.03
20.	Akola	0.17	0.17	0.87	82.68	100.90
21.	Amravati	0.13	0.01	1.12	88.76	110.31
22.	Yeotmal	0.21	0.03	0.79	76.37	104.13
23.	Wardha	0.26	0.03	1.17	80.46	98.19
24.	Nagpur	0.42	0.15	2.01	77.91	149.60
25.	Bhandara	0.42	0.15	0.69	54.78	98.40
26.	Chandrapur	0.53	0.10	1.62	72.30	139.39

Appendix-8
Economic Variables

Location Code No.	State/District	% of female workers to total female population	% growth of agricultural output	Population per hectare of gross cropped area	Cropping intensity Gross cropped area/ Net sown area	Gini coefficient of concentration of land holding	Mean size of holding (hect-are)
1	2	3	4	5	6	7	8
PUNJAB							
1.	Gurudaspur	0.73	8.97	3.07	1.665	0.574	2.13
2.	Amritsar	0.93	7.98	3.30	1.575	0.506	2.11
3.	Firozpur	0.75	7.14	3.32	1.335	0.555	3.13
4.	Ludhiana	0.82	7.98	3.04	1.660	0.503	3.15
5.	Jullunder	0.78	7.46	3.62	1.550	0.560	2.36
6.	Kapurthala	0.50	9.34	2.59	1.643	0.558	2.17
7.	Hoshiarpur	0.83	7.41	3.10	1.595	0.641	1.81
8.	Roper	0.64	7.00	3.22	1.486	0.599	2.12
9.	Fatiala	0.68	8.17	2.56	1.517	0.516	4.05
10.	Sangrur	0.47	7.37	1.81	1.513	0.498	4.10
11.	Bhatinda	0.51	6.37	2.07	1.352	0.360	4.53

(xxxix)

Location Code No.	State/District	% of net irrigated area	Index of intensity of culti- vation	% of male workers in non-agri- cultural acti- vities to total male workers	% of workers to total workers		
					in primary sector	in secondary sector	in tertiary sector
1	2	9	10	11	12	13	14
PUNJAB							
1.	Gurudaspur	67.08	3.33	27.67	72.75	9.32	17.94
2.	Amritsar	93.68	4.17	22.29	77.60	8.19	14.20
3.	Ferozpur	77.22	5.88	12.17	88.07	4.58	7.35
4.	Ludhiana	90.97	4.76	23.07	76.67	9.79	13.54
5.	Jullunder	85.75	5.00	30.50	69.69	14.53	15.73
6.	Kapurthala	83.16	20.00	21.68	79.04	8.95	12.09
7.	Hoshiarpur	38.88	3.13	30.52	69.37	10.76	19.87
8.	Roper	43.15	3.70	27.74	72.75	10.98	16.27
9.	Patiala	82.28	4.54	18.36	82.37	8.08	9.50
10.	Gangrur	88.47	3.33	18.19	84.61	6.91	8.50
11.	Dhatinda	70.46	33.33	12.33	88.73	4.85	6.42

(x1)

1	2	3	4	5	6	7	8
HARYANA							
1. Ambala		0.99	6.51	12.77	1.454	0.579	2.75
2. Karnal		1.40	8.30	2.54	1.561	0.561	3.43
3. Rohtak		2.07	3.71	2.76	1.512	1.512	3.59
4. Gurgaon		2.13	5.56	2.33	1.390	1.390	2.71
5. Mahendragarh		4.39	5.52	3.11	1.568	1.568	3.93
6. Hissar		3.07	4.16	1.53	1.294	1.294	4.96
7. Jind		2.72	5.17	2.40	1.453	1.453	4.61
WEST BENGAL							
1. Darjeeling		25.88	3.24	5.38	1.259	-	3.06
2. Jalpaiguri		10.66	2.62	5.34	1.307	0.597	1.52
3. Cooch Behar		1.49	1.88	5.15	1.600	0.442	1.54
4. West Dinajpur		2.75	2.39	3.52	1.373	0.468	1.66
5. Malda		3.38	3.07	4.96	1.403	0.520	1.23
6. Murshidabad		2.42	3.47	6.08	1.539	0.416	1.06
7. Nadia		1.57	2.17	5.39	1.602	0.477	1.31

(x11)

1	2	9	10	11	12	13	14
HARYANA							
1.	Ambala	28.66	10.00	30.70	69.89	11.24	18.87
2.	Karnal	83.86	3.45	19.51	81.24	7.99	10.77
3.	Rohtak	37.15	1.47	26.22	74.61	9.43	15.96
4.	Gurgaon	34.07	1.01	30.05	71.41	12.83	15.76
5.	Mahendragarh	15.68	0.50	22.52	79.40	6.35	14.25
6.	Hissar	55.14	1.11	17.03	85.25	5.69	9.06
7.	Jind	68.54	0.85	18.96	84.00	7.29	8.71
WEST BENGAL							
1.	Darjeeling	3.78	-	49.55	77.10	8.07	14.83
2.	Jalpaiguri	1.59	0.14	38.41	83.09	2.76	14.15
3.	Cooch Behar	4.98	0.14	10.26	89.92	3.13	6.95
4.	West Dinajpur	2.41	0.08	8.66	89.20	4.95	5.85
5.	Malda	5.46	0.14	16.70	77.66	13.97	8.37
6.	Murshidabad	22.71	0.23	17.44	86.22	5.57	8.21
7.	Nadia	4.64	0.33	21.68	68.92	21.64	9.45

(x111)

1	2	3	4	5	6	7	8
8.	24-Farganas	1.24	0.08	13.04	1.119	0.523	0.95
9.	Howrah	0.89	1.10	26.76	1.164	0.460	0.50
11.	Hooghly	5.14	4.25	12.04	1.359	0.488	0.91
12.	Burdwan	5.63	2.02	9.47	1.136	0.473	1.40
13.	Birbhum	4.38	4.01	5.74	1.253	0.442	1.50
14.	Bankura	8.19	2.07	6.31	1.054	0.460	1.39
15.	Midnapore	5.15	2.58	7.15	1.075	0.491	1.00
16.	Purulia	9.83	2.82	6.35	1.040	0.366	1.28
ANDHRA PRADESH							
1.	Srikakulam	27.96	-0.29	5.23	1.100	0.588	1.18
2.	Visakhapatnam	26.30	-0.29	0.13	1.170	0.588	1.43
3.	East Godavari	19.60	-0.85	0.56	1.310	0.611	1.57
4.	West Godavari	24.14	1.53	5.18	1.273	0.671	1.86
5.	Krishna	23.53	0.61	4.03	1.305	0.594	1.87
6.	Guntur	26.33	0.74	4.67	1.220	0.593	1.13
7.	Ongole	24.78	0.74	3.53	1.050	0.593	2.58

(x1111)

1	2	9	10	11	12	13	14
8.	24-Parganas	3.58	0.25	20.04	83.11	5.65	11.24
9.	Howrah	13.34	1.06	39.57	65.10	18.01	16.89
11.	Hooghly	49.49	0.34	26.17	76.10	10.10	13.80
12.	Burdwan	63.28	0.49	32.42	72.31	18.42	9.26
13.	Birbhum	58.62	0.11	16.30	75.47	4.50	20.02
14.	Bankura	33.50	0.11	15.09	86.80	12.97	7.76
15.	Midnapore	13.51	0.19	15.12	85.74	5.10	9.15
16.	Purulia	7.84	0.04	17.94	84.79	7.01	8.19
ANDHRA PRADESH							
1.	Srikakulam	51.08	0.44	23.28	84.11	5.92	9.98
2.	Visakhapatnam	41.16	0.44	21.33	84.53	6.47	9.00
3.	East Godavari	66.19	2.17	27.72	89.19	9.13	13.67
4.	West Godavari	78.88	2.94	23.38	83.13	5.98	10.89
5.	Krishna	65.00	1.92	25.24	82.28	7.41	10.31
6.	Guntur	47.26	0.18	21.95	82.85	7.52	9.63
7.	Ongole	19.12	0.18	38.00	80.39	9.04	10.57

(xliv)

1	2	3	4	5	6	7	8
8.	Bellore	25.75	0.74	5.50	1.104	0.593	1.87
9.	Chittore	23.56	2.80	4.79	1.120	0.563	1.73
10.	Cuddapah	22.71	-1.25	3.79	1.080	0.576	2.34
11.	Anantpur	29.34	-1.52	2.12	1.040	0.581	4.41
12.	Kurnool	31.75	0.74	2.02	1.062	0.593	3.91
13.	Kobubnagar	35.80	-1.82	1.81	1.090	0.547	3.94
14.	Hyderabad	34.05	-3.72	7.53	1.060	0.592	5.01
15.	Kodak	31.88	-5.32	2.77	1.080	0.612	4.26
16.	Nizamabad	34.60	-4.47	3.98	1.090	0.609	2.02
17.	Adilabad	28.15	-0.89	2.19	1.020	0.563	3.39
18.	Karimnagar	33.30	-0.57	3.30	1.090	0.643	2.10
19.	Warangal	27.63	0.37	3.47	1.100	0.624	2.78
20.	Khamam	25.60	-0.14	0.42	1.030	0.572	2.96
21.	Nalgonda	28.63	1.22	0.14	1.070	0.576	3.68

(xiv)

1	2	9	10	11	12	13	14
8.	Hellore	62.43	0.18	24.12	83.35	6.89	9.77
9.	Chittore	33.47	1.35	18.58	86.81	5.79	7.40
10.	Cuddapah	26.35	1.32	23.28	81.90	8.98	9.12
11.	Anantpur	11.80	0.30	19.94	87.22	6.14	6.63
12.	Kurnool	9.96	0.18	46.47	85.81	6.11	8.08
13.	Mahbubnagar	10.30	0.34	22.60	85.63	7.80	6.58
14.	Hyderabad	11.65	1.33	33.86	79.63	9.96	10.41
15.	Medak	17.57	0.59	24.11	84.22	7.84	7.94
16.	Nizamabad	43.40	1.89	30.06	51.46	30.60	17.94
17.	Adilabad	6.08	0.16	24.15	83.29	8.59	8.12
18.	Karimnagar	21.47	0.75	32.99	77.80	15.49	6.17
19.	Karangal	27.77	0.52	26.39	81.61	10.02	8.37
20.	Khamam	18.50	0.82	22.76	83.77	8.03	8.21
21.	Nalgonda	23.02	1.56	27.08	80.77	10.98	8.25

(xlv1)

1	2	3	4	5	6	7	8
MAHARASHTRA							
2.	Thana	24.61	-2.52	10.58	0.100	0.647	2.82
3.	Kolaba	25.30	0.31	7.03	0.103	NA	2.09
4.	Ratnagiri	29.66	1.34	6.52	0.101	0.664	2.74
5.	Nasik	29.22	-2.75	2.73	0.104	0.491	4.67
6.	Dhulia	21.92	-5.02	2.39	0.109	0.437	4.85
7.	Jaigson	26.40	-8.41	2.57	0.107	0.484	3.73
8.	Ahmadnagar	20.45	-5.29	1.83	0.104	0.505	5.19
9.	Poona	19.50	-5.04	3.32	0.107	0.560	4.03
10.	Satara	17.81	-2.72	3.10	0.108	0.584	2.69
11.	Sangli	11.58	-5.21	2.65	0.102	0.585	3.35
12.	Cholapur	16.50	-8.48	2.03	0.104	0.488	5.94
13.	Kolhapur	18.44	1.26	5.46	0.101	0.600	2.01
14.	Aurangabad	23.91	-8.29	1.48	0.106	0.438	6.02
15.	Parbhani	22.43	-6.28	1.46	0.107	0.428	6.37

(xlv11)

1	2	9	10	11	12	13	14
MAHARASHTRA							
2.	Thana	1.25	0.13	29.65	64.14	9.11	26.75
3.	Kolaba	2.15	0.04	23.59	86.39	5.57	8.04
4.	Ratnagiri	1.62	0.26	24.19	87.54	4.38	8.08
5.	Nasik	9.98	1.05	16.39	88.60	4.68	6.63
6.	Dhulia	9.83	0.99	13.08	90.56	3.70	5.74
7.	Jalgaon	10.46	0.94	16.38	88.86	4.24	6.90
8.	Ahmadnagar	13.19	1.03	19.66	85.18	7.45	7.36
9.	Poona	12.27	1.00	23.04	81.94	8.67	9.39
10.	Satara	13.47	1.12	23.23	83.22	7.15	9.63
11.	Sangli	9.46	1.09	19.88	84.15	7.46	8.39
12.	Sholapur	10.34	0.52	34.63	87.91	5.80	6.29
13.	Kolhapur	11.54	3.13	18.86	86.06	7.44	6.51
14.	Aurangabad	4.08	0.43	14.51	89.59	4.59	5.83
15.	Parbhani	1.14	0.36	12.79	91.42	0.04	4.70

(xlviii)

1	2	3	4	5	6	7	8
16.	Bhir	18.83	-8.89	1.44	0.108	0.466	6.09
17.	Nanded	19.18	-5.04	1.87	0.103	0.434	4.93
18.	Osmanabad	16.17	-7.41	1.63	0.105	0.436	6.72
19.	Buldhana	34.92	-4.09	1.81	0.105	0.519	4.92
20.	Akola	32.22	-3.43	1.95	0.102	0.512	5.05
21.	Amravati	28.95	-5.23	2.29	0.101	0.520	4.22
22.	Yeotmal	33.10	-0.56	1.75	0.101	0.441	7.11
23.	Wardha	30.94	-0.37	1.84	0.102	0.475	5.74
24.	Nagpur	32.11	-1.49	3.58	0.102	0.479	5.11
25.	Bhandara	41.10	-0.29	0.35	0.133	N. A.	2.16
26.	Chandrapur	27.31	-0.67	0.24	0.108	0.520	3.71

(xlix)

1	2	9	10	11	12	13	14
16.	Bhir	4.62	0.17	13.14	90.70	3.86	5.44
17.	Nanded	1.32	0.61	14.64	89.14	5.80	5.81
18.	Osmansbad	2.91	0.21	13.63	90.11	4.36	5.52
19.	Buldhana	1.51	0.54	12.81	92.02	3.24	4.74
20.	Akola	0.59	0.48	12.36	91.62	3.37	5.18
21.	Amravati	1.84	0.74	13.21	89.94	4.63	5.43
22.	Yeotmal	0.60	0.31	13.42	90.76	4.56	4.68
23.	wardha	2.19	0.53	17.39	87.91	5.89	8.20
24.	Nagpur	6.95	0.69	24.30	88.13	3.98	7.88
25.	Bhandara	33.26	0.55	26.56	89.37	3.18	7.46
26.	Chandrapur	16.61	0.34	18.80	90.61	3.18	6.21

Appendix-9

Demographic Variables

Location Name of the State/ code No.	Name of the State/ district	% of female workers to total female population	Sex Ratio	% of urban population to total population	Ratio of children below 5 years age to women in age group 15-49	% of growth of population (1961-71)
1	2	3	4	5	6	7
PUNJAB						
1.	Gurudaspur	0.73	893	20.26	694	24.08
2.	Amritsar	0.93	862	29.17	666	21.48
3.	Firozpur	0.73	868	19.84	663	18.60
4.	Ludhiana	0.82	859	34.81	564	18.02
5.	Jullundur	0.78	885	30.06	620	16.11
6.	Kapurthala	0.50	904	23.21	642	24.68
7.	Hoshiarpur	0.83	904	12.09	672	19.11
8.	Ropar	0.64	859	15.15	705	18.94
9.	Patiala	0.68	844	26.03	680	26.66
10.	Sangrur	0.47	832	20.31	587	18.62
11.	Bhatinda	0.51	851	20.00	596	24.16

1	2	3	4	5	6	7
HARYANA						
1.	Ambala	0.99	852	31.39	713	28.90
2.	Karnal	1.40	853	17.01	810	33.20
3.	Rohtak	2.07	885	15.69	789	22.80
4.	Gurgaon	2.13	868	18.51	832	34.40
5.	Mahendragarh	4.39	904	10.22	786	26.60
6.	Hissar	3.07	871	15.93	872	37.50
7.	Jind	2.72	861	13.24	891	36.11
WEST BENGAL						
1.	Darjeeling	25.88	910	23.05	2550	25.33
2.	Jalpaiguri	10.66	893	9.60	824	28.05
3.	Cooch Behar	1.49	923	6.83	998	38.92
4.	West Dinajpur	2.75	923	9.34	922	37.66
5.	Malda	3.38	951	4.22	792	31.89
6.	Murshidabad	2.42	958	8.45	867	28.51
7.	Nadia	1.57	952	18.74	823	29.63
8.	24-Parganas	1.24	935	35.15	752	27.92

1	2	3	4	5	6	7
9.	Howrah	0.89	941	41.93	822	15.68
11.	Hooghly	5.14	940	26.47	798	27.82
12.	Burdwan	5.63	918	22.77	762	19.92
13.	Birbhum	4.38	974	7.03	744	22.72
14.	Bankura	8.19	961	7.47	742	21.84
15.	Midnapore	5.15	952	7.63	698	26.98
16.	Purulia	9.83	970	8.26	621	16.01
ANDHRA PRADESH						
1.	Srikkulam	27.96	1027	10.65	585	11.75
2.	Visakhapatnam	26.30	1008	22.30	549	12.18
3.	East Godavari	19.60	997	19.23	573	17.35
4.	West Godavari	24.14	994	17.71	561	17.40
5.	Krishna	23.53	969	27.25	586	14.18
6.	Guntur	26.33	974	24.98	587	19.37
7.	Ongole	24.78	989	11.07	588	13.28

(1111)

1	2	3	4	5	6	7
8.	Nellore	25.75	989	15.77	542	13.25
9.	Chittoor	23.56	964	13.45	571	16.65
10.	Cuddapah	22.71	960	14.18	591	16.20
11.	Anantpur	29.34	950	17.77	678	19.16
12.	Kurnool	31.75	973	20.30	691	27.18
13.	Mahbubnagar	35.80	992	8.97	666	22.90
14.	Hyderabad	34.05	972	65.88	636	22.26
15.	Medak	31.88	988	8.51	652	18.05
16.	Nicamabad	34.60	1012	15.94	615	26.93
17.	Adilabad	28.15	986	15.92	675	27.01
18.	Karimnagar	33.30	990	10.72	586	16.35
19.	Warangal	27.63	959	13.43	669	22.00
20.	Khazam	25.60	961	13.59	735	27.40
21.	Balgonda	23.63	869	6.69	654	18.88

1	2	3	4	5	6	7
MAHARASHTRA						
2.	Thana	24.61	944	36.23	666	26.15
3.	Kolaba	25.30	1077	12.08	737	16.62
4.	Ratnagiri	29.66	1267	8.40	491	8.58
5.	Nasik	29.22	954	28.64	704	22.49
6.	Dhulia	21.92	967	17.30	690	21.06
7.	Jalgaon	26.40	958	23.65	657	18.51
8.	Ahmednagar	20.45	967	11.08	707	27.00
9.	Poona	19.50	983	41.84	682	21.04
10.	Satara	17.81	1061	13.16	639	17.96
11.	Bangli	11.58	962	18.63	661	20.67
12.	Sholapur	16.50	960	27.36	724	22.16
13.	Kohlapur	18.44	980	21.50	918	24.76
14.	Aurangabad	23.91	960	16.70	734	24.79
15.	Parbhani	22.43	969	16.06	702	21.67

(1v)

1	2	3	4	5	6	7
16.	Bhir	18.83	963	11.61	732	25.92
17.	Nanded	19.18	967	16.32	762	26.60
18.	Osmanabad	16.27	953	12.49	731	25.60
19.	Buldhana	34.92	965	17.56	658	17.74
20.	Akola	32.22	954	23.53	765	23.92
21.	Amravati	28.95	942	27.55	704	22.62
22.	Yeotmal	33.10	969	13.62	759	28.10
23.	Wardha	30.94	963	24.51	717	21.52
24.	Nagpur	32.11	949	54.32	706	22.37
25.	Bhandara	41.10	994	11.38	644	24.12
26.	Chandrapur	27.31	981	10.19	668	28.94

Appendix-10
Socio-Cultural Variables

Location Code No.	State/District	% of female workers to total females	% of female literate and educated population	% of literate and educated females		
				in primary level	between primary & Hr. Secy. level	above higher secondary category
1	2	3	4	5	6	7
PUNJAB						
1.	Gurudaspur	0.73	21.73	85.92	13.71	0.37
2.	Amritsar	0.93	20.3	82.73	16.5	0.77
3.	Firozpur	0.75	15.24	86.20	12.67	1.13
4.	Ludhiana	0.82	27.79	79.44	18.64	1.92
5.	Jullunder	0.78	26.71	84.54	14.52	0.94
6.	Kapurthala	0.50	21.9	85.46	13.71	0.83
7.	Hoshiarpur	0.83	27.82	83.63	15.49	0.88
8.	Roper	0.64	30.41	88.87	10.83	0.3
9.	Patiala	0.68	29.69	86.93	8.97	4.10
10.	Sangrur	0.47	13.18	89.16	10.10	0.77
11.	Bhatinda	0.51	10.7	88.12	10.51	1.37

(xvii)

Location Code No.	State/District	% of married females to total females	% of widowed/ divorced fe- males in total females	% of scheduled caste women	% of scheduled tribe women
1	2	8	9	10	11
PUNJAB					
1.	Gurudaspur	40.25	8.08	22.99	-
2.	Amritsar	42.58	5.32	26.96	-
3.	Firozpur	41.80	5.12	24.17	-
4.	Ludhiana	42.85	5.72	30.51	-
5.	Jullunder	43.94	5.92	36.83	-
6.	Kapurthala	41.30	5.11	26.39	-
7.	Hoshiarpur	42.44	7.06	30.02	-
8.	Roper	44.38	6.14	23.27	-
9.	Patiala	43.18	4.33	25.06	-
10.	Sangrur	43.93	5.50	25.67	-
11.	Bhatinda	43.34	5.87	28.77	-

(lviii)

1	2	3	4	5	6	7
HARYANA						
1.	Ambala	0.99	15.75	83.66	14.94	1.40
2.	Karnal	1.40	8.99	86.1	13.35	0.55
3.	Rohatak	2.07	12.23	81.17	17.25	1.58
4.	Gurgaon	2.13	8.54	87.49	12.46	0.05
5.	Mahendragarh	4.39	7.26	92.76	7.05	0.19
6.	Hissar	3.07	7.14	88.60	10.41	0.99
7.	Jind	2.72	3.88	91.20	8.0	0.80
WEST BENGAL						
1.	Darjeeling	25.88	15.88	84.42	14.93	0.65
2.	Jalpaiguri	10.66	11.52	84.55	14.98	0.46
3.	Cooch Behar	1.49	9.22	82.44	17.10	0.46
4.	West Dinajpur	2.75	8.84	88.03	11.37	0.60
5.	Malda	3.38	7.56	87.73	11.77	0.50
6.	Murshidabad	2.42	9.99	83.24	16.17	0.59
7.	Nadia	1.57	17.56	85.08	13.84	0.48

(11x)

1	2	8	9	10	11
HARYANA					
1.	Ambala	44.24	5.30	28.25	-
2.	Karnal	45.66	4.79	20.96	-
3.	Rohtak	47.27	5.34	18.66	-
4.	Gurgaon	46.72	5.67	17.49	-
5.	Mahendragarh	47.62	6.30	15.39	-
6.	Hissar	45.40	5.07	23.17	-
7.	Jind	49.30	4.74	20.42	-
WEST BENGAL					
1.	Darjeeling	34.09	6.82	13.81	16.40
2.	Jalpaiguri	38.60	6.78	36.30	27.39
3.	Cooch Behar	35.11	9.32	49.78	0.81
4.	West Dinajpur	40.71	7.56	24.75	13.19
5.	Malda	40.87	7.74	17.07	8.60
6.	Murshidabad	39.05	10.20	12.32	1.43
7.	Nadia	37.27	11.10	23.93	1.63

(1r)

1	2	3	4	5	6	7
8.	24-Parganas	1.24	16.47	84.75	14.65	0.60
9.	Howrah	0.89	20.62	85.79	13.58	0.63
10.	Hooghly	5.14	22.32	83.33	16.01	0.66
12.	Burdwan	5.63	19.87	82.80	16.53	0.67
13.	Birbhum	4.38	15.85	86.59	13.05	0.36
14.	Bankura	8.19	12.88	89.93	9.82	0.25
15.	Midnapore	5.15	17.75	84.56	15.12	0.32
16.	Purulia	9.83	5.98	73.45	25.23	0.32
ANDHRA PRADESH						
1.	Srikakulam	27.96	7.49	92.52	7.38	0.10
2.	Visakhapatnam	26.30	8.52	91.40	8.47	0.13
3.	East Godavari	19.60	20.76	92.50	7.42	0.08
4.	West Godavari	24.14	25.28	91.47	8.41	0.12
5.	Krishna	23.53	22.69	72.93	26.86	0.21
6.	Guntur	26.33	17.10	76.61	22.82	0.57
7.	Ongole	24.78	10.67	81.50	18.22	0.28

(1x1)

1	2	8	9	10	11
8.	24-Parganas	38.55	10.57	31.63	2.37
9.	Howrah	38.03	10.96	18.05	0.12
10.	Hooghly	34.34	13.18	23.84	4.57
12.	Burdwan	39.52	11.92	29.12	7.31
13.	Birbhum	40.89	12.48	30.49	7.50
14.	Bankura	39.11	13.68	28.90	11.20
15.	Midnapore	41.10	11.77	13.98	8.67
16.	Purulia	43.25	13.54	14.72	3.93
ANDHRA PRADESH					
1.	Srikakulam	44.01	14.44	9.32	8.95
2.	Visakhapatnam	44.69	15.59	7.70	13.45
3.	East Godavari	53.01	13.02	18.29	4.68
4.	West Godavari	46.35	12.02	15.65	2.49
5.	Krishna	44.94	10.83	11.91	2.38
6.	Guntur	44.72	13.03	5.14	3.95
7.	Ongole	44.42	13.52	9.87	2.80

(lxii)

1	2	3	4	5	6	7
8.	Nellore	25.75	14.03	87.18	12.63	0.18
9.	Chittoore	23.56	10.83	87.72	12.18	0.10
10.	Cuddapah	22.71	9.61	90.28	9.58	0.14
11.	Anantpur	29.34	7.91	81.37	18.54	0.00
12.	Kurnool	31.75	8.88	82.34	17.53	0.13
13.	Mahbubnagar	35.80	5.83	79.57	20.23	0.20
14.	Hyderabad	34.05	7.09	80.71	18.78	0.51
15.	Nedak	31.88	4.94	87.99	11.86	0.15
16.	Nizamabad	34.60	5.19	75.18	24.58	0.24
17.	Adilabad	28.15	3.74	86.48	13.52	0.00
18.	Karimnagar	33.30	4.65	70.42	29.33	0.25
19.	Warangal	27.63	6.21	79.12	22.71	0.17
20.	Khamam	25.60	8.43	92.22	7.33	0.45
21.	Nalgonda	28.63	7.04	78.47	21.27	0.26

1	2	8	9	10	11
8.	Nellore	43.32	14.08	21.97	8.06
9.	Chittore	44.16	13.47	19.16	3.12
10.	Cudapah	42.70	13.73	12.01	1.81
11.	Anantpur	41.70	12.29	14.57	3.58
12.	Kurnool	42.57	12.79	11.90	1.75
13.	Mahbubnagar	47.36	13.03	17.75	0.31
14.	Hyderabad	47.69	11.03	21.57	0.11
15.	Medak	48.94	12.68	16.44	0.01
16.	Nizamabad	50.83	14.49	16.63	0.04
17.	Adilabad	49.14	12.15	18.14	15.52
18.	Karimnagar	50.54	11.93	19.59	0.89
19.	Warangal	48.75	10.13	16.61	2.66
20.	Khamam	43.13	9.96	12.13	17.03
21.	Nalgonda	47.73	11.49	16.11	0.03

1	2	3	4	5	6	7
MAHARASHTRA						
2.	Thana	24.61	18.74	78.25	21.08	0.67
3.	Kolaba	25.30	20.82	85.62	14.07	0.31
4.	Ratnagiri	29.66	27.79	85.76	14.06	0.18
5.	Nasik	29.22	16.27	86.07	13.44	0.49
6.	Dhulia	21.92	16.10	85.59	13.90	0.51
7.	Jalgaon	26.40	27.93	85.92	13.87	0.21
8.	Ahmadnagar	20.45	20.11	86.32	13.37	0.31
9.	Poona	19.50	19.35	83.92	16.06	0.02
10.	Satara	17.81	21.70	84.54	15.10	0.36
11.	Sangli	11.58	19.53	81.30	18.29	0.41
12.	Sholapur	16.50	15.23	87.47	12.38	0.15
13.	Kolhapur	18.44	14.52	84.41	15.33	0.26
14.	Aurangabad	23.91	9.97	87.73	12.17	0.11
15.	Parbhani	22.43	8.22	83.93	16.07	0.00

(lxv)

1	2	8	9	10	11
2.	Thana	44.11	8.36	1.33	39.30
3.	Kolaba	43.95	10.21	1.06	9.24
4.	Ratnagiri	40.83	7.10	2.05	0.44
5.	Nasik	46.50	8.77	3.94	31.76
6.	Dhulia	44.18	8.42	3.46	43.74
7.	Jalgaon	45.05	11.14	4.07	7.36
8.	Ahmadnagar	45.73	9.00	9.57	7.21
9.	Poona	45.01	9.27	4.61	5.46
10.	Satara	45.22	11.78	5.12	0.20
11.	Sangli	45.27	11.18	9.94	0.16
12.	Sholapur	44.88	10.48	16.14	0.44
13.	Kolhapur	43.72	10.95	12.04	0.20
14.	Aurangabad	46.81	9.74	5.81	1.91
15.	Parchani	46.58	10.48	5.75	3.35

(Lrv1)

1	2	3	4	5	6	7
16.	Bhir	18.83	8.96	87.92	11.95	0.13
17.	Nanded	19.18	7.42	85.21	14.72	0.07
18.	Osmanabad	16.27	12.83	85.50	14.46	0.04
19.	Buldhana	34.92	19.15	88.39	11.61	0.00
20.	Akola	32.22	21.80	86.96	12.95	0.09
21.	Amravati	28.95	27.26	81.77	18.11	0.12
22.	Yeotmal	33.10	16.73	85.75	14.16	0.09
23.	Wardha	30.94	25.45	82.62	17.13	0.25
24.	Nagpur	32.11	19.60	85.23	14.43	0.34
25.	Bhandara	41.10	18.23	87.67	12.12	0.21
26.	Chandrapur	27.31	12.12	87.94	11.72	0.34

(lxvii)

1	2	8	9	10	11
16.	Bhir	47.16	8.37	13.12	0.38
17.	Nanded	47.27	10.19	9.93	4.88
18.	Osmanabad	46.64	13.08	16.06	0.14
19.	Buldhana	44.99	11.25	5.40	0.00
20.	Akola	44.57	10.37	4.87	0.00
21.	Amravati	41.59	10.39	4.04	7.18
22.	Yeotmal	43.13	10.29	3.73	15.81
23.	wardha	43.34	21.57	2.46	0.00
24.	Nagpur	44.74	10.55	4.04	0000
25.	Bhandara	47.58	9.93	4.87	0.00
26.	Chandrapur	45.52	10.66	4.31	15.56