

**WOMEN WORKERS IN THE MANUFACTURING  
SECTOR - A DISTRICT LEVEL ANALYSIS  
OF SELECTED STATES (1981)**

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

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CERTIFICATE

The research work embodied in this dissertation entitled "WOMEN WORKERS IN THE MANUFACTURING SECTOR - A DISTRICT LEVEL ANALYSIS OF FOUR STATES" has been carried out in the Centre for the Study of Regional Development in the School of Social Sciences, Jawaharlal Nehru University, New Delhi. The work is original and has not been submitted in part or full for any other degree or diploma of any University.

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## ACKNOWLEDGEMENT

My thanks are due to

my supervisor Dr. Atiya Habeeb Kidwai for her scholarly guidance and inspiration in preparing this dissertation

the chair person, CSRD for providing me the necessary facilities

the University Grants Commission for financial assistance

Mr. Muralidharan for valuable help in data processing

Mrs. Kakkar, Talwarji, Mr. Sukhdev, Tokhasji

and Rajani for their eager and timely help

my family for their love and inspiration

my friend Mohan for his precious help at every stage of the work

Mr. Anand for manuscript preparation

Mr. Sharma, Mr. Sri Kumar of NII, and Balak Mata Centre for their valuable help in drafting, suggestions and data entry

and all my friends for their understanding.

*Shobhe Krishna*

## CONTENTS

	Page No	
LIST OF TABLES	I	
LIST OF FIGURES	IV	
CHAPTER I	INTRODUCTION	1
CHAPTER II	WOMEN WORKERS IN MANUFACTURING INDUSTRIES - AGGREGATE AND DISAGGREGATE LEVELS	33
CHAPTER III	STRUCTURAL CHARACTERISTICS OF WOMEN WORKERS IN MANUFACTURING INDUSTRIES	162
CHAPTER IV	SOME DETERMINANTS OF LEVEL OF PARTICIPATION OF WOMEN WORKERS IN MANUFACTURING	180
CHAPTER V	CONCLUSION	189
APPENDICES		196

## I

## LIST OF TABLES

	Page No.
Table I.1 Women workers in Bengal in selected occupations (1881-1931).	10
Table II.1 Percentage share of women workers engaged in the manufacture of food products	37
Table II.2 Percentage share of women workers engaged in the manufacture of beverages, tobacco and tobacco products.	41
Table II.3 Percentage share of women workers engaged in the manufacture of cotton textiles.	52
Table II.4 Percentage share of women workers engaged in the manufacture of wool, silk and synthetic fibre textiles	58
Table II.5 Percentage share of women workers engaged in the manufacture of jute, hemp and mesta textiles.	63
Table II.6 Percentage share of women workers engaged in the manufacture of textile products.	67
Table II.7 Percentage share of women workers engaged in the manufacture of wood and wood products, furniture and fixtures.	78
Table II.8 Percentage share of women workers engaged in the manufacture of paper and paper products and printing, publishing and allied industries.	89
Table II.9 Percentage share of women workers engaged in the manufacture of leather and leather and fur products.	102
Table II.10 Percentage share of women workers engaged in the manufacture of rubber, plastic, petroleum and coal products.	105

## II

Table II.11	Percentage share of women workers engaged in the manufacture of chemicals and chemical products.	110
Table II.12	Percentage share of women workers engaged in the manufacture of non-metallic mineral products.	117
Table II.13	Percentage share of women workers engaged in the manufacture of basic metal and alloy.	122
Table II.14	Percentage share of women workers engaged in the manufacture of metal products and parts.	126
Table II.15	Percentage share of women workers engaged in the manufacture of machinery, machine tools and parts.	131
Table II.16	Percentage share of women workers engaged in the manufacture of electrical machinery, apparatus, appliances and parts.	139
Table II.17	Percentage share of women workers engaged in the manufacture of transport equipment and parts.	145
Table II.18	Percentage share of women workers engaged in 'other manufacturing' industries.	148
Table II.19	Percentage share of women workers engaged in 'repair.'	152
Table III.1	Some structural characteristics of women workers engaged in capital, intermediate and consumer goods industry in Kerala.	167
Table III.2	Some structural characteristics of women workers engaged in capital, intermediate and consumer goods industry in Punjab.	168
Table III.3	Some structural characteristics of women workers engaged in capital, intermediate and consumer goods industry in Maharashtra.	169
Table III.4	Some structural characteristics of women workers engaged in capital, intermediate and consumer goods industry in Bihar.	174

### III

Table III.5	Percentage share of districts in different classes of disparity indices in capital goods industry.	176
Table III.6	Percentage share of districts in different classes of disparity indices in intermediate goods industry.	176
Table III.7	Percentage share of districts in different classes of disparity indices in consumer goods industry.	176
Table IV.1	Some determinants and correlates of women's share in manufacturing activities.	182



## IV

### LIST OF FIGURES

Fig. No.		Page.No.
Fig. 1	Position of Maharashtra, Kerala, Punjab and Bihar in India (1981)	25
Fig. 2	Districts and their codes	26
Fig. 3	Proportion of women workers to total workers engaged in the manufacture of food products	36
Fig. 4	Proportion of women workers to total workers engaged in the manufacture of beverages, tobacco and tobacco products	39
Fig. 5	Proportion of women workers to total workers engaged in manufacture of cotton textiles	51
Fig. 6	Proportion of women workers to total workers engaged in manufacture of wool, silk and synthetic fibre textiles	57
Fig. 7	Proportion of women workers to total workers engaged in manufacture of jute, hemp and mesta textiles	62
Fig. 8	Proportion of women workers to total workers engaged in manufacture of textile products (including wearing apparel other than foot wear)	66
Fig. 9	Proportion of women workers to total workers engaged in manufacture of wood and wood products, furniture and fixtures	77
Fig.10	Proportion of women workers to total workers engaged in manufacture of paper and paper products and printing, publishing and allied industries.	87
Fig. 11	Proportion of women workers to total workers engaged in manufacture of leather and leather products and fur products	98
Fig. 12	Proportion of women workers to total workers engaged in manufacture of rubber, plastic, petroleum and coal products	106

Fig. 13	Proportion of women workers to total workers engaged in manufacture of chemical and chemical products (except products of petroleum and coal)	113
Fig. 14	Proportion of women workers to total workers engaged in manufacture of non-metallic mineral products	121
Fig. 15	Proportion of women workers to total workers engaged in basic metal and alloys industries	124
Fig. 16	Proportion of women workers to total workers engaged in manufacture of metal products and parts except machinery and transport equipments	130
Fig. 17	Proportion of women workers to total workers engaged in manufacture of machinery, machine tools and parts, except electrical machinery	133
Fig. 18	Proportion of women workers to total workers engaged in manufacture of electrical machinery, apparatus, appliances and supplies and parts	136
Fig. 19	Proportion of women workers to total workers engaged in manufacture of transport equipment and parts	142
Fig. 20	Proportion of women workers to total workers engaged in 'other manufacturing industries'	147
Fig. 21	Proportion of women workers to total workers engaged in 'repair'	156

CHAPTER I

CHAPTER I  
INTRODUCTION

I.1 Statement of the Problem

Women, as a component of the labour force affect the socio-economic and demographic features of society. Yet field and desk studies show that women's employment is limited within a narrow field by social, economic and cultural constraints. This in the long run undermines the role of women in society and eventually leads to erosion of their potential. Industries in which female labour is found are characteristically light, producing consumer goods of varying degrees of modernity, ranging from textiles and garments to chemicals, rubber, plastics and electronics. Women tend also to be placed in what are called dead - end jobs in which there are no promotion avenues. In a survey of 200 undertakings by the ICSSR (1974), only a few women were found employed in sophisticated industries like engineering and pharmaceuticals. Studies conducted in India also revealed women as relegated to the very low earning sectors of the economy, demanding strenuous work and employing low skills. Women workers are also found

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1. P. Susan Jockes, (1987) : Women in World Economy - AN INSTRAN STUDY, UNITED NATIONS, Oxford University Press, New York. P.83.
  2. ICSSR (1974) : Status of Women in India, Allied Publications, New Delhi. p.20.

in the low technology sectors of low productivity.<sup>3</sup>  
 Such a situation necessitates a study of the women workers engaged in various manufacturing industries in India. An understanding of the situation can contribute to policy formulations - both for industries and women workers in particular.

## I. 2. A SURVEY OF LITERATURE

There is need to classify the voluminous literature on women and women workers. Such an attempt is expected to reveal the emergence of the present status of working women in a historical perspective.

Available literature can be classified into the following heads.

2. 1. Women in the industrially developed countries.
2. 2. Women in the Third World countries.
2. 3. Importance of women in the economy.
2. 4. Women workers as affected by technology and education.

### 1.2.1. Women in the Industrially developed countries:

In the present industrially developed countries women entered the working field with the onset of the Industrial Revolution. This entry of women in the working field is closely associated with the

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3. A Mitra, A. K. Srimany, and L.P Pathak ; (1979) "Status of Women<sup>in</sup> Household and Non-Household Economic Activity", Allied Publishers, ICSSR Programme of women studies, New Delhi.pp.129

transformation of the society from a pre-industrial to an industrial one that was taking place at the time.<sup>4</sup> This transformation was characterised by women becoming less and less concerned with making goods for home consumption and using more and more goods manufactured elsewhere to service other household members. The industrial revolution involved a transformation of the family from a joint production unit, in which, the future worker, the children, were trained outside the home in spatially distinct and separate areas.<sup>5</sup> Women therefore began to play a dual role - one in the house and the other in the workplace i.e., factory. This delinking of home and work led to spatial differences and subsequent re-organisation of land use. While on the one hand women played a role in the economy only if she worked outside her home, on the other hand the factory and its surrounding parameters emerged as cities.<sup>6</sup>

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4. G Standing (1978) : Labour Force Participation and Development; International Labour Office, Geneva. pp.69-72.
  5. S Mackenzie, (1980) 'Women and Repro-duction of labour force in the industrial city.' Working Paper 23, Urban and Regional Studies, University of Sussex, Brighton.
  6. Institute of British Geographers (IBG); Geography and Gender (1984) p.45.

7

each of these stages can be assessed. The three stages are

- a) the pre-capitalistic city
- b) the transitional city and
- c) the victorian city

The pre-capitalistic city housed the aristocracy, the merchants, the skilled artisans producing for local consumption and a small portion of unskilled workers. A household included an artisan and his family together with his apprentices.<sup>8</sup> Women in such a city, therefore, had an indispensable role in the economy.

The improved means of communication that led to the characterisation of the transitional city stimulated trade and production in both craft workshops and the newly emerging factories. The outmigration from the rural areas to the manufacturing and construction sectors led to three changes.

- (i) it produced a large number of unskilled labourers.
- (ii) it led to a declining role of women in the economy due to mass production and reduced mobility, and,
- (iii) it transferred power from aristocracy to factory owners. (9)

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7. P Knox (1982) Urban Social Geography, Longman. London.
  8. M Barret and M McIntosh (1982) : The Antisocial family ; Verso Editions, London
  9. Institute of British Geographers (IBG). op.cit. p.4

The decline of the small family workshops and subsequent dominance of the factory system was concurrent with the emergence of the Victorian city. The chief characteristic of the Victorian city was the sharpening of spatial boundaries - home and work, were now completely separated in terms of space. This led to the emergence of women from their confines and to their employment in factories. Women now became engaged in the manufacture of new household commodities like prepared food, household machinery and readymade clothing. Middle class women sought the service sectors.<sup>10</sup>

While the above theory is able to explain the mechanism that triggered the crossing of the threshold of the women, it does not throw light on how their role in the economy became categorised. There are several theories which have tried to explain this phenomena which will be dealt in a later section.

### I.2.2 Women in the Third World Countries

The Third World Countries are characterised by two major identities.

- 1) Most of the countries, at some period of time, have been colonised, and,
- 2) The economy of these countries is based on agriculture.

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10. R Miller, (1983) : 'The Hoover in the Garden : Middle-class women and suburbanisation, 1850-1920'; Environment and Planning Department, Society and Space. p.73-87



Both the above identities have had an influence on women and have determined the roles they play in the economy today.

Trenchard (1987), in a study of sub-Saharan Africa examines how the role of women in the agricultural society underwent a change with colonisation. The basic feature common to most traditional African land tenure system was that ownership was by group (lineage or community). Women as wives or daughters, could work on the land along with the males and in some societies had right to land. In east and southern Africa (Kenya, Zimbabwe and South Africa), Europeans adopted a settler policy to exploit opportunities for mining and cash cropping. They appropriated much of the fertile and accessible land and confined Africans to designated reserves. This led to traditional systems of land tenure coming under pressure especially in parts of Kenya and Southern Ghana. Men therefore left the farms to work in the plantation and cash crop farms leaving<sup>11</sup> the women to tend the land and grow food crops.

Colonisation also affected African society adversely in other ways. The spread of education resulted in creating greater opportunities for men. A

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11. Esther Trenchard (1977) : Rural Women's Work in Sub-Saharan Africa and their implications for nutrition ; In Geography of Gender in the Third World (Eds.) Janet Z Henmshall, Momsen and Janet. G. Townsend, State University of New York Press Hutchinson, pp.175-212.

few women, mainly belonging to the elite class were also educated. Thus, on the one hand, education widened the gap between societal roles of men and women and on the other hand, by giving education to a few women only, it led to social and economic stratification among women themselves. This has been discussed at length by Smock (1977)<sup>12</sup>

In Mexico, a Latin American country, colonisation affected the status of women through an imposed religious institution - the Catholic church. By creating a highly prestigious class of nuns, submissive to the Church, women completely lost any relevance they had in the economy and society.<sup>13</sup>

Commercialisation of agriculture, urbanisation, religious fanaticism and other ill-effects of colonisation in the African and Latin American countries ultimately led to women making up only a very small part of the total workforce and worse, concentrating at the lower end of the labour market.<sup>14</sup>

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12. A C Smock (1977) : Ghana, From Autonomy to subordination in Women - Role and Status in Eight Countries (Eds) Janet - Z, Giele and Aundrey, C.Smock, John Wiley and Sons, New York pp.156-176.
13. M Elmendory (1977) Mexico : "The many worlds of women" in, Women - Role and status in eight countries, op.cit. p.129-172.
14. Chant and Sylvia (1987) : "Female Structure and female labour in Queritaro, Mexico, in Geography of Gender in the Third World, Ibid.p.180

Asian countries are again characterised by the late entry of women in the labour market. This is mainly due to the prolongation of the agrarian society based on a feudal set-up.<sup>15</sup> A study of the evolution of women's role in the Indian economy reveals characteristics more or less typical of Asian countries. Women in India have been studied in terms of two periods of time :

- a) the colonial period
- b) the post-independence period

a) Colonial Period :

During the colonial period the abrupt transformation of the feudal society to industrial capitalism resulted in upsetting the balance maintained in a self-sufficient economy that existed.<sup>16</sup> It affected women's role in two stages. First, the maritime trade boosted urban crafts and thus favoured the artisan classes. Consequently the women who played a major role in urban crafts were also benefited and they became indispensable to the economy.<sup>17</sup> This boost however favoured the artisan classes only for a brief

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- 15. M Daly (1973) : Beyond God, the Father : Toward a Philosophy of Women's Liberation; Boston : Beacon Press.
  - 16. N Desai & M Krishnaraj (1987) Women and Society in India; Ajanta Publications, Delhi. p.53.
  - 17. Ibid, p.53.

period of time when the British completely took over India and its trade after the battle of Plassey (in 1756) Thereafter the artisans were reduced to mere agents of European made machine goods. Such a process led to the deurbanisation of flourishing urban centres like Murshidabad, Surat, Malda etc.

18

The artisan classes, thrown out of work, became agricultural labourers. The population of agricultural labourers had risen from 21.5 million in 1921 to 31.5 million in 1931. This phenomena was chronicled as early as 1939 by Kamala Chattopadhyay. The mercantile interest of the British drove the individual workers, now jobless, into villages creating an excessive pressure on land. In 1818 people dependent on land were only 50 per cent but by 1939 their share rose to 75 per cent. Simultaneously, more women were employed in the plantations as they could be paid a lower wage than men. The employment of women in the mines however fell. This was mainly due to the employer's preference for male labour as female labour would require inconvenient provisions like creches, maternity leave etc.

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18. Habib, A.
19. Anupem Sen (1982), The State, industrialisation and class formation in India, Routledge and Kegan Paul, London.
20. Kamala Chattopadhyay (1939) : The awakening of Indian Women, Everyman's Press, Madras pp.25-26.

Table I.1 Women Workers in Bengal in Selected Occupation  
(1881 - 1931 - Figures in '00)

	1881	1901	1911	1921	1931
1. Producing & Selling ordinary fuel	210	208	276	119	39
2. Making and selling products	-	215	223	166	182
3. Silk worm rearing	-	301	141	23	5
4. Cotton Textiles	1703	462	450	519	357
5. Silk Textiles	-	34	94	36	10
6. Jute Textiles	435	262	508	542	388
7. Basket making and allied handicrafts	617	454	429	297	198
8. Medicine	121	126	152	105	113
9. Instruction	3	12	18	26	50
10. Domestic services	1337	801	1107	1158	4198
11. Rice Husking	-	2131	2703	1696	1390

Source : M. Mukherjee (1983) "Impact of modernisation in women's occupation- A case study of the Rice Husking industry of Bengal, Economic and Social History Review, Vol.20 No.1

Table 1 illustrates the case of the displacements of women of Bengal through a period of five decades. The decline of handicrafts in Western India has also been recorded in a study by Joshi (1936).<sup>21</sup>

Employment in general picked up only with the introduction of first industries in Bombay and Bengal, especially textile mills in Bombay in 1884. Women were

21. M M Joshi (1986), "Urban handicrafts in Bombay, Deccan, Gokhale Institute of Politics and Economics, Pune.

employed in the ginning factories under deplorable conditions. The Factory Commission of 1885 states, "The ginning season lasts about 8 months and in five of which the hands work from 5 a.m to 10 p.m and in the remaining they work day and night. The hands are mostly women".<sup>22</sup>

b. Post Independence Period - The spurt in employment of women noted above was however again a brief phenomena which had started reversing from 1901 onwards. With technological changes and legislative actions, coupled with other factors like economies of scale in the factories, the participation rate in general fell for both the sexes. But between 1911 and 1961, the decline for males was only 8 per cent compared to 18 per cent for females."<sup>23</sup>

Along with the fall of female participation in workshops, there was also the segregation of jobs for both male and female workers. The latter began to be concentrated in jobs that required no skill and were basically using indigenous methods of production.

### I.2 3. Importance of women in the economy today

Employment of women (non-domestic) have a bearing

22. Quoted in Neera Desai and Maithreyi Krishnaraj (1987). Women and Society in India, Ajanta Publications, p.62.

23. A Thorner (1962), "The Secular trend in the Indian Economy (1881-1951) The Economic Weekly, Special Number, Vol.2 Nos. 28, 29, 30 July.

on fertility, education and upward mobility of the poor classes and on per capita income and consumption. The effect of female participation on fertility was an important theme at the World Population Conference held at Bucharest in 1974. May and Heer have concluded from a study on India that higher levels of female economic activity can raise the value of daughters relative to the sons and hence indirectly reduce fertility. They found that in India, in order to have 95% probability of raising at least one son to adulthood, a couple had to have six children.<sup>24</sup>

Female participation can substitute child labour and to this extent it can check fertility levels as well as increase literacy rates. By allowing children to receive formal education, the poor can hope to achieve upward economic and social mobility.<sup>25</sup>

Basically, there are three views which define the role of women in the economy and society at large.

- A) The neo-classical school of thought,
- B) The Institutional school, and
- C) The Marxist school

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- 24. D A May and D M Heer, (1968) : "Son survivorship and motivation and family size in India : A computer simulation," in Population Studies, Vol.22, No.2 July 1968, pp.199-210.
  - 25. Muller, Eva : The Economic Value of Children in peasant agriculture, in R. Redkar (ed.) : Population and development: The search for selective intervention (Baltimore, John Hopkins, University Press, (1976).

A) The neo-classical school of thought

This school bases its explanation on the concept of utility.<sup>26</sup> Human beings exercise their choice to maximise their utility, as part of rational behaviour, subject to incomes and prices.

The allocation of time by any individual is linked to the utility attached to it. Women's participation in the labour force is a function of the total utility derived out of market work, leisure and housework. If the price of market work goes up, with other things remaining constant, the labour force participation rises. However, if household income rises (meaning husband's income or parent's income), then the relative disutility of work increases and women tend to withdraw from the labour force. There are therefore inducing and non-inducing factors which determine the participation of women in the labour force.

B) The Institutional School

This theory draws its rationale from rigid/quasi rigid structural institutions in the capitalistic society. Race, caste, gender, class, education, migration, status or other similar characteristics contribute to the formation of job rules, wage earning levels and status of men, women and children within a

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26. S Acharya, (1986), "Women's work and economic development" in Women's studies in India (eds) Ray M.K., Bombay, Popular Prakashan.



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 society. The principal manifestation of these is the segmented labour market structure which discriminates against women in employment, wage, access to training etc. Gender specific social division of labour is inherited and perpetuated, the origin of which lies, according to anthropologists in the hunting and fishing

28  
 theories. The Institutional school maintains that there is a possibility of change towards equity through social reforms, legislations and milder forms of social intervention. The institutional school therefore maintains that women's problems can be solved within the existing capitalist structure itself.

#### C) The Marxist Approach

The Marxist approach does not regard society as existing permanently in a capitalist set up but as one constantly evolving. Gender differences and associated problems are therefore treated as a natural corollary to capitalism and as one that would pass away when replaced by socialism and ultimately communism. Women's participation is therefore viewed within the process of

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27. G Rodgers, (1982) : "Migration and Income distribution" WEPR, Working Paper No. WEP. 2-21/W.P. 108

a. S Mukhopadhyay, (1980) : "Women Workers in India - A case of market segmentation," Workshop on 'Women in the Labour Force', CDS, TVM, Delhi and ILO, ARTEP.

b. G Standing (1982) Unemployment and female labour in Kingston, McMillan, London.

28. F Capra (1983) ; The Turning Point, Bastam Books.

capital accumulation and class struggle. The articulation of the relationship between land, labour and capital and their integration within the labour system is central to the understanding of women's employment status. Thus, splitting trade unions by gender, creating a wedge between genders to break labour homogeneity, exclusion of women from market production or diffusing the contradiction between capital and labour by a deliberate articulation of a different position for women are some of the methods of accentuating capital accumulation.<sup>29</sup>

#### I.2.4. Women workers as affected by technology and education

To understand the phenomena of declining female participation in workforce and increasing male-female disparity, one has to take a close look at what is often considered the two major variables affecting women's participation - technology and education.

##### A) Women and Technology

The impact of technology on the employment of women has to be seen in the light of the industrial revolution. According to Boserup, (1970), industrialisation and urbanisation produce a type of polarised division of labour characterised by a "wide

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29. S Himmeldweit and S Mohan (1977) "Domestic labour and Capital", Cambridge Journal of Economics, Volume 1.

gap in productivity and income between men and women within the same sector".<sup>30</sup>

Standing (1978) opines that the division of labour made possible by modern technology has resulted in the creation of 'static' and 'progressive' jobs. Conceptually, static jobs are those in which skill acquisition or promotion are unlikely, in which the nature of work does not change significantly with experience on-the-job. There is therefore, no accumulation of skills through working, once the basics of only the job has been mastered. Moreover, the workers average productivity always remains the same. On the other hand, progressive jobs are those in which income and skill tend to increase as the workers gain experience. Progressive jobs, therefore, create a vertical job structure where there is upward mobility of workers whereas static jobs create a segmented labour force.<sup>31</sup>

The empirical evidence to prove the displacements of women workers by technology has been provided by several studies. Sinha (1972) has described the dilemma of declining female employment due to the impact of technology very aptly. On the demand side,

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30. E Boserup (1970), "Women's role in economic development", London, Allen and Unwin, p.117.

31. G Standing, (1978) op.cit.pp.66-72

the service sector rejected women, the secondary sector did not expand sufficiently and the primary sector over crowded it self.<sup>32</sup> Ambannavar(1975) studied female employment in terms of old and new industries. The new industries are paper and printing, rubber, coal, petroleum, transport equipments and technical goods which are highly organised, capital intensive and urban based. In these new industries, in the first sixty years of this century, total employment grew to a level of 150,000, but the share of female workers was only 86,000, which gives the ratio of male to female as 70 :

4.<sup>33</sup> Mitra et.al (1980) has also conducted a state level study to give an account of the declining female participation between 1961 and 1971 in terms of mixed, traditional and modern industries and arrived more or less to the same conclusion.<sup>34</sup>

Anbarassan (1984), in a study of three Chengalput villages concluded that the introduction of nylon nets fabricated by machines has reduced women's job opportunities in net making. The introduction of

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32. J.N Sinha (1972) 'The Indian Working Force : Its growth, change and composition' ; Census of India, 1961, Vol. 1, Monograph 11, Government of India, New Delhi.
33. J.P. Ambannavar (1975), "Employment Pattern in India since 1911", Ph.D. Thesis, Australian National University, Canberra, p.225.
34. A Mitra, P L Pathak and S Mukherjee (1980) "The status of women - shifts in occupational participation 1961-71", an ICSSR and JNU study. Abhinav Publications.

auction system in marketing and other changes have caused the vertical disappearance of women from the fish trade.<sup>35</sup> The plight of fisherwomen of the Kerala coast has also been the same as revealed by Gulati.<sup>36</sup> The displacement of women has also taken place in the cotton handloom, wollen cottage industry and houseblock printing. Jain (1985) from a study of the five states of Tamil Nadu, Andhra Pradesh, Gujarat, Maharashtra and Uttar Pradesh finds that 2.5 lakh handloom workers were displaced within a span of 10 years (1961 and 1971)<sup>37</sup> Sharma, and Sengupta, (1984) have given an instance of exploitation of women by studying their pattern of employment in the free trade and export promotion zones. In the electronic zone in Bombay, a sample survey of 48 units was done and it was found that 23 per cent of the women were employed in unskilled jobs against 27 per cent males; 69 per cent females were in semi-skilled jobs against 39 per cent males and 76.9 per cent in skilled against 33.5 per cent males.<sup>38</sup>

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35. K Anbarassan (1984) : Factors influencing the role and status of Women - A study of three villages in Chengalput district, Tamil Nadu, MIDS Seminar on Women, Technology and Forms of Production, Madras. Oct. 1984.
36. L Gulati (1984) Fisherwomen in Kerala Coast, ILO, Geneva.
37. D Jain (1984) Displacement of Women workers in traditional industries, ISST, 1984.
38. R C Sharma and C Sengupta (1984) Women's employment in SEEPZ, unit for Urban Studies, Tata Institute of Social Sciences (Mimeographed).

Technology has therefore resulted in the fall of female participation rate much faster than males and created a fixed pattern of employment or job structure in terms of gender.

#### B) Education and Women's role in the economy

It is generally assumed that there is a positive correlation between education and labour force participation. Such an assumption is based on opportunity cost argument.

Since education and earning potential are positively correlated, education raises the opportunity cost of inactivity and thus the incentive to seek employment rises. This has been put forth as the opportunity cost argument. Bowen and Finnegan have included education as a variable in econometric models developed to explain and predict changing levels of male and female labour force participation.<sup>39</sup> However, there are a number of problems attached to the above reasoning. First of all in the affluent industrialised countries, the balance of education for secondary and higher education has probably changed from being predominantly economic to socially conventional.<sup>40</sup> A

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39. W G Bowen and T A Finnegan (1966), Educational attainment and labour force participation, American Economic Review, Vol. 65, No.2 pp. 567-582.

40. C F Epstein (1970), Women's Place :Options and limits in Professional Careers, Berkley University of California Press, p.65.

second objection is that educated women marry educated men and therefore lose the incentive to work as the latter's income<sup>41</sup> is usually sufficient. The third difficulty with the opportunity cost hypothesis is that, while compared with other women, an educated woman is probably better able to afford child care, either from her own or her husband's income, it is also probable that she is technically better equipped to educate her children than a less educated woman. According to Michael (1973), while investment in human capital is supported to yield a return in terms of time spent in the labour market it may also yield a return in terms of time spent in productive activities outside<sup>42</sup> the labour market.

Empirical studies in low income countries have yielded varied results indicating that there is a complex relationship between education and women's economic activity.

Nagi (1971) found from the 1960 census of Egypt that the ability to read and write generally increased the chances of women finding work outside the

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41. J Mincer (1962) ; Labour Force Participation of married women : A study of labour supply in H.G. Lewis (ed.) Aspects of Labour Economics (Princeton, National Bureau of Economic Research; Princeton University Press).
42. T R Michael (1973) : Education in non-market production, in Journal of Political Economy, vol. 81, No.2, Para 1, March - April.

household.<sup>43</sup> In contrast to the illiterate population, where only about 5 per cent of the women were actively employed, nearly 10 per cent of the literate females were employed. Regression analysis revealed a positive correlation between female activity rate and female education in Pakistan using, as alternate independent variables, either the literacy rate or the proportion of persons over 15 with an eighth grade or higher education and no longer at school.<sup>44</sup>

In a Nigerian study, based on a national survey conducted in 1973-74, a strong relationship was observed between education and controls like age, tribe and financial support.<sup>45</sup> Sheehan (1976) also concluded the same in a study based on household survey in Khartum.<sup>46</sup> In urban Kenya, a positive linear relationship was found between education and employment.<sup>47</sup> Ramachandran (1964) found from a survey conducted in Greater Bombay that a high proportion of women who were seeking employment were college educated

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43. M Nagi (1971) : Labour Force Participation and Employment in Egypt; New York, Praege.
44. G M Farooq (1972) An aggregate model of labour force participation in, Developing Economies, Vol.10 No.3, Sept. pp. 967-989
45. G Standing and G Sheehan (1976), Economic Activity of Women in Nigeria, Geneva, ILO, Tables 2 & 5 (Mimeographed).
46. G Sheehan (1976) Labour Force Participation rates in Khartfourn, Geneva, ILO, Mimeographed
47. Anker and J C Knowles (1977), Female Labour Force Participation in Kenya, Geneva, ILO, Mimeographed.



and came from families where heads were fairly young and held good jobs bringing in a relatively high income.<sup>48</sup> Negative relationship was also found in a cross sectional analysis of census data from Thailand.<sup>49</sup> Nath (1970) also found a negative<sup>50</sup> relationship in an analysis based on the 1961 census.

There are several other studies in which a non-linear relationship has been found between education and employment. The most common type of non-linearity has been a U-shaped curve whereby those with very low levels of education have had higher rate of participation than those with somewhat higher levels, but beyond some level the relationship has become positive. This means labour force participation of women declines with literacy but female education above the matriculation level favours high rate of employment.<sup>51</sup>

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48. P Ramachandran (1964) Attitudes of Women to part time employment, Part I Report (Bombay, Tata Institute of Social Sciences, Mimeographed)
49. K Maurer, R Ratajezak and T P Schultz (1973) : Marriage, fertility and labour force participation of Thai Women; An economic study, Rand Corporation Report R. 829-A 10/RF : Santa Monica, California.
50. K Nath (1970); "Female Work Participation and Economic developments : A regional analysis, in Economic and Political Weekly (Bombay) 23rd May 1970 pp. 846-849.
51. J N Sinha, (1965) Dynamics of female participation in Economic activity in a developing economy in proceedings of the World Population Conference, Belgrade, Vol. 4. Migration, Urbanisation, Economic Development. New York (UN 1967, p.337)

### 1.3. AIMS AND OBJECTIVES

(i) To understand how the level of participation of women workers in manufacturing is affected by the existing industrial structure.

(ii) To find the spatial variations in the participation of women workers in the manufacturing sector. This will aid in identifying thrust areas where development efforts to improve the status of ~~the~~ <sup>workers</sup> women can be targeted.

(iii) To study the influence of the certain socio-economic variables on the level of participation of women in manufacturing

### 1.4. HYPOTHESIS

(i) In the manufacturing sector women are concentrated in activities requiring low levels of skill and training.

(ii) In areas with low levels of development and low levels of literacy, there is higher participation of women workers in consumer goods industries compared to capital and intermediate goods industries.

(iii) The higher the level of urbanisation, the more the participation of women workers in manufacturing.

(iv) More than formal education it is technical training which determines the level of participation of women workers in manufacturing.

### 1.5 THE STUDY AREA

The study is done at district level in the four states of Bihar, Kerala, Maharashtra and Punjab.(Fig.1) These states have been chosen so as to facilitate a spatial study in terms of varying socio-economic phenomenon and have been coded as 0400 (Bihar), 1100 (Kerala), 1300 (Maharashtra) & 1500 (Punjab). Districts corresponding to the states have been coded accordingly as shown in Fig.2. For key to the codes see appendix - I . The four states have been chosen in terms of the following criterion.

(i) Level of Literacy : Bihar and Kerala have been compared keeping the level of literacy in mind. While Kerala is declared to have the highest literacy rate (70.42%), Bihar has one of the lowest (26.20%).<sup>52</sup>

(ii) Per capita Income : High level of agricultural and industrial development in Punjab and Maharashtra respectively have resulted in high per capita incomes in these states. Kerala, neither industrially developed nor agriculturally forward is ranked 8th in terms of per capita income while Bihar under similar situations is ranked well below the national average.<sup>53</sup>

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52. Primary Census Abstract, 1981

53. Cited in L Prasad (1983) : Industrialisation, concepts and issues, Chand and Company Ltd, New Delhi p.20. The Pandey Panel (1968) had recommended certain criteria for the purpose of identification of the industrially backward states. Based on this Bihar has been declared industrially backward, a position it still occupies.

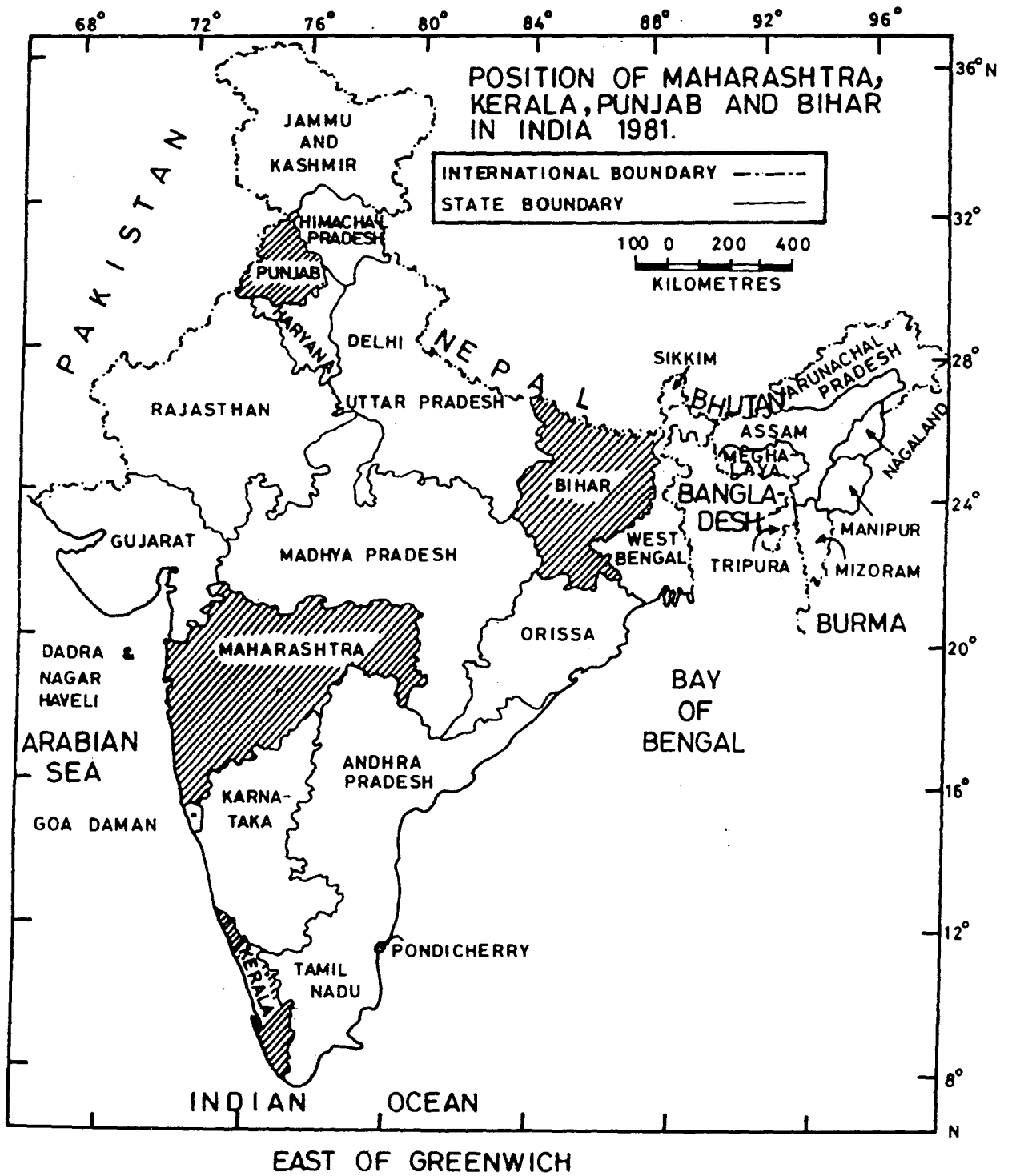


FIG. 1

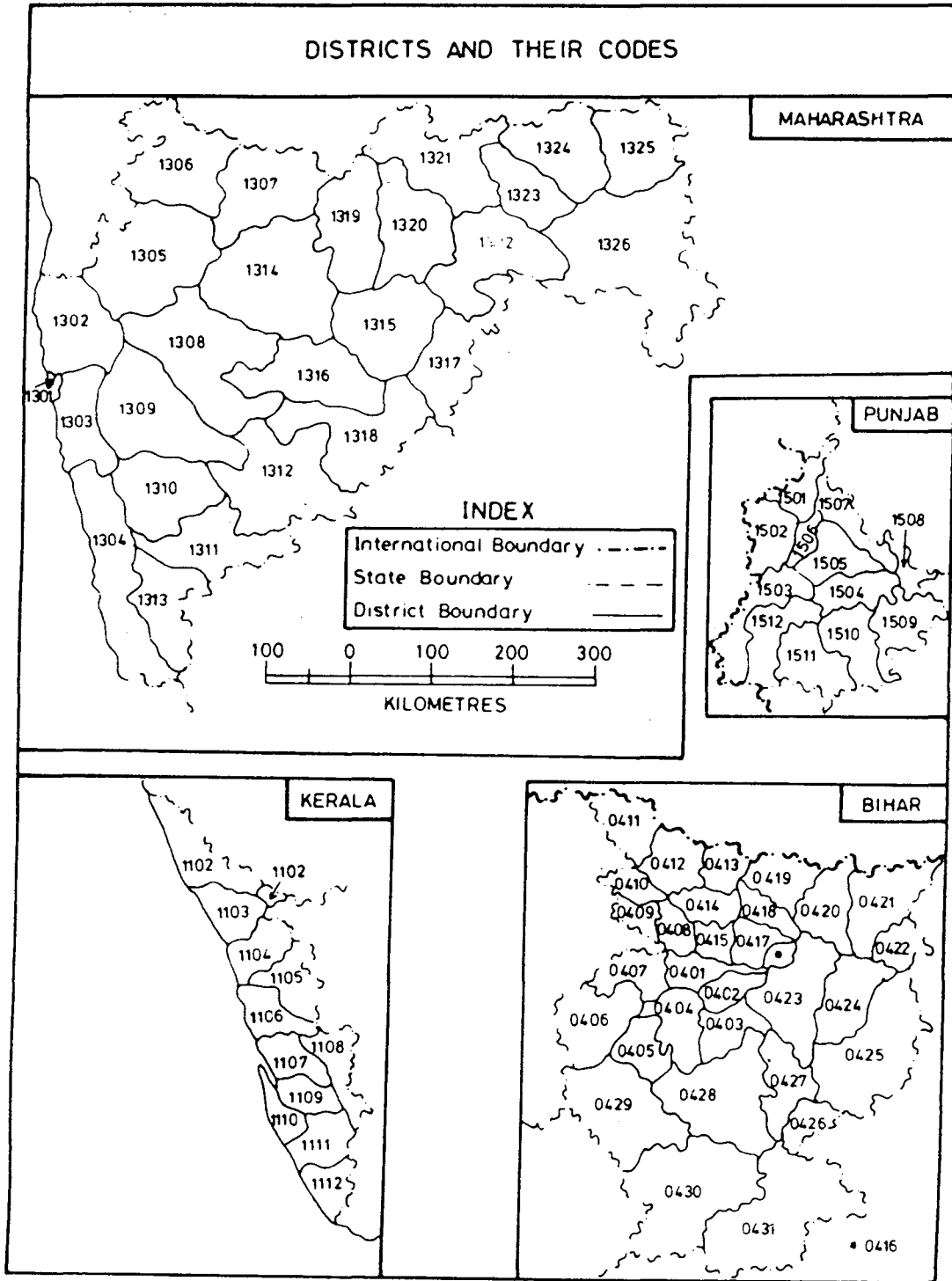


FIG. 2

A brief description of the study area (statewise) follows.

Kerala - The state of Kerala lies on the western coast of India. It supports a population of 25,403,217 persons according to the 1981 census.

Physiographically the state can be divided into highlands, comprising the districts of Cannanore, Kozhikode, Wayanad, Malappuram; midlands comprising of Trichur, Palghat, Kottayam and Idukki and the lowland consisting of Alleppey, Quilon and Trivandrum districts. The highlands rise to an average height of 3000 feet and is an area of major plantations like tea, coffee, rubber, cardamom and other spices. The midland is an area of intensive cultivation growing coconuts, arecanuts, tapioca, banana, rice, ginger, pepper, sugarcane and vegetables of different varieties. The lowlands, made up of backwaters is essentially a rice and coconut growing area.

Kerala, inspite of its heavy food shortage, has gone in for commercialisation of crops. It accounts for 92 per cent of India's rubber, 70 per cent of its cardamom, 70 per cent of its coconut, 60 percent of its arecanut, 70 percent of its pepper, 80 percent of its tapioca and 100 per cent of lemon grass oil. It is also the single largest producer of banana and ginger, besides tea and coffee in abundance.

**Bihar** - The most striking geographical feature of Bihar is the sharp division between north and south. The northern region, entirely a land track, is extremely fertile and watered by Sarayu, Gandhak and Ganga. The southern region consists of a series of hills and is heavily wooded.

**Maharashtra** - Physiographically the state can be divided into the Konkan coast and the Deccan Plateau separated by the Sahyadries. The costal strip is 560 km long and dotted with paddy fields and coconut gardens. The Sahyadries, with an average height of 1200 m. runs almost parallel to the Konkan coast and is made of thick evergreen forests. The Deccan plateau, stretching east of the Sahyadries, is extremely fertile due to regur soils formed by the weathering of Deccan 'traps'. It is drained by Godavari, Bhima and Krishna. The plateau provides excellent crops of cotton, oilseeds and sugarcane.

The areas west of the Sahyadries (Thane, Rajgarh and Ratnagiri) receive heavy rains with an annual average of 200 cm. The area lying in the rain shadow area of Sahyadries - Nasik, Pune, Ahmednagar, Dhule, Jalagaon-hardly receive 60 to 75 cm of rain fall annually.

**Punjab** - The state of Punjab has mainly two physical divisions : the Sub-Shivalik strip and the Sutlej -

Ghaggar plain. The Sub-Shivalik strip covers the upper portion of Ropar, Hoshiarpur and Gurdaspur districts. The Sutlej - Ghaggar plan embraces the other areas of Punjab. The land is highly fertile as they are or by the tributaries of the Indus, Ravi, Beas, Sutlej and the river Ghaggar.

#### 1.6 DATA BASE AND TIME PERIOD :

Data used in this study is based on secondary sources. The number of workers in the industrial category has been obtained from the General Economic Table (B-12) in the Census of India, 1981 Part III A & B (ii).

The term 'industry' in its broad sense is used to refer to economic activity followed by a person or a firm. In this sense, agriculture, trade, mining, manufacturing are all industries. However, the term is used in a restrictive sense to cover processing and relative activities only for which the generally accepted terminology is 'manufacturing industry'. In the NIC - 1980 prepared by the Central Statistical Organisation (CSO), these activities are classified under the major division 2 & 3. The basis of classification (which is along the lines similar to International Standard Classification 1968) followed in the NIC 1980 is the nature of economic activity carried



out in an establishment. Activities similar in nature have been grouped and classified under different heads at 2 & 3 digit levels.

In this system of classification, one to one correspondance is maintained at first and second digit level with the 'International Standard Classification 1968' and at the three digit level all classification items can be matched or made equivalent.

### 1.7 METHODOLOGY

The data is converted from absolute to percentage form to obtain the following :

- a) Proportion of women workers to total workers in each of the levels (2 digit and 3 digit levels)
- b) Ratio of female urban workers to female rural workers (urban female workers per 100 rural female workers).
- c) Male - female disparity through disparity index (Sopher 1974)(54)

The measure of disparity is as follows

$$DIS = \log \frac{X_2}{X_1} + \log \frac{(Q - X_1)}{(Q - X_2)}$$

where  $Q > 200^*$

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\*Modification by A.Kundu (1986)

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54. Sopher (1974), The professional Geogrpaher, Vol. XXVI, Number 4, November. pp.389-391.
  55. A Kundu (1986), "*Inequality in Educational Development : Issues in Measurement, Changing structure and its socio-economic correlates with special reference to India*" in Mosnis Raza (ed) Educational Planning, Concept Publishing Company, New Delhi, pp404-435

II. The three digit level data is regrouped into the following :

- a) Capital goods industry
- b) Intermediate goods industry
- c) Consumer goods industry (See Appendix II)

The indices mentioned earlier in this section (Ia-1e) is again calculated for the regrouped data.

III. The influence of certain variables on employment pattern of women is analysed with the help of correlation matrices. (Karl Pearson's method)

#### 1.8. ORGANISATION OF THE STUDY

Chapter I states the problem under study. A review of available literature traces the evolution of the status of women workers in different parts of the world. The objectives of the study and the methods in the present analysis has been listed.

Chapter II is a detailed discussion on various aspects of women workers engaged in manufacturing at the two and three digit levels.

In Chapter III manufacturing activities listed by N.I.C. (1970) at the three digit level have been reclassified to delineate three industrial types - capital, intermediate and consumer goods industries on the basis of goods produced and the type of demand satisfied. These three industrial types have been discussed in terms of participation of women workers.

Chapter IV is a discussion on the determinants that are generally held to affect work participation of women.

Chapter V is a summary of findings and conclusions from the study.

## CHAPTER II

## CHAPTER II

WOMEN WORKERS IN MANUFACTURING INDUSTRIES - AGGREGATE  
AND DISAGGR<sup>EG</sup>ATE LEVELS

Literature study reveals women as concentrated in certain types of industries and they constitute only a small percentage of the total main workers. In India, only 16.48% of women workers are engaged in primary production. The share in manufacturing (household and non-household) is even lower as women in it make up only 1.65% of the total main workers. 0.17% of the total women workers are engaged in construction and 1.89% in the service sector. At the state level, the percentage share of the women workers in household and non-household industry in Bihar is 6.24%, in Kerala it is 0.14%, in Punjab 0.01% and in Maharashtra 0.18%.<sup>1</sup> The location bound nature of industries therefore create a district geographical pattern which emerges from a study of women in manufacturing industries. This chapter attempts to study women workers in 19 major groups of industries listed under 'Manufacturing and repair' as division 2 and 3 by National Industrial classification (NIC) - 1970. The percentage share of women workers in each industry has been studied at the aggregate level as well as at the disaggregate level - in terms of their distribution.

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1. General Economic Tables, Table B 3, Part III-A, Census of India, (1981).

The objective is to identify thrust areas both in industry and space so that deliberate planning policies can be formulated at the government level. This could raise the status of women workers in manufacturing.

The percentage share of women workers have been discussed in the sections below.

II.1. Percentage share of women workers in the manufacture of food, beverages, tobacco and tobacco products.(20-21 & 22).

Food, beverages (wine and other alcoholic drinks) and tobacco are primary products based on activities like fishing, cultivation and plantation agriculture. The percentage share of women workers in the food and beverage industry therefore reflects the extent to which women have gained from the interflow between agriculture and industry. The percentage share of women workers in the food industry in India is 0.65%. This percentage in the beverage and tobacco industry is 2.07%.

A district level analysis necessitates the grouping of the districts into four categories based on the proportion of women workers to total workers :

- i) Extraordinary proportions - Greater the 60 percent workers
- ii) High proportions- 45% - 60%

iii) Moderate proportions - 30% - 45%

iv) Low proportions - 15% - 30%.

Very low proportions- less than 15%

(i) Extraordinary proportions ( > 60%)

Fig. 3 reveals the distribution of women workers in the food industry depending on their percentage share. One single coastal district - Quilon - which has an extraordinarily high proportion occupies the southern part of Kerala. As shown in Table II-1, the two main occupations in this district are fishing and cashew processing. The latter is almost an exclusive product of Kerala and is highly commercialised. It is also a major earner of foreign exchange for the country. Cashew processing however is labour intensive and women provide cheap and inexpensive labour. In Quilon 78.86 % of the workers engaged in this industry are women. Fish processing industry also employs more than 50 % women.

The other industries found worth mentioning in the census have been grain mill products, manufacture of bakery products, edible oil and manufacture of ice. While no women are employed in baking and ice making industry, in the other industries the proportion is less than 10 percent.

Fig 4 shows seven districts in the beverage and tobacco industry where percentage shares exceed 60 percent. With the exception of Trichur (which belongs

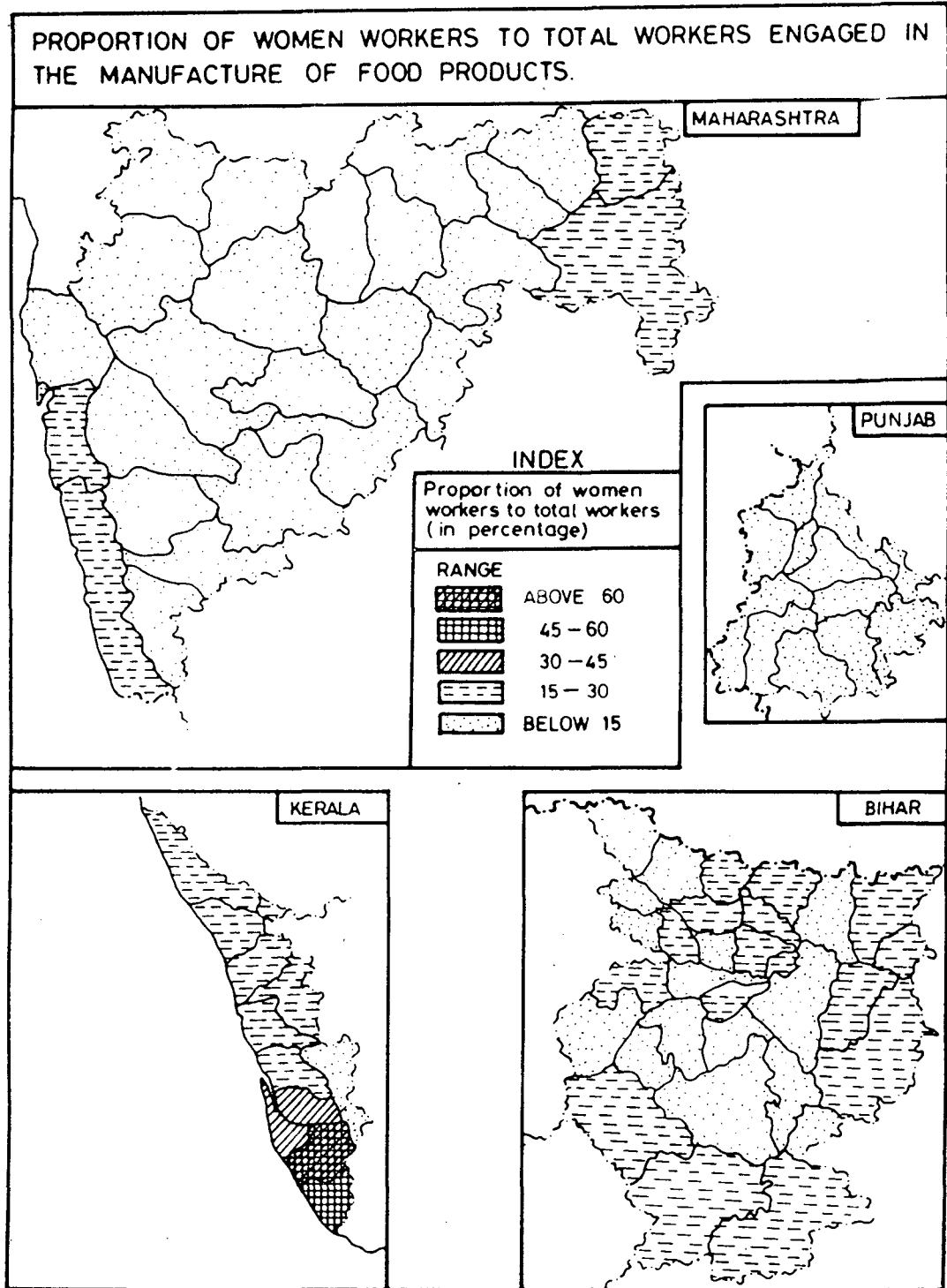


FIG. 3



Table II.1 PERCENTAGE SHARE OF WOMEN WORKERS ENGAGED IN THE MANUFACTURE OF FOOD PRODUCTS

Districts	Major Group	Minor Groups														
		201	202	203	204	205	207	209	210	211	212	213	214	215	216	217
Quilon	66.19			(24) 52.87	(192) 7.28	0.00				(38) 9.20		(71) 78.86	0.00			(182) 24.06
Trivandrum	53.63	CU 9.35	-	-	(44) 19.77	(251) 9.35	(CR) 63.33	(CU) 24.22		(CR) 9.26		(49) 90.58				(173) 33.37
Alleppey	43.39	-	-	(57) 73.06	(58) 10.36	(286) 5.41	(CU) 1.50	(50) 18.38		(CR) 1.27		(92) 84.36	CR 2.19			(30) 14.76
Ernakulam	30.60	(68) 18.78		(91) 52.84	(99) 14.52	(84) 9.64		(119) 15.05		(44) 4.61	(91) 23.30	(19) 73.83	(46) 2.43			(88) 27.56
Raigarh	29.15	0.00		(79) 91.07	(97) 6.07	(14) 3.15		(50) 5.33	CU 4.00						(22) 12.61	(36) 51.80
Bhandara	26.46	(CR) 4.81			(232) 8.40	(20) 16.67		CR 6.85							(27) 46.35	(47) 34.66
Palghat	25.70				(167) 14.81	(138) 14.98	(CR) 6.13		CU 5.21					CR 3.52		(98) 46.49
Trichur	25.61		(88) 79.73	(166) 36.91	(185) 20.06	(226) 8.04				(100) 8.07		(79) 88.69	(CU) 4.03	(470) 14.44	(CU) 4.07	(100) 26.39
Katihar	23.65	(CR) 5.45			(9) 39.51	0.00				(CR) 12.84						(CR) 63.71
Kottayam	23.11			(CR) 78.42	(54) 7.51	(194) 10.07		CU 23.03			(CR) 25.96					(92) 30.40
Santal Parganas	22.88	(CR) 11.59			(39) 21.99	(CU) 1.85		(11) 4.71		(2266) 5.75						(68) 59.38
Kozhikode	21.26			(113) 45.94	(212) 12.60	(124) 2.50		CR 6.90		(219) 4.33		(65) 66.76	(107) 67.89	(CU) 3.42		(49) 21.98
Cannanore	2.21			(245) 16.33	(52) 4.76	(243) 3.88				(248) 4.36		(CU) 38.04	(150) 82.03	(CU) 8.07		(48) 37.32
Ranchi	20.46				(20) 33.28	(CU) 2.67		CR 3.60		(7) 23.94						(45) 43.11
Purnea	19.29	(CR) 20.71			(35) 30.48	0.00		(25) 4.92		(CR) 9.45						(38) 39.41
Begusarai	19.16	(CR) 2.11			(CR) 1.09			(CR) 1.47								(91) 77.94

District	Major Group	Minor Groups														
		201	202	203	204	205	207	209	210	211	212	213	214	215	216	217
Malappuram	17.67			(755) 16.03	(CR) 5.01	(47) 0.89				0.00					(CR) 40.86	(113) 31.57
Saran	17.66			(137) 0.70	(CU) 1.85			(35) 5.48	(CR) 15.32							(20) 33.27
Singhbhum	16.99	(CR) 3.09		(17) 24.61	CU 1.40			(183) 2.00	(CR) 26.09							(43) 49.30
Ratnagiri	16.58		(81) 47.45	(189) 5.29	(43) 1.71			(133) 18.75					(85) 67.44			(430) 17.44
Wayanad	15.57			(CR) 4.46	CR 3.82						(CR) 6.05					(CR) 37.05
Chandrapur	15.23			(267) 12.78				CR 3.05	(CR) 9.51							(19) 26.16
Bhagalpur	15.18	CR 19.67		CU 5.21	CU 1.90	(CR) 2.63	(124) 4.08		(96) 44.95							(149) 5.41
Thane	14.70	CU 6.57	(CU) 9.59	(47) 79.35	(72) 2.61	(270) 5.69		(43) 1.23	CU 2.83				(63) 4.06			(135) 33.83
Muzaffarpur	13.94	CR 3.45		(84) 2.92	0.00		(37) 3.76		(CR) 37.21							(27) 35.10
Samastipur	13.87	0.00		CR 2.21	(CR) 13.99		(CR) 2.34		CR 32.85							(168) 52.61
Darbhanga	13.70	(331) 9.80		(681) 7.87	(109) 4.46	0.00	(81) 2.97		(32) 29.87							(23) 51.56
Sitamarhi	12.44			CR 3.11			(CR) 2.68									(CR) 27.95
Madhubani	12.31	CR 38.26		(CR) 3.07	0.00		(672) 4.16		(CR) 19.01							(26) 56.95
Palamau	11.54			(25) 6.80	(CR) 4.59		(205) 7.34		(34) 18.56							(50) 40.08
Nalanda	10.26			(CR) 2.79		(CR) 5.82	(140) 13.52			0.00						(25) 28.40
Bhojpur	9.59			0.00	0.00		(39) 2.88			0.00						(44) 30.48
Solapur	10.24	(CR) 72.84	(383) 13.72		(CU) 1.69	0.00	(57) 13.31		(CU) 4.50							(34) 18.23

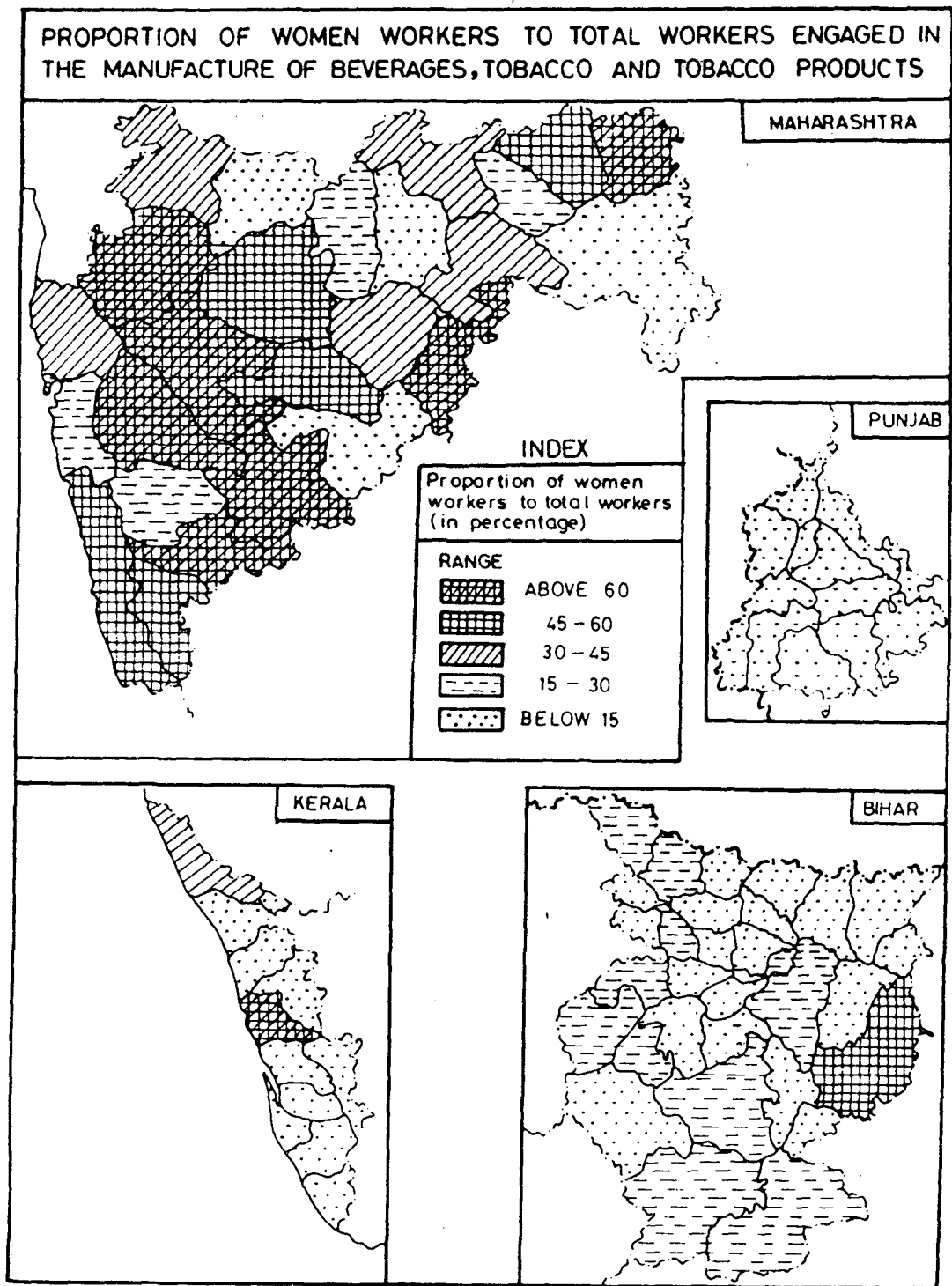


FIG.4

to Kerala), all these districts belong to Maharashtra. In these districts the maximum proportion of women workers are in the bidi making industry (Table II.2).

Wine industry is important only in Solapur and Pune. While in Solapur, there are no women workers engaged in this industry, in Pune the percentage is 3.79. Country liquor and toddy making industry is important only in Pune but the percentage share of women workers in it is nil. Soft drinks and carbonated water industries are indicated in Trichur and Pune where their percentage shares are 22.51 and 6.94 respectively. Chewing tobacco, zarda and snuff engage 53.64 % of women workers in Solapur and 48.79 % in Pune. None of the districts have significant workers engaged in distilling spirit, making malt, malt liquors, curing tobacco and manufacture of cigars, cigarattes, cheroot and cigarette tobacco.

(ii) High Proportion (45% - 60%)

The single district with high proportion of women workers in the food industry is Trivandrum where the percentage share is 53.63 %. Industries in Trivandrum with percentage shares exceeding 50 are cashew processing (90.58%) and production of indigenous sugar, borra, khandsari, gur etc from sugarcane and palm juice (63.33 %). The third highest proportion is 24.22 % in the manufacture of cocoa, chocolate and sugar

Table II.2 PERCENTAGE SHARE OF WOMEN WORKERS ENGAGED IN THE MANUFACTURE OF BEVERAGES, TOBACCO AND TOBACCO PRODUCTS

Districts	Major Group	Minor Groups							
		221	222	223	224	225	226	227	228
Solapur	92.22	-	-	-	-	-	(532) 94.71	-	(109) 53.69
Nanded	83.27	-	-	-	-	-	(101) (88.48)	-	-
Sangli	76.59	-	-	-	-	-	(90) 89.65	-	-
Trichur	68.24	-	-	-	-	-	(102) 70.99	-	-
Bhandara	64.28	-	-	-	(601) 22.51	-	(100) 64.36	-	-
Pune	63.20	CR 3.79	-	-	-	-	(129) 82.59	-	-
Nasik	61.60	-	-	0.00	CR 6.94	0	(109) 63.02	-	-
Bid	56.46	-	-	-	-	-	(538) 70.99	-	-
Aurangabad	55.13	CR 9.57	Cu 59.25	-	-	-	-	-	-
Nagpur	54.43	-	-	0.00	Cu 21.25	-	(120) 63.19	-	-
Santal Parganas	53.92	-	-	CR 27.33	-	-	(10) 54.37	-	-
Ratnagiri	53.82	-	-	0.00	-	-	(103) 66.03	-	-
Kolhapur	52.61	-	-	0.00	CU 4.72	(121) 89.60	CU 62.92	-	-
Cannanore	44.32	-	-	-	CR 1.30	-	(25) 44.13	-	-
Amravati	42.37	-	-	-	-	-	(212) 72.52	-	-
Thane	39.45	CU 7.07	-	0.00	(65) 5.66	-	(111) 76.20	(91) 9.41	-
Dhule	33.73	-	-	-	-	-	(284) 43.86	-	-
Yawatmal	32.89	-	-	-	-	-	(233) 48.25	-	-
Munger	28.85	-	-	(CR) 24.24	-	-	(22) 33.25	-	-
Greater Bombay	28.25	(CU) 13.77	-	(CU) 4.72	(CU) 3.94	(CU) 13.39	(CU) 66.06	-	-
Ranchi	28.13	-	-	-	-	-	(119) 19.41	-	-
Wardha	27.27	-	-	-	-	-	-	-	-
Buldana	26.90	-	-	-	-	-	(10) 25.93	-	-
Paschim Champaran	26.62	-	-	-	-	-	(154) 27.97	-	-
Raigarh	26.27	(22) 10.40	0.00	-	-	-	(410) 55.81	-	-
Katihar	23.81	-	-	-	-	-	(CR) 24.32	-	-
Saran	23.33	-	-	(CR) 12.36	-	-	(17) 26.26	-	-
Rohtas	20.13	-	-	(CR) 4.39	-	-	(123) 22.18	-	-
Aurangabad	19.91	-	-	(CR) 18.67	-	-	(115) 20.82	-	-
Purbi Champaran	18.42	-	-	0.00	-	-	(CR) 19.39	-	-
Bhojpur	16.67	-	-	(CR) 4.07	-	-	(58) 21.39	-	-
Singhbhum	16.49	-	-	(119)	CU	(12)	(12)	-	-

District	Major Groups	Minor Groups							
		221	222	223	224	225	226	227	228
Satara	16.43	CR 9.48	-	-	-	-	-	-	-
Begusarai	15.61	-	-	-	-	-	(54) 5.64	-	-
Hazaribagh	15.39	-	-	CR 2.35	-	-	(365) 18.76	-	-
Madhubani	13.96	-	-	-	-	-	(153) 13.07	-	-
Gaya	13.37	-	-	CR 31.66	(CR) 25.71	-	(36) 10.52	-	-
Osmanabad	13.33	-	-	-	-	-	-	-	-
Samastipur	11.99	-	-	(CR) 8.60	-	-	(140) 12.12	-	-
Patna	11.67	-	(201) 3.10	(41) 15.04	-	-	(112) 11.83	-	-
Nalanda	11.11	-	-	(CR) 19.13	-	-	(263) 10.38	-	-
Purnea	10.76	-	-	-	-	-	(9) 5.8	-	-
Ernakulam	10.32	-	-	-	(143) 2.88	-	(66) 11.04	-	-
Giridih	10.10	-	-	-	-	-	0.00	-	-
Malappuram	10.16	-	-	-	-	-	(34) 10.16	-	-

(Average values below 5% at the aggregate level are given in the Appendix No. III ).

confectionary(209) This is followed by grain mill products where the percentage share is 19.77 % The other industries significant in the district are manufacture of dairy products, bakery products and edible oils. But in none of these districts the percentage share exceeds 10 %.

Districts with high percentage of women workers in the beverage and tobacco industry are Bid, Aurangabad, Nagpur, Santal Parganas, Ratnagiri and Kolhapur. The maximum proportions are again in the bidi making industry where the percentage shares of women workers in all the districts exceed 50%. Aurangabad is the only district among this where bidi is not made. Kolhapur is the only district where the proportion of women workers in tobacco curing (which is 69.60%) exceed the share in beedi making industry (62.92%).

Aurangabad is significant for wine making and malt liquors and malt and the percentage share of women workers in these industries are 9.57% and 59.25% respectively. Women are not engaged at all in the production of country liquor and toddy except in the district of Santal Parganas (in Bihar) where the percentage share of women workers is 27.33%. The percentage share of women workers in the soft drinks industry exceed 20 percent only in Nagpur. Industries that do not have significant workers in any district are those engaged in distilling and blending of spirit,

manufacture of cigars, cigarettes. cheroot and cigarette tobacco and chewing tobacco.

(iii) Moderte Proportions (30% - 45%)

In the food industry only two districts -Alleppey and Ernakulam - fall in the moderate category. Both the districts have coastal accessibility and are located in Kerala. This explains their high proportion in the cashew and fish processing industry. In the fish industry, the percentage share of women workers in Alleppey and Ernakulam are 73.06% and 52.84% respectively. In both cases, rural workers exceed urban workers. The corresponding proportions in the cashew processing industry are 84.36% and 73.83%. The other industries with significant workers are engaged in meat processing, grain milling, baking, cocoa, chocolate and confectionary, edible oil processing and manufacture of ice. Percentage shares of women workers exceed 10% ( but are less than 20%) only in the case of grain milling products and manufacture of cocoa and its products, In the rest of the industries, the proportions do not exceed 10 %. Dairy industry is important in Ernakulam and the percentage share of women workers is 18.70 %. However, in the same district, the preparation of animal fodder is not an important industry. Manufacture and refining of sugar in the vaccum pan sugar factories is important only in Alleppey but the proportion of women workers is less



than 1.37 % and consists entirely of rural workers. The same percentage in indigenous sugar making in Alleppy is 1.50% Ice making engages only 2.15 % of women workers.

Moderate proportions in the beverage and tobacco industry include six districts all of which are in Maharashtra with the exception of Cannanore in north Kerala. The trend continues as in the previous group with the bidi making industry having the highest percentage share of women workers. In all districts, the share exceed 44 percent. Wine and country liquor and toddy industry are cited only for Thane and hence the percentage share of women workers are 7.07 % and 0.00 % respectively. Soft drinks and carbonated water industry is found in Cannanore and Thane. The percentage share of women workers in the former is 51.30 % and in the latter 5.66%. The manufacture of cigar, cigarettes and cheroot has been found in Thane only and the percentage share is 9.41.

(iv) Low and Very Low Proportions (15%-30% and 0%-15%)

Both the categories, the low and very low, have the maximum percentage of districts in the total districts under study.

The low proportion of women workers correspond to the relatively lower proportions of women workers in the cashew and fish processing and bidi making industries. The proportion of women workers in the

bidi making industry does not exceed 33 % exception being Raigarh and Bombay where the percentage share of women workers are 55.81 % and 66.06 % respectively. The industries in this group are those engaged in making wine, malt liquor and malt, country liquor and toddy, soft drinks and carbonated water, tobacco products and cigars and cigarettes. Wine industry is important in Raigarh, Greater Bombay and Thane where the percentage shares of women workers are 10.40, 15.77 and 9.48 respectively. Malt liquor and malt making is important in Raigarh only and no women workers are employed in this industry. Country liquor and toddy making is important in the districts of Munger, Katihar, Rohtas, Aurangabad, Bhojpur, Singhbhum and Hazaribagh and the percentage share of women in this industry are 24.24%, 4.72%, 12.36%, 4.39%, 18.67%, 0.00%, 4.07%, 48.24% and 12.35% respectively. The only district found manufacturing soft drinks and carbonated water is Singhbhum but the percentage share of women workers in it is very low i.e. less than 10 percent.

In the food industry 95.06% of the total districts under study belong to the low and very low category. Of these, eight districts belong to Kerala. The percentage share of women workers in cashew processing exceeds 65% in three districts of Kerala - Trichur, Kozhikode and Cannanore - where the percentages are

88.69, 67.89 and 82.03 % respectively. Cashew processing does not have significant proportion of women workers in Palghat, Malappuram, Waynad, Kottayam and Iddukki. Fish processing industry has 36.91% of women workers in Trichur, 78.42% in Kottayam, 45.94% in Kozhikode, 16.33% in Cannanore and 16.03% in Malappuram. Meat processing is cited in Trichur, Kottayam and Malappuram; while in the former two, no women workers are employed. In the latter the percentage of women workers to total workers is only 2.60 percent. Dairy industry does not have significant proportion of workers in any of the districts of Kerala. Canning and preservation of fruits and vegetables have been found only in Trichur where the proportion of women workers to total workers is 79.73 % Manufacture of grain mill product is important in all the districts of Kerala ; percentage share of women workers exceed 10 % in Palghat, Trichur, Kozhikode and Malappuram. Baking industry is cited in all the districts but the percentage share of women workers exceed 10 % only in Palghat. Tea processing has been found in Kottayam and Wayanad only, where the percentage shares are 25.86% and 6.05% respectively. Coffee processing is important in Kozhikode and Cannanore. 40.85% of the workers engaged in the manufacture of starch are women in Malappuram.

All the 26 districts of Maharashtra fall in the low and very low category. The highest proportion of women workers in all the districts of Maharashtra are engaged in the fish processing industry. The proportions are 91.07 % in Raigarh, 79.35% in Thane and 98.60% in Greater Bombay. However, this percentage in Ratnagiri is only 5.29%. None of the other industries show any definite trend. The districts without coastal accessibility have been mainly cited for grain mill products and with the exception of Chandrapur none of the districts have percentage shares of women workers exceeding 10 %.

The low and very low category also covers all the 31 districts of Bihar. Proportion of women workers to total workers exceed 20 % only in the grain mill products industry and manufacture of edible oils like mustard, groundnut oil, til etc. The districts in which the percentage share of women workers in the grain mill products industry exceed 10% are Katihar (39.51%), Santal Parganas (21.99%), Ranchi (33.28%), Purnea (30.98%) and Singhbhum (24.61%). The percentage share of women workers in edible oil making exceeds 10 % in Katihar, Ranchi, Santal Parganas, Singhbhum, Bhagalpur, Muzzafarpur, Samastipur, Darbhanga, Madhubani, Palamau, Aurangabad, Paschim Champaran, Purbi Champaran and Vaishali.

All the districts of Punjab also fall in this category. Percentage share of women workers in all

districts of Punjab in all industrial activities comes to less than 10 %. The industries found here manufacture of dairy products, grain mill products, baking industry, sugar refining in vaccum pan sugar factories, indigenous sugar products, manufacture of cocoa products sugar confectionary and edible oils. The highest proportion of women workers in the dairy industry and in grain mill products is in Sangrur (3.87%). The highest percentage share in baking industry (5.83%) is in Jalandhar. In the other industries the percentage shares are even less than 3 % and in most districts the percentage shares of women workers is nil.

In the food, beverage and tobacco products industry, none of the districts in Punjab have percentage share of women workers exceeding 10 %. In Kapurtala 28.89 % of the workers engaged in making malt liquors and malt are women.

II.2 Women workers in Textiles - Cotton textiles (23), wool, silk and synthetic fibre textiles (24), Jute, Hemp and Masta textiles (25) and textile products (including wearing apparel other than footwear) (26) :

Traditionally, the percentage share of women workers in the textile industry has been high. According to 1981 census, the percentage share of the

women workers in the cotton textile industry is 0.65%; wool, silk and synthetic fibre textile is 0.17%, Jute, hemp and mesta 0.03% and textile products is 0.78%. In 1981, in India out of 14.96% of the total workers engaged in the cotton textile industry (23), 2.9% were women. In the wool, silk and synthetic fibre industry (24), the corresponding ratios are 1.82% and 0.31%, in the jute hemp and mesta textiles (25) 1.68% and 0.12% and, in the textile garments industry the corresponding ratios are 11.08% and 1.39%.

To enable a comparative study, all the textile industries (23,24,25,26) have been classed into common groups depending upon the percentage share of women workers in these industries as mentioned earlier.

(i) Extraordinary proportions (i.e percentage share of women workers exceeding 60%).

The percentage shares of women workers in the cotton textile industry is extraordinary in the districts of Alleppey, Kottayam, Trivandrum and Quilon where the percentages are 88.94%, 73.75%, 70.96% and 70.52% respectively (Fig.5). Table II.3 shows that, in all these districts, the highest percentage shares are in cotton textiles not elsewhere classified (239). Excluding this, the percentage share of women workers is in the spinning of cotton by charkha (233). This industry is not significant in Kottayam. This is followed by the Khadi industry (234) where the percentage shares do not fall below 51%. The

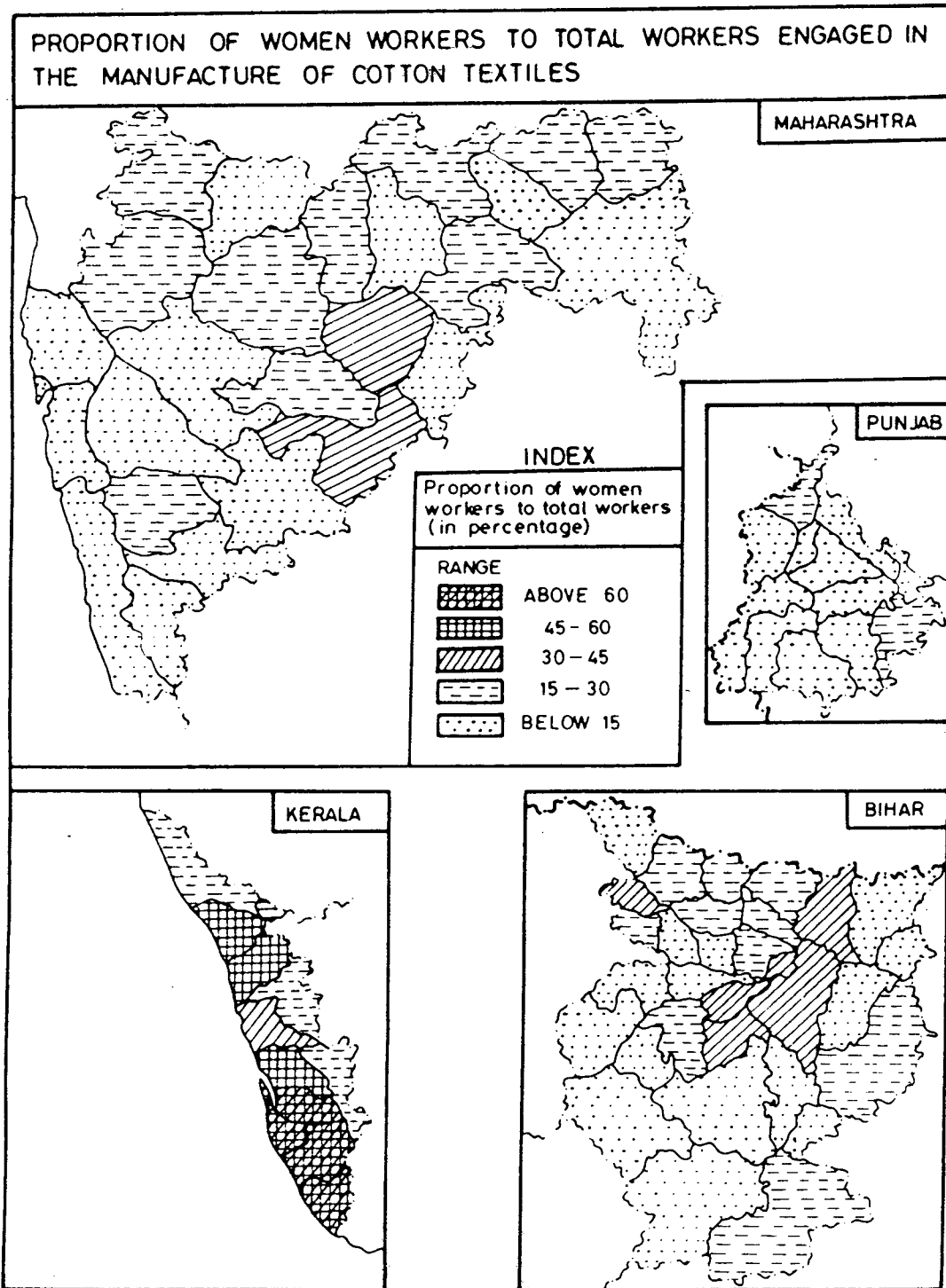


FIG. 5

TABLE II.3 PERCENTAGE SHARE OF WOMEN WOERKERS ENGAGED IN THE MANUFACTURE OF COTTON TEXTILES

District	Major Groups	Minor Groups							
		230	231	232	233	234	235	236	239
ALLEPREY	88.94	-	(44) 14.54	-	(26) 87.37	(51) 62.93	(129) 41.80	-	(86) 48.49
KOTTAYAM	73.75	-	CR 8.20	-	-	CR 65.81	-	-	(95) 79.98
TRIVANDRUM	70.96	-	(205) 14.55	-	(91) 94.28	(33) 70.09	(117) 54.49	-	(88) 86.20
QUILON	70.52		(236) 12.87		(117) 85.71	CR 51.19	(119) 36.01		(92) 82.48
KOZHIKODE	55.70		(99) 11.63		(48) 77.35	CR 79.17	88 12.48	(360) 11.90	(81) 84.73
WAYANAD	55.16								
ERNAKULAM	49.05		(111) 11.17		(151) 59.42		(104) 51.30		(59) 61.69
MALAPPURAM	45.00		CR 1.82		CR 96.64		(79) 32.21		(107) 61.23
TRICHUR	42.34		(83) 19.05		(105) 95.94	(87) 70.11	(184) 41.25		(86) 49.98
SAHARSA	38.46						(90) 44.00		
NALANDA	37.31			CR 80.68		(144) 35.34			
NAWADA	36.39			(54) 18.80			CR 41.73		
MUNGER	35.90				(103) 97.26	CR 4.76	(13) 20.56		(23) 11.95
GOPALGANJ	34.25								(124) 45.16
SMANABAD	34.25		(16.32) 15.70		(110) 93.45	(39) 41.04	(140) 50.63	CR 3.59	(113) 36.86
PARBHANI	32.29	(111) 55.34	(628) 34.42				(43) 7.16	CR 4.20	(124) 23.12
PALGHAT	28.83		(78) 8.03		(113) 88.67	CR 48.51	(180) 19.64		(60) 68.02







District	Major Groups	Minor Groups							239
		230	231	232	233	234	235	236	
AKOLA	9.75	(361) 25.81	(166) 6.44				(36) 18.64	CU 2.66	(112) 21.40
PALAMAU	8.92						CR 2.49	12.50	(316)
JALGAON	8.03	(127) 10.91	(236) 2.48						(108) 34.18
WARDHA	7.83	(219) 33.42	(125) 4.69				(20) 5.57		(27) 25.57
KATIHAR	7.57						CR 11.21		
PUNE	7.28		(219) 3.76	CU 4.27	CR 87.97		CU 3.74	CR 4.19	(37) 21.90
JALANDHAR	7.18		CU 0.74			(40) 9.36	(146) 6.66		(22) 5.40
HAZARIBAGH	6.45						(CR) 3.19		CR 24.11
NANDED	6.42	* 4.91	(64) 6.80				(68) 16.07	(106) 2.67	(172) 11.84
GIRIDIH	6.36								
BHATINDA	4.76		(71)			CR 15.60			CU 6.87
SARAN	4.75								(103) 15.03
AMRITSAR	4.58		(6) 3.14	CR 0.28	(32) 7.07	(83) 6.87	(21) 6.17	CU 8.42	(63) 1.96
RAIGARH	4.57		CU 1.90	CR 4.39				(206) 7.94	CR 8.00
SANGLI	4.56			(182) 1.68		76 60.98	(21) 9.71	(892) 3.43	(40) 14.37
LUDHIANA	3.96	(36) 29.55	(11) 4.15	CR 5.19	(94) 51.75	(152) 4.28	(359) 2.36		(199) 3.84
BHOJPUR	3.69				CR 18.00				CU 9.55
FEROZEPUR	3.54		(90) 2.23	CU 8.45	(59) 8.75	(96) 20.35			
CHANBAD	3.31	1.85							CR 3.38
KOLHAPUR	3.29		(680) 2.22	CU 0.74	(224) 18.11		(218) 4.25	(229) 2.64	(168) 15.49
RATNAGIRI	3.17	CR 0.90						CU 2.54	(318) 18.97
GREATER BOMBAY	2.93	CU 12.97	CU 2.76	CU 2.83	CU 40.28	CU 12.19	CU 9.07	CU 2.41	CU 8.48
THANE	2.42	CU 2.99	174 3.60	CU 7.41	CU 4.90	CU 0.95	(119) 1.38		(165) 6.08
PURNEA	2.08					24 2.37			CU 1.10
KAPURTALA	1.31		CR 2.20	CR 9.04	CR 4.60	CU 9.27	CU 3.30		CU 3.77

percentage share of women workers engaged in weaving and finishing of cotton textiles in handlooms, other than Khadi (235) range from 36% to 55%. Percentage share in cotton spinning, weaving, shrinking, safforising, mercerising and finishing of cotton textiles in mills (231) range from 8% to 14.5% only.

As shown in Fig.6, districts with extraordinary proportions in the wool, silk and synthetic fibre textiles are Chandrapur, Trivandrum, Vaishali, Katihar, Bhandara and Begusarai. Table II.4 shows that none of the districts have been classified at the disaggregate level with the exception of Chandrapur district of Maharashtra. Chandrapur has been listed for two industries only. 94.41% of the workers in the wool cleaning, baling and pressing industry are women. The percentage share in wool spinning and weaving (other than in mills) is 93.98%.

The only two districts with extraordinary percentage of women workers in the manufacture of Jute, hemp and mesta textiles are Wardha and Bhatinda. In both the districts the industries have not been classified at the disaggregate level (Fig. 7, Table II.5)

Fig. 8 shows that, Quilon is the only district where the percentage share of women workers in the manufacture of textile products (26) exceed 60%. The highest percentage which is in the manufacture of all

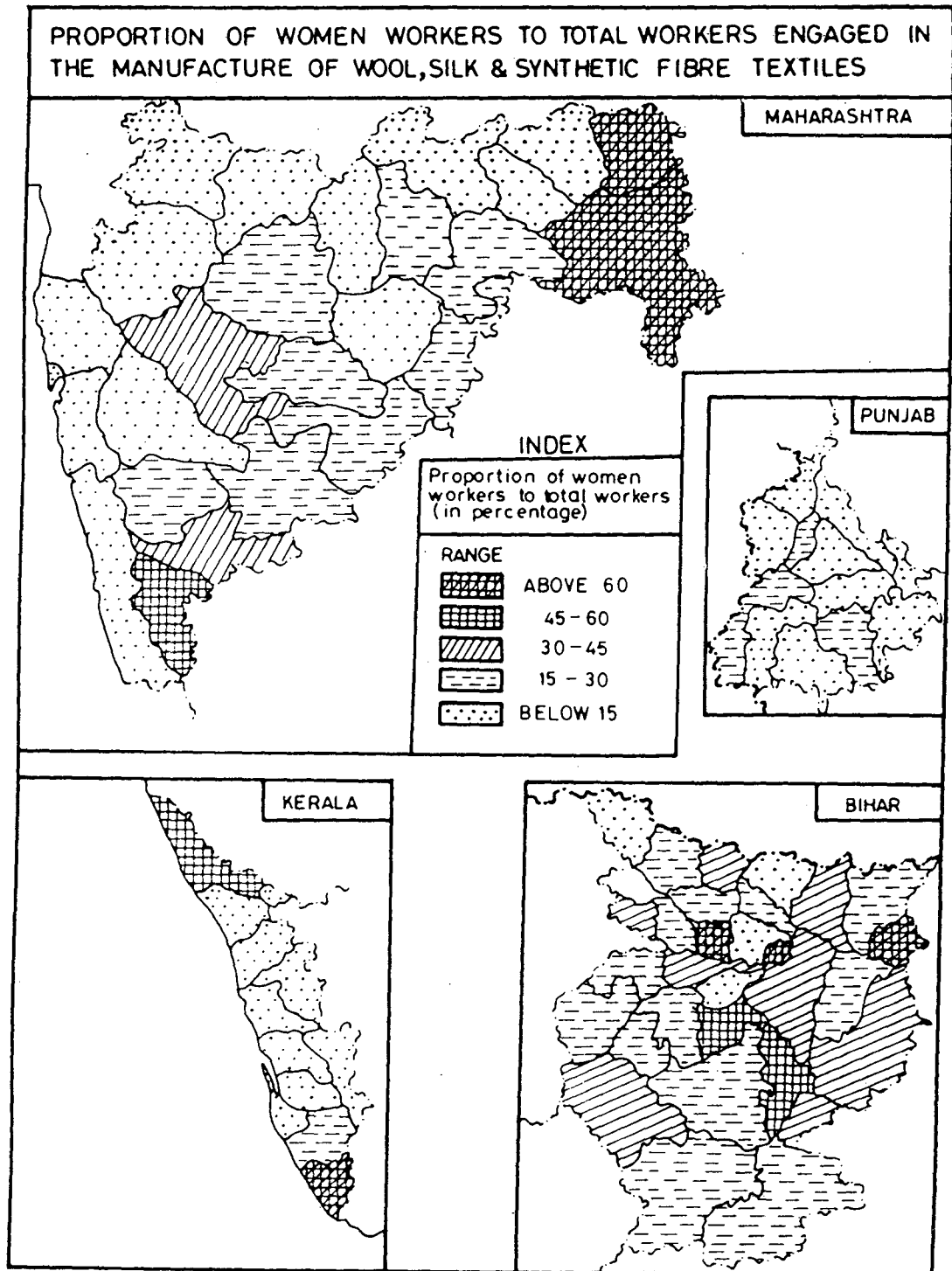


FIG. 6

TABLE II.4 PERCENTAGE SHARE OF WOMEN WORKERS ENGAGED IN THE MANUFACTURE OF WOOL, SILK AND SYNTHETIC FIBRE TEXTILES

Districts	% age share of women workers	240	241	242	243	244	245	246	247	248	249
Chandrapur	87.84	94.41	-	93.98	-	-	-	-	-	-	-
Trivandrum	83.87	-	-	-	-	-	-	-	-	-	-
Vaishali	80.77	-	-	-	-	-	-	-	-	-	-
Katihar	68.75	-	-	-	-	-	-	-	-	-	-
Bhandara	66.23	-	-	-	-	-	-	-	-	-	-
Giridih	52.38	-	-	-	-	-	-	-	-	-	-
Nawada	52.17	-	-	-	-	-	-	-	-	-	-
Cannanore	50.00	-	-	-	-	-	-	-	-	-	-
Kolhapur	48.05	-	-	-	-	69.06	-	-	10.78	-	-
Santal Parganas	41.07	-	-	-	-	-	-	-	-	-	-
Palamu	40.00	-	-	-	-	47.55	-	-	-	-	-
Saharsa	37.21	-	-	-	-	-	-	-	-	-	-
Patna	38.17	-	-	-	-	-	-	-	-	-	-
Sangli	37.93	-	-	-	-	-	-	-	-	-	-
Sitamarhi	37.50	-	-	-	-	-	-	-	-	-	-
Saharsa	37.21	-	-	-	-	-	-	-	-	-	-
Ahmednagar	33.20	-	-	44.16	-	39.02	-	-	-	-	-
Munger	31.90	-	-	-	-	-	-	-	-	-	-
Dhanbad	30.43	-	-	-	-	-	-	-	-	-	-
Siwan	30.30	-	-	-	-	-	-	-	-	-	-
Samastipur	29.38	-	-	-	-	34.21	-	-	-	-	-
Gaya	29.96	-	-	-	-	-	85.44	-	-	-	-

Districts	% age share of women workers	240	241	242	243	244	245	246	247	248	249
Hazaribagh	27.85	-	-	-	-	-	-	-	-	-	-
Bhojpur	26.77	-	-	-	-	-	-	-	-	-	-
Dhule	26.73	-	-	-	-	CU	-	-	-	-	-
Kapurthala	26.67	-	-	-	-	35.78 CR	7	-	-	-	-
Bhagalpur	25.78	-	-	-	-	9.71	37.50	-	-	-	-
Bid	25.89	-	-	-	-	-	-	-	-	-	-
				CR		(189)					
Satara	25.53	-	-	14.29	-	56.07	-	-	-	-	-
Singhbhum	24.26	-	-	-	-	-	-	-	-	-	-
Muzaffarpur	23.94	-	-	-	-	-	-	-	-	-	-
Akola	23.81	-	-	-	-	-	-	-	-	-	-
Quilon	22.73	-	-	-	-	-	-	-	-	-	-
Osmaniabad	20.51	-	-	-	-	-	-	-	-	-	-
Pu. Champaran	20.00	-	-	-	-	-	-	-	-	-	-
Solapur	19.30	-	-	(111) 45.43	-	-	CU 0.89	-	CU 4.46	-	-
Purnea	19.77	-	-	-	-	-	-	-	-	-	-
Ranchi	19.07	-	-	-	-	-	-	-	-	-	-
						CR					
Aurangabad(B)	16.71	-	-	-	-	19.59	-	-	-	-	-
							CU		CU		
Aurangabad(M)	16.70	-	-	-	-	-	0.89	-	8.29	-	-
Ferozpur	16.22	-	-	-	-	-	-	-	-	-	-
Saran	16.00	-	-	-	-	-	-	-	-	-	-
				CR							
Nanded	15.87	-	-	18.32	-	-	-	-	-	-	-
						CR					
Rothas	15.84	-	-	-	-	15.79	-	-	-	-	-

Districts	% age share of women workers	240	241	242	243	244	245	246	247	248	249
Sangrur	15.05	-	-	-	-	-	-	-	-	-	-
Yavatmal	15.00	-	-	-	-	-	-	-	-	-	-
Jalandhar	14.77	-	-	-	-	-	-	-	-	-	-
Palbhani	12.77	-	-	-	-	-	-	-	-	-	-
Kottyan	12.50	-	-	-	-	-	-	-	-	-	-
Wardha	12.20	-	-	-	-	-	-	-	-	-	-
			(29)								
Hoshiarpur	11.70	-	18.87	-	-	-	-	-	-	-	-
						(293)			(239)		
Pune	11.00	-	-	-	-	31.62	-	-	6.13	-	-
Darbhanga	10.59	-	-	-	-	-	-	-	-	-	-
Faridkot	9.62	-	-	-	-	-	-	-	-	-	-
							CU			CU	
Nasik	8.75	-	-	-	-	-	6.02	-	-	29.73	-
Jalgaon	8.52	-	-	-	-	-	-	-	-	-	-
Nalanda	8.45	-	-	-	-	-	-	-	-	-	-
Trichur	7.58	-	-	-	-	-	-	-	-	-	-
Bhatinda	7.14	-	-	-	-	-	-	-	-	-	-
			(1559)					CU			
Nagpur	6.87	-	16.13	-	-	-	-	-	-	-	-
			(125)	CU		(18)	(196)	CR	(105)	CU	
G. Bombay	4.87	-	8.14	16.26	3.91	8.70	3.62	1.08	5.03	2.70	18.33
Thane	4.65	-	7.75	14.79	-	8.04	6.39	5.35	1.56	3.99	1.69
Rupnagar	4.05	-	4.17	-	-	-	-	-	-	-	-
									CR		
Kozhikode	3.97	-	-	-	-	-	-	-	4.04	-	-
		CU	CU	CU							68
Ludhiana	3.26	8.66	3.34	2.84	0.00	0.00	0.00	-	-	-	7.60
			(21)	CR		CU	CR		CR		(6)





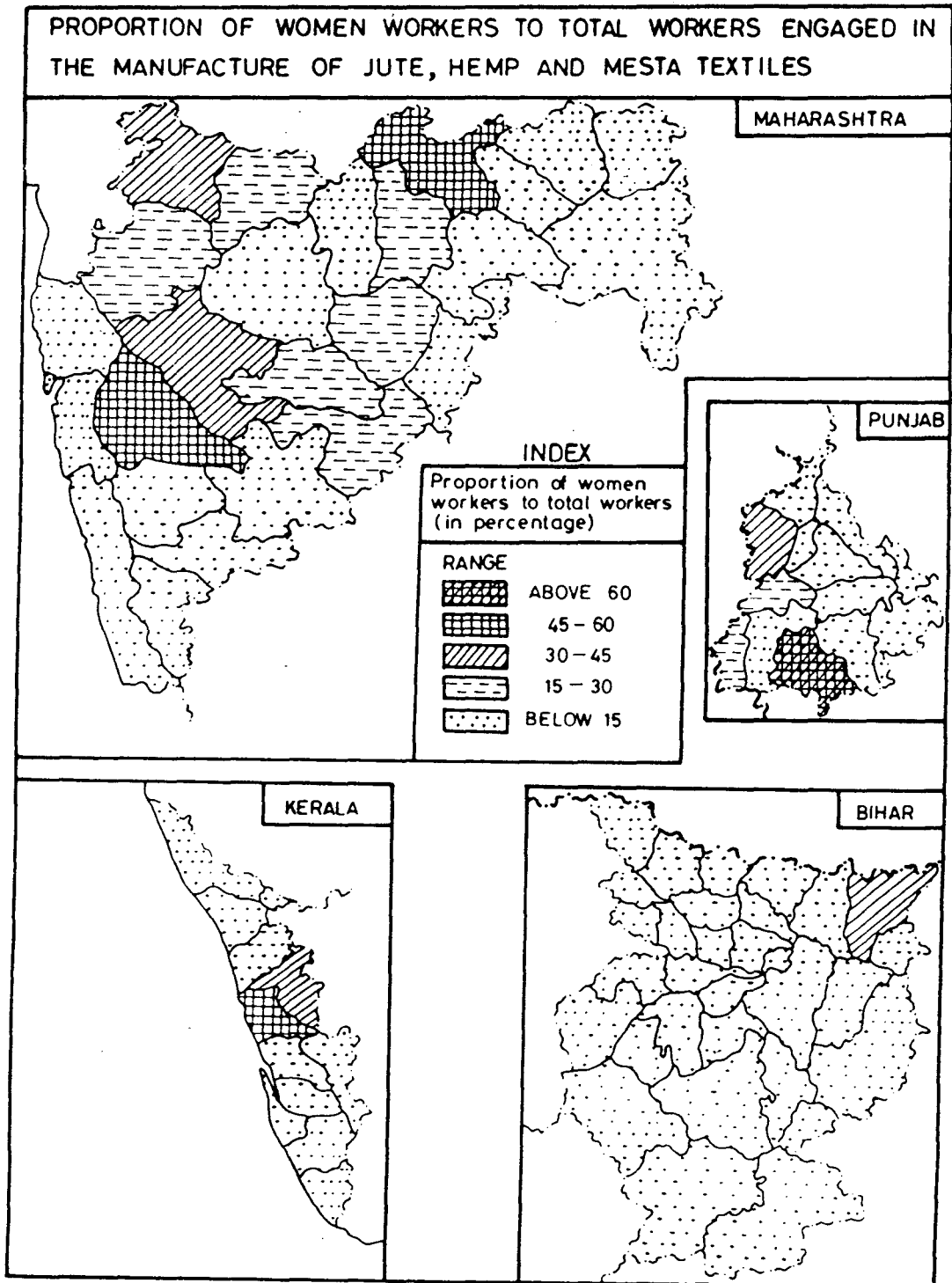


FIG. 7

TABLE II.5 PERCENTAGE SHARE OF WOMEN WORKERS ENGAGED IN THE MANUFACTURE OF JUTE, HEMP AND MESTA TEXTILES

Districts	% age share of women workers	250	251	252	253	259
Wardha	100.00	-	-	-	-	-
Bhatinda	62.16	-	-	-	-	-
			CU			
Amravati	52.84	-	59.42	-	-	-
Dhule	51.52	-	-	-	-	-
Trichur	50.00	-	-	-	-	-
Pune	48.39	-	-	-	-	-
Ahmednagar	40.74	-	-	-	-	-
Palghat	35.06	-	-	-	-	-
			(82)	(CU)		
Purnea	34.94	0.00	51.89	1.99	-	-
			CR			
Buldana	33.66	-	46.91	-	-	-
Nasik	24.24	-	-	-	-	-
Parbani	21.15	-	-	-	-	-
Jalgaon	20.00	-	-	-	-	-
Osmanabad	17.95	-	-	-	-	-
Akola	17.24	-	-	-	-	-
Bid	16.95	-	-	-	-	-
				(58)		
Ferozpur	16.71	-	-	16.64	-	-
		(CU)				
Greater Bombay	13.10	14.73	-	-	-	-
						CR
Nalanda	11.59	-	-	-	-	13.53
Satara	11.43	-	-	-	-	-
				CR		
Ludhiana	10.01	-	0.00	12.89	-	-

Districts	% age share of women workers	250	251	252	253	259
Bhandara	10.00	-	-	-	-	-
Nagpur	9.18	-	-	-	-	- CR
Aurangabad	9.14	-	-	-	-	9.94
Thane	9.00	-	-	-	-	-
Aleppey	8.16	-	-	-	-	-
Ernakulam	6.58	-	-	-	-	-
Patiala	6.17	-	-	-	-	-
Gurdaspur	5.39	-	- (2222)	-	- CR	-
Hoshiarpur	4.98	-	5.12	-	4.58	-
Santal Parganas	4.67	-	- CR	-	- (867)	-
Jalandhar	4.61	-	3.75	-	6.16	- (2)
Katihar	3.77	-	-	-	- CR	7.65
Rupnagar	3.77	-	-	-	4.40	- (CR)
Bhagalpur	3.33	-	- CU	-	-	2.84
Faridkot	3.05	-	3.47	-	-	-
Gaya	2.70	-	-	-	-	- (CR)
Patna	2.20	-	-	-	-	3.57
Begusarai	1.53	-	-	-	-	1.63
Gopal Ganj	1.08	-	-	-	-	-
Saran	1.06	-	-	-	-	0.49
Aurangabad(B)	0.94	-	-	-	-	-
Siwan	0.074	-	-	-	-	-

types of threads, cordage, ropes, twines, nets etc.(261) is as high as 93.54%. This is followed by the manufacture of coir and coir products where the percentage share is 80.94%. The details are shown in Table 2.6.

(ii) High Proportions (45% - 60%)

In the cotton textile industry (23) high percentage share of women workers is found in the districts of Kozhikode, Wayanad, Ernakulam and Malappuram. Wayanad has not been classified at the disaggregate level. The percentage share of women workers in unclassified cotton textiles range from 49.98% in Malappuram to 84.73% in Kozhikode. The proportion of women workers engaged in cotton spinning by charka (233) is high in these districts also (96.64% in Malappuram, 77.31% in Kozhikode, 59.42% in Ernakulam). As in the previous class, this is followed by the percentage share in Khadi (234) where the proportions for Ernakulam, Malappuram and Kozhikode are 51.30%, 32.21% and 12.48% respectively. Again, women workers in the textile mills do not exceed 12%.

In the wool, silk and synthetic fibre textiles, the percentage share of women workers range from 45% to 60% in the districts of Giridih, Nawada, Cannanore and Kolhapur. Classification at the disaggregate level is given only for Kolhapur where the percentage shares are 69.06% in the manufacture of unclassified wool and

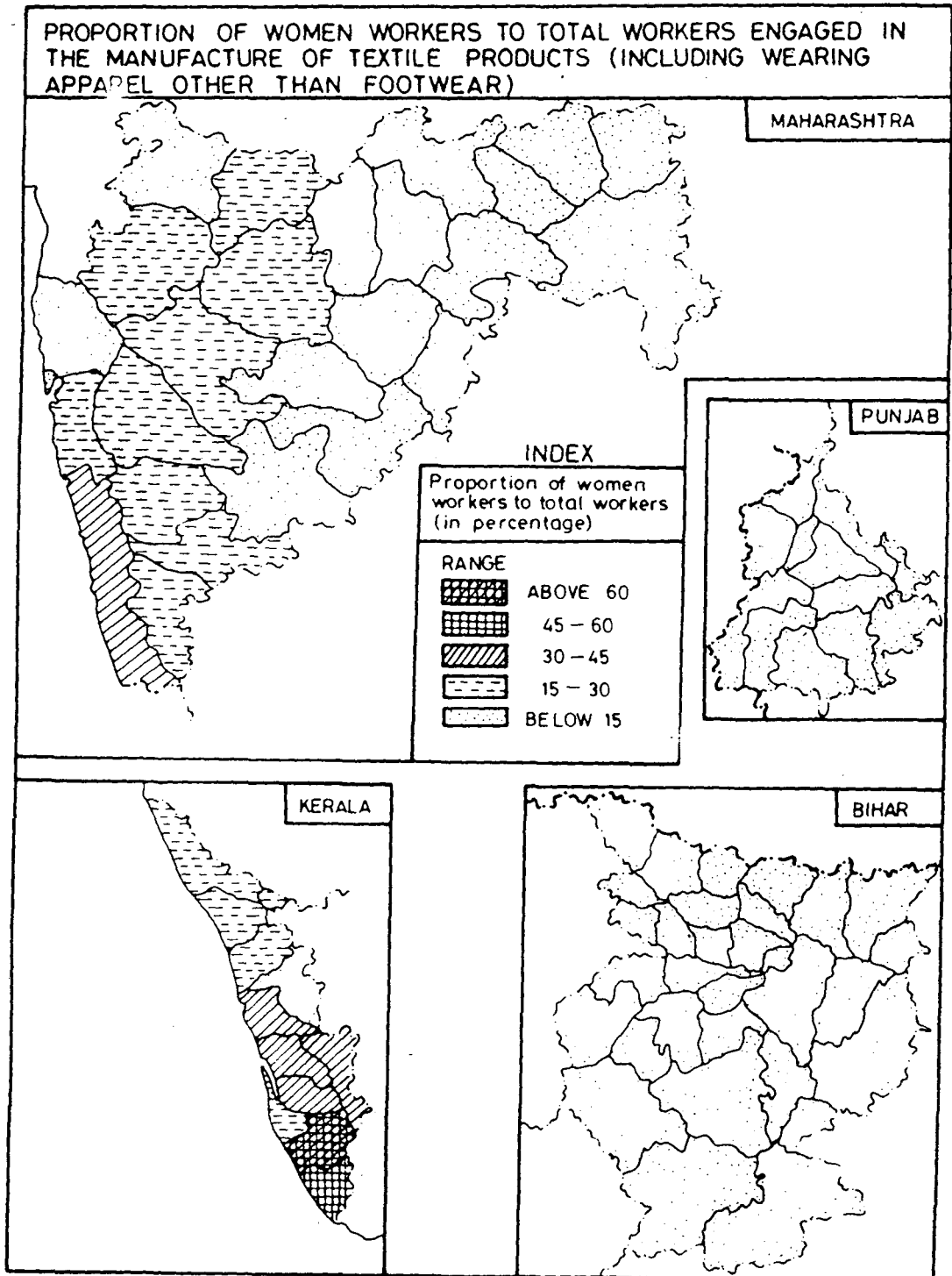


FIG. 8

TABLE II.6 PERCENTAGE SHARE OF WOMEN WORKERS ENGAGED IN THE MANUFACTURE OF TEXTILE PRODUCTS

Districts	% age share of women workers	260	261	262	263	264	265	266	267	268	269
			(106)			(62)				(70)	CU
Quilon	61.82	-	93.54 (102)	- (116)	-	38.30 (59)	-	-	-	80.94 (57)	2.33
Trivandrum	51.10	-	97.65	86.61	-	35.06 (86)	-	-	-	68.21 CR	-
Kottayam	39.40	-	- (34)	- CU	-	39.22 64	- 60	- CR	-	48.98 (126)	-
Ernakulam	36.88	-	36.32 (79)	93.79	-	25.77 (94)	14.85 (10)	78.72	-	72.99 (111)	8.28
Trichur	32.48	-	11.53 CR	-	-	29.58 (45)	11.74	-	-	60.44 CR	-
Ratnagiri	30.31	-	26.55 (120)	-	-	31.19 (63)	- CU	-	-	- (82)	6.67
Kozhikode	29.71	-	80.56	-	-	17.78 (76)	2.33	-	-	57.36	-
Idukki	29.68	-	- CR	-	-	30.18 (62)	-	-	-	- (35)	- (73)
Alleppey	29.00	-	35.58 (CR)	-	-	35.89 (65)	-	- CR	-	26.24	11.20
Satara	27.75	-	39.30 (47)	-	-	19.25 (261)	-	10.45 (56)	-	47.20 (218)	8.18 (2527)
Raigarh	27.91	-	33.79 (47)	-	-	28.41 (261)	-	3.85 (56)	-	- (213)	- (25)
Satara	27.75	-	39.30 (78)	-	-	19.25 (49)	-	10.45 CU	-	47.60 CU	8.18 (69)
Sangli	24.57	-	42.81	-	-	18.22 (76)	-	4.39	-	4.76 (76)	5.32
Malapuram	21.96	- CU	- (50)	-	-	15.59 (70)	-	-	-	62.00	-
Ahmednagar	21.91	4.65 (25)	36.74 (39)	- (215)	- (452)	15.46 (77)	-	- CU	-	- CR	- CU
Pune	21.81	21.63	36.82 (75)	17.40 (36)	18.14 CU	19.87 (61)	-	6.71 (54)	-	20.40 (12)	7.73 (7)

Districts	% age share of women workers	260	261	262	263	264	265	266	267	268	269
Nasik	20.11	- (259)	38.60	31.00	15.18	16.36 (88)	-	19.13	-	38.03 (61)	11.83
Cannanore	19.31	30.93 (86)	- (156)	-	-	14.32 (81)	-	- (84)	-	73.65	- CU
Kolhapur	18.72	8.89	26.97 (109)	-	-	17.71 (97)	-	12.06 (239)	-	-	5.11
Jalgaon	17.91	-	46.23	-	-	17.49 CR	-	11.11	-	-	-
Wayanad	16.69	-	- (47)	-	-	16.84 (73)	-	- (38)	-	-	-
Aurangabad(M)	16.07	-	27.04 (25)	-	-	15.62 (51)	-	10.62 (72)	-	-	-
Osmanabad	14.62	-	40.64	-	-	13.44 (130)	-	- (169)	11.51	-	-
Parbhani	14.02	-	-	-	-	13.44 (130)	-	34.82 (105)	-	-	- CU
Wardha	14.01	-	-	-	-	14.66	-	26.90	-	-	1.43
Bid	13.84	- CU	- (164)	- (50)	- (12)	- (77)	- CU	- (29)	-	-	- (562)
Thane	13.82	7.11	3.27	4.52	20.81	18.09 (106)	3.18	6.99 (100)	-	- CR	2.79
Buldana	13.49	- (93)	- (21)	- (13)	-	12.16 (80)	-	23.74 (22)	-	35.85 (72)	- CU
Solapur	13.44	13.39	32.62 CR	7.25 (8)	- (82)	14.85 (52)	-	5.66	-	42.48	1.05 (83)
Gurdaspur	13.29	- CU	43.10 (251)	41.70	60.14	5.48 (88)	-	- (134)	-	- (18)	11.61 (16)
Dhule	12.97	21.40	40.35 (105)	-	- (13)	10.61 (73)	-	27.00 (26)	-	47.24	14.01 CU
Akola	12.91	-	18.94	-	5.84	13.38 (74)	-	4.86 (CR)	-	- (67)	1.74
Amravati	12.33	-	-	-	-	11.72 (82)	-	5.33 CU	-	39.46	- (119)



Districts	% age share of women workers	260	261	262	263	264	265	266	267	268	269
Nanded	12.03	-	- (CR)	-	-	11.38 (44)	-	5.00	-	-	11.45 (73)
Palghat	11.43	-	18.49	- CU	- CU	11.21 (133)	-	-	- (103)	-	13.39 (30)
Nagpur	11.35	- (94)	- CR	12.21 (170)	1.93	12.25	-	11.41	-	- CR	7.27
Greater Bombay	10.02	11.48 (94)	16.23 (CR)	7.11 (170)	11.45	10.50	6.35	15.17	4.39	- CR	3.55
Singhbhum	10.72	45.16	78.35	4.84	-	- (87)	-	- CU	-	2.73	-
Yavatmal	9.87	-	-	-	-	9.89 (62)	-	3.33	-	-	-
Nalanda	9.67	-	-	-	-	6.21 (568)	-	-	-	-	-
Chandrapur	9.31	- (336)	- CR	-	-	7.73 (118)	-	-	-	-	-
Ranchi	8.94	9.17	3.01	-	-	7.85 (174)	-	-	-	-	-
Bhandara	8.82	-	-	-	-	8.27 (30)	-	-	-	-	- CR
Bhojpur	8.79	-	- CR	- CR	-	5.91 (59)	-	-	-	-	33.33
Kapurthala	7.58	-	98.38 (235)	3.57 CR	-	6.95 (163)	-	-	-	-	-
Hoshiarpur	7.55	- (132)	98.38 (102)	3.57 (15)	- CR	6.95 (58)	-	-	-	-	45
Jalandhar	7.10	10.72	3.31 (210)	9.55 CU	8.05	6.66 (29)	-	-	-	-	11.79 CR
Faridkot	7.07	-	12.39 (53)	5.08 (25)	-	5.33 (110)	-	-	-	-	2.87
Batinda	6.73	-	3.20	8.62 CU	-	5.81 (69)	-	-	-	-	-
Sangpur	6.28	-	-	7.52	-	4.27 (31)	-	-	-	-	-

Districts	% age share of women workers	260	261	262	263	264	265	266	267	268	269
Nawada	5.95	-	-	-	-	5.8 <sup>c</sup>	-	-	-	-	-
				CU							
Ferozpur	5.91	-	-	1.77	-	-	-	-	-	-	-
		(111)	CU	(101)		39					
Patiala	5.78	38.52	7.97	28.84	-	3.09	-	-	-	-	-
						(127)					(105)
Santal Parganas	5.54	-	-	-	-	3.03	-	-	-	-	40.28
			CR			(44)					
Hazari Bagh	5.33	-	53.60	-	-	2.68	-	-	-	-	-
						(29)					
Rohtas	5.22	-	-	-	-	5.50	-	-	-	-	-
						(99)					
Gopalganj	5.19	-	-	-	-	4.31	-	-	-	-	-
		(6)	CU	CU		(66)					(20)
Patna	5.12	16.29	4.35	4.53	-	4.77	-	-	-	-	16.29
						(50)					
Saran	4.91	-	-	-	-	5.45	-	-	-	-	-
		(21)	(31)	(21)	(23)	(48)					(116)
Siwan	4.67	-	-	-	13.93	2.92	-	-	-	-	14.39
					CR	(69)					(844)
Amritsar	4.53	10.45	6.19	2.92	7.67	3.24	-	-	-	-	5.10
		(71)	(96)			(73)		CU			(96)
Ludhiana	4.32	2.93	3.42	-	-	6.65	-	3.38	-	-	4.19
						CR (11)					
Aurangabad	4.28	-	-	-	2.27	4.62	-	-	-	-	-
						(46)					
Gaya	4.18	-	8.15	-	-	4.26	-	-	-	-	-
						CR				CR	
Paschim Chambaran	3.97	-	-	-	-	1.38	-	-	-	66.38	-
						(15)					
Vaishali	3.89	-	-	-	-	3.36	-	-	-	-	-
						(110)					

Districts	% age share of women workers	260	261	262	263	264	265	266	267	268	269
Rupnagar	3.81	-	5.76 CR	- (48)	-	1.94	-	-	-	-	- (10)
Purnea	3.65	-	29.70	1.89	-	- CR	-	-	-	-	11.72
Palamau	3.62	-	-	-	-	2.77 (65)	-	-	-	-	-
Bhagalpur	3.59	-	-	-	-	2.64 (54)	-	-	-	-	- (17)
Munger	3.51	- CR	-	-	-	2.87 (142)	-	-	-	-	7.34
Dhanbad	3.46	73.33	-	-	-	1.49	-	-	-	-	-
Giridih	3.06	-	-	-	-	1.92 (15)	-	-	-	-	- (CR)
Muzaffarpur	2.96	-	-	-	-	0.12 (67)	-	-	-	-	4.63
Saharsa	2.57	-	-	-	-	0.88	-	-	-	-	-
Begusarai	2.04	-	-	-	-	1.94 (32)	-	-	-	-	2.65
Dharbanga	2.51	-	-	-	-	1.46 (65)	-	-	-	-	-
Samastipur	2.04	-	-	-	-	1.42 (87)	-	-	-	-	-
Katihar	1.86	-	-	-	-	1.90 CR	-	-	-	-	-
Purbi Chambaram	1.24	-	-	-	-	0.81 CR	-	-	-	-	-
Sitamarhi	1.24	-	-	-	-	0.93 (259)	-	-	-	-	-
Malhi Rani	1.08	-	-	-	-	0.92	-	-	-	-	-

## (iii) Moderate proportion (30% - 45%)

The moderate proportion ranges from 30% to 45%. Of the nine districts in the textile industry which fall within this range, five belong to Bihar, two to Kerala and two to Maharashtra. Gopalganj in Bihar has not been classified at the disaggregate level. Of the others, only a few industries have been listed. None of the districts are significant for employment in cotton textile mills (231). Printing, dyeing and bleaching of cotton textiles (232) have been mentioned in Nalanda and Nawada only where the percentage shares are 80.68% and 18.80% respectively. Cotton spinning other than in mills (233) has been reported in Munger only and the percentage share of women workers is as high as 97.26%. The percentage share of women workers engaged in the production of Khadi are 35.34% in Nalanda and 4.76% in Munger. Percentage shares of women workers engaged in the weaving and finishing of cotton textiles in handlooms (235) in the districts of Saharsa, Nawada and Munger are 44%, 41.73% and 20.56% respectively.

The districts of Maharashtra falling in this range in the cotton textile industry are Osmanabad and Parbhani. 55.34% of the workers are engaged in cotton spinning, cleaning and baling (230). Cotton spinning outside mills by charkha (233) has been reported for Osmanabad only and the percentage share of women workers is 93.45%. In Khadi production, the

corresponding percentage is 41.04. In these two districts, the percentage share of women workers in mills is relatively higher - 15.70% in Osmanabad and 34.42% in Parbhani. In the districts of Kerala the pattern is the same as that mentioned in the previous classes. The percentage shares of women workers in cotton ginning by charkha is 96.64% in Malappuram and 95.94% in Trichur. In spite of the percentage share in cotton spinning by charkha (233) being high, it is tempered by relatively lower percentage shares in the production of khadi (234). The percentage share in cotton textiles in handlooms (235) does not exceed 30%. The highest percentage share in powerlooms is 26.08% (in Ahmednagar). The percentage share of women workers in cotton ginning, cleaning and baling range from nil proportions in Sitamarhi to 88.34% in Bid.

32.09% of the districts fall in the low proportion in the manufacture of wool, silk and synthetic fibre textiles (24). The corresponding percentages in the last class of very low proportions is 45.67%. The activities responsible for the low proportions are not easily explained as most of the districts have not been disaggregated. In cotton handlooms (235), 32.21% and 41.25% of the workers in the districts of Malappuram and Trichur respectively are women.

With two exceptions, all the districts falling in the moderate proportions in wool, silk and synthetic

fibre textile (25) are from Bihar. However, none of the districts of Bihar have been classified at the disaggregate level with the exception of Palamau where the percentage share in the manufacture of unclassified wool (244) is 47.55%. Of the two districts of Maharashtra - Sangli and Ahmednagar - only Ahmednagar has been further classified. 39.02% of the workers in the production of unclassified wool (244) are women and the corresponding percentage in wool spinning and weaving outside mills (242) is 44.16. Spinning, weaving and finishing of other textiles - synthetic fibres, rayons, nylons etc (247) have 100% male workers.

In Buldana, Purnea, Ahmadnagar and Palghat in the Jute, hemp and mesta textiles fall within the moderate range. Only Purnea and Buldana are classified at the disaggregate level. Jute and Mesta spinning and weaving have 51.89% women workers in Purnea and 46.91% in Buldana.

Kottayam, Ernakulam, Trichur and Ratnagiri are the districts which show moderate proportions in the manufacture of textile products. Percentage shares of women workers engaged in the manufacture of all types of threads, cordage, ropes, twines, nets, etc range from 11.53% in Trichur to 36.32% in Ernakulam. Percentage share in embroidery and making of crapes, laces and fringes are reported for Ernakulam only and

the percentage is 93.79%. The percentage share of women workers in garment making (264) are 39.22% in Kottayam, 31.219% in Ratnagiri, 29.58% in Trichur and 25.77% in Ernakulam. The only district - Ernakulam listed for the manufacture of made up textile garments (264) has a percentage share of 78.72%. The percentage shares in the manufacture of coir and coir products in Kottayam, Ernakulam and Trichur are 48.98%, 72.44% and 60.44% respectively.

(iv) Low (15% - 30%) and very low (less than 15%) proportions :

In the cotton textile industry, 28.39% of the total districts fall in the low category and 51.85% in the very low category. Wool cleaning, baling and pressing (28) has been listed only for Ludhiana and the percentage share of women workers in it is 8.66%. Wool spinning, weaving and finishing in mills (241) is important in the Hoshiarpur, Rupnagar, Ludhiana and Amritsar districts of Punjab and Nagpur and Thane in Maharashtra. In Punjab, the percentage share of women workers do not exceed 5% with the exception of Hoshiarpur where the percentage share is 18.87%. The most frequently reported activity for the all districts is the manufacture of wool not elsewhere classified (244) and the percentage share of women workers vary from 56.07% in Satara to 2% in Amritsar.

### II.3 Percentage share of women workers in the manufacture of wood and wood products, furniture and fixtures (27)

0.84% of the total women workers in the country are engaged in the manufacture of wood and wood, furniture and fixtures. Total workers engaged in the manufacture of wood and allied products constitute 9.51% of the total workers engaged in manufacturing. The percentage shares of males and females are 8.01% and 1.50% respectively.

The overall percentage shares of women workers in the wood industry is lower when compared to food, beverage and textile industry. The variations are therefore organised as follows :

- (i) High proportion - More than 42%
- (ii) Moderate proportion - 28% - 42%
- (iii) Low proportion - 14% - 28% and  
Very low proportion 0%-14%

- (i) High Proportions (Above 42%)

Fig. 9 shows that Trichur is the only district with a percentage share exceeding 42 % Women workers constitute more than 80 percent of the total workers engaged in the manufacture of wooden and cane boxes, crates, drums, barrels and other wooden containers, baskets and other rattan, bamboo, reed and willow wares made entirely or mainly of cane, rattan, reed bamboo and willow. Table II.7 shows that less than 3 % of the



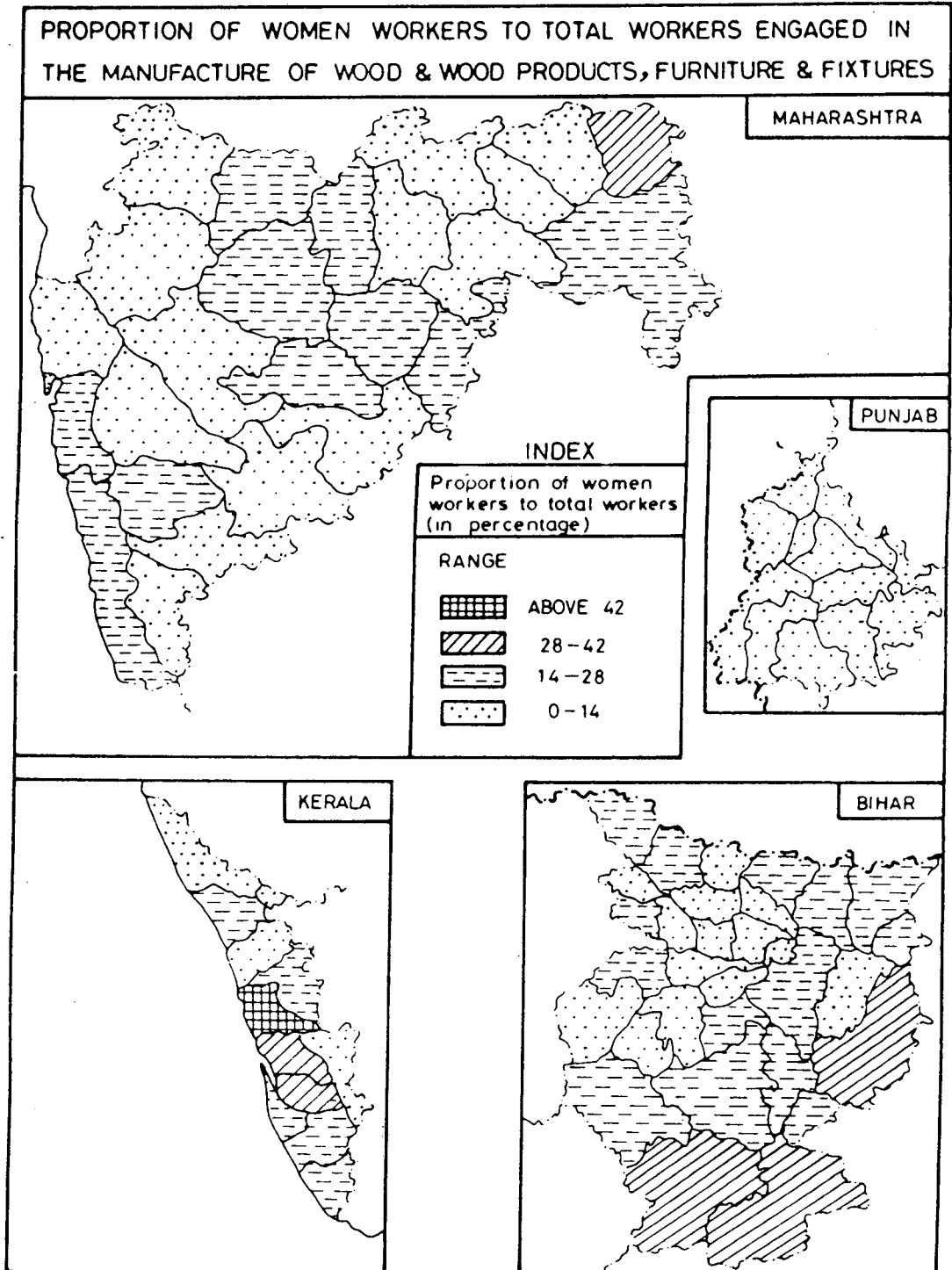


FIG. 9

TABLE II.7 PERCENTAGE SHARE OF WOMEN WORKERS ENGAGED IN THE MANUFACTURE OF WOOD AND WOOD PRODUCTS, FURNITURE AND FIXTURES

DISTRICTS	Major Group	Minor Groups								
		270	271	272	273	274	275	276	277	278
				CR	CR			CU		CR
TRICHUR	50.51	0.00	-	81.77 (109)	0.18 CR	-	-	0.14 CR	-	2.49 CR
KOTTAYAM	34.31	3.32	0.00	86.01 (93)	0.12 (72)	-	-	0.18	-	4.18
SINGHBHUM	33.66	-	0.00 (39)	46.22 (88)	1.46 CR	-	-	0.00 (135)	-	- (56)
ERNAKULAM	33.48	-	2.36	62.53 (60)	0.15	28.79	-	0.26	-	4.24 CR
BHANDARA SANTAL	30.50	-	0.00	53.31 (103)	0.00	-	-	0.00 CR	-	0.67
PARGANAS SANTAL	29.58	-	0.00 (242)	41.20 (95)	0.00 (294)	-	-	0.61 CR	-	- CU
RANCHI	28.59		4.65 CU	37.53 (114)	3.08 CR	-	-	0.44	-	3.29
DHANBAD	27.02	-	2.91 (317)	35.67 (93)	0.92	-	-	0.00	-	
PALAMAU	25.40	-	4.96	34.96 (61)	0.00 CR	-	-	0.00 CR	-	
HAZARI BAGH	23.06	-	0.00 (622)	37.87 (84)	0.34	-	-	0.48 CR	-	(226)
TRIVANDRUM	22.66	- (236)	0.64 CR	63.05 (31)	0.00 CR	-	-	0.37	-	0.86 CR
QUILON	22.29	3.96	0.79	73.67 (99)	0.06 CR	-	-	0.00 CR	-	10.53
PURNEA	22.21		0.00 CR	44.16 (106)	0.28 CR	-	-	0.33 CR	-	0.00
ALLEPPEY	22.01	17.37 CR	0.32 CU	74.77 (126)	0.09 CR	-	-	0.60	-	0.00 (264)
CHANDRAPUR	21.55	4.86	1.55	44.79 (67)	0.81	-	-	0.00 CR	-	0.74 CR

DISTRICTS	Major Group	Minor Groups								
		270	271	272	273	274	275	276	277	278
BULDANA	21.42	-	0.00	48.51 (40)	0.00	-	-	1.83	-	0.19
SAHARSA	18.33	-	0.00	39.54 (93)	0.00	-	-	0.00	-	
RAIGARH	17.57	-	-	51.76 (78)	0.00 CR	-	-	0.00 CR	-	1.17 CR
RATNAGIRI	17.46	-	0.00	60.01 (137)	0.49	-	-	0.34 (CR)	-	0.65
PASCHIM CHAMPARAN	17.42	-	0.00	60.01 (28)	0.49	-	-	0.34 (CR)	-	0.65
KATIHAR	17.43			38.09 (123)	0.00			0.63		
MUNGER	17.04	(58)	(380)	25.05 (51)	0.00 (CR)			0.00		
KOZHIKODE	16.87	12.08	0.61	73.81 (36)	0.31 CR			0.00		
GIRIDIH	16.83			38.00 (80)	0.82 CR			0.00 (2032)		
PALGHAT	16.60		0.69	53.93 (23)	0.05 CR			0.78		
MAWADA	16.09			33.39 (61)	1.30 CR			0.00		(132)
PARBHANI	16.06	-	10.24	42.94 CR	5.31 CR			0.00		1.05
MADHUBANI	15.85	-	0.00	26.78 (123)	0.48			0.00		
PURBI CHAMBARAM	15.80	-	0.00	29.83 (108)	0.00			0.00 (223)		(127)
JALGAON	15.70	-	0.00	43.59 (90)	0.00			1.13		0.63
SIWAN	14.95	-	0.00	21.31 CU (119)	0.00			0.00		

DISTRICTS	Major Group	Minor Groups								
		270	271	272	273	274	275	276	277	278
BHOJPUR	14.89	-	4.24	35.07 (73)	0.00			0.00		0.00 (127)
NANDED	14.51	-	-	43.68 (77)	0.00			0.00 CU		1.61 (98)
SATARA	14.34	-	0.00	40.61 (89)	0.00 CU			0.60 CR		0.58 (67)
BID	14.30	-	-	42.90 (106)	2.60			2.60		1.60 (83)
AURANGABAD(M)	14.28	-	0.00	44.31 CU (72)	0.00			0.00 CR		1.41 CR
OSMANABAD	13.92	-	2.81	46.17 CR (108)	0.00			1.43 CR		0.44 (150)
SOLAPUR	13.47	-	1.47	43.85 CR	0.00			0.00		1.23
GOPALGANJ	13.47	-		22.70 (24)	0.00 CR			0.00 CR		0.00
ROHTAS	13.36	-		27.84 CR	0.35 CU			0.79 CR		0.00 (306)
SANGLI	12.84	-	1.38 (7)	- (97)	0.81			1.43 CU		0.62 (983)
SARAN	12.46	-	-	23.30	0.00			0.00		0.00
AKOLA	12.19	-	9.89 CU	48.95 (73)	0.00		CR	0.72 (22)		2.34 (557)
NAGPUR	12.04	0.00	2.83	44.89 (78)	0.00	33.43	-	0.68		0.79
IDUKKI	11.91	-	0.00	47.00 (125)	0.00	0.00	-	0.00 CU		(282)
DHULE	11.38	-	- CU	38.20 CR	0.00 CR			0.36 CR		0.75
SITAMARHI	11.16	-	1.98	26.44 (69)	1.01 CR			0.66 CR		

DISTRICTS	Major Group	Minor Groups								
		270	271	272	273	274	275	276	277	278
BHAGALPUR	11.08	-	0.00	30.12 (84)	1.06 CR			0.30 (22)		(299)
NASIK	10.98	0.00	0.00 CR	43.51 (101)	0.53 (1188)			2.63 CR		1.67
MALLAPPURAM	10.71	-	0.73	49.62 (59)	0.25 CR			0.24 (82)		
NALANDA	10.69	-	0.00	45.13 (116)	0.46 CR			1.00		
DARBHANGA	10.55	-	-	31.73 CR	0.65			0.00		
VAISHALI	10.49	-	-	22.07 (96)	0.00 CR			0.00		(181)
AHMEDNAGAR	10.38	-	-	41.02 (56)	3.98 (170)			0.00		1.35
CANNANORE	10.11	5.80	2.04 CU	64.54 (172)	0.26			0.00		0.00 CU
WARDHA	9.94	-	7.89	48.12 (133)	0.00			0.00		0.25
AMRAVATI	9.51	-	0.00 (103)	41.09 (731)	0.00			0.00		0.13 CR
GAYA	9.36	-	0.00 CR	29.13 (224)	0.74 CR			0.00		7.73 CR
SAMASTIPUR	9.26	-	2.10 (199)	32.54 (17)	0.77			0.00		0.00
THANE	9.24	-	2.85	46.83 (198)	0.00 CR			0.94 CR		1.76
AURANGABAD(B)	8.66	-	- (CU)	31.38 (100)	1.19 CU			3.47 CU		(119)
PUNE	7.96	-	4.28	45.41 (186)	0.76			0.67 CR		0.87
MUZZAFURPUR	7.95	-	0.00 (CU)	17.98 (69)	0.00 (120)			0.21 (124)		(163)

DISTRICTS	Major Group	Minor Groups								
		270	271	272	273	274	275	276	277	278
KOLHAPUR	6.85	-	3.05 CU	35.46 (86)	1.46			1.15 (564)		1.15
YAVATMAL	6.63	-	4.73	37.40 (112)	0.00			0.00 CR		0.65
BEGUSARAI	6.04	-	0.00	20.32 (136)	0.00			0.29 (408)		
PATIALA	5.71	-	0.00	20.92 (207)	0.00 CR			1.41		
RUPNAGAR	3.95	-	0.00 CU	10.59 (CU)	0.86 CR	CU	CU	0.00 CU		CU
G. BOMBAY	3.67	1.25	9.14	23.03 (83)	0.00 CU	6.85	2.11	0.48 (135)		0.68 CU
PATNA	3.58		0.00	29.80 (CU)	0.04 CU	CU		0.58 CU		0.14
FARIDKOT	3.44		0.00	19.09	0.86	1.82		1.06		
KAPURTALA	2.39		0.00	0.00 (130)	0.00 CU	0.00		0.00		
JALANDHAR	2.16		0.00	11.25 (138)	0.60 CR	0.00		0.25		
LUDHIANA	2.12		0.00	7.93 CU	0.14 CU			1.13		
FIROZPUR	2.06		0.00 CU	7.77 (110)	0.53 CU	-		0.00		
AMRITSAR	2.05		0.83	6.36 (609)	0.42	-		0.00		2.33
HOSHIARPUR	1.74		0.00	7.49 CR	0.00	-		0.00		
WAYANAD	1.73		0.00 CR	21.21 CU	0.00 CR	-		0.00 CR		

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DISTRICTS	Major Group	Minor Groups								
		270	271	272	273	274	275	276	277	278
SANGPUR	1.28		1.91 CU	2.18 (70)	0.46	-		3.14		CU
GURDASPUR	1.15		1.19	4.35 (1130)	0.00 CR	-		0.00		10.26
BHATINDAR	0.87		0.00	5.85	0.40	0.00		0.00		0.00

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workers are engaged in the manufacture of structural wooden goods (classified as minor group 273), wooden furniture and fixtures (276) and manufacture of unclassified wood, bamboo and cane products(279).

(ii) Moderate Proportions (28%-42%)

7.40 per cent of the total districts under study have proportions ranging between 28% to 42%. The highest percentage shares in all the districts are again in the manufacture of wooden and crate boxes, drums, barrels, baskets and all other activities classified as the minor group 272. Kottayam is the only district for which the manufacture of veneer, plywood and their products i.e. minor group 270, has been listed. The percentage share of women workers in it is only 3.32%. All the districts are engaged in the sawing and planning of wood (270) though the percentage share of women workers are engaged in this industry. Again, not more than 5 percent of the workers are women in the manufacture of structural wooden goods (273), wooden furniture and fixtures (276) and unclassified wood, bamboo and cane products (279). Ernakulam is the only district listed for manufacture of industrial goods (274) and women constitutes 28.79% of the total workers.

(iii) Low Proportion and Very Low Proportions(14%-28% and 0%-14%)

35.80% of the total districts have proportion of



women workers ranging between 14% to 28%. The maximum percentage of women workers are again engaged in the manufacture of wooden boxes and other containers (272). Of the districts listed for manufacture of Veneer, plywood etc (270), only the districts of Kerala i.e. Alleppey and Kozhikode, exceed 10 %. The percentages are 17.37% and 12.08% respectively. Parbhani is the only district where the percentage share of women workers engaged in sawing and planning of wood (271) exceeds 10 %. For all other districts the value is less than 5 per cent. Again with the exception of Parbhani (5.31%), none of the districts listed for the manufacture of structural wooden goods (273) have a percentage share exceeding 5%. None of the districts have been listed for the manufacture of wooden industrial goods (274), cork and cork products (275) and manufacture of bamboo and cane furniture (276). Women making unclassified bamboo and cane products (279) constitute less than 5 % of the total workers (with the exception of Quilon where the percentage is 10.53).

Very Low proportions varying between 0 and 14 % are found in 55.55% of the total districts under study. The lower percentage in these districts is explained by two obvious reasons. First, the proportion of women workers in the manufacture of wooden and cane boxes (272) declines with declining proportions at the aggregate level, and second, women workers are seen

scattered over greater number of industries. The percentage share in the manufacture of wooden and cane boxes, crates etc(272) vary from 0 to 49 %. Ludhiana, Ferozpur, Amritsar, Hoshiarpur, Sangrur, Gurdaspur and Jalandhar without a single exception have the maximum proportion of women workers engaged in the manufacture of wooden and cane boxes (272). However, the percentage shares do not exceed 10 per cent and at the aggregate level also, the percentage share does not exceed 5 per cent. Unlike the previous ranges women in this range (i.e 0% - 14%) are engaged in a greater number of activities. More than 4% of the workers engaged in sawing and planning of wood are women in the districts of Bhojpur, and Greater Bombay. Of the districts listed for the manufacture of industrial goods of wood (274), women are engaged in three of the districts - Nagpur, Greater Bombay and Faridkot in which the percentage share as are 33.43%, . 6.85% and 1.82% respectively.

II.4. Percentage share of women workers in the manufacture of paper products and printing, publishing and allied industries (28)

Workers engaged in the manufacturing of paper and paper products and allied industries constitute only 0.07% of the total women workers. The male and female percentage shares in the industry are 2.38% and 0.012% respectively.

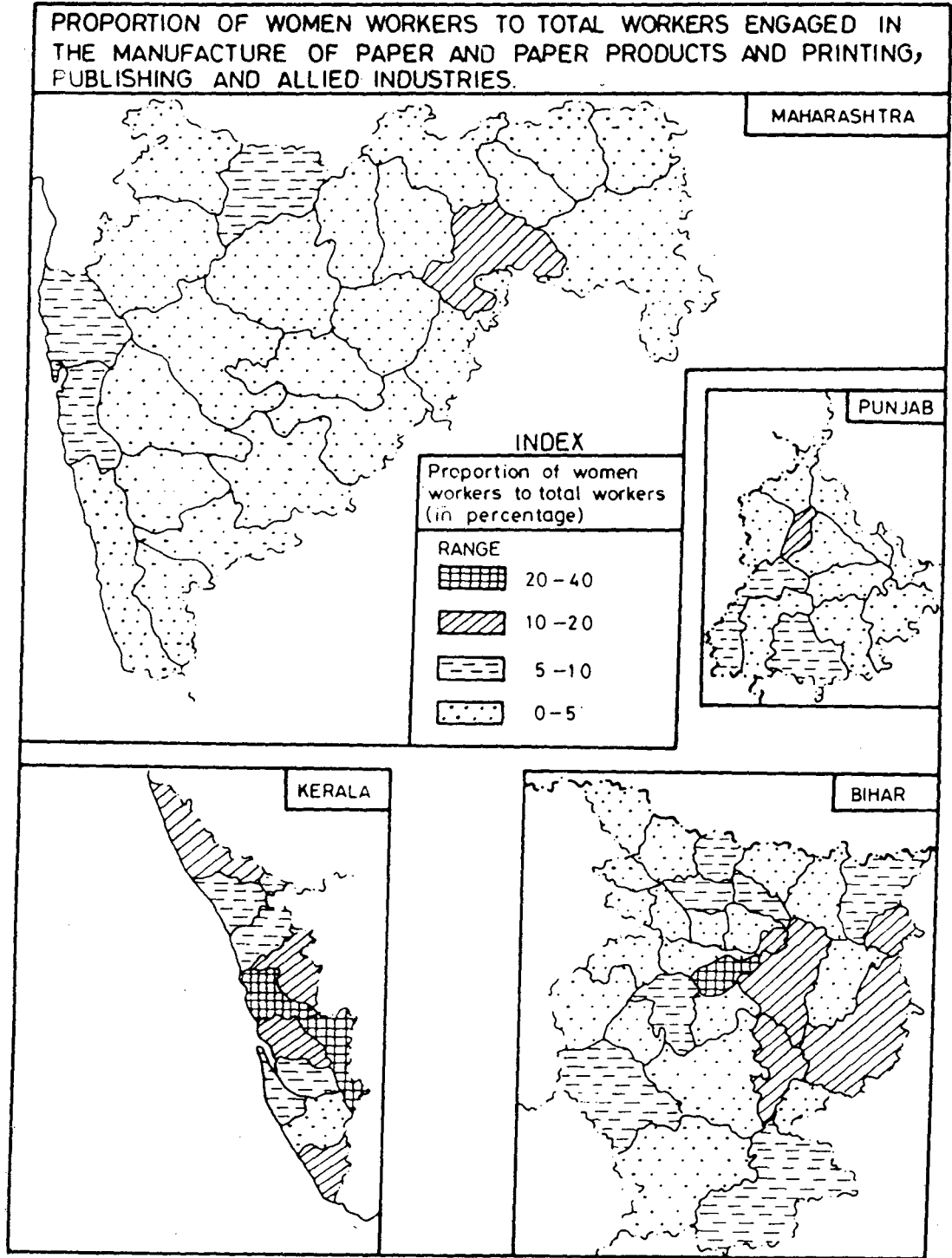


FIG. 10

The percentage shares of women workers vary from 0.0% to 24.96 %. Table II.8 shows the percentage distribution of female workers at the disaggregate level. The percentage share of women workers do not exceed 25% in any of the districts. Three districts - Idukki, Trichur and Nalanda - have percentage shares that range from 20% to 25%. The percentages are 24.96%, 24.20% and 22.19% respectively. The proportion of women workers in any of the industries in these districts do not reveal any particular trend. In Idukki, the highest percentage shares of women workers are in unclassified activities like printing, publishing and allied activities (289). The only other industry listed in this district is that involved in the manufacture of pulp, paper and paper board including newsprint (280). The percentage share in it is 17.45%. Trichur reveals a completely different picture. The maximum percentage of women workers are engaged in book binding (34.04%). This is followed by 18.75% in printing and publishing of periodicals, books, journals, atlases, maps, music, directories etc (285). The only other industry listed in this district is printing and publishing of newspaper (284) but the percentage share in it is only 2.92%. The third districts Nalanda belongs to Bihar. The manufacture of container and boxes of paper and paper board (281) engage 58.65% of the total workers as women. The only

TABLE II.8 PERCENTAGE SHARE OF WOMEN WORKERS ENGAGED IN THE MANUFACTURE OF PAPER AND PAPER PRODUCTS, AND PRINTING, PUBLISHING AND ALLIED INDUSTRIES

DISTRICTS	Major Group	Minor Groups										
		280	281	282	283	284	285	286	287	288	289	
IDUKKI	24.96	17.43	-	-	-	-	-	-	-	-	-	62.20
						(44)	(166)					
TRICHUR	24.20	-	-	-	-	2.92	18.75	-	-	34.04	-	
		(72)										
NALANDA	22.19	58.65	-	-	-	-	0.00	-	-	-	-	
						CU	(174)			(164)	(109)	
PALGHAT	19.34	-	-	-	-	3.8	25.00	-	-	28.43	23.84	
		(33)										
SANDAL PARGA	18.25	39.72	-	-	-	-	-	-	-	-	-	
						CU	(174)			(128)	(117)	
TVM	17.62	-	-	-	-	5.93	18.38	-	-	14.02	24.39	
GIRIDIH	17.37	-	-	-	-	-	-	-	-	-	-	
		(159)	(142)			(74)	(69)			(59)	(102)	
ERNAKULAM	17.11	5.73	15.69	-	-	9.29	25.46	-	-	23.85	19.63	
KAPURTALA	16.84	-	-	-	-	-	-	-	-	-	-	
		(97)										
MUNGER	13.29	-	39.02	-	-	-	0.00	-	-	-	-	
YAVATMAL	13.04	-	-	-	-	-	-	-	-	-	-	
BEGUSARAI	12.50	-	-	-	-	-	-	-	-	-	-	
KATI HAR	11.58	-	-	-	-	-	-	-	-	-	-	
						CR	(93)			CU	(158)	
CANNANORE	11.03	-	-	-	-	3.68	14.16	-	-	4.13	17.24	
BHATINDA	9.97	-	-	-	-	-	-	-	-	-	-	
		CR				(212)	(25)			(CR)	(158)	
KOTTYAM	9.82	4.51	-	-	-	4.03	14.07	-	-	12.12	18.07	
							(172)			(375)	(18)	

DISTRICTS	Major Group	Minor Groups									
		280	281	282	283	284	285	286	287	288	289
ALLEPPEY	9.76	-	-	-	-	0.00	6.14	-	-	7.78	13.45
PALAMAU	8.29	-	-	-	-	-	-	-	-	-	-
RAIGARH	7.89	-	-	-	-	-	(156) 7.71	-	-	(651) 7.82	(251) 8.03
MUZZAFARPUR	7.86	-	-	-	-	-	-	-	-	-	-
WAYA NANDA	7.32	-	-	-	-	-	-	-	-	-	-
		CU	142		CU	(352)	(127)			(143)	CU
PUNE	7.26	5.81 CR	16.07	-	6.63	8.86	5.24 (217)	-	-	13.00	3.72
MALAPURAM	7.23	2.86	-	-	-	-	13.12	-	-	-	22.62
SITAMARH	7.20	-	-	-	-	-	-	-	-	-	-
FEROZEPUR	6.42	-	-	-	-	-	-	-	-	-	-
					(27)						
GAYA	6.17	-	-	-	27.14	-	-	-	-	-	-
						(29)	(30)				
JALANGO	6.06	-	-	-	-	7.75	3.04	-	-	-	8.72
			(1548)								
PURNEA	5.82	-	13.79	-	-	-	-	-	-	-	-
						CU	CU				
SINGHBHUM	5.75	-	-	-	-	3.52	3.76	-	-	-	-
		CU	CU		CU	CU	CU		CU	CU	CU
G.BOMBAY	5.73	9.36	10.67	-	11.09	4.64	6.34	-	1.03	4.81	4.38
SAMASTIPUR	5.35	-	-	-	-	-	-	-	-	4.81	4.3
		(44)				CU	(160)			(27)	CU
KOZHIKODE	5.18	2.28	-	-	-	5.57	13.41	-	-	10.00	6.66
											CU
NANDED	4.94	-	-	-	-	-	-	-	-	-	8.62
							CR				CR







other activity listed i.e. printing and publishing of periodicals, books, journals etc (285) has 100% male workers.

Of the 11 districts with percentage shares of women workers varying between 10% and 20%, four belong to Kerala, five to Bihar, and one each to Punjab and Maharashtra. Printing and publishing of newspaper (284) and printing and publishing of periodicals, books, journals etc (285) have been listed only for the districts of Kerala (In Munger, it has been listed but the percentage share of women workers in it is nil). Not more than 10 % of the total workers engaged in the printing and publishing of newspaper (284) are women. On the other hand, the percentage shares in the printing and publishing of periodicals, books, journals etc (285) are 25% in Palghat, 18.38% in Trivandrum, 25.46% in Ernakulam and 17.16% Cannanore. Book binding (288) and unclassified printing and publishing and allied activities (289) has also been listed in the districts of Kerala only. The percentage shares in book binding in the districts of Palghat, Trivandrum, Ernakulam and Cannanore are 28.43%, 14.02%, 23.85% and 4.13% respectively. The corresponding percentages for printing, publishing and allied unclassified activities are 23.84%, 24.39%, 19.63% and 17.24%. None of the activities in the districts of Bihar, Maharashtra and Punjab have been listed with the exception of Munger

(Bihar). The two industries listed in Munger are manufacture of container and boxes of paper and paper board (281) and printing and publishing of periodicals, books etc (282). The percentage share in the former is 39.02% and is 0.00% in the latter. Ernakulam is the only district listed for the manufacture of pulp, paper and paper board (280) but the percentage share of women workers in it is only 5.73%.

Relatively low proportions (5% - 10%) exist for 17 districts of which four are Maharashtra, seven in Bihar, five in Kerala and two in Punjab. All the four districts of Maharashtra have been listed for book binding (288) and printing and publishing and allied unclassified activities (289). The maximum percentage share of women workers in Pune is 13% and in the latter (289), the corresponding percentage are the only two districts engaged significantly in engraving, etching, block making etc (287) and the percentage share of women workers in it is nil in Pune and only 1.03% in Greater Bombay. Only one single districts of Bombay is engaged in the printing of bank notes, currency notes, postage stamps, security passes etc (286) but the percentage share of women workers in it is nil. Printing and publishing of newspaper (284) and periodicals and journals (285) are listed for all the four districts of Maharashtra but the maximum percentage share of women workers is 8.86% in Newspaper (in Pune) and 7.71% in periodicals and journals (in

Raigarh). The higher percentage in the manufacture of paper and paper board activities (283) is 11.09% in Greater Bombay. Manufacture of pulp products (282) is not significant in any of the four districts of Maharashtra. Manufacture of pulp, paper and paper board (281) is significant in Pune and Greater Bombay and their corresponding proportions are 5.81% and 16.07% in Pune and 9.36% and 10.67% in Greater Bombay.

The districts of Kerala with low proportion of women workers (to total workers) are Kottayam, Alleppey, Wayanad, and Malappuram and Kozhikode. None of the activities at the disaggregate level are significant in Wayanad. The manufacture of pulp, paper and paper board (280) is important in Malappuram and Kozhikode but the percentage share of women workers does not exceed 3%. None of the five districts of Kerala are engaged in the manufacture of container and boxes of paper and paper board (281), pulp products (282) and unclassified paper and paper board (283). With the exception of Malappuram, printing and publishing of newspaper (284) is significant in all the districts of Kerala. However, the maximum percentage share is only 5.57% (in Kozhikode). Printing of bank notes, currency notes etc (284) and engraving, etching, block making etc (287) are not significant in the five districts. Book binding and unclassified printing and publishing activities are listed for all the districts

of Kerala but their highest percentage shares are 12.12% and 18.07% respectively (both in the district of Kottayam).

Unclassified pulp products (282) is not significantly manufactured in the districts of Bihar. Samastipur and Palamau are not significant for any of the industries listed under major group 28. Pulp and paper board manufacturing (280) has been listed only for Samastipur but the percentage share of women workers in it is nil. In Purnea, 13.79% of the workers engaged in the manufacture of container and boxes of paper and paper board (281) are women. Gaya is the only district listed for the manufacture of paper and paper board articles not elsewhere classified (284) and the percentage share of women workers in it is 27.14. Less than 4% of the total workers engaged in the printing and publishing of newspaper (284) and periodicals (285) are women and these activities are listed in none of the other districts. The printing and publishing industry listed in Muzzaffarpur has 100% male workers. Book binding (288) and unclassified printing and publishing activities have been listed in Muzzaffarpur and Gaya respectively but the percentage share of women workers in these industries is nil. 60.49% of the total districts under study have percentage share of women workers below 5% in Ahmednagar, Chandrapur, Aurangabad, Thane, Nagpur, Sangli, Bhandara and Nasik in Maharashtra are significant for the manufacture of

pulp, paper and paper board (280). However, women constitute less than 9% of the total workers engaged in this activity. Thane is the only district in Maharashtra listed for the manufacture of container and boxes of paper and paper board (281). The percentage share of women workers in it is less than 5%. Manufacture of unclassified paper and paperboard articles (283) is important in Thane and Nagpur. In the former the percentage share of women workers is nil and in the latter it amounts to just 5.22%. Ahmednagar, Solapur, Aurangabad, Kolhapur, Thane, Nagpur, Satara, Amravati, Bhandara and Nasik have been listed for printing and publishing of newspaper. However, women constitute not more than 7% of the total workers engaged in this industry. In the printing and publishing of periodicals (285) also in the districts of Maharashtra, women do not exceed 5% of the total workers. Nasik is the only district listed for the printing of bank notes, currencies etc. (286) and the percentage share of women workers in it is very negligible. Thane is the only district engaged in engraving, etching, block making etc and the percentage share of women workers in this industry does not exceed 7%. The percentage share of women workers engaged in book binding (288) does not exceed 3% in the district of Maharashtra with the exception of Solapur which has a percentage share of 14.05%. The percentage share of

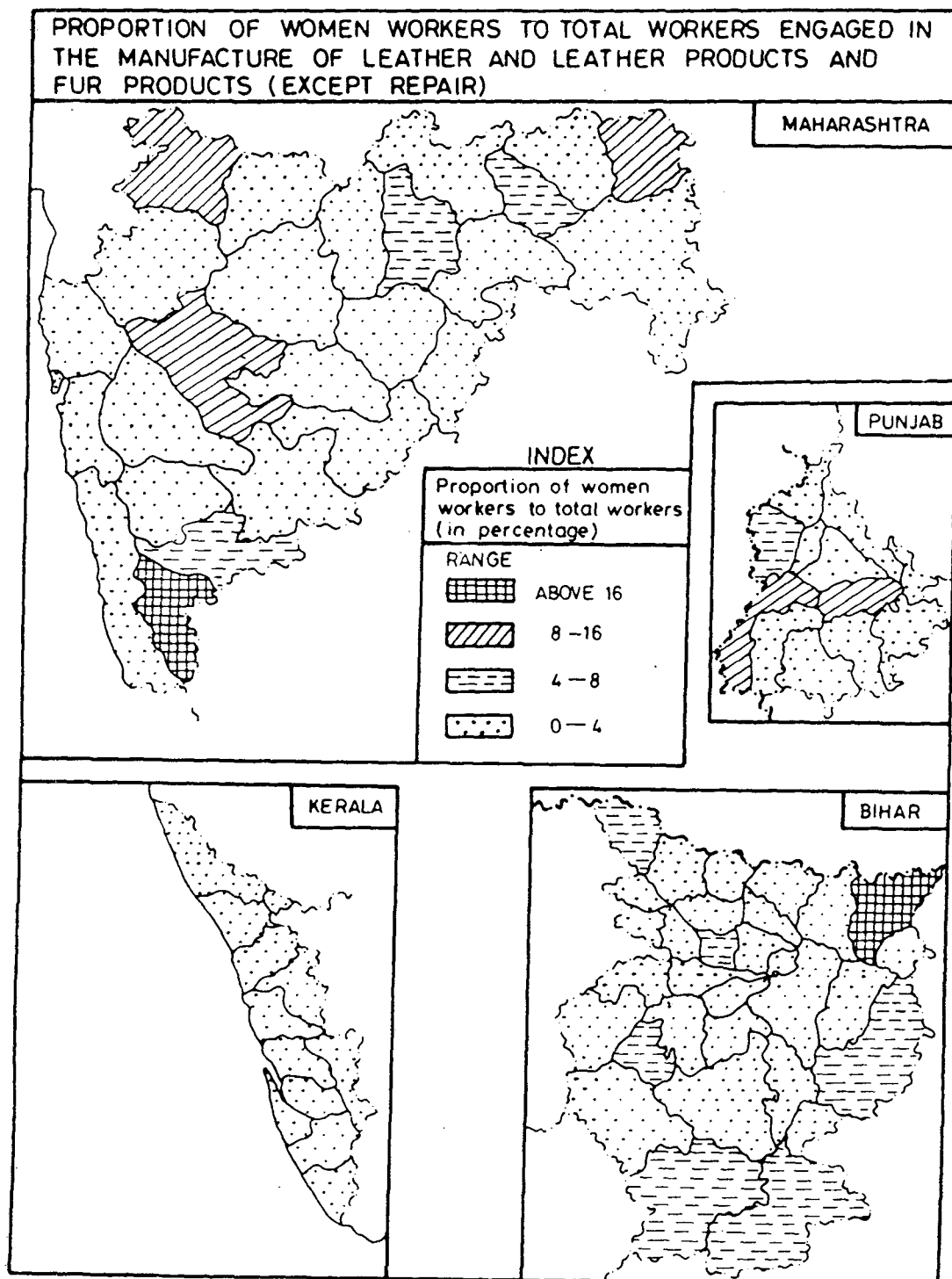


FIG.11

women workers engaged in printing and publishing and allied unclassified activities (289) does not exceed 6%. The only two districts of Bihar, where the shares are greater than 0.00% and less than 5% of women workers are Ranchi and Saharsa. The manufacturing activities of Saharsa have not been classified at the disaggregate level. For Ranchi, manufacture of pulp, paper and paper board (280), manufacture of unclassified pulp products (282), paper and paper board articles (283), printing of bank notes and currency (286) and engraving, etching, block making etc (287) are not listed. 28.92% of the workers engaged in the manufacture of container and boxes of paper and paper board (281) are women in Ranchi. 100% of the workers engaged in printing and publishing of newspaper (284) are males. This is also true for book binding and unclassified printing and publishing activities (289). The percentage share of women workers in the 17 districts of Bihar is nil at the aggregate level. This is very high compared to one district in Maharashtra and Kerala and two in Punjab. 7 out of 12 districts of Punjab fall in the very low category (0-5%) the percentage shares of women workers at the disaggregate level has not been shown for Faridkot. Manufacture of pulp, paper and paper board (280) has not been listed in any of the districts in Punjab. Manufacture of unclassified paper and paper board articles (283) are important in Ludhiana, Amritsar and

Jalandhar (283). In Ludhiana, 100% of its workers are males. The percentage in Amritsar, and Jalandhar are 0.98 and 3.32 respectively. Printing and publishing of newspaper in any of the districts of Punjab do not employ more than 3% female workers. The highest percentage share of women workers engaged in the printing and publishing of periodicals, 5.26% in Rupnagar. This is a high percentage compared to the other percentages for Punjab. Amritsar and Jalandhar are the only districts listed for book binding. While in the former 100 of the workers are male, in the latter the percentage share of women workers is 1.52%. None of the districts of Punjab are engaged in the manufacture of pulp, paper and paper board (280), printing of bank notes and currency (286) and engraving, etching, block making etc (287).

#### II.5. Percentage share of women workers in the manufacture of leather and fur products(29)

The overall proportion of women workers to total workers engaged in the manufacture of leather and fur products is very low.

In the states under study, the percentage share of women workers range from 0.00% to 17.08%. The only two districts in these states - Pune and Kolhapur - which exceed 15% do not show any definite trend. In Pune, at the disaggregate level, tanning currying, finishing,



embossing and jappaning of leather (290) and the manufacture of footwear (291) does not employ women workers at all. Whereas, in kolhapur in Maharashtra, the percentage share of women workers in these industries are 29.35 and 13.72 respectively. The only significant share of women workers in Purnea is in the manufacture of leather and fur products not elsewhere classified (299).

Table ( II.9) indicates consistant employment in footwear manufacture (291) in all the districts except where this industry is not significant at all. The percentage share of women workers in this industry varies from 0.42% to 13.72%. The percentage share of women workers in the industry is again nil in the districts of Purnea, Muzaffarpur, Dhanbad, Kozhikode, Munger and Sangrur.

II.6. Percentage share of women workers in women manufacture of Rubber, Plastic, Petroleum and Coal Products(30)

In India, 0.04% of the total women workers are engaged in the manufacture of rubber. Only 0.08 % of the workers in this industry are women.

The proportion of women workers to total workers do not exceed 22% in the rubber, plastic, petroleum and coal industry. The proportion of women workers range between 16% and 22% in the districts of Chandrapur,

TABLE II.9 : PERCENTAGE SHARE OF WOMEN WORKERS IN THE MANUFACTURE OF LEATHER AND FUR PRODUCTS

Districts	Major Group	MINOR GROUPS										
		290	291	292	293	294	295	296	297	298	299	
Punea	17.08	0.00	0.00	-	-	-	-	-	-	-	-	CR 50.85
Kolhapur	17.04	CU 29.35	(375) 13.72	-	(95) 7.85	-	-	-	-	-	-	-
Ferozepur	10.38	-	CU 4.20	CU 26.91	-	-	-	-	-	-	-	-
Ammadnagar	9.73	CR 27.86	CR 8.70	-	(52.63) 3.73	-	-	-	-	-	-	-
Ehandara	8.47	-	CR 8.66	-	CR 8.25	-	-	-	-	-	-	-
Ludhiana	8.20	0.00	CU 9.59	-	-	-	-	-	-	-	-	-
Dhule	8.06	-	CR 535	-	CU 17.33	-	-	-	-	-	-	-
Sangli	7.92	CR 4.42	(58) 8.36	-	0.00	-	-	-	-	-	-	-
Amritsar	6.82	CU 2.09	(669) 6.00	-	-	-	-	-	-	-	-	-
Wardha	6.73	-	CU 6.76	-	-	-	-	-	-	-	-	-
Bildana	6.6	(253) 36.28	(344) 2.42	-	-	-	-	-	-	-	-	-
Paschim Champaran	6.51	-	CR 8.67	-	-	-	-	-	-	-	-	-
Aurangabad(M)	6.19	-	CR 5.47	-	-	-	-	-	-	-	-	-
Santhal Parganas	5.00	-	CR 6.17	-	-	-	-	-	-	-	-	-
Vaishali	4.13	-	CU 6.33	-	-	-	-	-	-	-	-	-
Ranchi	4.06	-	CR 4.42	-	-	-	-	-	-	-	-	-
Alleppy	3.97	-	-	-	-	-	-	-	-	-	-	-
Trichur	3.90	-	CU 2.30	-	CR 6.14	-	-	-	-	-	-	-

Districts	Major Group	M I N O R G R O U P S									
		290	291	292	293	294	295	296	297	298	299
Kottayam	3.90	-	CU 3.90	-	-	-	-	-	-	-	-
Muzaffarpur	2.91	-	0.00	-	CU 11.54	-	-	-	-	-	-
Bhagalpur	2.67	-	CR 309	-	-	-	-	-	-	-	-
Ernakulam	2.58	-	(6) (1.82)	-	(182) 8.03	-	-	-	-	-	-
Trivendrum	2.49	-	CR 3.60	-	-	-	-	-	-	-	-
Palamau	2.24	-	(682) 2.36	-	-	-	-	-	-	-	-
Jalandhar	2.09	0.00	CU 2.20	CU 19.82	CU 1.84	-	-	-	-	-	-
Dhanbad	1.80	-	0.00	-	-	-	-	-	-	-	-
Malappuram	1.77	-	CR 2.51	-	-	-	-	-	-	-	-
Singhbhum	1.69	-	CU 1.13	-	-	-	-	-	-	-	-
Begu Sarai	1.06	-	CR 1.36	-	-	-	-	-	-	-	-
Bhatinda	1.04	-	(167) 0.61	-	-	-	-	-	-	-	-
Kozhikode	1.01	-	0.00 (287)	CU 1.77	-	-	-	-	-	-	-
Patna	0.86	0.00	0.96	-	0.00	-	-	-	-	-	-
Munger	0.83	-	0.00	-	-	-	-	-	-	-	-
Patiala	0.83	-	(236) 0.64	-	-	-	-	-	-	-	-
Gaya	0.75	-	CR 1.03	-	-	-	-	-	-	-	-
Rupnagar	0.41	-	CU 0.42	-	-	-	-	-	-	-	-
Sangrur	0.37	-	0.00	-	-	-	-	-	-	-	-

- indicates that total workers in the corresponding districts are less than 100 and therefore not significant enough to be listed.

CR - Completely Rural  
CU - Completely Urban

Thane, Aurangabad(Bihar), Wayanad, Bhandara, Yavatmal and Nalanda. None of the districts have been classified beyond the aggregate level except Thane. In Thane, the maximum percentage share of women workers are in the manufacture of unclassified rubber products (37.55%). This is followed by the manufacture of unclassified plastic products (10.34%). In tyre and tube industry (300), manufacture of rubber and plastic footwear (301) and petroleum by-products engage maximum proportion of women workers.

17 districts have percentage shares of women workers falling within 8% and 16%. The disaggregate classification of none of the districts of Maharashtra have been given with the exceptions of Greater Bombay, Solapur and Sangli. Of these, Greater Bombay is important for tyre and tube industries (300) but the percentage share of women workers in it is only 3.40%. The corresponding percentage for manufacture of rubber and plastic footwear (301) in this district is 13.23% and 7.54% in the manufacture of rubber plastic products not elsewhere classified. Greater Bombay, Solapur and Sangli are listed for the manufacture of plastic products not elsewhere classified and the percentage shares of women workers in it are 11.61%, 14.36% and 7.19% respectively. Petroleum refinery (304) is listed in Greater Bombay only and the percentage share of women workers in it is 6.95%. However, in the same

Table II-10 PERCENTAGE SHARE OF WOMEN WORKERS IN THE MANUFACTURE OF RUBBER, PLASTIC, PETROLEUM AND COAL PRODUCTS.

Districts	Major Group		Minor Groups						
	30	300	301	302	303	304	305	306	307
CHANDRAPUR	22	-	-	CR 20.30	CR 25.78	-	CU 2.12	-	-
THANE	21.11	-	(300) 11.22	CU 16.73	CR 19.21	-	CR 7.1	-	CR 2.22
AURANGABAD (M)	21.05	CR 7.11	-	-	-	-	-	-	-
WAYANAD	18.33	-	-	-	-	-	-	-	-
BHANDARA	17.39	CR 8.11	CU 3.73	CU 16.22	CU 19.52	-	-	-	-
YAVATMAL	17.14	-	CU 10.51	CU 14.20	-	-	-	-	CR 22.22
NALANDA	16.22	-	-	CR 5.23	CR 8.10	-	-	-	-
OSMANABAD	15.49	-	-	-	-	-	-	-	-
AHMADNAGAR	15.48	-	-	CR 3.63	-	-	-	-	CR 18.53
PARBHANI	12.77	-	-	-	-	-	-	-	-
PALAMAU	12.03	-	-	-	CR 6.55	-	-	-	CR 13.82
SOLAPUR	11.70	-	-	-	-	-	-	-	-
TRICHUR	11.69	(123) 3.22	-	(51) 6.35	(119) 38.03	-	-	-	-
KOTTAYAM	10.49	0.00	(322) 10.40	(32) 10.91	(58) 10.29	-	-	-	-
NAWADA	10.38	CR 9.80	-	-	-	-	-	-	-
DHANBAD	10.10	CU 8.51	-	(81) 10.91	-	-	-	-	-
AMRAVATI	9.68	CU 2.21	-	-	-	-	-	-	-
KOZHIKODE	9.79	-	-	(24) 15.62	(11) 24.73	-	-	-	-
G. BOMBAY	9.30	CU 1.20	CU 2.11	CU 13.22	CU 12.22	-	CU 5.1	-	-
QUILON	9.04	0.00	-	(335) 3.58	(305) 22.22	-	-	-	-
IDUKKI	8.79	-	-	-	-	-	-	-	-
MALAPPURM	8.51	0.00	-	-	CR 15.21	-	-	-	-
PALGHAT	8.19	(180) 4.83	-	CR 8.72	CR 9.82	-	-	-	-
GAYA	8.13	-	-	(40) 5.62	(40) 11.53	-	-	-	-
SANGLI	7.64	-	-	CU 10.22	CU 11.00	-	-	-	-
RAIGARH	7.30	-	-	-	-	-	-	-	-
KOLHAPUR	7.22	-	-	CU 8.22	-	-	-	-	-
SINGBHM AURANGABAD (B)	6.64 6.82	-	-	-	-	-	-	-	-
TRIVENDRUM	6.41	-	CU 3.96	(35) 6.63	(44) 4.54	-	-	-	-
EARNAKULAM	5.63	(10) 1.46	CR 10.34	-	(504) 13.91	(57) 2.93	(82) 30.11	-	-
NAGPUR	5.63	CR 1.32	CR 11.54	CR 2.21	CU 8.52	-	CU 7.71	-	-
CANNANORE	5.43	-	-	(101) 5.50	(92) 10.51	-	-	-	-

PROPORTION OF WOMEN WORKERS TO TOTAL WORKERS ENGAGED IN THE MANUFACTURE OF RUBBER, PLASTIC, PETROLEUM & COAL PRODUCTS

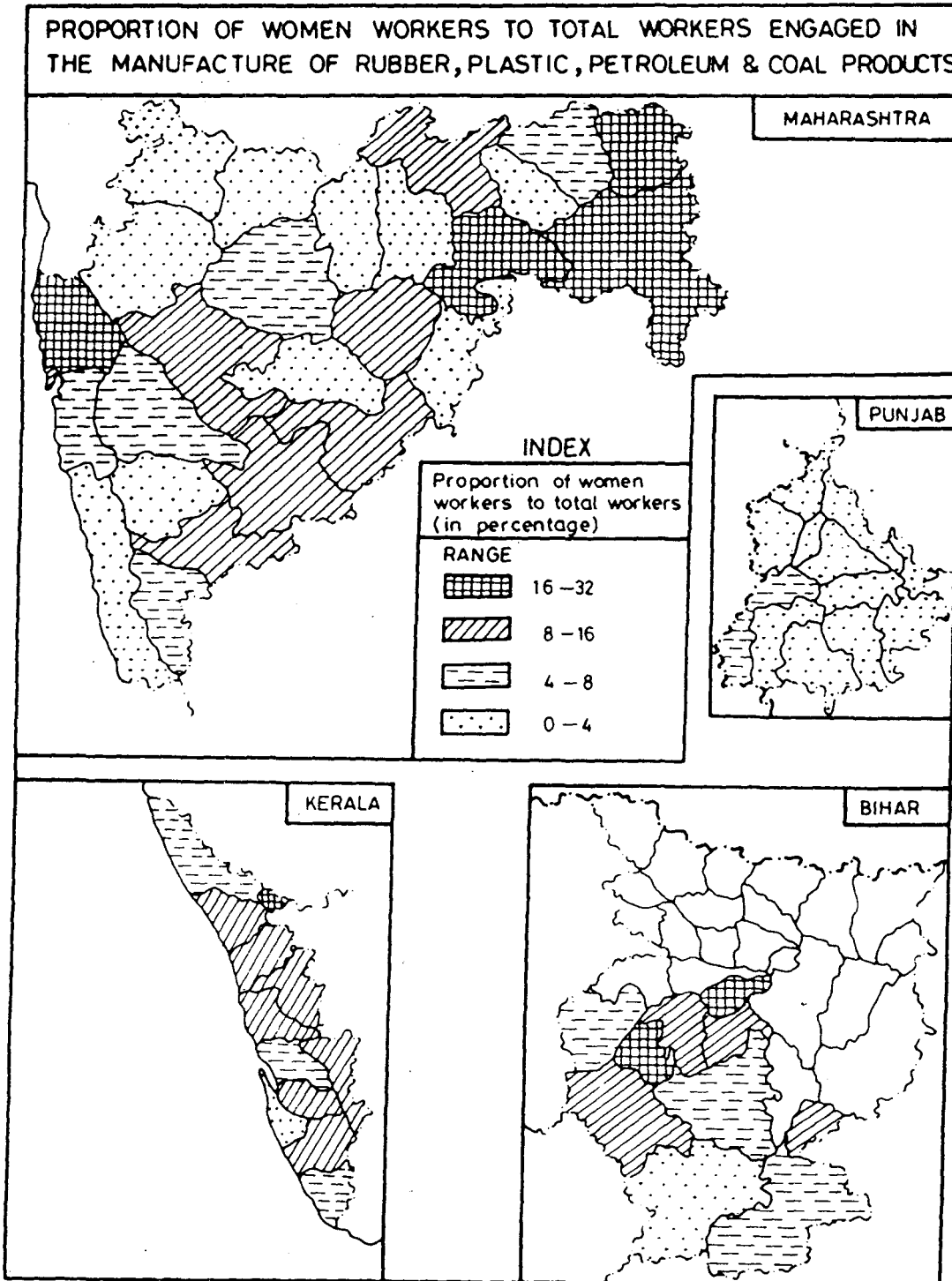


FIG.12

district, in the manufacture of petroleum products (305) 21.35% of the workers employed are females. For the districts of Bihar, classification below the aggregate level is available only for Dhanbad. It is significant for tyre and tube industries (300), production of coal tar in coke ovens and manufacture of coal and tar products and elsewhere classified. While the percentage share of women workers in the first two is nil, in the third it is 11.52%. With the exception of Idukki, all other districts of Kerala have been classified below the aggregate level. The percentage share of women workers in tyre and tube industries is nil in Kottayam, Quilon and Malappuram and in Trichur and Palghat the percentage shares are 3.32% and 4.83% respectively. Manufacture of rubber and plastic footwear is important in Kottayam only and the percentage share of women workers in it is 10.40%.

The percentage share of women workers in the manufacture of rubber products not elsewhere classified are 6.35% in Trichur, 10.91% in Kottayam, 3.58% in Quilon, 15.21% in Malappuram and 8.72% in Palghat. The corresponding percentages in the manufacture of plastic products not elsewhere classified are 38.08%, 18.29%, 21.22% and 9.83% in Trichur, Kottayam, Quilon and Palghat respectively.

None of the district of Punjab are included within this range.

The aggregate percentage share of women workers

between 4% and 8% include 5 districts of Maharashtra, 2 districts of Bihar, 3 of Kerala and 2 of Punjab.

In Maharashtra, tyre and tube industries are important in Pune, Raigarh, Kolhapur and Nagpur and the percentage share in the rest of the districts are nil. Pune is the only district listed for the manufacture of rubber and plastic footwear and its percentage share of women workers is 8.03%. The percentage share of women workers in rubber products not elsewhere classified are 4.01% in Pune, 1.08% in Raigarh, 10.22% in Kolhapur, 5.12% in Aurangabad and 4.42% in Nagpur. The corresponding percentages for manufacture of plastic products not elsewhere classified exceed 10% in the districts of Pune, Raigarh & Kolhapur, the percentage shares in Aurangabad and Nagpur are 9.54% and 6.82% respectively. Raigarh is the only district listed at the disaggregate-level for petroleum refineries and its percentage share of women workers is 3.85%.

In Bihar, the percentage share is nil in the district of Hazaribagh in the tyre and tube industry. In Singhbhum the percentage share is 3.39%. The percentage share in rubber and plastic not elsewhere classified are 7.69% and 4.35% respectively.

In the districts of Kerala, the percentage shares in tyre and tube industries do not exceed 2%. The percentage share in rubber and plastic footwear manufacture are respectively 6.93% and 11.54% in



Trivandrum; nil and 13.91% in Ernakulam and 5.29% and 9.58% in Cannanore. Only Ernakulam is listed for petroleum refinery and manufacture of petroleum products and the percentage shares are 2.93% and 30.11% respectively.

Districts included below 40% also exhibit the same trend with maximum frequency of women workers in manufacture of rubber and plastic products not elsewhere classified.

#### II.7. Percentage share women workers in the manufacture of Chemicals and Chemical Products (31)

0.29% of the total women workers are engaged in the manufacture of chemical and chemical products. The percentage share of women workers vary over a wide range in the chemical industry compared to wood, paper and rubber industry. The variations in the industry are grouped under the following classes :

- (i) High Proportions (above 40%)
- (ii) Moderate Proportion ( 20% - 40% )
- (iii) Low Proportions (10%-20%) and  
Very Low Proportion (0-10%)

- (i) High Proportions (above 40%)

Interestingly the percentage share of women workers at the aggregate level exceed 50% only in the most backward districts of Kerala - Idukki and Wayanad. Inedible oil manufacturing (315) is responsible for

TABLE II <sup>11</sup> ~~12~~ PERCENTAGE SHARE OF WOMEN WORKERS IN THE MANUFACTURE OF CHEMICALS AND CHEMICAL PRODUCTS

Districts	Major Group	M I N O R G R O U P S									
		310	311	312	313	314	315	316	317	318	319
Idukki	55.95	-	-	-	-	-	CR 74.91	-	(360) 45.10	-	-
Waya Nad	53.75	-	-	-	-	-	CR 51.85	-	-	-	-
Quilon	44.12	CR 3.16	CU 2.27	-	(403) 6.30	CU 17.54	-	-	(105) 60.54	-	(6.39) 6.76
Palamau	40.99	-	-	CR 57.89	-	-	-	-	-	-	-
Cannanore	39.66	-	CR 10.00	-	CR 5.48	CU 12.50	-	-	(96) 66.07	-	-
Osmanabad	36.13	-	-	-	-	-	-	-	-	-	-
Palghat	35.08	-	0.00	-	(205) 11.83	CU 2.44	(91) 36.65	-	(109) 47.65	-	-
Trichur	32.33	-	-	-	(134) 17.26	(38) 12.76	-	-	(117) 53.94	-	(207) 23.89
Aleppey	32.05	CR 4.78	(102) 4.26	-	(105) 25.17	CR 3.52	-	-	(101) 71.64	CR 5.26	CR 3.31
Kozhikode	30.39	-	0.00	(272) 7.68	-	(85) 4.45	CR 32.85	-	(101) 53.80	-	-
Kottayam	24.74	CR 1.18	CR 1.72	-	CR 6.71	CR 3.54	-	-	(115) 71.51	-	CR 4.76
Solapur	22.12	-	-	-	0.00	(295) 39.16	-	-	-	-	-
Malappuram	19.93	-	-	CR 4.52	0.00	-	-	(92) 50.76	-	-	-
Trivandrum	18.05	(70) 1.23	CU 2.89	-	(26) 17.02	-	-	-	(57) 77.72	-	CU 8.00
Nagpur	14.84	(52) 11.97	-	-	CU 5.94	CU 32.65	-	-	-	-	CR 4.69
Sitamarhi	14.56	-	-	-	-	-	-	-	-	0.00	CR 4.69
Nalanda	13.58	-	-	-	-	CR 7.50	-	-	-	CU 27.95	-
Sangli	11.92	-	-	-	(37) 6.94	CU 24.48	-	-	-	-	-
G. Bombay	11.75	CU 7.93	CU 4.95	CU 4.20	CU 18.33	CU 8.81	CU 7.71	CU 6.05	CU 8.70	CU 9.66	CU 7.80
Bid	11.11	-	-	-	-	-	-	-	-	-	-
Bhandara	11.11	-	-	-	-	CU 14.77	-	-	-	-	-

Districts	Major Group	110	111	112	113	114	115	116	117	118	119
Murba	10.78	-	-	-	-	-	-	-	-	-	-
Akola	10.12	-	-	-	0.00	CU 7.91	0.00	-	-	(58) 35.34	-
Nawada	10.07	-	-	-	-	-	-	-	-	-	-
Amravati	10.04	-	0.00	-	-	CU 22.17	-	-	-	-	-
Emakulan	9.94	(351) 3.79	(217) 4.30	CR 3.49	(51) 11.45	(30) 2.11	0.00	-	(93) 72.63	(23) 28.24	(116) 5.81
Aurangabad	9.44	-	CR 2.99	-	(83) 9.25	CU 13.29	-	-	-	-	-
Nasik	9.42	CU 10.95	CU 2.09	0.00	CU 6.91	(127) 16.69	-	-	-	-	CU 4.64
Perozapur	9.15	-	-	-	-	-	-	-	-	-	-
Samastipur	8.78	-	-	-	-	-	-	-	-	-	-
Ranchi	8.06	-	-	CR 13.65	CU 4.72	(7) 6.97	-	-	-	-	-
Yavatmal	7.94	-	-	-	-	-	-	-	-	-	-
Dhule	7.28	-	-	-	-	CR 2.96	-	-	-	-	-
Buldana	6.43	-	-	-	-	-	-	-	-	-	-
Satara	6.35	-	-	-	CU 6.85	(118) 7.26	-	-	-	-	-
Singhkhur	5.61	CU 3.31	0.00	(45) 16.10	CR 3.85	(250) 7.49	-	-	-	-	-
Faridkot	5.54	-	-	-	-	(17) 8.87	-	-	-	-	-
Pune	5.53	CU 2.67	CU 1.33	(213) 3.62	(915) 8.91	(346) 23.03	-	CU 3.10	-	(637) 2.76	(124) 7.08
Nanded	5.42	-	-	-	-	-	-	-	-	-	-
Thane	5.40	CU 3.81	(56) 5.63	(208) 2.35	(167) 9.06	(81) 7.54	CU 3.91	(273) 1.80	(53) 8.47	(329) 2.86	(162) 4.40
Chandrapur	5.25	-	-	-	-	(17) 11.86	-	-	-	-	-
Amukhapur	4.84	(93) 4.71	-	-	CU 3.40	CU 4.47	-	0.00	-	-	CU 7.04
Nolhapur	4.51	CU 4.59	CU 5.56	0.00	0.00	CU 13.21	-	-	-	-	-
Jalgaon	4.03	-	CU 13.06	-	CU 24.21	CU 11.39	-	-	-	503 1.51	-
Rajnagar	3.72	-	(862) 3.45	-	CU 7.72	-	-	-	-	-	-
Machubani	3.65	-	-	-	-	-	-	-	-	-	-
Raigarh	3.37	(290) 1.31	CR 3.01	CR 3.83	(249) 537	(1051) 1.59	-	-	-	CU 3.21	0.00
Santal Parganas	3.12	-	-	-	CU 6.13	0.00	-	-	-	-	-
Patna	2.95	-	0.00	CU 7.73	CU 3.31	CU 2.29	-	-	-	-	-
Muzer	2.62	0.00	CR 8.93	-	-	-	-	-	-	-	-
Dharwad	2.53	-	(21) 2.57	CU 4.88	CU 2.79	CR 1.53	-	-	-	-	-
Pune	2.17	-	-	-	-	-	-	-	-	-	-
Gaya	2.03	-	-	-	0.00	CU 5.21	-	-	-	-	-
Amritsar	1.77	CU 3.57	0.00	CU 1.46	CU 5.39	0.00	-	-	-	0.00	-
Sanyur	1.38	-	-	-	-	CU 1.74	-	-	-	-	-
Ludhiana	1.34	-	0.00	0.00	CU 7.53	(6) 1.18	0.00	-	-	-	-
Hazaribagh	1.21	-	-	-	-	0.00	-	-	-	0.00	-
Unauda	1.25	-	CU 0.59	-	-	0.00	-	-	-	-	-
Jalandhar	1.16	-	-	-	-	CU 1.49	-	-	-	-	-
Ukhalpur	1.04	-	-	-	-	CU 3.33	-	-	-	-	-
Hoshwarpur	1.03	-	-	-	-	0.00	0.00	-	-	-	-

- Indicates the total workers are less than 100 in the corresponding districts and therefore too insignificant to be listed.

CU Completely Urban

this where the percentage shares are 74.91% and 51.85% respectively. In Idukki, 45.10% of women workers constitute the match industry (317). Aggregate share exceeds 40% in Quilon and Palaman. In the former the maximum percentage shares are in the metal industry (60.54%) and in the latter in the manufacture of paints, varnishes and lacquer (312).

(ii) Medium Proportion (30%-40%) : Aggregate value between 20% and above 40% includes the districts of Cannanore, Osmanabad, Palghat, Trichur, Alleppey, Kozhikode, Kottayam and Solapur. Industries listed with maximum frequency are those manufacturing drugs and medicines (313) and perfumes, cosmetics, lotions etc. (314) apart from the match manufacturing industry. The highest percentage share of women workers in the drug industry is 25.17% (in Alleppey) followed by 17.26% in Trichur and 11.83% in Palghat. The percentage shares in Kottayam and Cannanore are 6.71% and 5.48% respectively. Apart from the districts of Kerala, Solapur in Maharashtra is listed for drug and medicine manufacturing industry where the percentage share of women workers are nil. In the cosmetics industry the maximum percentage of women workers constitute 39.16% in Solapur followed by 12.76% in Trichur and 12.50% in Cannanore. In the rest of the districts of Palghat, Alleppey, Kozhikode and Kottayam the percentage shares do not exceed 5%.

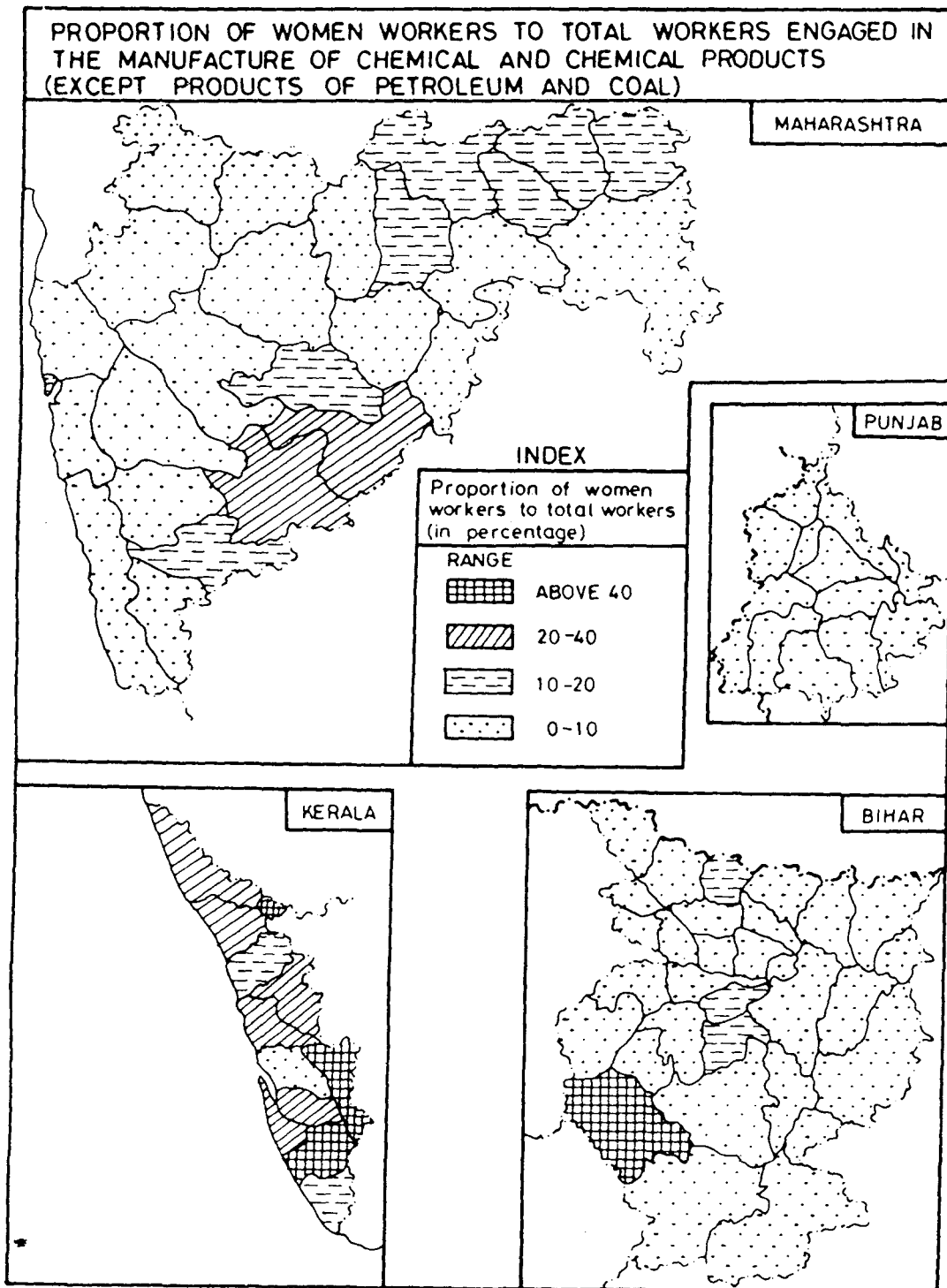


FIG. 13

The manufacture of basic industrial organic and inorganic chemicals and gases (310) have been listed only in the districts of Alleppy and Kottayam and the percentage share of women workers in it is below 5%. Cannanore, Palghat, Alleppey, Kozhikode and Kottayam have been cited for the manufacture of fertilizers and pesticides (311) The highest percentage share is 10% in Cannanore. Paint, Varnish and lacquer manufacturing industry is located in Kozhikode only where 7.68% of the total workers are women. Manufacture of inedible oils is significant in Palghat and Kozhikode only and in both the percentage share of women workers exceed 30%. The industry having the highest percentage of women workers is the match manufacturing industry. The proportion of women workers in this industry exceeds 50% in all the districts except in Palghat where the percentage share is no less than 47%. This industry is not significant in Osmanabad. The manufacture of explosives, ammunition and fireworks (318) listed only for Alleppey has a percentage share of 26% women workers. The manufacture of chemical products not elsewhere classified (319) are significant in Trichur, Alleppey and Kottayam and the percentage share of women workers are 23.89%, 3.31% and 4.76% respectively. Similar trends of concentration of women workers in the drugs, cosmetics and match manufacturing industry are seen in the districts where aggregate

share of women workers is between 10 and 20%. Greater Bombay is significant for all the industries but women workers constitute not more than 18.33% of the total workers.

(ii) Low Proportions (10% - 20%)

Sitamarhi, Nalanda and Nawada are the only districts which have aggregate percentage share of women workers between 20% and 40%. While Nawada has not been classified below the aggregate level, Sitamarshi and Nalanda are classified for the manufacture of explosives, ammunition and fireworks.

All the districts of Punjab have percentage share of women workers below 10%. The exceptions in Bihar are Sitamashi, Nalanda and Nawada. In Bihar, the match manufacturing industry is significant in most of the industries. Cosmetics and perfume manufacturing is significant in Ranchi, Singhbum, Santal Parganas, Patna, Dhanbad, Gaya, Hazaribad and Bhagulpur. The percentage share of women workers do not exceed 8% in these districts. The drug and medicine manufacturing industry also does not have more than 10% of females workers.

In Punjab, percentage share of women workers in the drug and medicine manufacturing industry, are 5.39% in Amritsar and 1.18% in Ludhiana. None of the other districts have been listed for this industry. In the cosmetics industry the corresponding percentage shares

are 8.87% in Faridkot, 1.74% in Sangrur, 1.18% in Ludhiana, 1.49% in Jalandhar, 3.33% in Bhagalpur and nil in the districts of Amritsar, Bhatinda and Hoshiarpur.

## II. 8 Percentage share of women workers in the manufacture of non-metallic mineral products(32)

The percentage share of women workers in the manufacture of non-metallic mineral products is considerably higher than the percentage shares in metal and machine manufacturing industries. 0.79% of the total women workers are engaged in manufacture of non-metallic mineral products.

The maximum percentage share of women workers engaged in the manufacture of non-metallic mineral products is 43.71%. The three major industries providing employment are those making structural clay products (320), earthenware and earthen pottery (322) and stone goods (326). The aggregate percentage share of women workers in the non-metal mineral industry depends on the percentage shares in the three industries cited above. 20% to 50% of the workers are women in clay and stone products industry where the aggregate percentage share of women workers is above 20%.

Glass industry is cited in a few of the districts. The maximum percentage share is 52.37% in Siwan,



Table 11.12 PERCENTAGE SHARE OF WOMEN WORKERS IN THE MANUFACTURE OF NON-METALIC MINERAL PRODUCTS

District	Major Groups	Minor Groups									
		320	321	322	323	324	325	326	327	328	329
TRICHUR	43.71	(115) 45.28		(92) 43.47							CR 3.88
DHULE	39.76	(129) 38.58		(61) 42.96		CR 60.14		(125) 58.12			CR 20.10
BHANDARA	36.79	(77) 42.89		(114) 39.25			CR 30.27				
NAGPUR	36.67	(50) 38.75	CU 15.44	(103) 39.63	(61) 32.55	CU 6.47		(29) 18.89		CU 7.62	(72) 12.92
NASIK	34.89	(71) 27.79		(55) 40.26				(19) 44.84		0.00	CU 5.26
RAIGARH	34.71	(71) 36.01	(512) 7.11	(86) 47.69				(97) 34.27	(223) 20.20		CU 23.71
JALGAON	33.75	(74) 38.39		(74) 38.61		CU 9.68		(37) 23.93	(292) 8.77		
NANDED	33.59	(331) 32.18		(91) 36.99				(180) 29.00			
JIWAN	32.83	(CR) 32.49	CR 52.37	(8) 20.65							
PALGHAT	32.77	(81) 33.46		(51) 42.20		CR 22.88					CR 3.91
AURANGABAD (M)	32.44	(113) 33.83		(154) 33.36				(57) 34.56			
RATNAGIRI	32.34	(CR) 48.14		(260) 26.64		(28) 80.38		(92) 23.38			
TRIVANDRUM	32.30	(133) 20.41		(84) 31.67		(88) 38.22		(71) 51.88			
BID	31.31	(413) 35.97		(103) 34.80				(381) 19.14		(350) 17.59	
PARBHANI	30.36	(72) 17.71		(82) 35.65				(77) 23.88			
YAVATMAL	30.72	(45) 22.40		(98) 41.06		CR 21.96		(499) 21.74			
ERNAKULAM	30.35	(104) 33.83	(70) 6.41	(77) 38.16		(75) 13.95		CR 25.00		(24) 14.02	(53) 6.39
PUNE	30.26	(115) 37.78	(823) 8.04	(119) 42.65	CU 35.65	(134) 13.52		(181) 27.20	CU 36.36	CU 4.91	(85) 24.14
PATNA	29.99	(105) 43.26	(11) 4.99	(125) 19.91		0.00		CU 18.55	CU 17.83		

District	Major Groups	Minor Groups									
		320	321	322	323	324	325	326	327	328	329
THANE	28.85	(26) 37.89	(42) 3.70	(75) 47.37		(14) 5.88		(104) 20.96	CR 32.02	(189) 14.17	(28) 8.54
AMRAWATI	27.59	(216) 46.54		(75) 27.69							
MALAPURAM	27.41	CR 12.34		(123) 42.51		CR 5.78		(146) 23.11			
PURNEA	25.50	(164) 22.88		CR 21.34		CR 13.18					
KATI HAR	25.44	CR 26.84		CR 26.47							
AHMADNAGAR	25.17	(81) 36.06	CR 4.66	(203) 34.99			(252) 14.89		CU 29.45	0.00	
BULDANA	24.73	(87) 22.77		(491) 30.50				CR 15.07			
RANCHI	24.72	(65) 34.97	CR 5.56	(62) 23.62		CU 5.59		(131) 39.96			
RUPNAGAR	24.23	CR 30.39		CR 0.95							
AKOLA	24.17	CR 14.29		(83) 27.72				(100) 25.02			
BHOJPUR	22.88	CR 40.75	(40) 20.29					(81) 32.61			
KOLHAPUR	22.75	(92) 32.80		(90) 25.57		(90) 14.84		(62) 16.01	(43) 13.45	CU 2.81	
CHANDRAPUR	22.67	(82) 22.78	(62) 12.43	(108) 35.42		CR 0.26		CR 25.84			
SATARA	22.63	(117) 34.98	CR 0.74	(209) 20.30				(348) 23.17	CR 43.14	(162) 7.63	
GAYA	22.59	(78) 33.69		(25) 19.11				CR 27.48			
NANADA	21.92	CR 29.77		(60) 22.56							
SOLAPUR	21.52	(54) 12.86		(91) 21.82		CU 20.31		(647) 27.20		CU 4.39	(26) 30.87

District	Major Groups	Minor Groups									
		320	321	322	323	324	325	326	327	328	329
SINGHBHUM	21.47	(73) 29.05	CR 6.57	(109) 19.41	CR 10.00	(189) 10.66		(57) 42.28		CU 8.25	0.00
PASCHIM CHAMPARAN	21.02	CR 31.61		(179) 14.66				CR 36.40			
BHAGALPUR	21.02	CR 31.61		(179) 14.66				CR 36.40			
PATIALA	20.99	CR 26.12		(29) 15.25				CR 4.78			
SANTAL PARGANAS	20.75	CR 8.68	(343) 12.70	(56) 17.15	CR 10.19	CR 14.04		CR 23.64			
PALAMAU	20.22	(130) 31.54		(66) 25.94		CR 37.00		CR 28.79		CU 3.69	
SANGLI	19.80	(74) 43.21	(40) 27.61	CR 22.64		CU 6.49		(174) 8.43	(53) 38.87	CU 1.30	
FEROZEPUR	19.69	(38) 21.97		(132) 11.92							
LUDHIANA	18.54	(23) 19.71		(63) 17.52							
MUNGER	17.06	CR 5.27		(24) 22.10				CR 3.37	CU 6.60		
FARIDKOT	16.99	(34) 18.68		(129) 12.56							
SAVARSA	16.85	0.00		(27) 15.41		CR 32.72					
KOZHIKODE	16.35	(58) 3.73		(102) 33.36		CR 4.98		(38) 48.02			
BHATINDA	16.29	(82) 18.42		(334) 10.31							
AURANGABAD (B)	15.17	(14) 22.14		(103) 44.28				CU 30.69			
HAZARIBAGH	15.02	(14) 19.96	(90) 5.70	(22) 14.48		CR 14.97	CR 15.89	CR 29.62			
AMRITSAR	14.80	CR 20.01		(74) 3.92							
MADHUBANI	14.34	0.00	CR 30.59	CR 12.58							

District	Major Groups	Minor Groups									
		320	321	322	323	324	325	326	327	328	329
GOPALGANJ	14.24	CR 26.48	-	(314) 10.66	-	-	-	-	-	-	-
DHANBAD	14.04	(64) 15.77	0.00	(18) 8.25	-	0.00	-	(42) 21.88	-	-	CR 2.75
SANGRUR	13.36	(139) 20.73	-	(530) 1.69	-	-	-	-	-	-	-
SAMASTIPUR	13.04	CR 17.69	CR 13.91	(99) 12.07	-	CR 11.74	-	-	-	-	-
NALANDA	12.67	-	-	(13) 13.47	-	-	-	-	-	-	-
IDUKKI	11.16	CR 4.45	-	-	-	-	-	-	-	-	-
JALANDHAR	10.85	(44) 13.58	-	(886) 3.28	0.00	-	-	-	-	-	CR 10.50
VAISHALI	10.34	CR 17.76	CR 38.27	CR 7.33	-	-	-	-	-	-	-
DARBHANGA	10.37	CR 7.25	-	CR 9.09	-	CR 42.94	-	-	-	-	-
GIRIDIH	10.21	(134) 5.69	-	(13) 23.01	-	-	(18) 11.49	CU 12.82	-	-	-
ROHTAS	9.74	(35) 36.18	-	(49) 17.72	-	CR 0.58	-	(371) 9.61	-	0.00	0.00
G. BOMBAY	9.40	CU 7.70	CU 7.40	CU 17.28	CU 12.88	CU 11.08	-	CU 18.14	CU 1.60	CU 4.68	CU 7.38
SITAMARHI	9.11	0.00	CR 43.23	CR 4.07	-	-	-	-	-	-	-
GURDASPUR	8.14	(27) 12.09	-	CR 4.72	-	-	-	-	-	-	-
KAPURTHALA	6.48	(207) 9.27	-	CR 2.37	-	-	-	-	-	-	-
BEGU-SARAI	5.34	0.00	-	(121) 6.53	-	-	-	-	-	-	-
1507 HOSHIARPUR	4.60	CR 9.15	-	CR 0.62	-	-	-	-	-	-	-
PURBI CHAMPARANI	1.64	0.00	-	CR 1.92	-	-	-	-	-	-	-

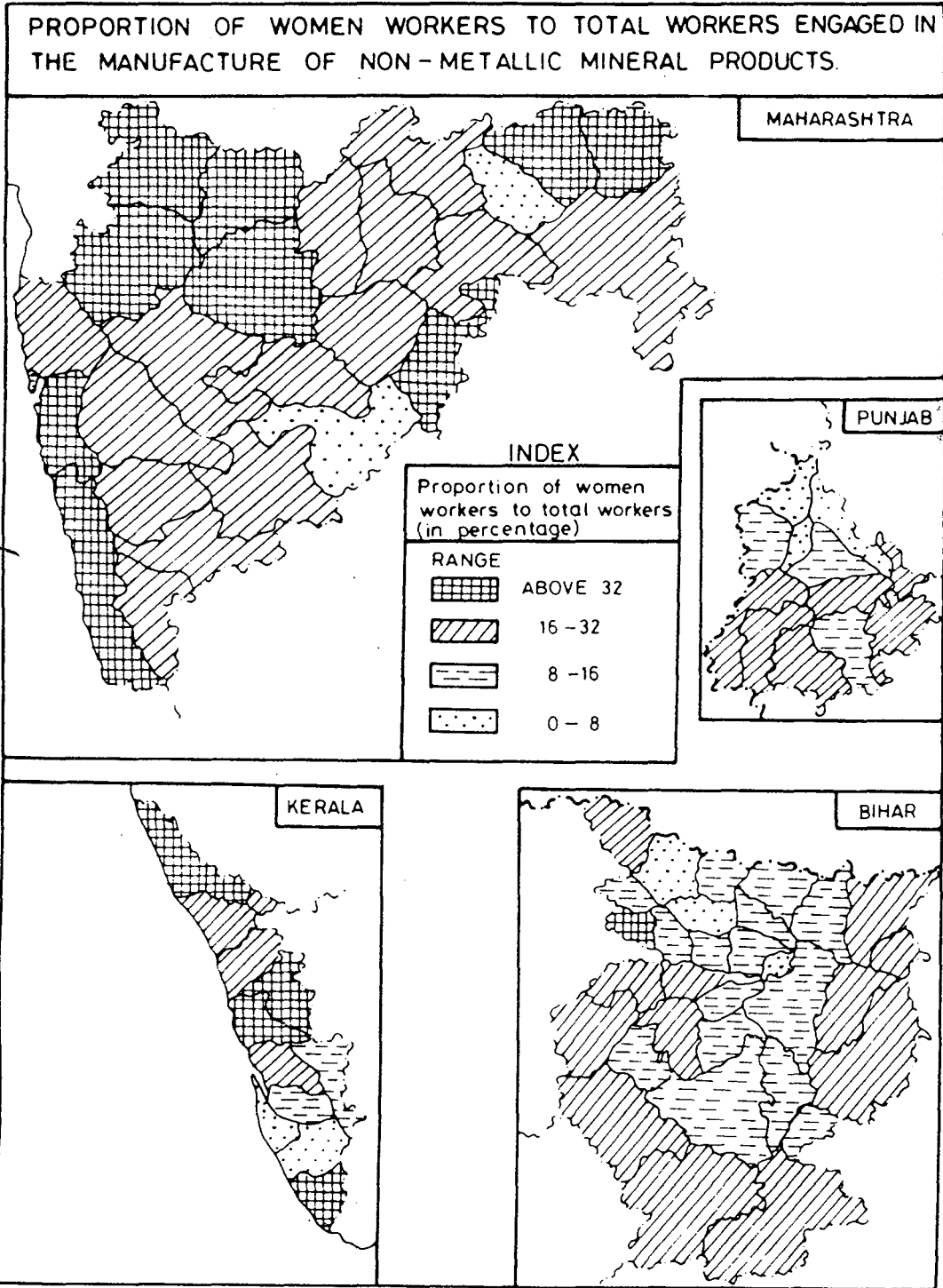


FIG.14

Table II.13 PERCENTAGE SHARE OF WOMEN WORKERS ENGAGED IN THE MANUFACTURE OF BASIC METAL AND ALLOY INDUSTRY

District	Major Groups	Minor Groups					
		330	331	332	333	335	339
Cahndrapur	32.13	CU 3.89	CR 38.64				
Nanded	13.19						
Parbhani	10.87						
Jalgaon	9.89		CR 12.68				
Nagpur	9.52	(19) 1.91	CU 2.29	(14) 28.99			(19) 4.60
Purnea	6.38	0.00					
Trivandrum	5.18						
Pune	5.11	CU 12.25	(99) 2.50	0.00		CU 5.95	(56) 3.95
Palghat	4.07	CR 4.46	0.00			0.00	
Ernakulam	3.21	CU 6.13				CR 2.85	
Santal Parganas	3.28	CR 3.78	CU 2.14				
Greater Bombay	3.05	CU 3.51	CU 2.75	CU 2.82	CU 2.79	CU 4.51	CU 3.78
Trichur	2.92	(258) 3.48					
Satara	2.90	CR 3.23	(401) 2.20				
Aurangabad(M)	2.84	(42) 9.09	CU 0.96				
Singhbhain	2.65	(77) 0.24	(58) 3.33		(157) 5.63	(40) 9.20	
Palamau	2.04	(726) 2.61				0.00	
Thane	2.03	(485) 2.13	(455) 1.98	CR 1.00		CU 1.75	(82) 3.29
Alleppey	2.00	CR 1.38				CR 4.67	
Ranchi	1.99	CR 0.52	(93) 1.72			(70) 4.95	
Kozhikode	1.89	CR 2.17					
Rupnagar	1.65	CU 2.41	0.00				

District	Major Group	Minor Groups					
		330	331	332	333	335	339
Hazaribagh	1.51	CR 1.40	CU 1.46	CR 2.21			
Dhanbad	1.41	(624) 1.48	(168) 0.38				
Solapur	1.33	0.00	CR 0.88				
Raigarh	1.25	CU 1.71	(144) 1.13	0.00		CU 4.81	
Quilon	1.19	CR 2.27				0.00	
Munger	1.15	CU 1.32					
Ludhiana	1.01	CU 1.11	(239) 0.71				
Giridih	0.99	(470) 1.04					
Faridkot	0.92	CR 1.40	0.00				
Patna	0.88		CU 2.37			CU 1.73	
ratnagiri	0.78		CU 2.07				
Bhagalpur	0.77	CU 1.06	0.00				
Gaya	0.77	0.00	0.00				CU 5.61
Jalandhar	0.69		(103) 0.36				0.00
Curdaspur	0.68	(208) 0.67	CU 0.90				
Kolhapur	0.54	CR 0.85	(92) 0.49				
Amritsar	0.52	CR 0.77	0.00				
Sangli	0.51	0.00	0.00				
Sangrur	0.34	CU 0.54	0.00				
Patiala	0.29	(14) 0.25	CR 0.61				

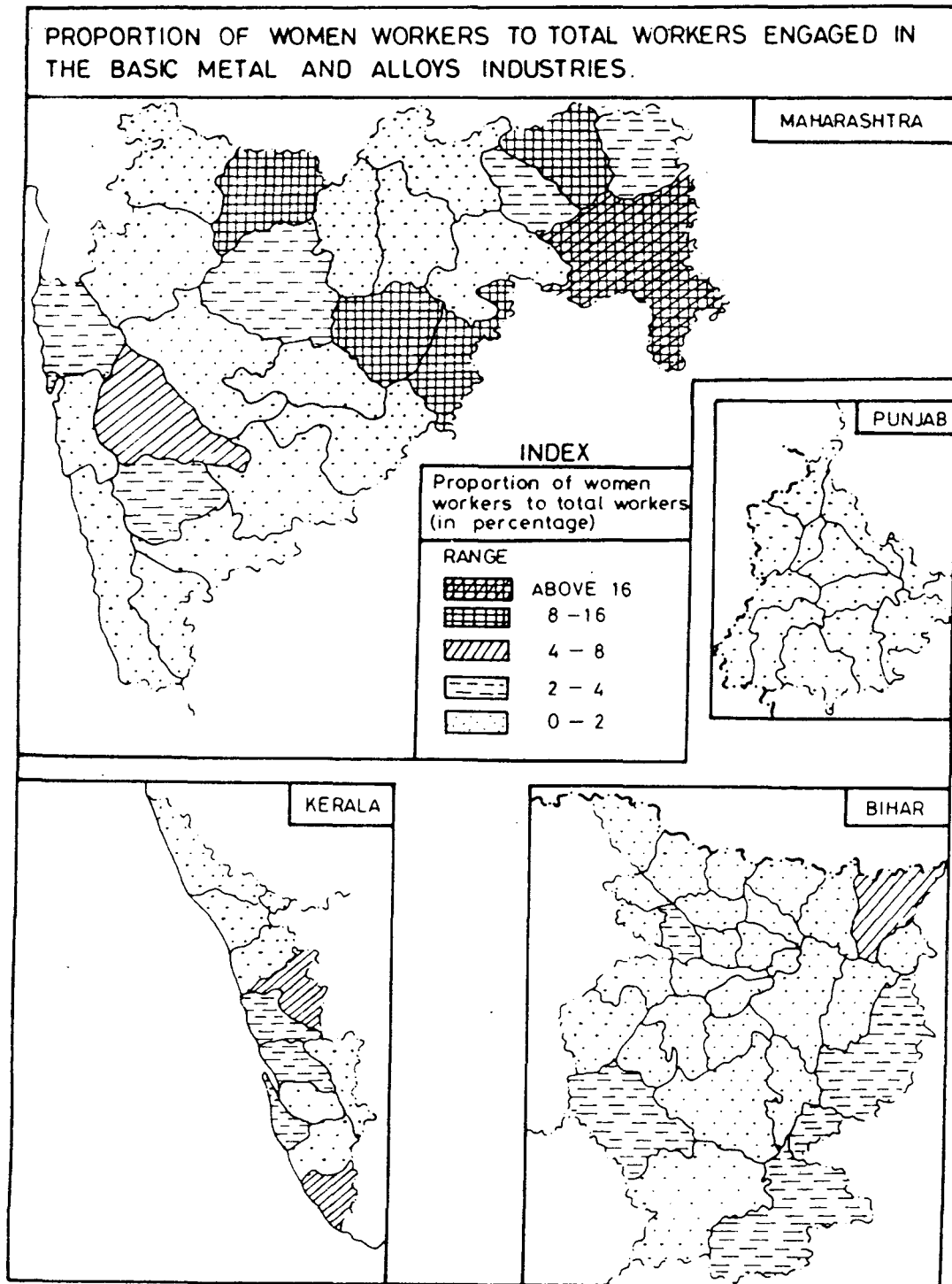


FIG. 15



followed by 30.598% in Madhubani, 27.61% in Sangli, 20.29% in Bhojpur and 15.44% in Nagpur. Manufacture of Chinaware and porcelain ware is listed in the districts of Nagpur, Pune, Singhbhum, Santal Parganas, Jalandhar and Greater Bombay where the percentage share of women workers range from nil to 35.65%. The proportion of women workers in the cement, lime and plaster industry (324) is high in the districts of Dhule, Ratnagiri, Trivandrum, Yavatwal, Solapur, Palamau, Saharsa and Darbhanga where the percentage are above 20% and reach a maximum of 80.22%. Bhandara, Ahmadnagar, Hazaribagh and Giridih are the only districts manufacturing mica products and the percentage share of women workers are 30.27%, 14.89%, 15.89% and 11.49% respectively.

Relatively high proportion of women workers are also engaged in the manufacture of earthen and plaster statues (327).

*For section 11.9 see appendix IV.*

II.10. Women workers in the manufacture of metal products and parts (34) and, machinery, machine tools and parts (35).

0.08% of the total women workers are engaged in the manufacture of metal products and parts. The corresponding percentage share in machine and machine

Table 11.14. PERCENTAGE SHARE OF WOMEN WORKERS ENGAGED IN THE MANUFACTURE OF METAL PRODUCTS AND PARTS

District	Major Groups	Minor Groups						
		340	341	342	343	344	345	349
Parbhani	11.82	-	-	-	-	CR 2.61	-	50 14.18
Nanded	11.81	CU 3.79	-	-	-	CU 3.42		CR 14.13
Jalgaon	11.58	CU 3.41		0.00		CU 4.42	(35) 7.95	27 16.44
Buldana	11.51					CR 4.12		(44) 13.24
Osmanabad	11.27					CR 9.40		(47) 11.30
Wardha	10.65							(310) 12.39
Akola	10.79	0.00				CU 4.27	(11) 14.29	CR 13.03
Ratnagiri	9.18	CR 1.57			CR 3.29	(1986) 26.42	0.00	(41) 7.27
Ranchi	8.59	0.00			(18) 9.40		CR 5.88	CU 9.88
Bid	7.35							(31) 8.19
Aurangabad(M)	7.14	(23) 8.81			0.00	0.00	CU 7.74	
Dhule	6.80	CU 2.29					CU 1.39	(132) 11.65
Nasik	6.67	(48) 1.94	CR 4.85	0.00	CR 1.89	CU 1.89	CU 2.39	(28) 12.49
Satara	6.53			0.00		(66) 12.44	CU 3.47	(114) 7.71
Santal Parganas	6.40	0.00			CR 6.88			
Solapur	6.28	(103) 0.95		0.00			CR 3.05	(153) 8.82
Kozhikode	6.15	0.00	0.00		(22) 9.10		CR 4.13	0.00
Amravati	6.09	(32) 3.88				0.00		
Trichur	5.93	CR 5.99	0.00	0.00	(22) 5.45	CR 1.02	(42) 14.52	CR 2.78
Lumadnagar	5.77	CR 1.22				(24) 8.73		(46) 6.82
Giridih	5.74	CU 0.47					CR 26.94	

District	Major Groups	Minor Groups						
		340	341	342	343	344	345	349
Singhbhum	5.59	(102) 3.98	CU 9.36	0.00	(17) 5.89		(81) 14.02	CU 3.01
Palighat	5.26				CR 4.27	0.00	(40) 11.98	CR 3.57
Bhatinda	5.16	CR 11.46			CU 5.00	0.00		
Yavatmal	5.04							CR 5.70
Raigarh	4.61	(379) 3.01		0.00	CR 3.85	(67) 8.67		(59) 7.12
Nagpur	4.37	CU 4.87	0.00	CU 1.30	CU 8.46	CR 1.23	CU 28.40	53 3.12
Pune	3.29	(80) 1.94	CU 7.24	CU 0.77	CU 4.11	(57) 6.40	(76) 2.69	(54) 3.23
Greater Bombay	3.22	CU 3.04	CU 2.22	CU 1.71	CU 4.14	CU 4.36	CU 3.37	CU 3.10
Thane	3.21	(55) 3.62	CR 1.21	CU 1.81	(167) 3.00	(14) 5.74	(108) 5.11	(15) 2.22
Palamau	3.17				(591) 2.36			
Ernakulam	2.95	(34) 2.07	(100) 2.78	0.00	(57) 2.10	CR 0.67	(10) 12.39	CR 2.09
Bhandara	2.91	CR 7.05					CU 5.94	-
Alleppey	2.57	CR 3.82			(45) 3.23	0.00	CR 1.80	(1068) 1.81
Idukki	2.52				CR 2.37		CR 7.27	
Cannanore	2.49		0.00		CR 3.11	0.00	CR 6.76	0.00
Rupnagar	2.36	0.00			(934) 4.81			
Saharsa	2.17				CR 2.44			
Trivandrum	2.14		(181) 5.43		(77) 1.79	CU 0.76		
Chandrapur	2.10	CR 22.64	0.00			CR 2.87		CR 0.88
Madhubani	2.10	0.00			CR 3.64		0.00	

District	Major Groups	Minor Groups						349
		340	341	342	343	344	345	
Rohtas	2.02	CR 1.92			CR 1.89			
Malapuram	1.99	-	-	-	(176) 2.57	0.00	CR 1.39	
Kottayam	1.94	CU 6.86	0.00		CR 2.23	0.00	CU 1.74	CR 4.76
Hazaribagh	1.53				CR 0.35		CR 11.46	
Hohhapur	1.52	0.00		0.00	0.00	(31) 11.24	CR 1.59	(298) 1.47
Quilon	1.34	0.00			(140) 1.41	0.00	0.00	CR 7.51
Gurdaspur	1.12	CR 1.80			CU 0.51	CU 1.21	(14) 5.73	
Purnea	1.11	0.00	CR 0.51				CU 5.13	
Bhojpur	0.91	CU 2.56			CR 0.41		CR 2.96	
Patiala	0.78	CR 0.87			CR 0.56	CU 2.02		
Samastipur	0.67				0.00			
Patna	0.65	0.00			CU 0.41		0.00	CU 4.00
Muzaffarpur	0.62	0.00			0.00			
Caya	0.55	0.00			CR 0.65			
Amritsar	0.53	0.00			(136) 0.58	CU 0.59		CU 3.31
Jalandhar	0.48	0.00		0.00	(99) 0.72	0.00	0.00	0.00
Nalanda	0.45	0.00			CR 0.60		0.00	
Aurangabad	0.37				CR 0.42		0.00	
Hoshiarpur	0.36	0.00			CR 0.42	0.00	0.00	
Ludhiana	0.20	CR 2.84			0.00	0.00		

tool making is also negligible.(0.03%)

The proportion of women workers to total workers employed in the manufacture of machinery and metal products and parts have been given in Tables II.14 & II.15. at the aggregate level from 0% to 11.82% in the case of metal products (34) and 0% to 17.89% in machinery and machine tools (35). These percentages have been illustrated in Fig 16 & 17 ). In the manufacturing of metal products and parts, the percentage share of women workers exceeds 8% in the districts of Parbhani, Nanded, Jalgaon, Buldana, Osmanabad, Wardha, Akola, Ratnagiri and Ranchi. All the districts are significant for the manufacture of metal products not elsewhere classified, such as forging (349), enamelling, japanning, lacquering, galvanising, plating and polishing of metal products (344) with the exception of Akola and Ranchi which have not been listed for the latter industry. The percentage share of women workers however range only from 4.88% in Ranchi to 17.44% in Jalgaon in case of the former industry and 2.61% to 26.42% in Ratnagiri. A few districts significant for manufacture of fabricated metal products (340) do not have more than 4% of women workers in this industry and in some districts like Akola and Ranchi, the percentage share of women workers is nil. The percentage share of women workers in the manufacture of metal intensils, cutlery

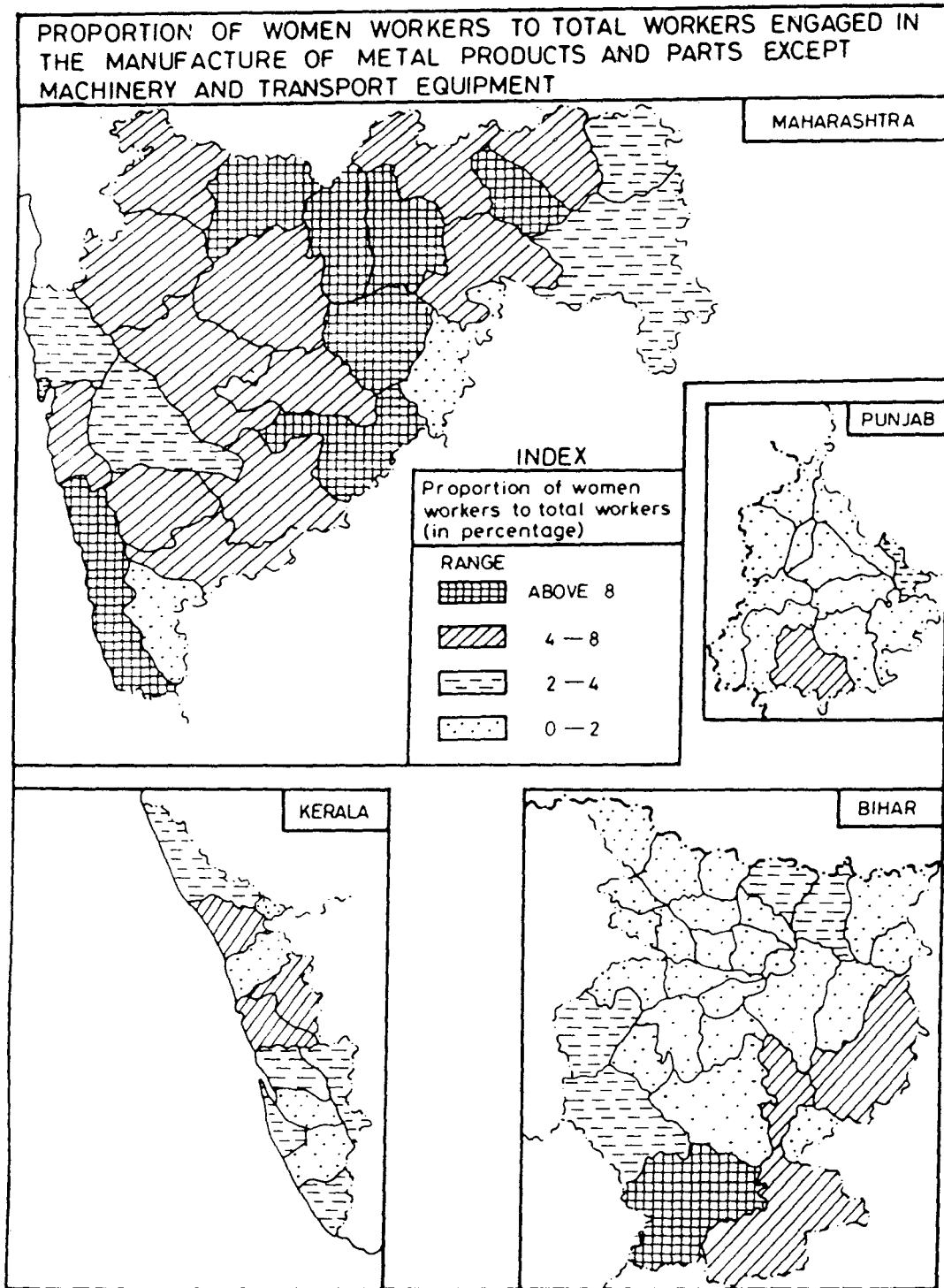


FIG.16

Table II.15 PERCENTAGE SHARE OF WOMEN WORKERS ENGAGED IN THE MANUFACTURE OF MACHINERY AND MACHINE TOOLS

District	Major Groups	Minor Groups										
		350	351	352	353	354	355	356	357	358	359	
Cannanore	17.89							(186) 29.65				
Wardha	11.90	CR 14.42										
Santhal Parganas	8.82											
Buldana	8.23	0.00										
Nanded	6.69										CR 7.75	
Jalgaon	5.10	CR 9.64							0.00			0.00
Kozhikode	5.08							(16) 5.43				(25) 4.00
Ernakulam	4.76	(676) 5.68						CU 6.41	(132) 12.96	(87) 3.13		(86) 7.24
Greater Bombay	4.74	CU 3.31	CU 4.12	CU 3.62	CU 7.53	CU 4.30	CU 4.93	CU 3.50	CU 3.83	CU 6.83	CU 5.20	
Osmanabad	4.36	CR 6.16										
Aurangabad	4.35											
Trivandrum	4.12											
Ahmadnagar	3.02	0.00		CR 2.45		0.00				0.00		(486) 6.58
Singhbhum	3.50	(46) 7.14							(35) 3.62			0.00
Trichur	3.10	CR 9.21	CU 2.88									0.00
Purnea	2.88	CR 5.17										
Pune	2.69	(745) 3.79	(45) 3.20	CU 2.02	0.00	CU 1.35	0.00	(47) 1.89	(130) 3.19	(569) 2.68		
Bid	2.62											0.00
Ranchi	2.62	0.00	(116) 4.95	CR 1.47		CR 4.57		0.00	CU 2.48			CU 2.58
Raigarh	2.59	CU 4.46		CU 7.69		CU 1.20	CU 0.70					(70) 4.11
Saharsa	2.55	CU 3.31										
Dhanbad	2.25	0.00	CR 2.21						CU 3.57			0.00

District	Major Groups	Minor Groups									
		350	351	352	353	354	355	356	357	358	359
Thane	2.13	CU 2.95	{90} 1.04	0.00	CU 0.51	{556} 2.40	{11} 1.18	{29} 4.79	{145} 2.20	CU 4.50	{106} 2.47
Nasik	1.98	{60} 5.94		0.00		CU 1.84		0.00	CU 1.40	0.00	{46} 2.13
Aurangabad	1.90	{158} 4.42		0.00		CR 3.14		CU 5.96	CU 1.66		{51} 1.59
Rupnagar	1.77	{165} 1.67						0.00	{114} 1.96		CU 2.23
Satara	1.49	CU 1.95		{70} 1.87		CR 1.69			95 1.27		0.00
Palghat	1.34	0.00							CU 2.91		
Sangrur	1.32	{54} 1.91						0.00	0.00		CU 2.67
Ratnagiri	1.29					0.00			0.00		CR 4.76
Bhojpur	1.28	0.00									
Dhule	1.27	CR 2.74									
Nagpur	1.06	0.00					0.00	CU 3.88	CR 2.39		CR 0.43
Faridkot	1.03	{68} 1.50							0.00		0.00
Patna	0.85	CR 0.94							0.00		CU 1.59
Sangli	0.81	CR 1.05				0.00		CU 4.24	{44} 0.82		CU 0.49
Kolhapur	0.80	CU 0.77		0.00		CU 0.73		0.00	{113} 1.05		CU 1.06
Kapurthala	0.59	0.00		CU 0.90					CU 0.53		0.00
Patiala	0.58	CU 0.20						{228} 2.82	{71} 0.55		0.00
Ludhiana	0.54	{256} 0.93	CR 0.98	0.00				{87} 1.97	{97} 0.32		CU 0.47
Munger	0.47	CR 0.59									
Jalandhar	0.38	{109} 0.59	0.00		0.00			0.00	{41} 0.28		0.00
Hoshiarpur	0.37	0.00							0.00		0.00
Amritsar	0.20	0.00	0.00					0.00	CU 0.17		CU 0.58
Gurdaspur	0.12	0.00						0.00	CR 0.20		0.00



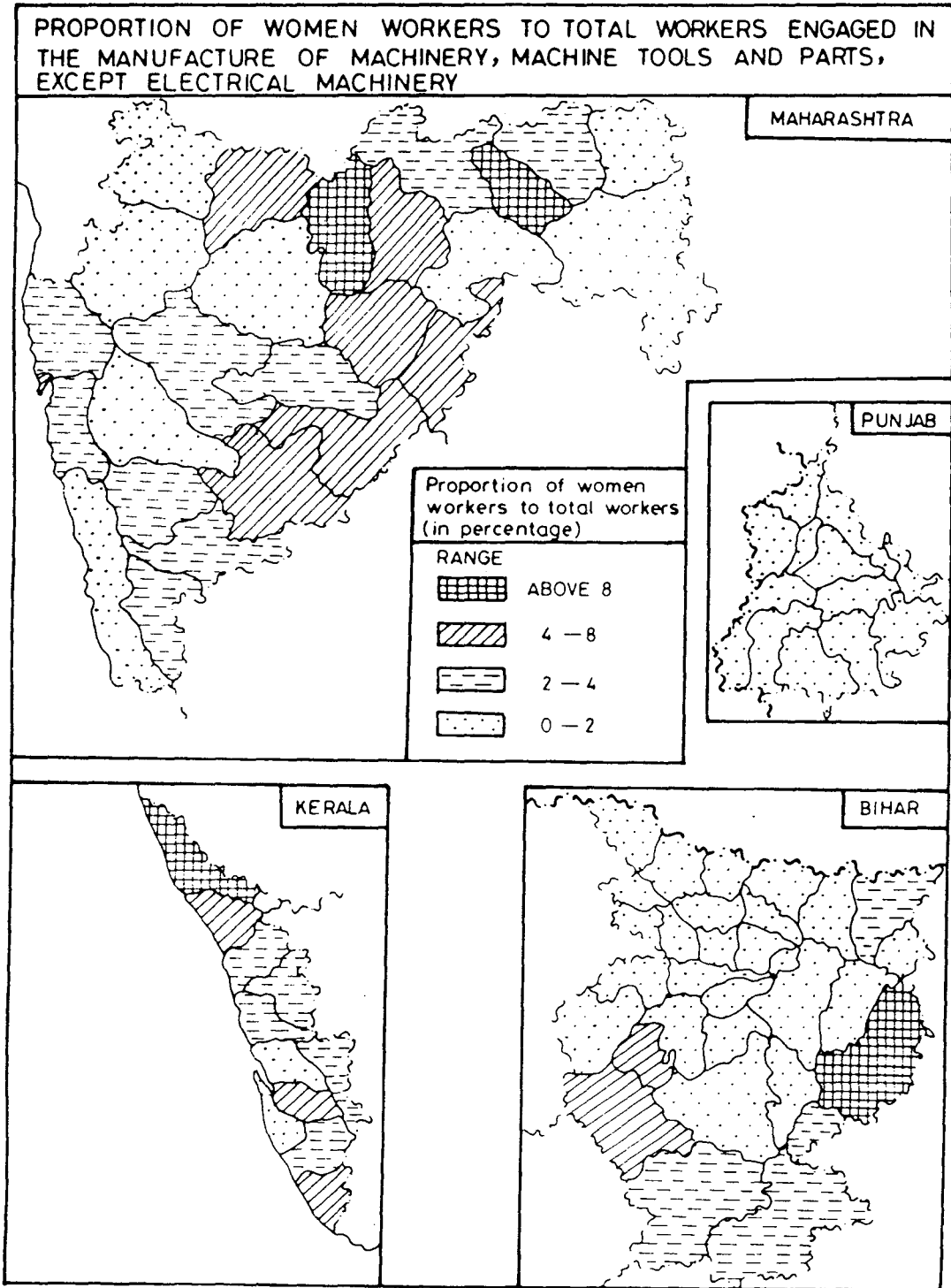


FIG. 17

and kitchenware are 7.95% in Jagalgaon, 14.29% in Akola and 5.88% in Ranchi. The percentage share in Ratnagiri is nil.

Percentage share of women workers engaged in making machinery and machine tools exceed 8% in the districts of Cannanore, Wardha, Santal Panganas and Buldana. The workers in the Santal Panganas had not been classified below the aggregate level. In Cannanore, 29.65% of the workers involved in the manufacture, alteration and repair of general items (356) are women. In Wardha, the percentage share of women workers in the manufacture of agricultural machinery and equipment and parts (350) is 14.42% and the corresponding percentage in Buldana is nil.

In districts with aggregate shares ranging between 4% and 8% in the metal products industry (34), the four industries listed with maximum frequency are those manufacturing fabricated metal products like metal cans, barrels, drum etc (340), manufacture of hand tools and general hardware (343), processing of metal products (344), the manufacture of metal utensils, cutlery and kitchenware (345) and, manufacture of metal products not elsewhere classified (349). In the fabricated metal products industry, the percentage share of women workers is highest in Bhatinda where the proportion is 11.46%. This is followed by Aurangabad

(8.81%) and Trichur (5.99%). The percentage share of women workers in Kozhikode, Santal Panganas and Satara is nil. In hand tool and general hardware manufacture (343) the highest percentage of women workers is 9.107 in Kozhikode followed by 6.88% in Santal Parganas, 5.89% in Singhbhum and 5.45% in Trichur. The share of the women workers in the metal processing (344) is 12.44% in Satara, 8.73% in Ahmednagar, 8.67 in Raigarh and nil in the districts of Solapur, Amravati and Bhatinda. The percentage of women workers in the manufacture of metal products not classified elsewhere does not exceed 9% except in Dhule and Nasik where the proportions are 11.65% and 12.49% respectively. The percentage share of women workers are however maximum in the metal processing industry where the proportions are 26.94% in Giridih, 28.40% in Nagpur, 14.52% in Trichur, 14.02% in Singhbhum, 11.98% in Palghat and 7.74% in Aurangabad (M) and below 5% in the rest of the districts.

In the manufacture of machinery, machine tools and parts, the industries listed most frequently are the manufacture and repair of electrical machinery (359) where the highest percentage share of women workers is 7.75% ( in Nanded); and manufacture and repair of general items (356) where the highest percentage share of women workers is 12.96% in Ernakulam. Greater Bombay with an aggregate percentage share of 4.74% is

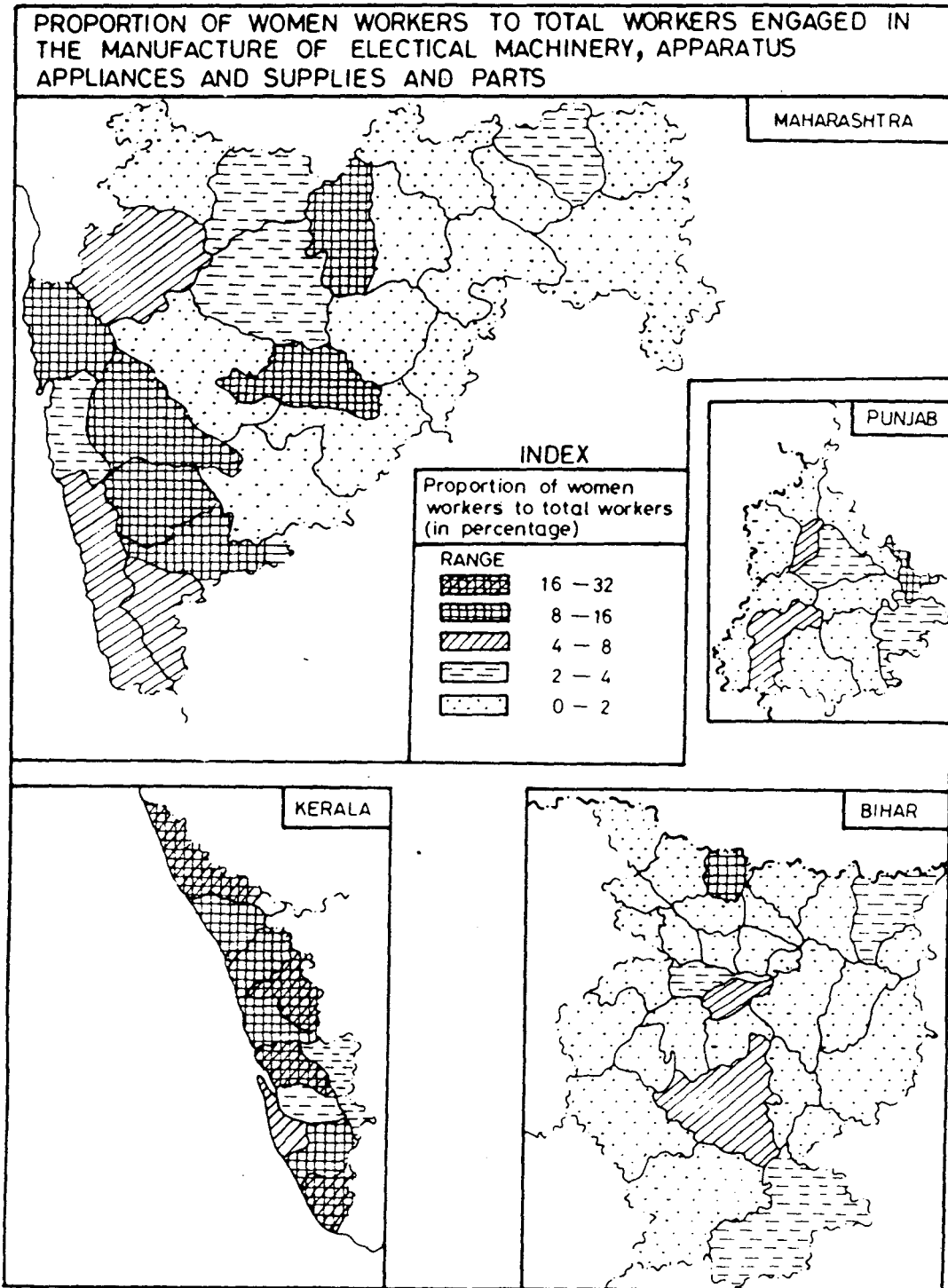


FIG. 18

listed for all the industries but the proportion of women workers does not exceed 8%.

The metal industry exhibits the same trend as in the previous range where the aggregate shares of women workers are 2% to 4%. In this range, Pune and Greater Bombay and Thane have been listed for all the industries and the percentage share of women workers do not exceed 7% in Pune, 5% in Greater Bombay and 6% in Thane. Below 2% at the aggregate level the percentage share of women workers in the most frequently listed industries (mentioned earlier) decreases.

Women workers engaged in the manufacture of machinery and machine tools with an aggregate percentage between 2% and 4% are consistently not engaged in any of these industries. Pune and Thane are listed for all the industries but the percentage share of women workers do not exceed 5%. Below 2%, manufacture of machine tools (357) and non-electrical machinery (359) is listed for almost all the districts but the percentage share of women workers does not exceed 4% in any of the district.

II. 11. Percentage share of women workers in the manufacture of electrical equipment (36) and transport equipment (37).

0.06 % of the total women workers in the country are engaged in the manufacture of electrical equipment.

The corresponding percentage for transport equipment is 0.01%.

(1) Percentage share of women workers :

The percentage of women workers engaged in the manufacture of electrical equipment varies at the aggregate level between 16% and 32% in the districts of Cannanore, Trivandrum, Palghat and Ernakulam. Manufacture of electrical industrial machinery and apparatus (360) is listed for the districts of Palghat and Ernakulam and the percentage shares are 15.75% and 3.93% respectively. Insulated wires and cable manufacture (361) is indicated in Ernakulam and the percentage share of women in it is 5.06% only. Dry and wet batteris (362) are manufactured in Palghat and Ernakulam and the percentage share of women workers in it are respectively nil and 28.49%. Proportion of women workers engaged in the manufacture of electrical appliances and parts (363) are 4.10% in Trivandrum, 7.04% in Palghat and 26.65% in Ernakulam. Manufacture of radio and television sets, tapes etc (364) are indicated in Cannanore and Trivandrum and the percentage share of women workers in it are 30.09% and 27.01% respectively. Manufacture and repair of radiographic X-ray apparatus and parts (365) are listed for Trivandrum and Palghat and the percentage share of women workers in it are 12.3% and 4.85% respectively.



Districts	Major Group	M i n o r G r o u p s								
		360	361	362	363	364	365	366	367	369
Hazaribagh	7.14	--	--	--	--	--	--	--	--	--
Kapurthala	6.87	(46) 12.10	--	--	(377) 0.60	0.00	--	--	--	--
Faridkot	5.61	--	--	--	--	--	--	--	--	--
Nalanda	5.56	--	--	--	--	--	--	--	--	--
Alleppey	4.83	CR 0.13	0.00	--	(370) 6.16	--	--	--	--	--
Jalgaon	3.38	0.00	--	--	--	--	--	--	--	0.00
Nagpur	3.34	0.00	CU 3.60	--	0.00	--	--	--	--	0.00
Raigarh	3.25	0.00	0.00	--	--	--	--	--	--	0.00
Kottayam	3.22	--	--	--	--	--	--	--	--	--
Aurangabad (M)	2.75	0.00	CU 2.47	--	(9) 12.96	--	--	--	--	0.00
Jalandhar	2.55	CU 2.22	--	--	(44) 2.53	CU 2.07	--	--	--	--
Patiala	2.36	--	(162) 2.38	--	--	--	--	--	--	--
Singhbhum	2.37	CU 1.71	(92) 2.00	--	0.00	--	--	--	--	--
Patna	2.29	--	--	--	CU 2.49	--	--	--	--	--
Ranchi	1.59	(249) 2.74	CR 0.83	--	(186) 0.44	--	--	--	--	--
Ahmednagar	1.15	--	--	--	CR 5.22	--	--	--	--	--
Amritsar	1.11	--	--	--	CR 0.58	CU 1.88	--	--	--	0.00
Dhanbad	0.74	0.00	--	--	--	--	--	--	--	--
Ludhiana	0.58	--	--	--	0.00	CU 1.74	--	--	--	--

CU - Completely Urban, CR - Completely Rural

Figures in bracket indicate Urban-rural ratio of female workers (Urban female workers per 100 rural female workers)



In Cannanore and Ernakulam, the percentage share of women workers in the manufacture of electric computers, control instruments etc (366) are 26.50% and 22.11% respectively. The proportion of women workers in the manufacture of electrical machinery not elsewhere classified (369) is 32.53% in Palghat and 23.49% in Ernakulam.

None of the districts engaged in the manufacture of transport equipment have aggregate percentage shares between 16% and 32.

Of the districts with aggregate percentage shares ranging from 8% to 16% in the electrical goods manufacture Pune, Greater Bombay, and Thane are indicated for almost all the industries at the disaggregate level. In Pune, the maximum percentage share of women workers is in the manufacture of radio and television sets (364) followed by 13.35% in the manufacture of electrical appliances (363). In Greater Bombay the corresponding percentages are 15.02% in the manufacture and repair of radiographic X-ray apparatus(365). In Thane the maximum percentage share is in the manufacture of radio and television sets.

Only two districts, Osmanabad and Chandrapur are engaged in the manufacture of transport equipment have percentage shares of women workers exceeding 8%. The percentage shares in these districts are 11.11% and

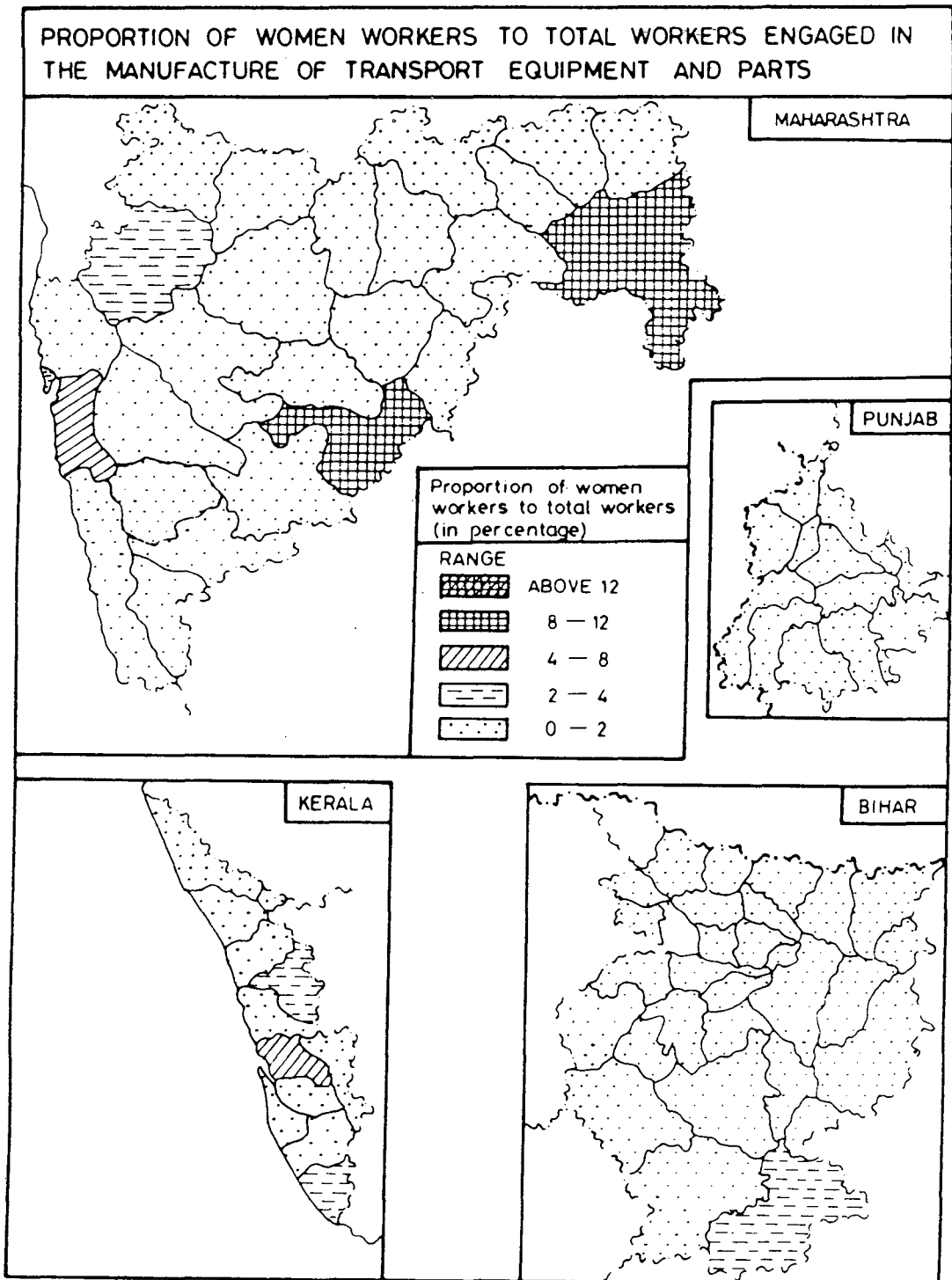


FIG. 19

10.74% respectively. At the disaggregate level, only the manufacture of rail road equipment (373) has been indicated in the districts of Chandrapur and the percentage share of women workers in it is 13%.

In the electrical industry, districts where aggregate percentage of women workers range from 4% to 8%, no definite trend is revealed. The percentage share of women workers in the manufacture of electrical industrial machinery are 5.08% in Nasik, 12.10% in Kapurtala and 8.13% in Alleppey. Women have a percentage share of 3.31% in the manufacture of insulated wires and cables only. This is true of the manufacture of radio and television sets also where the percentage share is 35.8%. Manufacture of electrical apparatus and appliances are indicated in the districts of Nasik, Kapurthala and Alleppey and their percentages are 7.35%, 0.60% and 6.16% respectively.

Raigarh and Ernakulam are only the two districts where the percentage share of women workers in the transport industry ( in the aggregate level) falls within 4% and 8%. Ship-building and repairing industry in Raigarh and Ernakulam constitute 3.01% and 21% women workers respectively. The percentage share of women workers in manufacture of motor vehicles and parts (374) are 1.38% and 3.25% respectively.

II.12. Percentage share of women workers in 'other manufacturing industries and repair'(38) and 'repair' (39)

0.14 % of the total women workers are engaged in 'other manufacturing' industries. This percentage in 'repair' is 0.37%. In 'other manufacturing industries'(38) with the exception of Alleppey, all the districts which have aggregate share of women workers above 0.00% are listed for the manufacture of jewellery and related articles (383). However, the percentage share of women workers in this industry does not exceed 9% in any district. Majority of the districts have also been listed for the manufacture of miscellaneous products (389) in which the percentage share of women workers exceeds 50% in the districts of Munger, Santal Panganas and Nalanda; in the rest of the districts, with a few exceptions.

At the disaggregate level, majority of the districts are listed for all industries. Only in 41 out of 81 districts listed for repair of footwear, women workers have a significant percentage share. The highest percentage share which is 15.63% is in Cannanore. With the exception of 17 districts, all the workers in electrical shops are men. The maximum percentage in the 17 districts is 7.72% ( in Satara) followed by 2.71% in Muzaffarpur. This trend continues in all other activities except in the case of

Table II.17. PERCENTAGE SHARE OF WOMEN WORKERS ENGAGED IN THE MANUFACTURE OF TRANSPORT EQUIPMENTS AND PARTS

Districts	Major Groups	M i n o r G r o u p s									
		370	371	372	373	374	375	376	377	378	379
Osmanabad	11.11	--	--	--	--	--	--	--	--	--	--
Chandrapur	10.74	--	--	--	CU 13.00	--	--	--	--	--	--
Raigarh	7.70	CU 3.01	--	--	0.00	CU 1.36	--	--	--	--	CU 16.99
Ernakulam	5.11	(312) 5.21	--	--	--	CU 3.25	--	--	--	--	--
Palaghat	2.89	--	--	--	--	--	--	--	--	--	--
Trivandrum	2.64	--	--	--	--	0.00	--	--	--	--	--
Greater Bombay	2.31	CU 1.40	CU 6.14	CU 2.15	CU 0.70	CU 2.90	CU 3.45	CU 3.49	CU 4.27	--	CU 4.63
Singhbhum	2.29	--	CU 2.52	0.00	--	(59) 2.15	CU 3.14	--	--	--	--
Nasik	2.20	--	--	0.00	CR 0.50	(34) 1.73	CU 3.16	--	(515) 2.90	--	CU 3.76
Aurangabad (M)	1.98	--	--	--	--	CU 4.67	CU 1.20	--	--	--	0.00
Sangli	1.75	--	--	--	--	--	--	--	--	--	--
Cannanore	1.74	0.00	--	--	--	--	--	--	--	--	--
Thane	1.63	CU 1.16	CU 1.66	CU 0.35	CU 0.46	(236) 2.20	CU 3.23	(69) 2.22	--	--	CU 2.00
Kottayam	1.49	0.00	--	--	--	--	--	--	--	--	0.00
Rupnagar	1.34	--	--	--	--	0.00	--	CU 5.0	--	--	--
Dhule	1.06	--	--	--	0.00	CU 2.19	--	--	--	--	--

Districts	Major Group	M i n o r G r o u p s									
		370	371	372	373	374	375	376	377	378	379
Pune	1.04	0.00	CU 1.42	--	--	(205) 1.24	CU 0.65	0.00	--	--	CU 0.99
Ahmadnagar	0.98	--	--	--	--	CU 1.73	CU 0.90	--	--	--	--
Alleppey	0.84	0.00	--	--	--	CR 4.67	0.00	--	--	--	--
Jalgaon	0.69	--	--	CU 0.47	CU 0.71	--	--	--	--	--	--
Ludhiana	0.63	--	--	--	--	CU 0.50	0.00 (52) 0.70	0.00	--	--	--
Patiala	0.67	--	--	--	--	CU 0.60	0.00 (55) 0.80	--	--	--	--
Amritsar	0.57	--	--	--	--	0.00	CU 5.00	0.00	--	--	--
Santal Parganes	0.34	--	(201) 0.04	0.00	--	--	--	--	--	--	--
Munger	0.29	--	CR 0.09	CU 0.50	--	--	--	--	--	--	--
Jalandhar	0.21	--	--	--	0.00	0.00	0.00	CU	--	--	--

CU - Completely Urban

CR - Completely Rural

Figures in bracket indicate Urban-rural ratio of female workers (Urban female workers per 100 rural female workers)  
 --: indicates that the total workers in the category is less than 100 and therefore not significant enough to be listed. (according to Census, 1981.)

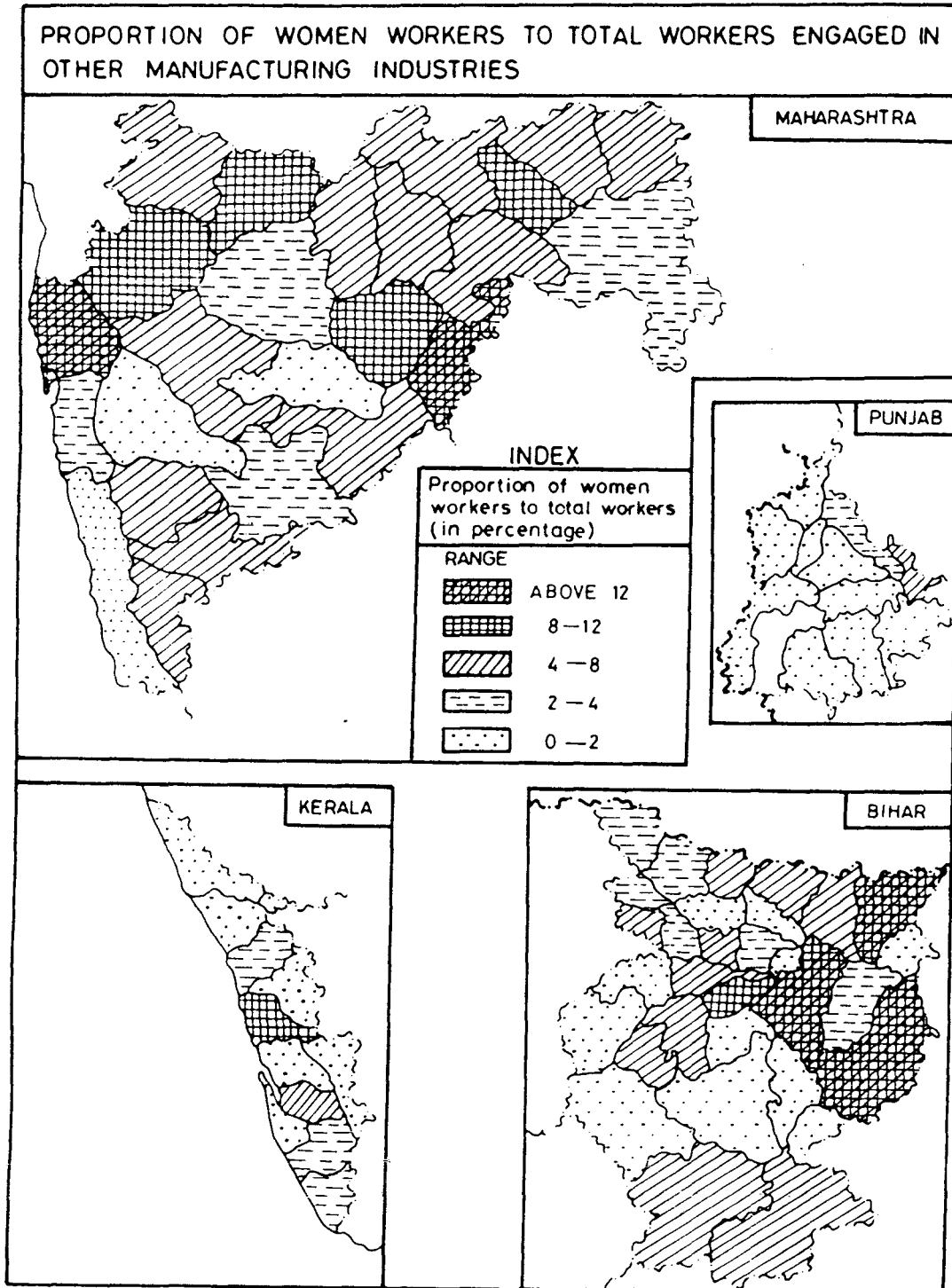


FIG. 20

Table II.18. Percentage share of women workers engaged in 'other manufacturing industries'

Districts	Major Group	M i n o r G r o u p s								
		380	381	382	383	384	385	386	387	389
Munger	27.30	--	--	--	(47) 0.92	--	--	--	--	(30) 52.50
Santal Parganas	17.90	--	--	--	CR 0.90	--	0.00	(3096) 5.66	--	(23) 66.23
Thane	16.29	--	(143) 14.13	(86) 34.55	(22) 4.16	--	--	--	(135) 19.02	(27) 24.73
Nanded	12.60	--	--	--	CU 0.56	--	--	--	--	(13) 44.64
Nalanda	11.51	--	--	--	0.00	--	--	--	--	(113) 75.13
Parbhani	10.64	--	--	--	CU 0.97	--	--	0.00	--	CU 24.37
Nasik	9.96	--	--	--	(36) 0.10	--	--	--	--	(16) 18.54
Wardha	9.38	--	--	--	0.00	--	--	--	--	(18) 22.47
Jalgaon	9.36	--	--	--	CU 0.94	--	--	--	--	(11) 14.57
Thrichur	8.94	--	--	--	(56) 0.84	--	--	--	--	(137) 10.22
Greater Bombay	8.68	CU 12.47	CU 7.57	CU 20.30	CU 2.35	CU 1.28	CU 2.99	CU 2.87	CU 24.70	CU 10.22
Aarungabad (B)	7.77	--	--	--	CR 1.27	--	--	--	--	--
Baya	7.76	--	--	--	0.00	--	--	--	--	(76) 20.16
Buldana	7.65	--	--	--	0.00	--	--	--	--	(96) 20.29
Bhandara	7.59	--	--	--	CU 1.14	--	--	--	--	(30) 17.28
Ernakulam	7.46	--	--	CU 18.44	(44) 1.81	--	--	--	--	(138) 20.38
Aaravati	7.27	--	--	--	CU 0.76	--	CR 40.98	0.00	--	(284) 6.1
Dhule	6.85	--	--	--	CU 1.89	--	--	--	--	(26) 17.01



Districts	Major Group	M i n o r G r o u p s								
		380	381	382	383	384	385	386	387	389
Singhbhum	6.83	--	--	--	CU 0.62	--	--	CR 27.01	--	(16) 7.82
Akola	6.75	--	--	--	0.00	--	--	--	--	(231) 14.29
Yavatmal	6.29	--	--	--	CR 2.17	--	--	--	--	(10) 15.38
Madhubani	5.71	--	--	--	CR 2.27	--	--	--	--	CR 16.58
Vaishali	5.22	--	--	--	0.00	--	--	--	--	CR 12.33
Osmanabad	5.14	--	--	--	(181) 3.13	--	--	--	--	(49) 8.35
Kolhapur	4.88	--	--	--	(33) 4.10	--	--	(89) 12.34	--	(102) 5.30
Satara	4.76	--	--	--	CR 1.77	--	--	CU 4.46	--	(50) 8.60
Sangli	4.73	--	--	--	(122) 2.05	--	--	0.00	--	(97) 9.91
Bhojpur	4.45	--	--	--	CR 0.40	--	--	--	--	(267) 21.34
Patna	4.43	--	--	--	0.00	--	--	CR 3.31	--	(16) 11.15
Nagpur	4.21	--	CU 0.85	(44) 1.43	--	--	CR 25.62	CU 3.23	--	(252) 2.13
Purnea	4.15	--	--	0.00	0.00	--	--	--	--	(30) 14.11
Siwan	4.12	--	--	0.00	0.00	--	--	CR 22.00	--	--
Sitamarhi	4.07	--	--	--	0.00	--	--	--	--	(582) 13.33
Bagalpur	3.92	--	CR 3.10	--	(31) 1.08	--	--	--	--	(130) 24.35
Aurangabad (M)	3.88	--	--	--	(67) 1.30	--	--	--	--	(45) 5.90
Ahmednagar	3.61	--	--	--	CU 0.62	--	--	--	CU 6.00	(174) 6.71

Districts	Major Group	M i n o r   G r o u p s								
		380	381	382	383	384	385	386	387	389
Pu. Champaran	3.44	--	--	--	0.00	--	--	--	--	CR 2.60
Quilon	3.42	CU 5.58	CR 37.74	--	(165) 0.43	--	--	--	--	CR 2.60
Trivandrum	3.17	--	--	--	(95) 0.90	--	--	--	--	(103) 7.14
Solapur	3.10	--	--	--	CR 0.34	--	--	0.00	--	(144) 9.23
Malappuram	2.90	--	--	--	(480) 3.03	--	--	--	--	--
Hosiarpur	2.86	--	--	--	0.00	--	--	0.00	--	(9) 7.72
Chandrapur	2.77	--	--	--	0.00	--	--	--	--	7.71
Saran	2.65	--	--	--	CR 0.75	--	--	--	--	(390) 15.85
Samastipur	2.58	--	--	--	0.00	--	--	--	--	CR 6.63
Bopalganj	2.37	--	--	--	0.00	--	--	0.00	--	--
Pa. Champaran	2.27	--	--	--	0.00	--	--	--	--	(194) 9.07
Ludhiana	1.95	--	--	--	0.00	--	--	--	--	CU 1.31
Begusarai	1.80	--	--	--	0.00	--	--	--	--	(256) 490
Rohtas	1.78	--	--	--	0.00	--	--	--	--	CR 7.00
Musafarpur	1.61	--	--	--	0.00	--	--	--	--	CR 4.05
Palghat	1.54	--	--	--	0.00	--	--	--	--	(229) 15.42
Nawada	1.51	--	--	--	0.00	--	--	--	--	--
Kapurthala	1.37	--	--	--	0.00	--	--	--	--	0.00
Katihar	1.30	--	--	--	0.00	--	--	--	--	CR 5.49
Ratnagiri	1.14	--	--	--	0.00	--	--	--	--	(354) 2.78

Districts	Major group	M i n o r G r o u p s								
		380	381	382	383	384	385	386	387	389
Iddukki	0.94	--	--	--	0.00	--	--	--	--	--
Jalandhar	0.84	0.00	--	--	CR 0.40	--	(36) 0.44	--	--	CU 1.06
Kozikode	0.79	--	--	--	CR 0.16	--	--	--	--	(230) 2.91
Bid	0.75	--	--	--	0.00	--	--	--	--	CU 2.33
Alleppey	0.70	--	--	CR 0.19	--	--	--	--	--	(105) 2.58
Dhanbad	0.61	--	--	--	0.00	--	--	--	--	CR 0.58
Bathinda	0.56	--	--	--	CR 0.73	--	--	--	--	0.00
Amritsar	0.50	0.00	--	--	CU 0.65	--	--	--	--	0.00
Patiala	0.50	--	--	--	0.00	--	--	--	--	1.00
Hazaibagh	0.41	--	--	--	0.00	--	--	--	--	CU 2.06
Pune	0.12	CU 9.95	CU 25.53	--	(29) 1.17	--	--	0.00 (296)	(145)	(145) 4.83

CU - Completely Urban, CR - Completely Rural

Figures in bracket indicate Urban-rural ratio of female workers (Urban female workers per 100 rural female workers  
 --; indicates that the total workers in the category is less than 100 and therefore not significant enough to be  
 listed (according to Census, 1981).

TABLE : II.19 PERCENTAGE SHARE OF WOMEN WORKERS ENGAGED IN 'REPAIR'

District	Major Groups	Minor Groups					390
		390	391	392	393	394	
RAIGARH	20.06				CR 7.61		(132) 29.10
CHANDRAPUR	17.43	(64) 14.52		CU 0.81		CR 0.67	(175) 28.55
AHMADNAGAR	16.04	(83) 3.55	CU 3.13	CU 0.33		(122) 0.50	(45) 26.07
THANE	15.13	CU 3.05	CU 3.69	(47) 1.17	(55) 4.53	CU 0.92	(43) 21.23
BHANDARA	14.36	CR 3.97		CR 0.83		CR 0.43	(68) 22.40
DARBHANGA	13.92			CR 2.09			(42) 27.23
DHULE	13.27	(70) 3.47		CU 0.67			(47) 22.44
BID	13.23	CR 1.14					(24) 25.81
NAWADA	12.61	CU 2.96					(27) 15.53
RATHAGIRI	11.91		CR 1.88				48 19.54
WARDHA	11.49		CU 2.45		CU 2.96	CU 0.78	(56) 21.61
SATARA	11.13	(488) 1.91	(244) 7.72	CU 0.85		CU 0.88	(50) 17.32
MADHUBANI	10.68	CR 3.85					(409) 17.77
NASIK	10.63	(230) 5.95		CU 0.35		(105) 1.11	(96) 20.77
KOLHAPUR	10.41	(80) 6.17	CU 1.50	CU 0.25	CU 0.83		(62) 21.59
PUNE	9.89	(314) 1.09	(147) 3.12	(110) 0.77		CU 0.56	(87) 18.06
SOLAPUR	9.86	CR 1.23		(36) 0.56	CU 1.41	37 0.52	(68) 18.79
NAGPUR	9.45	(50) 7.35		CU 0.33		CU 0.57	(105) 18.37
AURANGABADH (M)	9.17	(138) 4.56		CR 0.34			(25) 18.99
JALGAON	8.84	(72) 8.73		CU 0.40	CU 1.75	CU 0.40	(51) 13.67

District	Major Groups	Minor Groups					399
		390	391	392	393	394	
SANGLI	8.56			CU 0.89			(214) 3.77
GAYA	7.98						(74) 12.46
OSMANABAD	7.32	(62) 1.24		CR 0.34			(42) 17.05
SARAN	7.21					CR 0.60	(CR) 23.64
AKOLA	6.96	(145) 2.87		CU 0.52		(25) 0.54	
NANDED	6.54						(30) 15.21
BULDANA	6.40	(68) 3.01					(227) 14.44
AURANGABAD (B)	6.35						(106) 9.57
BHAGALPUR	6.07					CR 0.96	(118) 8.83
AMRAVATI	5.82	(92) 4.33				CU 0.44	(47) 12.16
GOPALGANJ	5.78						CR 9.70
YAVATMAL	5.51	(179) 3.23	CU 1.50	CU 1.48			(74) 11.04
VAISHALI	5.31						CR 10.50
RANCHI	4.84	CU 1.21		CU 0.24	CU 6.04	CU 0.75	(25) 13.94
CANNANORE	4.63	CR 15.63	CU 2.48		(89) 2.96		(81) 18.25
SANTAL PARGANAS	4.61						(24) 9.68
SAHARSA	4.53	CU 1.86					CR 9.50
G. BOMBAY	4.33	CU 2.91	CU 1.18	CU 0.82	CU 2.13	CU 1.87	CU 7.71
PALAMAU	4.29						CR 8.61

District	Major Groups	Minor Groups					
		390	391	392	393	394	399
SIWAW	4.28						CR 9.41
TRIVANDRUM	4.26		CU 1.61	CU 0.13			(13) 16.28
HOSHIARPUR	4.25				CR 1.11		CR 11.06
ROHTAS	4.15				CR 2.45		(12) 7.38
ALEPPEY	3.85				CR 1.72		(27) 10.52
BATINDA				CU 0.71			(60) 9.49
PARBHANI	3.64	(404) 2.98					(91) 7.67
GIRI DIHI	3.65						(57) 7.87
SINGBHUM	3.54				CU 1.27		(23) 12.04
NALANDA	3.42						(601) 15.98
BEGUSARAI	3.40	CR 0.65					CR 8.09
PALGHAT	3.30	CR 5.53	CU 2.21	CR 0.22			(54) 10.42
SANGRUR	3.24			CU 0.57		CR 0.51	(90) 6.55
KOTTAYAM	3.23	CR 2.52			CR 1.38		(48) 13.88
IDUKKI	3.14						CR 11.00
BHOJPUR	3.07					CR 0.81	CR 12.06
MUZAFFARPUR	3.06		CU 2.71				(232) 14.01
PASCHIM CHAMPARAN	3.01						CR 13.97
QUILON	2.92						(36) 18.82
HAZARIBAGH	2.88	CR 0.51		CU 0.30		CR 1.33	(21) 7.85

District	Major Groups	Minor Groups					
		390	391	392	393	394	
AMRITSAR	2.80	CR 0.30	CU 0.24	75 0.57		CU 0.84	(180) 5.93
PURNEA	2.78			56 0.49			(29) 12.31
KAPURTALA	2.58		CU 0.88	CU 0.87	CU 3.08		(43) 5.79
RUPNAGAR	2.50	CU 1.82		CR 0.57	CU 2.53	CU 1.36	(71) 4.48
MALAPPURAM	2.45			(CR) 0.24		CR 2.31	(125) 9.35
ERNAKULAM	2.01			(62) 0.22	CU 1.05		(59) 7.43
SAMASTIPUR	1.95					CR 0.67	CR 3.47
KATIRAR	1.94						CR 9.27
KOZHIKODE	1.91	CU 3.33	CR 1.56	CU 0.17			(55) 11.62
PURBA CHAMPARAN	1.83	CR 0.84					CR 13.78
JALANDAR	1.76	(13) 1.74				(56) 0.36	(100) 3.88
FARIDKOT	1.73	(25) 0.95					(49) 4.89
WAYAWAD	1.66						CR 3.59
TRICHUR	1.56		CU 1.64	CU 0.13			(97) 4.79
DHANBAD	1.21			CU 0.52		CR 0.54	(20) 3.15
PATIALA	1.17			(71) 0.46			(13) 4.09
GITAMARHI	0.80						CR 3.09
PATNA	0.60					CU 0.40	(36) 3.36
FEROZEPUR	0.67	CU 0.51					(269) 1.64

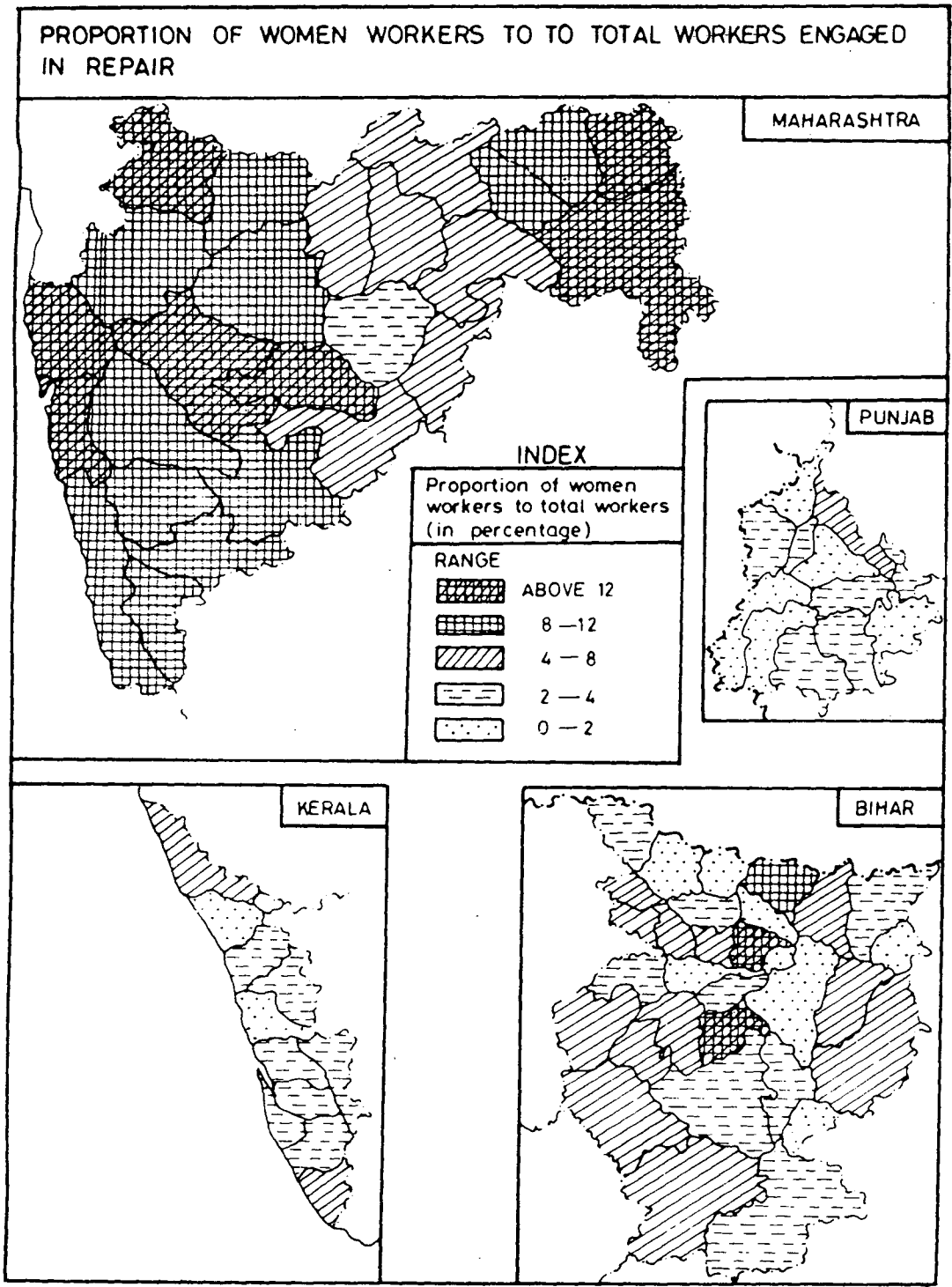


FIG. 21



enterprise not elsewhere classified (399). The percentage share of women workers exceed 15% in most of the districts. a higher percentage share of women workers in this industry coincides with higher proportion of women workers at the aggregate level.

### Conclusion

The discussion in this chapter leads to the following conclusion :

1. Women in the manufacturing industry are concentrated in a few selected activities. These activities are a legacy of the colonial period that fostered an economy based on exploitation. The trend still continues. The major industries having a high percentage of women workers are those involved in the manufacture of food products, beverage and tobacco products and textiles garments. In most of these industries women are hired as cheap casual labourers. They are mainly involved in manual processes such as peeling, cutting, packing etc. The discussion in the chapter reveals in the textile and garment industry, the majority of women are engaged in cotton spinning by charkha production of Khadi, embroidery and making of coir and coir products. The percentage share of women workers in textile mills is either nil or negligible.
2. The non-traditional industries like those manufacturing wood products, paper goods and allied activities, leather and fur products, rubber and

plastic products and chemicals have lower percentage share of women workers in comparison to food and textiles. They also tend to employ women in selected industries. These include activities like the manufacture of bamboo and cane furniture and packing boards. Only in a few districts of Kerala are women involved in printing of newspapers and journals.

3. The lowest percentage share of women workers are in the metal and mineral based industries and those involved in the manufacture of machinery. Among these, the percentage share of women workers is relatively higher for non-metallic mineral industry as women workers here are concentrated in the following activities.

(i) Manufacture of earthenware and earthen pottery

(ii) Manufacture of structural stone goods, stone dressing and stone crushing and stoneware.

(iii) Manufacture of structural clay products

4. Women workers engaged in 'other manufacturing' industries are consistently engaged in the manufacture of jewellery and related articles.

5. In terms of repairing activities, the repair of footwear and other leather goods engage the maximum percentage of women workers

6. The statewise picture that emerges is as follows :

(i) Kerala - Within Kerala, the percentage share of women workers is high in the southern coastal districts

comprising of the districts of Trivandrum, Quilon and Alleppey in industries like food, textile products, equipment and paper products. This largely due to the concentration of most of women oriented industries like fish processing, bidi making, manufacture of ropes, nets, cordage, twines etc. and processing of cashew, coffee, tea etc. In the chemical industry also, Kerala has the highest percentage share of women workers concentrated in Idukki and Quilon, and engaged mainly in the manufacture of drugs and medicines and inedible oils. In spite of rubber being a primary product of Kerala, the industry has high percentage share of women workers in Wayanad only. In the metal industry in electrical machinery manufacturing, Kerala has the highest percentage share of women workers namely in Cannanore, Palghat, Ernakulam and Trivandrum.

(ii) Bihar - In Bihar, the percentage share of women workers is low for most of the industries. The most important industry absorbing women workers is non metallic mineral products industry. Relatively high percentage of women workers in this industry are found in Saran. Moderate percentage are found in the eastern region comprising of the districts of Purnea, Katihar and Santhal Parganas and in the southern region consisting of Singhbhum, Ranchi and Palamau and western region consisting of Gopalganj, Rohtas and Paschim Champaran. The prevalence of mining activity in the eastern regions of Bihar and the dry and infertile land

in the southern region can explain such a pattern. Percentage share of women workers are also moderate in the wood manufacturing industry in the districts of Santhal Parganas, Singhbhum and Palamau. Wool, silk and synthetic fibre textiles show relatively high proportion of women workers in Vaishali, Begusarai, Katihar and Nawada. In the rest of the industries, the percentage share of women workers is very low, in most case less than 5%.

(iii) Maharashtra - Inspite of Maharashtra being traditionally known for cotton textile industry, the percentage share of women workers is highest in the lowland coastal districts of Kerala - namely Alleppey, Kottayam, Trivandrum and Quilon. The next highest concentration is also in Kerala in the central districts of Wayanad, Malappuram, Koshikode and Trichur. The reasons for such a peculiarity is obvious. In the cotton textile industry, women tend to be employed in a few typical activities like cotton spinning by Charkha and production of Khadi. As rapid industrialisation takes place and cotton mills with became more and more sophisticated in Maharashtra, women workers tend to be replaced by machines. Mass scale production also reduces the need for cheap labour. On the other hand, in Kerala due to absence of large scale industries and consequent production by small scale and household industries, more and more

women were employed in cotton textile industry.

(iv) Punjab - In Punjab, the percentage shares of women workers are lowest in all the industries, including food products. Even the wool industry in Punjab does not engage significant proportion of women workers. Industries, manufacturing wood and allied products and non-metallic mineral products have a relatively high percentage of women workers.

CHAPTER III

CHAPTER III  
 STRUCTURAL CHARACTERISTICS OF WOMEN WORKERS IN  
 MANUFACTURING INDUSTRIES

The participation of women in the manufacturing sector has to be understood within the structure of the present industrial set up. According to Hoffman industrial structure is determined by the three stages of development of an economy. If the economy is in the first stage the net output of consumer goods industry is five times that of capital goods industry. In the second stage the ratio of consumer goods to capital goods output is 2 : 5 and in the third stage it is 1:1. Thus, as an economy progresses, emphasis shifts from capital goods industry to consumer goods industry.<sup>1</sup>

The industrial pattern in India on the eve of independence revealed structural imbalances marked by low capital intensity, limited development of medium sized factory enterprises and imbalances between consumer and capital goods output. There was a preponderance of consumer goods vis-a-vis capital goods. In 1953 however, the ratio of consumer to capital goods (62 :38) indicated India's entry into the

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1. W G Hoffman (1958) : The Growth of Industrial Economies, Oxford, p.3

second stage of economic development by Hoffman's<sup>2</sup> criteria .

The development strategy adopted by the Indian planners consisted of a policy of accelerated industrialisation with a base of heavy industry . Basic industries which include iron and steel, fertilisers, chemicals, cement and non-ferrous metals have improved their position significantly under the impact of industrialisation during the last three decades. On the other hand the share of consumer goods industries such as textiles, sugar, paper, tobacco etc has declined in terms of productive capital employment and value added.<sup>3</sup>

The most important consumer oriented industry i.e food manufacturing and textiles were among the slowest growing industry groups over the entire period.

The discussion in chapter II reveals that the maximum percentage share of women workers in the manufacturing industry was in food, beverage and textile goods manufacture. This leads one to conclude that womens role in the economy in manufacturing is by way of participating in the most depressed and stagnating enterprises.

The objective in this chapter is to give an

- 
2. R Dutta and K P Sundaram (1986) Indian Economy S. Chand and Company, New Delhi. pp.514-515.
  3. Ibid. pp.520-521.



analysis of the pattern of employment of women workers based on three types of industries i.e, capital goods industry, intermediate goods industry and consumer goods industry. The classification is based on regrouping of the three digital level data as given by N.I.C. (1970) for manufacturing and repair in divisions numbered 2 and 3 consisting of 19 major groups. In this study, however, only 17 major groups have been included because of the exclusion of the divisions pertaining to manufacture of transport equipment (38) and repair (39) from the analysis. This classification is based on the following definitions.

(i) Capital goods:

The McGraw Hill Dictionary of Modern Economics (1965) defines capital goods as those used for the production of other goods.<sup>4</sup> Such goods are mainly the manufacture of agricultural machinery and equipment and parts, industrial machinery for food and textile industries etc (see appendix 1). It should be noted that there can be no clear cut demarcation of industries. The UNIDO has categorised such industries as 'heavy' industries and the cue has been taken up by

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4. The McGraw Hill Dictionary of Modern Economics (1965), McGraw Hill Book Company, New York, p.70.

scholars like Ayal (1969)<sup>5</sup> and Patel (1967)<sup>6</sup>

(ii) Intermediate goods

Intermediate goods which have been said to be those that 'enter into the production of other goods'<sup>7</sup> can also be called as those goods that are used to convert capital goods to economic goods.

(iii) Consumer goods

The goods can be defined as those end products which are bought for direct consumption by the consumers and their resale value will always be less than the cost price. The definition as 'goods bought by household for the service it yields in the home' can not be fully accepted due to the narrow meaning it conveys. Such industries are also been called as 'light industries' (Ayal 1969)<sup>8</sup>, (Patel 1967)<sup>9</sup>, UNIDO, 1960<sup>10</sup>.

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5. R B Ayal (1969) Manufacturing and Economic Growth, An application to the Phillipines, Centre for Development Planning, National Planning Association. pp. 1-58 to 1-64.
  6. B J Patel (1967) "Main features of Economic Growth over the last century" in Baljit Singh et.al (eds), Social and Economic Changes, pp. 373-394.
  7. The McGraw Hill Dictionary, op.cit.
  8. R B Ayal (1969), op.cit.
  9. B J Patel (1967), op. cit.
  10. World Industry since 1960, Third General Conference of UNIDO, UN, New York, pp.65-67.

A high percentage share of women workers in intermediate and consumer goods corresponding to lower sex disparity would therefore indicate a low status of women workers in the Indian economy.

States included in the analysis are Kerala, Bihar, Maharashtra and Punjab. The data tabulated in table III.1, III 2 & III. 3 deals with the following aspects :

III. 1. Percentage share of women workers in capital, intermediate and consumer goods industries.

III.2. Urban-Rural ration of women workers in capital intermediate and consumer goods industries.

III.3. Sex disparity among workers in the above industrial groups.

III. Percentage share of women workers in the three industrial types :

Table III.3 indicates highest percentage share of women workers in the consumer goods industry as compared to capital and intermediate goods industry. Also, in the majority of the districts under study, the percentage share of women workers in intermediate goods industry exceeds those of capital goods industry.

Statewise picture shows several trends. First, the higher percentage share of women workers in the capital goods industry is not in the highly industrialised state of Maharashtra but in Kerala. In

Table III.1. Some structural characteristics of women workers engaged in capital, intermediate and consumer goods industries in Kerala.

State/ Districts	Capital Goods			Intermediate Goods			Consumer Goods		
	Percentage share	urban- rural ratio	Index of male female Disparity	Percentage share	Urban rural ratio	Index of male female Disparity	Percentage share	Urban rural ratio	Index of male female Disparity
Kerala	10.30	103	2.6968	9.70	60	2.7819	39.98	54	0.5401
Cannanore	29.11	233	1.1704	11.36	33	2.5816	32.31	35	0.9765
Wayanad	----	---	----	6.54	CR	3.2661	16.50	CR	2.0758
Kozhikode	4.61	21	3.6545	7.62	27	3.0760	33.09	64	0.9305
Malappuram	----	---	----	4.04	92	3.8008	21.14	60	1.7062
Palghat	10.30	138	2.7066	8.87	36	2.8924	19.70	89	1.8148
Trichur	4.86	45	3.5954	21.94	87	1.6478	43.62	57	0.3417
Ernakulam	11.16	64	2.6044	10.78	33	2.6488	35.46	63	0.7934
Iddukki	0.00	0	a	13.35	CR	2.3691	17.74	146	1.9710
Kottayam	1.86	CR	4.6312	4.23	53	3.7501	40.76	71	0.4973
Alleppey	4.42	64	3.7014	2.96	27	4.1390	54.59	57	0.2453
Quilon	6.20	206	3.3181	3.69	53	3.9082	55.50	62	0.2943
Trivandrum	23.86	88	1.5125	15.35	63	2.1779	50.21	94	0.0112

CR - Completely Rural, a-infinity.

Table III.2. Some structural characteristics of women workers engaged in capital, intermediate and consumer Goods Industries in Punjab.

State/ Districts	Capital Goods			Intermediate Goods			Consumer Goods		
	Percentage share	Urban-Rural ratio	Index of male female Disparity	Percentage share	Urban-rural ratio	Index male female Disparity	Percentage share	Urban-rural ratio	Index of male female Disparity
Punjab	0.94	16.1	5.3367	5.15	26	3.5301	4.23	50	3.7501
Gurdaspur	0.13	DR	7.3353	2.23	54	4.4405	5.66	28	3.4229
Amritsar	0.29	200	6.5289	3.58	12	3.9333	3.35	28	4.0054
Ferozpur	0.00	0	---	9.57	17	2.7987	5.10	63	3.5412
Ludhiana	0.55	95	5.8620	5.35	14	3.4849	4.06	67	3.7954
Jalandhar	0.44	69	6.1083	3.26	24	4.0349	3.85	52	3.8538
Kapurthala	1.90	179	4.6083	1.24	42	5.0522	2.39	32	4.3672
Hoshiarpur	0.00	0	a	4.98	16	3.5680	4.21	117	3.7553
Rupnagar	3.54	447	3.9445	10.86	26	2.6393	3.06	142	4.1033
Patiala	1.08	254	5.1943	4.73	2	3.6258	4.17	59	3.7659
Sangrur	1.36	69	4.9562	6.17	110	3.323	5.36	83	3.4649
Bhatinda	0.00	0	0.0000	8.15	69	2.9953	5.21	62	3.5170
Faridkot	0.66	42	5.6973	6.70	17	3.2279	6.39	67	3.2801

DR - Completely Rural, a-infinity.

Table.III.3. Some structural characteristics of women workers engaged in capital, intermediate and consumer goods industries in Maharashtra

State/ Districts	Capital Goods			Intermediate Goods			Consumer Goods		
	Percentage share	Urban-rural ratio	Index of male female Disparity	Percentage share	Urban-rural ratio	Index of male female Disparity	Percentage share	Urban-rural ratio	Index of male female Disparity
Maharashtra	5.91	48	3.3733	10.32	51	2.7041	13.74	58	2.3303
G. Bombay	7.47	CU	3.0977	6.10	CU	3.3369	6.30	CU	3.2831
Thane	8.90	80	2.0003	10.55	26	2.6762	6.37	50	3.2868
Raigarh	2.27	380	4.4217	9.99	54	2.7450	20.50	63	1.7539
Ratnagiri	1.75	85	4.6949	13.67	91	2.3372	19.44	100	1.8349
Nasik	3.63	100	3.9181	14.91	54	2.2184	19.44	93	1.8349
Dhule	2.74	CR	4.2218	25.48	129	1.4031	14.46	119	2.2606
Jalgaon	2.75	CR	4.2179	17.21	45	2.0152	11.29	62	2.5895
Ahmednagar	3.89	424	3.8424	12.32	107	2.4759	25.13	99	1.4264
Pune	5.24	246	3.5106	10.61	125	2.6690	13.02	90	2.4026
Satara	2.26	105	4.4264	15.27	152	2.1052	15.81	76	2.1365
Sangli	0.92	99	5.3587	5.98	91	3.3598	11.88	65	2.5235
Solapur	0.00	0	a	12.59	262	2.4473	29.62	252	1.3009
Kolhapur	0.86	448	5.4276	8.51	149	2.9430	7.42	74	3.1077
Aurangabad	2.03	45	4.5395	13.12	179	2.8924	14.56	117	2.2512
Parbhani	0.00	0	a	19.39	87	1.8388	16.48	94	3.0775
Bid	0.00	0	a	16.43	139	2.0019	13.34	89	2.3701
Nanded	7.75	CR	3.0558	23.95	132	1.5070	15.00	94	2.1373
Osmanabad	6.16	CR	3.3256	16.07	110	2.1130	13.18	116	2.3863
Buldhana	0.00	0	a	14.25	110	2.2807	15.78	61	2.1391
Akola	0.00	0	a	16.39	47	2.0054	10.96	66	2.6276
Amravati	0.00	0	a	12.59	420	2.4473	13.51	89	2.4557
Yavatmal	0.00	0	a	16.11	185	2.1019	12.76	98	2.4295
Wardha	14.72	CR	2.6440	27.45	127	1.2749	9.46	67	2.8130
Nagpur	1.96	117	4.5763	20.13	37	1.7818	16.49	69	2.0767
Bandara	0.00	0	a	11.32	25	2.5861	52.60	84	0.1388
Chandrapur	0.00	0	a	9.73	42	3.7793	18.28	91	1.9269

CR -Completely Rural, CU- Completely Urban,  
a -infinity

the state of Kerala, 10.91% of the total workers engaged in the capital goods industry are women. The corresponding percentage for Maharashtra is only 5.91%.

Secondly, Kerala also has the highest percentage share of women workers in the consumer goods industry. 39.98% of the total workers employed in the consumer goods industry in Kerala. Maharashtra and Bihar have only 14% women workers in its consumer goods industry. Thirdly, Punjab has the lowest percentage share of women workers in all the three groups of industries.

(i) Percentage share of women workers in capital goods

The highest percentage share of women workers in the capital goods group is in Cannanore with 29.11%. Along with Trivandrum (23.86%), these are the only two districts where percentage share of women workers exceeds 20%. There are only four districts where percentage shares are between 10% and 20%. These are Ernakulam (11.16%), Palghat (10.30%), Greater Bombay (7.47%) and Wardha (14.42%). The rest of the districts with percentage shares above 5% include Quilon, Singhbhum, Greater Bombay, Thane, Pune, Nandad and Osmanabad. In 83.95% of the total districts under study the percentage share of women workers is less than 5%. Of the remaining 16.05% districts, 8.64% are coastal districts.

Within Kerala, a spatial analysis reveals extreme values at the northern and southern ends of the state

and moderate values in the central part which include the districts of Palghat, Trichur and Ernakulam.

The maximum percentage share of women workers in Bihar is 6.93% in Singhbhum district. This is followed by 3.31% in Saharsa. With the exception of Patna, Saharsa, Purnea, Bhagalpur, Dhanbad and Ranchi, the percentage share of women workers in capital goods industries is nil. All the exceptional districts constitute the eastern part of the state - poor in agriculture and rich in mineral resources, mining being a major primary activity (exception to this is Patna).

In Maharashtra, the highly urbanised coastal districts of Greater Bombay, Thane, Raigarh and Pune have less than 10% of women workers to total workers engaged in capital goods manufacturing. The maximum percentage share is instead in Wardha where the percentage share is 14.42%.

In Punjab, the highest percentage share of women workers is in Rupnagar (3.54%) followed by 1.90% in Kapurthala.

(ii) Percentage share in intermediate goods.

Generally, the percentage share of women workers in intermediate goods manufacturing industries exceed those of capital goods' industries. The values ranging from 0.00% to 35.11% may be classed as follows :



- a. High values : above 20%
- b. Medium values : 10% - 20% and
- c. Low values : Below 10%.
  - i. Very high values : These are found in Trichur, Santal Parganas, Dhule, Wardha and Nagpur. This constitutes 6.17% of the total districts under study.
  - ii. Medium values : Medium values are concentrated in the central districts of Kerala - Ernakulam and Iddukki and eastern regions of Bihar constituting the districts of Munger, Bhagalpur, Palamau and Ranchi. Medium values exist in almost all the districts of Maharashtra with few exceptions namely Greater Bombay, Raigarh, Sangli, and Chandrapur. Rungpur is the only district in Punjab with medium values.
  - (iii) Low values : Low values in Kerala constitute the northern districts of Wayanad, Kozhikode, Malappuram and Palghat and southern districts of Kottayam, Alleppey and Quilon percentage share of women workers in Southern Bihar is more than none. Highly urbanised district of Maharashtra (Greater Bombay) has only a percentage share of 6.10% in intermediate goods.

### iii) Percentage share in consumer goods

With few exceptions in Punjab, consumer goods have higher percentage of women workers compared to capital and intermediate goods.

In Kerala, the southern districts of Alleppey,

Quilon and Trivandrum have more than 50% of women workers engaged in the production of consumer goods. The percentage shares in central Kerala exceeds 35%. The maximum percentage share is in Wayanad which is a cent percent rural area.

Bhandara is the only district in Maharashtra with a percentage share of women workers exceeding 50%. Percentage shares exceed 50%. Percent shares exceed 20% in the the traditional districts of textile manufacturing like Ahmednagar and Solapur.

In Bihar, the highest percentage share of women workers in consumer goods industry is 19.44% in Ranchi. The eastern part of Bihar again has a relatively higher percentage (above 15%) and includes the districts of Purnea, Katihar, Munger, Santal Parganas, Palamau and Ranchi. In Punjab 9 out its 12 districts have percentage share of women workers in intermediate goods industry exceeding consumer goods industry.

It can therefore be surmised that the percentage share of women workers in capital goods and consumer goods is higher in Kerala than Maharashtra. Moreover, Maharashtra has the highest percentage share of women workers in the case of intermediate goods industry.

III. 2. Urban-Rural Ratio of women workers in capital, intermediate and consumer goods industry.

Table. III.4. Some structural characteristics of women workers engaged in capital, intermediate and consumer goods industries in Bihar.

State/ Districts	Capital Goods			Intermediate Goods			Consumer Goods		
	Percentage share	Urban-rural ratio	Index of male female Disparity	Percentage share	Urban-rural ratio	Index of male female Disparity	Percentage share	Urban-rural ratio	Index of male female Disparity
Bihar	2.01	154	4.5499	7.23	35	3.1384	13.93	35	2.3117
Patna	1.62	112	4.7754	14.52	77	2.2550	7.51	49	3.0933
Nalanda	0.00	0	a	5.06	CR	4.2614	12.11	95	2.4984
Nawada	--	--	--	2.64	CR	2.6183	14.12	22	2.2932
Gaya	--	--	--	11.04	93	3.7606	10.82	34	2.6441
Arungabad	--	--	--	4.19	306	3.8768	13.03	55	2.4016
Rohtas	--	--	--	3.77	17	3.2420	10.50	51	2.6822
Bhojpur	0.00	0	a	6.62	91	4.0058	11.79	58	2.5334
Saran	0.00	0	a	3.11	CR	2.1861	13.13	39	2.3914
Siwan	--	--	--	15.26	CR	3.2367	12.89	35	2.4160
Gopalganj	0.00	0	a	6.65	CR	3.9617	7.40	56	3.1109
Pa. Champaran	0.00	0	a	8.38	CR	a	10.23	99	2.7152
Pu. Champaran	0.00	0	a	0.00	0	6.0633	9.21	33	2.0462
Sitamarhi	0.00	0	a	0.46	514	3.2687	8.37	56	2.9631
Muzaffarpur	0.00	0	a	0.47	CR	2.8767	6.93	19	3.1884
Vaishali	0.00	--	a	3.54	CR	3.9455	7.00	56	3.1666
Begusarai	--	--	--	0.53	326	5.9199	12.67	38	2.4389
Samastipur	--	--	--	4.33	CR	3.7242	8.95	114	2.8814
Darbhanga	--	--	--	8.81	CR	2.9007	8.20	50	2.9879
Madhubani	--	CU	--	15.97	22	2.1222	11.40	30	2.5770
Saharsa	3.31	CR	4.0185	2.86	CR	4.1759	13.27	48	2.3772
Purnea	0.60	--	5.7941	5.68	248	3.4188	18.49	20	1.9100
Katihar	--	--	--	3.44	CR	3.9767	15.33	4	2.1797
Munger	--	CR	--	10.52	7	2.6798	19.74	28	1.8117
Bhagalpur	3.10	0	4.0893	13.65	81	2.3392	10.77	48	2.6500
Santalparganas	0.00	115	a	35.11	2	0.8134	30.52	30	1.0839
Dhanbad	1.60	--	4.7375	4.37	10	3.7140	8.20	15	2.9879
Biridih	--	--	--	5.87	41	3.3811	11.40	11	2.5725
hazaribag	--	--	--	10.33	76	2.4494	12.57	35	2.4404
Palamau	--	--	--	12.10	62	2.4495	16.42	36	2.0828
Ranchi	2.51	99	4.3152	13.50	49	2.3541	19.44	28	1.8349
Singhbhwa	6.93	101	3.1884	3.84	20	3.8566	19.41	26	1.8373

CR- Completely Rural, CU- Completely Urban, a-infinity.

c)

The Urban Rural ratio exceeds 1 : 1 in 20.48% of the total districts under study in the capital goods group of industries. The corresponding percentage in intermediate goods is 16.04% and consumer industry is 8.64%. Thus the manufacturing sector employs maximum percentage of women workers in the consumer and intermediate goods and both these industries are rural oriented. Urban women therefore are least absorbed in the manufacturing sector.

### III. 3. Sex disparity among workers engaged in the production of capital, intermediate and consumer goods.

In the capital goods industry, sex disparity index is below 3.00 only in 4.93% of the total districts under study. The corresponding percentages in intermediate and consumer goods are 34.56% and 92.59% respectively.

28.39% of the districts with capital goods industry have no female workers at all. In the capital goods industry, districts with relatively high level of urbanisation like Greater Bombay(100% ), Thane(44.34%), Nagpur(56.75%) and Pune(47.33% ) in

Maharashtra, have narrower disparity compared to districts with low levels of urbanisation.

The districts of Kerala exhibit minimum sex disparity in all the three categories as shown in the

Table.III.5. Percentage share of districts in different classes of disparity indices in capital goods industry

States	Ranges of Disparity indices					
	very low	low	medium	high	very high	extraordinary
Kerala	---	16.66	16.66	33.33	8.33	8.33
Bihar	---	---	---	8.33	16.12	75.55
Maharashtra	---	---	7.69	23.07	26.92	42.30
Punjab	---	---	---	2.83	16.66	66.66

Table.III.6. Percentage share of districts in different classes of disparity indices in intermediate goods industry

Kerala	---	8.33	41.66	41.66	8.33	---
Bihar	---	3.22	35.48	38.70	9.67	3.23
Maharashtra	---	19.23	73.07	11.53	---	---
Punjab	---	---	25.00	50.00	16.66	8.33

Table.III.7. Percentage share of districts in different classes of disparity indices in consumer goods industry.

Kerala	66.66	25.00	8.33	---	---	---
Bihar	---	16.12	70.96	12.90	---	---
Maharashtra	3.84	23.07	61.53	11.53	---	---
Punjab	---	---	---	75.00	25.00	---

--- indicates the absence of any district under the corresponding range of sex disparity

very low : 0.0 to 1.0; low : 1.0 to 2.0; medium : 2.0 to 3.0; high : 3.0 to 4.0; very high : 4.0 to 5.0; extra ordinary : above 5.0.

Table III.1. In the capital goods industry, only 10% of the districts of Kerala have extraordinarily high values of sex disparity. It is followed by Maharashtra (42.30% of the districts), Bihar (64.70% of the districts) and Punjab (75%). In the very high category also Kerala has the lowest percentages of districts and Bihar the highest 40% of the districts of Kerala have 'high' disparity and the rest 40% medium and low disparity. None of the other states have low or medium disparity (with the exception of Maharashtra which has 7.69% of the districts with medium values.

#### CONCLUSION

1. The maximum percentage share of women workers is in the consumer goods industry. This leads to the conclusion that the role of women in the manufacturing sector is confined to participation in the most depressed and stagnating enterprises. This conclusion further buttresses the findings of other studies discussed earlier.

2. The industry wise analysis of urban-rural ratio indicates that in the consumer and intermediate industries the share of women workers in the manufacturing sector is more in the rural areas. On the other hand, the urban-rural ratios in the capital goods industry exceeds 1 : 1 in almost all the districts implying that the share of women workers in the industry is more in the urban than in the rural

areas.

3. In the capital goods industry, the higher levels of urbanisation correspond with higher sex disparity.

4. The districts of Kerala exhibits minimum sex disparity in all, that capital consumers and intermediate goods industries, indicating that compared to the other three states the percentage share of women workers is more here.

5. Kerala also has the highest percentage share of women workers in consumer goods industry. In Kerala, absence of heavy base industries has resulted in emphasis of small scale industries specialising in consumer items and therefore the scope for engaging women workers was greater. In Maharashtra on the other hand, emphasis on heavy industries resulted in the loss of dynamism in small scale industries so that female labour was easily replaced.

6. The industry wise analysis of urban-rural ratio indicates that in the consumer and intermediate goods industries the share of women workers in the manufacturing sector is more in the rural areas.

7. Districts which have higher level of urbanisation also have a lower share of women workers in all the three, capital, consumer and intermediate goods industries. For example districts like Greater Bombay, Thane and Nasik have higher sex disparity when compared to districts with relatively lower levels of

urbanisation.

8. In Bihar, about one third of the districts do not employ any women in the capital goods industry. The maximum percentage share of women workers is in the consumer goods industry followed by intermediate goods industry.

9. Punjab is the only state in which the share of women workers in the intermediate goods industry is higher as compared to capital and consumer goods. But it is interesting to note that this industry is rural rather than urban based in all the districts except in Sangrur. In the capital goods industries the share of women workers here is, however, higher than it is in Bihar but lower than Maharashtra and Kerala.

10. Maharashtra is the only state where urban-rural ratio is less than 1:1 for all the industries. In the other states under consideration these ratios exceed 1:1 in the capital goods industry.



CHAPTER IV

## CHAPTER IV

SOME DETERMINANTS OF THE STRUCTURAL COMPOSITION OF  
WOMEN WORKERS IN MANUFACTURING

It has been established in this study that female workers constitute a very small percentage of the workers engaged in manufacturing. Women are represented primarily in traditional and non-household sector of each industry and their numbers are small in the modern organised sector.<sup>1</sup> Most studies attribute such a situation to low levels of literacy and lack of technical education among women. This chapter analysis therefore some of the basic factors that are considered as influential in determining the extent and pattern of employment of women workers in three industrial types - capital, intermediate and consumer goods industries are identified. The determinants analysed include level of urbanisation, urban female work participation, rural female work participation, level of education (literate, matriculate, technically educated, graduates and graduates engineers).

IV 1. Urbanisation and percentage share of women workers in industrial types.

The level of urbanisation is reflected in the

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1. K. Nath(1968), Women in the working force in India, Economic and Political Weekly, Aug.3 Vol.III. No.31.

existence of certain infrastructural facilities that have a strong influence on the pattern of female employment. Lack of traditional avenues of employment, better roads, schools/colleges and the need to reduce family size etc. have a bearing on women workers in manufacturing through indirectly.<sup>2</sup>

(i) Urbanisation and capital goods industry

The capital goods industry requires high degree of capital intensity and technology which in turn are dependent on infrastructural facilities that urban areas can provide. On this assumption there should exist a positive correlation between percentage share of women workers in capital goods industry and the level of urbanisation. Such a relationship is proved significant for Bihar, Maharashtra and Kerala. In Bihar the relationship is highly significant as shown in the Table IV.1. The general backwardness of the economy could mean that a higher level of urbanisation will result in the increase in capital goods industries' propensity for absorption of professional skills. In the early stage of industrial development, low level of literacy and general backwardness of the economy may create a shortage of professional skills which urbanisation can fill.

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2. Golden (1955), Literacy and Social Change in underdeveloped countries, Rural Sociology, Vol.20, p-17.



(ii) Urbanisation and intermediate goods industry

Intermediate goods and level of urbanisation do not correlate in any of the states. This inevitable as industries manufacturing intermediate goods do not usually require heavy capital investment or high levels of energy and consequently they are not location bound. Chapter II reveals maximum percentage share of women workers in textile industry engaged in the household activities like charkha spinning, Khadi making etc. which are actually concentrated in rural areas.

(iii) Urbanisation and consumer goods industry

Consumer groups of industries imply mainly stagnant and depressed economic activities like food, beverages and tobacco which, if one considers Hoffman's postulations, it constitute lesser and lesser proportion of industrial output as the economy progresses. It is therefore likely that employment of women in consumer goods industry will drop with rising levels of urbanisation. However, Maharashtra is the only state where the negative correlate is significant. This indicates that as levels of urbanisation and industrialisation rise, the proportion of women workers will fall in consumer goods industry also.

IV.2 Urban work participation of females and percentage share of women in the industrial types.

(i) Capital goods industry - A highly positive correlation exists between urban work participation and capital goods' industry in the districts of Bihar and Punjab. No such relationship is revealed in Maharashtra and Kerala. This indicates that being at lower levels of industrial development, both Bihar and Punjab have a high propensity to absorb skilled and professionally trained labour. As more and more modern industries will be added with development, the tendency will be to absorb trained labour.

(ii) Intermediate - Employment of women in intermediate goods industry correlate with urban work participation positively at low levels only in Punjab only though at very low level of significance.

(iii) Consumer Goods :

Rising rates of urban work participation among females affect share of women workers in consumer goods' industry significantly in Maharashtra and Bihar only. In spite of the fact that level of urbanisation tends to improve the percentage share of women workers in capital goods industry, a higher work participation among urban females results in increasing the percentage share of women workers in consumer goods industry. Such a case indicates the failure of the urban sector to provide employment to women in capital goods industry. Even within the urban sector, there is

a distinct traditional/rural component of occupations.

IV. Rural Work Participation Rates and Percentage share of Women Workers in Industrial types :

(i) Capital Goods

A positive correlation was found only between rural work participation rate of females and capital goods industry in Bihar. The relationship is not significant in any other state.

(ii) Intermediate goods

A significant positive correlation was found between rural work participation rate and the percentage share of women workers in intermediate goods in Bihar and Maharashtra. The relationship is highly significant in Maharashtra indicating the concentration of intermediate goods industry in that state.

(iii) Consumer Goods

The discussion in chapter III indicates that consumer goods industries are rural oriented. It is therefore to be expected that there will be a positive correlation between rural work participation rates and percentage shares in consumer goods. Correlation values reveal such a relationship only in Bihar.

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3. P V L S Rao (1983) Urbanisation in India - Spatial dimensions. Concept Publishing Company, New Delhi.

Level of Education and Percentage share of women workers in industrial types :

Literacy and matriculate level of education among women do not affect the percentage share of women workers in any of the industrial type where both these levels are already high and work participation rates of females is also high. It is technical and professional education that is likely to improve the absorption of women in the labour market. Rising percentage of technically educated women raises the percentage share of women workers in intermediate goods and capital goods as shown in Table IV.1. Consumer goods industry is affected by level of education only in Punjab. It is negatively correlated with employment in consumer goods, significantly so in the case of technically educated women. Rising percentage of technically educated women tends to results in the withdrawal of women from jobs that require tedious work. However, the absence of a positive relation between technically educated women and percentage share of women in capital goods reveals that women who withdraw from the labour market are not absorbed elsewhere in the manufacturing sector.

An increasing share of matriculate women tends to withdraw women from the labour market in consumer goods. But the relationship is confirmed at very low level of significance in Maharashtra only. Withdrawal from consumer and intermediate goods industries also



tend to occur with rising level of female engineering graduates. Again there is no evidence of these women being absorbed in the capital goods industry.

The pattern of employment of women in different types of industries is therefore affected by the determinants under study but not uniformly in all the states.

### Conclusion

1. There is a positive correlation between the level of urbanisation and share of women workers in capital goods industry. This is found true for Bihar, Maharashtra and Kerala. Infrastructural facilities that urban areas are able to provide, to a large extent determine the share of women workers in capital goods industry.
2. There is an inverse relationship between the level of urbanisation and percentage share of women workers in the consumer goods industry. Urbanisation is generally accompanied by higher level of technology in production requiring trained skills. Women will therefore tend to be replaced by machines.
3. It follows from the above two that the immediate effect of rising levels of urbanisation will be to reduce the percentage share of women workers in manufacturing.

4. There is no distinct relationship between intermediate goods industry and level of urbanisation.

5. The positive correlation between rural work participation and percentage share of women workers in manufacturing is explained the predominance of rural workers in consumer goods industry.

6. In Kerala, no significant relationship is discerned between level of formal education and percentage share of women workers in manufacturing. This means that more the level of literacy and formal education among females, less the relation between level of education and level of participation of females in manufacturing.

7. As exemplified by Bihar where the level of economy is generally low, percentage share of women workers in all the categories respond positively to formal and technical education.

CHAPTER V

## CHAPTER V

## CONCLUSION

A survey of available literature shows that women workers form only a very small percent of the total workers engaged in the manufacturing industry which is a constituent of the secondary sector. Such a situation in which women almost do not participate in the most dynamic sector of the economy indicate serious flaws in our economic planning and development policies. Generally, low level of education, absence of training and lack of adequate infrastructural facilities are held responsible for pattern and level of participation of women workers.

This study reveals the spatial and structural pattern of participation of women workers and the extent to which socio-economic variables determine the status of the women workers in manufacturing. The conclusion drawn from such an attempt are stated below.

1. Women in the manufacturing industry are concentrated in a few selected activities. These activities are a legacy of the colonial period that fostered an economy based on exploitation. The trend still continues. The major industries having a high percentage of women workers are those involved in the manufacture of food products, beverage and tobacco products and textiles garments. In most of these industries women are hired as cheap casual labourers.

They are mainly involved in manual processes such as peeling, cutting, packing etc. The discussion in the chapter reveals that in the textile and garment industry, the majority of women are engaged in cotton spinning by charkha, production of Khadi, embroidery and making of coir and coir products. The percentage share of women workers in textile mills is either nil or negligible.

2. The non-traditional industries like those manufacturing wood products, paper goods and allied activities, leather and fur products, rubber and plastic products and chemicals have lower percentage share of women workers in comparison to food and textiles. They also tend to employ women in selected activities. These include activities like the manufacture of bamboo and cane furniture and packing boards. Only in a few districts of Kerala are women involved in printing of newspapers and journals.

3. The lowest percentage share of women workers are in the metal and mineral based industries and those involved in the manufacture of machinery. Among these, the percentage share of women workers is relatively higher for non-metallic mineral industry as women workers here are concentrated in the following activities.

- (i) Manufacture of earthenware and earthen pottery
- (ii) Manufacture of structural stone goods, stone dressing and stone crushing and stoneware.

(iii) Manufacture of structural clay products

4. Women workers engaged in 'other manufacturing' industries are consistently engaged in the manufacture of jewellery and related articles.

5. In terms of repairing activities, the repair of footwear and other leather goods engage the maximum percentage of women workers

6. The statewise picture that emerges is as follows :

(i) Kerala - Within Kerala, the percentage share of women workers is high in the southern coastal districts comprising of the districts of Trivandrum, Quilon and Alleppey. In industries like food, textile products, equipment and paper products, Kerala has high percentage share of women workers. This is largely due to the concentration of women oriented industries like fish processing, bidi making, manufacture of ropes, nets, cordage, twines etc. and processing of cashew, coffee, tea etc in the state. In the chemical industry also, Kerala has the highest percentage share of women workers concentrated in Idukki and Quilon, and engaged mainly in the manufacture of drugs and medicines and inedible oils. In spite of rubber being a primary product of Kerala, the industry has high percentage share of women workers in Wayanad only. In the metal industry in electrical machinery manufacturing, Kerala has the highest percentage share

of women workers namely in Cannanore, Palghat, Ernakulam and Trivandrum.

(ii) Bihar - In Bihar, the percentage share of women workers is low for most of the industries. The most important industry absorbing women workers is non metallic mineral products industry. Relatively high percentage of women workers in this industry are found in Saran. Moderate percentages are found in the eastern region comprising of the districts of Purnea, Katihar and Santhal Parganas and in the southern region consisting of Singhbhum, Ranchi and Palamau and western region consisting of Gopalganj, Rohtas and Paschim Champaran. The prevalence of mining activity in the eastern regions of Bihar and the dry and infertile land in the southern region can explain such a pattern. Percentage share of women workers are also moderate in the wood manufacturing industry in the districts of Santhal Parganas, Singhbhum and Palamau. Wool, silk and synthetic fibre textiles show relatively high proportion of women workers in Vaishali, Begusarai, Katihar and Nawada. In the rest of the industries, the percentage share of women workers is very low, in most case less than 5%.

(iii) Maharashtra - In spite of Maharashtra being traditionally known for cotton textile industry, the percentage share of women workers is highest in the lowland coastal districts of Kerala - namely Alleppey,

Kottayam, Trivandrum and Quilon. The next highest concentration is also in Kerala in the central districts of Wayanad, Malappuram, Koshikode and Trichur. The reasons for such a peculiarity is obvious. In the cotton textile industry, women tend to be employed in a few typical activities like cotton spinning by Charkha and production of Khadi. As rapid industrialisation takes place and cotton mills with became more and more sophisticated in Maharashtra, women workers tend to be replaced by machines. Mass scale production also reduces the need for cheap labour. On the other hand, in Kerala due to absence of large scale industries and consequent production by small scale and household industries, more and more women were employed in cotton textile industry.

(iv) Punjab - In Punjab, the percentage shares of women workers are lowest in all the industries, including food products. Even the wool industry in Punjab does not engage significant proportion of women workers. Industries, manufacturing wood and allied products and non-metallic mineral products have a relatively high percentage of women workers.

7. The maximum percentage share of women workers is in the consumer goods industry. This leads to the conclusion that the role of women in the manufacturing sector is confined to participation in the most depressed and stagnating enterprises. This conclusion



further buttresses the findings of other studies discussed earlier.

8. The industrywise analysis of urban-rural ratio indicates that in the consumer and intermediate industries the share of women workers in the manufacturing sector is more in the rural areas. On the other hand, the urban-rural ratios in the capital goods industry exceeds 1 : 1 in almost all the districts implying that the share of women workers in the industry is more in the urban than in the rural areas.

9. In the capital goods industry, the higher levels of urbanisation correspond with higher sex disparity.

10. The districts of Kerala exhibits minimum sex disparity in all, that capital consumers and intermediate goods industries, indicating that compared to the other three states the percentage share of women workers is more here.

11. Kerala also has the highest percentage share of women workers in consumer goods industry. In Kerala, absence of heavy base industries has resulted in emphasis of small scale industries specialising in consumer items and therefore the scope for engaging women workers was greater. In Maharashtra on the other hand, emphasis on heavy industries resulted in the loss of dynamism in small scale industries so that female labour was easily replaced.

12. The industry wise analysis of urban-rural ratio indicates that in the consumer and intermediate goods industries the share<sup>o</sup> of women workers in the manufacturing sector is more in the rural areas.

13. Districts which have higher level of urbanisation also have a lower share of women workers in all the three, capital, consumer and intermediate goods industries. For example districts like Greater Bombay, Thane and Nasik have higher sex disparity when compared to districts with relatively lower levels of urbanisation.

14. In Bihar, about one third of the districts do not employ any women in the capital goods industry. The maximum percentage share of women workers is in the consumer goods industry followed by intermediate goods industry.

15. Punjab is the only state in which the share of women workers in the intermediate goods industry is higher as compared to capital and consumer goods. But it is interesting to note that this industry is rural rather than urban based in all the districts except in Sangrur. In the capital goods industries the share of women workers here is, however, higher than it is in Bihar but lower than Maharashtra and Kerala.

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## APPENDICES

APPENDIX I      DISTRICTS AND THEIR CODES

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<u>DISTRICTS</u>	<u>CODES</u>	<u>DISTRICTS</u>	<u>CODES</u>
BIHAR	0400	Bhagalpur	0424
Patna	0401	Santal Pargans	0425
Nalanda	0402	Dhanbad	0426
Nawada	0403	Giridih	0427
Gaya	0404	Hazari Bagh	0428
Aurangabad	0405	Palamau	0429
Rohtas	0406	Ranchi	0430
Bhojpur	0407	Singhbhum	0431
Saran	0408		
Siwan	0409	KERALA	1100
Gopal Ganj	0410	Cannanore	1101
Paschim Champaran	0411	Wayanad	1102
Purbi Champaran	0412	Kozhikode	1103
Sitamarhi	0413	Malappuram	1104
Muzzafur Pur	0414	Palghat	1105
Vaishali	0415	Trichur	1106
Begu Sarai	0416	Ernakulam	1107
Samastipur	0417	Idukki	1108
Darbhangha	0418	Kottayam	1109
Madhubai	0419	Alleppey	1110
Saharsa	0420	Quilon	1111
Purnea	0421	Trivendrum	1112
Kathar	0422		
Munger	0423		

<u>DISTRICTS</u>	<u>CODES</u>	<u>DISTRICTS</u>	<u>CODES</u>
MAHARASHTRA	1300	PUNJAB	1500
Greater Bombay	1301	Gurdaspur	1501
Thane	1302	Amritsar	1502
Raigarh	1303	Ferozpur	1503
Ratnagiri	1304	Ludhiana	1504
Nasik	1305	Jalandhar	1505
Dhule	1306	Kapurthala	1506
Jalgaon	1307	Hoshiarpur	1507
Ahamad Nagar	1308	Roopnagar	1508
Pune	1309	Patiala	1509
Satara	1310	Sangrur	1510
Sangli	1311	Bhantinda	1511
Solapur	1312	Faridkot	1512
Kolhapur	1313		
Aurangabad	1314		
Parbhami	1315		
Bid	1316		
Nanded	1317		
Osmanabad	1318		
Buldhana	1319		
Akole	1320		
Amarvati	1321		
Yavalmat	1322		
Wardha	1323		
Nagpur	1324		
Bhandara	1325		
Chandrapur	1326		

APPENDIX-II RECLASSIFIED LIST OF MANUFACTURING ACTIVITIES  
AT THE THREE DIGITAL LEVEL.

<u>CAPITAL GOODS</u>	<u>INTERMEDIATE GOODS</u>	<u>CONSUMER GOODS</u>
350 - 354;	230; 233; 240;	200 - 229;
356 - 367;	250; 271; 273; 274;	231 - 232;
369;	280; 290; 294; 300;	234 - 235;
380 - 382	302 - 307;	239; 241 - 249;
	310 - 312;	251 - 253; 259 - 270;
	315; 316; 319;	272; 275; 277;
	320; 324 - 326;	279; 281 - 293;
	328 - 333;	295; 296; 299; 301;
	335; 336; 339 - 341;	313; 314; 317; 318;
	343; 344.	322; 323 - 327;
		334 - 342; 345;
		355; 393 - 387;
		389.

APPENDIX II PERCENTAGE SHARE OF WOMEN WORKERS ENGAGED IN THE MANUFACTURE OF FOOD PRODUCTS

District	Major Group	Minor Groups																
		201	202	203	204	205	207	209	210	211	212	213	214	215	216	217	219	
Aurangabad(B)	9.56				(819) 2.07			(37) 10.17									(CR) 40.69	
Aurangabad(M)	9.22	(CR) 31.40			(63) 3.65	(22) 5.86	0.00	(73) 8.09	(15) 43.68	(73) 22.63	0.00				0.00		(111) 27.94	
Pune	8.78	(CR) 4.23	CU 46.72		(72) 4.88	(10) 3.27	(799) 4.56	(267) 7.89	(187) 8.74	(210) 12.54			0.00	(25) 5.66			(147) 29.95	
Saharsa	8.77	(CU) 2.62			(776) 9.25			(CR) 3.71		(CR) 4.93							(56) 34.56	
Ahmadnagar	8.46				(69) 2.70	(66) 2.80		(145) 12.53	(CR) 18.87	(101) 13.85							(131) 18.13	
Parbani	8.37				(212) 4.10	(CU) 5.41		(21) 17.05	(CU) 7.81	(40) 17.33							(105) 17.14	
Munger	8.32	(CR) 11.92			(508) 3.89	0.00		(20) 3.71		(30) 6.54							(100) 37.90	
Gaya	8.15	(CR) 27.39			(48) 1.65	(CU) 1.95		(26) 10.00		(CR) 3.62				0.00			(37) 10.89	
Satara	8.12	0.00			(158) 9.94	(44) 3.98	0.00	(67) 10.87		(340) 15.25							(113) 28.46	
Greater Bombay	7.95	(CU) 3.63	(CU) 27.04	(CU) 48.60	(CU) 1.63	(CU) 6.98	0.00	(CU) 3.99	(CU) 3.63	CU 3.45	(CU) 3.31		CU 5.40	CU 8.85	38.81		(CU) 19.66	
Idukki	7.68				(1494) 8.33	(1211) 14.97					0.00	CR 3.62					(267) 21.57	
Nanded	7.60				(253) 3.72		(CR) 8.37	(175) 3.75		(6) 27.88							(66) 25.35	
Osmanabad	6.51				(655) 4.15	(CU) 17.03		(57) 13.31		(CU) 4.50							(47) 18.38	(178) 18.81
BID	7.60				(CR) 1.71	(CU) 12.97		(230) 22.27	(CU) 30.99	(62) 7.23							(51) 10.20	
Siwan	7.34				(CU) 1.34			(114) 1.51									(54) 39.57	
Patna	7.04	(102) 5.21			(9) 2.94	(CU) 2.62											(90) 5.35	

District	Major Group	Minor Groups															
		201	202	203	204	205	207	209	210	211	212	213	214	215	216	217	219
Sangli	6.90	CR 3.19			(156) 5.82	0.00	0.00										(24) 18.23
Purbi Champan	6.51	CR 4.07			(CR) 4.15	(11) 3.91		(23) 11.40	CU 4.35	CU 18.37							(478) 18.81
Paschim Champan	5.69	CR 20.15			(63) 5.02	0.00		(CR) 2.52		CR 18.25							(53) 22.42
Buldana	5.62	(CR) 8.93			(35) 3.48	0.00		(22) 7.69		CR 10.93							(135) 22.68
Dhule	5.25	(CU) 14.00			(451) 3.21	(CU) 3.20		CR 2.28	(CU) 5.33	(23) 4.62							(42) 17.86
Vaishali	5.06	0.00			(CR) 1.85	(CU) 4.42		CR 3.21	(CU) 5.91	0.00							(22) 18.36
Sangrur	5.02	0.00			(562) 3.87	(CR) 5.50		(246) 5.98			24.33						(32) 11.30
Rohtas	4.84				(165) 2.24			(34) 4.20	0.00	CR 3.77							(39) 21.61
Jalgaon	4.11	(11) 11.88			(261) 4.13	0.00		(182) 9.52	CU 5.37	0.00							(60) 12.31
Gopalganj	4.15				CR 1.04			(30) 4.12									(43) 34.02
Kolhapur	4.12	(CR) 3.36			(92) 5.79	(75) 2.67	CU 1.56	0.00		(85) 22.71			0.00				(107) 2.11
Akola	3.88	(12) 8.65			(302) 3.98	0.00		CR 8.70	CU 2.27	CU 3.68							(66) 7.53
Giridih	3.81				(164) 2.34	0.00		(37) 1.96		CR 7.53							(49) 17.39
Hazaribagh	3.69				(205) 1.32	CU 2.96		CR 2.34									(7) 20.99
Navadi	3.15				CU 1.30			(20) 3.83									(145) 10.58
Dhanbad	2.99				(71) 8.87	0.00		(CU) 0.22									(9) 5.89
Bhatinda	2.27	(CU) 5.16			0.00	0.00	0.00	CR 0.76		0.00							(21) 12.75
Jalandhar	2.25	(CR) 0.65			(300) 1.00	CU 5.33	0.00	0.00					0.00				(17) 13.66

District	Major Group	Minor Groups															
		201	202	203	204	205	207	209	210	211	212	213	214	215	216	217	219
Kapurthala	1.98				CR 1.42			(16) 4.96							0.00		(13) 3.70
Faridkot	1.94	0.00			CU 0.30	0.00		CU 0.92									(66) 8.77
Ferozepur	1.73	(CU) 2.97			CU 1.41	0.00		0.00									(110) 5.05
Rupnagar	1.40	(CU) 4.03			(211) 1.43	0.00		CU 0.93									CR 1.33
Ludhiana	1.21	(CU) 0.90			(169) 0.41	CU 1.83	0.00	0.00	0.00	0.00				CU 6.40			(57) 3.11
Amritsar	1.08	(CU) 1.19			CR 0.72	0.00	0.00	CU 0.70	0.00	0.00				0.00			(12) 2.95
Patiala	0.91	(53) 3.20			(57) 0.32	CR 1.21		0.00	0.00								(24) 1.84
Gurdaspur	0.75	CU 4.68			(219) 0.43	0.00	0.00	CR 0.37		0.00							(17) 2.15

APPENDIX III: PERCENTAGE SHARE OF WOMEN WORKERS ENGAGED IN THE MANUFACTURE OF BEVERAGES, TOBACCO AND TOBACCO PRODUCTS

District	Major Groups	Minor Groups							
		221	222	223	224	225	226	227	228
Shivani	9.89	-	-	-	-	-	(51) 12.10	-	-
Gopalganj	8.82	-	-	CR 1.69	-	-	(CR) 21.47	-	-
Nanada	8.58	-	-	CR 37.11	-	-	(103) 3.93	-	-
Palghat	8.48	-	-	-	(CR) 4.42	(CR) 8.47	(17) 8.47	-	-
Kapurthala	8.15	-	CR 1.75	-	-	-	CR 11.60	-	-
Jalgaon	8.10	-	-	-	-	-	-	-	-
Wayanad	7.81	-	-	-	-	-	-	-	-
Vaishali	7.18	-	-	CR 3.62	-	-	(139) 10.49	-	-
Kozhikode	5.47	-	-	-	(CU) 1.98	-	(229) 5.40	CR 2.13	-
Bhagalpur	5.41	-	-	-	-	-	(154) 5.53	-	-
Chandrapur	5.26	-	-	-	-	-	(CR) 4.80	-	-
Saharsa	5.16	-	-	-	-	-	CR 4.48	-	-
Akola	5.10	-	-	-	-	-	-	-	-
Palamau	4.13	-	-	(CR) 7.30	-	-	(121) 4.14	-	-
Sitamarhi	4.26	-	-	-	-	-	-	-	-
Darbhanga	3.99	-	-	(CR) 2.47	-	-	(89) 4.88	-	-
Gurdaspur	3.97	-	-	-	-	-	-	-	-
Dhanbad	3.69	-	-	-	-	-	CR 2.01	-	-
Muzaffarpur	3.44	-	-	(CR) 4.96	-	-	(226) 3.89	-	-
Alleppey	2.47	(103) 8.00	-	-	CR 1.30	-	-	-	-
Idukki	2.38	-	-	-	-	-	CR 2.08	-	-
Trivandrum	1.60	-	-	-	CR 2.70	-	CR 1.39	-	-
Quilon	1.29	-	-	(CR) 2.59	-	-	-	-	-
Kottayam	0.36	-	-	-	-	-	CR 1.39	-	-



**Section II.9: Percentage share of women workers engaged in the manufacture of basic metal products and alloys (33)**

The percentage share of women workers in the manufacture of metal products is much lower than non-metallic mineral products. The percentage values range between 0.0% and 9.52%. The district of Chandrapur has an extraordinary percentage of 32%. The major activities engaging women workers in this district are iron and steel industries and foundries for casting and forging of iron and steel. Relatively higher percentage share of women workers in the basic metal industry are concentrated in the districts of Maharashtra, namely Nanded, Parbhani, Jalgaon and Nagpur. In the districts of Bihar, the industries engaging women workers are copper manufacturing (333) and aluminium manufacturing. In Kerala also, these are the industries engaging women workers although the percentage share is very small. In Punjab, Rupnagar is the only district where percentage share of women workers in this industry exceeds 0.00%.