

**GROWTH AND INTERDEPENDENCE OF SECONDARY AND  
TERTIARY ACTIVITIES IN EASTERN INDIA: 1971-81**

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

**DEEPAK VERMA**

**CENTRE FOR THE STUDY OF REGIONAL DEVELOPMENT  
SCHOOL OF SOCIAL SCIENCES  
JAWAHARLAL NEHRU UNIVERSITY  
NEW DELHI-110 067  
INDIA  
1993**



जवाहरलाल नेहरू विश्वविद्यालय  
JAWAHARLAL NEHRU UNIVERSITY  
NEW DELHI - 110067

SCHOOL OF SOCIAL SCIENCES  
CENTRE FOR THE STUDY OF  
REGIONAL DEVELOPMENT

19TH JULY, 1993

CERTIFICATE

This is to certify that this dissertation entitled  
"GROWTH AND INTERDEPENDENCE OF SECONDARY AND TERTIARY ACTIV-  
ITIES IN EASTERN INDIA : 1971-81" submitted by MR. DEEPAK  
VERMA, in fulfilment of six credits out of the total re-  
quirements for the award of the degree of MASTER OF PHILOSO-  
PHY, is a bonafide work to the best of my knowledge and may  
be placed before the examiners for evaluation.

(M. SATISH KUMAR)  
SUPERVISOR

(G.K. CHADHA)<sup>21.7.93</sup>  
CHAIRPERSON

**TO MY PARENTS**

**AND**

**SISTERS**

## ACKNOWLEDGEMENTS

I extend my thanks to Dr.M.Satish Kumar for his supervision and invaluable suggestions for creating an environment of intellectual excitement. I am thankful to Dr. A.K. Mathur for giving me preliminary guidelines for conducting this research.

My thanks are also due to Mr. Satyendra and Ms. Sheesh Kaur for assisting me in Data compilation and programming. I am also thankful to library staff of Jawaharlal Nehru University, Registrar General Census of India, School of Planning and Architecture and Ratan Tata Library.

I owe deep dept of gratitude to Miss. Mahuya Mitra for her constant support at all the stages of work without which the work would have been incomplete.

I am also thankful to all of my friends epecially Mr. Kalyan for assisting me in the final stage of the work.

I am extreemly grateful to Mr. Om Prakash and Mr. Tiwari for adept typing of this dissertation and to Mr. Anjani, Mr. Vinoy and Mr. Satyendra for typing the tables.

Last but not the least, I extend my deep gratitude to my parents and sisters whose encouragement and inspiration has always guided me to the right path.

*Deepak Verma*

DEEPAK VERMA

## C O N T E N T S

CHAPTER	TITLE	PAGES
	ACKNOWLEDGEMENTS	
	LIST OF TABLES	
	LIST OF MAPS	
I	INTRODUCTION	1
	1.1 Introductory Statement	1
	1.2 Eastern India: As a regional Unit	3
	1.2.1 Concept of Region	3
	1.2.2 Tracing Eastern India in the Past	5
	1.3 The Study Unit	16
	1.3.1 Choice of Study Area	19
	1.4 Objectives	20
	1.5 Hypotheses	21
	1.6 Data Base	23
	1.7 Organisation of the Study	24
II	NON PRIMARY WORKFORCE : A CONCEPTUAL FRAMEWORK	26
	2.1 Concept of Non-Primary Sectors	26
	2.2 Non-Primary Sectors : A Development Debate	29
	2.3 Literature on Non-Primary Sectors in India	36
	2.4 Classification of Non-Primary Sectors	39
III	GROWTH OF NON-PRIMARY WORKFORCE IN EASTERN INDIA (1971-81)	45
	3.1.1 Objectives	46
	3.1.2 Hypotheses	47
	3.1.3 Methodology	47
	3.2.1 Urban Secondary Sector: Male Workers	49
	3.2.2 Urban Secondary Sector: Female Workers	50
	3.3.1 Urban Utility Sector: Male Workers	60

	3.3.2	Urban Utility Sector: Female Workers	61
	3.4.1	Urban Tertiary Sector: Male Workers	67
	3.4.2	Urban Tertiary Sector: Female Workers	80
	3.5	Relationship of Male and Female workers in Non-Primary Workforce	90
IV		PARTICIPATION RATE AND CONCEN- TRATION OF NON-PRIMARY WORKFORCE IN EASTERN INDIA (1981)	96
	4.1	Objectives	97
	4.2	Hypotheses	98
	4.3	Methodology	98
	4.4	Urban Secondary Sector: Male Workers (1981)	101
	4.5	Urban Secondary Sector : Female Workers (1981)	106
	4.6	Secondary Sector Base	107
	4.7	Urban Utility Sector : Male Workers (1981)	115
	4.8	Urban Utility Sector: Female Workers (1981)	117
	4.9	Urban Tertiary Sector: Male Workers (1981)	119
	4.10	Urban Tertiary Sector: Female Workers	127
	4.11	Service Sector Base	138
	4.12	Male Preferred and Female Preferred Non-Primary Workforce (1981)	138
V		INTERRELATION AND INTERDEPENDENCE OF NON-PRIMARY WORKFORCE 1981	151
	5.1	Objectives	152
	5.2	Hypotheses	152
	5.3	Methodology	156
	5.4.1	Correlation Between Growth of Urban Non-Primary Sectors: Male Workers(1971-81)	159
	5.4.2	Correlation between Growth of Urban Non-Primary Sectors: Female Workers(1971-81)	161

5.5.1	Correlation between Participation Rate of Urban Non-Primary Sector	161
5.5.2	Correlation between Participation Rate of Urban Non-Primary Sector: Female Workers (1981)	163
5.6.1	Correlation between Levels of Development and Workforce in Non-Primary Sector: Male Workers (1981)	164
5.6.1.1	Level of Development and Workforce in Service Industries	165
5.6.2	Correlation between level of development and Workforce in Non-Primary Sector: Female Workers (1981)	169
5.6.2.1	Level of Development and Services Industries	171
VI	SUMMARY OF THE FINDINGS AND CONCLUSION	189
	BIBLIOGRAPHY	176
	APPENDIX-I	
	APPENDIX-II	

## LIST OF TABLES

Table No.	Title	Page No.
1.1	Regionalisation in India: An Evolutionary Approach	6
1.2	Jharkhand as a Regional Unit	13
1.3	Temporal Comparability	18
1.4	Sources of Data	24
2.1	Comparability of Use Based and Input Based Classification	42
3.1	Growth Rate of Urban Secondary Sector in Eastern India, 1971-81	50
3.2	Average Annual Growth of Male Activities in Urban Secondary Sector: A District Level Analysis, Eastern India, 1971-81	52
3.3	Average Annual Growth of Female Activi- ties in Secondary Sector, A District Level Analysis, Eastern India - 1971-81	57
3.4	Growth Rate of Urban Utility Sector in Eastern India, 1971-81	61
3.5	Average Annual Growth of Male Activities in Urban Utility Sector: A District Level Analysis, 1971-81	63
3.6	Average Annual Growth of Female Activities in Utility Sector - A District Level Analysis, Eastern India, 1971-81	66
3.7	Growth Rate of Urban Tertiary Sector in Eastern India, 1971-81	68



3.8	Average Annual Growth of Male Activities in Urban Tertiary Sector: A District Level Analysis, Eastern India, 1971-81	75
3.9	Average Annual Growth of Female Activities in Tertiary Sector, A District Level Analysis, Eastern India, 1971-81	85
3.10	Inverse Trend of Growth Rate: Eastern India, 1971-81	91
4.1	Location Quotient and Participation Rate of Urban Secondary Sector in Eastern India, 1981	102
4.2	Concentration of Secondary Sector in Eastern India - A District Level Analysis, 1981	105
4.3	Secondary and Utility Sector Base in Eastern India	108
4.4	Location Quotient and Participation Rate of Urban Utility Sector	116
4.5	Concentration of Utility Sector in Eastern India: A District Level Analysis	118
4.6	Location Quotient and Participation Rates of Urban Tertiary Sectors in Eastern India	120
4.7	Concentration of Tertiary Sector in Eastern India, A District Level Analysis	125
4.8	Tertiary Sector Base in Eastern India - 1981 (Singer's Classification)	128
4.9	Major Service Base in Eastern India: A District Level Analysis	134
4.10	Secondary Sector: Male and Female Preferred Activities	140
4.11	Tertiary Sector: Male and Female Preferred Activities	141
5.1	Correlation Between Growth of Urban Non- Primary Sectors, 1971-81	157

5.2	Correlation Between Participation Rate of Urban Non-Primary Sector	162
5.3	Level of Development in West Bengal, 1981	167
5.4	Level of Development in Orissa, 1971	168
5.5	Correlation between Level of Development and Participation Rate in Non-Primary Sectors, 1971-81	170
5.6	Services Which Indicate Development and Underdevelopment	171

## LIST OF MAPS

Map No.	Title	Page No.
1.1	Eastern India: The Study Area	17
3.1	Eastern India: Growth of Urban Secondary Sector (1971-81), Male and Female	17
3.2	Eastern India: Growth of Urban Tertiary Sector (1971-81), Male and Female	71
4.1	Eastern India: Relation between Growth Rate (1971-81) and Level of Concentration (1981): Male Secondary Sector	142
4.2	Eastern India: Relation between Growth Rate (1971-81) and Level of Concentration (1981): Female Secondary Sector	144
4.3	Eastern India: Relation between Growth Rate (1971-81) and Level of Concentration (1981): Male Tertiary Sector	146
4.4	Eastern India: Relation between Growth Rate (1971-81) and Level of Concentration (1981): Female Tertiary Sector	148

## CHAPTER I

### INTRODUCTION

#### 1.1 Introductory Statement

Nonprimary workforce comprises of Secondary, Utility and Tertiary sectors. It constitutes more than eighty per cent of workforce in urban areas of Eastern India. A study of the Secondary and Tertiary sector together gives a better understanding of the nature of spatial spread, trend of growth and interdependence of nonprimary workforce.

Eastern India has experienced relatively slow growth of Secondary sector during 1965-75. This has been followed by rapid growth of this sector in post 1975 period. It will be interesting to observe the growth pattern of Tertiary sector in the context of growth of Secondary sector. There occurs spatial variation in workforce structure due to diverse nature of the resource base of Eastern India. The disparity in level of development is also associated with the spatial variation.

The region of Eastern India comprises of West Bengal which indicates relatively high level of development and Bihar and Orissa which exhibit relatively low level of development. Spatial pattern of spread of nonprimary workforce in a developed and under-developed region gives a clue to the activities which are associated with development.

The Secondary sector of a economy comprises of manufacturing and construction. The activities increases the value of a previously existing items by changing its forms. Tertiary sector of economy is concerned with transportation communication, administration and other services and not with farming, extraction or manufacturing. Utility sector has dual characteristic of Secondary and Tertiary sector, and it has been taken as a separate sector.

Secondary sector activities are more or less homogeneous in nature. Tertiary sector, however, displays relatively heterogeneous nature of activities. This paves the way for the analysis of Tertiary sector in detail, so that the varying trend of growth and spatial pattern of service industries can be analysed.

In the Third World the high concentration of service industries was taken to be a negative feature. But with the changing socio economic scenario, the services industries, now has a different role to play. It is necessary to analyse whether in the changed scenario, the assumption of services industries being of a residual nature, holds true or not. But before delving in this research, an attempt has been made to justify the concept of region and delineate Eastern India as a distinct regional unit.

## 1.2 Eastern India: As a Regional Unit

The study area pertains to Eastern India which comprises of the states of West Bengal, Orissa and Bihar. Before commencing the study it is necessary to have a clear vision of the concept of region, the debate of region as a mental construct and a real fact and different schemes of regionalisation, which have traced Eastern India in the past.

### 1.2.1 Concept of Region

The earth consists of a number of similar units. These units are homogeneous in physical economic and socio-cultural criteria. These homogeneous unit which are spatially contiguous is termed as a region.

Homogeneity has been the basis of delimiting a region, in the initial phase of development of the concept of region (Blache 1899; Herbertson 1905; Demangeon 1905, Hettner 1907). These were generally single feature region depending upon physical characteristics of land. They also agreed that region do exist. When the role of man in region formation was considered, it gave rise to multiple feature regions, economic regions and cultural regions. They were all based on the concept of homogeneity and termed as 'formal' region.

The concept of region had a major change with the introduction of the concept of functional region (Stanberry, Cline 1949). Region has been defined by Stanberry as an area within which higher degrees of mutual dependency exists. Regions based on homogeneity were not discarded altogether. But now region were of two types, formal and functional region. A third type of region, termed as ad hoc region, is referred in the contemporary period. The delineation of such region is on the basis of specific purpose such as backward region, water resource region etc. They are a type of formal region as they are homogeneous and share common purpose.

The questioning of regions' existence came in the light of arbitrary delineation of regions based on quantitative tools "Delimitation of a region is always based on mental judgement" (Singh 1971:26). So variables chosen for delimiting region on the basis of quantitative technique also varies. Referring to the difficulty in comprehension of a region, Minshul says "the concept of region floats away when one tries to grasp it and disappears, when one looks directly at it and tries to focus" (Singh 1971:26). Regarding 'region', as redundant concept, Massey (1978) states that, "region is rarely constituted as an effect of analysis." Gore (1984) states, "In much Anglo-American regional development theory... the region has been displaced from the

centre of the stage."

The concept of region does suffer from the drawback of being influenced by varying mental-judgement and subjectivity attached to it. But it will be incorrect to altogether discard the concept of region. "Region does exist in both mind of people and as a reality" (Deshpande, 1992). We can very well differentiate the Ganges Plain from Himalayan Ranges and Peninsular Block in India. The functional relationship of National Capital Region can also be distinctly differentiated from its adjoining region. So the region does exist. Region may be defined as a unit of land with homogeneous character and/or network of linkages around a focal point, which is operationally the most convenient and most gainful economic unit having a single common boundary.

#### **1.2.2 Tracing Eastern India in the Past**

Eastern India comprising of West Bengal, Orissa and Bihar is necessary to be traced in the scheme of regionalisation of different regional scientists. Different scheme of regionalisation propounded in the past is given in Table 1.1



Table 1.1: Regionalisation in India  
An Evolutionary Approach

Author	Basis of Classification and Type of Region
1. Blanford (1889)	Climatic Regionalisation.
2. L.D. Stamp (1927)	Natural Region - three macro and twenty two meso-regions; physical aspect stressed, a human aspect ignored.
3. J.L. Baker (1928)	Natural Region, similar to Stamps classification.
4. Pithawala (1939)	Concept of physiographic uniformity.
5. Kazi S. Ahamed (1944)	Natural Regions of India, first time macro region in four divisions - Coastal region separated from Peninsula.
6. V.L.S.P. Rao (1949)	First to analyse economic region - denies state as territorial base.
7. V. Nath (1954)	Fifteen Resource Development regions of India on the basis of physical factor, agricultural landuse and and cropping pattern.
8. State Reorganisation Act (1956)	Division of State on linguistic basis.
9. Asok Mitra (1961)	Region on the basis level of development, Ranking method used
10. O.H.K. Spate et. al. (1967)	Takes structure to delineate into three noise level region.
11. G. Sadasyuk and P. Sengupta (1968)	Economic Regionalisation, Production Specialisation as the basis - understanding of natural region with endowment of resources leads to regionalisation - gave planning region - Administrative Boundary should be superimposed upon the map of natural region,

- 12.L.S. Bhat (1969) Economic Regions for achieving regional goals.
- 13.R.L. Singh (1971) Takes Geology, structure, relief and physiography. For macro level classification uses physical cultural, and historico-cultural factor for second order Region.
- 14.R.G. Gindadhubly and L.S. Bhat (1971) Economic Regions and Resource flow in delimiting functional economic region.
- 15.S.P. Chatterjee (1974) Economic Regions on the basis of politico-economic factor, economic ties, agricultural output and natural resources.
- 16.T.C.P.O. Balanced Regional Development as a goal.
- 17.Agro-Climatic Regionalisation On the basis of soil, topography rainfall, temperature and crop pattern - fifteen agro climatic regions identified
- 18.C.D. Deshpande (1992) Took human aspect into consideration - gave the concept of geographic region - took natural region, cultural and economic landscape and administrative boundary as basis - states with distinct boundary serves as a good basis for inter-state region.
- 

The Census Monograph "Levels of Regional Development in India" uses ranking method to arrive at regionalisation of India on the basis of the level of development (Mitra, 1961). Multiple-factors are taken into consideration. Eastern India can be traced by clubbing the below stated region.

1. Orissa Hills and Plateaus:

(a) North Western Hills.

(b) North Eastern Hills.

2. South Bihar Hills and Plateau:

(a) Chotanagpur.

(b) Gondwana Trough.

(c) Rajmahal Hills.

3. West Bengal Upland:

(a) Ranchi Peni-Plain.

(b) Rarh.

4. Bihar Plains:

(a) North Bihar Plains.

(b) South Bihar Plains.

5. West Bengal Plains:

(a) North Bengal Plain.

(b) North Delta.

(c) Gangetic Delta.

(d) Damodar Delta.

6. Orissa Coastal Plain.

The proposed Jharkhand State in this scheme is obtained by clubbing northeast of Orissa Hills and Plateau Regions complete South Bihar Hills and Plateau Region and West Bengal Upland Region.

One of the pioneering work on economic regionalisation classifies India into five integral economic regions (Sadasyuk and Sengupta, 1968). Of the five regions North East is comprises of West Bengal, Orissa and Bihar. It is termed as relatively mature economic region. Calcutta Damodar belt is the backbone of this region. Sadasyuk is a strong supporter for taking administrative boundary for the planning purpose. Sengupta gave a general principle underlying the division of the country into a hierarchy of region (Sadasyuk and Sengupta, 1968).

(i) Understanding of natural region with the endowment of resources is essential.

(ii) Production specialisation should be the basis of regionalisation in economic planning. Micro region should coincide with single or multiple resource areas. Meso economic region should be always multipurpose units with production specialisation of national, regional and local importance. Macro economic regions must show potential in production cycles of national importance in more than one.

(iii) The first step of economic regionalisation is the division of the country into natural regions of different order. Administrative boundary should be superimposed upon map of natural regions and sub-regions, with the indication of resources.

(iv) Macro region will emerge out by grouping meso regions and mesoregion by grouping micro regions.

Sengupta classified India into seven planning regions for resource development of which Eastern Region comprising of West Bengal, Orissa and Bihar is one. A further classification of Eastern Region is as follows.

#### **I. Eastern Region**

- (i) Calcutta-Hooghly Area.
- (ii) Damodar Valley Area.
- (iii) Chotanagpur and Northern Orissa Plateau.
- (iv) Southern Hills and Plateau of Orissa.
- (v) Lower Ganga Plain including delta and coastal area.
- (vi) Darjeeling Hills and Duars.

The proposed Jharkhand state is formed by clubbing Damodar Valley area, and Chotanagpur and northern Orissa plateau.

A delineation of the subcontinent on the basis of structure into three macro regions comprises of the Mountain

Rim, Indo Gangetic Plain and the Peninsula (Spate, 1964).  
Eastern India is a part of all the three macro regions.

I. The Mountain Rim

(i) Tista Valley.

II. Indo Gangetic Plain

(i) Middle Gangetic Plain

(ii) The Bengal Delta

III. The Peninsula

(i) Aravali and Central India

(a) Chotanagpur.

(ii) The Deccans

(a) Upper Brahmini and Jamshedpur

(b) Eastern Hills

(c) Orissa Delta.

The peninsular part excluding Orissa Delta encompasses the proposed Jharkhand State. A classification taking into account geology, structure, relief and physiography for a macro level classification and physical, cultural and historico-cultural factor in delineation of second order region indicates that the Eastern India can be traced out in all the four macro regions (Singh, 1971).

I. Great Plains

(i) Middle Ganga Plain

(ii) Lower Ganga Plain.

## II. The Himalayan Mountain Region

(i) Eastern Himalaya

(ii) Darjeeling Himalaya.

## III. Peninsular Upland

(i) Chotanagpur Region

(ii) Orissa Highland Region.

## IV. Indian Coast and Island

(i) Utkal Coastal Plain.

Proposed Jharkhand State comprises of peninsular upland portion of Eastern India. An attempt to delineate economic regions of India classifies India into five divisions (Bhat, 1969): Eastern, Western, Northern, Southern and North Central. Eastern Region comprises of Bihar, Orissa, West Bengal and Assam.

"The three state regions comprising Bihar, Orissa and West Bengal stand out as a distinct unit" (Pathak et. al., 1970:64). On the basis of physical, economic and socio-cultural indices a composite index is prepared which leads to formation of four types of region in Eastern India.

(I) Dynamic Region:- This includes part of Southern West Bengal.

(II) Prospective Region:- This comprises of major part of proposed Jharkhand State.

(III) Less Developed Region:- Which includes Northern Bihar, eastern West Bengal and eastern Orissa.

(IV) Problematic Region:- i.e. the hilly tract of Orissa and West Bengal.

Table 1.2: JHARKHAND AS A REGIONAL UNIT

Regional Scientist	The Region
1. A. Mitra (1961)	Northeast of Orissa Hills and Plateau Region, South Bihar Hills and Plateau Region, West Bengal Upland Region
2. P. Sengupta and G. Sadasyuk(1968)	Damodar Valley, Chotanagpur and Northern Orissa Plateau
3. O.H.K. Spate et. al. (1968)	Chotanagpur, Upper Brahmin and Jumeshpur, Eastern Hills
4. R.L. Singh(1971)	Chotanagpur Region, Orissa Highland Region
5. Agro-Climatic Regionalisation Scheme	Northeast part of Eastern Plateau and Hill Region
6. C.D. Deshpande (1992)	Part of Madhya BHARAT Plateau

S.P. Chatterjee (1974) on the basis of politico-economic consideration, economic ties, agricultural output and natural resources has delineated three economic regions



of first order namely North East, North West and South. There are thirteen economic regions of second order of which three, Eastern Coast Plains, Eastern Peninsular Plateau and North East Mountains are sub-part of North East Region, Eastern India can be traced in North East Region if North East Mountain is excluded and a part of U.P. from Eastern Great Plain is excluded.

Gidadhuby and Bhat (1971) in their Economic Regions and Resource flows have attempted a pioneering work in delineating functional economic region. It studies commodity flow in India and analyses inter-regional and intraregional relationship between different economic regions. The seven functional economic regions delineated are Southern, Western, Central, North Western, North Central, Eastern and North Eastern. Eastern Region which comprises of West Bengal, Orissa and Bihar forms a distinct macro-region for functional economic regionalisation.

Planning regions as delineated by T.C.P.O. (Town and Country Planning Organisation) steers to a balanced regional development. The study unit i.e. Eastern India can be traced by clubbing Eastern Peninsula and Lower Ganga Plain. The proposed Jharkhand State can be traced in Eastern Peninsula.

One of the recent regionalisation schemes is that of Agro-Climatic Regionalisation. The parameter for the regionalisation are soil, topography, rainfall, temperature and crop-pattern. Eastern India is obtained by clubbing three zones, Lower Gangetic Plain, Middle Gangetic Plain and north eastern part of Eastern Plateau and Hill Region. The proposed Jharkhand State is the northeast part of Eastern Plateau and Hill region.

"India - A Regional Interpretation" is the most recent regionalisation of India (Deshpande, 1992) Deshpande gave adequate stress to human factor which has been neglected in the previous regionalisations. Natural, Cultural, Economic aspects and administrative division are the basis of delineation of region. He traced twelve geographic regions: Eastern India comprised of Middle Ganga Plain (Bihar), Bengal Delta (West Bengal) and East Plateau (Orissa). The proposed Jharkhand State is a part of Madhya Bharat Plateau.

The different scheme of regionalisations does not always identify Eastern India as a distinct regional unit. Such as natural regions of Spate and R.L. Singh has to club up all its macro region for tracing Eastern India. Proposed Jharkhand State is rather easily set apart due to its more homogeneous nature. However economic regionalisation does delineate Eastern India as a distinct regional unit. Pro-

posed Jharkhand region also can be distinctly separated from its adjoining region.

Due to lack of uniformity of regionalisation at lower level administrative boundary (state and districts) are taken as study unit. "District boundary serves as a good basis for inter-state region" (Deshpande, 1992).

Taking district as study unit has an added advantage, as it becomes a planning unit.

### **1.3 The Study Unit**

The study unit chosen is Eastern India which comprises of West Bengal, Orissa and Bihar. The proposed Jharkhand State is formed by clubbing six districts from Bihar, four districts from Orissa, two districts from West Bengal and two districts from Madhya Pradesh. The following districts are taken for study.

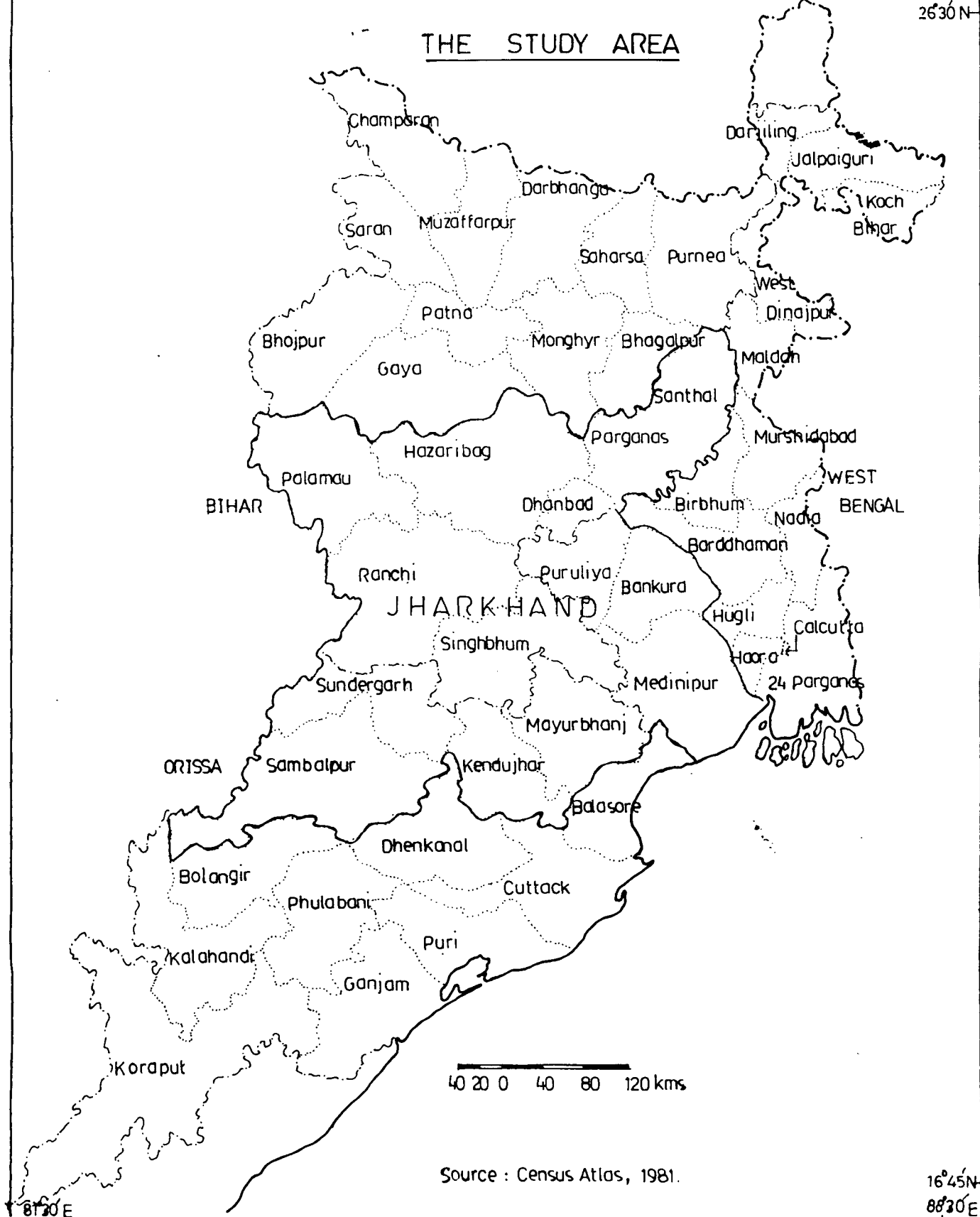
**(A) West Bengal:-** Koch Bihar, Jalpaiguri, Darjiling, West Dinajpur, Maldah, Murshidabad, Nadia, Twentyfour Parganas, Calcutta, Haora, Hugli, Medinipur, Bankura, Puruliya, Bardhaman, Birbhum (sixteen districts).

**(B) Orissa:-** Sambalpur, Sundergarh, Kendujhar, Mayurbhanj, Balasore, Cuttack, Dhenkanal, Phulabani, Bolangir, Kalahandi, Koraput, Ganjam, Puri (thirteen districts).

Eastern India

26°30' N

THE STUDY AREA



16°45' N  
88°30' E

(C) Bihar:- Patna, Gaya, Bhojpur, Saran, Champaran, Muzaffarpur, Darbhanga, Munger, Bhagalpur, Saharsa, Purnia, Santhal Parganas, Palamau, Hazaribag, Ranchi, Dhanbad, Singhbhum (seventeen districts).

(D) Proposed Jharkhand State:- Santal Pargana, Palamau, Hazaribag, Ranchi, Dhanbad, Singhbhum, Sambalpur, Sundargarh, Kendujhar, Mayurbhanj, Medinipur, Bankura, Puruliya, Raigarh, Sarguja (fifteen districts).

The proposed Jharkhand State is analysed only at aggregative level because its districts are analysed as a part of three states.

The temporal data is comparable for 1971 and 1981 only for West Bengal and Orissa. But for Bihar, adjustment has to be made. The 1981 data is clubbed up to make it comparable with 1971 data. The clubbing is done as follows:

Table 1.3: Temporal Comparability

1971	1981
1. Champaran	1. Paschim Champaran+Purba Champaran
2. Muzaffarpur	2. Muzaffarpur+Sitamarhi+Vaishali
3. Darbhanga	3. Darbhanga+Samastipur+Madhubani
4. Purniya	4. Purnia+Katihar+Madhubani
5. Patna	5. Patna+Nalanda
6. Sahabad	6. Bhojpur+Rohtas
7. Gaya	7. Gaya+Navada+Aurangabad
8. Hazaribagh	8. Hazaribag+Giridih
9. Saran	9. Saran+Sivan+Gopalgunj

### 1.3.1 Choice of Study Area

The reason for selecting this Eastern Region is stated below:

(i) This unit has a separate regional identity. It can be distinctly differentiated from its adjoining region.

(ii) Industrial, regionalisation of B.N. Sinha delineates "The Hugly Belt" and "The Chotanagpur Region" as major industrial regions. They are approximately contiguous and its hinterland comprises of is West Bengal, Orissa and Bihar.

(iii) Calcutta-Haldia port acts as a hinterland to Bihar, West Bengal and Orissa. The hinterland is the study area.

(iv) This regional unit accounts for maximum reserve and maximum production of mineral resources. It is also fairly independent in power and energy resource. Moreover a long history of agricultural activity adds diversity to its resource base. An attempt has been made to analyse the predominant activities at district level.

(v) West Bengal is a developed state. Orissa and Bihar, on the other hand, are backward states in terms of the level

of development. The present study may enable us to analyse the employment structure in non-primary sector in a developed and a backward region.

The proposed Jharkhand State has also been analysed separately.

(i) Jharkhand region has a distinct regional identity.

(ii) The employment structure of non-primary sector, in richest mineral resource region is analysed. It may give a clue to certain non-primary activity being underemployed. Proper employment planning in non-primary sector may give a partial solution of Jharkhand problem.

In the present study only the urban component of the region is discussed because non-primary activity is predominant in the urban areas. In rural area they have a limited influence.

#### **1.4 Objectives**

The objectives of the present study are as follows:

(i) An analysis of the growth pattern of non-primary sector at a disaggregative level.

(ii) To trace out whether the trend of growth of Secondary, Utility and Tertiary sectors are similar or dissimilar.

(iii) The present research attempts to analyse the spatial spread of dominance of non-primary activity for males and females.

(iv) Attempt has been made to reveal the relationship of participation rate of concentration and growth of non-primary workforce in males and females.

(v) It also aims at distinguishing between male preferred non-primary workforce and female preferred non-primary workforce.

(vi) To trace out the nature of interdependence of Secondary, Utility and Tertiary sectors by analysing their relationship.

(vii) To analyse the relationship of participation rate of non-primary sectors with the levels of development.

### **1.5 Hypotheses**

1. Higher the growth of male and female in the Secondary sector higher will be the growth of Tertiary sector in the Eastern Region.

2. Utility sector exhibits relatively high growth, in comparison to Secondary and Tertiary sectors, for males and



TH-4968





females in the Eastern Region.

3. Services Linked to Production show a higher growth of male workers than female workers in the Eastern Region.

4. Services Linked to Consumption show a higher growth of Female workers than male workers in the Eastern Region.

5. The growth of male and female activities in Secondary and Tertiary sector is moderate in comparison to all India average.

6. Secondary workforce reflects a high degree of spatial variation as compared to Tertiary workforce.

7. There is an inverse relationship between the level of concentration and growth of non-primary activities for male and female workers

8. Female workforce is high in those non-primary workforce which require less skill, less mobility and are low paid jobs.

9. High participation rate in Secondary sector is accompanied by low participation rate in Tertiary sector.

10. Higher the level of development higher the participa-

tion rates of non-primary sector.

11. High participation rate in social economic overhead services and financial services is followed by high level of development.

12. Personal services, retail trade services, sanitation services exhibit negative relationship with development.

### **1.6 Data Base**

The source of data for the contemporary study is the B12 table of the General Economic Tables 1981 which deals with industrial classification of main worker other than cultivators and agricultural labourers by sex and by division, major group and minor group. It corresponds to Table BIV Part A of 1971 Census, General Economic Tables. The analysis for the present study is done at two digit level (i.e. major group) for urban areas because it captures the salient features of urban employment pattern distinctly.

The sources of data incorporated in the present study for levels of development is indicated in the table below.

Table 1.4: Sources of Data

Variable	Data Base
1. Female Work Participation outside agriculture (1981)	Census of India 1991, Series I India, Provisional Population Totals, Paper 3 of 1991. Workers and their distribution.
2. Total Fertility Rate	(i) Census of India 1981, Occasional Paper No.13 of 1987, Fertility and Child Mortality Estimates of Orissa.  (ii) Census of India 1981, Occasional Paper No.9 of 1988, Fertility and Child Mortality, Estimates of West Bengal.
3. Female Literacy above Primary (1981)	Census of India 1981, Part IV-A, Social and Cultural Tables, Series 16 - Orissa, 23 - West Bengal.
4. Percent of Household having Electricity	Census of India 1981, Occasional Paper of 1989, Household Literacy, Drinking Water, Electricity and Toilet facility.
5. Percent of Household having Drinking Water	- do -
6. Infant Mortality Rate	Census of India, 1981, Occasional Paper No.5 of 1988, Child Mortality Estimates of India.
7. Child Labour	Census of India 1981, General Economic Table Part III, A and B(i), Series 16 Orissa, 23 West Bengal.

### **1.7 Organisation of the Study**

The first chapter introduces the problem, defines the concept of region, traces Eastern India as a regional unit,

explains the choice of study area and discusses the data base. The conceptual framework of non-primary sector, the development debate related to it, the literature on non-primary sector in India and the classification scheme used for the contemporary study are discussed in the second chapter. The third chapter pertains to district level growth of non-primary sector between 1971 and 1981, at a disaggregative level for male and female separately. The fourth chapter, again for the same time period, analyses the non-primary base and concentration of non-primary activities independently for males and females at the district level. The fifth chapter traces the relationship between secondary sector and tertiary sector (including the sub-classification of these sectors), secondary sector and utility sector and tertiary sector. This correlation is worked out for growth and level separately for male and female between 1971 and 1981 for West Bengal, Orissa and Bihar. The fifth chapter also discusses the relationship of level of development and non-primary sector in West Bengal and Orissa for 1981. The sixth chapter summarises the results obtained from the study and discusses the policy implications. The objectives hypothesis and methodology are dealt in detail at the beginning of chapters three, four and five.

## CHAPTER II

### NON PRIMARY WORKFORCE: A CONCEPTUAL FRAMEWORK

The present chapter aims to provide a conceptual clarity of non-primary sector. The non-primary sector comprises of secondary, utility and tertiary sectors. The concept of these three sectors, their relationship with development and classificatory scheme used for the analysis is dealt in this chapter.

#### **2.1 Concept of Non-Primary Sectors**

Non-primary sector pertains to activities other than farming, hunting, food gathering, fishing and extractive industries. Unlike primary sector it is not directly linked to nature. These activities are relatively refined.

The secondary sector of the economy comprises of manufacturing and construction. The activities in this sector, "increases the value of a previously existing item by changing its form" (Alexander, 1988;1-2). This sector manufactures goods by processing raw materials, assembling components or producing commodities of value to man. There is a considerable range of industries covered under this sector. These include agro-based, mineral-based, machine-based industries, textiles, construction, etc.

Tertiary sector of the economy is concerned with transport, trade, communication, administration and other services. Universal definition of tertiary sector has been elusive due to its heterogeneous nature of activities. The only characteristic common to the tertiary sector or service sector is intangibility. But there are few services which do produce tangible goods, for example, an artificial teeth provided by a dentist.

The heterogeneous nature of service sector has led to regard this sector as residual sector. Fisher (1939) identifies this sector as "a residual rag bag after primary and secondary activities were accounted for". Deniel Bell also relies on the residual definition, "Services are what is left after you subtract jobs on farms and factories" (Cohen and Zysman, 1987:52 ). Taking tertiary sector as residual sector can only result from an 'isolated view' of the sector where interlinkage with the other sector of economy are ignored (Kumar, 1991). Bailly (1987) states that it can be of a residual nature only if it played a marginal role in economic activity. The role of this sector is fundamentally different. In the recent literature the focus has slightly shifted to functional linkages provided by the service sector. It is looked upon as having "capa-

bility to assist in the distribution of goods and raw materials and in circulation of capital" (Kumar, 1984:71). Thomas (1967) drew attention to those features common to many services, "First, their product is typically an immediate one often continuously provided and often of a personal nature; with an output hard to measure in conventional accounting terms. Second, the labour involved is often professional in nature requiring some personal skills and less manual ability. Third, organisation providing services typically differ from those in other sector. There are more non-profit making firms, more small companies and self-employed workers and more labour intensive production" (Gershuny & Miles, 1987: 52). Hence a tentative definition of tertiary sector can be arrived at, Tertiary sector comprises of heterogeneous activities which are generally intangible, labour intensive, non-storable and is related with high ratio of value added to the value of input.

Utility sector which comprises of electricity, gas and steam water works and supply has been made a separate category as it has a distinctive characteristic. This utility sector has some element of secondary sector and some of service sector. The dual nature and its distinctive character has led to the formation of a separate sector

named as utility sector. This sector is studied separately and its relationship with the secondary and tertiary sector is also analysed.

## **2.2 Non-Primary Sector: A Development Debate**

The growth of non-primary sector is associated with development. Fisher (1939:77) is pioneer to analyse this relationship. According to him, "In every progressive economy there has been a steady shift of employment and investment from essential primary activities to secondary activity of all kinds and to a still greater extent into tertiary production" (Dutta and Sundram, 1991: 77). Colin Clark in his work "Conditions of Economic Progress" argues a somewhat same relationship when he says, "A high average level of real income per head is always associated with high proportion of working population engaged in tertiary industries... low real income per head is always associated with a low proportion of the working population engaged in tertiary production" (Clark, 1940:182). This three sector model is studied almost independently. It has also been advocated that tertiary sector is the ultimate stage of development and a developing economy passes from primary to secondary and then to tertiary sector dominated economy.



The shift of the dominance of primary sector to non-primary sector with development is necessary to be analysed. In the early stages of development (agricultural economy) primary sector dominates. It is due to the lack of innovation and diffusion of innovation. Moreover activities are governed by nature's bounty. Later on with innovation leading to industrial expansion non-primary activities starts expanding rapidly. This is due to:

(i) Means of production in non-primary sector is governed by man rather than nature.

(ii) Range of goods is more in non-primary sector.

(iii) Terms of trade is in favour of non-primary sector,  
and

(iv) Elasticity of demand is more than unity in non-primary sector.

Development leads to shift from primary sector dominated activities to non-primary dominated activities. But within non-primary sector the dominance of different sub-sector varies. In the early stage of economic development services and utilities which provide the vital infrastructure from industrial development may even grow more rapidly than industry in terms of employment and income (Ford Foundation, 1975). As the economy rapidly approaches

the industrial stage, industry usually runs neck to neck with the tertiary sector. The faster growth of secondary sector is due to larger economies of scale leading to rise in productivity per worker faster than in the case of tertiary sector. In the last stage i.e. the post-industrial economy (services more than fifty per cent), tertiary sector once again occupies the pride of place. Economic energy gets directed in meeting consumers varied and quite personal needs. There are three reasons of tertiary sector overtaking secondary sector (Ford Foundation, 1975):

(i) A high capital intensive production in secondary sector needs an elaborate system of transport, interpersonal communication, managerial and technical skills and an efficient wholesale and retail trade network.

(ii) With increase in personal disposable income demand for goods and services like consumer durables, entertainment and recreation which have high income elasticity, rises quickly.

(iii) It leads to urbanisation and hence newer governmental activities in the form of administration legislation and regulation emerge rapidly.

But dominance of tertiary sector does not always signifies development. Another school of thought has emerged which regards tertiary sector as dysfunctional. This school is supported by studies undertaken in third world economy where tertiarisation has led to economic stagnation and decay (Dutta, 1960; Lewis, Bauer and Yamey, 1951; Amin 1974). Dutta (1960) distinguishes between low income type of tertiary activity and high income type of tertiary activity. Expansion of petty retail trading does not signify development (Lewis). In the short run it signifies increase of marginal employment and low productive services (Bauer and Yamey, 1951).

Two components can be traced in services sector (Kumar, 1991): Traditional and Modern. Traditional tertiary sector engages domestic servants, artisans. Expansion of this sector signifies stagnating economy. The Modern tertiary sector is more conducive to development. For example, growth of banking, insurance recreation. This dual nature has led different scholars to trace dichotomy in tertiary activity. McGee (1971) for example, takes firm-centered economy (capital intensive) and Bazar economy (labour intensive). Santos advocates two circuits' upper circuit (capital intensive, investment is abundant and work limited) and

lower circuit (labour intensive and abundant work). Jan Breman (1976) traces dichotomy of formal and informal.

The sectoral shift and development however has been criticized on two grounds (Syrquin, 1989):

i) The model advocates for anti-agricultural bias. Jameson (1982) argues that decline in the share of agriculture in value added is not universal. A reorientation of development strategy is needed that will give priority to agriculture.

(ii) The historical shift of labour from agriculture to industry is achieved under different conditions. The rates of population growth are significantly lower during the process of industrialisation in advanced countries. Thus industry is unable to absorb labour at rates comparable to the historical ones. The result has been over expansion of employment in services particularly in low productive informal sector.

Gershuny and Miles (1983) while criticizing three sector model says that it ignores the possibility of social innovation and technical change. Also association between needs and industrial structure may vary between different historical juncture. The three sectors are not static.

With innovations taking place the type of services changes and in the new set-up has to be analysed at a given technology and economic condition. The sectoral shift may be conducive to development in a particular set up, but unfavourable with innovation and diffusion of innovation taking place.

The three sector model to become valid in the present context has to take into consideration three aspects:

(a) The dualism of tertiary sector has to be maintained (Kumar , 1991). The tertiary activities conducive to development should be taken in the model of sectoral shift and economic development. Tertiary sector which has negative relation with development should be excluded.

(b) Occupation classification should also be analysed. If more unskilled activities in tertiary sector is on the rise it signifies a stagnating economy. If, however, the tertiary activities which are conducive to development is on the rise these activities are also of skilled and highly paid in nature. It signifies development. The sectoral shift model of development holds true in this case.

(c) The concept of innovation and technical change should be taken into consideration while analysing the three

sector model. Innovation and technical changes may altogether alter the structure of employment and a change in it should be viewed vis-a-vis development.

There has been few studies relating to interdependence of secondary and tertiary sector Marshall (1982) has collected information about the linkages between manufacturing establishments and business services in British conurbation. "Relationship between manufacturing and services sector... is likely to be two way" (Pacione, 1985:73). But services does not purely depend upon manufacturing industry. Some services export their output to other region and cities. This is why when manufacturing in Britain continues to contract, business services experiences increased demand. It is due to its policy externalise its requirement.

'Manufacturing Matters' by Cohen and Zysman analyses relationship between manufacturing and services, "services are compliment to manufacturing not potential substitute or successor" (Cohen and Zysman, 1987:52). If one loses mastery and control of manufacturing the high paying service jobs that are directly linked to manufacturing disappears. "It is the high value added service roles tied directly to manufacturing that we must hold and develop." (Cohen and Zysman, 1987:52)

Relationship of utility sector with development has not been discussed separately in the literature available. It is because it has been considered either a part of secondary sector or a part of tertiary sector. Utility sector comprising of electricity, gas and steam and water works and supply provide necessary infrastructure for secondary sector. Thus, in a way, it accelerates the pace of secondary sector. Hence it is indirectly linked to development.

Thus secondary, utility and tertiary sectors are related to development in a specific way. These two sectors are interdependent and complementary and not competitive. Hence, study of these sectors together can give us a better picture of non-primary activities. The contemporary study focuses on giving a spatial pattern of growth, concentration and interdependence of non-primary sectors in Eastern India.

### **2.3 Literature on Non-Primary Sector in India**

A marked deceleration in growth rate has been experienced after mid-sixties in the secondary sector especially manufacturing (Raj 1976; Shetty 1978; Ahluwalia 1985). The stagnation is more pronounced in Eastern India (Banerjee 1982).

Ahluwalia (1985) had carried a detailed empirical analysis of industrial deceleration. She identified three principal contributing culprits: (i) Slow down in infrastructure investment and poor management of infrastructure; (ii) Slow growth of per capita agricultural incomes; (iii) Restrictive framework of industrial and trade policy. Some recent studies have brought out that after mid-seventies there has been a "turnaround" in the growth of secondary sector (Raj 1984; Alagh 1988; Ahluwalia 1988). Alagh (1988) and Seth (1989) have stressed on periodization of the reference period selected for the study. The time period selected for study has a relevance on capturing the trend of the level or growth rate of secondary sector. So it is necessary to classify the time period so that each sub-period may reveal a definite trend. Alagh (1988) had taken the year 1976-77 as cut off point. Between the mid-sixties to 1976-77 the growth of secondary sector had slowed down. In the post 1976-77 period however the growth recovered. Seth (1989) had taken 1976 as the dividing line. Ahluwalia (1988, 1991) has argued that the turn around in growth is partially due to favourable changes made in industrial and foreign trade policy. Jain (1993), however, is very critical about the turnaround concept of industrial growth. The management of infrastructure and change in per capita income



show little sign of recovery. Contributing reforms of restrictive trade policy to be the reason of turnaround in growth will be a hasty judgement.

Tewari (1988) analysing the growth rate of sectoral employment states that primary sector is growing faster in industrialised states whereas secondary and tertiary sectors are growing faster in industrialising states.

	Industrialised States (%)	Industrialising States (%)
	-----	-----
Primary Sector	2.01	1.85
Secondary Sector	3.76	4.34
Tertiary Sector	2.80	2.98

Banerjee (1982) looked at industrial stagnation in eastern India and denies the role of industrial disputes as a major factor of stagnation. Mukhopadhyay (1989) has looked upon inter-spatial intertemporal pattern of industrial employment, disparity in industrialisation and relationship of specialisation and growth of industries in West Bengal.

Mohan (1989) attempted to assemble the relevant data on employment, urbanisation and manufacturing during 1960s and 1970s. He found that non-household manufacturing and con-

struction records the fastest growth, whereas agriculture related activities have extremely low growth rate.

Kundu (1991) looks at the spatial structure and growth of industries and their rural-urban interdependence. He finds a strong positive co-relation of rural and urban growth pattern. Rao (1988) states that between 1950-52 and 1979-80 the share of tertiary and secondary sectors have increased in comparison to the primary sector.

Primary Sector	- 36.86 per cent
Secondary Sector	- 46.06 per cent
Tertiary Sector	- 48.87 per cent

"Tertiary Sector in Second India", a Ford Foundation Report explains the growth of education, trade, storage, financial institutions, public administration health and public services. A detailed analysis of tertiary sector in urban India has been discussed in an unpublished thesis of Satish Kumar (Satish, 1991), which encompasses almost all the aspect of female activities in tertiary sector in India.

#### **2.4 Classification of Non-Primary Sector**

The National Industrial Classification (1970) as adopted in 1971 Census of India provides a clear vision of the nature and character of urban activities. This scheme has

dual advantage. The classificatory system has not changed between 1971 and 1981 facilitating inter-temporal comparison. It considers only the main work force. But this classificatory scheme has inherent drawback. It is difficult to analyse specific activities significant in an urban economy. Such as, the manufacturing division classified into sub-groups as major and minor groups is unable to reveal the extent of agro-based industries or machine based industries. Tertiary sector suffers from the same drawback. It is difficult to estimate the extent of services linked to production or consumption in tertiary sector. Hence a classification scheme is required for non-primary sector which may enables to capture salient features of an urban economy.

Input based classification (Ahluwalia, 1985; Awasthi, 1991) is used for the analysis of secondary sector. Use based classification (Hoffman, 1958; Ahluwalia, 1985; Awasthi, 1991) has a limitation. This classification is possible only at three digit level. At the two digit level there are overlaps. For example, in the major group manufacturing chemicals (31), manufacturing of fertilizer (311) can be grouped with Basic Goods industries whereas manufacturing of paints, varnishes (312) with intermediate goods and manufacturing of photo chemicals (319) with consumer non-durables. Moreover few groups reveal dual nature. They may be used

both as capital goods and consumer goods. Such as manufacture of refrigerators can be used for preparing ice-cream for sale (capital goods) and for preparing ice-cream for personal consumption in a household (consumer goods). The below stated input based classification is used for analysis as it is relatively free from the afore-stated drawbacks.

#### I. Secondary Sectors\*

- a. Agro-based Industries
- b. Textiles
- c. Forest-based Industries
- d. Metal-based Industries
- e. Mineral-based Industries
- f. Machine-based Industries
- g. Other Industries
- h. Construction.

A attempt has also been made to make this input based classification comparable with use based classification:

---

\* The details of classification is given in the appendix.

**TABLE-2.1 COMPARABILITY OF USE BASED AND INPUT BASED CLASSIFICATION:**

<u>Use based Classification</u>	<u>Input based Classification</u>
1. Consumer Goods industries	Agro-based industries, textiles, forest based industries, other industries, construction.
2. Capital Goods Industries	Metal based industries, mineral based industries, machine based industries.

The classification of secondary sector excludes Repair (39 major group) because most of its activities are service oriented. Construction has, however, been added as by the very definition of secondary sectors, construction increases the value of a previously existing items.

The classification of utility sector is followed on the basis of NIC (1970) classification. Utility sector comprises of major division - D4. The major group. Electricity (40), Gas and Steam (41) and water works and supply (42) are sub-groups of utility sector.

Tertiary sector is more heterogeneous than the two other sectors (Kumar, 1991). This gives rise to problem of classification. NIC 1970 classification is also unable to capture service sector of urban economy. P. Singer's clas-

sification of service sector suits the service component of a developing country like India (Kumar, 1991). This classification has further advantage that it can be analysed at three disaggregative level enabling us to have a better understanding of the changes in urban economy. The broad classification of tertiary sector is stated below.

#### I. Tertiary Sector\*

##### (A) Services Linked to Production (SLP)

###### (i) Social Economic Overhead Services(SEO)

(a) Transport Services

(b) Storage Services

(c) Communication Services

###### (ii) Trade Services

(a) Wholesale Trade Services

(b) Retail Trade Services

###### (iii) Financial Services

(a) Banking Services

(b) Insurance Services

(c) Red Estate and Business Services

##### (B) Services Linked to Consumption (SLC)

###### (i) Private Consumption Services

---

\* A detailed classification of tertiary sector is given in the Appendix I.

- (a) Legal Services
- (b) Personal Services.
- (ii) Collective Consumption Services
  - (a) Public Services
  - (b) Medicine and Health Services
  - (c) Educational Services
  - (d) Community Services
  - (e) Recreation and Cultural Services
  - (f) Hotel and Restaurant Services
  - (g) Sanitation Services

The study pertaining to growth, concentration and interdependence of non-primary sector is carried on the basis of afore-stated classification.

### CHAPTER III

#### GROWTH OF NON-PRIMARY WORKFORCE IN EASTERN INDIA

The deceleration in the rate of industrial growth in mid-sixties was followed by a sharp increase of growth in mid-seventies in Eastern India (Seth, 1989). Thus there should be a moderate growth of Secondary sector during 1971-1981. The growth of Utility and service sector which are closely linked to Secondary sector may or may not show a similar trend. It may show a similar trend if increase in Secondary sector leads to expansion of Utility and Tertiary sectors. For example, establishment of iron and steel plant gives rise to employment opportunity in transportation, financial services, electricity etc. On the other hand Utility and Tertiary sector may be abnormally swollen or shrunken. The growth of Utility and Tertiary sector may be very fast (in comparison Secondary sector) in spite of low or moderate growth of Secondary sector. It will occur if the work force is growing very fast, but the growth of primary and Secondary sector are slow. The workforce will try to get absorbed in Tertiary sector. This will lead to high growth of Tertiary sector and this is termed as terti- arisation of the economy. The rapid expansion of retail trade and personal services signifies this trend. Slow



growth of Tertiary sector (in comparison to Secondary sector) in spite of moderate growth of Secondary sector may be attributed to slow growth of distributive and producers services due to over all backwardness.

Female workforce in Secondary, Utility and Tertiary sector is high in lesser skilled category (Kodras, 1993). As the level of education is low, social norms are strict and female preference is for white collar clean jobs. High growth of female activities in traditionally female areas such as teaching, health care, sales, personal services, social services is expected. However, with increasing awareness, level of education, social norms becoming liberal and government effort high growth of female activities in male dominated activities cannot be ruled out.

### **3.1.1 Objectives**

The objectives of the present study are as follows:

(i) An analysis of the growth pattern of non-primary sector at a disaggregative level.

(ii) To trace out whether the trend of growth of Secondary, Utility and Tertiary sectors are similar or dissimilar.

### **3.1.2 Hypotheses**

1. Higher the growth of male and female in the Secondary sector higher will be the growth of Tertiary sector in the Eastern Region.
2. Utility sector exhibits relatively high growth, in comparison to Secondary and Tertiary sectors, for males and females in the Eastern Region.
3. Services Linked to Production show a higher growth of male workers than female workers in the Eastern Region.
4. Services Linked to Consumption show a higher growth of Female workers than male workers in the Eastern Region.
5. The growth of male and female activities in Secondary and Tertiary sector is moderate in comparison to all India average.

### **3.1.3 Methodology**

Analysis of change in the workforce is based on the compound rate of growth. The compound growth rate has an advantage over simple growth rate. Simple growth rate takes into account only the terminal years. This leads to arriving at a growth rate which is overestimated. If the time

period taken is small (say one year) simple growth can be used as there will be no distortion in the growth rate. But if the time period is large (say 10 years) compound growth rate will be an appropriate method as it takes into consideration the sub-periods apart the terminal years (all the ten years). For example, if growth rate of Secondary sector is calculated for 1971 and 1981, simple growth rate takes into account only the values of the two terminal years. But in compound growth rate the growth of first year is added with the initial year and then the growth for second year is calculated. The process is repeated for second year, third year... upto tenth year. The final growth rate obtained gives a better picture of growth.

This chapter analyses the growth of non-primary work force as follows:

(i) Growth of non-primary workforce (Secondary, Utility and service sectors) for Eastern India, States and their respective districts, male and female separately.

(ii) Growth of non-primary workforce (the classified data for Secondary, Utility and service sector) for Eastern India, states and districts, male and female workers separately.

For the classified data analysis is done on the basis of

(i) Regions (states, districts) which have very high growth\* of non-primary activities for male and female.

(ii) Regions which show negative growth in non-primary activity for male and female workers separately.

(iii) Regions which have shown high growth of male activities in nonprimary sector but negative growth for females workers in these activities or vice versa.

### 3.2.1 Urban Secondary Sector - Male Workers

In Eastern India, the overall growth of male urban workers in the Secondary sector has been low (3.23 per cent in comparison to India's average growth of 4.01 per cent). This low growth is attributed to slow growth of Secondary

- 
1. The classification of growth rates for the period 1971-81, is as follows:

<u>Males</u>		<u>Females</u>	
Negative	= Less than one per cent	Negative	= Less than one per cent
Low	= 0-3 per cent	Low	= 0-4.5 per cent
Medium	= 3-6 per cent	Medium	= 4.5-9 per cent
High	= 6+ per cent	High	= 9+ per cent

very high growth rate is 9 per cent plus for males and 13.5 per cent plus for females.

**TABLE 3.1 : GROWTH RATE OF URBAN SECONDARY SECTOR IN EASTERN INDIA, 1971-1981**

(PERCENTAGE)

SECONDARY ACTIVITIES	INDIA	EASTERN INDIA	WEST BENGAL	ORISSA	BIHAR	JHAR-KHAND*
<u>MALE</u>						
SECONDARY	4.01	3.23	2.63	6.59	4.04	4.39
Agro Based	3.55	2.94	2.58	5.44	2.96	3.95
Textiles	3.60	3.27	3.00	6.60	4.10	4.92
Forest Based	3.20	2.66	2.04	3.87	4.77	4.01
Metal Based	4.50	3.53	1.82	6.29	5.53	5.71
Mineral Based	3.79	2.67	1.71	9.35	3.38	4.55
Machine Based	4.53	2.05	2.01	9.36	1.89	1.20
Others	4.27	4.24	4.53	2.60	4.17	5.69
Construction	5.68	5.39	4.51	10.90	4.75	4.38
<u>FEMALE</u>						
SECONDARY	5.52	6.46	7.13	9.19	3.30	3.07
Agro Based	6.06	10.09	12.36	8.56	6.14	7.35
Textiles	6.58	6.78	7.49	5.84	3.13	5.16
Forest Based	5.54	7.02	7.08	5.06	8.91	5.35
Metal Based	7.25	3.80	6.52	9.03	-0.60	2.82
Mineral Based	5.60	3.74	-0.09	12.97	9.50	3.54
Machine Based	6.73	3.81	4.08	11.22	2.65	3.11
Others	5.07	7.27	8.19	1.15	8.14	10.95
Construction	5.61	5.84	11.60	23.25	-1.12	1.70

\* Proposed state.

Source: 1. General Economic Tables, 1971, Census of India, B - IV, Part 4.  
2. General Economic Tables, 1981, Census of India, Table B -12.

sector in West Bengal (2.63 per cent). The growth in Orissa (6.59 per cent) has been high and but in Bihar (4.04 per cent) and proposed Jharkhand state (4.39 per cent) has been moderate. A district level analysis can be comprehended by the Map no.3.1, and Tables 3.1 and 3.2. A contiguous belt of low growth lies in central, northern and south eastern Bihar, eastern West Bengal and few isolated pockets of Calcutta, Haora, Ganjam and Kalahandi. A medium growth contiguous belt lies in eastern and western Bihar, central and southern Orissa, southern and eastern West Bengal. There are two high growth belts, one in northern West Bengal and the other in the northern part of Orissa. Dhenkanal displays highest growth of Secondary activities in Eastern India.

The classified data for male workers in Secondary sector reveals a growth rate of two per cent to four per cent for all the industries except construction (5.39 per cent) in Eastern India. Machine-based industries recorded slowest growth (2.05 per cent). In West Bengal capital goods industries has a slower growth in comparison to consumer goods industries. On the contrary in Orissa the capital goods to industries have grown fast (machine-based 9.36 per cent, mineral-based 9.35 per cent, metal-based 6.29 per cent). In Bihar and proposed Jharkhand state metal-

Table 3.2 : Average Annual Growth of Male Activities in Urban Secondary Sector  
A District Level Analysis, Eastern India, 1971 - 81

Secondary Workforce	Growth Rates of Employment (Percentage)	
	Negative Growth Rate	Very High Growth Rate
1. Secondary Sector		<u>Dhenkanal</u> (19.8)
1. Agro-based Industries	<u>Dhenkanal</u> (-7.61), <u>Kalahandi</u> (-4.48), <u>West Dinajpur</u> (-3.14) and <u>Champaran</u> (-0.43).	<u>Kendujhar</u> (14.28), <u>Phulabani</u> (18.24), <u>Mayurbhanj</u> (10.7) and <u>Nadia</u> (10.46).
2. Textiles	<u>Champaran</u> (-1.34), <u>Phulabani</u> (-0.64) and <u>Haora</u> (-0.85).	<u>Patna</u> (30.82), <u>Dhenkanal</u> (12.13), <u>Sundergarh</u> (10.94), <u>Mayurbhanj</u> (10.92), <u>Koraput</u> (9.84), <u>Kendujhar</u> (9.55), <u>Medinipur</u> (9.24) and <u>Bolangir</u> (9.02).
3. Forest-based Industries	<u>Calcutta</u> (-0.55) and <u>Puruliya</u> (-0.13).	<u>Jalpaiguri</u> (9.57), <u>Mayurbhanj</u> (9.89), <u>Phulabani</u> (15.4), <u>Koraput</u> (15.22) and <u>Bhojpur</u> (9.07).
4. Metal-based Industries	<u>West Dinajpur</u> (-1.71), <u>Calcutta</u> (-0.27), <u>Dhenkanal</u> (-3.85), <u>Gaya</u> (-3.56), <u>Bhagalpur</u> (-0.72) and <u>Hazaribag</u> (-3.22).	<u>Jalpaiguri</u> (10.38), <u>Medinipur</u> (9.85), <u>Balasore</u> (11.42), <u>Kalahandi</u> (9.71), <u>Puri</u> (13.54), <u>Saharsa</u> (16.25), <u>Palamu</u> (10.84) and <u>Dhanbad</u> (12.93).
5. Mineral-based Industries	<u>Twenty Four Pargana</u> (-6.09), <u>Bhojpur</u> (-1.69), <u>Singhbhum</u> (-0.07)	<u>Jalpaiguri</u> (11.58), <u>Maldah</u> (11.64), <u>Twenty Four Pargana</u> (9.42), <u>Puruliya</u> (16.11), <u>Samabalpur</u> (9.3), <u>Kendujhar</u> (12.62), <u>Mayurbhanj</u> (10.92), <u>Dhenkanal</u> (23.07), <u>Koraput</u> (11.09), <u>Ganjam</u> (13.23), <u>Patna</u> (9.22) <u>Purnia</u> (20.02) and <u>Ranchi</u> (11.29).

\* : Negative Growth Rate=Negative Percent Values

Secondary Workforce	Negative Growth Rate	Very High Growth Rate
6. Machine-based Industries	West Dinajpur(-7.69), Medinipur(-15.79), Bankura(-4.1), Puruliya(-6.18), Koraput(-17.37), Munger(-2.06) and Bhagalpur(-0.25).	Jalpaiguri(21.79), Darjiling(10.27), Birbhum(12.79), Samabalpur(26.49), Sundergarh(53.86), Kendujhar(24.57), Mayurbhanj(26.39), Cuttack(15.2), Ganjam(18.8), Puri(12.79), Patna(9.10), Champan(9.77), Saharsa(15.97), Purnia(10.96) and Palamu(27.66).
7. Other Industries	Darjiling(-0.8), Phulabani(-3.8), Bolangir(-1.02), Koraput(-0.72), Bhojpur(-0.83) and Palamu(-4.81).	Haora(9.4), Sundergarh(15.61) and Puri(9.15).
8. Construction	Gaya(-2.69) and Dhanbad(-3.42).	Darjiling(11.51), Medinipur(10.09), Sundergarh(17.29), Kendujhar(12.25), Mayurbhanj(12.87), Dhenkanal(30.21), Koraput(13.44), Saran(8.6), Bhagalpur(9.81), Purnia(9.22), Palamu(11.03) and Ranchi(10.98).

Source : 1.General Economic Tables, 1971, Census of India, BIV,Part A.

2.General Economic Tables, 1981, Census of India, Table B-12.



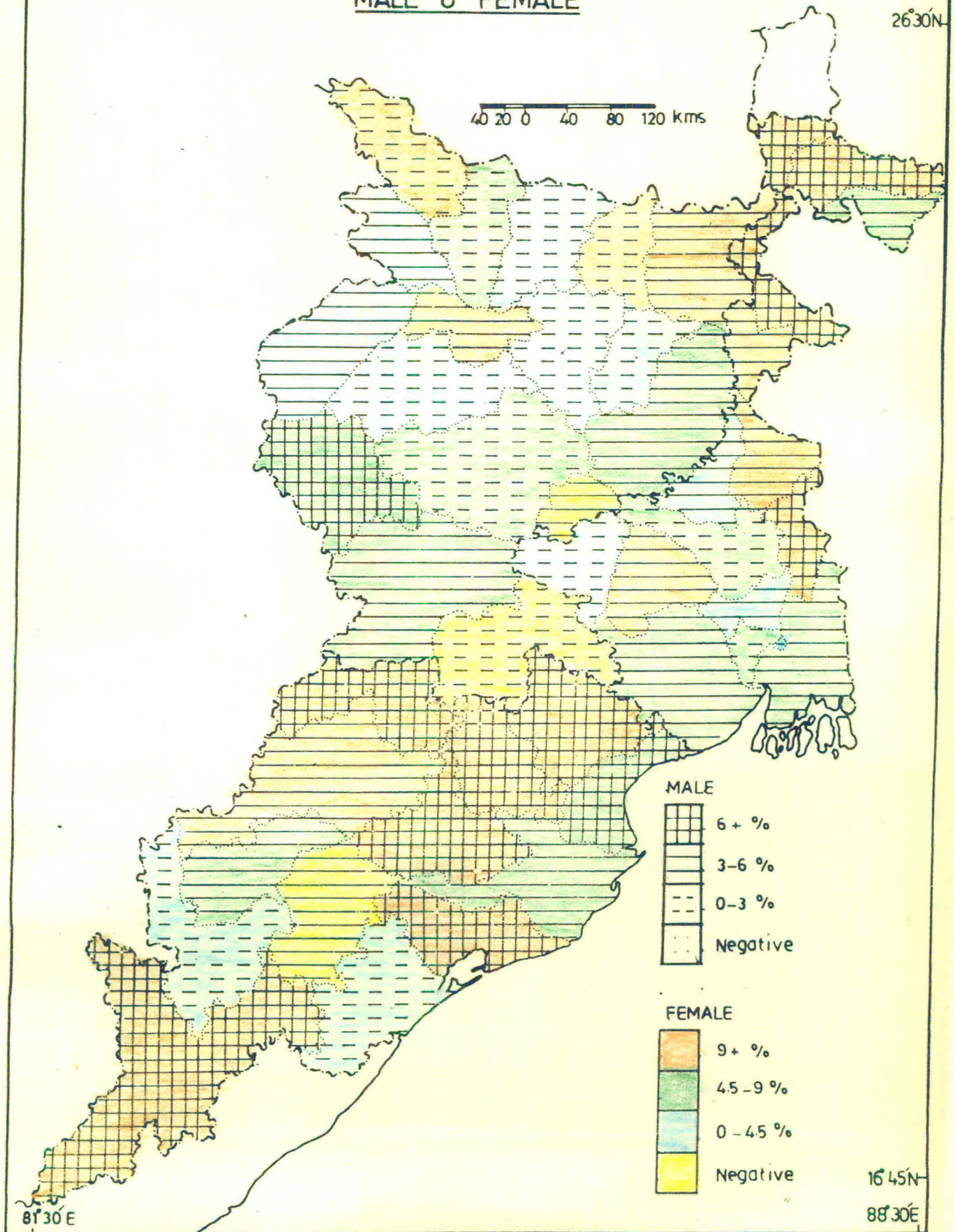
based industries showed fast growth over 5 per cent but that of machine-based industry is very slow (below 2 per cent). Construction activities have high growth of male workers for all the states in Eastern India. Rest of the industries show moderate growth of male workers in the Eastern region. Table 3.2 provides an understanding of the district level analysis of workforce in the fastest growing as well as in the negatively growing Secondary sector. The highest growing and the fastest declining districts in Secondary activities for males are underlined in the table. The table reveals, that deceleration is more prominent in the case of agro-based, metal-based and machine-based industries. Fast growth is experienced by mineral-based industries, construction and textiles. Dhenkanal has shown great variation in growth with few industries growing very fast and few stagnating as well. Other industries which have shown fast growth are Jalpaiguri, Mayubhangj, Kendujhar, Sundergarh, Koraput and Patna. The districts which have shown overall deceleration are West Dinajpur, Calcutta and Koraput.

In West Bengal the decline of Secondary sector can be attributed to industrial sickness, disputes and lock-outs. Export market has declined and agricultural growth has been relatively slow (Ahluwalia 1985). Northern part of Orissa

Eastern India

Map No 3-1

GROWTH OF URBAN SECONDARY SECTOR, (1971-81)  
MALE & FEMALE



has shown high growth due to its being rich mineral resource region and having potential to develop capital goods industries. A very high growth in construction in Orissa can be attributed to governmental relief measures e.g. "food for work" and an expansion of industrial activity. In spite of rich resources the proposed Jharkhand region reveal moderate growth of Secondary activities which a matter of concern. Bihar reveals moderate growth due to its overall backwardness.

### **3.2.2 Urban Secondary Sector - Female Workers**

Female workforce in the Secondary sector, contrary to male has grown faster in Eastern India (6.46 per cent in East India as against 5.52 per cent for India). The growth has been high in West Bengal (12.36 per cent) and Orissa (9.19 per cent) but low in Bihar (3.3 per cent) and in proposed Jharkhand State (3.07 per cent). A district level analysis can be analysed by the Map 3.1 and the Tables 3.1 and 3.3.

Low growth of Secondary sector female workforce activities has a contiguous belt in northern Bihar (except Champaran and Muzaffarpur) and few isolated pockets of Purnuliya, Birbhum, Hugli, Calcutta, Kalahandi and Ganjam. Negative growth occurs in Singhbhum and Phulbani. Moderate growth

Table 3.3 Average Annual Growth of Female Activities in Secondary Sector - A  
District Level Analysis Eastern India, 1971-81

Secondary Workforce	Growth Rates of Employment (Percentage)	
	Negative Growth Rate	Very High Growth Rate
I. Secondary Sector	<u>Singhbhum</u> (-1.2) Dhanbad(-2.74) Phulabani(-4.3)	West Dinajpur(14.87) Murshidabad(15.67) Nadia(16.11) Sundergarh(15.98) Mayurbhanj(18.25) Dhenkanal(17.33) <u>Phulabani</u> (20.57) Koraput(16.86)
1. Agro-based Industries	Cuttak(-0.64) Kalahandi(-3.48) Gaya(-0.59) <u>Palamu</u> (-4.87) Dhanbad(-2.71)	West Dinajpur(13.67) Maldah(16.23) Murshidabad(16.68) <u>Nadia</u> (10.46) Hugli(18.59) Medinipur(18.99) Samabalpur(13.38) Mayurbhanj(15.79) Koraput(13.5) Saharsa(17.67)
2. Textiles	Samabalpur(-5.98) <u>Phulabani</u> (-32.18) Gaya(-0.39) Bhojpur(-4.82) Muzaffarpur(-7.26) Darbhanga(-0.75) Palamu(-5.52) Dhanbad(-2.21)	Jalpaiguri(17.19) Nadia(17.68) Bankura(29.39) Puruliya(23.11) <u>Sundergarh</u> (30.29) Kendujhar(22.8) Mayurbhanj(17.46) Balasore(19.53) Dhenkanal(20.4) Patna(14.94) Hazaribag(13.82) Ranchi(13.32)
3. Forest-Based Industries	Darjiling(-1.49) Champan(-22.62) <u>Bhojpur</u> (-26.35) Bhagalpur(-13.57) Hazaribag(-3.8) Dhanbad(-6.65)	Jalpaiguri(17.19) West Dinajpur(17.63) Murshidabad(31.1) Nadia(14.74) Medinipur(14.93) Bardhaman(17.54) Mayurbhanj(15.31) Balasore(14.58) Cuttak(15.42) Dhenkanal(32.75) <u>Patna</u> (19.88) Munger(15.52) Purnia(17.4) Santhal Pargana(15.34) Ranchi(18.47)

Secondary Workforce	Negative Growth Rate	Very High Growth Rate
4. Metal-Based Industries	Murshidabad (-2.2) Cuttak (-4.59) Ganjam (-10.77) Munger (-11.34) Singhbhum (-4.16)	Medinipur (20.02) Sundergarh (13.18) Bolangir (19.02) Patna (22.8) Hazaribagh (21.02) Ranchi (33.21) Dhanbad (4.93)
5. Mineral-Based Industries	Darjiling (-3.13) Nadia (-1.08) Twenty Four Pargana (-3.88) Medinipur (-6.91) Puruliya (-2.51) Birbhum (-3.97) Samabalpur (11.47) Kendujhar (-8.76) Cuttak (-2.11) Dhenkanal (-5.1) Kalahandi (-12.45) Muzaffarpur (-24.67) Munger (-2.76) Saharsa (-9.34) Singhbhum (-1.31) Dhanbad (-0.77)	Jalpaiguri (1.49) West Dinajpur (22.02) Bankura (17.69) Mayurbhanj (23.62) Balasore (25.89) Bolangir (25.23) Koraput (27.36) Ganjam (18.73) Patna (19.28) Santhal Parganas (15.34) Palamu (20.02)
6. Machine-Based Industries	Koraput (-13.25) Gaya (-4.98)	
7. Other Industries	Koch Bihar (-8.76) Hugli (-.34) Bardhaman (-10.75) Cuttak (-.76) Dhenkanal (-2.21) Phulabani (-1.81) Koraput (-.17) Ganjam (-2.5) Palamu (-10.0)	Darjiling (32.44) Twenty Four Pargana (16.45) Haora (24.68) Medinipur (15.49) Samabalpur (15.97) Bhojpur (14.48) Saran (16.98)
8. Construction	Bolangir (-10.4) Bhojpur (-12.31) Champaran (-4.59) Munger (-18.06) Darbhanga (-3.97) Palamu (-10.0) Dhanbad (-4.38)	Koch Bihar (14.87) Darjiling (21.87) West Dinajpur (22.94) Malda (12.13) Twenty Four Pargana (14.21) Samabalpur (16.00) Sundergarh (41.03) Kendujhar (28.2) Balasore (13.27) Dhenkanal (35.68) Phulabani (22.32) Koraput (30.02) Puri (13.87) Muzaffarpur (20.35) Bhagalpur (28.99)

Source: General Economic Tables, 1971, Census of India, Biv, Part A.  
General Economic Tables, 1981, Census of India, Table B 12.

occurs in South Bihar, north eastern Orisa, southern West Bengal and few isolated pockets like Koch Bihar and Bolan-gir. High growth of female workforce in Secondary sector is observed in northern and central West Bengal, northern Orissa, north eastern Bihar and isolated pockets of Champaran, Koraput and Bankura. Phulbani accounts for the highest growth of female workforce in the Secondary sector.

The growth of sub-groups of Secondary activity reveals that agro-based industries (10.09 per cent) has a high growth rate followed by other industries (7.27 per cent) and textiles (7.02 per cent). There has been low a growth of female workforce in capital goods industries (around three per cent). The growth of agro-based industries is high in West Bengal (12.36 per cent) and Orissa (9.19 per cent). It is moderate in Bihar (6.1 per cent) and Jharkhand (7.35 per cent). Growth of female workforce in forest-based industry is moderate except Bihar where it is low (3.13 per cent). Female workforce in textile have also shown a moderate growth rate. High growth of female workers in the metal-based, mineral-based and machine-based (9.03 per cent, 12.97 per cent, 11.22 per cent, respectively) occurred in Orissa. Mineral based female workforce has negative growth in West Bengal (0.09 per cent), low growth in Jharkhand (3.54 per

cent), and high growth in Bihar (9.5 per cent). Females in metal-based industries have declined (-0.6 per cent). The females in construction activities have grown very fast in Orissa (23.25 per cent) and in West Bengal (11.6 per cent). But they have a negative growth in Bihar (-1.12 per cent) and low growth in Jharkhand (-1.7 per cent). Table 3.3 highlights the districts which have shown either very high or negative growth of workforce in Secondary sector. Nadia and Singhbhum experienced negative growth of female activities in Secondary sector.

The female workforce have grown higher in consumer goods industries in comparison to capital goods industries (exception is Orissa where female workforce in capital goods industries are high. The high female workforce in the Secondary sector especially in agro based and textiles is due to low level of skills required in these industries, which is typically suited for females (cotton and tobacco). It may be partly due to the awareness led by education and changes in social attitudes. Government policy towards encouraging female absorption and better enumeration in 1981 can also be partly the reasons for high growth.

### **3.3.1 Urban Utility Sector - Male Workers**

Male workforce in the Utility sector has grown faster

TABLE 3.4 : GROWTH RATE OF URBAN UTILITY SECTOR IN EASTERN INDIA, 1971-1981  
(PERCENTAGE)

UTILITY SECTOR	INDIA	EASTERN INDIA	WEST BENGAL	ORISSA	BIHAR	JHAR-KHAND*
<u>MALE</u>						
UTILITY SECTOR	5.68	6.11	5.84	6.23	6.38	5.29
(i) Electricity	5.26	5.83	6.34	5.67	5.27	4.95
(ii) Gas and Steam	4.59	3.62	3.76	17.81	0.78	-4.15
(iii) Water Works and Supply	8.82	9.05	2.21	8.75	15.13	10.11
<u>FEMALE</u>						
UTILITY SECTOR	8.81	5.44	14.50	16.38	-3.96	-2.88
(i) Electricity	7.68	4.54	15.38	10.21	-4.46	-4.17
(ii) Gas and Steam	6.36	5.76	1.84	-	-	-
(iii) Water Works and Supply	17.95	23.40	11.36	34.66	-	25.89

\* Proposed State.

Source: 1. General Economic Tables, 1971, Census of India, B - IV, Part 4.

2. General Economic Tables, 1981, Census of India, Table B -12.



in Eastern India compared to India as a whole. High growth is experienced in Bihar (6.38 per cent) and Orissa (6.23 per cent) West Bengal and Jharkhand reveal moderate growth. (Table 3.4)

A district level analysis reveals, a contiguous belt of high growth of male workforce in the Utility sector exists in southern Bihar, southern, northern and southern Bihar, southern and southeastern Orissa and eastern West Bengal. Moderate growth occurs in central Bihar, Southern-west Bengal and few isolated pockets of Sundergarh, Cuttack, Ganjam, and Jalpaiguri. Low growth of male workforce occurs in Santal Pargana, Dhanbad and Sambalpur and a negative growth in Nadia.

In the sub-group of the Utility sector male workforce in water works (9.05 per cent) have grown fastest in Eastern India (Table 3.5). There has been a moderate growth of electricity (5.83 per cent) and gas and steam (3.62 per cent). Male workers in electricity has grown fastest in West Bengal (6.34 per cent) and slowest in Jharkhand (4.95 per cent). Orissa reveals highest growth of male workforce in gas and steam. But proposed Jharkhand state (-4.15) reveals negative growth. Male workforce in Water works and supply have however shown the highest growth in Bihar (15.3

Table 3.5 : Average Annual Growth of Male Activities in Urban Utility Sector  
A District Level Analysis, Eastern India, 1971 - 81

Utility Workforce	<u>Growth Rates of Employment</u> (Percentage)	
	Negative Growth Rate	Very High Growth Rate
II Utility	Nadia(-1.26) <u>Kendujhar(-3.54)</u>	Koch Bihar(9.76) Darjiling(9.32) Twenty Four Pargana(12.19) Bankura(20.81) Puruliya(13.02) Barddhaman(11.17) Birbhum(12.33) Mayurbhanj(10.97) <u>Dhenkanal(29.19)</u> Phulabani(12) Kalahandi(9.51) Saran(19.37) Darbhanga(9.63) Palamu(9.33) Ranchi(15.91)
i. Electricity	Nadia(-1.91) Samabalpur(-0.44) Kendujhar(-3.14) Santhal Pargana(-0.98)	Darjiling(9.7) West Dinajpur(12.19) Bankura(13.03) Puruliya(25.37) Barddhaman(11.17) Birbhum(12.33) Mayurbhanj(10.97) <u>Dhenkanal(29.19)</u> Phulabani(12.00) Saran(19.37) Ranchi(15.70)
ii. Gas & Steam	Haora(-0.69) Birbhum(-10.40) Singhbhum(-11.80) Ranchi(-0.29) <u>Dhanbad(-12.94)</u>	Nadia(24.29) Sundergarh(6.98) Ganjam(11.61) <u>Patna(29.63)</u> Hazari bag(7.80)

Utility Workforce	Negative Growth Rate	Very High Growth Rate
iii. Water Works & Supply	Darjiling(-0.89)	Koch Bihar(17.22)
	Twenty Four Pargana(-0.33)	Jalpaiguri(1.23)
	Hugly(-1.54)	Haora(20.27)
	Sundergarh(-6.30)	Samabalpur(14.12)
	Kendujhar(-5.59)	Balasore(15.43)
	Cuttack(-11.00)	Dhenkanal(15.98)
	<u>Bolangir</u> (-17.68)	Phulabani(24.57)
		<u>Kalahandi</u> (27.55)
		Koraput(23.57)
		Ganjam(19.52)
		Puri(18.83)
		Bihar all the districts except
		Bhojpur, Bhagalpur, Saharsa Palamu and Ranchi.

Source : 1. General Economic Tables, 1971, Census of India, BIV, Part A.

2. General Economic Tables, 1981, Census of India, Table B-12.

per cent). West Bengal (2.21 per cent) exhibited slowest growth of male workers in gas and steam. A district level analysis reveals highest growth in Dhanbad. A detailed table is given to identify out districts where these activities have grown very fast and districts which have negative growth of these activities.

### **3.3.2 Urban Utility Sector - Female Workers**

Female workforce in Utility sector have grown slower in Eastern India (5.44 per cent) in comparison to India (Table 3.6). Highest growth is in Orissa (6.38 per cent) and it has negative growth in Bihar and proposed Jharkhand (-3.96 per cent and -2.88 per cent, respectively).

A district level analysis is done in Tables 3.4 and 3.6.

The sub-group of Utility sector shows that female activity in electricity has fastest growth in West Bengal (15.38 per cent) and a negative growth in Bihar and Jharkhand (-4.46 and -4.17 per cent, respectively). Female activity in gas and steam has fastest growth in West Bengal (5.76 per cent) water works and supply activities for female have grown fastest in Orissa (34.66 per cent).

Table 3.6 Average Annual Growth of Female Activities in Utility Sector - A  
District Level Analysis, Eastern India, 1971-81

(Percentage)		
<u>Growth Rate in Employment</u>		
Secondary Workforce	Negative Growth Rate	Very High Growth Rate
II. Utility Sector		
I. Utility	<u>Hazaribag</u> (-10.26) Singhbhum(-4.36) Dhanbad(-1.0)	Darjiling(19.22) Calcutta(13.89) Hugli(15.89) Medinipur(18.8) Barddhaman(21.68) <u>Sundergarh(22.48)</u> Puri(15.06)
1. Electricity	Haora(-6.7) <u>Hazaribag</u> (-10.71) Singhbhum(-7.88) Dhanbad(-1)	Darjiling(19.22) Calcutta(15.54) Hugli(15.15) Medinipur(18.8) <u>Barddhaman(23.32)</u>
2. Gas & Steam	Calcutta(-.81)	
3. Water Works & Supply		

Source : General Economic Tables, 1971, Census of India, Biv, Part A  
 General Economic Tables, 1981, Census of India, Table B 12.

### 3.4.1 Urban Tertiary Sector - Male Workers

The growth of male workforce in the Tertiary sector in Eastern India (1.95 per cent) has been slower than all India average growth of these activities (3.24 per cent) (Table 3.7). This slow growth of Tertiary sector can be attributed to slow growth of these activities in West Bengal and Bihar (1.51 per cent and 1.89 per cent, respectively) Orissa and Jharkhand, however, experienced moderate growth (4.34 per cent and 3.79 per cent, respectively). A district level analysis of male workforce in Tertiary sector has been analysed with the help of Map 3.2 and Table 3.7.

Negative growth of male workforce in the Tertiary seen is obtained in Calcutta (Table 3.8). A contiguous belt of low growth of service sector lies in the border districts of eastern and southern Bihar, central and southern West Bengal and south western Orissa. Moderate growth belt comprises of northern and eastern Bihar, northern and south eastern West Bengal, and southern, south western Orissa and isolated region of Sambalpur district. High growth belt lies in central Orissa of Mayurbhanj.

The classification of Service sector as given by Singer is used for the sub-groups of Tertiary sector. The growth

TABLE 3.7 : GROWTH RATE OF URBAN TERTIARY SECTOR IN EASTERN INDIA, 1971-1981

(PERCENTAGE)

TERTIARY SECTOR	INDIA	EASTERN INDIA	WEST BENGAL	ORISSA	BIHAR	JHAR-KHAND*
<u>MALE</u>						
TERTIARY SECTOR	3.24	1.95	1.51	4.34	1.89	3.79
1. Services Linked to Production	3.55	0.14	-1.60	3.45	3.80	3.63
A. Social-Economic Overhead Service	2.79	-3.37	-5.85	1.64	3.49	2.73
(i) Transport	2.63	-3.88	-6.47	1.46	3.41	2.72
(ii) Storage	5.72	7.52	9.96	-0.18	2.38	-0.31
(iii) Communication	3.97	2.47	1.45	3.62	4.67	3.33
B. Trade Service	4.11	2.88	1.94	5.80	4.00	4.71
(i) Wholesale	3.79	1.50	1.14	9.81	1.42	1.14
(ii) Retail	4.14	3.05	2.08	5.60	4.17	4.97
C. Financial Service	3.15	2.37	2.48	-0.07	3.61	1.21
(i) Banking	6.54	6.72	6.07	8.35	8.07	7.10
(ii) Insurance	3.41	3.67	2.74	10.23	4.95	5.41
(iii) Real Estate	-0.81	-1.98	-0.39	-10.56	-8.65	-9.19
2. Services Linked to Consumption	3.19	2.51	1.35	4.53	3.85	4.25
A. Private Consumption Services	4.03	0.95	-0.38	3.77	2.58	4.01
(i) Legal	4.76	3.09	2.32	2.48	3.81	4.86
(ii) Personal	4.00	0.81	-0.48	3.86	2.41	3.95
B. Collective Consumption Services	2.74	3.40	2.41	4.89	4.54	4.38
(i) Public Admn.	2.40	3.76	2.72	5.81	4.81	4.84
(ii) Medicine and Health	3.65	2.97	2.50	4.72	3.01	2.72
(iii) Education	3.03	3.07	1.96	5.04	4.04	3.47
(iv) Community	3.00	1.31	0.96	1.21	1.99	2.67
(v) Recreational	3.07	2.44	1.25	5.19	4.83	5.44
(vi) Restaurant	2.96	3.03	1.61	4.03	5.21	4.73
(vii) Sanitation	2.62	6.69	10.35	-3.99	7.93	8.85

\* Proposed state

TERTIARY SECTOR	INDIA	EASTERN INDIA	WEST BENGAL	ORISSA	BIHAR	JHAR-KHAND*
<u>FEMALE</u>						
TERTIARY SECTOR	4.75	4.85	4.44	5.83	5.48	5.80
1. Services Linked to Production	3.80	3.27	3.65	2.02	3.69	2.61
A. Social-Economic Overhead Service	1.10	-0.77	0.96	-5.35	-0.86	-2.16
(i) Transport	-1.24	-2.72	-0.91	-6.73	-1.96	-2.57
(ii) Storage	6.80	10.33	5.94	36.59	-19.90	0.49
(iii) Communication	8.47	4.90	4.11	11.42	13.45	9.44
B. Trade Service	3.32	4.51	3.82	5.13	4.88	6.08
(i) Wholesale	5.97	5.24	3.92	21.74	4.30	3.68
(ii) Retail	3.16	4.46	3.81	4.86	4.90	6.17
C. Financial Service	11.78	9.18	9.03	6.96	14.30	6.35
(i) Banking	15.42	16.01	14.92	17.80	25.47	19.27
(ii) Insurance	8.08	6.38	5.12	7.90	11.71	8.19
(iii) Real Estate	5.81	4.95	6.56	3.24	-4.27	1.53
2. Services Linked to Consumption	4.87	5.22	4.65	6.74	5.90	6.52
A. Private Consumption Services	3.72	4.44	4.17	5.92	4.90	4.62
(i) Legal	13.37	11.76	10.95	7.38	19.62	9.60
(ii) Personal	3.67	4.42	4.15	5.91	4.05	4.61
B. Collective Consumption Services	5.47	5.90	5.10	7.65	6.91	8.00
(i) Public Admn.	7.21	7.39	6.17	12.70	8.21	9.77
(ii) Medicine and Health	5.28	4.80	4.39	3.42	6.50	6.38
(iii) Education	5.48	6.24	4.83	10.90	7.95	7.81
(iv) Community	5.39	4.12	4.31	3.20	4.60	10.38
(v) Recreational	3.29	2.93	7.23	1.79	-1.82	12.49
(vi) Restaurant	8.30	6.64	5.64	7.22	7.78	7.77
(vii) Sanitation	1.39	4.27	13.55	-9.30	5.21	11.53

Source: 1. General Economic Tables, 1971, Census of India, B - IV, Part 4.  
2. General Economic Tables, 1981, Census of India, Table B -12.



of male workforce in Services Linked to Production (SLP) is lower in Eastern India (0.14 per cent), in comparison to all India average growth of these services (3.55 per cent). There has been a negative growth of these activities in West Bengal (-1.6 per cent) and moderate growth (3 to 4 per cent) in other states. This low growth of Services Linked to Production is attributed to low growth in all its sub-groups, namely Socio-Economic Overhead Services Trade Services and Financial Services (-3.37 per cent, 2.88 percent, 2.37 per cent, respectively). The growth of these services is less than all India average.

West Bengal has a negative growth of Social and Economic Overhead Services (-5.85 per cent) which is mainly influenced by negative growth in transport services (-6.47 per cent) and Communication services (1.45 per cent). The growth of services, storage, a sub-group of Social and Economic Overhead in West Bengal, however, has a very high growth (9.96 per cent). The growth of Social and Economic Overhead services is low in Orissa and proposed Jharkhand state. It is moderate in Bihar (3.49 per cent). Transport services, a subgroup of social and economic overhead services, has a similar trend. Storage services show negative growth of male activities in Orissa and proposed Jharkhand State (-0.18 per cent and -0.31 per cent respectively).

Eastern India

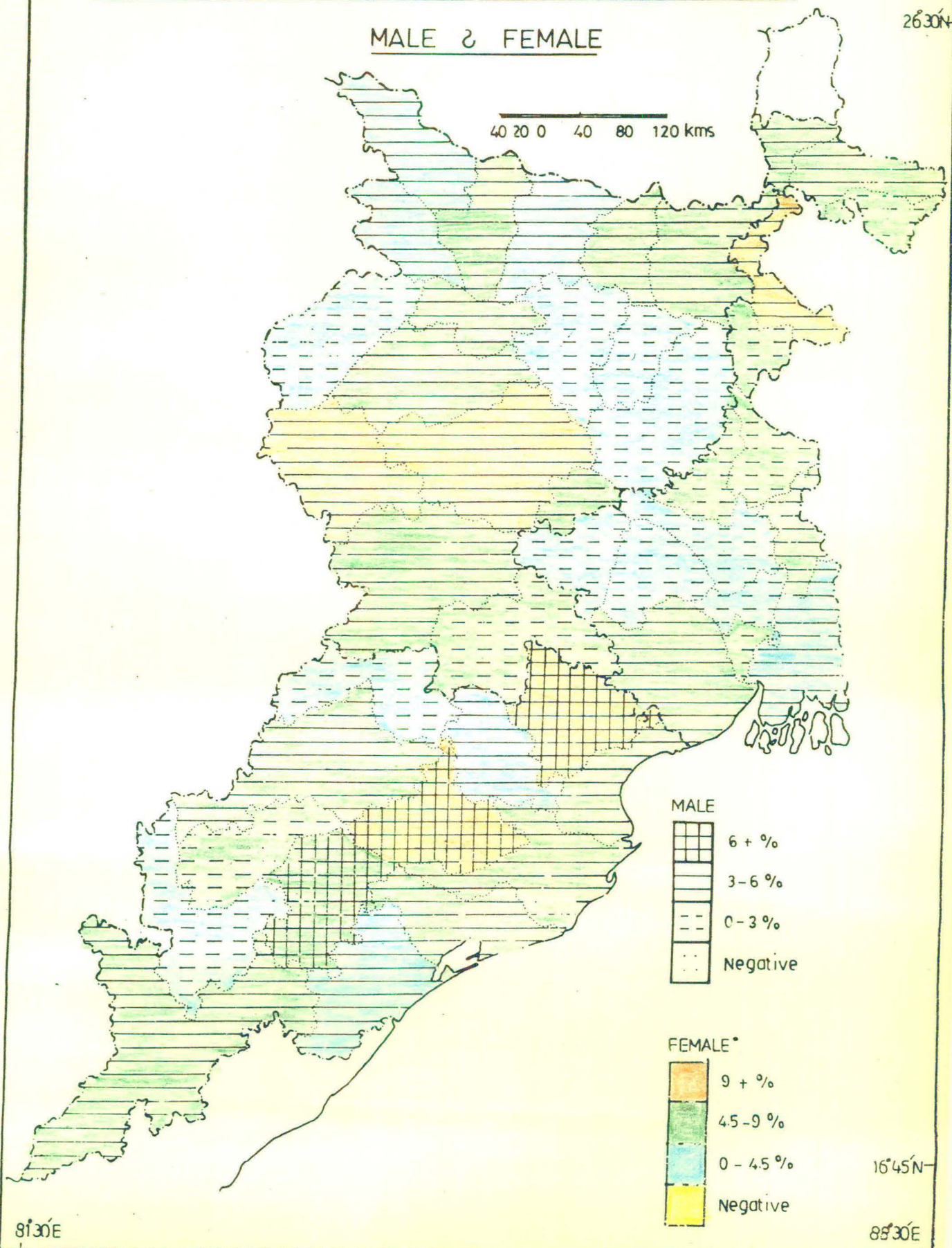
Map No 3:2

GROWTH OF URBAN TERTIARY SECTOR (1971-81)

MALE & FEMALE

26°30'N

40 20 0 40 80 120 kms



Communication services has a low growth of male workforce in West Bengal.

The growth of male participation trade services is low in West Bengal (1.94 per cent) and moderate in rest of the states. Wholesale trade services has a very high growth in Orissa and low growth in other states (1-2 per cent). Retail trade services has low growth in West Bengal and moderate growth in rest of the states.

Male participation in financial Services has a moderate growth in Bihar and negative growth in Orissa. Banking Services reveal a high growth in all the states. Insurance services has very high growth in Orissa (10.23 per cent) and low growth in West Bengal (2.74 per cent). Real Estate and Business Services has declined for all the states.

The Services Linked to Consumption has also a lower growth in Eastern India (2.51 per cent) in comparison to all India average (3.19 per cent). West Bengal (1.35 per cent) exhibit low growth, whereas rest of the States show moderate growth (3-5 per cent).

Private consumption services has negative growth of male workforce in West Bengal (-0.38 per cent) and low growth (2.58 per cent) in Bihar. Jharkhand reveals highest

growth of these activities (4.01 per cent). Legal services has grown moderately in Jharkhand and Bihar (3.86 and 3.81 per cent) and slowly in West Bengal and Orissa. There has been negative growth of personal services in West Bengal (-0.48) and moderate growth in Orissa and Jharkhand (3.86 per cent and 3.95 per cent respectively). Bihar displays low growth.

Collective consumption services has grown faster in Eastern India (3.4 per cent) in comparison to all India average (2.74 per cent). The growth has been faster than all India average in the case of public administrative services, community services, hotels and restaurant services and sanitation services. Public administration services has a low growth in West Bengal (2.72 per cent) and moderate growth in rest of the states (4 per cent to 6 per cent). Medicine and health services has low growth in Jharkhand (2.72 per cent). Rest show moderate growth. Education recreation services and hotel and restaurant services is similar to the trend as revealed in the case of public administration services. Low growth exists in all the states in Eastern India for male workforce in community services. Sanitation services has negative growth in Orissa (-3.99 per cent) where as a high growth rate in the rest of

the states.

A district level analysis can be carried with the help of Table 3.8. The district with highest growth and maximum decline have been highlighted. The low growth of male workforce in Tertiary sector may be attributed to relatively slow growth of Secondary sector. It also may be due to overall backwardness which acts as bottleneck for the expansion of Distributive Services (transportation, communication, storage, wholesale and retail services). The growth of produces services (banking, insurance, real estate and business services) recorded moderate growth but Real Estate and business services have declined. This trend is of negative sign of development. The slow growth of retail trade services personal services goes against tertiarisation of the economy. Relatively higher growth of banking, insurance, educational services and public administration services have relatively high growth trade.

A district level analysis of growth of male workforce in the service industries reveals that in the distributive services (Social Economic Overhead Services and Trade services), Calcutta and Murshidabad show overall deceleration, whereas Mayurbhanj presented an overall acceleration. Medinipur exhibited negative growth for social economic

Table 3.8 : Average Annual Growth of Male Activities in Urban Tertiary Sector  
A District Level Analysis, Eastern India, 1971 - 81

<u>Growth Rates of Employment</u> (Percentage)		
<u>Tertiary Workforce</u>	<u>Negative Growth Rate</u>	<u>Very High Growth Rate</u>
III. Tertiary Sector	Calcutta(-0.79)	
I. Services Linked to Production		Mayurbhanj(9.33)
A. Social and Economic Overheads Services	Calcutta(-0.6) Medinipur(-0.36)	Bhagalpur (9.42)
i. Transport Services	Calcutta(-0.93) Bardhaman(-0.35) Bolangir(-0.6)	Phulabani (9.36) Palamu(9.13)
ii. Storage Services	Koch Bihar(-9.82) Murshidabad(-22.82) Haora(-0.47) Medinipur(-11.34) Bankura(-5.5) Puruliya(-1.81) Samabalpur(-0.55) Cuttak(-10.86) Bolangir(-2.84) Puri(-2.21) Gaya(-6.37) Muzaffarpur(-0.34) Bhagalpur(-12.7)	Jalpaiguri(28.84) Darjiling(16.6) West Dinajpur(14.98) 24 Parganas(13.9) Calcutta(14.05) Birbhum(13.35) Mayurbhanj(16.49) Dhenkanal(13.67) Koraput(25.29) Sharsha(19.62) Purnia(19.14) Santhal Parganas(9.55) Ranchi(13.87)
iii. Communication Services	Maldah(-2.93) Murshidabad(-27.96) Calcutta(-0.94) Bankura(-5.21) Phulabani(-2.95)	Mayurbhanj(10.13)
B. Trade Services		Medinipur(10.53) Mayurbhanj(10.96)
i. Wholesale Trade Services	Koch Bihar(-2.68) Jalpaiguri(-1.33) West Dinajpur(-2.95) Calcutta(-0.38) Haora(-0.41) Medinipur(-0.65) Birbhum(-0.41) Kendujhar(-25.03) Phulabani(-6.7)	Darjiling(16.1) Sundergarh(16.62) Mayurbhanj(10.96) Balasore(14.51) Koraput(17.89) Ganjam(10.61) Puri(11.61)

Tertiary Workforce	Negative Growth Rate	Very High Growth Rate
	Bolangir(-5.7) Munger(-2.92) Hazariabag(-5.6) Palamu(-4.06)	
ii. Retail Trade Services		Medinipur(12.11) Kendujhar(19.89) Mayurbhanj(11.45)
C. Financial Services	Jalpaiguri(-0.56) Calcutta(-0.46) Samabalpur(-2.65) Sundergarh(-2.95) Singbhum(-0.95)	
i. Banking Services		West Dinajpur(10.99) Maldah(13.67) Murshidabad(9.2) 24 Pargana(9.4) Medinipur(12.51) Puruliya(9.79) Birbhum(18.44) Mayurbhanj(9.46) Balasore(9.23) Dhenkanal(12.42) Bolangir(9.07) Puri(13.89) Bhojpur(9.31) Saran(9.51) Champaran(9.75) Muzaffarpur(9.19) Munger(10.9) Palamu(12.4) Ranchi(9.79)
ii Insurance Services	Koch Bihar(-7.53) Jalpaiguri(-1.21) Murshidabad(-5.42) Puruliya(-2.84) Balasore(-3.61) Bolangir(-0.34) Santhal Parganas(-1.47) Singbhum(-0.75)	West Dinajpur(9.37) Samabalpur(14.28) Sundergarh(14.02) Kendujhar(23.11) Cuttak(9.84) Dhenkanal(18.7) Koraput(11.8) Puri(14.46) Patna(9.55) Saran(15.61) Bhagalpur(20.02) Purnia(10.49) Dhanbad(10.06)
iii. Real Estate and Business Services	Koch Bihar(-7.53) Jalpaiguri(-10.4) Darjiling(-2.7) West Dinajpur(-5.08)	Haora(11.87)

Tertiary Workforce	Negative Growth Rate	Very High Growth Rate
	Maldah (-8.4)	
	Murshidabad (-5.16)	
	Nadia, Calcutta (-3.26)	
	Hugli (-1.91)	
	Medinipur (-6.35)	
	Bankura (-0.14)	
	Bardhaman (-2.04)	
	Birbhum (-7.34),	
	Samabalpur (-8.93),	
	Sundergarh (-1.3),	
	Cuttack (-10.3),	
	Dhenkanal (-13.0),	
	Phulabani (-2.93),	
	Bolangir (-14.40),	
	Kalahandi (-6.78),	
	<u>Koraput (-15.14)</u>	
	Ganjam (-12.2),	
	Puri (-7.73),	
	Gaya (-4.23)	
	Bhojpur (-6.41),	
	Saran (-2.08),	
	Champan (-14.46),	
	Darbhanga (-12.56),	
	Munger (-12.8)	
	Bhagalpur (-14.70),	
	Saharsa (-13.35)	
	Purnia (-11.56)	
	Samabalpur (-7.71)	
	Hazaribagh (-12.1)	
	Singhbhum (-13.13)	
	Palamu (-10.68)	
	Ranchi (-8.43)	
	Dhanbad (-9.49)	
II. Services Linked to Consumption	Calcutta (-1.26)	
	<u>Patna</u> (-3.87)	
A. Private Consumption Services	Koch Bihar (-2.25)	Medinipur (12.17)
	Twenty Four Pargana (-.6)	
	<u>Calcutta</u> (-2.48)	
	Hugli (-2.16)	
	Bankpura (-2.16)	
i. Legal Services	Koch Bihar (-3.57)	Ranchi (9.75)
	Jalpaiguri (-.66)	
	Nadia (-1.34)	
	Hugli (-.38)	
	Puruliya (-.57)	
	Kendujhar (-0.6)	
	Balasore (-.043)	
	Puri (-0.5)	
	<u>Patna</u> (-5.92)	



Tertiary Workforce	Negative Growth Rate	Very High Growth Rate
ii. Personal Services	Koch Bihar(-2.42) Twenty Four Pargana(-.79) Calcutta(-.62) <u>Huqli</u> (-3.11) Bankura(-2.36)	Medinipur(12.39)
B. Collective Consumption Services	Calcutta(-0.34)	
i. Public Administration	Calcutta(-.8) Puruliya(-3.36) <u>Sundergarh</u> (-11.13)	<u>Huqli</u> (28.57) Koraput(10.19) Dhanbad(12.61)
ii. Medicine & Health Services	Calcutta(-0.05) Saharsa(-3.35) <u>Santhal Pargana</u> (-18.71)	Gaya(9.56) <u>Hazaribag</u> (9.93)
iii. Education Services	Hazaribag(-1.43)	Phulabani(11.89)
iv. Community Services	Koch Bihar(-2.02) Malda(-4.39) Calcutta(-.83) Haora(-.04) Samabalpur(-4.37) <u>Kalahandi</u> (-7.82) Puri(-1.94) Gaya(-1.74) Bhagalpur(-1.23) Saran(-2.29) Palamu(-1.61) Dhanbad(1.07)	Dhenkanal(11.00)
v. Recreational and Cultural Services	Calcutta(-1.3) <u>Phulabani</u> (-6.33) Bolangir(-3.33) Champaran(-1.35) Bhagalpur(-.73)	<u>West Dinajpur</u> (16.77) Dhenkanal(11.61) Puri(10.11) Hazaribag(9.75) Dhanbad(13.02)
vi. Hotel and Restaurant Services	Calcutta(-1.3) Balasore(-.55)	<u>Puruliya</u> (11.89) Phulabani(10.8) Saran(9.68)

Tertiary Workforce	Negative Growth Rate	Very High Growth Rate
vii. Sanitation Services	West Dinajpur (-2.84)	Jalpaiguri (16.98)
	Maldah (-14.87)	Darjiling (28.9)
	Medinipur (-13.28)	Calcutta (12.47)
	Bardhaman (-18.18)	Haora (47.23)
	Samabalpur (-18.12)	Purnia (9.29)
	Sundergarh (-.44)	Singhbhum (21.45)
	Kendujhar (-3.97)	Dhanbad (18.3)
	Mayurbhanj (-11.95)	
	Balasore (-5.21)	
	Phulabani (-13.96)	
	Kalahandi (-3.78)	
	Koraput (-18.1)	
	Puri (-20.85)	
	Patna (-4.47)	
	Bhagalpur (-8.39)	

Source : 1. General Economic Tables, 1971, Census of India, BIV, Part A.

2. General Economic Tables, 1981, Census of India, Table B-12.

overhead services but fast growth of retail trade services. In financial services banking does not show negative growth in any district. Birbhum exhibited fastest growth of male workers. Real Estate services has a negative growth a number of districts (except Howrah, very high growth). Calcutta, Koch Bihar and Patna have experienced negative growth of Services Linked to Consumption.

### **3.4.2 Urban Tertiary Sector - Female Workers**

Female workforce in Tertiary sector have grown faster in Eastern India (4.85 per cent) in comparison to all India average (4.75 per cent). The growth has been moderate for all the states (4 to 6 per cent). Highest growth has been in Orissa (5.83 per cent) and slowest in West Bengal (4.44 per cent).

A district level analysis can be done with the help of Map 3.2 and the Tables 3.7 and 3.9. Contiguous belt of low growth of female workers lies in north central and north western and eastern Bihar, southern and south-western West Bengal, northern Orissa and districts of Ganjam and Kalahandi. A moderate growth belt lies in north and central Bihar, north eastern Bihar, northern and central West Bengal, coastal districts of Orissa. Growth of female workforce in Tertiary sector has been identified in Hazaribagh,

Palamau, West Dinajpur, Mayurbhanj and Dhenkanal districts. Highest growth of female worker in the Tertiary sector was observed in Dhanbad.

The growth of Services Linked to Production is lower in East India (3.27 per cent) than all India average (3.80 per cent). This growth has been low in Orissa proposed Jharkhand State (2.02 per cent and 2.61 per cent, respectively) and in Bihar and West Bengal (3.69 per cent and 3.65 per cent respectively).

Female workforce in social and economic overhead services have shown negative growth for Eastern India and all the States except West Bengal (0.96 per cent). (Table 3.7) Transportation services, however, has negative growth for all the States. Communication services has high growth in Bihar, Orissa and proposed Jharkhand State (13.45 per cent, 11.92 per cent and 9.44 per cent respectively) but moderate growth in West Bengal. Storage services has grown very fast in Orissa (36.59 per cent) but has a negative growth in Bihar (-19.9 per cent).

Female workforce in trade services especially retail trade services has faster than all India average. The growth of trade services is fastest in proposed Jharkhand

state (6.06 per cent) and slowest in West Bengal (3.82 per cent). Wholesale trade services is very high in Orissa (21.74 per cent) but low in other states. Retail trade has shown fastest growth in Jharkhand (6.17 per cent and slowest in West Bengal (3.81 per cent).

Female workforce in financial services exhibit high growth for all other states with very high growth in Bihar (14.3 per cent). In Eastern India (9.18 per cent) however, the growth rate has been slower than all India average (11.78 per cent). This is due to slower growth in comparison to India for insurance and real estate services. Banking services in Eastern India has grown faster than the all India average and is very high for all the States.

High growth of insurance services occur in Bihar (11.71 per cent). Real Estate services has, however, declined in Bihar (-4.27 per cent).

Female workforce in Services Linked to Consumption has grown faster in Eastern India (5.22 per cent whereas 4.87 in India). The growth rate has been moderate for all the States.

Female workforce in private consumption services has grown faster in Eastern India (4.44 per cent whereas 3.72 is

all India average). It is due to higher growth of personnel services in Eastern India in comparison to India (co-hired) Legal services has grown very fast but it is slower than all India average. Private consumption-services has shown a higher growth of in in all the States (4 to 6 per cent) legal services has high growth in all the states except Orissa. Personal services reveal the same trend as of private consumption services.

Collective consumption services has grown faster in Eastern India (5.9 per cent) with respect to all India average growth in these activities (5.47 per cent). Public administration services, education services, and sanitation services have grown faster than all India average growth. Collective consumption services have shown moderate growth for all its states. It is maximum in Jharkhand and minimum in West Bengal. Public administration services has a high growth in Orissa and proposed Jharkhand State (12.7 per cent and 9.77 per cent), West Bengal (6.17 per cent) has slowest growth of Tertiary sector. Female forceforce in medicine and health have shown fast growth in Bihar (6.5 per cent) and slowest growth in Orissa (3.42 per cent). Orissa reveals fastest growth of education services (10.9 per cent) whereas West Bengal (4.83 per cent) records minimal growth. community services has a low growth. Proposed Jharkhand

State (10.38 per cent) however exhibit high growth rate. Recreation services have shown an overall low growth rate. This is due to negative growth in Bihar (-1.82 per cent) and low growth in Orissa (1.79 per cent). Jharkhand (12.43) however exhibit high growth of Hotel and restaurant services has moderate growth. West Bengal and Jharkhand show high growth of sanitation services, but Orissa experienced negative growth.

A district level analysis of female workforce in Tertiary sector (Table 3.9) reveals high growth in Mayurbhanj, Dhenkanal and Hazaribag. In distributive services the growth of services has been very high in Koraput, Hazaribagh and Mayurbhanj. The negative growth of these activities occur in Jalpaiguri, Bankura and Balasore. In financial services, Hazaribag, Mayurbhanj and Jalpaiguri experienced very high growth. Negative growth of these activities occurred in Champaran, Bankura and Hugli. There are no districts which have shown a negative growth of Banking services.

Services linked to consumption does not show negative growth for any district. Dhenkanal and Koraput have experienced very high growth of these activities. Puruliya and Champaran have, however reflected, negative growth of pri-

Table 3.9 Average Annual Growth of Female Activities in Tertiary Sector - A  
District Level Analysis, Eastern India, 1971-81

Growth Rate in Employment			(Percentage)
Tertiary Workforce	Negative Growth Rate	Very High Growth Rate	
II Tertiary Sector	Nadia (-10.27)	<u>Dhenkanal (16.9)</u>	
1. Services Linked to Production	<u>Jalpaiguri (-4.23)</u> Kendujhar (-0.82) Bankura (-3.4) Bardhaman (-0.99) Balasore (-3.31) Dhenkanal (-2.13) Bolangir (-0.39) Champaran (-2.05) Dhanbad (-5.05)	<u>Koraput (16.37)</u> Hazaribag (15.53) Palamu (13.59)	
A. Social Economic Overhead Services	Koch Bihar (-2.52) Jalpaiguri (-10.04) Darjiling (-1.29) West Dinajpur (-7.2) Murshidabad (-0.64) Bankura (-7.02) Bardhaman (-6.42) <u>Birbhum (-17.32)</u> Samabalpur (-2.77) Kendujhar (-7.84) Balasore (-8.87) Cuttak (-4.69) Dhenkanal (-10.4) Phulabani (-5.17) Bolangir (-10.79) Kalahandi (-11.53) Koraput (-16.37) Puri (-3.93) Gaya (-10.93) Munger (-2.84) Santhal Parganas (-2.35) Hazaribag (-3.52) Dhanbad (-9.68)	<u>Mayurbhanj (18.59)</u> Champaran (15.3) Palamu (20.27)	
i. Transport Services	Koch Bihar (-6.24) Jalpaiguri (-12.26) Darjiling (-2.7) Haora (-5.65) Medinipur (-8.8) Bankura (-7.78)	Champaran (15.3) <u>Palamu (20.27)</u>	



Tertiary Workforce	Negative Growth Rate	Very High Growth Rate
--------------------	----------------------	-----------------------

	Bardhaman(-8.8)	
	Birbhum(-18.71)	
	Samabalpur(-2.77)	
	Kendujhar(-7.80)	
	Balasore(-8.87)	
	Cuttack(-7.09)	
	Dhenkanal(-10.4)	
	Bolangir(-10.78)	
	Kalahandi(-11.53)	
	<u>Koraput(-17.24)</u>	
	Ganjam(-6.65)	
	Puri(-4.99)	
	Gaya(-5.15)	
	Darbhanga(-1.91)	
	Munger(-11.71)	
	Saharsa(-2.84)	
	Santhal Parganas(-2.35)	
	Hazaribag(-7.15)	
	Singhbhum(-.49)	
	Dhanbad(-10.84)	
ii. Storage Services		Bardhaman(15.97)
iii. Communication Services	Murshidabad(-10.4)	<u>Jalpaiguri(16.98)</u>
	Medinipur(-3.23)	
	<u>Birbhum(-10.4)</u>	
	Koraput(-2.21)	
	Muzaffarpur(-1.53)	
B. Trade Services	Hugli(-1.9)	Jalpaiguri(13.53)
	Bankura(-1.00)	<u>Nadia(9.0)</u>
	Puruliya(-0.7)	Mayurbhanj(15.83)
	Dhenkanal(-2.45)	<u>Hazaribag(21.17)</u>
	<u>Champan(-4.38)</u>	
i. Whole sole Trade Services	Koch Bihar(-8.38)	Darjiling(20.02)
	West Dinajpur(-7.15)	Nadia(17.22)
	Hugli(-20.42)	Twenty Four Pargana(13.98)
	Bankura(-6.7)	Birbhum(22.8)
	<u>Kendujhar(-24.02)</u>	<u>Sundergarh(23.91)</u>
	Ganjam(-2.21)	Bhojpur(15.43)
	Champan(-6.7)	
	Muzaffarpur(-8.76)	
ii. Retail Trade Services	Bankura(-.77)	Jalpaiguri(13.73)
	Puruliya(-.7)	<u>Kendujhar(23.95)</u>
	Dhenkanal(-2.45)	Mayurbhanj(14.53)
	<u>Champan(-4.32)</u>	Hazaribag(21.87)
	Dhanbad(-.12)	

Tertiary Workforce	Negative Growth Rate	Very High Growth Rate
C. Financial Services	Darjiling(-.93) Murshidabad(-4.49)  Hugli(-10.58) Samabalpur(-3.13) Sundergarh(-14.92) Mayurbhanj(-8.38) Ganjam(-2.62) Hazaribag(-4.98)	Koch Bihar(22.05) West Dinajpur(16.98)  Maldah(16.98) Twenty Four Pargana(13.92) Kendujhar(19.3) Patna(33.51) Champaran(15.43) Purnia(22.16) Ranchi(18.28)
i. Banking Services		Darjiling(23.11) Twenty Four Pargana(18.91) Hugli(24.3) Bardhaman(30.01) Cuttak(25.64) Puri(16.1) Patna(36.59) Purnia(20.4) Singhbhum(17.46) Ranchi(21.48)
ii. Insurance Services	Muzaffarpur(-1.05)	Cuttak(20.5) Patna(26.29)
iii. Real Estate and Business Services	Darjiling(-13.74) Samabalpur(-19.73) Cuttak(-7.88) Puri(-.34) Ranchi(4.98)	Nadia(13.98) Twenty Four Pargana(13.99) Haora(15.43) Kendujhar(18.7) Dhanbad(15.40)
2. Services Linked to Consumption		Dhenkanal(16.62) Koraput(14.49)
A. Private Consumption Services	Puruliya(-6.82) Ganjam(-1.71) Bhojpur(-4.87) Champaran(-3.24) Palamu(-2.27)	Dhenkanal(21.86) Koraput(18.81)
i. Legal Services		Hugli(14.87) Cuttak(15.97) Patna(24.85)
ii. Personal Services	Puruliya(-18.82) Ganjam(-1.74) Bhojpur(-4.89) Champaran(-3.24) Munger(-0.1) Palamu(-2.27)	Dhenkanal(21.86) Koraput(18.81)

Tertiary Workforce	Negative Growth Rate	Very High Growth Rate
B. Collective Consumption Services	Kalahandi (-.69)	Purulia (14.13)
i. Public Services	Phulabani (-2.84) Ganjam (-3.22) Munger (-2.9) <u>Purnia</u> (-12.34)	Sambalpur (18.53) Mayurbhanj (22.27) <u>Cuttack</u> (28.35) Dhenkanal (27.6) Bolangir (23.72) Koraput (15.86) Puri (16.95) Saran (30.84) Champaran (20.77) Muzaffarpur (17.91) Darbhanga (15.37) Santhal Parganas (17.46) Hazaribag (21.45) Palamu (20.95) Ranch (19.25)
ii. Medicine & Health Services	Calcutta (-.73) Sundergarh (-.27) Kalahandi (-5.15) <u>Saharsa</u> (-12.94)	<u>Puruliya</u> (28.6) Dhenkanal (16.06) Gaya (17.32)
iii. Education Services		<u>Phulabani</u> (15.88) <u>Purnia</u> (10.87)
iv. Community Services	West Dinajpur (-12.94) Nadia (-1.67) <u>Kalahandi</u> (-18.25) Ganjam (-3.92) Darbhanga (-1.05) Calcutta (-2.29) Ranchi (8.35)	Darjiling (14.4) Hugli (23.72) Bolangir (18.5) <u>Hazaribag</u> (27.82)
v. Recreation Services	Bardhaman (-.29) Sundergarh (-4.54) Ganjam (-16.74) Puri (-.6.33) Patna (-3.28) Bhojpur (-7.58) Muzaffarpur (-9.03) Darbhanga (-10.4) Munger (-17.47) <u>Bhagalpur</u> (-17.85)	<u>Darjiling</u> (70.69) Murshidabad (20.05) Twenty Four Parganay (18.53) Hugli (15.97) Ranchi (32.28)

Tertiary Workforce	Negative Growth Rate	Very High Growth Rate
vi. Hotel & Restaurant Services	Koch Bihar (-.91)	Jalpaiguri (23.72)
	Kalahandi (-4.98)	Maldah (37.41)
	Gangam (-2.95)	<u>Murshidabad</u> (26.14)
	<u>Bhagalpur</u> (-6.88)	Hugli (15.43)
		Medinipur (15.97)
		Bankura (14.87)
		Balaore (15.41)
		Phulabani (17.46)
		Bolangir (18.66)
		<u>Gaya</u> (11.74)
	Saran (18.37)	
	Munger (13.87)	
vii. Sanitation Services	Medinnipur (-5.93)	<u>Nadia</u> (34.87)
	Bankpura (-6.7)	Twenty Four Pargana (31.3)
	Bardhaman (-22.82)	Calcutta (17.81)
	Sundergarh (-6.87)	Haora (14.88)
	Kendujhar (-.5)	Phulabani (14.17)
	<u>Cuttack</u> (-38.88)	Ganjam (33.44)
	Bolangir (19.66)	Munger (33.97)
	Koraput (-1.26)	Singhbhum (33.22)
	Patna (-8.15)	Dhanbad (1.35)
	Gaya (-3.54)	
	Bhojpur (-3.75)	
	Muzaffarpur (-.84)	
	Bhagalpur (-5.11)	
	Saharha (-11.85)	

\* Male High Growth Rate = 6 percent plus

\*\* Female High Growth Rate = 9 percent plus

Source : General Economic Tables, 1971, Census of India, Biv, Part A

General Economic Tables, 1981, Census of India, Table B 12.

vate consumption services. In the case of collective consumption services, Kalahandi has shown a negative growth.

The moderate growth of female workforce in Tertiary sector may be attributed to high growth of producer services (banking, insurance) and collective consumption services. The growth of producer services can be attributed to expansion of banking, changes in social norms, favourable government policy, increasing awareness and hence increase in the mobility of female, and female preference towards white collar jobs. High growth of collective consumption services is due to its being traditionally a female domain of work. However low growth of Distributive Services is a sign of backwardness. Personal services has a moderate growth with high growth of legal services. This trend is due to female workforce expansion, female preference of those activities, and expansion of education and awareness and changing social attitudes.

### **3.5 Relationship of Male and Female Workers in Non-Primary Workforce**

The growth of female workforce in Secondary sector has been faster than male workforce in Secondary sector. The growth of female is higher in consumer goods industries and construction whereas male workers show moderate growth for

Table 3.10 Inverse Trend\* of Growth Rate - Eastern India (1971-81)

Non-Primary Work-Force	Female Negative Growth Rate & Male High Growth Rate	Male Negative Growth Rate & Female High Growth Rate
1. Secondary Sector	Singhbhum	
i. Agro based	Palamu	Dhenkanal
ii. Textiles	Gaya Samabalpur	Puruliya
iii. Forest based		
iv. Metal based		Hazaribag
v. Mineral based	Medinipur Puruliya Kendujhar Cuttak Dhenkanal Muzaffarpur Sharsha	
vi. Machine based	Gaya	Medinipur
vii. Other Industries	Hugli	Bhojpur
viii. Construction	Bhojpur Munger	
2. Utility		
i. Electricity		
ii. Gas and Steel		
iii. Water Works & Supply		
3. Tertiary Sector		
I Services Linked to Production		
A. Social Economic Overhead Services	Jalpaiguri Phulabani	
i. Transport	Jalpaiguri Hazaribag	

\* Inverse trend implies male high but female negative growth rate or vice-versa.

Non-Primary Workforce	Negative Growth Rate	Very High Growth Rate
ii. Storage		
iii. Communication		
B. Trade Services	Dhenkanal	
i. Whole Sale	Bankura	Birbhum
ii. Retail	Dhenkanal	
C. Financial Services	Cuttak Koraput	
i. Banking		
ii. Insurance	Muzaffarpur	
iii. Real Estate		Nadia
II Services Linked to Consumption		
A. Private Consumption Services		Koch Bihar Twenty Four Pargana
i. Legal		Hugli, Patna
ii. Personal Services		Koch Bihar
B. Collective Consumption Services		
i. Public Services		
ii. Medicine & Health	Dhanbad	
iii. Education		
iv. Community Services	West Dinajpur Darbhanga	
v. Recreation Services		
vi. Hotel & Restaurant		Balasore
vii. Sanitation	Bankura Mujaffarpur	Samabalpur Phulabani

\*\* Male High Growth Rate = 6 percent plus

\*\*\* Female High Growth Rate = 9 percent plus

Source : 1. General Economic Tables, 1971, Census of India, BIV, Part A.  
2. General Economic Tables, 1981, Census of India, Table B-12.

all Secondary activities. In general there has been similar trend of growth for male and female secondary workers.

Male high and female negative growth (Table 3.10) is experienced in textiles and mineral-based industries. Dhanbad, Singhbhum, Phulbani are few districts which reveal this trend in Secondary sector.

In the Utility sector male workforce have shown a high growth in electricity whereas growth of female workforce in water works and supply is high. Inverse relationship<sup>2</sup> exists in Singhbhum, Nadia, Hazaribagh etc.

Tertiary sector has declined for both male and female workers but it has declined more in the case of male workers. Distributive services have declined both for male and female workers. Services linked to consumption, especially collective consumption services have shown a higher growth of female workforce. High growth of financial services has been observed for male and female workers. In general Tertiary sector also reveal similar trend of growth for male and female workers.

---

\* Inverse relationship implies high growth of male workforce but negative growth of female workforce and vice versa.



Inverse trend of male high growth and female negative growth occurs in transport services. On the other hand female high but male negative growth is revealed in private consumption services, collective consumption services and sanitation services. Inverse relationship is revealed only in Calcutta. In general, the trend of growth of male and female workforce in Tertiary sector is in the same direction.

The results of the analysis largely confirms the hypotheses. Few exceptions are as follows:

(i) There has been relatively fast growth of female workforce in the secondary sector.

(ii) Relatively fast growth of male and female workforce in capital goods in industries is observed in Orissa.

(iii) Male workforce in tertiary sectors reveal low rate of growth.

(iv) It has been observed that in some of the categories of services linked to production, male participation rates have declined over time. These services are transport, real estate and business services.

(v) Growth of female work participation rate in some of the Services Linked to Production has grown rapidly. These

services are banking and insurance.

This chapter provides an overall picture of the growth rate of non-primary sector in Eastern India. It is necessary to conduct a region specific study of this sector. The relationship of growth with the level of non-primary activities need to be examined. These are discussed in the following chapters.

## CHAPTER IV

### PARTICIPATION RATE AND CONCENTRATION OF NON-PRIMARY WORKFORCE IN EASTERN INDIA (1981)

A region specific research is necessary, to analyse the spatial spread of dominance of different non-primary workforce. "The geographic distribution of services reflects the spatial arrangement of the urban system (the hierarchy of urban places distinguished by population size)" (Kodras, 1993). Central place theory provides a conceptual framework for understanding geographic distribution of services. Briefly, basic lower order services are available in central places of all sizes, from the city to the hamlet, whereas higher order services for which demand is lower are confined to largest urban centres because only these contain sufficient market. This concept, however, does not completely explain the geographical spread of Secondary sector as it takes only market as a factor to analyse spatial spread. But still, in an analysis of employment in USA, Kodras found that the production services (banking, insurance, business services, legal services) and distributive services (transportation, communication storage, wholesale, retail) along with capital intensive manufacturing has a dominance.

Tewari (1988) has carried an analysis of sectoral employment trend in the Indian states. He found that industrialised states (which also exhibit higher participation rate of non-primary workforce) has lower growth of Secondary sector than the growth of these sectors in an industrialising states (with low participation rate of employment in non-primary sector).

	Growth of Rates of Employment	
	Secondary Sector	Tertiary Sector
Industrialised States	3.76	2.80
Industrialising States	4.34	2.73

Source: R.T. Tewari (1988), "Inter-Regional Pattern of Industrialisation in India 1971-81", The Indian Economic Journal, Vol.36, No.2, p.17.

#### 4.1 Objectives

(i) The present research attempts to analyse the spatial spread of dominance of non-primary activity for males and females.

(ii) Attempt has been made to reveal the relationship of participation rate of concentration and growth of non-primary workforce in males and females.

(iii) It also aims at distinguishing between male preferred non-primary workforce and female preferred non-primary workforce.

#### **4.2 Hypotheses**

(i) Secondary workforce reflects a high degree of spatial variation as compared to Tertiary workforce.

(ii) There is an inverse relationship between the level of concentration and growth of non-primary activities for male and female workers

(iii) Female workforce is high in those non-primary workforce which require less skill, less mobility and are low paid jobs.

#### **4.3 Methodology**

The analysis of the non-primary workforce in Eastern India has been carried out on the basis of participation rate (by simple percentage method) and calculating non-primary sector base and the the level of concentration by location quotient method. The percentage of non-primary sector is calculated with respect to total urban main workers for males and females separately which gives us their participation rates. The method of location quotient is used for obtaining non-primary base like Secondary sector

base, Tertiary sector base, Utility sector base. The non-primary workforce base for a region comprises those workforce which have location quotient (LQ) value more than. If the value of LQ is greater than one it also implies that these workforce are specialised and over represented in that region. If, however, the value is less than one it implies that these workforce are underrepresented.

The concentration of non-primary sector is analysed with the help of location quotient method. When the proportion of any character in an area is studied in relation to the proportion in the region, the ratio is known as location quotient. The advantages of this method is that it gives us a relative picture of proportions, such as proportion of workers in manufacturing, in region, say, to the proportion in the region as a whole. Participation rate of a particular activity should be in general having the same trend as level of concentration. But at times, it may vary.

Participation rates have been used to arrive at male preferred and female preferred non-primary workforce. Non-primary base gives the spatial dominance of various workforce. The growth and level of concentration of non-primary sector gives a relationship which indicates whether both are moving in the same direction or not.

Symbolically location quotient can be written as:

$$L_{ik} = \frac{e_{ik}}{E_k} / \frac{E_i}{E}$$

where

$e_{ik}$  = employment of non-primary activity  $i$ , in region  $k$   
( $i=1,2,\dots,n$  and  $k=1,2,\dots,m$ )

$E_k$  = Total employment of non-primary workforce in region  $k$  i.e.

$$E_k = \sum_{i=1}^m e_{ik}$$

$E_i$  = employment of non-primary activity  $i$  in all regions i.e.

$$E_i = \sum_{k=1}^m e_{ik}$$

and  $E$  = Total employment of non-primary workforce in all regions.

Non-primary workforce base of a region includes those workforce which have location quotient value above one. In the present chapter a district level analysis is done for Secondary sector base, Utility sector base and service sector base. If the location quotient value above one is arranged in descending order these bases are arrived at.

The relationship of level of concentration and growth of Secondary or Tertiary sector is analysed with the help of

bivariate maps for both, male and female. A table is made for male favoured activities and female favoured activities by analysing the participation rates (the activities which reveal relatively high proportion of male workers are male favoured and those activities which indicate high proportion of female workers are female favour).

#### **4.4 URBAN SECONDARY SECTOR - MALE WORKERS, 1981**

The proportion of male work force in urban Secondary sector in Eastern India (32.24 per cent) is very near to all-India average (31.13 per cent) (Table 4.1). Urban Secondary sector has maximum proportion of male workers in West Bengal (38.75 per cent) and minimum proportion in Orissa (22.33 per cent).

A district participation rate analysis indicate maximum proportion of male worker engaged in urban Secondary sector in Hugli, Haora, Twentyfour Pargana and Singhbhum (54.48 percent, 52.44 per cent, 48.24 per cent and 47.91 per cent respectively). On the other hand, Hazaribag , Kalahandi and Puri (12.94 per cent, 13.03 per cent, 13.03 per cent respectively) have minimum proportion of male workers engages in the Secondary sector in Eastern India (Table 4.2).



TABLE 4.1 : LOCATION QUOTIENT\*\* AND PARTICIPATION RATE OF URBAN SECONDARY SECTOR IN EASTERN INDIA, 1981

(PERCENTAGE)

SECONDARY SECTOR		INDIA	EASTERN INDIA	WEST BENGAL	ORISSA	BIHAR	JHAR-KHAND*
<u>MALE</u>							
SECONDARY SECTOR	(L)		0.97	1.11	0.74	0.85	0.98
	(P)	31.13	32.24	38.75	22.33	24.11	25.40
i. Agro-Based Industries	(L)		0.93	0.82	1.11	1.49	0.86
	(P)	3.15	3.03	3.00	2.34	3.37	2.06
ii. Textile Industries	(L)		0.94	1.22	0.56	0.50	0.31
	(P)	9.27	9.08	13.33	3.53	3.39	2.23
iii. Forest-Based Industries	(L)		0.96	1.04	1.27	0.78	0.64
	(P)	4.17	4.15	5.18	3.65	2.43	2.09
iv. Metal-Based Industries	(L)		1.63	0.75	1.55	1.55	2.47
	(P)	2.72	4.61	4.13	0.94	5.35	8.97
v. Mineral-Based Industries	(L)		1.02	0.93	1.15	1.16	1.38
	(P)	2.28	2.40	2.65	1.91	2.09	2.62
vi. Machine-Based Industries	(L)		1.19	1.15	0.14	0.86	0.97
	(P)	3.51	4.33	6.00	0.42	2.80	3.30
vii. Other Industries	(L)		0.63	0.98	1.21	0.99	0.66
	(P)	1.76	1.14	1.34	0.95	0.84	0.59
viii. Construction	(L)		0.78	0.72	1.93	1.50	1.29
	(P)	4.26	3.44	2.98	4.59	3.85	3.50

\* Proposed state

Contd.....

TABLE 4.1 (CONTD.)

(PERCENTAGE)

SECONDARY SECTOR		INDIA	EASTERN INDIA	WEST BENGAL	ORISSA	BIHAR	JHAR-KHAND*
<b>FEMALE</b>							
SECONDARY SECTOR	(L)		0.68	1.01	1.01	0.95	0.91
	(P)	27.23	19.50	22.92	17.30	14.70	15.55
i. Agro Based Industries	(L)		0.96	0.99	1.22	0.86	0.92
	(P)	7.40	5.11	5.94	5.53	3.30	3.83
ii. Textile Industries	(L)		0.78	1.31	0.51	0.49	0.52
	(P)	9.54	5.36	8.27	2.41	1.98	2.27
iii. Forest Based Industries	(L)		1.40	0.85	1.28	1.20	0.84
	(P)	2.16	2.17	2.18	2.47	1.96	1.48
iv. Metal Based Industries	(L)		3.28	0.69	1.38	1.60	2.99
	(P)	0.48	1.13	0.91	1.38	1.30	2.74
v. Mineral Based Industries	(L)		1.17	0.83	1.11	1.40	1.55
	(P)	3.01	2.52	2.46	2.48	2.66	3.18
vi. Machine Based Industries	(L)		1.40	1.23	0.09	1.06	1.17
	(P)	0.90	0.91	1.31	0.08	0.72	0.87
vii. Other Industries	(L)		1.00	1.17	0.55	0.87	0.72
	(P)	0.63	0.45	0.62	0.22	0.30	0.27
viii. Construction	(L)		0.84	0.57	1.66	1.73	2.42
	(P)	3.10	1.86	1.24	2.73	2.42	3.66

Note : \* Proposed state.

\*\* Location quotient value for Eastern India is with reference to India and State/district with reference to Eastern India.

L : Location Quotient; P : Participation Rate.

Source : General Economic Tables, 1981, Census of India, Table 12.

#### **4.4.1 An Analysis of Male Participation in the Classified Urban Secondary Sector (1981)**

The classification of Secondary sector in Eastern India shows higher proportion (more than all India average) of male work force in capital goods industries. Textile (9.08 per cent) accounts for maximum proportion followed by metal based industries (4.61 per cent). Other industries (1.14 per cent) and mineral based industries (2.4 per cent) indicates lowest proportions of male workforce.

The highest proportion of male workers in textiles (13.33 per cent), forest based (5.18 per cent), mineral based (2.68 per cent), machine based (6.00 per cent) and other industries (1.3 per cent) were in West Bengal. Agro-based industries has highest proportion (3.37 per cent) in Bihar and metal based (4.24 per cent) and construction (4.59 per cent) in Orissa.

A district level data indicates, maximum proportion of male workers in urban Secondary sector, in Hugli (54.48 percent), Haora (52.44 per cent). Twentyfour Pargana (48.24 per cent) and Singhbhum (47.91 per cent). Lowest proportion for this sector was recorded in Hazaribagh (12.94 per cent), Kalahandi (13.03 per cent) and Puri (13.32 per cent).

A district level concentration of workforce in urban

**TABLE 4-2 CONCENTRATION OF SECONDARY SECTOR IN EASTERN INDIA :  
A DISTRICT LEVEL ANALYSIS, 1981**

SECONDARY SECTOR	DISTRICTS	
	MALE	FEMALE
Ø1. Agro based Industries	Mursidabad, Birbhum, Champaran, Puruliya, Balasore	Balasore, Hugli, Koch Bihar, Sambalpur, Munger
Ø2. Textiles Industries	Patna, Nadia, Hugli	Nadia, Darjiling, Bhagalpur
Ø3. Forest based Industries	Phulbani, Sambalpur, Jalpaiguri, Gaya, Bhojpur	Champaran, Mayurbhanj, Munger, Ganjam
Ø4. Metal based Industries	Mayurbhanj, Dhanbad, Singhbhum, Kendujhar Barddhaman	Dhanbad, Kendujhar, Singhbhum, Mayurbhanj
Ø5. Mineral based Industries	Dhanbad, Hazaribagh, Sundergarh, Bhojpur, Puruliya	Puruliya, Singhbhum, Sundergarh
Ø6. Machine based Industries	Ranchi, Barddhaman, Singhbhum	Ranchi, Singhbhum, Calcutta, Bardhaman
Ø7. Other Industries	Ganjam, Maldah, Saran, Champaran, Bankura	Koraput, Mursidabad, Saharsa, Dhenkanal, Bankura
Ø8. Construction	Dhenkanal, Kalahandi, Saharsa, Palamau, Maldah, Darjiling	Dhenkanal, Kalahandi, Singhbhum, Dhanbad, Gaya, Hazaribagh, Saharsa, Kendujhar, Sundergarh

Secondary sector is given in the Table 4.2.

#### **4.5 Urban Secondary Sector - Female Workers, 1981**

The proportion of female work force in Secondary sector in urban areas of Eastern India (19.5 per cent) is much less than all India average (27.23 per cent) (Table 4.1). West Bengal (22.92 per cent) again exhibit the highest proportion, but lowest proportion is recorded in Bihar (14.7 per cent). The location quotient value indicate that the over representation of Secondary sector occurs only in Orissa.

A district level data indicates maximum proportion of female workers, of urban Secondary sector in Nadia (65.15 per cent), Murshidabad (48.10 per cent) and Bankura (34.78 per cent), Saharsa (6.22 per cent), Purnia (9.01 per cent), Singhbhum (7.57 per cent), Palamau (8.88 per cent) indicate minimum proportion of female workers in Secondary sector.

##### **4.5.1 An Analysis of Female Participation Rate in the Classified Urban Secondary Sector**

The classification of Secondary sector reveals that it is only in metal based and machine based industry that female workforce in Eastern India showed a dominance. The highest proportion of worker is in textiles (5.36 per cent)

followed by agro-based industries (5.11 per cent). Agro-based textiles, machine based and other industries have highest proportion in West Bengal. Forest based and construction have highest proportion in Orissa. Metal based and mineral based industries have highest proportion of female workers in proposed Jharkhand.

#### **4.6 Secondary Sector Base**

The term Secondary sector base implies to those Secondary workforce which indicate location quotient value over one. The workforce with location quotient value over one is put in descending order. This gives Secondary sector base for a region (state, district) The table 4.3 pertains to state/district Secondary sector base. These workforce are specialised and overrepresented in a region (state/district).

Table 4.3 gives an account of Secondary sector base for male and female. The region under study has rich agriculture and vast mineral resource. This gives potential for development of variety of industries. Bihar has a number of districts with agro-based industries as Secondary sector base. Textile industries are governed by locaton factor and hence is specialised in few selected districts like Hugli,

Table 4.3 : Secondary and Utility Sector Base In Eastern India - 1981

State/District	Male	Female
1. India-East India	Metal-based Industries (1.63) Machine-based Industries (1.19) Mineral-based Industries (1.01) Gas and Steam (1.50) Electricity (1.027)	Metal-based Industries (3.27) Machine-based Industries (1.4) Forest-based Industries (1.4) Mineral-based Industries (1.16) Electricity (1.07)
2. West Bengal	Textiles (1.22) Machine-based Industries (1.15) Forest-based Industries (1.03) Gas and Steam (1.88) Electricity (1.04)	Textiles (1.31) Machine-based Industries (1.22) Other Industries (1.16) Gas and Steam (1.15) Electricity (1.05)
3. Orissa	Construction (1.92) Metal-based Industries (1.54) Forest-based Industries (1.26) Other Industries (1.20) Mineral-based Industries (1.14) Agro-based Industries (1.11) Water Works (1.46)	Construction (1.65) Metal-based Industries (1.37) Forest-based Industries (1.28) Agro-based Industries (1.22) Mineral-based Industries (1.1) Water Works (4.34) Gas and Steam (2.29)
4. Bihar	Metal-based Industries (1.55) Construction (1.49) Agro-based Industries (1.48) Mineral-based Industries (1.16) Water Works (1.37)	Construction (1.72) Metal-based Industries (1.6) Mineral-based Industries (1.4) Forest-based Industries (1.19) Machine-based Industries (1.08) Electricity (1.07)
5. Proposed Jharkhand State	Metal-based Industries (2.47) Mineral-based Industries (1.38) Construction (1.28) Water Works (1.06) Electricity (1.0)	Metal-based Industries (2.98) Construction (2.42) Mineral-based Industries (1.55) Machine-based Industries (1.17)

\* Values in the bracket pertain to the location coefficient

\*\* Location quotient of Eastern India is with reference to India and that of state/district is with reference to Eastern India.

\*\*\* Secondary sector base is followed by utility sector base.

State/District	Male	Female
1. Koch Bihar	Agro-based Industries (3.08) Other Industries (2.29) Construction (1.26) Electricity (1.04)	Agro-based Industries (2.63)
2. Jalpaiguri	Forest-based Industries (2.21) Agro-based Industries (2.05) Construction (1.62) Other Industries (1.29) Gas and Steam (1.62) Water Works (1.16)	Agro-based Industries (1.98) Forest-based Industries (1.56)
3. Darjiling	Construction (2.7) Agro-based Industries (1.89) Forest-based Industries (1.51) Other Industries (1.08) Electricity (1.15)	Other Industries (2.45) Textiles (2.25) Construction (1.14) Electricity (1.13)
4. West Dinajpur	Agro-based Industries (2.81) Other Industries (1.84) Construction (1.5) Forest-based Industries (1.3) Electricity (1.03)	Agro-based Industries (2.01) Other Industries (1.2) Mineral-based Industries (1.10)
5. Maldah	Other Industries (2.02) Construction (2.71) Agro-based Industries (1.02) Forest-based Industries (1.22) Mineral-based Industries (1.11) Electricity (1.03)	Agro-based Industries (1.08) Construction (1.68) Electricity (1.13)
6. Murshidabad	Agro-based Industries (4.67) Construction (2.13) Other Industries (1.41) Electricity (1.07)	Agro-based Industries (3.22) Electricity (1.13)
7. Nadia	Textiles (2.0) Agro-based Industries (1.26) Other Industries (1.09) Gas and Steam (1.3)	Textiles (2.69) Electricity (1.13)
8. 24 Parganas	Textiles (1.67) Machine-based Industries (1.21) Gas and Steam (2.28)	Machine-based Industries (1.69) Textiles (1.64) Other Industries (1.41) Forest-based Industries (1.4) Mineral-based Industries (1.09) Gas and Steam (1.49) Electricity (1.06)



State/District	Male	Female
9. Calcutta	Forest-based Industries (1.86) Other Industries (1.81) Machine-based Industries (1.35) Mineral-based Industries (1.28) Agro-based Industries (1.00) Gas and Steam (3.72)	Machine-based Industries (3.63) Other Industries (1.90) Forest-based Industries (1.86) Gas and Steam (2.9) Electricity (1.01)
10. Haora	Textiles (1.55) Machine-based Industries (1.37) Metal-based Industries (1.20) Electricity (1.04)	Other Industries (2.35) Textiles (1.54) Machine-based Industries (1.35) Metal-based Industries (1.31) Mineral-based Industries (1.16) Electricity (1.13)
11. Hugli	Textiles (2.01) Mineral-based Industries (1.04) Electricity (1.1)	Mineral-based Industries (2.08) Textiles (1.77) Other Industries (1.03) Electricity (1.07)
12. Medinipur	Construction (2.6) Other Industries (2.06) Agro-based Industries (1.68) Forest-based Industries (1.37) Mineral-based Industries (1.36) Electricity (1.10)	Agro-based Industries (1.65) Forest-based Industries (1.4) Other Industries (1.39) Electricity (1.13)
13. Bankura	Other Industries (2.47) Agro-based Industries (2.30) Construction (1.19) Textiles (1.11) Forest-based Industries (1.01) Electricity (1.08)	Other Industries (3.39) Textiles (2.08) Electricity (1.13)
14. Puruliya	Mineral-based Industries (1.88) Construction (1.36) Other Industries (1.11)	Mineral-based Industries (4.51) Other Industries (1.33) Water Works (1.03)
15. Bardhaman	Metal-based Industries (3.2) Machine-based Industries (1.79) Electricity (1.13) Gas and Steam (1.01)	Metal-based Industries (4.13) Machine-based Industries (1.9) Mineral-based Industries (1.17) Agro-based Industries (1.11)
16. Birbhum	Agro-based Industries (4.05) Construction (1.16) Electricity (1.07)	Electricity (1.11) Other Industries (4.26) Agro-based Industries (2.23) Electricity (1.13)
1. Sambalpur	Agro-based Industries (2.03) Construction (1.4) Water Works (1.00)	Agro-based Industries (2.51) Textile (2.33)

State/District	Male	Female
2. Sundergarh	Metal-based Industries (4.2) Mineral-based Industries (2.06) Construction (1.01) Water Works (1.11) Electricity (1.00)	Metal-based Industries (4.88) Mineral-based Industries (2.73) Construction (2.68) Gas and Steam (13.79) Water Works (2.92)
3. Kendujhar	Metal-based Industries (3.46) Construction (1.8) Water Works (1.12) Electricity (1.01)	Metal-based Industries (8.06) Construction (3.12)
4. Mayurbhanj	Construction (2.08) Agro-based Industries (1.82) Forest-based Industries (1.54)	Forest-based Industries (4.24) Construction (1.61) Mineral-based Industries (1.29)
5. Balasore	Agro-based Industries (2.73) Other Industries (1.95) Construction (1.8) Water Works (1.34)	Agro-based Industries (2.33) Construction (1.02) Water Works (10.1)
6. Cuttack	Forest-based Industries (1.85) Other Industries (1.73) Agro-based Industries (1.25) Construction (1.14) Textile (1.12) Electricity (1.13)	Forest-based Industries (2.01) Construction (1.65) Other Industries (1.4) Electricity (1.13)
7. Dhenkanal	Construction (5.61) Mineral-based Industries (1.89) Other Industries (1.32) Electricity (1.17)	Construction (4.48) Forest-based Industries (2.2) Water Works (5.05)
8. Phulabani	Construction (2.69) Forest-based Industries (2.55) Agro-based Industries (1.02) Water Works (2.3)	
9. Bolangir	Other Industries (2.08) Agro-based Industries (1.70) Construction (1.43) Mineral-based Industries (1.18) Textile (1.17) Forest-based Industries (1.05) Electricity (1.16)	Mineral-based Industries (2.29) Agro-based Industries (1.29) Metal-based Industries (1.06) Electricity (1.13)
10. Kalahandi	Construction (4.08) Agro-based Industries (1.71) Other Industries (1.22) Electricity (1.09)	Construction (3.6) Agro-based Industries (1.61) Machine Based Industries (1.08)

State/District	Male	Female
11. Koraput	Construction (3.05) Forest-based Industries (2.23) Agro-based Industries (1.14) Other Industries (1.05) Water Works (1.05)	Construction (3.27) Mineral-based Industries (1.08) Other Industries (1.09) Water Works (2.37)
12. Ganjam	Other Industries (3.81) Construction (1.78) Agro-based Industries (1.64) Mineral-based Industries (1.03) Water Works (1.68)	Forest-based Industries (6.73) Agro-based Industries (1.18) Mineral-based Industries (1.03) Water Works (6.73)
13. Puri	Construction (3.43) Forest-based Industries (1.49) Agro-based Industries (1.06) Water Works (3.24)	Forest-based Industries (6.29) Water Works (11.6)
1. Patna	Textile (4.57) Agro-based Industries (2.47) Construction (1.93) Forest-based Industries (1.39) Other Industries (1.2) Mineral-based Industries (1.04) Water Works (1.04)	Mineral-based Industries (2.21) Agro-based Industries (1.43) Other Industries (1.26) Water Works (2.19)
2. Gaya	Agro-based Industries (2.36) Other Industries (1.81) Textile (1.23) Mineral-based Industries (1.2) Water Works (1.3)	Construction (2.40) Other Industries (2.14) Mineral-based Industries (1.15) Textile (1.11) Water Works (2.37)
3. Bhojpur	Construction (2.1) Forest-based Industries (2.02) Agro-based Industries (1.72) Mineral-based Industries (1.58) Electricity (1.07)	Other Industries (2.61) Forest-based Industries (1.97) Mineral-based Industries (1.37) Electricity (1.13)
4. Saran	Agro-based Industries (3.76) Other Industries (2.75) Construction (1.71) Mineral-based Industries (1.15)	Other Industries (2.04) Forest-based Industries (1.90) Agro-based Industries (1.47) Textile (1.17) Electricity (1.13)
5. Champaran	Agro-based Industries (4.04) Other Industries (2.54) Construction (1.54) Forest-based Industries (1.07) Water Works (2.67)	Forest-based Industries (4.53) Agro-based Industries (1.67)

State/District	Male	Female
6. Muzaffarpur	Construction (2.43) Other Industries (2.33) Agro-based Industries (2.19) Forest-based Industries (1.18) Water Works (1.36)	Forest-based Industries (2.65) Other Industries (1.37) Construction (1.13) Agro-based Industries (1.13) Electricity (1.13)
7. Darbhanga	Agro-based Industries (1.91) Other Industries (1.77) Construction (1.65) Textile (1.27) Water Works (2.69)	Agro-based Industries (2.26) Forest-based Industries (1.61)
8. Munger	Agro-based Industries (2.79) Machine-based Industries (1.35) Construction (1.24) Other Industries (1.88) Water Works (1.48)	Forest-based Industries (3.58) Agro-based Industries (1.3) Other Industries (1.85) Electricity (1.13)
9. Bhagalpur	Agro-based Industries (1.77) Textile (1.76) Construction (1.43) Other Industries (1.33) Water Works (1.48)	Textile (1.68) Other Industries (1.44) Agro-based Industries (1.38) Water Works (5.77)
10. Saharsa	Construction (3.84) Agro-based Industries (2.31) Other Industries (1.37) Water Works (1.68)	Construction (2.83) Agro-based Industries (2.84)
11. Purnia	Agro-based Industries (1.71) Textile (1.65) Water Works (2.79)	Forest-based Industries (2.44) Agro-based Industries (1.83)
12. Santhal Parganas	Agro-based Industries (2.33) Mineral-based Industries (1.61) Other Industries (1.56) Construction (1.58) Forest-based Industries (1.89) Water Works (2.23)	Other Industries (2.52) Forest-based Industries (1.64) Mineral-based Industries (1.41) Agro-based Industries (1.25) Electricity (1.13)
13. Palamu	Machine-based Industries (3.47) Construction (1.14) Mineral-based Industries (1.83) Water Works (2.64)	Machine-based Industries (4.74) Metal-based Industries (2.84) Mineral-based Industries (1.74) Construction (1.57) Electricity (1.13)
14. Hazaribag	Mineral-based Industries (3.74) Construction (2.48) Agro-based Industries (1.66) Electricity (1.13)	Construction (3.21) Mineral-based Industries (2.21) Electricity (1.88)

State/District.	Male	Female
15. Ranchi	Metal-based Industries (3.76) Machine-based Industries (2.31) Construction (1.25) Electricity (1.12)	Construction (4.8) Metal-based Industries (3.8) Mineral-based Industries (1.7) Electricity (1.13)
16. Dhanbad	Construction (2.4) Agro-based Industries (2.34) Mineral-based Industries (1.8) Forest-based Industries (1.1) Water Works (4.0)	Mineral-based Industries (2.66) Metal-based Industries (2.11) Forest-based Industries (1.69)
17. Singhbhum	Metal-based Industries (3.6) Machine-based Industries (1.78)	Metal-based Industries (15.8) Construction (8.3) Machine-based Industries (8.83) Mineral-based Industries (3.48) Water Works (3.15)

Source : General Economic Tables, 1981, Census of India, Table B-12.

Haora, 24 Pargana, Patna etc. Nearness to the raw material is an essential condition for forest based industries. Hence it is located near dense forested areas like Sambalpur, Darjeeling and Dhenkanal. Metal based industries are also specialised in mineral rich districts of Singhbhum, Sundergarh and Kendujhar. Mineral based industries is the Secondary sector base, for female workers, as it requires comparatively low skilled category workers. Machine based industries on the other hand require relatively skilled workers, large finance and nearness to the market. Hence it is specialised in selectively developed districts of Calcutta and Ranchi. Construction is concentrated both in developed and relatively underdeveloped districts.\*<sup>1</sup> Construction provides employment in backward districts in the form of governmental programmes like "Food for Work", "Twenty Point Programmes" Drought Prone Area Programme etc. In relatively developed districts, due to agglomeration economy workforce gets concentrated in these centres.

#### **4.7 Urban Utility Sector - Male Workers 1981**

The urban Utility sector has high porportion of male worker in Eastern India (1.47 per cent) in comparison to all

---

\* Level of development on the basis of composite index of indicator of development stated in Chapter 5.

TABLE 4.4 : LOCATION QUOTIENT\*\* AND PARTICIPATION RATE OF URBAN UTILITY SECTOR IN EASTERN INDIA, 1981

(PERCENTAGE)

UTILITY SECTOR	INDIA	EASTERN INDIA	WEST BENGAL	ORISSA	BIHAR	JHAR-KHAND*
<u>MALE</u>						
i. Electricity (L)		1.01	1.04	0.96	0.97	1.02
(P)	1.11	1.24	1.02	1.62	1.48	1.54
ii. Gas and Steam (L)		1.50	1.89	0.20	0.29	0.24
(P)	0.03	0.05	0.07	0.01	0.02	0.01
iii. Water Work and Supply (L)		0.89	0.51	1.47	1.37	1.06
(P)	0.19	0.19	0.08	0.38	0.32	0.25
<u>FEMALE</u>						
i. Electricity (L)		1.07	1.06	0.59	1.08	0.98
(P)	0.24	0.25	0.30	0.11	0.26	0.33
ii. Gas and Steam (L)		0.96	1.16	2.30	0.00	0.99
(P)	0.01	0.01	0.01	0.01	0.00	0.01
iii Water Work & Supply (L)		0.62	0.45	4.35	0.51	0.96
(P)	0.05	0.03	0.01	0.09	0.01	0.09

Note : \* Proposed state.

\*\* Location quotient value for Eastern India is with reference to India and State/district with reference to Eastern India.

L : Location Quotient

P : Participation Rate

Source : General Economic Tables, 1981, Census of India, Table 12.

India average (1.33 per cent). Utility sector has highest proportion of male workers in Orissa (2.01 per cent) and lowest proportion in West Bengal (1.17 per cent).

A district level data reveals high proportion of male workforce in Utility sector particularly in Hazaribagh, Dhenakanal, Puruliya, Barddhan and Puri. Low participation rate of these workforce are indicated in Jalpaiguri, Haora and Bankura.

The classification of Utility secondary indicates that electricity (1.24 per cent) gas and steam (0.05 per cent) are specialised in Eastern India. Highest proportion of male worker are found in electricity and water works and supply in Orissa. Gas and steam has highest proportion of male workers in West Bengal.

#### **4.8 Urban Utility Sector - Female Workers (1981)**

The proportion of urban female workers in the Utility sector is same as all India average. Proposed Jharkhand (0.38 per cent) indicates maximum proportion and Orissa (0.21 per cent) the lowest proportion of female workers (Table 4.4).

District level data reveals high proportion of female in Utility sector in Hazaribagh, Puruliya and Barddhan



TABLE 4.5 CONCENTRATION OF UTILITY SECTOR IN EASTERN INDIA :  
A DISTRICT LEVEL ANALYSIS, 1981

UTILITY SECTOR	DISTRICTS	
	MALE	FEMALE
Ø1. Electricity	Puruliya, Darjiling, Bolangir, Hazaribagh, Singhbhum	Darjiling, Maldah W. Dinajpur, Medinipur Murshidabad
Ø2. Gas and Steam	Calcutta, Haora, Cuttack, Munger, Mayurbhanj, Singhbhum	Calcutta, 24-Pargana Sundergarh
Ø3. Water Works and Supply	Jalpaiguri, Nadia, Puri, Bankura, Bolangir Palamau, Purnia	Puri, Jalpaiguri

Source: General Economic Tables, 1981, Census of India, Table B  
12.

(Table 4.5).

The subgroups of female workforce in Utility sector reveals that it is electricity in which Eastern India is specialised. Electricity has the highest proportion of female workers in proposed Jharkhand state. Gas and Steam and water works and supply have negligible female workers.

#### **4.9 Urban Tertiary Sector - Male Workers (1981)**

The proportion of male workforce in urban Tertiary sector in Eastern India (49.54 per cent) is less than for all India average (54.78 per cent) (Table 4.6). Orissa has the highest percentage followed by West Bengal (53.29 per cent). Bihar accounts for minimum proportion of male work force in urban sector (40.98 per cent).

A district level data indicate maximum proportion of male workers in urban Tertiary sector in Darjeeling, Koch Bihar, Malda and Puri (over 70 per cent). Hugli, Barddhawan and Dhanbad have minimum proportion of Tertiary sector in Eastern India (less than 40 per cent).

##### **4.9.1 An Analysis of Male Work Participation Rate in Classified Urban Tertiary Sector (1981)**

The classified data for male workers reveals that Services Linked to Production (29.41 per cent) is specia-

TABLE 4.6: LOCATION QUOTIENT\*\* AND PARTICIPATION RATES OF URBAN TERTIARY SECTOR IN EASTERN INDIA

TERTIARY SECTOR		INDIA	EASTERN INDIA	WEST BENGAL	ORISSA	BIHAR	JHAR-KHAND*
<u>MALE</u>							
TERTIARY SECTOR	(L)		0.92	0.98	1.20	0.93	1.10
	(P)	54.78	49.84	53.29	56.20	40.98	43.76
1. Services	(L)		1.11	1.00	0.75	1.15	0.91
Linked to Production	(P)	29.01	29.41	31.31	24.72	27.75	23.59
A. Social Economic	(L)		1.14	1.00	0.78	1.11	1.12
Overhead Serv.	(P)	9.98	10.32	11.09	9.01	9.41	10.16
i. Transport	(L)		1.15	1.00	0.77	1.13	1.17
	(P)	8.89	9.29	9.93	8.01	8.60	9.53
ii. Storage	(L)		1.54	1.30	0.46	0.56	0.32
	(P)	0.13	0.18	0.25	0.09	0.08	0.05
iii. Communication	(L)		0.98	1.00	0.93	1.04	0.77
	(P)	0.96	0.86	0.91	0.91	0.73	0.58
B. Trade Service	(L)		1.11	0.96	0.73	1.23	0.85
	(P)	15.76	15.90	16.40	13.09	16.08	11.83
i. Wholesale	(L)		1.15	1.29	0.40	0.63	0.45
	(P)	1.59	1.66	2.28	0.75	0.86	0.60
ii. Retail	(L)		1.10	0.93	0.77	1.30	0.89
	(P)	14.18	14.24	14.11	12.34	15.22	11.16
C. Financial Services	(L)		1.03	1.23	0.69	0.60	0.49
	(P)	2.82	2.64	3.49	2.03	1.31	1.13
i. Banking	(L)		0.96	1.09	0.87	0.84	0.93
	(P)	1.63	1.41	1.66	1.39	0.98	0.78
ii. Insurance	(L)		1.25	1.15	0.65	0.84	0.59
	(P)	0.24	0.28	0.34	0.20	0.19	0.15
iii. Real Estate	(L)		1.09	1.47	1.42	1.18	0.42
	(P)	0.95	0.95	1.49	0.44	0.14	0.20

\* Proposed state

Contd.....

TERTIARY SECTOR		INDIA	EASTERN INDIA	WEST BENGAL	ORISSA	BIHAR	JHAR-KHAND*
2. Services	(L)		0.99	0.88	1.20	1.17	1.00
Linked to Consumption	(P)	26.22	23.59	22.32	31.38	22.66	20.66
A. Private Consumption Service	(L)		0.91	0.92	1.10	1.14	1.04
	(P)	9.46	7.87	7.72	9.75	7.40	7.20
i. Legal Services	(L)		1.34	0.57	0.97	2.07	0.98
	(P)	0.45	0.55	0.34	0.58	0.94	0.47
ii. Personal Services	(L)		0.89	0.94	1.11	1.07	1.05
	(P)	9.01	7.32	7.39	9.17	6.62	7.71
B. Collective Consumption Service	(L)		1.03	0.87	1.25	1.18	0.98
	(P)	16.76	15.72	14.59	22.14	15.24	3.47
i. Public Admin.	(L)		1.07	0.87	1.33	1.08	0.89
	(P)	8.28	8.07	7.72	12.05	7.15	6.29
ii. Medicine & Health	(L)		1.12	0.87	1.09	1.27	0.98
	(P)	1.40	1.43	1.33	1.76	1.49	1.23
iii. Education	(L)		1.04	0.84	1.27	1.24	1.11
	(P)	3.07	2.89	2.60	4.12	2.75	2.81
iv. Community	(L)		0.85	0.80	1.57	1.18	1.03
	(P)	0.67	0.52	0.44	0.92	0.50	0.47
v. Recreation & Cultural	(L)		0.85	1.04	0.84	0.99	0.71
	(P)	0.59	0.46	0.51	0.43	0.37	0.29
vi. Restaurant & Hotel	(L)		0.92	0.84	1.18	1.29	1.07
	(P)	2.28	1.92	1.72	2.54	2.03	1.79
vii. Sanitation	(L)		1.00	0.60	0.65	2.15	1.56
	(P)	0.47	0.42	0.27	0.31	0.75	0.58

\* Proposed state

Contd.....

TH-4968

TERTIARY SECTOR		INDIA	EASTERN INDIA	WEST BENGAL	ORISSA	BIHAR	JHAR-KHAND*
<u>FEMALE</u>							
TERTIARY SECTOR	(L)		1.18	0.99	0.99	1.01	1.04
	(P)	48.79	61.57	70.80	53.64	19.93	54.86
1. Services	(L)		0.71	0.86	1.35	1.12	1.16
Linked to Production	(P)	19.30	9.24	9.12	10.86	8.39	9.57
A. Social Economic	(L)		0.87	1.05	0.99	0.87	1.40
Overhead Serv.	(P)	2.24	2.45	2.96	2.12	1.73	3.05
i. Transport	(L)		0.90	0.89	1.26	1.10	1.96
	(P)	1.45	1.64	1.66	1.80	1.47	2.86
ii. Storage	(L)		0.88	0.68	3.47	0.05	0.25
	(P)	0.06	0.07	0.05	0.21	0.00	0.01
iii. Communication	(L)		0.80	1.44	0.17	0.11	0.27
	(P)	0.73	0.74	1.23	0.11	0.27	0.18
B. Trade Service	(L)		0.65	0.66	1.68	1.40	1.20
	(P)	6.26	5.44	4.12	7.98	6.16	5.84
i. Wholesale	(L)		0.67	1.20	0.87	0.56	0.65
	(P)	0.41	0.34	0.48	0.28	0.16	0.20
ii. Retail	(L)		0.69	0.62	1.74	1.45	1.24
	(P)	5.85	5.09	3.64	7.72	6.01	5.64
C. Financial Services	(L)		0.58	1.32	0.66	0.42	0.56
	(P)	1.71	1.25	1.90	0.72	0.43	0.63
i. Banking	(L)		0.41	1.32	0.49	0.53	0.42
	(P)	1.17	0.61	0.92	0.26	0.26	0.23
ii. Insurance	(L)		0.69	1.19	0.43	0.91	0.62
	(P)	0.21	0.19	0.26	0.07	0.14	0.10
iii. Real Estate	(L)		1.13	1.36	0.98	0.07	0.73
	(P)	0.32	0.46	0.72	0.39	0.03	0.30

\* Proposed state.

Contd.....

TERTIARY SECTOR		INDIA	EASTERN INDIA	WEST BENGAL	ORISSA	BIHAR	JHAR-KHAND*
2. Services	(L)		1.08	1.03	0.93	0.98	0.96
Linked to Consumption	(P)	38.59	52.61	62.16	42.82	41.61	45.14
A. Private Consumption Service	(L)		1.48	1.09	1.06	0.72	0.89
	(P)	12.50	23.32	29.31	21.48	13.56	18.53
i. Legal Services	(L)		0.83	1.19	0.52	0.84	0.49
	(P)	0.10	0.83	0.15	0.05	0.07	0.05
ii. Personal Services	(L)		0.11	1.09	1.06	0.72	0.89
	(P)	12.40	1.48	29.17	21.43	13.48	18.48
B. Collective Consumption Service	(L)		0.80	0.98	0.84	1.18	1.02
	(P)	26.09	29.29	32.85	21.35	28.05	26.61
i. Public Admin.	(L)		0.83	1.11	1.10	0.65	0.73
	(P)	4.50	4.69	5.97	4.80	2.46	3.03
ii. Medicine & Health	(L)		1.05	1.02	0.69	1.18	1.16
	(P)	4.58	6.08	7.11	3.66	5.82	6.28
iii. Education	(L)		0.87	1.00	0.83	1.11	0.93
	(P)	13.86	15.25	17.61	11.05	13.51	12.68
iv. Community	(L)		0.61	1.10	1.18	0.63	1.26
	(P)	0.52	0.40	0.51	0.41	0.20	0.45
v. Recreation & Cultural	(L)		0.90	0.99	0.56	1.35	0.77
	(P)	0.32	0.37	0.42	0.56	0.40	0.25
vi. Restaurant & Hotel	(L)		0.72	0.73	1.61	1.26	1.17
	(P)	0.83	0.75	0.73	1.06	0.77	0.78
vii. Sanitation	(L)		0.92	0.30	0.34	3.29	2.05
	(P)	1.49	1.72	0.59	0.50	4.59	3.13

Note : \*\* Location quotient value for Eastern India is with reference to India and State/district with reference to Eastern India.

L : Location Quotient  
P : Participation Rate

Source : General Economic Tables, 1981, Census of India, Table 12.

lised in Eastern India. Social Economic Overhead services and (10.32 per cent), and trade services (15.9 per cent) and distributive services specialised centres of activity in Eastern India. Collective consumption services is also an important provider of employment.

In the urban Tertiary sector, the participation rate of male workers is high in Eastern India in retail trade (14.24 per cent), transport services (9.29 per cent), public administration (8.07 per cent), personal services (7.32 per cent) and education (2.89 per cent). The remaining workforce in Tertiary sector reveal proportion around one per cent of urban main workers.

Classified data for male workforce in Tertiary sector reveals a distinct trend. All the workforce in Services Linked to Production except retail trade reflected high participation in West Bengal. In Services Linked to Consumption, Orissa had high participation rate in all the workforce except legal services, recreation and cultural and sanitation services. Retail trade services has highest proportion of male workers in Bihar. A district level concentration of service sector is given in a tabular form (Table 4.7).

TABLE : 4.7

## CONCENTRATION OF TERTIARY SECTOR IN EASTERN INDIA : A DISTRICT LEVEL ANALYSIS, 1981

TERTIARY SECTOR	DISTRICTS	
	MALE	FEMALE
Ø1. Transport	Puruliya, Bankura, Dhanbad, Singhbhum, Singhbhum	Puruliya, Kendujhar, Palamau
Ø2. Communication	Darjiling, 24-Parganas, Bhagalpur, Bolangir	24-Parganas, Nadia, Patna, Phulbani
Ø3. Storage	Calcutta, Dhenkanal, Patna	Ganjam, Barddhaman, Koraput, Bhagalpur
Ø4. Wholesale	Koch Bihar, Calcutta, Kendujhar	Birbhum, Nadia, Bhojpur, Darbhanga, Sundergarh, Koraput
Ø5. Retail	W. Dinajpur, Bhojpur, Nadia, Saran, Bolangir	Nadia, Ganjam, Koraput, Munger, Hazaribagh
Ø6. Banking	Birbhum, 24-Parganas, Bolangir, Patna	24-Parganas, Puri, Calcutta, Haora
Ø7. Insurance	24-Parganas, Calcutta, Cuttack, Muzaffarpur	24Parganas, Puruliya, Cuttack, Kendujhar, Darbhanga, Palamau
Ø8. Real Estate	Haora, Calcutta, Kendujhar	Calcutta, Haora, 24-Parganas, Hugli, Kendujhar
Ø9. Legal Service	Champaran, Saran, Bolangir, Maldah, Phulbani, Murshidabad	Haora, Medinipur, Bolangir, Patna
1Ø. Personal Services	Medinipur, Kalahandi, Ganjam	Nadia, 24-Parganas, Kalahandi
11. Public Administration	Maldah, Koch Bihar, Phulabani, Puri, Patna, Saharsa	Murshidabad, Puri, 24-Parganas, Cuttack, Saran, Bhagalpur
12. Medicine and Health	Bankura, Birbhum, Kalahandi, Phulabani, Gaya, Darbhanga	Nadia, 24-Parganas, Dhenkanal, Gaya, Saran, Singhbhum

CONTD.....



TERTIARY SECTOR	DISTRICTS	
	MALE	FEMALE
13. Education	Birbhum, Murshidabad, Bolangir, Phulabani, Saharsa, Bhagalpur	Nadia, 24-Parganas, Mayurbhanj, Cuttack
14. Community Services	Santhal Pargana, Puri, Ganjam, Gaya, Bankura, Nadia	Hugli, Nadia, Puri, Bolangir, Palamau, Hazaribagh
15. Recreation	Darjiling, Calcutta, Cuttack, Ranchi	Darjiling, Calcutta, Cuttack, Sambalpur, Gaya, Muzaffarpur
16. Hotel and Restaurant	Darjiling, Phulabani, Sundergarh, Santhal Pargana, Puri	Balasore, Phulabani, Nadia, Santhal Pargana, Champaran
17. Sanitation	Dhanbad, Champaran, Kalahandi, Phulabani, Calcutta	Dhanbad, Saran, Ganjam, Puruliya

#### **4.10 Urban Tertiary Sector - Female Workers (1981)**

The urban female workforce in Tertiary sector is over-represented in Eastern India (61.5 per cent). The maximum proportion is indicated in West Bengal (70.8 per cent) and minimum proportion in Bihar (49.23 per cent).

A district level analysis reveals high proportion of female workforce in Tertiary sector in Calcutta (87.2 per cent), Malda (85.9 per cent), Jalpaiguri (76.92 per cent), and Darjeeling (76.75 per cent), Low participation rate of Tertiary activity is indicated in Nadia (8.87 per cent), Saharsa (17.67 per cent), Murshidabad (31.8 per cent) and Twentyfour Pargana (34.74 per cent).

##### **4.10.1 An Analysis of Female Participation in the Classified Urban Tertiary Sector**

The results of the classified data for urban Tertiary sector indicate that Eastern India has higher proportion of female workers in Social Economic Overhead Services, private consumption services and collective consumption services. This region has specialisation of female workforce in personal services and sanitation services, medicine and health.

The proportion of female workers is high in personal services (23.28 per cent), education (15.28 per cent),

Table 4.8 : Tertiary Sector Base In Eastern India -1981 (Singers' Classification)

State/District	Male	Female
1. India-East India	Social Economic Overhead (1.13) Services Linked to Production (1.11) Trade Services (1.1) Collective Consumption Services (1.03) Financial Services (1.02)	Private Consumption Services (1.47) Service Linked to Consumption (1.08)
2. West Bengal	Financial Services (1.23) Social Economic Overhead (1.00)	Financial Services (1.31) Private Consumption Services (1.09) Service Linked to Consumption (1.02) Social Economic Overhead
3. Orissa	Collective Consumption Services (1.25) Service Linked to Consumption (1.2) Private Consumption Services (1.1)	Services Linked to Production (1.34) Private Consumption Services (1.05)
4. Bihar	Trade Services (1.23) Collective Consumption Services (1.18) Services Linked to Production (1.16) Social Economic Overhead (1.1)	Trade Services (1.39) Collective Consumption Services (1.18) Services Linked to Production (1.11)
5. Proposed Jharkhand State	Social Economic Overhead (1.12) Private Consumption Services (1.04)	Social Economic Overhead (1.39) Trade Services (1.2) Services Linked to Production (1.16) Collective Consumption Services (1.01)

\* The values in the bracket pertains to the location quotient values.

\*\* Location quotient of Eastern India is with reference to India and that of state/district is with reference to Eastern India.

State/District	Male	Female
1. Koch Bihar	Collective Consumption Services (1.2)	Collective Consumption Services (1.14) Service Linked to Consumption (1.11) Private Consumption Services (.07)
2. Jalpaiguri	Social Economic Overhead(1.35) Services Linked to Production(1.11) Trade Services (1.07)	Social Economic Overhead(1.7) Collective Consumption Services (1.0) Service Linked to Consumption (1.00)
3. Darjiling	Social Economic Overhead(1.10) Collective Consumption Services (1.00)	Social Economic Overhead(2.06) Services Linked to Production(1.12) Collective Consumption Services (1.02)
4. West Dinajpur	Trade Services (1.33) Social Economic Overhead(1.03)	Collective Consumption Services (2.01) Service Linked to Consumption (1.09) Private Consumption Services (1.05)
5. Maldah	Collective Consumption Services (1.25) Service Linked to Consumption (1.09)	Private Consumption Services (1.24) Service Linked to Consumption (1.00)
6. Murshidabad	Trade Services (1.12) Collective Consumption Services (1.11) Service Linked to Consumption (1.02)	Private Consumption Services (1.1) Service Linked to Consumption (1.06) Collective Consumption Services (1.02)
7. Nadia	Trade Services (1.15) Collective Consumption Services (1.06)	Collective Consumption Services (6.71) Service Linked to Consumption (5.68) Private Consumption Services (4.30) Trade Services (3.72) Services Linked to Production (3.17) Social Economic Overhead (2.59) Financial Services (2.05)
8. 24 Parganas	Financial Services (1.43)	Financial Services (3.25) Collective Consumption Services (2.24) Service Linked to Consumption (2.17) Private Consumption Services (2.08) Services Linked to Production (1.78)
9. Calcutta	Financial Services (1.52) Services Linked to Production (1.05) Trade Services (1.02)	Financial Services (1.88) Private Consumption Services (1.35) Social Economic Overhead (1.03) Service Linked to Consumption (1.01)
10. Haora	Financial Services (1.46) Social Economic Overhead (1.19) Services Linked to Production (1.06)	Financial Services (1.4) Services Linked to Production (1.2) Trade Services (1.15) Social Economic Overhead (1.14)

State/District	Male	Female
11. Hugli	Financial Services (1.63) Services Linked to Production (1.00) Trade Services (1.00)	Financial Services (1.18) Social Economic Overhead (1.04) Service Linked to Consumption (1.02)
12. Medinipur	Private Consumption Services (1.51) Social Economic Overhead (1.35) Service Linked to Consumption (1.07)	Social Economic Overhead (2.06) Collective Consumption Services (1.07) Service Linked to Consumption (1.00)
13. Bankura	Collective Consumption Services (1.1)	Private Consumption Services (1.14) Service Linked to Consumption (1.04)
14. Puruliya	Social Economic Overhead (1.93)	Social Economic Overhead (4.51) Services Linked to Production (1.59) Collective Consumption Services (1.09)
15. Bardhaman	Social Economic Overhead (1.12) Private Consumption Services (1.12)	Collective Consumption Services (1.11) Service Linked to Consumption (1.04)
16. Birbhum	Collective Consumption Services (1.42) Service Linked to Consumption (1.27) Social Economic Overhead (1.26) Trade Services (1.12)	Private Consumption Services (1.28) Trade Services (1.25) Service Linked to Consumption (1.01)
1. Sambalpur	Collective Consumption Services (1.17) Service Linked to Consumption (1.11) Private Consumption Services (1.01)	Trade Services (2.18) Services Linked to Production (1.67) Social Economic Overhead (1.31)
2. Sundergarh	Private Consumption Services (1.34) Service Linked to Consumption (1.11) Social Economic Overhead (1.10)	Social Economic Overhead (1.84) Private Consumption Services (1.30) Services Linked to Production (1.03)
3. Kendujhar	Private Consumption Services (1.23) Service Linked to Consumption (1.08) Financial Services (1.05) Collective Consumption Services (1.01)	Financial Services (6.64) Social Economic Overhead (3.68) Services Linked to Production (2.41)
4. Mayurbhanj	Collective Consumption Services (1.23) Service Linked to Consumption (1.21) Private Consumption Services (1.20)	Private Consumption Services (1.21) Service Linked to Consumption (1.09)
5. Balasore	Private Consumption Services (1.02) Service Linked to Consumption (1.01) Collective Consumption Services (1.00)	Private Consumption Services (1.25) Service Linked to Consumption (1.09)
6. Cuttack	Private Consumption Services (1.21) Service Linked to Consumption (1.19) Collective Consumption Services (1.18)	Collective Consumption Services (1.17) Service Linked to Consumption (1.07)

State/District	Male	Female
7. Dhenkanal	Private Consumption Services (1.53) Service Linked to Consumption (1.42) Collective Consumption Services (1.37)	Private Consumption Services (1.25)
8. Phulabani	Collective Consumption Services (1.70) Service Linked to Consumption (1.46)	Services Linked to Production (1.16) Private Consumption Services (1.08)
9. Balangir	Private Consumption Services (1.51) Service Linked to Consumption (1.51) Collective Consumption Services (1.51)	Trade Services (2.10) Services Linked to Production (1.38) Private Consumption Services (1.10)
10. Kalahandi	Collective Consumption Services (1.33) Service Linked to Consumption (1.20)	Trade Services (2.83) Services Linked to Production (1.81) Collective Consumption Services (1.39)
11. Koraput	Collective Consumption Services (1.31) Service Linked to Consumption (1.34) Private Consumption Services (1.25)	Trade Services (3.48) Services Linked to Production (2.21) Private Consumption Services (1.18)
12. Gaujam	Collective Consumption Services (1.25) Service Linked to Consumption (1.12)	Trade Services (3.33) Services Linked to Production (2.38) Social Economic Overhead (1.47)
13. Puri	Collective Consumption Services (1.53) Service Linked to Consumption (1.30)	Trade Services (1.13) Collective Consumption Services (1.05) Service Linked to Consumption (1.01)
1. Patna	Collective Consumption Services (1.12) Service Linked to Consumption (1.02)	Trade Services (1.53) Services Linked to Production (1.22) Collective Consumption Services (1.13)
2. Gaya	Trade Services (1.08)	Trade Services (1.39) Collective Consumption Services (1.15)
3. Bhojpur	Trade Services (1.22) Private Consumption Services (1.03)	Trade Services (2.53) Services Linked to Production (1.61) Collective Consumption Services (1.19)
4. Saran	Trade Services (1.30) Services Linked to Production (1.04)	Trade Services (2.03) Collective Consumption Services (1.08) Service Linked to Consumption (1.34) Services Linked to Production (1.34)
5. Champaran	Trade Services (1.20) Private Consumption Services (1.09) Services Linked to Production (1.01)	Collective Consumption Services (1.55) Trade Services (1.10) Service Linked to Consumption (1.02)
6. Muzaffarpur	Trade Services (1.02)	Collective Consumption Services (1.27) Service Linked to Consumption (1.04)

State/District	Male	Female
7. Darbhanga	Trade Services (1.13) Services Linked to Production (1.05)	Trade Services (2.55) Services Linked to Production (1.76) Collective Consumption Services (1.07)
8. Munger	Trade Services (1.08) Social Economic Overhead (1.06) Services Linked to Production (1.03)	Trade Services (2.99) Services Linked to Production (1.89) Collective Consumption Services (1.20)
9. Bhagalpur	Social Economic Overhead (1.50) Services Linked to Production (1.17) Collective Consumption Services (1.13) Service Linked to Consumption (1.09) Trade Services (1.02) Private Consumption Services (1.02)	Trade Services (1.64) Social Economic Overhead (1.61) Services Linked to Production (1.44) Collective Consumption Services (1.22)
10. Saharsa	Collective Consumption Services (1.19) Service Linked to Consumption (1.15) Trade Services (1.11) Private Consumption Services (1.07)	Trade Services (1.62) Collective Consumption Services (1.14) Services Linked to Production (1.03)
11. Purnia	Social Economic Overhead (1.09) Trade Services (1.02) Services Linked to Production (1.01)	Trade Services (2.07) Services Linked to Production (1.50) Collective Consumption Services (1.07)
12. Santhal Parganas	Social Economic Overhead (1.03)	Collective Consumption Services (1.38) Service Linked to Consumption (1.16) Trade Services (1.14)
13. Palamau	Collective Consumption Services (1.12) Service Linked to Consumption (1.09) Private Consumption Services (1.02)	Collective Consumption Services (1.11) Service Linked to Consumption (1.05)
14. Hazaribag	Collective Consumption Services (1.03) Service Linked to Consumption (1.02) Private Consumption Services (1.01)	Trade Services (3.25) Services Linked to Production (2.05)
15. Ranchi	Social Economic Overhead (1.26)	Collective Consumption Services (1.33) Service Linked to Consumption (1.05)
16. Dhanbad	Trade Services (1.08)	Social Economic Overhead (3.03) Services Linked to Production (1.70) Collective Consumption Services (1.06) Trade Services (1.05)
17. Singhbhum	Social Economic Overhead (1.25) Services Linked to Production (1.00)	Social Economic Overhead (1.78) Services Linked to Production (1.2) Collective Consumption Services (1.17) Trade Services (1.15)

Source : General Economic Tables, 1981, Census of India, Table B-12.

retail trade (5.09 per cent), medicine and health (6.08 per cent) and public administration services (4.69 per cent). Services linked to consumption (52.61 per cent) accounts for maximum proportion of female work force in Tertiary sector (61.57 per cent) (Tertiary sector accounts for 61.57 percent of female workforce).

A state level data for female workforce reveals that in communication services, wholesale trade, banking, insurance real estate and business services, legal services, personal services, public administration, education, medicine and health, community and recreation services, West Bengal have the highest proportion. This trend is opposite to the trend traced in the case of male workforce which showed that Orissa had high level of participation rate in these workforce. This is true in the case of Services Linked to Consumption. Storage, retail trade and restaurants and hotel services shows maximum participation in Orissa. Sanitation services shows maximum participation in Bihar and transport services reflect maximum participation in proposed Jharkhand. District level concentration of Tertiary sector is given in a tabular form (Table 4.7).



**TABLE 4-9 : MAJOR SERVICE BASE IN EASTERN INDIA :  
A DISTRICT LEVEL ANALYSIS, 1981**

<b>DISTRICT</b>	<b>MALE/FEMALE</b>	<b>SERVICE BASE</b>
<b>WEST BENGAL</b>		
Ø1. Koch Bihar	(M) (F)	Wholesales, Public Administration Public Administration, Education
Ø2. Jalpaiguri	(M) (F)	Transportation, Retail Trade Transportation, Storage
Ø3. Darjiling	(M) (F)	Communication, Wholesale Transportation, Hotel and Restaurants
Ø4. W. Dinajpur	(M) (F)	Retail, Education Education, Storage
Ø5. Maldah	(M) (F)	Legal, Public Administration Public Administration, Legal
Ø6. Mursidabad	(M) (F)	Education, Legal Recreation, Public Administration
Ø7. Nadia	(M) (F)	Education, Medicine Recreation, Education
Ø8. 24-Parganas	(M) (F)	Insurance, Real Estate Communication, Banking
Ø9. Calcutta	(M) (F)	Storage, Wholesale Real Estate and Business, Legal Service
10. Haora	(M) (F)	Real Estate, Business, Wholesale Legal, Real Estate and Business
11. Hugli	(M) (F)	Banking, Real Estate and Business Community, Banking
12. Medinipur	(M) (F)	Personal, Transport Transport, Legal Service
13. Bankura	(M) (F)	Medicine, Community Medicine, Community
14. Puruliya	(M) (F)	Transport, Communication Transport, Communication

Contd.....

DISTRICT	MALE/FEMALE	SERVICE BASE
15. Bardhaman	(M) (F)	Transport, Personal Storage, Medicine
16. Birbhum	(M) (F)	Public Administration, Medicine Wholesale, Hotel & Restaurants
<b>ORISSA</b>		
Ø1. Sambalpur	(M) (F)	Education, Hotel Retail, Transport
Ø2. Sundergarh	(M) (F)	Hotel, Personal Wholesale, Transport
Ø3. Kendujhar	(M) (F)	Real Estate and Business, Education Real Estate and Business, Transport
Ø4. Mayurbhanj	(M) (F)	Legal, Education Hotel, Community
Ø5. Balasore	(M) (F)	Communication, Education Hotel, Legal
Ø6. Cuttack	(M) (F)	Legal, Insurance Public Administration, Legal
Ø7. Dhenkanal	(M) (F)	Communication, Personal Public Administration, Personal
Ø8. Phulbani	(M) (F)	Community, Education Hotel, Education
Ø9. Bolangir	(M) (F)	Legal, Education Communication, Hotel
1Ø. Kalahandi	(M) (F)	Medicine, Public Administration Retail, Personal
11. Koraput	(M) (F)	Medicine, Public Administration Retail, Personal
12. Ganjam	(M) (F)	Public Administration, Communication Retail, Wholesale

Contd.....

DISTRICT	MALE/FEMALE	SERVICE BASE
13. Puri	(M) (F)	Communication, Medicine Storage, Retail
<b>BIHAR</b>		
01. Patna	(M) (F)	Public Administration, Medicine Legal, Retail
02. Gaya	(M) (F)	Legal, Medicine Recreation, Sanitation
03. Bhojpur	(M) (F)	Legal, Sanitation Sanitation, Wholesale
04. Saran	(M) (F)	Legal, Sanitation Sanitation, Public Administration
05. Champaran	(M) (F)	Legal, Sanitation Sanitation, Hotel
06. Muzaffarpur	(M) (F)	Sanitation, Legal Sanitation, Recreation
07. Darbhanga	(M) (F)	Legal, Sanitation Sanitation, Retail
08. Munger	(M) (F)	Legal, Sanitation Retail, Sanitation
09. Bhagalpur	(M) (F)	Community, Legal Sanitation, Transport
10. Saharsa	(M) (F)	Legal, Hotel Recreation, Education
11. Purnia	(M) (F)	Legal, Sanitation Recreation, Sanitation
12. Santhal Pargana	(M) (F)	Community, Sanitation Sanitation, Community
13. Palamau	(M) (F)	Recreation, Legal Recreation, Sanitation
14. Hazaribgh	(M) (F)	Sanitation, Legal Community, Retail

Contd.....

DISTRICT	MALE/FEMALE	SERVICE BASE
15. Ranchi	(M) (F)	Sanitation, Transport Sanitation, Medicine
16. Dhanbad	(M) (F)	Legal, Sanitation Transport, Community
17. Singhbhum	(M) (F)	Transport, Hotel Transport, Medicine

Note : M = Male; F = Female

Source : General Economic Tables, 1981.  
Census of India, Table B 12.

#### **4.11 Service Sector Base**

Service sector base for a particular region (state/district), are workforce which are overrepresented or specialised in that region. Service sector base for Eastern India can be analysed with the help of table.

The overrepresentation of social and economic overhead services, trade services, financial services and collective consumption service indicates that male workforce in Tertiary sector have a wide range of workforce in Eastern India (Table 4.8). West Bengal has workforce of Services Linked to Production as services base. Orissa on the other hand has Services Linked to Consumption as service base. This may be due to high level of urbanisation in West Bengal which gives rise to expansion of producer and distributive services. But female service base indicates Services Linked to Consumption as service base for West Bengal. This may be due to female preference towards activities in Services Linked to Consumption.

#### **4.12 Male Preferred and Female Preferred Non-Primary Activity (1981)**

Non-primary work force has a predominant role to play in an urban economy. More than eighty per cent of urban main workers are engaged in non-primary activity. But the

proportion of male workforce in a particular non-primary activity does not always correspond to female workforce in that activity. This gives rise to male preferred non-primary activities and female preferred non-primary workforce.

The data for Secondary sector reveals that Secondary sector is more preferred by males (32.24 per cent) than females (19.50 per cent) in Eastern India. But, there are two districts where participation in the of Secondary sector is higher for females workers. For example, Koch Bihar, West Dinajpur, Murshidabad, Nadia, Bankura, Sambalpur, Balasore and Bolangir.

The analysis of data in Table 4.1 reveals that only in agro-based industries females workers (5.11 per cent) have higher participation in comparison to males (3.00 per cent). The participation rates are at par in case of mineral based industries and construction (2.68 per cent and 2.98 per cent, respectively) for males and females (2.52 and 11.86 per cent respectively). In other Secondary workforce like textiles, forest based, metal based, machine based industries, male participation rates are higher.

Table 4.10: Secondary Sector  
Male and Female Preferred Activities

Male Preferred Activities	Female Preferred Activities
Textiles, Forest based, Metal based, Machine based, Other industries and construction	Agro-based Industries

This partly proves that male activity is higher in capital goods industries and female activity in consumer goods industries.

Utility sector is more preferred by males (1.17 per cent males and 0.29 per cent females). Male activity in electricity is preferred to female activity in electricity.

In Tertiary sector female activity is more predominant which proves that these workforce are favourable to females (49.84 per cent male and 61.57 per cent female). But Orissa does not confirm to this observation (male 56.02 per cent in Tertiary sector and female 53.64 per cent in this sector). A number of districts also shows male participation in Tertiary sector to be high. They are Murshidabad, Nadia, Twentyfour Pargana, Bankura, Puruliya, Sambalpur, Mayurbhanj, Phulbani, Koraput, Ganjam, Patna, Gaya, Saran, Munger, Bhagalpur, Saharsa, Purnea and Santal Pargana.

Table 4.11: Tertiary Sector  
Male and Female Preferred Activities

Male Preferred Activities	Female Preferred Activities
1. Services linked to production A. Social Economic Overhead Services (a) Transport Services B. Trade (a) Retail Trade  2. (a) Public Administration (b) Hotel and Restaurant Services	1. Services Linked to Consumption (A) Private Consumption Services (B) Collective Consumption (a) Medicine (b) Education

The analysis of Table reveals that Services Linked to Production has larger proportion of male worker whereas Services Linked to Consumption has more proportion of female workers. Social and Economic overhead services especially transport services is preferred by males. In trade services and financial services male participation is higher. Public administration services and hotel and restaurant services are two collective consumption services where male is higher. This implies that they are male preferred activities.

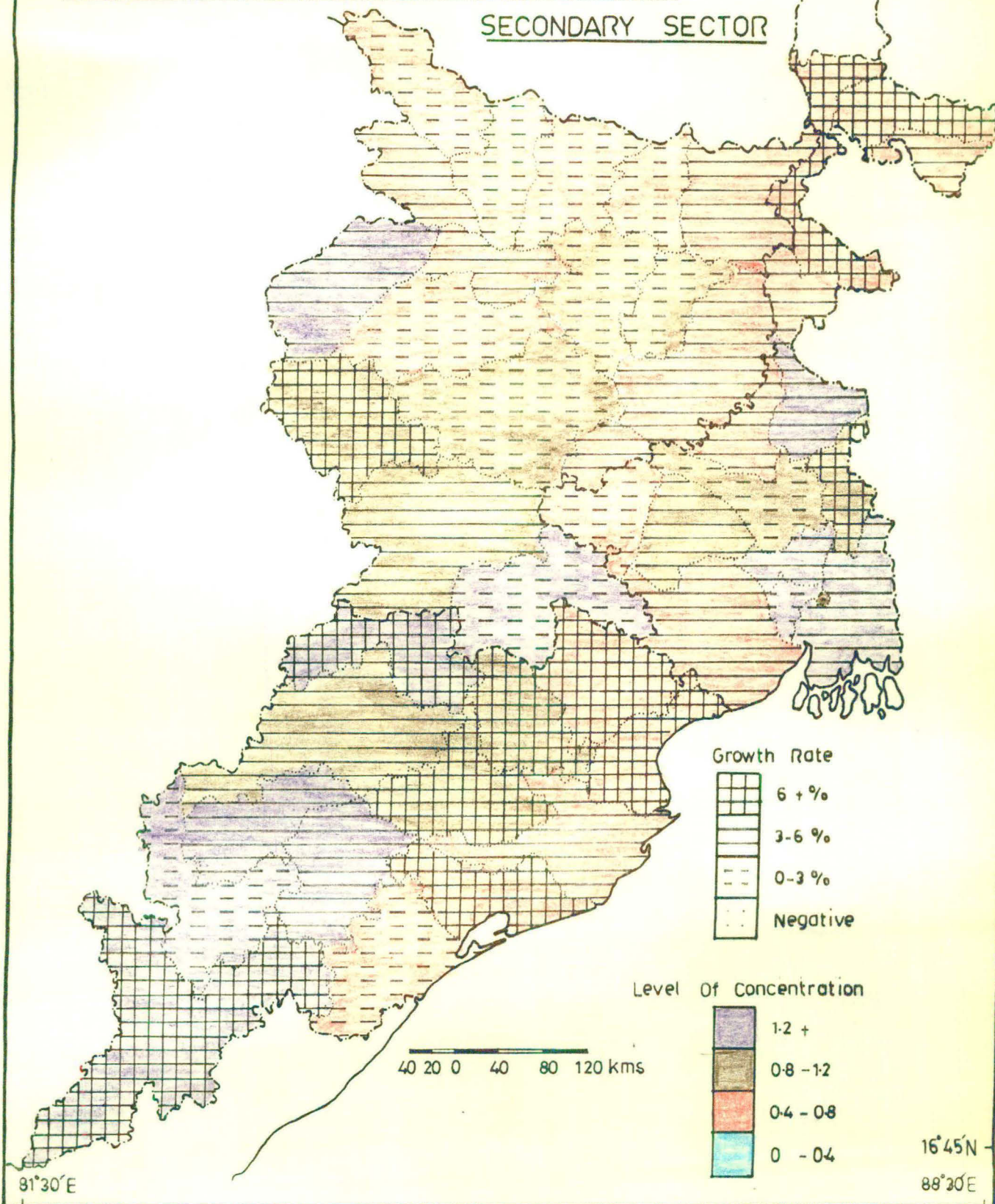
Proportion of female worker is higher in both private consumption services and collective consumption services. Personal services, education services, medicine and health



RELATION BETWEEN GROWTH RATE (1971-81) &  
LEVEL OF CONCENTRATION (1981) : MALE

SECONDARY SECTOR

26°30' N



91°30' E

16°45' N

88°30' E

services have higher female participation than males.

The result obtained confirmed that female preference occurs in traditionally female areas of teaching, library work and health care. Higher proportion of workforce in personal services substantiates the argument that female workforce is high in low paid, lesser skilled category. Male workforce in services is higher in distributive services and producer services.

#### **4.13 Relationship between Growth and Concentration of Non-Primary Sector - Male Workers (1981)**

The relationship between level of concentration and growth of Secondary and Tertiary sectors is carried with the help of bivariate maps. The analysis has been carried out for male and female separately.

##### **4.13.1 Urban Secondary Sector - Male workers, (1981)** (Map 4.1)

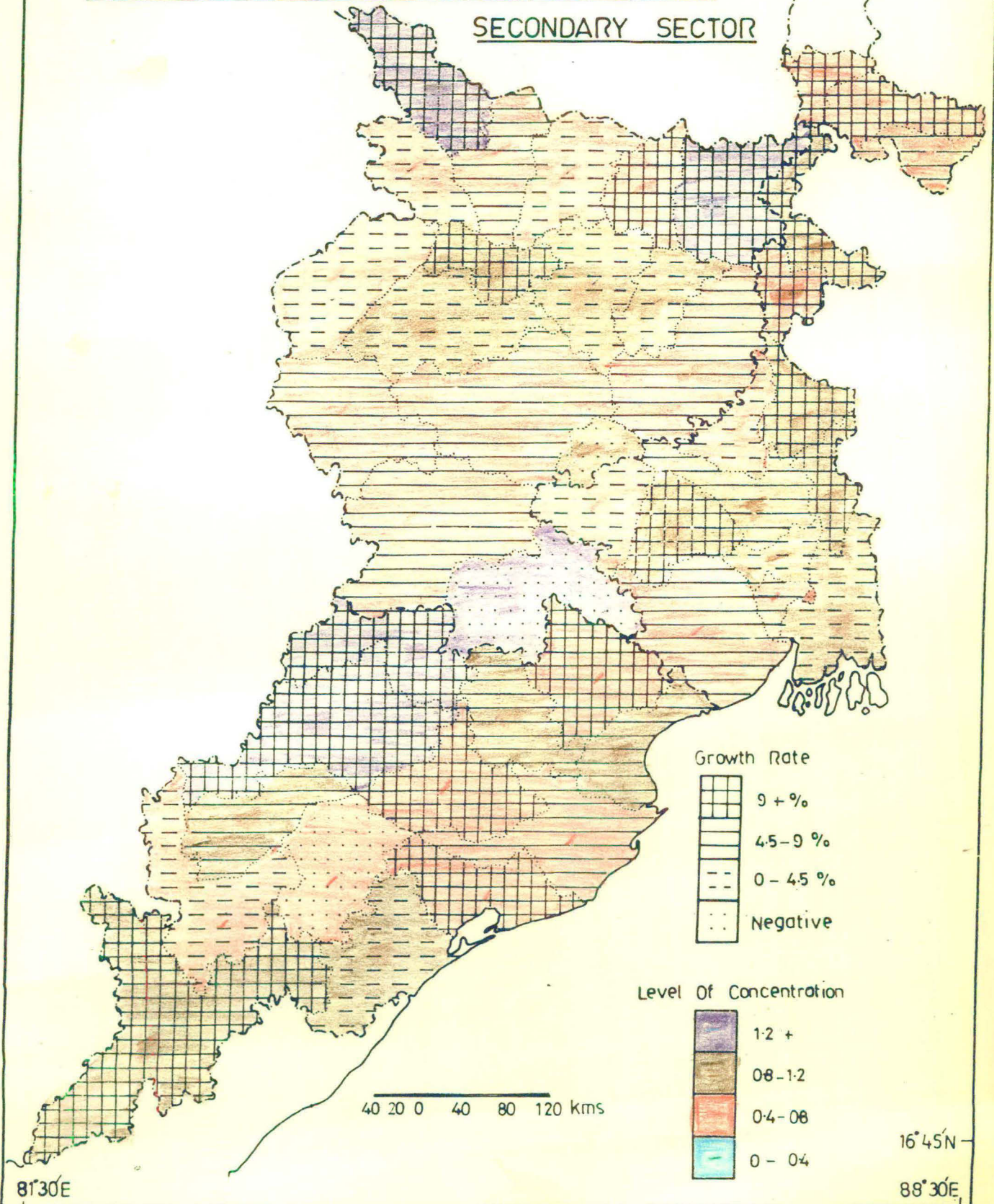
The district which showed high level of concentration and low or negative growth of male work force in urban Secondary sector were, Haora, Kalahandi, Ganjam, and Singhbhum. On the other hand low participation rate and high growth is indicated in Koch Bihar, Jalpaiguri, Darjiling, West Dinajpur, Mayurbhanj, Kendujhar and Balasore. So out

Eastern India

Map No 4-2

RELATION BETWEEN GROWTH RATE (1971-81) &  
LEVEL OF CONCENTRATION (1981) : FEMALE  
SECONDARY SECTOR

26°30'N



of forty-six districts, only twelve districts confirm to the hypothesis of higher the level of concentration, lower the growth and vice versa. Few districts also show low level of concentration and moderate growth. The districts which indicate similar trend of growth and level of concentration were Champaran, Muzaffarpur, Darbhanga, Saharsa, Sundergarh and Sambalpur. The analysis reveals that a weak inverse relationship exist between growth and level of concentration of male workforce in the Secondary sector.

#### **4.13.2 Urban Secondary Sector, Female workers (1981) (Map 4.2)**

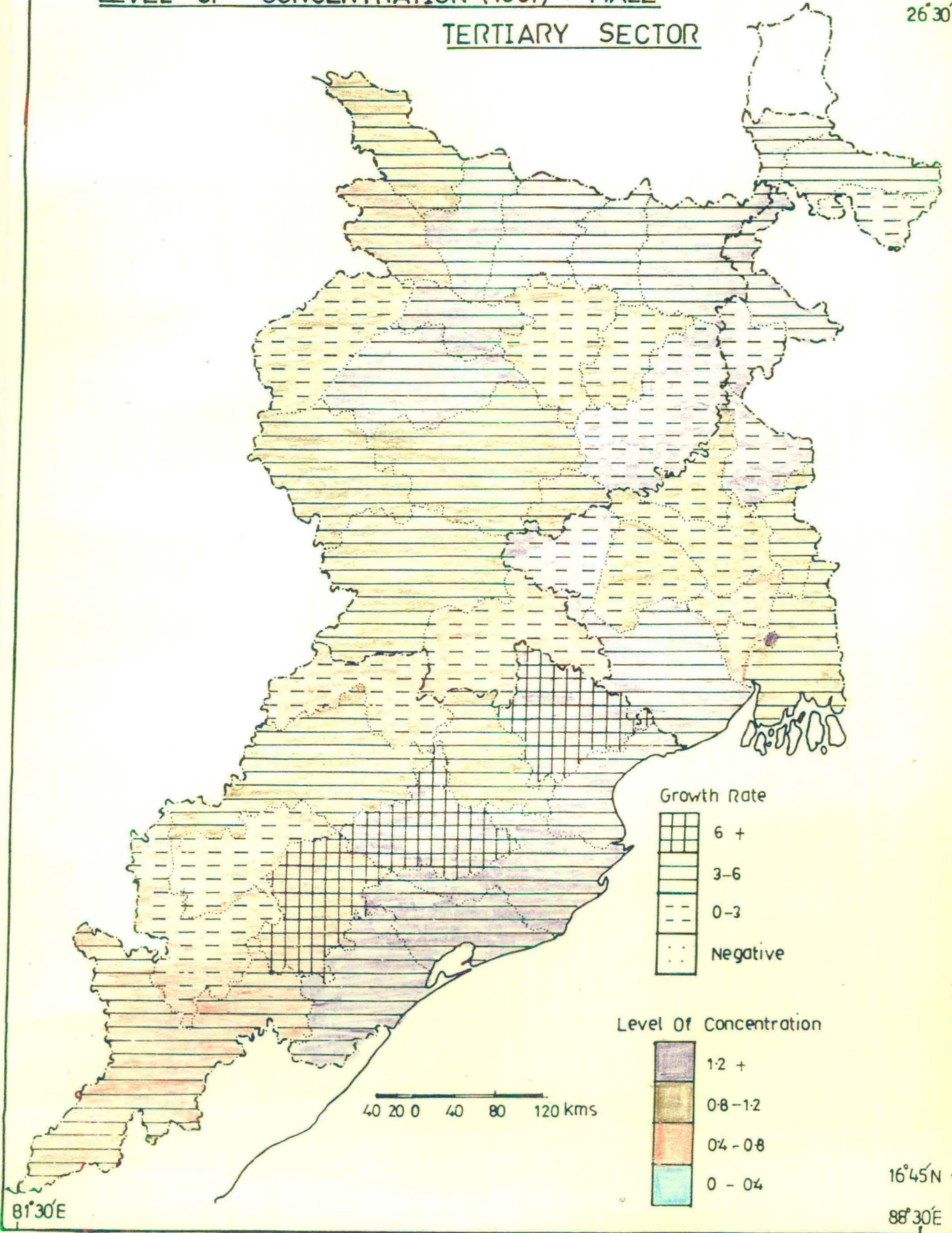
The districts which indicate low or very low level of concentration and high growth were Jalpaiguri, Darjeling, Malda, Saharsa, Mayurbhanj, Dhenkanal and Puri. Districts with high level of concentration and low and negative growth in female workforce in Secondary sector occurred in Dhanbad, and Singhbhum. The same trend of growth and level of concentration occurs in Murshidabad, Nadia, Calcutta, Birbhum, Bardhawan, Bankura, Puruliya, Darbhanga, Purnea, Saran, Bhojpur, Balasaore, Kendujhar, Sundergarh, Sambalpur, Bolangir and Kalahandi. The Map 4.2 reveals that when the level of concentration is low or very low, growth has been moderate and high. Districts with high level of concentration, in general have moderate and high growth of female workers.

Eastern India

Map No 43

RELATION BETWEEN GROWTH RATE (1971-81) &  
LEVEL OF CONCENTRATION (1981) : MALE  
TERTIARY SECTOR

26°30'N



#### **.4.13.3 Urban Tertiary Sector - Male, 1981 (Map 4.3)**

District with low and very low level of concentration and high growth of male workforce in urban Tertiary sector was identified in Phulbani. Districts with high level of concentration and low growth of male workforce were identified as Koch Bihar, Malda, Santal Pargana, Murshidabad, Calcutta, Puruliya. Districts with high level of concentration and high growth of were, Mayurbhanj and Dhenkanal. Moderate participation rate and moderate growth occurred in Nadia, Hazaribagh, Ranchi and Sambalpur. Low level of concentration and low growth of workforce occurred in Sundergarh and Kalahandi. In general, the trends which occurred were high level of concentration of Tertiary sector is followed by low growth of participation rate.

#### **4.13 Urban Tertiary Sector Female Workers (1981) (Map 4.4)**

The districts which reveal low and very low level of concentration of female workforce in Tertiary sector but high growth were West Dinajpur, and Nadia. District with high level of concentration but low growth of female workforce in Tertiary sector was Monghyr. District with high growth and high concentration was Hazaribag. Low growth of workforce and low level of concentration were identified as

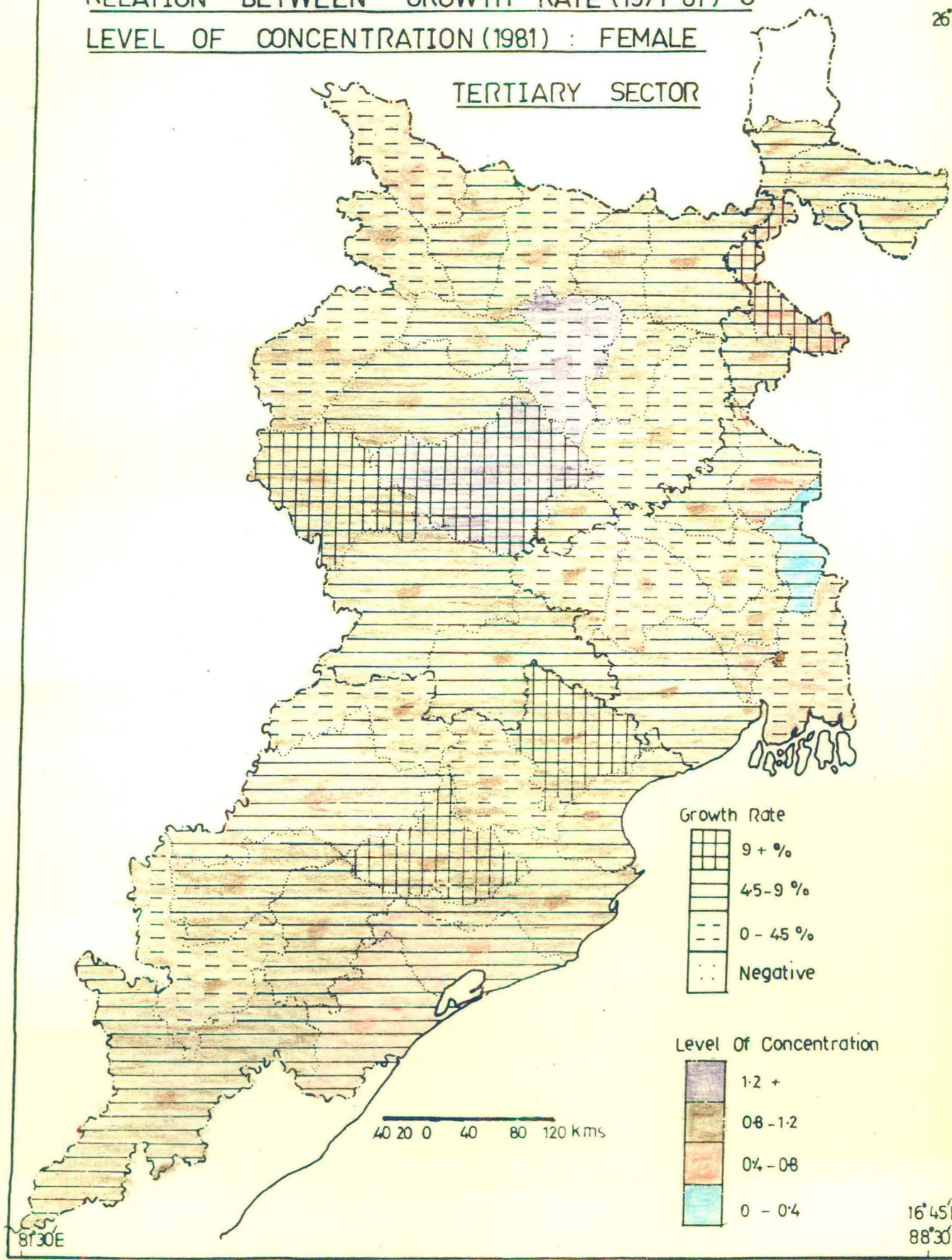
Eastern India

Map No 44

RELATION BETWEEN GROWTH RATE (1971 81) &  
LEVEL OF CONCENTRATION (1981) : FEMALE

26°30'N

TERTIARY SECTOR



Twentyfour Pargana, Bankura, Champaran and Ganjam. Districts with moderate level of concentration and moderate growth were identified as Koch Bihar, Jalpaiguri, Darjeeling, Malda, Birbhum, Midnapore, Dhanbad, Ranchi, Gaya, Patna, Muzaffarpur. Saharsa, Purnia, Singhbhum, Balasore, Cuttack, Bolangir, Phulbani, and Koraput. The trend for female workers in the Tertiary sector in Eastern India had been moderate growth for moderate level of concentration.

An attempt has been made to analyse the proportion, level of concentration and its relationship with growth in the present chapter. The hypotheses tested gives the following results.

(a) The spatial variation of Secondary sector is more pronounced than Tertiary sector. For Secondary sector, we obtain contiguous belt of high and low participation rate. Tertiary sector do not reveal distinct contiguous belt.

(b) The relationship between level of concentration and growth of non-primary activity is inverse in the case of male activities in the Secondary sector and male activities in the Tertiary sector. But in the case of female workforce this relationship is not established.



(c) There are evidences of male preferred and female preferred non-primary activities in the Eastern India.

It would be necessary to analyse the relationship between Secondary sector, Tertiary sector and Utility sector which is analysed in the subsequent chapter.

## CHAPTER V

### INTERRELATION AND INTERDEPENDENCE OF NON-PRIMARY WORKFORCE, 1981

The present chapter attempts to analyse the interdependence and interrelation of workforce in Secondary, Utility and Tertiary sectors. The stagnation of Secondary sector in eastern India in 1965-75 has been followed by subsequent recovery and high growth. The overall impact in 1971-81 is that of moderate growth.

The relationship of growth of Secondary, Utility and Tertiary sectors reveals the nature of interdependence. If the trend of growth of these workforce is in a similar direction, it implies that the growth of one sector induces growth in the other sector or vice versa. For example, the setting up of a iron and steel industry leads to an increase in the employment generation capacity of Utility or Tertiary sector. But if the relationship of growth shows inverse trend it implies that slow growth in one sector leads to high growth in other sector.

The relationship between participation rate of Secondary, Utility and Tertiary sectors gives a clue, to the effect of the participation rate of one sector of the participation rate of other sectors. Similar trend indicates that, when the participation rate in one sector is high the

participation rate in the other sector is also high and vice versa.

Relationship of level of development and participation rate of Secondary, Utility and tertiary sectors indicates whether high participation rate of these sectors, implies development or backwardness.

### **5.1 Objective**

(i) To trace out the nature of interdependence of Secondary, Utility and Tertiary sectors by analysing their relationship.

(ii) To analyse the relationship of participation rate of non-primary sectors with the levels of development.

### **5.2 Hypotheses**

(i) Higher the growth of Secondary sector, higher the growth in Tertiary sector.

(ii) High participation rate in Secondary sector is accompanied by low participation rate in Tertiary sector.

(iii) Higher the level of development higher the participation rates of non-primary sector.

(iv) High participation rate in social economic overhead services and financial services is followed by high level of development.

(v) Personal services, retail trade services, sanitation services exhibit negative relationship with development.

### 5.3 Methodology

The relationship between non-primary workforce is arrived at with the method of correlation which shows a simple linear relationship between the variables. The correlation has been worked out according to the formula,

$$r = \frac{n \cdot \sum xy - \sum x \cdot \sum y}{\sqrt{n \cdot \sum x^2 - (\sum x)^2} \cdot \sqrt{n \cdot \sum y^2 - (\sum y)^2}}$$

where

r = correlation coefficient

n = number of observations

x = (x-x) where x is the one variable and x mean of it.

y = (y-y) where y is another variable and y is mean of it.

The value of correlation varies between +1 to -1. 't' test has been carried to indicate whether the relationship is significant or not. This test has been done at 99 per cent level of significance. If the value is significant it

implies that there occurs definite relationship between the variables.

The chapter has been subdivided into three broad sub-heads. The first sub-division analyses the inter-relationship of growth of Secondary, Utility and Tertiary sectors. It also analyses relationship of growth of Secondary with growth of services industries for male and female workers separately. The second sub-division deals with interrelation of participation rate of Secondary, Utility and Tertiary sectors. It also analyses relationship of participation rate of Secondary sector with participation rate of service industries for male and female separately. The third subdivision attempts to trace relationship of level of development, participation rate of non-primary sectors. The relationship of level of development and is carried out to trace services which are product of development and services which are identified with backwardness. The analysis for this subgroup is done for a developed state (West Bengal) and a backward state (Orissa) for 1981.

The levels of development is calculated, by ranking indicators of development and making a composite index by adding the ranks. If in the case of West Bengal, an indicator shows rank one the value attached will be 16. If however the rank is 16 the value attached to that district will

be one.

The indicators chosen for calculating level of development were female work participation outside agriculture, female literacy above primary, per cent household having electricity, per cent household having safe drinking water, total fertility rate, child labour and infant mortality rate. Female work participation rate outside agriculture and female literacy above primary has been taken because it indicates both social and economic development. First four indicators are directly proportional to development where as last three indicators are inversely proportional.

#### Measurement of Variables

Variables	Measurement
1. Female work Participation outside agriculture	$\frac{\text{Total female workers in non-agriculture}}{\text{Total female population}} \times 100$
2. Female literacy above primary	$\frac{\text{Number of female literacy above primary}}{\text{Total female population}} \times 100$
3. Infant mortality	$\frac{\text{Number of deaths of infants before attaining the age of one year}}{\text{Total live births in that year}} \times 100$
4. Child labour	$\frac{\text{Worker in the age group 10-14}}{\text{Total workers}} \times 100$

5. Peasant household having safe drinking water	Number of households having safe drinking water	x 100
	-----	
	Total number of households	
6. Per cent household having electricity	Number of households having electricity	x 100
	-----	
	Total number of households	
7. Total fertility Rate	Summation of Age specific fertility Rate	Width of age interval
	-----	x
	1000	interval

---

#### 5.4.1 Correlation between Growth of Urban Non-Primary Sectors - Male Workers (1971-81)

Correlation of coefficient of male workforce in the Secondary sector and male workforce in Tertiary sector in urban areas is positive for West Bengal (0.70\*), Orissa (0.63) and Bihar (0.30) (Table 5.1). The value is significant only for West Bengal. Correlation coefficient between male workforce in urban Secondary and Utility sector however have positive relationship only for Orissa (0.74\*) and Bihar (0.19). West Bengal indicates weak negative relationship. Male workforce in urban Tertiary sector and male workforce in urban Utility sector also show a similar trend. Positive correlation coefficient occurs in Orissa (0.56) and Bihar (0.35). Weak negative relationship occurs in the case of West Bengal.

TABLE 5.1 : CORRELATION BETWEEN GROWTH OF URBAN NON-PRIMARY SECTORS, 1971-81

CORRELATION WITH SECONDARY SECTOR	MALE			FEMALE		
	WEST BENGAL	ORISSA	BIHAR	WEST BENGAL	ORISSA	BIHAR
Utility Sector	-0.31	0.74*	0.19	-0.15	0.30	0.23
Tertiary Sector	0.70*	0.63	0.39	-0.06	0.64*	0.38
SLP <sup>1</sup>	0.71*	0.54	0.39	0.11	0.48	0.26
SEO <sup>2</sup>	0.62	0.19	0.21	-0.01	0.27	0.28
Trade Service	0.50	0.61	0.55	0.34	0.44	0.10
Financial Service	-0.15	0.43	0.54	0.07	-0.33	0.44
SLC <sup>3</sup>	0.48	0.49	0.22	0.44	0.67*	-0.07
Private Consumption	0.22	0.65	0.16	0.52	0.61	0.25
Collective Consumption	0.39	0.29	0.18	0.33	0.66*	-0.43
<u>Correlation with Tertiary Sector</u>						
Participation Rate of Utility	0.02	-0.13	-0.12	0.01	0.50	-0.29
Growth of Utility	-0.16	0.56	0.35	-0.23	-0.02	-0.67

Note :

1. SLP = Services linked to production.
  2. SEO = Social Economic Overhead Service.
  3. SLC = Services linked to Consumption.
- \* = 1-tailed significance : = 0.01

Source : General Economic Tables, 1981, Census of India, Table 12.



The relationship between male workforce in Secondary and Tertiary sector in urban areas indicates that both has similar trend of growth. Moderate growth of Secondary sector is followed by moderate growth of Tertiary sector. This implies that overexpansion of Tertiary sector is not experienced which goes against the hypothesis of tertiarisation of the economy in urban areas of Eastern India. Growth of male workforce in Utility sector and Secondary sector has positive significant relationship only in Orissa (0.74). West Bengal (-0.31) exhibit weak negative and Bihar (0.19) weak positive relationship. So expansion of Utility sector results in expansion of Secondary sector only in urban areas of Orissa. Relationship of growth of male workforce in urban Utility and Tertiary sectors show similar trend.

#### **5.4.1.1 Secondary Sectors and Subgroups of Tertiary Sector Male Workers**

The relationship of male workforce in Secondary sector and Tertiary sector is positive. An attempt has been made to work out relationship of Secondary sector with subclassification of Tertiary sector in urban areas.

The relationship between male workforce in Secondary sector and subclassification of Tertiary sector shows in general a positive relationship with the exception of financial services (-0.15) in West Bengal. West Bengal exhibits

positive significant relationship of male Secondary sector with Services Linked to Production (0.71\*) especially Social Economic overhead services (0.62\*). Growth of private consumption services has positive significant relationship with growth of Secondary sector in Orissa (0.65\*). The results obtained indicate that increase in male workforce in Secondary sector has a close direct relationship with increase in Services Linked to Production, especially Social Economic overhead services and trade services.

#### **5.4.2 Correlation between Growth of Urban Non-Primary Sectors - Female Workers (1971-81)**

Correlation coefficient of growth of female workforce in Secondary sector and growth of female workforce in Tertiary sector in urban areas is positive in Orissa (0.64\*) and Bihar (0.35) (Table 5.1). Orissa indicates a significant relationship. But West Bengal (-0.06) reveals a weak negative correlation co-efficient. Relationship between growth of female workforce in Secondary sector and growth of female workforce in Utility sector is positive in Orissa (0.30) and Bihar (0.23), but negative in West Bengal (-0.15). Relationship of growth of female workforce in Tertiary sector and Utility sector displays negative value for three states (-0.23, -0.02 and -0.67\*, West Bengal, Orissa and Bihar, respectively). It is negative and significant in Bihar.

The growth rate of female workforce in Secondary sector is high in Orissa and West Bengal. Positive significant relationship reveals that high growth of workforce in Secondary sector is followed by high growth of Tertiary sector. But this relationship is not evident in Bihar. Bihar indicates that low growth in female workforce in Secondary sector is accompanied by low growth of female workforce in tertiary sector. Similar relationship is obtained in the case of growth of female workforce in Secondary sector and Utility sector. Negative values of correlation coefficient between growth of female workforce in Utility and Tertiary sector implies that they have inverse relationship. It is significant in Bihar which indicates that negative growth of female workforce in urban Utility sector is followed by moderate growth in female workforce in urban Tertiary sector.

#### **5.4.2.1 Secondary Sector and Sub-groups of Tertiary Sector**

The relationship of growth of female workforce in Secondary sector and Tertiary sector gives way to analyse the relationship of growth of Secondary sector with sub-classification of Tertiary sector. This analysis reveals, that in general there has been a positive relationship between the two. Negative relationship occurs in Social Economic Overhead services in Orissa, Services Linked to

Consumption and collective consumption services in Bihar. Positive significant relationship occurs in Services Linked to Consumption and collective consumption services in Orissa. This implies that high growth of female workforce in Secondary sector is followed by high growth in Services Linked to Consumption and collective consumption services. However inverse relationship does occur in Social Economic overhead services in West Bengal, financial services in Orissa, Services Linked to Consumption and collective consumption services in Bihar.

#### **5.5.1 Correlation between Participation Rate of Urban Non-Primary Sector - Male Workers (1981)**

Correlation coefficient of participation rate of male workforce in Secondary and Tertiary sector in urban areas is negative for West Bengal (-0.81\*), Orissa (0.41) and Bihar (-0.32) (Table 5.2). The correlation between male workforce in urban Secondary sector and urban Tertiary sector is also negative (except Orissa +0.05). Male workforce in Tertiary sector and Utility sector in urban areas also exhibit weak negative relationship (except West Bengal 0.02).

This relationship clearly indicates that when the participation rate of male workforce in Secondary sector is high the participation rate of male workforce in Tertiary sector is low and vice versa. This relationship is true for Secondary and Utility sector and Tertiary and Utility sector

TABLE 5:2 : CORRELATION BETWEEN PARTICIPATION RATE OF URBAN NON-PRIMARY SECTORS, 1971-81

CORRELATION WITH SECONDARY SECTOR	MALE			FEMALE		
	WEST BENGAL	ORISSA	BIHAR	WEST BENGAL	ORISSA	BIHAR
Utility Sector	-0.19	0.05	-0.28	-0.20	-0.34	-0.08
Tertiary Sector	-0.81*	-0.43	-0.32	-0.79*	-0.17	0.07
SLP <sup>1</sup>	-0.75*	-0.30	-0.24	-0.55	-0.01	-0.08
SEO <sup>2</sup>	-0.58	0.10	0.22	0.39	-0.13	-0.12
Trade Service	-0.62	-0.38	-0.45	-0.40	0.09	-0.03
Financial Service	0.44	-0.52	-0.12	-0.33	-0.11	0.05
SLC <sup>3</sup>	-0.74*	-0.43	-0.35	-0.81*	-0.10	0.18
Private Consumption	-0.57	0.14	-0.35	-0.66	-0.15	0.04
Collective Consumption	-0.62*	0.51	-0.32	-0.71	-0.05	0.24

Note :

1. SLP = Services linked to production.
  2. SEO = Social Economic Overhead Service.
  3. SLC = Services Linked to Consumption.
- \* = 1-tailed significance : = 0.01

Source : General Economic Tables, 1981, Census of India, Table 12.

also.

#### **5.5.1.1 Secondary Sector and Subgroups of Tertiary Sector**

Correlation coefficient between male workforce in Secondary sector and subgroup of Tertiary sector in urban areas is positive only in financial services (0.44) in West Bengal, Social Economic overhead services in Orissa (0.10) and Bihar (0.22) and collective consumption services (0.51) and private consumption services (0.14) in Orissa. Significant inverse relationship is revealed in West Bengal in Services Linked to Production (-0.75\*) especially social and economic overhead services (-0.58\*) and Services Linked to Consumption also reflected a similar trend (-0.74), especially in collective consumption services (-0.62\*).

Only financial services in West Bengal and collective consumption services in Orissa showed a positive relationship with the participation rate of Secondary sector. Rest of the services is liable to be less concentrated if Secondary sector has a high proportion of male workers.

#### **5.5.2 Correlation between Participation of Urban Non-Primary Sectors - Female Workers (1981)**

Correlation coefficient of female workforce in Secondary sector and female workforce in Tertiary sector in urban areas is negative for West Bengal (-0.79\*) and Orissa

(-0.17) (Table 5.2). Bihar indicates weak positive relationship. Relationship between female workforce in Secondary sector and Utility sector is weak negative for all the three states. Tertiary sector and Utility sector has, however, positive relationship for Orissa (0.50).

This indicates a trend similar to males. The relationship of non-primary sector in general is inverse. Only Utility sector in Orissa show somewhat positive relationship Tertiary sector.

#### **5.5.2.1 Secondary Sector and Subgroup of Tertiary Sector**

The relationship of female workforce in Secondary sector and female workforce in subgroups of Tertiary sector in urban areas is generally, negative and (Table 5.2) weak. Positive correlation coefficient is, however, obtained in Services Linked to Production in West Bengal(0.39) and Services Linked to Consumption in Bihar (0.18).

#### **5.6.1 Correlation between Level of Development and Workforce in Non-Primary Sector - Male Workers (1981)**

The correlation coefficient of levels of development and male workforce in Secondary sector in urban areas is positive in Orissa (0.63\*) and West Bengal (0.57). However, relationship between male workforce in the tertiary sector and levels of development is positive in Orissa (0.27) and negative in West Bengal (-0.23). Relationship of Utility

sector with level of development shows same trend as that of Tertiary sector.

The analysis reveals that if there is high participation rate of Secondary sector, it implies that level of development is also high. But high participation rate of tertiary sector or Utility sector may or may not correlate with the development of any region.

#### **5.6.1 Level and Development and Workforce in Subgroups of Tertiary Sector (1981)**

West Bengal indicates, in general, a negative relationship of participation rate of male workforce in urban Tertiary sector and level of development. Only financial services reveals positive relationship (0.82\*). At a further disaggregative level, positive relationship of level of development and participation rate of male workforce in Tertiary sector is experienced in Banking services (0.76\*), Real Estate services (0.75\*), Insurance (0.66\*), storage (0.56), communication (0.36), wholesale trade (0.48), sanitation services (0.48) and hotel and restaurant services (0.19).

Orissa however indicates positive relationship of male workforce in subgroups of Tertiary sector and level of development, except trade services (-0.17). Services which



TABLE 53: LEVEL OF DEVELOPMENT IN WEST BENGAL, 1981

DISTRICT	FEMALE WORK-FORCE OUTSIDE AGRICULTURE		FEMALE LITERACY ABOVE PRIMARY		CHILD LABOUR		HOUSEHOLD HAVING SAFE DRINKING WATER		HOUSEHOLD HAVING SAFE ELECTRICITY		IMR		TFR		LEVEL OF DEVELOPMENT
	Percent	Rank	Percent	Rank	Percent	Rank	Percent	Rank	Percent	Rank	IMR	Rank	TFR	Rank	
Koch Bihar	93.81	8	48.83	14	3.88	2	77.31	9	70.99	15	68	3	3.48	13	64
Jalpaiguri	94.84	9	39.98	5	2.34	4	37.70	1	44.58	9	63	5	4.18	4	37
Darjiling	97.22	12	43.26	12	1.71	9	43.38	2	68.19	12	42	13	3.78	7	67
W. Dinajpur	89.87	5	12.25	1	1.85	7	68.84	7	37.33	18	67	4	4.28	3	37
Maldah	98.67	14	43.88	15	2.79	3	78.43	11	71.56	13	59	6	3.68	11	73
Murshidabad	97.63	13	38.39	3	3.41	1	84.91	13	38.63	1	69	2	4.48	2	35
Nadia	96.35	18	39.47	6	2.89	5	82.19	12	45.54	7	74	1	3.68	18	51
24-Pargana	96.86	11	44.33	18	1.22	14	85.98	14	58.61	14	54	9	3.38	15	87
Calcutta	98.77	15	51.82	16	1.78	8	98.92	16	83.66	16	44	12	2.78	16	99
Haora	98.79	16	39.48	8	1.27	13	78.15	18	48.95	8	48	11	3.98	5	71
Hugli	92.37	7	42.98	9	8.87	16	88.18	15	49.18	11	48	11	3.38	14	83
Medinipur	82.94	2	38.82	4	1.35	12	59.52	6	44.11	6	59	6	5.48	1	37
Bankura	98.47	6	32.58	13	1.66	18	51.57	3	62.46	3	41	14	3.68	9	58
Puruliya	81.56	1	31.83	7	1.58	11	53.46	4	48.23	2	48	15	3.98	6	46
Bardhaman	86.11	4	34.86	11	8.97	15	66.93	8	59.16	5	38	16	3.58	12	71
Birbhum	83.87	3	33.48	2	1.96	6	87.72	5	38.88	4	56	8	3.78	8	28

TABLE 5.4: LEVEL OF DEVELOPMENT IN ORISSA, 1981

DISTRICT	FEMALE WORK- FORCE OUTSIDE AGRICULTURE		FEMALE LIT- ERACY ABOVE PRIMARY		CHILD LABOUR		HOUSEHOLD HAVING SAFE DRINKING WATER		HOUSEHOLD HAVING SAFE ELECTRICITY		IMR		TFR		LEVEL OF DEVELOP- MENT
	Percent	Rank	Percent	Rank	Percent	Rank	Percent	Rank	Percent	Rank	IMR	Rank	TFR	Rank	
Sambalpur	76.68	7	24.63	6	2.79	8	48.91	7	44.14	4	77	10	4.50	9	51
Sundergarh	94.78	13	29.90	10	1.61	13	61.89	12	54.27	8	66	12	4.40	10	78
Kendujhar	84.96	10	20.46	1	2.86	7	55.56	10	35.45	1	106	2	4.90	3	34
Mayurbhanj	59.54	1	33.27	11	4.09	2	35.09	3	54.39	11	96	3	4.10	12	43
Balashwar	62.55	3	25.13	5	3.75	3	66.97	13	43.26	5	107	1	5.50	1	31
Cuttack	84.32	9	34.98	12	2.32	12	51.74	9	57.27	12	84	7	5.00	2	63
Dhenkanal	87.44	12	30.44	9	2.45	10	44.86	6	52.80	10	92	4	4.50	7	58
Phulbani	68.60	5	30.30	2	3.06	6	31.17	2	39.72	9	67	11	4.50	8	43
Bolangir	76.65	8	24.38	4	2.56	9	36.11	4	49.77	3	65	13	4.60	6	44
Kalahandi	65.03	4	21.32	3	5.40	1	26.64	1	40.29	2	82	8	4.10	13	32
Koraput	72.07	6	28.59	8	3.71	4	42.81	5	47.95	7	85	6	4.30	11	47
Ganjam	62.05	2	27.40	7	3.62	5	51.61	8	46.77	6	87	5	4.80	4	37
Puri	85.19	11	30.05	13	2.36	11	57.36	11	71.45	13	81	9	4.70	5	73

indicates positive relationship were personal services (0.51), Insurance (0.49), hotel and restaurant (0.42), recreation services, transport (0.35), community services (0.85), public administration (0.25), banking (0.14) and wholesale trade (0.10). Services which indicated a negative relationship in West Bengal and Orissa were retail trade, services, medicine and health, and education services.

It can be concluded that in a developed region participation rate of Tertiary sector would in general be low exception of banking, real estate, insurance, storage, communication, wholesale trade sanitation and hotel and restaurant services. In a backward region the relationship will, however, be positive with the exception of excepting retail trade, legal services, medicine and health and education services.

#### **5.6.2 Correlation between Level of Development and Workforce in Non-Primary Sectors - Female Workers (1981)**

The correlation coefficient value between level of development and female workforce in the urban secondary sector is weak negative for West Bengal (-0.26) and for Orissa (-0.09). Relationship of level of development and female workforce in Utility sector is weak positive, West Bengal (0.11) and for Orissa (0.45). Conversely, relationship of level of development and level of female workers in Tertiary sector is positive for Orissa (0.168\*) and West

TABLE 55: CORRELATION BETWEEN LEVEL OF DEVELOPMENT AND PARTICIPATION RATE IN NON-PRIMARY SECTORS, 1971-81

PRIMARY ACTIVITIES	LEVELS OF DEVELOPMENT			
	WEST BENGAL -1981		ORISSA - 1981	
	MALE	FEMALE	MALE	FEMALE
Secondary Sector	0.57	-0.26	0.63*	-0.09
Utility Sector	-0.01	0.11	0.17	0.45
Tertiary Sector	-0.23	0.19	0.27	0.68*
Services Linked in Production	-0.25	0.22	0.05	-0.21
Socio-Economic Overhead	-0.27	-0.07	0.34	0.06
Transport	-0.32	-0.24	0.35	0.05
Storage	0.56	0.09	-0.03	-0.11
Communication	0.36	0.74*	0.01	0.13
Trade	-0.26	0.14	-0.17	-0.18
Wholesale	0.48	0.16	0.10	0.41
Retail	-0.40	0.09	-0.20	-0.21
Financial	0.82*	0.82*	0.12	-0.20
Banking	0.76*	0.81*	0.14	0.69*
Insurance	0.66*	0.42	0.49	0.32
Real Estate	0.75*	0.79*	-0.15	-0.30
Services linked to consumption	-0.18	0.41	0.29	0.65*
Private Consumption	-0.18	0.44	0.42	0.47
Legal	-0.26	0.38	-0.16	0.09
Personal	-0.15	0.44	0.51	0.47
Collective Consumption	-0.13	0.21	0.21	0.61
Public Adminis.	-0.01	0.37	0.25	0.74*
Medicine	-0.24	-0.04	-0.30	0.45
Education	-0.54	0.12	-0.01	0.43
Community	-0.14	0.21	0.25	0.16
Recreation	0.19	0.16	0.37	0.45
Hotel	-0.02	0.15	0.42	0.20
Sanitation	0.48	0.07	0.05	-0.17

Note : \* 1-tailed significant = 0.01.

Bengal (0.19).

### 5.6.2.1 Level of Development and Subgroups of Tertiary Sector

West Bengal indicates in general a weak positive relationship of female workforce in Tertiary sector and level of development. Services which indicate positive relationship are communication (0.74\*), Banking (0.81\*), real estate (0.79\*), personal services (0.44), insurance (0.42), public administration (0.37), legal services (0.38), community services (0.21), recreation services (0.16), hotel (10.15), wholesale (0.16), retail (0.09) and sanitation services (0.09).

Table 5.6: Services which indicate Development and Underdevelopment

Services Linked to Development		Services Linked to Underdevelopment	
Male	Female	Male	Female
Communication	Communication	Retail trade	
Wholesale,	Wholesale,	Legal,	
Banking,	Banking,	Medicine &	
Insurance,	Insurance	Health	
Recreation	Legal	Education	
Sanitation	Personal	services	
services	Public Admn.		
	Recreation		
	Sanitation		
	services		

Notes: Services with positive correlation for both Orissa and West Bengal pertain to Services Linked to Development Services with both negative correlation pertain to Services Linked to Underdevelopment.

Orissa (0.68\*) reveals positive significant relationship of female workforce in Tertiary sector and level of development. The services which reveal positive relationship are banking (0.69\*), public administration (0.74\*), personal services (0.47), medicine and health (0.45), recreation (0.45), education (0.43), insurance (0.30), wholesale trade (0.41), communication (0.13), hotel and restaurant (0.20), communication services (0.16) and transport (0.05). Retail trade reveals negative relationship with level of development in Orissa and West Bengal. Real estate reveals positive significant relationship in West Bengal but negative relationship in Orissa. On the contrary public administration reveals a positive relationship and Services Linked to Consumption as a whole reveals positive significant relationship in Orissa (0.65\*) but negative relationship in West Bengal (0.18).

So the results obtained in general, confirm the hypotheses.

(i) High growth of workforce Secondary sector is followed by high growth in workforce in Tertiary sector. Over-expansion of Tertiary sector has not taken place in Eastern India. The argument of tertiarisation of economy in Eastern India does not hold true. This relationship is significant

for male workers in West Bengal and female workforce in Orissa.

(ii) High male and female participation rate in Secondary sector is followed by low male and female participation rate in services industries. West Bengal reveal significant inverse relationship. This indicates that where Tertiary sector has high concentration, Secondary sector has low concentration.

(iii) High participation rate of male and female Secondary sector also signifies high level of development. Tertiary sector indicates weak positive relationship. The defused relationship is due to some of the services indicating negative relationship with development. These services are male activities in retail trade and education services. Retail trade and education services gives inverse relationship as in a backward region it gets overcrowded due to lack of alternative employment.

The exceptions which has been arrived at are as follows:

(i) The relationship of growth of male and female workers in Secondary sector and Tertiary sector in urban area is inverse in West Bengal.

(ii) Relationship of level of development and participation rate of male workers in Utility and Tertiary sector is inverse in West Bengal.

(iii) Relationship of level of development and participation rate of female workers in the Secondary sector is inverse for Orissa and West Bengal.

(iv) Social Economic Overhead services have in general inverse relationship with levels of development. Personal services and sanitation services have in general positive relationship with level of development. It is due to transition taking place in these services. Personal services is no more a low paid job.

The expansion of Secondary sector is followed by expansion of Tertiary sector. Relationship of level of development and participation rate in non-primary sectors also indicate positive relationship. However, participation rates of Secondary and Tertiary sector reveal inverse relationship. But analysis of disaggregative level does not always confirm this relationship. Such as high participation rate of Secondary sector is followed by high participation rate in financial services.

Tertiary sector cannot be taken as a residual and dysfunctional development. At disaggregative level, services industries are identified which indicate high level of



development. Non-primary sectors are interdependent and intrrelated. They are complimentary rather than competitive.

## CHAPTER VI

### SUMMARY OF THE FINDINGS AND CONCLUSION

The present research is an attempt to analyse the growth, concentration and interrelation of Secondary, Utility and Tertiary sectors, together. The study of these sectors in isolation tend to give incomplete understanding of their interrelation. A disaggregative analysis of the sectors enables us to have a better understanding of spatial dimension of urban non-primary sectors in Eastern India. A summary of the findings is presented below.

1. Regions exist. The delineation of a region has been guided by subjective interpretation of a regional scientist. This subjective interpretation was criticized and few scholars went to an extent to <sup>question</sup> the validity of the concept of region. It will be incorrect to discard the concept of region on this ground. One region can be differentiated from the other region. However, they cannot be distinctly delineated. Region is defined as a unit of land, with homogeneous character and a network of linkages around a focal point which is operationally the most convenient and most gainful economic unit having a single common boundary.

The different schemes of regionalisation did not always confirm Eastern India as a regional unit. The "natural

regions" of Spate and Singh had to club all its macro region for tracing Eastern India. Economic regionalisation (Sadasyuk and Sengupta, 1968), however, delimits Eastern India comprising of West Bengal, Orissa and Bihar as a distinct region. Proposed Jharkhand State indicates distinct regional identity. The region has a homogeneous physical and socio-economic characteristic.

2. The theory of sectoral shift and economic development considers dominance of Tertiary sector as the ultimate stage of development. But this is possible if we consider the following two caveats pertaining to the Tertiary sector.

(i) Tertiary sector is heterogeneous. Dominance of certain service industries indicates development and others reveal relatively less development. If the dominance is of Services Linked to Development (services with positive correlation value with level of development) Tertiary sector can be related to the final stage of development.

(ii) There are services which are low paid and require less skill. Conversely, there are services which require high level of skill and are highly paid. If the growth and participation rate of services in the latter category is high, it reveals a positive role of the Tertiary sector in the development.

3. Tertiary sector should not be viewed as dysfunctional and residual. Study at disaggregative level reveals that dominance of some of the service industries indicates high level of development.

4. Male workforce in urban Secondary sector in Eastern India has a low rate of growth between 1971-81. Conversely female workforce in this sector indicates high rate of growth.

In Eastern India, Orissa exhibits highest growth rate of urban Secondary sector, both for males and females. Lowest growth of male and female workforce in this sector was revealed in West Bengal and Bihar, respectively. Though, the proposed Jharkhand state is endowed with rich resources, it shows a low growth of male and female workforce in urban Secondary sector.

Mayurbhanj revealed high growth of male and female workers in urban Secondary sector. Other districts which revealed a high growth of male workers in this sector were Dhenkanal, Puri and Jajapaiguri. High growth of female workforce in this sector were in Sundergarh and Murshidabad. These were resource rich regions, low growth of male workers in this sector were in Calcutta, Champaran and Puruliya. Negative growth of female workforce in the Secondary sector occurs in Singhbhum and Dhanbad.

West Bengal indicated relatively fast growth of consumer goods industries than capital goods industries. Conversely, Orissa displayed relatively fast growth of capital goods industries. Bihar indicated relatively low growth rate of all the Secondary activities except in the case of male and female in forest based industries.

5. Male enterprises in the Utility sector indicated a high growth rate but female enterprise in this sector revealed relatively slow rate of growth. This is attributed to the fact that the Utility sector required relatively high level of skill which is more suited to male workers.

In Eastern India, male workforce in Utility sector have a high growth in Orissa and Bihar. Female workforce exhibited high growth in West Bengal and Orissa. Bihar, however, displayed negative growth of female workforce in the Utility sector. Opportunities in electricity has grown quicker for males and that of water works and supply for females. Thus Utility sector has grown relatively faster than Secondary and Tertiary sectors. This is indicative of a rapid expansion of infrastructure, for future development process.

6. Tertiary sector has experienced relatively slow growth of male and female enterprise. This indicates that the overexpansion of Tertiary sector has not taken place in

Eastern India. Therefore, the assumption that Tertiary sector is swollen and dysfunctional does not hold true for the urban Eastern India.

Tertiary sector experienced slow growth in male activities but relatively fast growth in female activities. However, Orissa has experienced fast growth of both male and female workforce. Mayurbhanj, Phulbani exhibited high growth and Calcutta negative growth of male workers in the Tertiary sector. Dhenkanal, Mayurbhanj and Hazaribag experienced rapid growth of female workforce in the Tertiary sector.

Services Linked to Production exhibited slower growth than Services Linked to Consumption both for males and females in urban Eastern India. But at disaggregative level, some of the services in Services Linked to Production reflected high growth. For example, banking and insurance. Negative growth rate is however indicated in transport, real estate and business services.

Services Linked to Consumption revealed faster growth of collective consumption services than private consumption services. Growth of female enterprise in Services Linked to Consumption is faster than the growth of male enterprise. This is because these services required low level of skill and are clean jobs. High growth of female workforce in

legal services, public services, restaurant and hotels services, and education services, is attributed to giving due importance to female education which leads to increasing awareness, changing social norms and governmental efforts.

7. The participation of male and female Secondary workforce in Eastern India corresponds to the participation rate in India. Highest participation rate of male workers was reserved in West Bengal in textiles, forest-based, mineral-based, machine-based and other industries. This is largely attributed to the locational advantages enjoyed by this state. West Bengal also accounts for a high participation rate of male enterprises in agro-based, textiles, machine-based and other industries. High participation rate of female workers in mineral and metal-based industries is revealed in the mineral rich belt of India, i.e. the proposed Jharkhand state. Orissa revealed a high rate of male and female participation in the metal-based and forest-based industries, respectively.

Highest participation rate for both male and female workers is also revealed in sanitation services in Orissa. Due to lack of diversification Secondary sector in Bihar exhibited high participation rate, for male workers in agro-based industries. Districts which accounted for a high participation rate of male workers in the Secondary sector were Hugli, Haora and Singhbhum. Female workers in this

sector exhibited highest participation rate, particularly in Nadia and Murshidabad.

8. Utility sector indicated high participation rate in Eastern India, both for males and females. High participation rate of male and female workers is revealed in electricity. Districts with high participation rate of male and female workers in Utility sector were observed for Hazaribag, Puruliya and Bardhaman.

9. Participation rate is low for male workforce in the Tertiary sector but high for female workforce. Highest male participation rate in the Tertiary sector is indicated in Orissa and highest female participation rate in this sector is revealed in West Bengal. Districts with high participation rates of male workers of Tertiary workforce were Darjiling, Koch Bihar and Puri. They are tourist resorts and tend to have high participation rates of service industries. Female workers exhibit high participation rate of this sector in Calcutta and Jalpaiguri. Male workforce indicate high participation rate in Services Linked to Production and female enterprise reveals high participation in Services Linked to Consumption in Eastern India as a whole, West Bengal and Bihar, Orissa, however, indicated high participation rate of male workers in Services Linked to Consumption.



10. For the Easterion region, (a) Male Preferred Secondary activities were identified in forest-based, textiles, metal-based, machine-based and construction industries; (b) Female Preferred Secondary Activities were agro-based industries; (c) Male Preferred Service Industries were identified in Services Linked to Production, especially social economic overhead services and trade services. Retail trade showed a distinct male preference. In Services Linked to Consumption only public administration and hotel and restaurant services exhibited a male preference; (d) In the case of the Female Preferred Service Industries, Services Linked to Consumption had a female preference. Both private consumption services and collective consumption service, indicate a specific female preference. Medicine and health services and education services were preferred by females.

The male and female preferred activities indicates that activities which require relatively high level of skill, are highly paid are preferred by males. Apart low paid jobs, females do reveal high participation in high paid job also. This indicates at the transition taking place in the society.

11. The bivariate map indicates at a weak inverse relationship of level of concentration and growth of Secondary sector. Female workforce indicated that when the level of

concentration of female activities in Secondary sector is low, growth of this sector is moderate and high. If the level of concentration of Secondary sector is high the growth of this sector is also high. Tertiary sector do not reveal a definite trend. In general, relatively high level of concentration of male workforce in service industries is associated with low level of growth of this sector. Moderate level of concentration in the Tertiary sector is followed by moderate growth. Relationship is not clearly established. Future research may be conducted to establish a definite relationship.

12. High growth of Secondary sector is followed by high growth of Tertiary sector. This relationship negates the assumption that service industries are dysfunctional. The over expansion of Tertiary sector is ruled out. West Bengal indicated a positive significant relationship of male enterprises in Secondary and Tertiary sectors. Orissa signifies positive significant relationship for female workforce in these sectors.

13. High growth of male workers in the Utility sector is followed by high growth in Secondary and Tertiary sectors in Orissa. West Bengal indicated weak negative relationship and Bihar weak positive relationship between these sectors.

14. The correlation coefficient values indicate that rela-

tionship of growth of workforce in the Secondary sector and Services Linked to Production has higher positive relationship than Services Linked to Consumption.

High growth of female workers in Secondary sector is followed by slow growth in social economic overhead services in West Bengal and financial services in Orissa. Growth of female workforce in Services Linked to Consumption and collective consumption services have a positive relationship with growth of female workforce in Secondary sector in Bihar. Conversely, high growth of female activities in the Secondary sector is followed by high growth of Services Linked to Consumption and collective consumption services in Orissa.

15. High male and female participation rate in Secondary sector is followed by low male and female participation rate in service industries. West Bengal revealed significant inverse relationship. This indicates that where Secondary sector had a high concentration in Tertiary sector revealed low concentration. All the Service industries however do not confirm this relationship. For example, financial services has a positive correlation with participation rate in Secondary sector. There occurs a significant inverse relationship of social economic overhead services and collective consumption services in West Bengal.

16. Relationship between levels of development and participation rate of Secondary, Utility and Tertiary sectors indicate different trends. Higher the participation rate in Secondary sector higher is the level of development. This relationship is significant in Orissa. However, high participation rate of female workers in Secondary sectors reveal inverse relationship with level of development which is in an unexpected direction.

If the participation rate of the Utility sector is higher there will be a high level of development. Higher the participation rate in Tertiary sector higher the level of development. Female workforce in Tertiary sector confirms this relationship in Orissa. However in West Bengal this relationship does not hold good. So high participation rate in the Tertiary sector reveals a defused relationship at aggregative level.

At disaggregative level one arrives at a conclusion that most of the services are linked to development. This has been traced by forming two categories: (a) Services Linked to Development and (b) Services Linked to Underdevelopment. Workforce in services which indicate a positive correlation with level of development for both West Bengal and Orissa are Services Linked to Development. Conversely participation rate in services which exhibit negative relationship with development. These services are linked to

underdevelopment.

(a) Services Linked to Development for male workforce are communication, wholesale, banking, insurance, recreation, and sanitation.

(b) Services Linked to Development for female workforce are communication, wholesale, banking, insurance, recreation, sanitation, legal, personal and public administration.

(c) Services Linked to Underdevelopment for male workforce, retail trade, legal and medicine and health services.

However these are the services which indicate the Services Linked to Underdevelopment for female workforce.

Secondary, Utility and Tertiary sectors in the Eastern India exhibit distinct growth trend, spatial pattern and a definite interrelation. In spite of being rich resource region proposed Jharkhand state and Bihar reveal relatively low level of growth of employment in the Secondary sector. Weak inverse relationship between concentration and growth of Secondary sector reveals that backward region are experiencing a rapid growth of the Secondary sector.

Relationship of Secondary and Tertiary sectors revealed that Tertiary sector has grown slower than Secondary sector. This goes against the concept of tertiarisation as proposed

by various scholars in the past. Service industries are not a sign of backwardness, as is generally presumed. At disaggregative level high participation rate in Services like banking, insurance, communication, wholesale, public administration indicates high level of development. Personal services, retail trade also do not always signify underdevelopment. With the changing socio-economic condition these services tend to become highly paid. Services are not substitutes to Secondary activities. They are compliment to it. In the present scenario expansion of Secondary sector along with expansion of Tertiary sector is required, so that development can be sustained.

## BIBLIOGRAPHY

- Acharya, N.K. (1980), "Some Aspects of the Tertiarisation of the Urban Economy in India, 1961-71", M.Phil. Dissertation, J.N.U., New Delhi.
- Ahluwalia, I.J. (1985), Industrial Growth in India: Stagnation since mid-Sixties, Oxford University Press, Delhi.
- Ahluwalia, I.J. (1985), "Agriculture-Industry Interrelationships - A Summing Up", Indian Economic Journal, 33.4, 183-186.
- Alagh, Y.K. (1973), "Regional Planning for Industrial Aspects of the Indian Economy", Indian Journal of Regional Science, 5:2, 147-166.
- Alagh, Y.K. (1988), Process of Industrialization and Technological Alternatives, Lancer International, New Delhi.
- Amin Samir (1974), Accumulation of Capital on a World Scale, Monthly Review Press, New York, 2 Vol.
- Arild Holt-Jenson (1980), Geography Its Historical Concepts, Harper and Row Publication, New York.
- Awasthi, Dinesh (1991), Regional Pattern of Industrial Growth in India, Concept Company, New Delhi.
- Bailey, A., et. al. (1987), "Services and Production for a Reassessment of Economic Sector", The Annals of Regional Sciences (2), 21:2 (July) 45-59.

- Balasubramanyam, Y., N.P. Sanjaya Lall (1991), 'Current Issues in Development Economics, Macmillan, London.
- Banerjee, Debdas (1982), "Industrial Stagnation in Eastern India: A Statistical Investigation" Part I, Economic and Political Weekly, 17:17 (20 February), 286-298.
- Bauer, P.T. and Yamey, B.S. (1951), "Economic Progress and Occupational Distribution", Economic Journal, 161.
- Bhagwati, J.N. (1985), Wealth and Poverty, Vol.1, Oxford Press, Bombay.
- Bhattacharya, Asit Kumar (1973), "Economic Regions in the Context of Development: Some Basic Considerations", Artha Vijnana, 15:1 (March), 57-90.
- Bose, A., D.B. Gupta and G. Raychaudhuri (eds.) (1977), Population Statistics in India, Vikas Publishing House Pvt. Ltd., New Delhi.
- Breman, Jan (1976), "Dualistic Labour System:", Economic and Political Weekly, 11:48 (27 November), 1870-76.
- Census of India, 1971, General Economic Tables, B IV, Part A, Series 4 - Bihar; 16 - Orissa; 23 - Bengal.
- Census of India, 1971, "Economic and Socio-Cultural Dimension of Regionalisation", An Indo-USSR Collaborative Study - Census Centenary Monograph No.7.



- Census of India, 1981, General Economic Tables, Table B-12, Series 4 - Bihar; 16 - Orissa; 23 - West Bengal.
- Census of India, 1981, General Economic Table, Part III - A and B(i), Series 16 - Orissa; 23 - West Bengal.
- Census of India, 1981, Occasional Paper of 1989, Household Literacy, Drinking Water, Electricity and Toilet Facility.
- Census of India, 1981, Part IV-A, Social and Cultural Tables, Series 16 - Orissa; 23 - West Bengal.
- Census of India, 1981, Occasional Paper No.5 of 1988, Child Mortality Estimates of India.
- Census of India, 1981, Occasional Paper No.13 of 1987 - Orissa, No.9 of 1988 - West Bengal.
- Census of India, 1981, Census Atlas, National Volume, Series 1, Part XII.
- Census of India, 1991, Series I, India, Provisional Population Tables, Paper 3 of 1991, Workers and their Distribution.
- Chatterjee, S.P. (1974), "Economic Regions of India" in Studies in Applied and Regional Geography, Dept. of A.M.U., Aligarh.
- Chenery, H.B. (1960), "Pattern of Industrial Growth", The American Economic Review, L(4), September.

- Chenery, H. and Srinivasan, T.N. (eds.), (1988), Handbook of Development Economics, Vol.1, Elsevier Science Publishers, Amsterdam.
- Cohen, Stephen S. and John Zysman (1987), Manufacturing Matters, Basic Books, Inc. Publication, New York.
- Coondoo, D., C. Neogi and B. Ghosh (1973), "Technology - Intensive Industrialisation in LDCs: Experience of Indian Industries", Economic and Political Weekly, 28:7 (20 February), M43-52.
- Das, T.P (1983), "Localisation and Specialisation of manufacturing Industries in Eastern India", M.Phil. Dissertation, JNU, New Delhi.
- Dutt, Ashok K. (ed.) (1975), India: Resources Potentialities and Planning, Oxford and IBH Publishing Co., New Delhi.
- Dutt, Bhabhatosh (1978), Indian Economic Thought Twentieth Century Perspective, 1900-1950, Tata McGraw Hill, Delhi.
- Employment, Unemployment and Labour Force Statistics: A Study of Methods (1948), Report Prepared for the Sixth International Conference of Labour Statistics (Montreal, 4-12, August 1947), Geneva.
- Ernste, Huib and Verena, Meier (eds.) (1992), Regional Development and Contemporary Industrial Response, Belhaven Press, New York.
- Ford Foundation (1975), "Tertiary Sector in Second India", Tata Economic Consultancy Services, Orient House, Bombay (March).

- Gopal, M.H. (1971), "Region As Developmental Concept", The Indian Economic Journal, 19:1 (July-Sept.), 1-6.
- Gershuny, J.I. and I.D. Miles (1984), The New Service Economy, Frances Pinter, London.
- Goldar, B. and V. Seth, "Spatial Variation in the Rate of Industrial Growth", Economic and Political Weekly 24:22 (3 June), 1237-1240.
- Haggett, Peter (1983), Geography A Modern Synthesis, Harper and Row Publication, New York.
- Husain, Majid (1984), Evolution of Geographical Thought, Rawat Publication, Jaipur.
- Jain, L.C. (1993), "Turn-around in Industrial Growth: Hasty Claims for Liberalisation", Economic & Political Weekly, 27:7 (20 February), M-2-11.
- Kaldor, Nicholas (1967), Strategic Factor in Economic Development, New York State School of Industrial and Labour Relations, New York.
- Khurana, Indu (1986), "Structure of Manufacturing Industries in India: A District Level analysis of Labour Force and Establishment 1901-71", Ph.D. Thesis, JNU, New Delhi.
- Kodras, J.E. and I. Padavic (1993), "Economic Restructuring and Women's Sector Employment in 1970's: A Spatial Investigation Across 380 U.S. Labour Market Areas", Social Science Quarterly 74:1 (March), 1-27.

- Kumar, Satish M. (1984), "Female Participation in Tertiary Sector of Urban Economy of India": A Case Study of Selected Districts, 1971", M.Phil. Dissertation, JNU, New Delhi.
- Kumar, Satish M. (1991), "The Urban Labour Market in India and the Female Workforce in Tertiary Sector", Ph.D. Thesis, JNU, New Delhi.
- Kundu, Amitabh, et. al. (1978), Input Output Framework: An Economic Analysis, K.B. Publication, New Delhi.
- Kundu, Amitabh (1980), Measurement of Urban Processes: Study in Regionalisation, Popular Prakashan, Bombay.
- Kundu, Amitabh (1982), "Nodal Regions - Some Conceptual Issues in Measurement and Regionalisation", Indian Journal of Regional Science, 14:1, 12-18.
- Kundu, Amitabh and M. Raza (1981), Indian Economy, A Regional Dimension, Spectrum Publication, New Delhi.
- Kundu, Amitabh (1985), "Analysing the Structural Changes in the Indian Economy - Certain Avoidable Anomalies in the Usage of the Population Census Data", Population Geography, 7:1-2 (June-December), 66-81.
- Kundu, Amitabh (1991), "Sectoral Diversification: Spatial Dimension", Productivity, 32:1 (April-June), 48-57.

- Kuznets, Simon (1957), "Industrial Distribution of National Production and Labour Force", Economic Development and Cultural Change, 5:4, 3-11.
- Lampard, Eric E. (1954), "The History of Cities in Economically Developed Areas", Economic Development and Cultural Change, 3:2, 81-146.
- Lewis, Arthur A., "Economic Development and Unlimited Supply and Labour", in A.N. Agarwala and S.P. Singh (eds.), The Economics of Underdevelopment, Oxford University Press, Delhi.
- McGee, I.G. (1971), The Urbanisation Process in Third World, G. Bell & Sons, London.
- Maharatna, Arup (1989), "Change in Concentration and Growth in Indian Industries 1964-80", Indian Economic Journal, 37:2 (October-December), 93-102.
- Mahmood, Aslam (1977), Statistical Methods in Geographical Studies, Rajesh Publication, New Delhi.
- Mamoria, C.B. (1980), Economic and Commercial Geography of India, Sivalal Agrawala & Co., Agra.
- Massey, Doreen (1984), Spatial Divisions of Labour: Social Structures and the Geography of Production, Macmillan, London.
- Misra, R.P. (1969), Regional Planning - Concepts, Techniques, Policies & Case Studies, Prasaranga, The University of Mysore.

- Mitra, As ok, "Level of Regional Development in India", Census of India, Vol.1, Part 1A(i), The Manager of Publication, Delhi.
- Mohan, Rakesh (1989), "Industry and Urban Employment, 1961-81: A Preliminary Exploration", Economic and Political Weekly, 24:44-45 (4 November), 2481-2502.
- Mukhopadhyay Debdas (1989), "Inter District Variation in Industrial Employment: Its Main Causes - A Case Study of West Bengal", Artha Vijnana, 32:4(December), 409-428.
- Nath, V. (1954), Resource Development Regions and Division of India, Planning Commission, New Delhi.
- National Industrial Classification 1970 (NIC-1970), Central Statistical Organisation, Department of Statistics, Cabinet Secretariat, Government of India, New Delhi.
- Pacione, Michael (1985), Progress in Industrial Geography, Croom Helm, London.
- Pathak, C.R., A. Aziz and R.N. Chattopadhyay (1970), "Identification of Planning Areas in the Three State Regions Bihar, Orissa and West Bengal, with Respect to their Levels of Development and Planning Problems", Indian Journal of Regional Science 11:1, 64-91.
- Premi, M.K., A.Ramanamma and U. Bampawale (1983), An Introduction to Social Demography, Vikas Publishing House Pvt. Ltd., New Delhi.

- Raj, K.N. (1976), "Growth and Stagnation in Indian Industrial Development", Economic and Political Weekly, 11:6 (February), pp.5-7.
- Raj, K.N. (1984), "Economic Growth in India 1952-53 to 1982-83", Economic and Political Weekly, 19:41, October.
- Ranis, G. and Schultz, T.P. (eds.) (1988), The State of Development Economics: Progress and Perspectives, Basil Blackwell Ltd., Oxford.
- Rao, V.L.S.P. and L.S. Bhat (1964), "A Regional Framework for Resource Development", Geographical Magazine, 10:1.
- Raj, Tirthanker (1984), "Interstate Variation of Industrial Growth in India", Unpublished M.Phil. Dissertation, JNU, New Delhi.
- Santos, Milton, "Spatial Dialects Two Circuits of Urban Economy in Underdeveloped Countries", Antipode 9:3 (December), 49-59.
- Sawant, G.B. and Tawde, M.D. (1975), "Planning for Problem Region", Indian Journal of Regional Science 7(2), 183-186.
- Sengupta, P. and Galina Sadasyyuk (1968), "Economic Regionalisation of India - Problems and Approaches", Census of India, 1961, Monograph Series, 1:8, The Manager of Publication, Delhi.
- Seth, V.K. (1987), Industrialisation in India: Spatial Perspective, Commonwealth Publishers, Delhi.

- Shetty, S.L. (1978), "Structural Retrogression in Indian Economy since mid-Sixties", Economic and Political Weekly, 7:13 (6 & 7), Annual Number, (February) 185-245.
- Singer, H.W. (1970-71), "Dualism Revisited: A New Approach to the Problem of Dual Society in Developing Countries", Journal of Development Studies, 7, 60-65.
- Singh, R.L. (1971), India: A Regional Geography, National Geographical Society of India, Varanasi.
- Spate, O.H.K. (1967), India, Pakistan and Sri Lanka: A General and Regional Geography, Methuen and Co. Ltd., London.
- Stamp, L.D. (1967), Asia: A General and Regional Geography, Methuen and Co. Ltd., London.
- Sundaram, K.V. (1968), "Problems in Delimitation of Region", Indian Journal of Regional Science 1(1), 53-59.
- Sundaram, K.V. and Dutt, R. (1985), Indian Economy, S. Chand and Company, New Delhi.
- Tewari, R.T. (1988), "Inter Regional Pattern of Industrialisation in India - 1971-1981", Indian Economic Journal, 36:2 (October-December), 1-23.
- Triantis, S.C. (1953), "Economic Progress, Occupational Distribution and International Terms of Trade", Economic Journal, 63, 627-37.



Truman, A., John Hartshorn (1988), Economic Geography, Prentice-Hall of India Pvt. Ltd., New Delhi.

Verma, Amita (1991), "Regional Dimension of Industrialisation in India", M.Phil. Dissertation, JNU, New Delhi.

Visariya Praveen (1990), "Evolving an Employment Policy for the 1990s - What Do the Data Tell US", Conference of the India Association for the Study of Population Udaipur.

Williamson, Jeffery G., Panchamukhi (eds.) 1989), The Balance Between Industry and Agriculture in Economic Development Vol.2, Sector Proportion, Macmillan Press, London.

APPENDIX - I

CLASSIFICATION OF NON-PRIMARY WORKFORCE  
(TWO DIGIT LEVEL CLASSIFICATION) (NIC) 1970

SECTORS	DIVISION/MAJOR GROUP		ACTIVITIES
I. Secondary Sector	D	2 and 3	Manufacturing (excluding repair service)
	D	5	Construction
(A) Agro-based	M	20-21	Manufacturing of Food Products
	M	22	Manufacturing of Beverages, Tobacco and Tobacco products
(B) Textiles	M	23	Manufacturing of Cotton Textiles
	M	24	Manufacturing of Wool, Silk, Synthetic Fibre Textiles
	M	25	Manufacturing of Jute, Hemp and Mesta Textiles
	M	26	Manufacturing of Textile Products (including wearing xxxx other than foot-wear)
(C) Forest Based	M	27	Manufacturing of Wood and Wood Products, Furnitures and Fixtures
	M	28	Manufacturing of Paper, Paper products and Printing, Publishing and Allied Industries
	M	29	Manufacturing of Leather and Leather and Fur Products (except repairs)
	M	30	Manufacturing of Rubber, Plastic, Petroleum and Coal Products
(D) Metal Based Industries	M	33	Basic Metal and Alloy Industries

CONTD.....

SECTORS	DIVISION/MAJOR GROUP	ACTIVITIES
	M 34	Manufacturing of Metal Products and Parts except Machinery and Transport Equipment
(E) Mineral Based Industries	M 31	Manufacturing of Chemicals and Chemical Products except Products of Petroleum and Coal
	M 32	Manufacturing of Non-metallic Mineral Products
(F) Machine Based Industries	M 35	Manufacturing of Machinery Machine Tools and Parts except Electrical Machinery
	M 36	Manufacturing of Electrical Machinery, Apparatus, Appliances and Supplies and Parts
	M 37	Manufacturing of Transport Equipment and Parts
(G) Other Industries	M 38	Other manufacturing Industries
(H) Construction	M 50	Construction
	M 51	Allied Activities to Construction
II. Utility Sector	D 4	Electricity, Gas and Water
(A) Electricity	M 40	Electricity
(B) Gas & Steam	M 41	Gas and Steam
(C) Water Works and Supply	M 42	Water Works and Supply
III. Tertiary Sector	D 6	Wholesale and Retail Trade and Restaurant and Hotels
	D 7	Transport, Storage and Communication

CONTD.....

SECTORS	DIVISION/MAJOR GROUP	ACTIVITIES
	D 8	Financing, Insurance, Real Estate and Business Services
	D 9	Community, Social and Personal Services
	M 39	Repair Services
A (I) Services Linked to Production	D 7	Transport, Storage and Communication
	D 6 (except M 69)	Wholesale and Retail Trade (except Hotel and Restaurant)
	D 8 (except M 83)	Financing, Insurance and Real Estate
(i) Social and Economic Overhead Services	D 7	Transport, Storage and Communication.
	M 70	Land Transport
(a) Transport Services	M 71	Water Transport
	M 72	Air Transport
	M 73	Services Incidental to Transport
(b) Storage Services	M 74	Storage and Warehousing
(c) Communication Services	M 75	Communication
(ii) Trade Services	D 6 (except M 69)	Wholesale and Retail Trade
(a) Wholesale Trade Services	M 61	Wholesale Trade in Food, Textiles, Live Animals, Beverages and Intoxicants

CONTD.....

SECTORS	DIVISION/MAJOR GROUP		ACTIVITIES
	M	62	Wholesale Trade in Fuel, Light Chemicals, Perfumery, Ceramics and Glass
	M	63	Wholesale Trade in Wood, Paper Other Fabrics, Hide and Skin and Inedible Oils.
	M	64	Wholesale Trade in All Types of Machinery, Equipment including Transport and Electrical Equipment
	M	65	Wholesale Trade in Miscellaneous Manufacturing
(b) Retail Trade Services	M	65	Retail Trade in Food Articles, Beverages, Tobacco and Intoxicants
	M	66	Retail Trade in Textiles
	M	67	Retail Trade in Fuel and Other Household Utilities and Durables
	M	68	Retail Trade in Others
(iii) Financial Services	D	8	Financing, Insurance, Real Estate and Business Services (except Legal services)
(a) Banking Services	M	80	Banking and Similar Type of Financial Institutions
(b) Insurance Services	M	81	Provident and Insurance
(c) Real Estate and Business Services	M	82	Real Estate and Business services
B Services Linked to Consumption	M	39	Repair Services
	M	69	Restaurants and Hotels

CONTD.....

SECTORS	DIVISION/MAJOR GROUP	ACTIVITIES
	M 83	Legal Services
	D 9	Community, Social and Personnel Services
(i) Private Consumption Services	M 83	Legal services
	M 96	Personal Services
	M 97	Repair Services
	M 98	International and Other Extra Territorial Bodies Services
	M 99	Services Not Elsewhere Classified
(a) Legal Services	M 83	Legal Services
(b) Personal Services	M 96	Personal Services
	M 98	International and Other Extra Traditional Bodies Services
	M 99	Services not elsewhere Classified
	M 39	Repair Services
(ii) Collective Consumption Services	M 90	Public Administration and Defence Services
	M 91	Sanitary Services
	M 92	Education, Scientific and Research Services
	M 93	Medical and Health Services
	M 94	Community Services
	M 95	Recreational and Cultural Services
	M 69	Hotel an Restaurants

CONTD.....

SECTORS	DIVISION/MAJOR GROUP	ACTIVITIES
(a) Public Adminis. Services	M 90	Public Administration and Defence Service
(b) Medicine & Health Services	M 93	Medicine and Health
(c) Education Services	M 92	Education and Scientific Research
(d) Community Services	M 94	Community Services
(e) Recreation and Cultural Services	M 95	Recreation and Cultural
(f) Hotel and Restaurant Services	M 69	Hotel and Restaurants
(g) Sanitation Service	M 91	Sanitation

## CODES USED IN APPENDIX - II

SA	=	Secondary Workforce
SA1	=	Agro-Based Industries
SA2	=	Textiles
SA3	=	Forest-Based Industries
SA4	=	Metal-Based Industries
SA5	=	Mineral-Based Industries
SA6	=	Machine Based Industries
SA7	=	Other Industries
SA8	=	Construction
TA	=	Tertiary Sector
TA1	=	Service Linked to Production
TA1A	=	Social Economic Overhead Services
TA1A1	=	Transport
TA1A2	=	Storage
TA1A3	=	Communication
TA1B	=	Trade Service
TA1B1	=	Wholesale Trade
TA1B2	=	Retail Trade
TA1C	=	Financial Services
TA1C1	=	Banking
TA1C2	=	Insurance
TA1C3	=	Real Estate and Business Service
TA2	=	Service Linked to Consumption
TA2A	=	Private Consumption Services
TA2A1	=	Legal Services



TA2A2	=	Personal Services
TA2B	=	Collective Consumption Services
TA2B1	=	Public Services
TA2B2	=	Medicine and Health
TA2B3	=	Education
TA2B4	=	Community Services
TA2B5	=	Recreation and Cultural Services
TA2B6	=	Hotel and Restaurant Services
TA3B7	=	Sanitation
UT	=	Utility Sector
UT1	=	Electricity
UT2	=	Gas and Steam
UT3	=	Water Works and Suppl
W. Dinajpur	=	West Dinajpur
24-Pargana	=	Twenty Four Paragans

APPENDIX - II

**Participation Rate(1981), Growth Rate(1971-81) and Location Quotient (1981) of Urban Non-Primary Workforce - Male and Female**

State/ District	Industrial Division	Participation Rate		Growth Rate		Location Quotient	
		Male	Female	Male	Female	Male	Female
INDIA	SA	31.13	27.23	4.01	5.52		
WEST BENGAL	SA	38.75	22.92	2.63	7.13	1.11	1.01
ORISSA	SA	22.33	17.30	6.59	9.19	0.74	1.01
BIHAR	SA	24.11	14.70	4.04	3.30	0.85	0.94
KOCHBIHAR	SA	18.14	19.77	3.28	8.85	0.52	0.87
JALFAIGURI	SA	16.80	14.66	7.13	11.89	0.52	0.65
DARJILING	SA	17.95	16.76	6.05	9.29	0.49	0.74
W. DINAJPUR	SA	15.36	19.31	6.87	14.07	0.48	0.90
MALDA	SA	19.13	11.43	4.74	11.90	0.55	0.48
MURSHIDABAD	SA	31.24	65.18	4.66	15.67	1.53	3.02
NADIA	SA	37.47	48.10	7.00	16.11	1.14	2.10
24 PARGANA	SA	48.24	23.03	3.19	4.21	1.35	0.99
CALCUTTA	SA	31.86	11.40	0.68	3.13	0.85	0.48
HAORA	SA	52.44	26.99	2.39	4.88	1.45	1.14
HUGLI	SA	54.48	26.67	3.22	3.82	1.53	1.20
MEDINIPUR	SA	15.69	10.30	3.33	6.59	0.51	0.52
BANKURA	SA	29.88	34.78	3.04	11.94	0.89	1.66
PURULIYA	SA	18.39	16.90	1.37	0.18	0.55	0.87
BARDDHAMAN	SA	34.05	23.95	2.05	8.24	1.16	1.34
BIRBHUM	SA	19.50	11.51	4.71	3.95	0.61	0.58
SAMBALPUR	SA	23.63	32.43	4.87	11.39	0.81	1.79
SUNDERGARH	SA	45.78	26.51	8.16	15.78	1.31	1.30
KENDUJHAR	SA	19.55	14.68	7.07	8.39	0.80	0.99
MAYURBHANG	SA	16.28	11.17	11.28	18.25	0.52	0.79
BALASORE	SA	14.08	15.82	6.33	6.21	0.57	1.07
CUTTACK	SA	21.60	10.30	3.97	5.38	0.65	0.52
DHENKANAL	SA	29.73	9.05	19.00	17.33	1.05	0.42
PHULBANI	SA	16.27	41.20	5.66	-4.3	0.56	1.00
BALANGIR	SA	17.15	19.99	4.66	6.12	0.61	1.10
KALAHANDI	SA	13.03	9.68	2.93	0.52	0.53	0.66
KOKAPUT	SA	18.46	15.98	6.73	16.86	0.66	0.99
GANJAM	SA	16.84	14.40	4.29	3.65	0.59	1.10
PURI	SA	13.32	9.31	8.43	9.88	0.41	0.46
PATNA	SA	22.30	16.50	5.95	12.83	0.75	1.06
GAYA	SA	18.85	15.00	3.64	1.51	0.63	1.14
BHOJPUR	SA	23.52	16.19	4.72	1.47	1.25	0.79
SARAN	SA	17.14	12.80	5.68	4.34	0.60	0.92
CHAMPARAN	SA	16.63	13.73	1.05	9.54	0.63	0.89
MUZAFFARPUR	SA	16.73	8.44	3.63	4.66	0.58	0.44
DARBHANGA	SA	19.30	12.69	3.66	4.02	0.60	0.62
MUNGER	SA	20.45	11.21	1.90	2.86	0.80	0.96
BHAGALPUR	SA	24.60	20.09	1.82	4.28	0.83	1.22
SAHARSA	SA	14.03	6.22	4.34	9.04	0.63	0.72
PURNIA	SA	19.62	9.01	5.75	10.65	0.72	0.79
SPARGANA	SA	19.97	15.78	5.07	6.78	0.64	0.81
PALAMU	SA	17.72	8.88	7.29	5.05	0.59	0.58
HAZARIBAG	SA	12.94	9.29	3.89	6.70	1.01	0.70
RANCHI	SA	28.32	13.13	5.42	7.84	0.90	0.69
DHANBAD	SA	26.90	15.31	5.24	-2.74	1.16	1.06
SINGHBHUM	SA	47.91	7.57	2.17	-1.2	1.42	1.17
E. INDIA	SA	32.24	19.50	3.23	6.46	0.97	0.68
JHARKHAND	SA	25.40	15.85	4.39	3.07	0.98	0.91

Contd.....

State/ District	Industrial Division	Participation Rate		Growth Rate		Location Quotient	
		Male	Female	Male	Female	Male	Female
INDIA	SA1	3.15	7.40	3.55	6.06		
WEST BENGAL	SA1	3.00	5.94	2.58	12.36	0.82	0.99
ORISSA	SA1	2.34	5.53	5.44	8.56	1.11	1.22
BIHAR	SA1	3.37	3.30	2.96	6.14	1.49	0.86
KOCHBIHAR	SA1	5.27	13.66	1.72	8.10	3.09	2.64
JALPAIGURI	SA1	3.24	7.63	2.34	9.56	2.05	1.99
DARJILING	SA1	3.20	2.93	7.57	12.58	1.90	0.67
W. DINAJPUR	SA1	4.15	10.17	7.65	13.67	2.87	2.01
MALDA	SA1	3.29	5.63	6.71	16.23	1.83	1.88
MURSHIDABAD	SA1	13.73	55.04	6.43	16.68	4.67	3.22
NADIA	SA1	4.47	6.48	10.46	21.19	1.27	0.51
24 PARGANA	SA1	2.32	1.81	2.93	7.78	0.51	0.30
CALCUTTA	SA1	3.02	1.30	0.07	4.63	1.01	0.43
HAORA	SA1	1.82	2.33	0.99	12.94	0.37	0.33
HUGLI	SA1	1.75	2.45	0.82	18.59	0.34	0.35
MEDINIPUR	SA1	2.49	4.48	4.41	18.99	1.69	1.66
BANKURA	SA1	6.48	7.05	2.21	0.99	2.31	0.77
PURULIYA	SA1	4.96	2.10	-3.14	0.65	2.87	0.47
BARDHAMAN	SA1	2.60	6.90	4.89	10.40	0.81	1.10
BIRBHUM	SA1	7.43	6.73	2.40	2.22	4.05	2.23
SAMBALPUR	SA1	4.52	21.38	7.19	13.38	2.03	2.52
SUNDERGARH	SA1	1.32	0.72	7.58	6.46	0.31	0.10
KENDUJHAR	SA1	1.25	0.87	14.28	1.43	0.68	0.23
MAYURBHANG	SA1	2.80	1.62	10.70	15.79	1.83	0.55
BALASORE	SA1	3.63	9.66	4.17	2.63	2.74	2.33
CUTTACK	SA1	2.54	1.37	5.60	-0.64	1.25	0.51
DHENKANAL	SA1	0.29	1.52	-7.61	10.69	0.10	0.64
PHULBANI	SA1	1.57	8.18	10.84	9.15	1.03	0.21
BALANGIR	SA1	2.75	6.76	3.19	2.56	1.70	1.29
KALAHANDI	SA1	2.10	4.09	-3.48	-3.48	1.71	1.61
KORAPUT	SA1	1.98	3.08	4.03	13.50	1.14	0.74
GANJAM	SA1	2.60	4.45	4.42	7.59	1.64	1.18
PURI	SA1	1.34	1.86	4.94	5.90	1.07	0.76
PATNA	SA1	5.20	6.21	3.88	14.94	2.48	1.44
GAYA	SA1	4.19	1.69	3.12	-0.59	2.36	0.43
BHOJPUR	SA1	3.81	3.84	2.39	-4.02	1.72	0.91
SARAN	SA1	6.06	4.96	5.60	11.00	3.76	1.48
CHAMPARAN	SA1	6.33	6.01	-0.43	7.18	4.05	1.67
MUZAFFARPUR	SA1	3.46	2.51	0.98	4.99	2.20	1.14
DARBHANGA	SA1	3.48	7.54	0.89	5.70	1.92	2.27
MUNGER	SA1	5.37	4.81	1.98	1.71	2.79	1.64
BHAGALPUR	SA1	4.12	7.29	1.57	9.09	1.78	1.39
SAHARSA	SA1	3.06	3.33	4.83	17.67	2.32	2.05
PURNIA	SA1	3.17	2.45	2.28	7.39	1.72	1.04
SPARGANA	SA1	4.39	5.19	2.59	0.13	2.34	1.26
PALAMU	SA1	3.90	1.68	7.97	-4.87	2.34	0.72
HAZARIBAG	SA1	2.03	1.88	4.96	11.98	1.67	0.77
RANCHI	SA1	1.71	1.15	5.28	0.91	0.64	0.34
DHANBAD	SA1	1.03	0.31	3.69	-2.71	0.41	0.08
SINGHBHUM	SA1	1.72	1.00	4.17	0.55	0.38	0.51
E. INDIA	SA1	3.03	5.11	2.94	10.09	0.93	0.96
JHARKHAND	SA1	2.06	3.83	3.95	7.35	0.86	0.92

Contd.....

State/ District	Industrial Division	Participation Rate		Growth Rate		Location Quotient	
		Male	Female	Male	Female	Male	Female
INDIA	SA2	9.27	9.54	3.60	-6.58		
WEST BENGAL	SA2	13.33	8.27	3.00	7.49	1.22	1.31
ORISSA	SA2	3.53	2.41	6.60	5.84	0.56	0.51
BIHAR	SA2	3.39	1.98	4.10	3.13	0.50	0.49
KOCHBIHAR	SA2	3.79	3.23	3.05	10.42	0.74	0.59
JALPAIGURI	SA2	2.45	3.57	6.75	18.17	0.52	0.89
DARJILING	SA2	2.95	10.40	5.39	8.89	0.58	2.26
W. DINAJPUR	SA2	3.28	3.43	5.73	12.29	0.76	0.65
MALDA	SA2	2.25	2.59	3.87	4.74	0.42	0.82
MURSHIDABAD	SA2	5.81	7.70	4.24	12.88	0.66	0.43
NADIA	SA2	21.89	34.67	8.05	17.68	2.08	2.62
24 PARGANA	SA2	22.68	10.40	3.09	4.47	1.67	1.64
CALCUTTA	SA2	4.02	2.54	0.34	4.56	0.45	0.81
HAORA	SA2	22.91	11.47	2.29	3.27	1.55	1.55
HUGLI	SA2	30.96	13.03	3.01	3.29	2.02	1.78
MEDINIPUR	SA2	1.69	1.03	5.42	1.87	0.38	0.36
BANKURA	SA2	9.53	19.91	3.22	29.39	1.13	2.08
PURULIYA	SA2	3.50	1.57	-0.05	23.11	0.68	0.34
BARDDHAMAN	SA2	2.32	1.66	5.24	3.60	0.24	0.25
BIRBHUM	SA2	3.89	2.32	9.24	8.09	0.71	0.73
SAMBALPUR	SA2	4.45	3.70	8.29	-5.98	0.67	0.41
SUNDERGARH	SA2	1.87	1.18	10.94	30.29	0.14	0.16
KENDUJHAR	SA2	1.72	1.28	9.55	22.80	0.31	0.32
MAYURBHANG	SA2	2.72	0.62	10.92	17.46	0.59	0.20
BALASORE	SA2	3.32	2.65	6.39	19.53	0.84	0.61
CUTTACK	SA2	6.86	3.56	4.91	5.47	1.13	1.26
DHENKANAL	SA2	2.08	0.84	12.13	20.40	0.25	0.34
PHULBANI	SA2	3.56	0.31	-0.64	-32.18	0.78	0.01
BALANGIR	SA2	5.68	4.29	9.02	2.52	1.18	0.78
KALAHANDI	SA2	1.18	0.27	0.46	6.05	0.32	0.10
KORAPUT	SA2	3.14	2.64	9.84	11.79	0.60	0.60
GANJAM	SA2	3.99	2.77	5.19	2.26	0.84	0.70
PURI	SA2	1.90	1.83	8.42	10.36	0.51	0.72
PATNA	SA2	28.72	2.61	30.82	4.56	4.57	0.58
GAYA	SA2	6.54	4.61	6.39	-0.39	1.23	1.12
BHOJPUR	SA2	2.74	2.62	4.85	3.49	0.41	0.59
SARAN	SA2	2.78	4.12	6.54	4.50	0.58	1.17
CHAMPARAN	SA2	2.56	0.11	-1.34	-22.62	0.55	0.03
MUZAFFARPUR	SA2	2.74	0.43	3.75	-7.26	0.58	0.19
DARBHANGA	SA2	6.94	2.01	5.86	-0.75	1.28	0.58
MUNGER	SA2	3.27	2.48	3.67	9.29	0.57	0.81
BHAGALPUR	SA2	12.25	9.33	0.75	2.21	1.77	1.69
SAHARSA	SA2	1.99	0.50	0.94	2.66	0.50	0.29
PURNIA	SA2	8.66	1.13	5.62	4.77	1.57	0.46
SPARGANA	SA2	2.36	2.91	0.62	7.70	0.42	0.67
PALAMU	SA2	2.69	0.84	2.97	-5.52	0.54	0.34
HAZARIBAG	SA2	1.41	0.69	3.90	13.02	0.39	0.27
RANCHI	SA2	2.41	2.26	3.97	13.32	0.30	0.63
DHANBAD	SA2	1.23	0.42	5.88	-2.21	0.16	0.10
SINGHBHUM	SA2	1.75	1.20	4.06	10.03	0.13	0.58
E. INDIA	SA2	9.08	5.36	3.27	6.78	0.94	0.78
JHARKHAND	SA2	2.23	2.27	4.92	5.16	0.31	0.52

Contd.....

State/ District	Industrial Division	Participation Rate		Growth Rate		Location Quotient	
		Male	Female	Male	Female	Male	Female
INDIA	SA3	4.17	2.16	3.24	5.74		
WEST BENGAL	SA3	5.18	2.18	2.04	7.08	1.04	0.85
ORISSA	SA3	3.65	2.47	3.87	5.06	1.27	1.28
BIHAR	SA3	2.43	1.96	4.77	8.91	0.78	1.20
KOCHBIHAR	SA3	4.08	1.59	9.11	10.03	1.75	0.72
JALPAIGURI	SA3	4.79	2.55	9.57	17.19	2.22	1.57
DARJILING	SA3	3.50	0.92	1.01	-1.49	1.52	0.49
W. DINAJPUR	SA3	2.71	1.19	4.40	17.63	1.37	0.56
MALDA	SA3	3.02	1.17	3.65	0.00	1.23	0.92
MURSHIDABAD	SA3	1.56	0.95	5.52	31.10	0.39	0.13
NADIA	SA3	3.05	1.83	6.78	14.74	0.63	0.34
24 PARGANA	SA3	5.20	2.93	3.59	10.61	0.84	1.14
CALCUTTA	SA3	7.65	2.37	-0.55	1.44	1.87	1.87
HAORA	SA3	3.39	2.98	2.95	11.73	0.50	0.99
HUGLI	SA3	4.82	1.60	2.29	6.70	0.69	0.54
MEDINIPUR	SA3	2.78	1.69	7.65	14.93	1.38	1.47
BANKURA	SA3	3.92	0.58	0.93	2.26	1.02	0.15
PURULIYA	SA3	1.94	1.38	-0.13	4.52	0.82	0.73
BARDDHAMAN	SA3	2.42	2.13	4.56	17.54	0.55	0.80
BIRBHUM	SA3	2.10	0.00	4.90	0.00	0.84	0.00
SAMBALPUR	SA3	6.81	3.12	0.21	3.74	2.24	0.86
SUNDERGARH	SA3	1.62	0.68	8.52	6.05	0.28	0.23
KENDUJHAR	SA3	1.98	1.14	4.76	-1.09	0.79	0.70
MAYURBHANG	SA3	3.22	5.27	9.89	15.31	1.54	4.24
BALASORE	SA3	2.15	0.83	6.05	14.58	1.19	0.47
CUTTACK	SA3	5.15	2.31	1.79	15.42	1.85	2.01
DHENKANAL	SA3	2.22	2.22	8.97	32.75	0.58	2.21
PHULBANI	SA3	5.36	5.15	15.41	3.13	2.56	0.30
BALANGIR	SA3	2.33	1.69	2.05	3.42	1.06	0.76
KALAHANDI	SA3	2.39	0.43	4.10	3.42	1.43	0.40
KORAPUT	SA3	5.31	1.66	15.22	11.61	2.24	0.93
GANJAM	SA3	2.97	4.47	2.50	0.55	1.37	2.79
PURI	SA3	2.56	2.64	7.89	10.44	1.49	2.55
PATNA	SA3	4.00	1.52	4.90	19.08	1.39	0.83
GAYA	SA3	2.13	1.57	3.72	2.03	0.88	0.94
BHOJPUR	SA3	6.14	3.59	9.07	7.80	2.03	1.99
SARAN	SA3	1.49	2.71	2.15	3.34	0.68	1.90
CHAMPARAN	SA3	2.29	6.92	3.84	26.35	1.07	4.53
MUZAFFARPUR	SA3	2.39	2.50	2.02	4.80	1.11	2.66
DARBHANGA	SA3	1.95	2.28	0.67	9.93	0.79	1.62
MUNGER	SA3	2.68	4.48	1.89	15.52	1.02	3.59
BHAGALPUR	SA3	1.67	0.39	0.09	-13.57	0.53	0.18
SAHARSA	SA3	1.27	0.67	6.62	3.85	0.70	0.97
PURNIA	SA3	1.86	2.45	5.78	17.40	0.74	2.44
SPARGANA	SA3	2.82	2.88	6.27	15.34	1.10	1.64
PALAMU	SA3	2.52	1.68	7.68	0.00	1.10	1.70
HAZARIBAG	SA3	1.14	0.74	5.00	-3.00	0.68	0.71
RANCHI	SA3	2.59	1.44	6.34	18.47	0.71	0.99
DHANBAD	SA3	0.96	0.50	3.38	-6.65	0.28	0.29
SINGHBHUM	SA3	2.14	1.83	5.76	6.00	0.35	2.17
E. INDIA	SA3	4.15	2.17	2.66	7.02	0.96	1.40
JHARKHAND	SA3	2.09	1.48	4.01	5.35	0.64	0.84

Contd.....

State/ District	Industrial Division	Participation Rate		Growth Rate		Location Quotient	
		Male	Female	Male	Female	Male	Female
INDIA	SA4	2.72	0.48	4.50	7.25		
WEST BENGAL	SA4	4.13	0.91	1.82	6.52	0.75	0.69
ORISSA	SA4	4.94	1.38	6.29	9.03	1.55	1.38
BIHAR	SA4	5.35	1.36	5.53	-0.60	1.55	1.60
KOCHBIHAR	SA4	0.47	0.00	0.70	0.00	0.18	0.00
JALPAIGURI	SA4	0.80	0.00	10.38	0.00	0.33	0.00
DARJILING	SA4	0.96	0.11	8.99	7.18	0.38	0.12
W. DINAJPUR	SA4	0.39	0.00	6.32	0.00	0.18	0.00
MALDA	SA4	0.94	0.00	2.41	0.00	0.34	0.00
MURSHIDABAD	SA4	0.44	0.03	-1.71	-2.21	0.10	0.01
NADIA	SA4	1.57	0.26	4.56	9.37	0.29	0.09
24 PARGANA	SA4	2.53	0.57	3.47	7.53	0.37	0.43
CALCUTTA	SA4	2.77	0.46	-0.29	0.36	0.61	0.70
HAORA	SA4	9.00	2.05	2.23	6.71	1.20	1.31
HUGLI	SA4	2.13	0.28	3.23	7.18	0.27	0.18
MEDINIPUR	SA4	0.90	0.27	9.05	20.02	0.40	0.45
BANKURA	SA4	2.48	0.50	2.28	2.66	0.58	0.25
PURULIYA	SA4	1.64	0.66	2.38	7.18	0.63	0.67
BARDDHAMAN	SA4	16.00	6.29	1.64	8.79	3.29	4.54
BIRBHUM	SA4	0.62	0.19	1.00	0.00	0.22	0.28
SAMBALPUR	SA4	1.83	0.32	6.20	3.21	0.54	0.17
SUNDERGARH	SA4	27.50	7.49	6.51	13.18	4.21	4.88
KENDUJHAR	SA4	9.67	6.85	5.02	6.68	3.46	8.07
MAYURBHANG	SA4	0.70	0.07	8.82	0.00	0.30	0.12
BALASORE	SA4	0.72	0.11	11.42	0.00	0.36	0.12
CUTTACK	SA4	1.54	0.23	3.63	-4.59	0.50	0.38
DHENKANAL	SA4	0.42	0.00	-3.85	0.00	0.10	0.00
PHULBANI	SA4	0.00	0.00	0.00	0.00	0.00	0.00
BALANGIR	SA4	1.22	1.23	7.60	19.82	0.50	1.06
KALAHANDI	SA4	0.71	0.61	9.71	6.16	0.38	1.09
KORAPUT	SA4	0.27	0.06	0.15	6.05	0.10	0.07
GANJAM	SA4	0.85	0.09	3.53	-10.77	0.35	0.11
PURI	SA4	0.80	0.14	13.54	0.00	0.42	0.25
PATNA	SA4	1.08	0.14	4.27	22.80	0.34	0.14
GAYA	SA4	1.02	0.06	-3.56	-28.51	0.38	0.07
BHOJPUR	SA4	0.97	0.08	5.33	0.00	0.29	0.09
SARAN	SA4	0.51	0.00	1.10	0.00	0.21	0.00
CHAMPARAN	SA4	0.74	0.00	6.24	0.00	0.31	0.00
MUZAFFARPUR	SA4	0.78	0.00	3.96	0.00	0.32	0.00
DARBHANGA	SA4	1.14	0.00	4.90	0.00	0.41	0.00
MUNGER	SA4	0.68	0.05	4.73	-11.34	0.23	0.08
BHAGALPUR	SA4	0.65	0.08	-0.72	0.00	0.18	0.07
SAHARSA	SA4	0.58	0.00	16.25	0.00	0.29	0.00
PURNIA	SA4	0.78	0.29	8.00	0.00	0.28	0.55
SPARGANA	SA4	1.58	0.16	8.06	0.00	0.56	0.18
PALAMU	SA4	0.61	1.09	10.84	0.00	0.24	2.11
HAZARIBAG	SA4	0.77	0.36	-3.22	21.82	0.41	0.68
RANCHI	SA4	2.19	1.55	8.11	33.21	0.54	2.04
DHANBAD	SA4	14.45	3.43	12.71	14.93	3.76	3.87
SINGHBHUM	SA4	24.72	6.95	2.20	-4.16	3.61	15.87
E. INDIA	SA4	4.61	1.13	3.53	3.80	1.63	3.28
JHARKHAND	SA4	8.97	2.74	5.71	2.82	2.47	2.99

Contd.....

State/ District	Industrial Division	Participation Rate		Growth Rate		Location Quotient	
		Male	Female	Male	Female	Male	Female
INDIA	SA5	2.28	3.01	3.79	5.60		
WEST BENGAL	SA5	2.68	2.46	1.71	-0.09	0.93	0.83
ORISSA	SA5	1.91	2.48	9.35	12.97	1.15	1.11
BIHAR	SA5	2.09	2.66	3.38	9.56	1.16	1.40
KOCHBIHAR	SA5	0.33	0.12	1.63	0.00	0.25	0.05
JALPAIGURI	SA5	0.87	0.69	11.58	16.49	0.69	0.36
DARJILING	SA5	0.77	0.09	2.89	-3.13	0.57	0.04
W. DINAJPUR	SA5	1.04	2.76	8.39	22.82	0.90	1.10
MALDA	SA5	1.59	0.21	11.64	0.00	1.11	0.14
MURSHIDABAD	SA5	0.78	0.55	0.34	3.79	0.34	0.07
NADIA	SA5	1.58	1.45	2.97	-1.08	0.57	0.23
24 PARGANA	SA5	3.20	3.13	1.05	-3.88	0.89	1.05
CALCUTTA	SA5	3.05	1.47	0.68	2.57	1.28	0.99
HAORA	SA5	2.43	4.07	0.48	1.78	0.62	1.17
HUGLI	SA5	4.23	7.18	4.73	2.15	1.04	2.08
MEDINIPUR	SA5	1.60	1.29	9.42	-6.91	1.37	0.97
BANKURA	SA5	0.68	0.99	1.19	17.69	0.31	0.22
PURULIYA	SA5	2.58	9.86	16.11	-2.41	1.89	4.51
BARDDHAMAN	SA5	2.14	3.63	3.04	9.45	0.84	1.17
BIRBHUM	SA5	0.91	0.24	4.48	-3.97	0.63	0.16
SAMBALPUR	SA5	1.20	1.60	9.30	11.47	0.68	0.38
SUNDERGARH	SA5	7.06	9.38	8.51	12.67	2.07	2.74
KENDUJHAR	SA5	0.59	0.16	12.62	-8.76	0.40	0.09
MAYURBHANG	SA5	1.21	1.87	10.92	23.62	1.00	1.29
BALASORE	SA5	0.49	1.06	6.29	25.89	0.46	0.52
CUTTACK	SA5	1.08	0.87	6.57	-2.11	0.67	0.66
DHENKANAL	SA5	4.21	0.42	23.07	-5.10	1.90	0.36
PHULBANI	SA5	0.16	0.00	-6.09	0.00	0.13	0.00
BALANGIR	SA5	1.51	5.92	8.53	25.23	1.18	2.29
KALAHANDI	SA5	0.29	0.27	4.31	-12.45	0.30	0.22
KORAPUT	SA5	0.96	3.06	11.09	27.36	0.70	1.48
GANJAM	SA5	1.30	1.91	13.23	18.73	1.04	1.03
PURI	SA5	0.60	0.38	5.73	2.54	0.61	0.32
PATNA	SA5	1.74	4.73	9.22	19.28	1.05	2.22
GAYA	SA5	1.71	2.25	4.90	2.43	1.22	1.16
BHOJPUR	SA5	2.78	2.88	-1.69	0.48	1.59	1.37
SARAN	SA5	1.47	1.57	8.30	9.51	1.15	0.95
CHAMPARAN	SA5	0.27	0.24	2.66	0.96	0.22	0.14
MUZAFFARPUR	SA5	1.13	0.05	6.41	-24.67	0.91	0.05
DARBHANGA	SA5	0.84	0.59	3.70	0.00	0.58	0.36
MUNGER	SA5	1.23	0.60	1.46	-2.76	0.81	0.41
BHAGALPUR	SA5	0.73	0.45	0.99	1.41	0.40	0.17
SAHARSA	SA5	0.49	0.12	8.20	-9.34	0.47	0.14
PURNIA	SA5	0.84	1.75	11.13	12.49	0.57	1.50
SPARGANA	SA5	2.41	2.88	8.42	15.34	1.62	1.41
PALAMU	SA5	2.39	3.06	8.18	20.02	1.81	2.66
HAZARIBAG	SA5	3.61	2.66	5.24	4.40	3.75	2.21
RANCHI	SA5	2.18	2.96	11.24	7.73	1.03	1.74
DHANBAD	SA5	4.64	3.37	1.18	-0.77	2.31	1.70
SINGHBHUM	SA5	1.43	3.41	-0.07	-1.31	0.40	3.48
E. INDIA	SA5	2.40	2.52	2.67	3.74	1.02	1.17
JHARKHAND	SA5	2.62	3.18	4.55	3.54	1.38	1.55

Contd.....

State/ District	Industrial Division	Participation Rate		Growth Rate		Location Quotient	
		Male	Female	Male	Female	Male	Female
INDIA	SA6	3.51	0.90	4.53	6.73		
WEST BENGAL	SA6	6.00	1.31	2.01	4.08	1.15	1.23
ORISSA	SA6	0.42	0.08	9.36	11.22	0.14	0.09
BIHAR	SA6	2.80	0.72	1.89	2.65	0.86	1.06
KOCHBIHAR	SA6	0.27	0.00	0.83	0.00	0.11	0.00
JALPAIGURI	SA6	0.95	0.00	21.79	0.00	0.42	0.00
DARJILING	SA6	0.71	0.05	10.27	0.00	0.29	0.06
W. DINAJPUR	SA6	0.31	0.08	-7.67	0.00	0.15	0.09
MALDA	SA6	0.59	0.00	23.91	0.00	0.23	0.00
MURSHIDABAD	SA6	0.25	0.00	2.74	0.00	0.06	0.00
NADIA	SA6	1.53	0.20	5.14	9.74	0.30	0.09
24 PARGANA	SA6	7.86	1.82	1.74	3.57	1.21	1.70
CALCUTTA	SA6	5.81	1.93	1.42	2.14	1.36	3.63
HAORA	SA6	9.71	1.70	1.54	0.27	1.38	1.35
HUGLI	SA6	5.91	0.52	2.00	5.39	0.81	0.42
MEDINIPUR	SA6	0.72	0.46	-15.79	10.24	0.34	0.97
BANKURA	SA6	0.35	0.00	-4.10	0.00	0.09	0.00
PURULIYA	SA6	0.36	0.00	-6.18	0.00	0.15	0.00
BARDDHAMAN	SA6	8.23	2.14	3.95	10.64	1.80	1.92
BIRBHUM	SA6	0.61	0.00	12.79	0.00	0.23	0.00
SAMBALPUR	SA6	0.89	0.00	26.49	0.00	0.28	0.00
SUNDERGARH	SA6	1.01	0.14	53.86	0.00	0.16	0.12
KENDUJHAR	SA6	0.27	0.00	24.57	0.00	0.10	0.00
MAYURBHANG	SA6	0.22	0.00	26.39	0.00	0.10	0.00
BALASORE	SA6	0.11	0.00	7.18	0.00	0.06	0.00
CUTTACK	SA6	0.47	0.00	15.20	0.00	0.16	0.00
DHENKANAL	SA6	0.22	0.10	0.00	0.00	0.06	0.25
PHULBANI	SA6	0.37	1.18	0.00	0.00	0.17	0.17
BALANGIR	SA6	0.06	0.00	6.63	0.00	0.02	0.00
KALAHANDI	SA6	0.20	0.49	5.07	0.00	0.11	1.08
KORAPUT	SA6	0.40	0.05	-17.37	-13.25	0.16	0.07
GANJAM	SA6	0.13	0.00	18.80	0.00	0.06	0.00
PURI	SA6	0.09	0.19	12.79	0.00	0.05	0.43
PATNA	SA6	1.13	0.13	9.19	6.63	0.38	0.17
GAYA	SA6	0.22	0.03	7.22	-4.98	0.09	0.04
BHOJPUR	SA6	0.25	0.00	8.09	0.00	0.08	0.00
SARAN	SA6	0.34	0.00	5.03	0.00	0.15	0.00
CHAMPARAN	SA6	0.20	0.00	9.77	0.00	0.09	0.00
MUZAFFARPUR	SA6	0.44	0.00	1.69	0.00	0.20	0.00
DARBHANGA	SA6	0.31	0.00	1.24	0.00	0.12	0.00
MUNGER	SA6	3.72	0.19	-2.06	0.96	1.35	0.37
BHAGALPUR	SA6	0.24	0.00	-0.29	0.00	0.07	0.00
SAHARSA	SA6	0.21	0.10	15.97	0.00	0.11	0.33
PURNIA	SA6	0.25	0.00	10.96	0.00	0.10	0.00
SPARGANA	SA6	2.08	0.30	8.16	0.00	0.77	0.41
PALAMU	SA6	0.45	0.00	27.66	0.00	0.19	0.00
HAZARIBAG	SA6	0.22	0.06	8.27	0.00	0.13	0.14
RANCHI	SA6	13.22	2.90	3.45	4.41	3.47	4.75
DHANBAD	SA6	0.51	0.14	3.70	0.00	0.14	0.19
SINGHBHUM	SA6	11.51	2.83	0.47	0.58	1.79	8.04
E. INDIA	SA6	4.33	0.91	2.05	3.81	1.19	1.40
JHARKHAND	SA6	3.30	0.87	1.20	3.11	0.97	1.17

Contd.....



State/ District	Industrial Division	Participation Rate		Growth Rate		Location Quotient	
		Male	Female	Male	Female	Male	Female
INDIA	SA7	1.76	0.63	4.27	5.07		
WEST BENGAL	SA7	1.34	0.62	4.53	8.19	0.98	1.17
ORISSA	SA7	0.95	0.22	2.60	1.15	1.21	0.55
BIHAR	SA7	0.84	0.30	4.17	8.14	0.99	0.87
KOCHBIHAR	SA7	1.47	0.10	4.34	-8.76	2.30	0.21
JALPAIGURI	SA7	0.77	0.00	2.45	0.00	1.30	0.00
DARJILING	SA7	0.69	0.95	3.46	32.44	1.08	2.46
W. DINAJPUR	SA7	1.00	0.54	7.86	2.92	1.85	1.20
MALDA	SA7	1.91	0.00	7.52	0.00	2.82	0.00
MURSHIDABAD	SA7	1.56	0.16	5.46	5.24	1.41	0.11
NADIA	SA7	1.45	0.86	7.45	5.74	1.10	0.77
24 PARGANA	SA7	1.36	0.75	8.17	16.45	0.80	1.41
CALCUTTA	SA7	2.04	0.50	3.47	7.38	1.81	1.91
HAORA	SA7	1.20	1.47	9.14	24.68	0.65	2.36
HUGLI	SA7	1.25	0.64	7.51	-0.34	0.65	1.04
MEDINIPUR	SA7	1.14	0.33	5.53	15.49	2.06	1.39
BANKURA	SA7	2.62	2.74	5.40	9.10	2.48	3.40
PURULIYA	SA7	0.73	0.52	0.47	0.00	1.12	1.34
BARDDHAMAN	SA7	0.71	0.16	0.96	-13.75	0.59	0.29
BIRBHUM	SA7	1.26	1.14	5.61	0.00	1.83	4.26
SAMBALPUR	SA7	0.45	0.30	0.60	15.97	0.54	0.40
SUNDERGARH	SA7	0.43	0.13	15.61	12.33	0.26	0.22
KENDUJHAR	SA7	0.25	0.00	-0.80	0.00	0.36	0.00
MAYURBHANG	SA7	0.00	0.00	0.00	0.00	0.00	0.00
BALASORE	SA7	0.96	0.00	6.67	0.00	1.93	0.00
CUTTACK	SA7	1.32	0.34	0.72	-0.76	1.73	1.44
DHENKANAL	SA7	1.39	0.10	4.63	-2.21	1.32	0.50
PHULBANI	SA7	0.56	0.31	-3.80	-1.81	0.98	0.09
BALANGIR	SA7	1.26	0.00	-1.02	0.00	2.08	0.00
KALAHANDI	SA7	0.57	0.15	0.35	0.00	1.23	0.68
KORAPUT	SA7	0.69	0.41	-0.72	-0.17	1.06	1.10
GANJAM	SA7	1.80	0.31	1.02	-2.56	3.02	0.93
PURI	SA7	0.92	0.14	9.15	4.81	1.95	0.63
PATNA	SA7	0.95	0.48	4.09	8.61	1.20	1.27
GAYA	SA7	1.21	0.75	3.16	4.96	1.81	2.15
BHOJPUR	SA7	0.46	0.98	-8.83	14.48	0.56	2.62
SARAN	SA7	1.67	0.61	5.72	16.98	2.76	2.05
CHAMPARAN	SA7	1.50	0.00	4.93	0.00	2.54	0.00
MUZAFFARPUR	SA7	1.38	0.27	4.37	0.00	2.34	1.38
DARBHANGA	SA7	1.21	0.00	2.38	0.00	1.78	0.00
MUNGER	SA7	0.78	0.27	0.77	0.00	1.08	1.05
BHAGALPUR	SA7	1.17	0.67	3.01	3.12	1.34	1.44
SAHARSA	SA7	0.68	0.00	4.36	0.00	1.37	0.00
PURNIA	SA7	0.61	0.00	3.39	0.00	0.88	0.00
SPARGANA	SA7	1.11	0.92	8.37	0.00	1.57	2.52
PALAMU	SA7	0.46	0.00	-4.81	0.00	0.73	0.00
HAZARIBAG	SA7	0.44	0.05	6.60	0.00	0.97	0.23
RANCHI	SA7	0.56	0.18	8.27	0.00	0.56	0.58
DHANBAD	SA7	0.47	0.03	13.84	0.00	0.50	0.08
SINGHBHUM	SA7	0.48	0.07	4.17	4.14	0.28	0.42
E. INDIA	SA7	1.14	0.45	4.24	7.27	0.63	1.00
JHARKHAND	SA7	0.59	0.27	5.69	10.95	0.66	0.72

Contd.....

State/ District	Industrial Division	Participation Rate		Growth Rate		Location Quotient	
		Male	Female	Male	Female	Male	Female
INDIA	SA8	4.26	3.10	5.42	5.61		
WEST BENGAL	SA8	2.98	1.24	4.51	11.60	0.72	0.57
ORISSA	SA8	4.59	2.73	10.90	23.25	1.93	1.66
BIHAR	SA8	3.85	2.42	4.75	-1.12	1.50	1.73
KOCHBIHAR	SA8	2.44	1.08	0.58	14.87	1.26	0.57
JALPAIGURI	SA8	2.92	0.64	8.08	8.51	1.63	0.46
DARJILING	SA8	5.18	1.83	11.51	21.87	2.70	1.14
W. DINAJPUR	SA8	2.48	1.19	8.27	22.94	1.51	0.65
MALDA	SA8	5.54	1.83	2.30	12.13	2.71	1.69
MURSHIDABAD	SA8	7.12	1.07	2.96	6.99	2.13	0.17
NADIA	SA8	2.59	2.34	3.13	25.75	0.65	0.51
24 PARGANA	SA8	3.09	1.62	8.24	14.21	0.60	0.74
CALCUTTA	SA8	2.84	0.82	0.89	5.54	0.83	0.76
HAORA	SA8	1.99	0.94	3.63	6.96	0.36	0.37
HUGLI	SA8	2.88	0.95	6.45	3.02	0.49	0.38
MEDINIPUR	SA8	4.37	0.75	10.09	5.57	2.61	0.77
BANKURA	SA8	3.82	3.01	6.38	9.96	1.20	0.91
PURULIYA	SA8	2.67	0.85	7.78	5.65	1.36	0.53
BARDDHAMAN	SA8	2.48	1.03	3.06	0.04	0.68	0.45
BIRBHUM	SA8	2.42	0.71	5.11	1.06	1.16	0.65
SAMBALPUR	SA8	3.54	2.06	7.45	16.06	1.40	0.67
SUNDERGARH	SA8	4.98	6.78	17.29	41.03	1.02	2.69
KENDUJHAR	SA8	3.83	4.37	12.28	28.26	1.83	3.12
MAYURBHANG	SA8	3.49	1.72	12.87	0.00	2.01	1.61
BALASORE	SA8	2.72	1.55	8.46	13.27	1.81	1.03
CUTTACK	SA8	2.64	1.62	5.02	23.97	1.14	1.65
DHENKANAL	SA8	17.82	3.87	34.21	35.68	5.61	4.49
PHULBANI	SA8	4.69	0.93	6.65	22.32	2.70	0.06
BALANGIR	SA8	2.63	0.10	3.31	-10.40	1.43	0.05
KALAHANDI	SA8	5.68	3.33	6.95	8.10	4.08	3.61
KORAPUT	SA8	6.02	4.99	13.44	41.62	3.05	3.28
GANJAM	SA8	3.21	0.38	4.68	2.77	1.78	0.28
PURI	SA8	4.88	2.04	8.89	13.87	3.43	2.30
PATNA	SA8	4.62	0.68	8.79	6.96	1.94	0.43
GAYA	SA8	1.85	3.43	-2.69	1.95	0.92	2.40
BHOJPUR	SA8	5.29	0.42	8.40	-12.31	2.11	0.27
SARAN	SA8	3.15	0.00	8.60	0.00	1.72	0.00
CHAMPARAN	SA8	2.74	0.11	1.90	-4.59	1.54	0.09
MUZAFFARPUR	SA8	4.35	0.92	6.52	20.35	2.43	1.14
DARBHANGA	SA8	3.42	0.20	5.42	-3.97	1.66	0.16
MUNGER	SA8	2.71	0.11	8.31	-18.06	1.24	0.10
BHAGALPUR	SA8	3.77	1.01	9.81	28.99	1.44	0.53
SAHARSA	SA8	5.76	1.50	3.87	10.79	3.84	2.53
PURNIA	SA8	3.47	0.73	9.22	8.10	1.65	0.85
SPARGANA	SA8	3.20	0.60	6.05	7.18	1.50	0.40
PALAMU	SA8	4.72	0.00	11.03	0.00	2.49	0.00
HAZARIBAG	SA8	3.33	2.85	3.51	8.83	2.41	3.22
RANCHI	SA8	3.47	1.97	10.98	9.04	1.15	1.57
DHANBAD	SA8	3.61	7.11	-3.42	-6.39	1.26	4.87
SINGHBHUM	SA8	4.16	6.01	5.32	1.07	0.81	8.34
E. INDIA	SA8	3.44	1.86	5.39	5.84	0.78	0.84
JHARKHAND	SA8	3.50	3.66	4.38	1.70	1.29	2.42

Contd.....

State/ District	Industrial Division	Participation Rate		Growth Rate		Location Quotient	
		Male	Female	Male	Female	Male	Female
INDIA	TA	54.78	48.79	3.24	4.75		
WEST BENGAL	TA	53.29	70.80	1.51	-11.28	0.98	0.99
ORISSA	TA	56.02	53.64	4.34	5.83	1.20	0.99
BIHAR	TA	40.98	49.93	1.89	5.48	0.93	1.01
KOCHBIHAR	TA	73.59	74.03	1.11	6.37	1.36	1.04
JALPAIGURI	TA	67.96	76.92	5.72	7.15	1.38	1.09
DARJILING	TA	76.65	76.75	4.09	5.65	1.37	1.08
W. DINAJPUR	TA	67.96	69.53	4.79	9.38	1.39	1.03
MALDA	TA	71.90	85.90	2.93	5.69	1.35	1.16
MURSHIDABAD	TA	49.34	31.80	2.45	4.92	1.57	0.46
NADIA	TA	49.27	8.87	3.72	-10.27	0.97	0.12
24 PARGANA	TA	46.15	34.74	3.50	0.07	0.83	0.47
CALCUTTA	TA	66.16	87.17	-0.79	1.79	1.15	1.16
HAORA	TA	43.54	71.39	2.67	6.06	0.78	0.95
HUGLI	TA	39.03	64.83	2.14	4.02	0.71	0.92
MEDINIPUR	TA	65.41	71.64	3.58	5.93	1.37	1.15
BANKURA	TA	58.51	52.17	2.20	4.17	1.13	0.79
PURULIYA	TA	66.03	62.56	2.28	1.68	1.28	1.02
BARDDHAMAN	TA	38.45	49.15	1.89	3.61	0.85	0.87
BIRBHUM	TA	50.45	70.71	0.13	5.33	1.03	1.13
SAMBALPUR	TA	51.61	42.72	3.70	5.39	1.15	0.72
SUNDERGARH	TA	45.76	58.08	2.68	4.17	0.85	0.90
KENDUJHAR	TA	44.58	46.68	3.19	1.89	1.18	1.00
MAYURBHANG	TA	60.72	47.65	7.66	10.78	0.79	1.07
BALASORE	TA	50.15	46.62	4.30	6.31	1.32	0.98
CUTTACK	TA	65.07	71.05	4.33	6.71	1.27	1.15
DHENKANAL	TA	40.36	71.46	6.70	16.90	0.92	1.16
PHULBANI	TA	57.80	50.84	6.24	7.74	1.29	1.00
BALANGIR	TA	45.75	55.52	1.64	4.94	1.06	0.96
KALAHANDI	TA	49.37	50.21	2.58	1.40	1.31	1.10
KORAPUT	TA	53.46	50.78	5.32	7.21	1.24	1.00
GANJAM	TA	57.14	39.60	3.29	1.51	1.29	0.96
PURI	TA	70.70	73.86	5.86	8.49	1.41	0.76
PATNA	TA	58.39	47.75	4.39	5.16	1.27	0.97
GAYA	TA	57.58	46.28	3.17	4.62	1.24	1.12
BHOJPUR	TA	52.14	52.02	2.95	3.15	1.16	0.80
SARAN	TA	48.83	38.59	4.42	3.53	1.25	0.88
CHAMPARAN	TA	50.33	50.37	3.15	3.40	1.24	1.03
MUZAFFARPUR	TA	63.78	70.93	4.91	5.29	1.45	1.17
DARBHANGA	TA	64.17	72.60	3.14	3.94	1.30	1.12
MUNGER	TA	46.16	37.05	2.96	4.32	1.17	1.01
BHAGALPUR	TA	52.65	48.21	2.43	2.81	1.14	0.93
SAHARSA	TA	41.54	17.67	3.79	5.89	1.20	0.81
PURNIA	TA	51.47	36.59	4.06	7.51	1.23	1.12
SPARGANA	TA	61.09	57.61	2.51	3.76	1.28	0.94
PALAMU	TA	61.49	55.38	5.10	9.09	1.31	1.13
HAZARIBAG	TA	43.48	64.31	5.94	12.00	1.07	1.54
RANCHI	TA	53.77	65.16	5.20	7.39	1.10	1.09
DHANBAD	TA	33.95	44.20	3.89	6.77	0.93	0.96
SINGHBHUM	TA	40.17	59.66	2.92	5.87	0.77	0.94
E. INDIA	TA	49.84	61.57	1.95	-7.68	0.92	1.18
JHARKHAND	TA	43.76	54.86	3.79	5.80	1.10	1.04

Contd.....

State/ District	Industrial Division	Participation Rate		Growth Rate		Location Quotient	
		Male	Female	Male	Female	Male	Female
INDIA	TA1	29.01	10.30	3.55	3.80		
WEST BENGAL	TA1	31.31	9.12	-1.60	3.65	1.04	1.06
ORISSA	TA1	24.72	10.86	3.45	2.02	0.96	0.59
BIHAR	TA1	27.75	8.39	3.80	3.69	0.97	1.08
KOCHBIHAR	TA1	37.88	3.82	1.46	4.87	1.04	
JALPAIGURI	TA1	44.53	10.82	6.28	-4.23	0.95	
DARJILING	TA1	43.36	12.95	4.25	0.35	1.15	1.14
W. DINAJPUR	TA1	41.65	4.64	5.91	4.97	1.12	
MALDA	TA1	36.02	6.88	3.36	4.52	1.03	1.14
MURSHIDABAD	TA1	25.49	3.06	0.85	4.76	1.08	1.14
NADIA	TA1	27.80	4.23	3.12	9.15	0.98	1.14
24 PARGANA	TA1	25.26	9.30	4.37	6.83	0.99	1.06
CALCUTTA	TA1	41.19	11.52	0.19	3.13	0.95	1.01
HAORA	TA1	27.25	12.87	0.93	3.51	1.04	1.14
HUGLI	TA1	23.12	8.37	3.50	1.72	1.12	1.07
MEDINIPUR	TA1	32.96	10.17	2.82	1.59	1.10	1.14
BANKURA	TA1	32.11	5.69	2.70	-3.40	1.08	1.14
PURULIYA	TA1	44.98	14.94	2.79	0.83	1.17	1.00
BARDDHAMAN	TA1	21.97	5.47	1.56	-0.99	1.13	1.11
BIRBHUM	TA1	33.64	9.07	3.95	4.53	1.08	1.14
SAMBALPUR	TA1	24.71	10.71	2.93	4.17	0.82	0.68
SUNDERGARH	TA1	21.92	8.98	3.61	3.18	1.00	0.51
KENDUJHAR	TA1	22.02	16.93	4.62	-0.82	1.02	
MAYURBHANG	TA1	26.80	3.21	9.33	10.86	1.04	
BALASORE	TA1	26.88	3.29	5.27	-3.31	0.96	0.00
CUTTACK	TA1	29.66	5.95	3.79	0.31	1.13	1.14
DHENKANAL	TA1	13.71	2.07	5.65	-2.13	1.18	0.57
PHULBANI	TA1	18.55	8.87	6.20	4.97	0.83	
BALANGIR	TA1	22.96	11.51	2.42	-0.39	1.18	1.14
KALAHANDI	TA1	21.89	13.71	2.72	2.12	1.06	1.14
KORAPUT	TA1	19.73	16.82	2.83	3.12	0.93	0.87
GANJAM	TA1	27.39	14.15	3.65	1.75	0.93	0.34
PURI	TA1	27.42	9.84	6.21	1.88	0.69	0.43
PATNA	TA1	29.25	8.75	4.84	7.10	0.89	0.89
GAYA	TA1	32.44	6.60	2.82	1.51	0.99	0.87
BHOJPUR	TA1	30.34	12.57	3.16	6.05	1.07	1.14
SARAN	TA1	30.13	7.74	4.60	4.19	0.81	1.14
CHAMPARAN	TA1	30.13	6.59	3.44	-2.05	0.78	
MUZAFFARPUR	TA1	30.97	8.24	3.07	4.52	0.97	1.14
DARBHANGA	TA1	39.61	19.19	4.18	3.75	0.78	
MUNGER	TA1	27.96	10.50	2.80	5.05	0.86	1.14
BHAGALPUR	TA1	36.28	10.45	5.09	2.30	0.97	0.65
SAHARSA	TA1	22.17	2.73	4.41	6.45	0.93	
PURNIA	TA1	30.76	8.38	3.64	7.66	0.76	
SPARGANA	TA1	34.65	7.54	2.73	0.47	0.85	1.14
PALAMU	TA1	36.29	14.12	6.27	13.59	0.57	
HAZARIBAG	TA1	23.26	19.81	5.62	15.53	1.13	1.08
RANCHI	TA1	26.90	6.62	5.57	6.07	0.76	1.14
DHANBAD	TA1	19.72	3.96	2.45	-5.05	1.13	1.14
SINGHBHUM	TA1	23.84	10.77	3.35	2.96	0.85	0.78
E. INDIA	TA1	29.41	9.24	0.14	3.27	1.01	1.07
JHARKHAND	TA1	23.59	9.57	3.63	2.61	1.02	0.98

Contd.....

State/ District	Industrial Division	Participation Rate		Growth Rate		Location Quotient	
		Male	Female	Male	Female	Male	Female
INDIA	TA1A	9.98	2.24	2.79	1.16		
WEST BENGAL	TA1A	11.09	2.96	-5.85	0.96	1.89	1.16
ORISSA	TA1A	9.01	2.12	1.64	-5.35	0.20	2.30
BIHAR	TA1A	9.41	1.73	3.49	-0.86	0.29	0.00
KOCHBIHAR	TA1A	11.00	0.76	0.15	-2.52	0.00	
JALPAIGURI	TA1A	19.13	5.11	6.12	-10.04	1.63	
DARJILING	TA1A	17.62	6.30	2.51	-1.29	0.13	0.00
W. DINAJPUR	TA1A	10.57	0.40	5.29	-7.26	0.00	
MALDA	TA1A	11.45	1.17	2.86	1.99	0.00	0.00
MURSHIDABAD	TA1A	5.26	0.29	1.50	-0.64	0.00	0.00
NADIA	TA1A	7.58	0.92	2.23	8.82	1.31	0.00
24 PARGANA	TA1A	8.53	2.86	3.77	3.76	2.29	1.50
CALCUTTA	TA1A	13.73	3.60	-0.60	2.20	3.73	2.90
HAORA	TA1A	10.82	3.25	0.10	-3.00	2.42	0.00
HUGLI	TA1A	7.05	2.70	2.86	4.48	0.52	0.00
MEDINIPUR	TA1A	18.42	5.87	-0.36	-0.78	0.34	0.00
BANKURA	TA1A	11.71	1.92	2.70	-7.02	0.00	0.00
PURULIYA	TA1A	26.45	10.12	3.30	1.62	0.00	0.00
BARDDHAMAN	TA1A	8.97	1.89	0.05	-6.42	1.02	0.00
BIRBHUM	TA1A	13.21	0.47	3.91	-17.32	0.27	0.00
SAMBALPUR	TA1A	10.00	2.23	1.98	-2.58	0.34	0.00
SUNDERGARH	TA1A	10.43	4.24	3.36	3.26	0.50	13.80
KENDUJHAR	TA1A	9.15	6.84	1.79	-7.89	0.00	
MAYURBHANG	TA1A	5.78	0.27	6.63	18.59	0.00	
BALASORE	TA1A	9.25	1.00	3.89	-8.87	0.67	0.00
CUTTACK	TA1A	10.36	1.74	3.02	-4.69	0.29	0.00
DHENKANAL	TA1A	3.84	0.42	2.86	-10.40	0.00	0.00
PHULBANI	TA1A	6.30	0.62	6.90	-5.17	0.00	
BALANGIR	TA1A	7.54	0.62	0.10	-10.78	0.00	0.00
KALAHANDI	TA1A	8.17	0.98	3.11	-11.53	0.00	0.00
KORAPUT	TA1A	7.09	1.15	0.45	-16.37	0.20	0.00
GANJAM	TA1A	7.41	2.31	2.85	1.02	0.28	0.00
PURI	TA1A	10.83	1.37	5.83	-3.93	0.05	0.00
PATNA	TA1A	9.58	1.51	4.35	7.77	0.36	0.00
GAYA	TA1A	10.14	0.66	2.78	-5.12	0.00	0.00
BHOJPUR	TA1A	7.48	0.68	2.15	1.94	0.00	0.00
SARAN	TA1A	7.31	0.61	5.57	2.92	0.00	0.00
CHAMPARAN	TA1A	8.05	1.20	4.49	15.30	0.00	
MUZAFFARPUR	TA1A	6.66	0.32	2.56	9.90	0.19	0.00
DARBHANGA	TA1A	13.18	1.69	4.50	0.73	0.00	
MUNGER	TA1A	10.16	0.48	2.14	-10.93	2.72	0.00
BHAGALPUR	TA1A	16.34	3.10	9.42	1.30	0.00	0.00
SAHARSA	TA1A	5.47	0.12	4.18	-2.84	0.00	
PURNIA	TA1A	11.63	1.18	3.29	3.42	0.00	
SPARGANA	TA1A	13.06	1.29	2.09	-2.35	0.00	0.00
PALAMU	TA1A	12.00	8.44	8.85	20.27	0.00	
HAZARIBAG	TA1A	8.69	1.22	6.79	-3.62	0.04	0.00
RANCHI	TA1A	9.95	1.87	6.17	0.82	0.72	0.00
DHANBAD	TA1A	8.84	1.67	2.02	-9.68	0.03	0.00
SINGHBHUM	TA1A	10.47	4.24	3.01	0.16	0.89	0.00
E. INDIA	TA1A	10.32	2.45	-3.37	-0.77	1.50	0.96
JHARKHAND	TA1A	10.16	3.05	2.73	-2.16	0.24	0.99

Contd.....

State/ District	Industrial Division	Participation Rate		Growth Rate		Location Quotient	
		Male	Female	Male	Female	Male	Female
INDIA	TA1A1	8.89	1.45	2.63	-1.24		
WEST BENGAL	TA1A1	9.93	1.68	-6.47	-0.91	0.51	0.45
ORISSA	TA1A1	8.01	1.80	1.46	-6.73	1.47	4.35
BIHAR	TA1A1	8.60	1.47	3.41	-1.96	1.37	0.51
KOCHBIHAR	TA1A1	10.27	0.51	0.04	-6.24	0.93	
JALPAIGURI	TA1A1	18.17	3.90	6.05	-12.26	1.17	
DARJILING	TA1A1	15.09	5.21	2.07	-2.76	0.21	0.00
W. DINAJPUR	TA1A1	9.85	0.00	5.35	0.00	0.43	
MALDA	TA1A1	10.85	0.58	3.31	1.55	0.99	0.00
MURSHIDABAD	TA1A1	5.23	0.24	3.16	3.48	0.73	0.00
NADIA	TA1A1	6.77	0.60	1.89	9.45	1.04	0.00
24 PARGANA	TA1A1	7.37	1.12	3.77	1.13	0.74	0.89
CALCUTTA	TA1A1	12.06	1.72	-0.93	2.70	0.70	0.49
HAORA	TA1A1	9.92	1.79	0.11	-5.65	0.39	0.00
HUGLI	TA1A1	6.19	1.32	2.52	0.43	0.34	0.58
MEDINIPUR	TA1A1	17.63	5.66	-0.35	-0.80	0.49	0.00
BANKURA	TA1A1	11.11	1.73	3.41	-7.78	0.70	0.00
PURULIYA	TA1A1	25.83	10.12	3.30	1.82	0.13	1.03
BARDDHAMAN	TA1A1	8.42	1.35	-0.13	-8.80	0.12	0.20
BIRBHUM	TA1A1	12.35	0.36	3.77	-18.71	0.67	0.00
SAMBALPUR	TA1A1	8.94	2.17	1.89	-2.77	2.31	4.04
SUNDERGARH	TA1A1	9.83	4.24	3.44	3.26	1.11	2.93
KENDUJHAR	TA1A1	8.46	6.84	1.73	-7.84	1.12	
MAYURBHANG	TA1A1	4.78	0.15	5.96	11.61	1.01	
BALASORE	TA1A1	8.42	1.00	3.96	-8.87	1.35	10.11
CUTTACK	TA1A1	9.00	1.26	3.38	-7.09	0.30	0.00
DHENKANAL	TA1A1	3.10	0.42	2.05	-10.40	0.09	5.05
PHULBANI	TA1A1	5.65	0.00	9.36	0.00	2.36	
BALANGIR	TA1A1	6.47	0.62	-0.60	-10.78	0.05	0.00
KALAHANDI	TA1A1	6.98	0.98	2.39	-11.53	0.85	0.00
KORAPUT	TA1A1	6.33	1.03	0.08	-17.24	1.63	2.38
GANJAM	TA1A1	6.07	1.05	2.54	-6.65	1.60	6.74
PURI	TA1A1	9.71	1.17	5.99	-4.99	3.24	6.30
PATNA	TA1A1	8.13	0.85	4.36	5.85	1.85	2.20
GAYA	TA1A1	9.22	0.57	2.92	-5.15	1.30	2.38
BHOJPUR	TA1A1	6.76	0.59	1.87	2.26	0.78	0.00
SARAN	TA1A1	6.65	0.48	5.74	4.70	0.91	0.00
CHAMPARAN	TA1A1	7.54	1.20	4.42	15.30	2.65	
MUZAFFARPUR	TA1A1	5.83	0.22	2.73	0.00	1.36	0.00
DARBHANGA	TA1A1	11.98	1.30	4.27	-1.91	2.70	
MUNGER	TA1A1	9.67	0.44	2.12	-11.77	1.48	0.00
BHAGALPUR	TA1A1	7.48	3.02	2.01	1.04	1.40	5.78
SAHARSA	TA1A1	4.72	0.12	3.45	-2.84	1.68	
PURNIA	TA1A1	10.80	1.12	3.10	3.65	2.79	
SPARGANA	TA1A1	12.01	1.29	1.88	-2.35	2.23	0.00
PALAMU	TA1A1	11.31	8.44	9.13	20.27	4.08	
HAZARIBAG	TA1A1	8.23	0.82	6.98	-7.15	0.37	0.00
RANCHI	TA1A1	8.78	1.43	6.04	0.46	2.65	0.00
DHANBAD	TA1A1	8.45	1.47	2.01	-10.84	0.41	0.00
SINGHBHUM	TA1A1	9.96	3.98	2.99	-0.49	2.00	3.16
E. INDIA	TA1A1	9.29	1.64	-3.88	-2.72	0.89	0.62
JHARKHAND	TA1A1	9.53	2.86	2.72	-2.57	1.06	0.96

Contd.....

State/ District	Industrial Division	Participation Rate		Growth Rate		Location Quotient	
		Male	Female	Male	Female	Male	Female
INDIA	TA1A2	0.13	0.06	5.72	6.80		
WEST BENGAL	TA1A2	0.25	0.05	9.96	5.94	1.00	0.86
ORISSA	TA1A2	0.09	0.21	-0.18	36.59	0.75	1.35
BIHAR	TA1A2	0.08	0.00	2.38	-19.90	1.15	1.12
KOCHBIHAR	TA1A2	0.06	0.00	-9.82	0.00	0.87	0.34
JALPAIGURI	TA1A2	0.08	0.13	28.84	6.05	1.11	0.94
DARJILING	TA1A2	0.28	0.09	16.60	0.00	0.96	1.12
W. DINAJPUR	TA1A2	0.16	0.08	14.98	0.00	1.04	0.44
MALDA	TA1A2	0.00	0.00	0.00	0.00	0.85	0.53
MURSHIDABAD	TA1A2	0.01	0.00	-22.82	0.00	0.88	0.64
NADIA	TA1A2	0.03	0.00	1.59	0.00	0.96	3.17
24 PARGANA	TA1A2	0.13	0.01	16.18	0.00	0.93	1.78
CALCUTTA	TA1A2	0.60	0.08	14.05	0.80	1.05	0.88
HAORA	TA1A2	0.14	0.10	-0.47	0.00	1.06	1.20
HUGLI	TA1A2	0.10	0.08	5.15	0.00	1.00	0.86
MEDINIPUR	TA1A2	0.08	0.05	-11.34	0.00	0.85	0.95
BANKURA	TA1A2	0.03	0.00	-5.80	0.00	0.93	0.73
PURULIYA	TA1A2	0.06	0.00	-1.81	0.00	1.15	1.59
BARDDHAMAN	TA1A2	0.11	0.10	5.89	15.97	0.97	0.74
BIRBHUM	TA1A2	0.09	0.00	13.35	0.00	1.13	0.85
SAMBALPUR	TA1A2	0.16	0.03	-0.58	0.00	0.81	1.67
SUNDERGARH	TA1A2	0.03	0.00	1.50	0.00	0.81	1.03
KENDUJHAR	TA1A2	0.03	0.00	7.18	0.00	0.84	2.42
MAYURBHANG	TA1A2	0.10	0.00	16.49	0.00	0.75	0.45
BALASORE	TA1A2	0.00	0.00	0.00	0.00	0.91	0.47
CUTTACK	TA1A2	0.08	0.05	-10.86	1.84	0.77	0.56
DHENKANAL	TA1A2	0.15	0.00	13.67	0.00	0.58	0.19
PHULBANI	TA1A2	0.00	0.00	0.00	0.00	0.54	1.16
BALANGIR	TA1A2	0.04	0.00	-2.84	0.00	0.85	1.38
KALAHANDI	TA1A2	0.11	0.00	0.00	0.00	0.75	1.82
KORAPUT	TA1A2	0.19	0.09	25.29	0.00	0.63	2.21
GANJAM	TA1A2	0.18	1.16	4.81	0.00	0.81	2.38
PURI	TA1A2	0.03	0.00	-2.21	0.00	0.66	0.89
PATNA	TA1A2	0.23	0.00	2.38	0.00	0.85	1.22
GAYA	TA1A2	0.12	0.00	-6.37	0.00	0.95	0.95
BHOJPUR	TA1A2	0.07	0.00	1.97	0.00	0.99	1.61
SARAN	TA1A2	0.13	0.00	3.65	0.00	1.05	1.34
CHAMPARAN	TA1A2	0.02	0.00	0.00	0.00	1.01	0.87
MUZAFFARPUR	TA1A2	0.06	0.00	-0.34	0.00	0.82	0.77
DARBHANGA	TA1A2	0.06	0.00	0.22	0.00	1.05	1.76
MUNGER	TA1A2	0.05	0.04	4.52	0.00	1.03	1.89
BHAGALPUR	TA1A2	0.01	0.00	-12.70	0.00	1.17	1.44
SAHARSA	TA1A2	0.14	0.00	19.62	0.00	0.90	1.03
PURNIA	TA1A2	0.13	0.00	19.14	0.00	1.01	1.53
SPARGANA	TA1A2	0.02	0.00	-9.55	0.00	0.96	0.87
PALAMU	TA1A2	0.06	0.00	4.81	0.00	1.00	1.70
HAZARIBAG	TA1A2	0.03	0.00	7.96	0.00	0.91	2.05
RANCHI	TA1A2	0.07	0.00	13.87	0.00	0.85	0.68
DHANBAD	TA1A2	0.01	0.00	0.96	0.00	0.98	0.60
SINGHBHUM	TA1A2	0.03	0.00	3.71	0.00	1.01	1.20
E. INDIA	TA1A2	0.18	0.07	7.52	10.33	1.11	0.71
JHARKHAND	TA1A2	0.05	0.01	-0.31	0.49	0.91	1.16

Contd....

State/ District	Industrial Division	Participation Rate		Growth Rate		Location Quotient	
		Male	Female	Male	Female	Male	Female
INDIA	TA1A3	0.96	0.73	3.97	8.47		
WEST BENGAL	TA1A3	0.91	1.23	1.45	4.11	1.00	1.05
ORISSA	TA1A3	0.91	0.11	3.62	11.42	0.78	0.99
BIHAR	TA1A3	0.73	0.27	4.67	13.45	1.11	0.87
KOCHBIHAR	TA1A3	0.67	0.24	4.22	0.00	0.72	0.26
JALPAIGURI	TA1A3	0.89	1.08	6.76	16.98	1.36	1.67
DARJILING	TA1A3	2.25	1.00	4.88	13.28	1.11	2.06
W. DINAJPUR	TA1A3	0.55	0.32	2.72	6.63	0.75	0.15
MALDA	TA1A3	0.60	0.58	-2.93	2.44	0.77	0.34
MURSHIDABAD	TA1A3	0.02	0.04	-27.96	-10.40	0.51	0.23
NADIA	TA1A3	0.79	0.32	5.87	10.37	0.74	2.59
24 PARGANA	TA1A3	1.04	1.73	2.98	5.87	0.89	2.07
CALCUTTA	TA1A3	1.08	1.80	-0.94	1.81	1.00	1.04
HAORA	TA1A3	0.75	1.36	0.05	2.08	1.20	1.14
HUGLI	TA1A3	0.76	1.30	5.81	10.40	0.87	1.05
MEDINIPUR	TA1A3	0.71	0.16	1.88	-3.23	1.36	2.06
BANKURA	TA1A3	0.57	0.19	-5.21	7.18	0.97	0.93
PURULIYA	TA1A3	0.55	0.00	4.33	0.00	1.93	4.07
BARDDHAMAN	TA1A3	0.44	0.44	2.73	5.95	1.13	0.96
BIRBHUM	TA1A3	0.77	0.12	5.49	-10.40	1.26	0.17
SAMBALPUR	TA1A3	0.90	0.03	3.56	0.00	0.94	1.31
SUNDERGARH	TA1A3	0.57	0.00	2.19	0.00	1.10	1.84
KENDUJHAR	TA1A3	0.66	0.00	2.36	0.00	0.99	3.68
MAYURBHANG	TA1A3	0.90	0.12	10.13	0.00	0.46	0.14
BALASORE	TA1A3	0.83	0.00	4.22	0.00	0.89	0.54
CUTTACK	TA1A3	1.28	0.42	2.68	12.10	0.77	0.62
DHENKANAL	TA1A3	0.60	0.00	6.16	0.00	0.46	0.15
PHULBANI	TA1A3	0.64	0.62	-2.95	0.00	0.53	0.31
BALANGIR	TA1A3	1.02	0.00	6.72	0.00	0.80	0.28
KALAHANDI	TA1A3	1.08	0.00	7.97	0.00	0.80	0.49
KORAPUT	TA1A3	0.57	0.03	1.89	-2.21	0.64	0.57
GANJAM	TA1A3	1.16	0.10	4.34	0.00	0.63	1.47
PURI	TA1A3	1.09	0.19	4.76	8.69	0.74	0.47
PATNA	TA1A3	1.22	0.66	4.68	12.81	0.79	0.80
GAYA	TA1A3	0.81	0.09	3.50	0.00	0.85	0.36
BHOJPUR	TA1A3	0.66	0.08	5.69	0.00	0.69	0.33
SARAN	TA1A3	0.53	0.13	4.07	0.00	0.72	0.40
CHAMPARAN	TA1A3	0.49	0.00	5.92	0.00	0.77	0.60
MUZAFFARPUR	TA1A3	0.76	0.11	1.61	-1.53	0.50	0.11
DARBHANGA	TA1A3	1.14	0.39	7.61	0.00	0.99	0.59
MUNGER	TA1A3	0.45	0.00	2.47	0.00	1.06	0.33
BHAGALPUR	TA1A3	8.85	0.08	34.46	0.00	1.50	1.61
SAHARSA	TA1A3	0.61	0.00	9.49	0.00	0.64	0.16
PURNIA	TA1A3	0.70	0.06	4.89	0.00	1.09	0.81
SPARGANA	TA1A3	1.03	0.00	5.73	0.00	1.03	0.56
PALAMU	TA1A3	0.62	0.00	5.15	0.00	0.94	3.83
HAZARIBAG	TA1A3	0.43	0.40	3.70	0.00	0.96	0.48
RANCHI	TA1A3	1.10	0.44	6.84	3.93	0.89	0.72
DHANBAD	TA1A3	0.38	0.20	2.47	0.00	1.26	0.95
SINGHBHUM	TA1A3	0.48	0.27	3.51	0.00	1.26	1.79
E. INDIA	TA1A3	0.86	0.74	2.47	4.90	1.14	0.87
JHARKHAND	TA1A3	0.58	0.18	3.33	9.44	1.12	1.40

Contd.....



State/ District	Industrial Division	Participation Rate		Growth Rate		Location Quotient	
		Male	Female	Male	Female	Male	Female
INDIA	TA1B	15.76	6.26	4.11	3.32		
WEST BENGAL	TA1B	16.40	4.12	1.94	3.82	1.00	0.89
ORISSA	TA1B	13.09	7.98	5.80	5.13	0.77	1.26
BIHAR	TA1B	16.08	6.16	4.00	4.88	1.13	1.10
KOCHBIHAR	TA1B	23.66	1.86	2.30	5.15	0.75	0.26
JALPAIGURI	TA1B	23.25	4.71	7.41	13.73	1.43	1.90
DARJILING	TA1B	22.27	5.90	6.49	2.73	1.06	2.54
W. DINAJPUR	TA1B	28.84	3.75	6.49	6.94	0.78	0.00
MALDA	TA1B	20.86	4.50	3.52	3.99	0.81	0.25
MURSHIDABAD	TA1B	17.77	2.62	0.60	5.80	0.57	0.28
NADIA	TA1B	18.20	2.92	3.63	9.00	0.74	2.53
24 PARGANA	TA1B	13.00	4.08	3.89	6.50	0.86	1.20
CALCUTTA	TA1B	21.69	4.29	0.87	1.33	0.98	0.74
HAORA	TA1B	12.83	7.27	0.67	6.52	1.22	0.94
HUGLI	TA1B	12.46	3.99	4.07	-1.69	0.85	0.76
MEDINIPUR	TA1B	12.26	3.62	10.53	5.56	1.45	2.97
BANKURA	TA1B	18.03	3.49	2.73	-1.00	1.02	1.24
PURULIYA	TA1B	16.34	4.49	1.92	-0.70	2.10	6.07
BARDDHAMAN	TA1B	11.46	2.82	2.92	3.16	1.17	1.03
BIRBHUM	TA1B	18.03	7.84	3.79	11.45	1.31	0.19
SAMBALPUR	TA1B	12.61	8.21	4.92	7.98	0.93	1.90
SUNDERGARH	TA1B	10.33	4.41	6.26	7.72	1.15	2.74
KENDUJHAR	TA1B	10.14	3.61	8.34	7.84	1.02	5.49
MAYURBHANG	TA1B	17.52	2.81	11.44	15.83	0.42	0.12
BALASORE	TA1B	15.52	1.97	6.56	0.55	0.90	0.80
CUTTACK	TA1B	15.61	3.18	5.49	2.06	0.74	0.67
DHENKANAL	TA1B	8.16	1.02	7.42	-2.45	0.41	0.22
PHULBANI	TA1B	9.19	7.94	6.28	6.07	0.52	0.00
BALANGIR	TA1B	11.88	10.29	3.95	0.26	0.76	0.42
KALAHANDI	TA1B	11.71	12.55	3.02	4.89	0.76	0.73
KORAPUT	TA1B	11.16	15.61	5.97	11.03	0.64	0.76
GANJAM	TA1B	17.29	11.66	4.49	1.94	0.57	0.99
PURI	TA1B	12.66	7.35	7.67	2.64	0.74	0.60
PATNA	TA1B	17.30	6.44	5.56	5.88	0.75	0.67
GAYA	TA1B	19.75	5.69	2.85	2.36	0.86	0.46
BHOJPUR	TA1B	20.29	11.64	3.65	6.26	0.69	0.43
SARAN	TA1B	20.22	6.90	4.25	3.97	0.73	0.47
CHAMPARAN	TA1B	19.24	4.92	3.00	-4.38	0.80	0.89
MUZAFFARPUR	TA1B	20.78	7.33	3.20	3.91	0.49	0.11
DARBHANGA	TA1B	23.11	16.34	4.08	3.47	1.00	0.67
MUNGER	TA1B	15.87	9.81	3.12	7.25	1.12	0.45
BHAGALPUR	TA1B	17.21	6.98	2.52	2.59	0.76	2.35
SAHARSA	TA1B	14.73	2.52	4.85	6.78	0.61	0.25
PURNIA	TA1B	16.81	6.69	3.89	7.98	1.13	1.14
SPARGANA	TA1B	19.26	5.79	3.05	0.41	1.05	0.84
PALAMU	TA1B	21.25	5.18	5.33	7.08	0.99	5.72
HAZARIBAG	TA1B	13.07	18.47	5.31	21.17	1.02	0.48
RANCHI	TA1B	14.68	3.86	5.15	7.91	0.88	0.82
DHANBAD	TA1B	9.89	1.98	2.78	0.75	1.34	1.25
SINGHBHUM	TA1B	12.07	6.11	4.12	5.49	1.33	2.50
E. INDIA	TA1B	15.90	5.44	2.88	4.51	1.15	0.90
JHARKHAND	TA1B	11.83	5.84	4.71	6.08	1.17	1.96

Contd.....

State/ District	Industrial Division	Participation Rate		Growth Rate		Location Quotient	
		Male	Female	Male	Female	Male	Female
INDIA	TA1B1	1.59	0.41	3.79	5.97		
WEST BENGAL	TA1B1	2.28	0.48	1.14	3.92	1.30	0.68
ORISSA	TA1B1	0.75	0.26	9.81	21.74	0.46	3.47
BIHAR	TA1B1	0.86	0.16	1.42	4.30	0.56	0.05
KOCHBIHAR	TA1B1	3.85	0.12	-2.68	-8.38	0.22	0.00
JALPAIGURI	TA1B1	1.44	0.00	-1.33	0.00	0.33	1.58
DARJILING	TA1B1	3.84	0.36	16.10	20.02	1.02	1.08
W. DINAJPUR	TA1B1	1.19	0.17	-2.95	-7.15	0.67	1.09
MALDA	TA1B1	1.23	0.00	1.25	0.00	0.00	0.00
MURSHIDABAD	TA1B1	1.24	0.08	3.38	0.00	0.07	0.00
NADIA	TA1B1	1.44	0.26	8.63	17.22	0.16	0.00
24 PARGANA	TA1B1	1.31	0.34	4.25	13.98	0.79	0.34
CALCUTTA	TA1B1	4.55	0.87	-0.38	8.67	2.54	0.80
HAORA	TA1B1	1.86	0.70	-0.41	9.15	0.92	1.24
HUGLI	TA1B1	1.40	0.25	5.34	-20.42	0.73	1.17
MEDINIPUR	TA1B1	0.80	0.17	-0.65	2.39	0.33	0.66
BANKURA	TA1B1	0.96	0.10	6.51	-6.70	0.13	0.00
FURULIYA	TA1B1	1.16	0.00	5.80	0.00	0.27	0.00
BARDDHAMAN	TA1B1	0.85	0.16	6.09	3.42	0.79	1.81
BIRBHUM	TA1B1	1.11	2.77	-0.41	22.80	0.48	0.00
SAMBALPUR	TA1B1	0.66	0.07	2.60	8.20	0.87	0.71
SUNDERGARH	TA1B1	0.55	1.07	16.62	23.91	0.16	0.00
KENDUJHAR	TA1B1	0.16	0.08	-25.03	-24.02	0.19	0.00
MAYURBHANG	TA1B1	0.43	0.30	10.96	0.00	0.46	0.00
BALASORE	TA1B1	0.74	0.00	14.51	0.00	0.00	0.00
CUTTACK	TA1B1	1.31	0.05	8.64	1.84	0.36	0.69
DHENKANAL	TA1B1	0.34	0.00	7.53	0.00	1.02	0.00
PHULBANI	TA1B1	0.05	0.00	-6.70	0.00	0.00	0.00
BALANGIR	TA1B1	0.26	0.00	-5.70	0.00	0.27	0.00
KALAHANDI	TA1B1	0.59	0.00	2.70	0.00	0.63	0.00
KORAPUT	TA1B1	0.96	0.79	17.89	0.00	0.99	1.62
GANJAM	TA1B1	1.25	0.07	10.61	-2.21	0.88	26.45
PURI	TA1B1	0.41	0.00	11.61	0.00	0.12	0.00
PATNA	TA1B1	1.13	0.19	1.20	8.20	1.10	0.00
GAYA	TA1B1	0.79	0.00	1.34	0.00	0.57	0.00
BHOJPUR	TA1B1	0.93	1.07	0.74	15.43	0.39	0.00
SARAN	TA1B1	1.11	0.15	6.23	0.00	0.75	0.00
CHAMPARAN	TA1B1	0.67	0.11	2.16	-6.70	0.09	0.00
MUZAFFARPUR	TA1B1	1.40	0.11	5.45	-8.76	0.28	0.00
DARBHANGA	TA1B1	1.74	0.55	7.43	10.84	0.27	0.00
MUNGER	TA1B1	0.43	0.04	-2.92	0.00	0.31	1.08
BHAGALPUR	TA1B1	0.88	0.00	0.05	0.00	0.07	0.00
SAHARSA	TA1B1	0.78	0.00	5.80	0.00	0.95	0.00
FURNIA	TA1B1	1.01	0.00	4.63	0.00	0.70	0.00
SPARGANA	TA1B1	1.06	0.00	7.90	0.00	0.08	0.00
PALAMU	TA1B1	1.03	0.00	-4.06	0.00	0.29	0.00
HAZARIBAG	TA1B1	0.50	0.00	-5.60	0.00	0.19	0.00
RANCHI	TA1B1	0.77	0.04	2.23	1.84	0.38	0.00
DHANBAD	TA1B1	0.62	0.17	0.36	0.00	0.09	0.00
SINGHBHUM	TA1B1	0.70	0.25	4.65	1.26	0.24	0.00
E. INDIA	TA1B1	1.66	0.34	1.50	5.24	1.54	0.88
JHARKHAND	TA1B1	0.66	0.20	1.14	3.68	0.32	0.25

Contd.....

State/ District	Industrial Division	Participation Rate		Growth Rate		Location Quotient	
		Male	Female	Male	Female	Male	Female
INDIA	TA1B2	14.18	5.85	4.14	3.16		
WEST BENGAL	TA1B2	14.11	3.64	2.08	3.81	1.00	1.44
ORISSA	TA1B2	12.34	7.72	5.60	4.86	0.95	0.17
BIHAR	TA1B2	15.22	6.01	4.17	4.90	1.04	0.44
KOCHBIHAR	TA1B2	19.81	1.74	3.69	7.64	0.53	0.28
JALPAIGURI	TA1B2	21.81	4.71	8.41	13.73	0.76	1.16
DARJILING	TA1B2	18.43	5.54	5.28	2.22	1.71	1.08
W. DINAJPUR	TA1B2	27.65	3.58	7.21	8.64	0.47	0.38
MALDA	TA1B2	19.63	4.50	3.69	3.99	0.49	0.57
MURSHIDABAD	TA1B2	16.53	2.54	0.42	5.46	0.02	0.12
NADIA	TA1B2	16.76	2.65	3.30	8.45	0.93	2.98
24 PARGANA	TA1B2	11.69	3.74	3.85	6.04	1.31	4.14
CALCUTTA	TA1B2	17.14	3.42	1.23	0.12	0.95	1.72
HAORA	TA1B2	10.97	6.57	0.87	6.28	1.01	1.59
HUGLI	TA1B2	11.06	3.74	3.92	4.90	1.13	1.68
MEDINIPUR	TA1B2	11.46	3.45	12.11	5.74	0.63	0.18
BANKURA	TA1B2	17.07	3.40	2.56	-0.77	0.57	0.31
PURULIYA	TA1B2	15.18	4.49	1.68	-0.70	0.49	0.00
BARDDHAMAN	TA1B2	10.61	2.66	2.71	3.15	0.67	0.74
BIRBHUM	TA1B2	16.93	5.07	4.14	8.23	0.89	0.14
SAMBALPUR	TA1B2	11.95	8.14	5.06	7.97	1.02	0.07
SUNDERGARH	TA1B2	9.78	3.34	5.91	5.41	0.72	0.00
KENDUJHAR	TA1B2	9.98	3.52	19.89	23.95	0.86	0.00
MAYURBHANG	TA1B2	17.09	2.51	11.45	14.53	0.87	0.22
BALASORE	TA1B2	14.79	1.97	6.29	0.55	0.96	0.00
CUTTACK	TA1B2	14.30	3.13	5.25	2.06	1.14	0.50
DHENKANAL	TA1B2	7.82	1.02	7.42	-2.45	0.86	0.00
PHULBANI	TA1B2	9.14	7.94	6.44	6.07	0.65	1.02
BALANGIR	TA1B2	11.62	10.29	4.35	0.26	1.30	0.00
KALAHANDI	TA1B2	11.12	12.55	3.04	4.89	1.28	0.00
KORAPUT	TA1B2	10.20	14.82	5.34	10.46	0.62	0.05
GANJAM	TA1B2	16.04	11.59	4.15	1.97	1.18	0.22
PURI	TA1B2	12.25	7.35	7.57	2.64	0.90	0.22
PATNA	TA1B2	16.17	6.25	5.96	5.81	1.22	1.15
GAYA	TA1B2	18.96	5.69	2.92	2.60	0.82	0.17
BHOJPUR	TA1B2	19.37	10.57	3.81	5.67	0.73	0.14
SARAN	TA1B2	19.11	6.75	4.15	3.74	0.63	0.27
CHAMPARAN	TA1B2	18.56	4.81	3.04	-4.32	0.57	0.00
MUZAFFARPUR	TA1B2	19.38	7.22	3.06	4.33	0.70	0.13
DARBHANGA	TA1B2	21.38	15.78	3.85	3.29	1.04	0.45
MUNGER	TA1B2	15.44	9.77	3.36	7.30	0.56	0.00
BHAGALPUR	TA1B2	16.32	6.98	2.68	-2.98	9.79	0.14
SAHARSA	TA1B2	13.94	2.52	4.80	7.60	0.85	0.00
PURNIA	TA1B2	15.80	6.69	3.84	8.19	0.79	0.14
SPARGANA	TA1B2	18.20	5.79	2.83	0.62	0.98	0.00
PALAMU	TA1B2	20.22	5.18	6.20	7.08	0.59	0.00
HAZARIBAG	TA1B2	12.57	18.47	6.18	21.87	0.58	0.52
RANCHI	TA1B2	13.91	3.83	5.34	7.98	1.19	0.56
DHANBAD	TA1B2	9.27	1.81	2.97	-0.12	0.65	0.38
SINGHBHUM	TA1B2	11.37	5.86	4.08	5.72	0.69	0.37
E. INDIA	TA1B2	14.24	5.09	3.05	4.46	0.98	0.80
JHARKHAND	TA1B2	11.16	5.64	4.97	6.17	0.77	0.27

Contd.....

State/ District	Industrial Division	Participation Rate		Growth Rate		Location Quotient	
		Male	Female	Male	Female	Male	Female
INDIA	TA1C	2.82	1.71	3.15	11.78		
WEST BENGAL	TA1C	3.49	1.90	2.48	9.03	0.96	0.66
ORISSA	TA1C	2.03	0.72	-0.07	6.96	0.73	1.68
BIHAR	TA1C	1.31	0.43	3.61	14.30	1.23	1.40
KOCHBIHAR	TA1C	2.73	1.08	1.34	22.05	1.01	0.28
JALPAIGURI	TA1C	1.77	1.00	-0.56	5.83	1.07	0.69
DARJILING	TA1C	3.30	0.70	1.54	-0.93	0.91	0.87
W. DINAJPUR	TA1C	1.52	0.40	3.22	16.98	1.33	0.61
MALDA	TA1C	2.20	1.00	5.24	16.98	0.91	0.59
MURSHIDABAD	TA1C	1.75	0.08	1.86	-4.49	1.13	0.93
NADIA	TA1C	1.76	0.37	2.93	10.69	1.16	3.72
24 PARGANA	TA1C	3.50	2.30	8.20	13.92	0.88	1.33
CALCUTTA	TA1C	5.35	3.35	-0.46	6.90	1.03	0.56
HAORA	TA1C	3.37	2.03	5.69	10.53	0.92	1.15
HUGLI	TA1C	3.38	1.57	3.18	10.88	1.00	0.70
MEDINIPUR	TA1C	1.51	0.40	4.20	11.86	0.59	0.57
BANKURA	TA1C	1.90	0.27	2.88	3.42	0.97	0.76
PURULIYA	TA1C	1.66	0.33	5.67	0.00	0.78	0.81
BARDDHAMAN	TA1C	1.32	0.69	1.92	8.05	0.93	0.65
BIRBHUM	TA1C	1.80	0.76	7.24	0.00	1.12	1.26
SAMBALPUR	TA1C	1.59	0.27	-2.65	-3.13	0.77	2.18
SUNDERGARH	TA1C	0.95	0.28	-7.92	-14.92	0.71	0.86
KENDUJHAR	TA1C	2.48	6.49	4.89	19.03	0.71	0.88
MAYURBHANG	TA1C	2.41	0.12	7.57	-8.38	0.90	0.67
BALASORE	TA1C	1.53	0.21	4.90	7.18	0.97	0.48
CUTTACK	TA1C	2.55	0.83	-0.83	10.15	0.75	0.51
DHENKANAL	TA1C	1.29	0.63	6.08	0.00	0.63	0.16
PHULBANI	TA1C	1.94	0.31	3.10	0.00	0.50	1.77
BALANGIR	TA1C	2.38	0.40	2.86	0.00	0.81	2.10
KALAHANDI	TA1C	1.44	0.18	-1.24	0.00	0.74	2.83
KORAPUT	TA1C	1.15	0.06	-2.95	6.05	0.65	3.48
GANJAM	TA1C	2.21	0.13	0.88	-2.62	0.95	3.33
PURI	TA1C	3.54	1.12	3.94	9.23	0.56	1.13
PATNA	TA1C	2.26	0.64	5.93	33.51	0.93	1.53
GAYA	TA1C	1.18	0.15	4.65	0.00	1.08	1.39
BHOJPUR	TA1C	1.24	0.25	4.94	11.61	1.22	2.53
SARAN	TA1C	1.20	0.10	6.44	0.00	1.30	2.03
CHAMPARAN	TA1C	1.16	0.47	2.02	15.43	1.20	1.11
MUZAFFARPUR	TA1C	2.19	0.48	5.95	10.44	1.02	1.17
DARBHANGA	TA1C	1.66	1.04	2.50	0.00	1.13	2.55
MUNGER	TA1C	0.90	0.15	3.22	0.00	1.08	3.00
BHAGALPUR	TA1C	1.31	0.22	1.31	0.96	1.02	1.64
SAHARSA	TA1C	1.06	0.10	1.51	0.00	1.11	1.62
PURNIA	TA1C	1.05	0.44	2.09	22.16	1.02	2.07
SPARGANA	TA1C	1.27	0.46	4.09	0.00	0.99	1.14
PALAMU	TA1C	1.56	0.49	4.50	0.00	1.08	1.06
HAZARIBAG	TA1C	0.83	0.12	1.07	-4.98	0.94	3.25
RANCHI	TA1C	1.42	0.79	5.17	18.28	0.86	0.67
DHANBAD	TA1C	0.78	0.29	2.71	5.65	0.91	0.51
SINGHBHUM	TA1C	1.01	0.39	-0.93	3.05	0.94	1.16
E. INDIA	TA1C	2.64	1.25	2.37	9.18	1.11	0.69
JHARKHAND	TA1C	1.13	0.63	1.21	6.35	0.85	1.20

Contd.....

State/ District	Industrial Division	Participation Rate		Growth Rate		Location Quotient	
		Male	Female	Male	Female	Male	Female
INDIA	TA1C1	1.63	1.17	6.54	15.42		
WEST BENGAL	TA1C1	1.66	0.92	6.07	14.92	1.29	1.20
ORISSA	TA1C1	1.39	0.26	8.35	17.80	0.40	0.87
BIHAR	TA1C1	0.98	0.26	8.07	25.47	0.63	0.56
KOCHBIHAR	TA1C1	1.53	0.59	6.03	0.00	1.57	0.30
JALPAIGURI	TA1C1	1.09	0.64	7.46	0.00	0.64	0.00
DARJILING	TA1C1	1.45	0.46	8.24	23.11	1.50	0.83
W. DINAJPUR	TA1C1	0.99	0.40	10.99	0.00	0.53	0.43
MALDA	TA1C1	1.66	0.58	13.67	0.00	0.51	0.00
MURSHIDABAD	TA1C1	1.18	0.03	9.20	0.00	0.76	0.47
NADIA	TA1C1	0.92	0.17	7.88	12.33	0.88	5.33
24 PARGANA	TA1C1	1.75	1.15	9.41	18.91	0.85	1.76
CALCUTTA	TA1C1	2.28	1.57	3.80	12.21	2.07	1.78
HAORA	TA1C1	1.39	0.76	1.51	6.91	1.28	1.76
HUGLI	TA1C1	1.89	0.99	8.50	24.36	1.08	0.68
MEDINIPUR	TA1C1	1.06	0.17	12.15	6.63	0.37	0.42
BANKURA	TA1C1	1.38	0.27	8.80	10.84	0.49	0.33
PURULIYA	TA1C1	1.05	0.00	9.79	0.00	0.53	0.00
BARDDHAMAN	TA1C1	0.68	0.31	8.40	30.01	0.67	0.57
BIRBHUM	TA1C1	1.26	0.21	18.44	0.00	0.66	7.03
SAMBALPUR	TA1C1	1.25	0.17	7.74	9.60	0.39	0.31
SUNDERGARH	TA1C1	0.52	0.28	5.26	0.00	0.36	3.31
KENDUJHAR	TA1C1	0.69	0.00	6.33	0.00	0.11	0.32
MAYURBHANG	TA1C1	1.70	0.12	9.46	0.00	0.21	1.12
BALASORE	TA1C1	1.01	0.21	9.93	0.00	0.44	0.00
CUTTACK	TA1C1	1.36	0.44	8.51	25.64	0.60	0.14
DHENKANAL	TA1C1	1.13	0.42	12.42	0.00	0.25	0.00
PHULBANI	TA1C1	1.68	0.31	4.56	0.00	0.03	0.00
BALANGIR	TA1C1	2.12	0.40	9.07	0.00	0.17	0.00
KALAHANDI	TA1C1	1.11	0.00	0.31	0.00	0.36	0.00
KORAPUT	TA1C1	0.90	0.06	2.78	0.00	0.54	2.79
GANJAM	TA1C1	1.83	0.13	6.04	1.41	0.66	0.31
PURI	TA1C1	2.52	0.75	13.89	16.10	0.18	0.00
PATNA	TA1C1	1.75	0.40	9.58	36.59	0.58	0.73
GAYA	TA1C1	0.89	0.15	8.11	0.00	0.41	0.00
BHOJPUR	TA1C1	0.89	0.08	9.31	0.00	0.53	3.67
SARAN	TA1C1	0.90	0.10	9.51	0.00	0.68	0.71
CHAMPARAN	TA1C1	0.92	0.13	9.75	0.00	0.40	0.40
MUZAFFARPUR	TA1C1	1.40	0.32	9.19	0.00	0.66	0.27
DARBHANGA	TA1C1	1.23	0.39	8.77	0.00	0.81	1.36
MUNGER	TA1C1	0.74	0.04	10.69	0.00	0.28	0.21
BHAGALPUR	TA1C1	1.04	0.22	8.90	0.00	0.50	0.00
SAHARSA	TA1C1	0.79	0.10	5.93	0.00	0.57	0.00
PURNIA	TA1C1	0.74	0.38	4.79	20.40	0.59	0.00
SPARGANA	TA1C1	1.03	0.46	8.92	0.00	0.52	0.00
PALAMU	TA1C1	1.27	0.00	12.40	0.00	0.50	0.00
HAZARIBAG	TA1C1	0.64	0.06	5.69	0.00	0.34	0.00
RANCHI	TA1C1	1.14	0.62	9.79	21.48	0.43	0.10
DHANBAD	TA1C1	0.46	0.12	4.28	15.43	0.55	0.67
SINGHBHUM	TA1C1	0.73	0.24	3.93	17.46	0.52	0.75
E. INDIA	TA1C1	1.41	0.61	6.72	16.01	1.15	0.67
JHARKHAND	TA1C1	0.78	0.23	7.10	19.29	0.45	0.65

Contd.....

State/ District	Industrial Division	Participation Rate		Growth Rate		Location Quotient	
		Male	Female	Male	Female	Male	Female
INDIA	TA1C2	0.24	0.21	3.46	8.08		
WEST BENGAL	TA1C2	0.34	0.26	2.74	5.12	0.93	0.62
ORISSA	TA1C2	0.20	0.07	10.23	7.90	0.77	1.74
BIHAR	TA1C2	0.19	0.14	4.95	11.71	1.30	1.45
KOCHBIHAR	TA1C2	0.23	0.24	-7.53	0.00	0.94	0.28
JALPAIGURI	TA1C2	0.38	0.36	-1.21	3.51	1.12	0.74
DARJILING	TA1C2	0.32	0.09	7.50	4.81	0.84	0.87
W. DINAJPUR	TA1C2	0.16	0.00	9.37	0.00	1.42	0.62
MALDA	TA1C2	0.29	0.21	0.49	0.00	0.96	0.63
MURSHIDABAD	TA1C2	0.08	0.00	-5.42	0.00	1.17	0.97
NADIA	TA1C2	0.15	0.00	5.43	0.00	1.19	3.62
24 PARGANA	TA1C2	0.40	0.34	5.72	5.39	0.89	1.30
CALCUTTA	TA1C2	0.51	0.37	0.97	3.72	0.91	0.47
HAORA	TA1C2	0.22	0.32	2.71	9.37	0.88	1.11
HUGLI	TA1C2	0.28	0.22	5.36	7.18	0.99	0.70
MEDINIPUR	TA1C2	0.14	0.16	5.45	0.00	0.61	0.58
BANKURA	TA1C2	0.14	0.00	0.87	0.00	1.02	0.79
PURULIYA	TA1C2	0.08	0.33	-2.84	0.00	0.80	0.87
BARDDHAMAN	TA1C2	0.14	0.10	0.36	0.96	0.97	0.65
BIRBHUM	TA1C2	0.23	0.33	0.00	0.00	1.17	0.87
SAMBALPUR	TA1C2	0.16	0.07	14.28	0.00	0.81	2.30
SUNDERGARH	TA1C2	0.12	0.00	14.02	0.00	0.75	0.69
KENDUJHAR	TA1C2	0.12	0.18	23.11	0.00	0.78	0.91
MAYURBHANG	TA1C2	0.12	0.00	6.44	0.00	0.99	0.64
BALASORE	TA1C2	0.10	0.00	-3.61	0.00	1.03	0.51
CUTTACK	TA1C2	0.53	0.29	9.84	20.40	0.77	0.53
DHENKANAL	TA1C2	0.07	0.21	18.37	0.00	0.68	0.17
PHULBANI	TA1C2	0.00	0.00	0.00	0.00	0.55	1.89
BALANGIR	TA1C2	0.09	0.00	-0.34	0.00	0.89	2.24
KALAHANDI	TA1C2	0.05	0.00	0.00	0.00	0.79	3.02
KORAPUT	TA1C2	0.08	0.00	11.80	0.00	0.67	3.53
GANJAM	TA1C2	0.13	0.00	7.56	0.00	0.98	3.54
PURI	TA1C2	0.28	0.13	14.46	11.61	0.61	1.20
PATNA	TA1C2	0.27	0.18	2.71	26.39	0.97	1.58
GAYA	TA1C2	0.11	0.00	7.18	0.00	1.15	1.49
BHOJPUR	TA1C2	0.18	0.17	8.93	0.00	1.30	2.46
SARAN	TA1C2	0.09	0.00	15.61	0.00	1.37	2.11
CHAMPARAN	TA1C2	0.14	0.22	2.84	0.00	1.29	1.15
MUZAFFARPUR	TA1C2	0.54	0.16	6.65	-1.05	1.06	1.23
DARBHANGA	TA1C2	0.28	0.55	4.29	0.00	1.17	2.63
MUNGER	TA1C2	0.07	0.11	5.28	0.00	1.17	3.19
BHAGALPUR	TA1C2	0.13	0.00	20.02	0.00	1.08	1.75
SAHARSA	TA1C2	0.18	0.00	5.65	0.00	1.17	1.72
PURNIA	TA1C2	0.22	0.06	10.49	0.00	1.07	2.21
SPARGANA	TA1C2	0.12	0.00	-1.47	0.00	1.04	1.21
PALAMU	TA1C2	0.13	0.25	2.50	0.00	1.15	1.13
HAZARIBAG	TA1C2	0.10	0.06	5.03	0.00	1.01	3.47
RANCHI	TA1C2	0.14	0.14	5.57	0.00	0.91	0.71
DHANBAD	TA1C2	0.25	0.17	10.06	4.48	0.96	0.50
SINGHBHUM	TA1C2	0.17	0.15	-0.75	0.33	0.99	1.19
E. INDIA	TA1C2	0.28	0.19	3.67	6.38	1.10	0.69
JHARKHAND	TA1C2	0.15	0.10	5.41	8.19	0.89	1.24

Contd.....

State/ District	Industrial Division	Participation Rate		Growth Rate		Location Quotient	
		Male	Female	Male	Female	Male	Female
INDIA	TA1C3	0.95	0.32	-0.81	5.81		
WEST BENGAL	TA1C3	1.49	0.72	-0.39	5.65	1.23	1.32
ORISSA	TA1C3	0.44	0.39	-10.56	3.24	0.69	0.66
BIHAR	TA1C3	0.14	0.03	-8.65	-4.27	0.60	0.42
KOCHBIHAR	TA1C3	0.98	0.24	-0.66	5.24	0.70	0.72
JALPAIGURI	TA1C3	0.30	0.00	-10.42	0.00	0.49	0.64
DARJILING	TA1C3	1.53	0.15	-2.73	-13.74	0.81	0.45
W. DINAJPUR	TA1C3	0.38	0.00	-5.98	0.00	0.42	0.29
MALDA	TA1C3	0.24	0.21	-8.40	0.00	0.58	0.57
MURSHIDABAD	TA1C3	0.48	0.05	-5.16	4.81	0.67	0.12
NADIA	TA1C3	0.69	0.20	-1.43	13.98	0.68	2.06
24 PARGANA	TA1C3	1.36	0.81	7.59	13.99	1.43	3.26
CALCUTTA	TA1C3	2.56	1.41	-3.26	3.86	1.53	1.89
HAORA	TA1C3	1.76	0.95	11.87	15.43	1.46	1.40
HUGLI	TA1C3	1.21	0.36	-1.91	0.65	1.63	1.19
MEDINIPUR	TA1C3	0.30	0.08	-6.35	6.05	0.43	0.28
BANKURA	TA1C3	0.37	0.00	-6.14	0.00	0.61	0.26
PURULIYA	TA1C3	0.53	0.00	1.89	0.00	0.48	0.26
BARDDHAMAN	TA1C3	0.50	0.28	-2.64	3.19	0.65	0.69
BIRBHUM	TA1C3	0.31	0.21	-7.34	0.00	0.67	0.53
SAMBALPUR	TA1C3	0.18	0.03	-18.93	-19.73	0.58	0.31
SUNDERGARH	TA1C3	0.31	0.00	-16.30	0.00	0.39	0.23
KENDUJHAR	TA1C3	1.67	6.31	3.81	18.70	1.05	6.84
MAYURBHANG	TA1C3	0.59	0.00	3.73	0.00	0.75	0.13
BALASORE	TA1C3	0.43	0.00	0.20	0.00	0.58	0.22
CUTTACK	TA1C3	0.66	0.10	-10.31	-7.88	0.74	0.57
DHENKANAL	TA1C3	0.09	0.00	-13.08	0.00	0.61	0.43
PHULBANI	TA1C3	0.27	0.00	-2.93	0.00	0.63	0.30
BALANGIR	TA1C3	0.17	0.00	-14.41	0.00	0.98	0.36
KALAHANDI	TA1C3	0.27	0.18	-6.78	0.00	0.55	0.18
KORAPUT	TA1C3	0.16	0.00	-15.14	0.00	0.40	0.06
GANJAM	TA1C3	0.26	0.00	-12.20	0.00	0.73	0.16
PURI	TA1C3	0.74	0.24	-7.73	-0.34	0.95	0.75
PATNA	TA1C3	0.25	0.05	-3.87	0.00	0.73	0.65
GAYA	TA1C3	0.19	0.00	-4.23	0.00	0.39	0.16
BHOJPUR	TA1C3	0.17	0.00	-6.41	0.00	0.45	0.24
SARAN	TA1C3	0.21	0.00	-2.08	0.00	0.46	0.13
CHAMPARAN	TA1C3	0.10	0.11	-14.46	0.00	0.43	0.46
MUZAFFARPUR	TA1C3	0.25	0.00	-3.65	0.00	0.65	0.34
DARBHANGA	TA1C3	0.15	0.10	-12.56	0.00	0.49	0.71
MUNGER	TA1C3	0.09	0.00	-12.80	0.00	0.37	0.20
BHAGALPUR	TA1C3	0.14	0.00	-14.78	0.00	0.47	0.22
SAHARSA	TA1C3	0.09	0.00	-13.35	0.00	0.48	0.27
PURNIA	TA1C3	0.09	0.00	-11.56	0.00	0.39	0.60
SPARGANA	TA1C3	0.12	0.00	-7.71	0.00	0.39	0.39
PALAMU	TA1C3	0.17	0.25	-10.68	0.00	0.48	0.44
HAZARIBAG	TA1C3	0.09	0.00	-12.10	0.00	0.36	0.09
RANCHI	TA1C3	0.13	0.04	-8.43	-4.98	0.50	0.59
DHANBAD	TA1C3	0.07	0.00	-9.49	0.00	0.43	0.32
SINGHBHUM	TA1C3	0.10	0.00	-13.13	0.00	0.47	0.32
E. INDIA	TA1C3	0.95	0.46	-1.98	4.95	1.03	0.58
JHARKHAND	TA1C3	0.20	0.30	-9.19	1.59	0.49	0.56

Contd.....

State/ District	Industrial Division	Participation Rate		Growth Rate		Location Quotient	
		Male	Female	Male	Female	Male	Female
INDIA	TA2	26.22	38.59	3.19	4.87		
WEST BENGAL	TA2	22.32	62.16	1.35	4.65	1.09	1.32
ORISSA	TA2	31.88	42.82	4.53	6.74	0.87	0.49
BIHAR	TA2	22.66	41.61	3.85	5.90	0.84	0.53
KOCHBIHAR	TA2	36.21	70.39	0.88	6.49	0.73	0.80
JALPAIGURI	TA2	23.76	66.13	4.53	6.90	0.56	0.85
DARJILING	TA2	33.49	63.85	3.89	7.21	0.67	0.61
W. DINAJPUR	TA2	27.03	64.96	3.17	9.70	0.51	0.59
MALDA	TA2	37.39	79.48	2.69	5.90	0.82	0.69
MURSHIDABAD	TA2	23.94	28.87	2.58	5.00	0.84	0.08
NADIA	TA2	21.72	43.10	3.58	5.76	0.65	1.97
24 PARGANA	TA2	21.07	64.51	2.55	8.06	1.33	3.36
CALCUTTA	TA2	25.38	75.94	-1.26	1.63	1.21	1.82
HAORA	TA2	16.53	58.84	4.31	6.70	1.12	1.08
HUGLI	TA2	16.14	56.60	4.19	4.43	1.70	1.54
MEDINIPUR	TA2	33.21	61.77	6.78	6.91	0.57	0.23
BANKURA	TA2	26.73	46.45	1.45	5.76	0.83	0.53
PURULIYA	TA2	21.59	47.63	1.21	1.96	0.56	0.00
BARDDHAMAN	TA2	16.69	43.78	2.33	4.41	0.62	0.63
BIRBHUM	TA2	30.49	61.61	3.87	6.16	0.88	0.31
SAMBALPUR	TA2	27.31	32.10	4.39	6.66	0.85	0.40
SUNDERGARH	TA2	24.05	49.16	1.94	4.54	0.40	0.48
KENDUJHAR	TA2	22.83	29.75	2.81	3.43	0.55	0.00
MAYURBHANG	TA2	35.03	44.41	6.37	10.68	0.99	0.26
BALASORE	TA2	24.06	43.29	3.27	7.61	0.71	0.46
CUTTACK	TA2	36.55	65.28	5.02	7.54	0.74	0.63
DHENKANAL	TA2	27.15	58.57	7.23	16.62	0.99	0.59
PHULBANI	TA2	39.92	42.10	6.19	8.48	1.02	0.62
BALANGIR	TA2	32.77	44.10	4.28	7.06	1.64	0.73
KALAHANDI	TA2	28.04	36.68	2.54	1.17	0.79	0.00
KORAPUT	TA2	34.04	33.96	7.89	14.49	0.60	0.13
GANJAM	TA2	30.37	25.49	2.97	1.40	1.13	0.34
PURI	TA2	43.64	64.02	5.54	10.06	1.26	1.03
PATNA	TA2	28.30	39.16	3.49	4.81	1.05	0.85
GAYA	TA2	25.77	38.11	3.44	4.80	0.54	0.34
BHOJPUR	TA2	23.01	36.46	2.49	1.58	0.60	0.16
SARAN	TA2	20.11	44.08	4.11	7.12	0.65	0.27
CHAMPARAN	TA2	23.51	43.78	3.63	4.59	0.64	0.27
MUZAFFARPUR	TA2	27.71	62.79	3.93	5.36	0.77	0.46
DARBHANGA	TA2	28.20	53.49	2.59	4.00	0.67	0.55
MUNGER	TA2	19.27	26.62	3.29	4.10	0.57	0.12
BHAGALPUR	TA2	27.20	37.91	3.02	3.00	0.70	0.46
SAHARSA	TA2	22.64	13.57	4.25	4.78	0.67	0.55
PURNIA	TA2	21.74	28.29	4.64	7.50	0.51	1.06
SPARGANA	TA2	26.00	56.97	1.70	5.72	0.59	0.81
PALAMU	TA2	26.71	36.23	3.39	4.58	0.73	0.00
HAZARIBAG	TA2	21.08	40.55	6.36	9.71	0.52	0.10
RANCHI	TA2	27.71	58.65	4.90	7.57	0.75	0.96
DHANBAD	TA2	14.44	39.70	6.30	9.29	0.47	0.26
SINGHBHUM	TA2	16.62	48.91	2.36	6.65	0.64	0.41
E. INDIA	TA2	23.59	52.61	2.51	5.22	0.96	0.41
JHARKHAND	TA2	20.66	45.14	4.25	6.52	0.63	0.42

Contd.....



State/ District	Industrial Division	Participation Rate		Growth Rate		Location Quotient	
		Male	Female	Male	Female	Male	Female
INDIA	TA2A	9.46	12.50	4.03	3.72		
WEST BENGAL	TA2A	7.72	29.31	-0.38	4.17	1.15	1.19
ORISSA	TA2A	9.75	21.48	3.77	5.92	0.65	0.43
BIHAR	TA2A	7.40	13.56	2.58	4.09	0.84	0.91
KOCHBIHAR	TA2A	6.76	30.05	-2.51	9.51	0.55	1.09
JALPAIGURI	TA2A	8.10	27.03	4.88	6.06	1.00	1.53
DARJILING	TA2A	9.14	26.35	1.55	9.20	0.74	0.39
W. DINAJPUR	TA2A	7.00	27.71	3.22	13.45	0.42	0.00
MALDA	TA2A	8.91	40.62	0.66	7.58	0.73	0.80
MURSHIDABAD	TA2A	6.60	13.37	1.04	4.94	0.30	0.00
NADIA	TA2A	5.11	14.78	0.91	5.71	0.55	0.00
24 PARGANA	TA2A	6.65	27.45	-0.60	9.03	1.56	3.26
CALCUTTA	TA2A	10.22	44.72	-2.48	1.59	1.38	1.41
HAORA	TA2A	5.59	26.42	4.32	7.79	0.91	1.47
HUGLI	TA2A	4.03	18.22	-2.98	1.62	1.28	1.13
MEDINIPUR	TA2A	15.63	25.23	12.17	8.44	0.39	0.72
BANKURA	TA2A	6.25	22.69	-2.16	6.14	0.44	0.00
PURULIYA	TA2A	7.68	15.07	2.68	-6.82	0.21	1.72
BARDDHAMAN	TA2A	6.82	16.94	0.34	2.41	0.63	0.66
BIRBHUM	TA2A	7.85	34.50	1.66	4.70	0.80	1.54
SAMBALPUR	TA2A	8.22	16.66	2.51	4.91	0.56	0.52
SUNDERGARH	TA2A	9.66	28.58	4.10	4.06	0.46	0.00
KENDUJHAR	TA2A	8.64	17.10	1.14	1.83	0.48	1.28
MAYURBHANG	TA2A	11.48	21.92	6.19	11.12	0.35	0.00
BALASORE	TA2A	8.10	22.14	1.41	7.33	0.34	0.00
CUTTACK	TA2A	12.41	25.61	3.84	7.38	1.45	1.33
DHENKANAL	TA2A	9.77	33.82	8.55	21.86	0.32	0.96
PHULBANI	TA2A	8.96	20.83	5.89	6.99	0.00	0.00
BALANGIR	TA2A	10.94	23.09	4.40	5.41	0.34	0.00
KALAHANDI	TA2A	7.32	26.42	0.55	2.01	0.19	0.00
KORAPUT	TA2A	10.58	22.65	8.07	18.81	0.27	0.00
GANJAM	TA2A	7.84	10.57	0.20	-1.71	0.40	0.00
PURI	TA2A	9.63	27.12	4.69	9.57	0.72	0.56
PATNA	TA2A	7.73	13.47	1.98	4.45	0.82	1.26
GAYA	TA2A	8.49	12.61	1.90	2.12	0.33	0.00
BHOJPUR	TA2A	8.45	6.97	0.88	-4.89	0.62	1.07
SARAN	TA2A	6.91	9.56	2.87	2.34	0.33	0.00
CHAMPARAN	TA2A	8.63	6.72	4.50	-3.24	0.48	1.45
MUZAFFARPUR	TA2A	10.23	20.04	2.90	5.64	1.51	0.75
DARBHANGA	TA2A	8.82	16.61	0.79	1.49	0.79	2.50
MUNGER	TA2A	6.27	5.51	1.03	0.00	0.26	0.94
BHAGALPUR	TA2A	8.50	9.90	1.89	0.99	0.45	0.00
SAHARSA	TA2A	7.03	3.96	5.12	6.97	0.79	0.00
PURNIA	TA2A	8.10	9.59	4.57	8.02	0.76	0.54
SPARGANA	TA2A	7.87	19.04	2.27	2.90	0.34	0.00
PALAMU	TA2A	8.09	8.24	1.87	-2.27	0.37	1.47
HAZARIBAG	TA2A	6.93	15.20	4.71	10.29	0.41	0.31
RANCHI	TA2A	8.65	24.09	4.66	8.31	0.48	0.68
DHANBAD	TA2A	4.66	11.74	3.10	4.64	1.31	1.27
SINGHBHUM	TA2A	5.99	15.63	0.28	2.17	0.78	0.83
E. INDIA	TA2A	7.87	23.32	0.95	4.44	1.25	0.69
JHARKHAND	TA2A	7.20	18.53	4.01	4.62	0.59	0.62

Contd.....

State/ District	Industrial Division	Participation Rate		Growth Rate		Location Quotient	
		Male	Female	Male	Female	Male	Female
INDIA	TA2A1	0.45	0.10	4.76	13.37		
WEST BENGAL	TA2A1	0.34	0.15	2.32	10.95	1.47	1.36
ORISSA	TA2A1	0.58	0.05	2.48	7.38	0.42	0.98
BIHAR	TA2A1	0.94	0.07	3.81	19.62	0.18	0.07
KOCHBIHAR	TA2A1	0.49	0.12	-3.57	0.00	0.70	0.45
JALPAIGURI	TA2A1	0.37	0.00	-0.66	0.00	0.24	0.00
DARJILING	TA2A1	0.17	0.06	1.21	0.00	1.05	0.26
W. DINAJPUR	TA2A1	0.73	0.08	0.91	0.00	0.29	0.00
MALDA	TA2A1	1.52	0.21	2.59	0.00	0.18	0.33
MURSHIDABAD	TA2A1	0.71	0.07	0.26	0.00	0.51	0.22
NADIA	TA2A1	0.25	0.02	-1.34	0.00	0.74	3.03
24 PARGANA	TA2A1	0.23	0.06	7.23	6.52	1.55	3.13
CALCUTTA	TA2A1	0.41	0.29	1.78	11.75	2.04	2.17
HAORA	TA2A1	0.24	0.32	1.99	12.57	2.13	1.80
HUGLI	TA2A1	0.23	0.11	-0.38	14.87	1.64	0.74
MEDINIPUR	TA2A1	0.77	0.27	8.54	11.98	0.24	0.15
BANKURA	TA2A1	0.48	0.00	0.78	0.00	0.34	0.00
PURULIYA	TA2A1	0.53	0.00	-0.57	0.00	0.42	0.00
BARDDHAMAN	TA2A1	0.22	0.08	0.13	0.00	0.68	0.77
BIRBHUM	TA2A1	0.60	0.00	1.76	0.00	0.32	0.41
SAMBALPUR	TA2A1	0.51	0.00	2.36	0.00	0.18	0.11
SUNDERGARH	TA2A1	0.23	0.05	8.47	0.00	0.35	0.00
KENDUJHAR	TA2A1	0.24	0.00	-0.60	0.00	1.98	18.21
MAYURBHANG	TA2A1	1.10	0.00	2.55	0.00	0.51	0.00
BALASORE	TA2A1	0.58	0.11	-0.43	0.00	0.45	0.00
CUTTACK	TA2A1	1.14	0.20	3.21	15.97	0.53	0.19
DHENKANAL	TA2A1	0.42	0.00	3.10	0.00	0.11	0.00
PHULBANI	TA2A1	1.12	0.00	8.20	0.00	0.24	0.00
BALANGIR	TA2A1	1.15	0.20	4.52	0.00	0.20	0.00
KALAHANDI	TA2A1	0.57	0.00	3.42	0.00	0.29	0.49
KORAPUT	TA2A1	0.33	0.00	-0.58	0.00	0.16	0.00
GANJAM	TA2A1	0.48	0.06	2.08	7.18	0.24	0.00
PURI	TA2A1	0.39	0.00	-0.50	0.00	0.55	0.45
PATNA	TA2A1	0.11	0.16	-15.92	24.85	0.22	0.15
GAYA	TA2A1	1.36	0.09	1.45	6.05	0.17	0.00
BHOJPUR	TA2A1	1.32	0.00	0.78	0.00	0.17	0.00
SARAN	TA2A1	1.40	0.13	3.61	0.00	0.23	0.00
CHAMPARAN	TA2A1	1.69	0.00	4.96	0.00	0.11	0.30
MUZAFFARPUR	TA2A1	1.34	0.11	0.09	0.00	0.21	0.00
DARBHANGA	TA2A1	1.65	0.12	5.00	1.84	0.12	0.18
MUNGER	TA2A1	1.03	0.05	4.57	0.00	0.10	0.00
BHAGALPUR	TA2A1	1.42	0.16	5.00	0.00	0.14	0.00
SAHARSA	TA2A1	0.92	0.00	2.88	0.00	0.11	0.00
PURNIA	TA2A1	1.26	0.07	5.14	0.00	0.09	0.00
SPARGANA	TA2A1	1.07	0.00	3.57	0.00	0.11	0.00
PALAMU	TA2A1	1.48	0.00	4.35	0.00	0.14	0.60
HAZARIBAG	TA2A1	0.67	0.00	4.70	0.00	0.11	0.00
RANCHI	TA2A1	0.85	0.11	7.04	0.00	0.13	0.07
DHANBAD	TA2A1	0.21	0.03	4.73	0.00	0.11	0.00
SINGHBHUM	TA2A1	0.28	0.02	4.44	0.00	0.14	0.00
E. INDIA	TA2A1	0.55	0.11	3.09	11.76	1.09	1.13
JHARKHAND	TA2A1	0.47	0.05	4.86	9.60	0.24	0.73

Contd.....

State/ District	Industrial Division	Participation Rate		Growth Rate		Location Quotient	
		Male	Female	Male	Female	Male	Female
INDIA	TA2A2	9.01	12.40	4.00	3.67		
WEST BENGAL	TA2A2	7.39	29.17	-0.48	4.15	0.88	1.03
ORISSA	TA2A2	9.17	21.43	3.86	5.91	1.20	0.93
BIHAR	TA2A2	6.46	13.48	2.41	4.05	1.17	0.98
KOCHBIHAR	TA2A2	6.27	29.93	-2.42	9.58	1.04	1.11
JALPAIGURI	TA2A2	7.74	27.03	5.25	6.13	0.74	1.01
DARJILING	TA2A2	8.97	26.30	1.55	9.23	0.92	0.97
W. DINAJPUR	TA2A2	6.27	27.63	3.53	13.41	0.84	1.09
MALDA	TA2A2	7.40	40.41	0.31	7.64	1.10	1.08
MURSHIDABAD	TA2A2	5.89	13.30	1.14	4.89	1.03	1.06
NADIA	TA2A2	4.86	14.76	1.05	5.69	0.93	5.69
24 PARGANA	TA2A2	6.42	27.39	-0.79	9.04	0.96	2.17
CALCUTTA	TA2A2	9.81	44.43	-2.62	1.55	0.81	1.02
HAORA	TA2A2	5.35	26.10	4.44	7.74	0.80	0.96
HUGLI	TA2A2	3.79	18.11	-3.11	1.58	0.87	1.02
MEDINIPUR	TA2A2	14.87	24.96	12.39	8.40	1.07	1.01
BANKURA	TA2A2	5.78	22.69	-2.36	6.14	0.97	1.04
PURULIYA	TA2A2	7.16	15.07	2.97	-6.82	0.69	0.89
BARDDHAMAN	TA2A2	6.60	16.86	0.35	2.36	0.92	1.04
BIRBHUM	TA2A2	7.25	34.50	1.65	4.70	1.28	1.02
SAMBALPUR	TA2A2	7.71	16.66	2.52	4.95	1.12	0.88
SUNDERGARH	TA2A2	9.44	28.53	4.02	4.04	1.11	0.99
KENDUJHAR	TA2A2	8.40	17.10	1.20	1.83	1.08	0.75
MAYURBHANG	TA2A2	10.38	21.92	6.67	11.34	1.22	1.09
BALASORE	TA2A2	7.52	22.04	1.57	7.39	1.01	1.09
CUTTACK	TA2A2	11.27	25.41	3.90	7.33	1.19	1.08
DHENKANAL	TA2A2	9.35	33.82	8.89	21.86	1.42	0.96
PHULBANI	TA2A2	7.84	20.83	5.60	6.99	1.46	0.97
BALANGIR	TA2A2	9.79	22.89	4.38	5.32	1.51	0.93
KALAHANDI	TA2A2	6.75	26.42	0.34	2.01	1.20	0.86
KORAPUT	TA2A2	10.25	22.65	8.53	18.81	1.35	0.78
GANJAM	TA2A2	7.36	10.51	0.09	-1.74	1.12	0.75
PURI	TA2A2	9.24	27.12	4.99	9.57	1.30	1.01
PATNA	TA2A2	7.62	13.30	2.92	4.34	1.02	0.96
GAYA	TA2A2	7.13	12.52	1.99	2.10	0.95	0.96
BHOJPUR	TA2A2	7.13	6.97	0.90	-4.89	0.93	0.82
SARAN	TA2A2	5.51	9.43	2.69	2.20	0.87	1.34
CHAMPARAN	TA2A2	6.94	6.72	4.39	-3.24	0.99	1.02
MUZAFFARPUR	TA2A2	8.89	19.93	3.41	5.58	0.92	1.04
DARBHANGA	TA2A2	7.17	16.49	0.05	1.49	0.93	0.86
MUNGER	TA2A2	5.24	5.45	0.47	-0.10	0.88	0.84
BHAGALPUR	TA2A2	7.08	9.74	1.37	0.83	1.09	0.92
SAHARSA	TA2A2	6.12	3.96	5.50	6.97	1.15	0.90
PURNIA	TA2A2	6.83	9.52	4.46	7.93	0.89	0.90
SPARGANA	TA2A2	6.80	19.04	2.08	2.90	0.90	1.16
PALAMU	TA2A2	6.61	8.24	1.40	-2.27	0.92	0.77
HAZARIBAG	TA2A2	6.26	15.20	4.71	10.29	1.02	0.74
RANCHI	TA2A2	7.80	23.98	4.43	8.26	1.09	1.05
DHANBAD	TA2A2	4.45	11.71	3.03	4.66	0.90	1.05
SINGHBHUM	TA2A2	5.71	15.60	0.11	2.15	0.87	0.96
E. INDIA	TA2A2	7.32	23.21	0.81	4.42	0.99	1.08
JHARKHAND	TA2A2	6.72	18.48	3.95	4.61	1.00	0.96

Contd.....

State/ District	Industrial Division	Participation Rate		Growth Rate		Location Quotient	
		Male	Female	Male	Female	Male	Female
INDIA	TA2B	16.76	26.09	2.74	5.47		
WEST BENGAL	TA2B	14.59	32.85	2.41	5.10	0.92	1.09
ORISSA	TA2B	22.14	21.35	4.89	7.65	1.10	1.06
BIHAR	TA2B	15.26	28.05	4.54	6.91	1.14	0.72
KOCHBIHAR	TA2B	29.45	40.33	1.88	4.73	0.58	1.07
JALPAIGURI	TA2B	15.66	39.10	4.36	7.52	0.76	0.93
DARJILING	TA2B	24.36	37.50	4.95	6.02	0.76	0.91
W. DINAJPUR	TA2B	20.03	37.24	3.15	7.61	0.65	1.05
MALDA	TA2B	28.48	38.87	3.43	4.42	0.78	1.25
MURSHIDABAD	TA2B	17.34	15.50	3.25	5.06	0.85	1.11
NADIA	TA2B	16.61	28.32	4.59	5.79	0.66	4.40
24 PARGANA	TA2B	14.42	37.06	4.46	7.39	0.91	2.09
CALCUTTA	TA2B	15.16	31.22	-0.34	1.69	0.98	1.35
HAORA	TA2B	10.94	32.42	4.30	5.89	0.81	0.98
HUGLI	TA2B	12.12	38.37	8.69	6.13	0.65	0.74
MEDINIPUR	TA2B	17.58	36.55	3.65	5.98	1.51	0.93
BANKURA	TA2B	20.48	23.76	2.91	5.41	0.68	1.15
PURULIYA	TA2B	13.90	32.56	0.49	14.13	0.74	0.64
BARDDHAMAN	TA2B	9.87	26.84	4.01	5.94	1.12	0.91
BIRBHUM	TA2B	22.64	27.11	4.77	8.40	0.99	1.29
SAMBALPUR	TA2B	19.09	15.44	5.33	8.98	1.01	1.03
SUNDERGARH	TA2B	14.39	20.58	0.74	5.27	1.34	1.30
KENDUJHAR	TA2B	14.19	12.65	3.99	6.15	1.23	0.97
MAYURBHANG	TA2B	23.55	22.49	6.46	10.27	1.20	1.21
BALASORE	TA2B	15.97	21.15	4.38	7.91	1.02	1.25
CUTTACK	TA2B	24.13	39.67	5.69	7.65	1.21	0.95
DHENKANAL	TA2B	17.38	24.74	6.57	12.10	1.53	1.25
PHULBANI	TA2B	30.95	21.26	6.28	10.19	0.98	1.08
BALANGIR	TA2B	21.82	21.01	4.22	9.25	1.51	1.10
KALAHANDI	TA2B	20.71	10.26	3.36	-0.69	0.94	1.39
KORAPUT	TA2B	23.46	11.31	7.81	9.10	1.25	1.18
GANJAM	TA2B	22.52	14.92	4.17	4.48	0.87	0.70
PURI	TA2B	34.02	36.89	5.79	10.44	0.86	0.97
PATNA	TA2B	20.57	25.69	4.12	5.01	0.84	0.74
GAYA	TA2B	17.28	25.50	4.30	6.47	0.93	0.72
BHOJPUR	TA2B	14.56	29.49	3.57	4.13	1.03	0.35
SARAN	TA2B	13.20	34.52	4.83	9.01	0.90	0.65
CHAMPARAN	TA2B	14.88	37.06	3.15	7.14	1.09	0.35
MUZAFFARPUR	TA2B	17.48	42.75	4.59	5.23	1.02	0.75
DARBHANGA	TA2B	19.38	36.88	3.55	5.39	0.87	0.60
MUNGER	TA2B	13.00	21.12	4.62	5.55	0.86	0.39
BHAGALPUR	TA2B	18.70	28.02	3.59	3.83	1.02	0.54
SAHARSA	TA2B	15.60	9.60	3.88	4.00	1.07	0.59
PURNIA	TA2B	13.64	18.70	4.68	7.24	1.00	0.69
SPARGANA	TA2B	18.13	37.93	1.46	7.54	0.82	0.87
PALAMU	TA2B	18.62	27.99	4.13	8.15	0.83	0.39
HAZARIBAG	TA2B	14.15	25.35	7.28	9.37	1.01	0.62
RANCHI	TA2B	19.06	34.56	5.01	7.09	1.02	0.98
DHANBAD	TA2B	9.77	27.96	8.31	12.15	0.87	0.70
SINGHBHUM	TA2B	10.62	33.29	3.79	9.79	0.94	0.69
E. INDIA	TA2B	15.72	29.29	3.40	5.90	0.91	1.48
JHARKHAND	TA2B	13.47	26.61	4.38	8.09	1.04	0.89

Contd.....

State/ District	Industrial Division	Participation Rate		Growth Rate		Location Quotient	
		Male	Female	Male	Female	Male	Female
INDIA	TA2B1	8.28	4.50	2.40	7.21		
WEST BENGAL	TA2B1	7.72	5.97	2.72	6.17	0.57	1.19
ORISSA	TA2B1	12.05	4.48	5.81	12.70	0.94	0.52
BIHAR	TA2B1	7.15	2.46	4.81	8.21	2.07	0.84
KOCHBIHAR	TA2B1	17.32	8.39	2.54	4.08	0.60	0.96
JALPAIGURI	TA2B1	8.46	6.36	6.04	10.64	0.49	0.00
DARJILING	TA2B1	13.27	6.21	5.41	6.94	0.20	0.43
W. DINAJPUR	TA2B1	9.85	4.37	2.11	6.39	0.97	0.70
MALDA	TA2B1	17.61	9.84	3.42	6.14	1.91	1.41
MURSHIDABAD	TA2B1	8.56	3.43	3.57	7.18	1.31	1.27
NADIA	TA2B1	8.22	4.27	5.85	4.41	0.46	1.41
24 PARGANA	TA2B1	8.63	7.97	5.13	10.47	0.44	1.03
CALCUTTA	TA2B1	7.30	5.12	-0.86	1.77	0.56	1.90
HAORA	TA2B1	5.95	7.32	6.11	9.64	0.49	2.58
HUGLI	TA2B1	6.48	7.55	28.57	8.49	0.54	1.00
MEDINIPUR	TA2B1	8.55	7.05	4.34	4.90	1.06	2.19
BANKURA	TA2B1	10.46	4.37	2.79	2.49	0.74	0.00
PURULIYA	TA2B1	5.48	2.92	-3.36	8.33	0.72	0.00
BARDDHAMAN	TA2B1	4.74	3.16	5.32	4.91	0.52	0.95
BIRBHUM	TA2B1	12.98	5.56	7.12	5.32	1.07	0.00
SAMBALPUR	TA2B1	10.24	3.88	6.65	18.54	0.90	0.00
SUNDERGARH	TA2B1	6.94	4.32	-1.13	5.77	0.44	0.50
KENDUJHAR	TA2B1	5.70	1.78	2.57	5.88	0.48	0.00
MAYURBHANG	TA2B1	13.26	2.79	7.88	22.27	1.64	0.00
BALASORE	TA2B1	8.47	2.17	6.89	11.29	1.04	1.32
CUTTACK	TA2B1	13.51	10.93	7.82	28.35	1.59	1.62
DHENKANAL	TA2B1	9.24	7.79	6.94	27.62	0.95	0.00
PHULBANI	TA2B1	17.08	1.86	5.44	-2.84	1.76	0.00
BALANGIR	TA2B1	11.58	3.38	4.93	23.72	2.28	2.10
KALAHANDI	TA2B1	11.07	0.67	4.59	3.90	1.04	0.00
KORAPUT	TA2B1	14.92	1.52	10.19	15.86	0.56	0.00
GANJAM	TA2B1	10.13	1.98	4.31	-3.22	0.75	0.84
PURI	TA2B1	20.12	10.30	7.27	16.95	0.49	0.00
PATNA	TA2B1	11.68	3.74	4.20	12.38	0.18	1.97
GAYA	TA2B1	6.87	1.24	3.89	4.22	2.14	1.15
BHOJPUR	TA2B1	6.57	1.98	2.27	11.33	2.29	0.00
SARAN	TA2B1	5.75	7.44	3.29	30.84	2.60	1.90
CHAMPARAN	TA2B1	7.02	0.73	2.16	20.77	3.04	0.00
MUZAFFARPUR	TA2B1	7.02	4.22	3.42	17.97	1.90	0.88
DARBHANGA	TA2B1	6.71	0.65	2.36	-15.37	2.32	0.94
MUNGER	TA2B1	6.44	2.65	6.56	-2.90	2.03	0.83
BHAGALPUR	TA2B1	10.03	8.54	5.90	33.00	2.44	1.90
SAHARSA	TA2B1	7.45	0.40	3.26	7.70	2.00	0.00
PURNIA	TA2B1	5.65	0.80	3.40	-12.34	2.22	1.14
SPARGANA	TA2B1	6.54	2.31	1.43	17.46	1.59	0.00
PALAMU	TA2B1	9.26	6.61	3.60	20.95	2.17	0.00
HAZARIBAG	TA2B1	8.31	2.83	9.93	21.48	1.40	0.00
RANCHI	TA2B1	10.10	4.44	5.15	19.23	1.42	0.94
DHANBAD	TA2B1	3.78	0.75	12.65	7.74	0.56	0.36
SINGHBHUM	TA2B1	3.49	0.97	4.20	0.78	0.64	0.24
E. INDIA	TA2B1	8.07	4.69	3.76	7.39	1.34	0.83
JHARKHAND	TA2B1	6.29	3.03	4.84	9.77	0.98	0.49

Contd.....

State/ District	Industrial Division	Participation Rate		Growth Rate		Location Quotient	
		Male	Female	Male	Female	Male	Female
INDIA	TA2B2	1.40	4.58	3.65	5.28		
WEST BENGAL	TA2B2	1.33	7.11	2.50	4.39	0.94	1.09
ORISSA	TA2B2	1.76	3.66	4.72	3.42	1.11	1.06
BIHAR	TA2B2	1.49	5.82	3.01	6.50	1.07	0.72
KOCHBIHAR	TA2B2	2.82	7.12	0.48	1.95	0.58	1.07
JALPAIGURI	TA2B2	1.57	8.29	0.42	8.35	0.78	0.93
DARJILING	TA2B2	1.98	9.69	2.62	5.01	0.80	0.91
W. DINAJPUR	TA2B2	1.79	7.16	1.29	6.08	0.63	1.05
MALDA	TA2B2	2.77	6.67	8.11	1.71	0.70	1.25
MURSHIDABAD	TA2B2	1.67	3.42	3.67	6.94	0.81	1.11
NADIA	TA2B2	1.78	5.63	4.08	5.72	0.67	4.41
24 PARGANA	TA2B2	1.17	7.55	4.73	8.32	0.95	2.09
CALCUTTA	TA2B2	1.36	6.41	-0.05	-0.73	1.01	1.35
HAORA	TA2B2	0.78	6.05	4.37	6.44	0.84	0.97
HUGLI	TA2B2	1.33	9.26	3.29	4.60	0.66	0.74
MEDINIPUR	TA2B2	1.86	10.29	3.14	8.94	1.55	0.92
BANKURA	TA2B2	2.91	9.28	6.25	6.65	0.67	1.15
PURULIYA	TA2B2	1.82	12.15	3.47	28.60	0.74	0.64
BARDDHAMAN	TA2B2	1.04	7.31	3.38	6.90	1.17	0.91
BIRBHUM	TA2B2	2.15	5.26	2.98	4.72	0.98	1.29
SAMBALPUR	TA2B2	1.33	2.56	2.14	3.99	1.02	1.03
SUNDERGARH	TA2B2	1.16	3.71	3.72	-0.27	1.40	1.30
KENDUJHAR	TA2B2	1.50	2.78	4.25	2.20	1.28	0.97
MAYURBHANG	TA2B2	2.04	4.35	5.43	4.75	1.16	1.22
BALASORE	TA2B2	1.30	5.03	5.52	9.01	1.02	1.25
CUTTACK	TA2B2	2.20	6.83	4.43	1.20	1.18	0.95
DHENKANAL	TA2B2	1.61	8.00	7.64	16.06	1.58	1.26
PHULBANI	TA2B2	2.70	1.80	4.20	1.50	0.92	1.09
BALANGIR	TA2B2	1.84	3.18	5.02	7.74	1.46	1.09
KALAHANDI	TA2B2	2.55	1.71	5.05	-5.15	0.93	1.40
KORAPUT	TA2B2	1.52	1.75	5.26	3.69	1.31	1.18
GANJAM	TA2B2	2.49	2.37	5.66	0.20	0.88	0.70
PURI	TA2B2	1.73	5.54	5.33	7.98	0.89	0.97
PATNA	TA2B2	2.06	3.92	4.02	3.08	0.89	0.74
GAYA	TA2B2	2.85	8.61	9.56	17.72	0.84	0.72
BHOJPUR	TA2B2	1.36	5.19	3.60	11.33	0.93	0.36
SARAN	TA2B2	1.56	6.25	4.49	11.26	0.77	0.65
CHAMPARAN	TA2B2	1.43	12.57	0.45	10.67	0.94	0.35
MUZAFFARPUR	TA2B2	1.80	6.55	5.38	10.88	0.95	0.75
DARBHANGA	TA2B2	2.75	8.84	1.64	4.65	0.76	0.60
MUNGER	TA2B2	1.16	2.88	0.60	3.14	0.77	0.39
BHAGALPUR	TA2B2	1.42	3.13	0.91	3.75	0.92	0.54
SAHARSA	TA2B2	1.02	0.37	-3.35	-12.94	1.00	0.60
PURNIA	TA2B2	1.04	4.69	2.53	5.45	0.90	0.69
SPARGANA	TA2B2	0.17	4.94	-18.71	7.90	0.76	0.88
PALAMU	TA2B2	1.45	2.71	0.94	3.24	0.73	0.39
HAZARIBAG	TA2B2	0.82	4.56	-1.49	3.20	0.98	0.63
RANCHI	TA2B2	2.05	7.32	3.11	3.41	0.99	0.98
DHANBAD	TA2B2	1.14	6.92	7.66	10.74	0.89	0.70
SINGHBHUM	TA2B2	1.08	10.03	2.63	9.21	0.97	0.69
E. INDIA	TA2B2	1.43	6.08	2.97	4.80	0.89	1.48
JHARKHAND	TA2B2	1.23	6.28	2.72	6.38	1.05	0.89

Contd.....

State/ District	Industrial Division	Participation Rate		Growth Rate		Location Quotient	
		Male	Female	Male	Female	Male	Female
INDIA	TA2B3	3.07	13.86	3.03	5.48		
WEST BENGAL	TA2B3	2.60	17.61	1.96	4.83	0.87	0.98
ORISSA	TA2B3	4.12	11.05	5.04	10.90	1.25	0.84
BIHAR	TA2B3	2.95	13.81	4.04	7.95	1.18	1.18
KOCHBIHAR	TA2B3	5.79	24.06	0.87	6.17	1.27	1.15
JALPAIGURI	TA2B3	2.92	22.81	2.12	6.25	0.73	1.07
DARJILING	TA2B3	3.30	18.27	3.01	6.13	1.01	1.03
W. DINAJPUR	TA2B3	5.34	24.45	5.94	8.87	0.93	1.13
MALDA	TA2B3	4.68	20.98	2.37	4.82	1.26	0.95
MURSHIDABAD	TA2B3	4.04	7.59	1.87	2.65	1.11	1.02
NADIA	TA2B3	3.87	16.29	3.09	5.85	1.07	6.71
24 PARGANA	TA2B3	2.45	19.91	2.75	5.86	0.99	2.24
CALCUTTA	TA2B3	2.26	16.76	0.81	2.36	0.73	0.75
HAORA	TA2B3	1.74	16.90	0.74	4.24	0.80	0.95
HUGLI	TA2B3	2.04	17.69	0.29	4.77	0.98	1.24
MEDINIPUR	TA2B3	4.68	17.32	3.16	4.55	0.85	1.07
BANKURA	TA2B3	3.71	8.85	0.03	4.96	1.11	0.96
PURULIYA	TA2B3	3.27	12.77	2.20	10.79	0.67	1.09
BARDDHAMAN	TA2B3	2.31	15.50	3.37	6.09	0.81	1.15
BIRBHUM	TA2B3	4.21	13.85	0.32	12.20	1.42	0.81
SAMBALPUR	TA2B3	4.25	7.44	6.20	9.33	1.17	0.76
SUNDERGARH	TA2B3	2.82	10.93	2.74	9.41	1.00	0.74
KENDUJHAR	TA2B3	3.95	6.85	7.61	10.31	1.01	0.57
MAYURBHANG	TA2B3	4.85	14.06	7.43	12.43	1.23	0.99
BALASORE	TA2B3	3.11	11.97	2.86	11.26	1.01	0.95
CUTTACK	TA2B3	3.73	19.50	4.87	10.51	1.18	1.17
DHENKANAL	TA2B3	3.01	8.11	4.10	6.97	1.37	0.73
PHULBANI	TA2B3	6.26	13.89	11.89	15.08	1.70	0.88
BALANGIR	TA2B3	5.09	10.85	4.52	11.84	1.51	0.80
KALAHANDI	TA2B3	3.85	7.48	0.82	6.54	1.33	0.43
KORAPUT	TA2B3	3.34	5.61	5.74	13.12	1.39	0.47
GANJAM	TA2B3	4.72	7.81	3.53	8.91	1.25	0.79
PURI	TA2B3	6.05	18.14	6.79	13.26	1.53	1.05
PATNA	TA2B3	3.13	14.87	4.23	8.46	1.12	1.13
GAYA	TA2B3	3.43	10.29	3.60	6.06	0.95	1.16
BHOJPUR	TA2B3	3.55	15.82	6.42	7.03	0.89	1.19
SARAN	TA2B3	2.96	13.94	6.35	7.35	0.86	1.88
CHAMPARAN	TA2B3	2.76	14.08	3.70	4.80	0.94	1.55
MUZAFFARPUR	TA2B3	3.89	19.29	5.08	9.21	0.87	1.27
DARBHANGA	TA2B3	4.79	16.59	5.03	8.04	0.96	1.07
MUNGER	TA2B3	2.49	11.98	2.59	8.29	0.89	1.20
BHAGALPUR	TA2B3	4.12	11.38	2.11	4.40	1.13	1.22
SAHARSA	TA2B3	3.71	7.76	7.63	9.61	1.19	1.14
PURNIA	TA2B3	2.52	8.06	7.36	10.84	0.84	1.07
SPARGANA	TA2B3	3.71	23.23	3.10	9.54	0.94	1.38
PALAMU	TA2B3	4.07	14.02	4.81	5.02	0.96	1.06
HAZARIBAG	TA2B3	1.85	12.75	2.04	10.87	1.03	0.83
RANCHI	TA2B3	3.25	17.16	3.65	6.33	1.12	1.11
DHANBAD	TA2B3	2.12	12.29	5.33	11.72	0.91	1.33
SINGHBHUM	TA2B3	2.45	13.72	1.11	6.74	0.84	1.17
E. INDIA	TA2B3	2.89	15.28	3.07	6.24	1.03	0.89
JHARKHAND	TA2B3	2.81	12.68	3.47	7.81	0.98	1.02

Contd.....

State/ District	Industrial Division	Participation Rate		Growth Rate		Location Quotient	
		Male	Female	Male	Female	Male	Female
INDIA	TA2B4	0.67	0.52	3.00	5.39		
WEST BENGAL	TA2B4	0.44	0.51	0.96	4.31	0.89	1.11
ORISSA	TA2B4	0.92	0.41	1.21	3.20	1.33	1.10
BIHAR	TA2B4	0.50	0.20	1.99	4.60	1.08	0.65
KOCHBIHAR	TA2B4	0.74	0.12	-2.02	0.00	1.45	1.49
JALPAIGURI	TA2B4	0.53	0.43	2.65	0.00	0.77	1.09
DARJILING	TA2B4	0.78	0.67	5.91	14.48	1.07	1.06
W. DINAJPUR	TA2B4	0.41	0.08	6.01	-12.94	0.89	0.83
MALDA	TA2B4	0.38	0.00	-4.39	0.00	1.51	1.51
MURSHIDABAD	TA2B4	0.45	0.08	0.09	10.03	1.07	1.42
NADIA	TA2B4	0.53	0.38	2.29	-1.67	1.03	6.32
24 PARGANA	TA2B4	0.39	0.47	1.01	5.42	1.15	3.01
CALCUTTA	TA2B4	0.54	0.56	-0.83	-2.29	0.68	0.77
HAORA	TA2B4	0.28	0.39	-0.04	7.18	0.84	1.35
HUGLI	TA2B4	0.38	1.41	2.68	23.72	1.02	1.53
MEDINIPUR	TA2B4	0.45	0.60	2.61	0.00	0.81	1.29
BANKURA	TA2B4	0.74	0.58	5.31	0.00	1.10	1.10
PURULIYA	TA2B4	0.70	1.24	7.54	0.00	0.51	0.61
BARDDHAMAN	TA2B4	0.29	0.28	5.62	0.00	0.76	0.84
BIRBHUM	TA2B4	0.47	0.21	3.16	0.00	1.59	1.03
SAMBALPUR	TA2B4	0.26	0.17	-4.37	0.00	1.23	1.19
SUNDERGARH	TA2B4	0.40	0.33	4.28	1.09	0.94	0.98
KENDUJHAR	TA2B4	0.64	0.28	3.05	1.26	0.79	0.50
MAYURBHANG	TA2B4	0.66	0.42	0.26	5.45	1.35	0.77
BALASORE	TA2B4	0.80	0.11	3.62	0.00	1.04	0.61
CUTTACK	TA2B4	0.89	0.32	2.30	9.15	1.28	2.02
DHENKANAL	TA2B4	0.77	0.00	11.00	0.00	1.41	1.43
PHULBANI	TA2B4	1.16	0.62	4.18	0.00	1.82	0.48
BALANGIR	TA2B4	0.81	1.65	1.12	18.51	1.56	0.80
KALAHANDI	TA2B4	0.30	0.12	-7.82	-18.25	1.38	0.18
KORAPUT	TA2B4	0.84	0.34	6.36	3.21	1.72	0.39
GANJAM	TA2B4	1.38	0.33	2.93	-3.92	1.09	0.66
PURI	TA2B4	1.92	0.94	-1.94	7.27	1.76	1.83
PATNA	TA2B4	0.68	0.30	4.96	15.43	1.23	1.03
GAYA	TA2B4	0.91	0.22	-1.72	8.20	0.74	0.35
BHOJPUR	TA2B4	0.27	0.14	-1.23	0.00	0.78	0.50
SARAN	TA2B4	0.15	0.00	-2.29	0.00	0.73	2.53
CHAMPARAN	TA2B4	0.34	0.24	2.03	0.96	0.86	0.19
MUZAFFARPUR	TA2B4	0.45	0.25	1.43	3.42	0.68	0.78
DARBHANGA	TA2B4	0.86	0.35	8.04	-1.05	0.65	0.12
MUNGER	TA2B4	0.38	0.00	1.07	0.00	0.86	0.94
BHAGALPUR	TA2B4	0.47	0.14	-0.73	3.42	1.18	2.33
SAHARSA	TA2B4	0.20	0.10	0.23	0.00	1.11	0.30
PURNIA	TA2B4	0.43	0.07	5.10	0.00	0.68	0.29
SPARGANA	TA2B4	3.79	0.88	2.26	4.28	0.66	0.53
PALAMU	TA2B4	0.27	1.23	-1.61	0.00	0.93	1.57
HAZARIBAG	TA2B4	0.50	1.78	9.75	27.92	1.18	0.58
RANCHI	TA2B4	0.33	0.14	2.15	-8.35	1.16	0.89
DHANBAD	TA2B4	0.17	0.17	-1.07	7.18	0.69	0.22
SINGHBHUM	TA2B4	0.24	0.15	0.56	7.53	0.54	0.21
E. INDIA	TA2B4	0.52	0.40	1.31	4.12	1.07	0.83
JHARKHAND	TA2B4	0.47	0.45	2.67	10.38	0.89	0.73

Contd.....



State/ District	Industrial Division	Participation Rate		Growth Rate		Location Quotient	
		Male	Female	Male	Female	Male	Female
INDIA	TA2B5	0.59	0.32	3.07	3.29		
WEST BENGAL	TA2B5	0.51	0.42	1.25	7.23	0.87	1.02
ORISSA	TA2B5	0.43	0.18	5.19	1.79	1.09	0.69
BIHAR	TA2B5	0.37	0.40	4.83	-1.82	1.27	1.18
KOCHBIHAR	TA2B5	0.70	0.00	7.67	0.00	1.33	0.97
JALPAIGURI	TA2B5	0.50	0.49	6.81	2.82	0.80	1.09
DARJILING	TA2B5	1.04	0.59	2.24	17.69	0.90	1.28
W. DINAJPUR	TA2B5	0.53	0.24	16.77	3.42	0.92	1.04
MALDA	TA2B5	0.51	0.38	5.40	0.00	1.34	0.79
MURSHIDABAD	TA2B5	0.53	0.62	4.19	20.65	1.17	1.09
NADIA	TA2B5	0.43	0.39	1.34	11.31	1.26	6.42
24 PARGANA	TA2B5	0.43	0.40	4.45	18.53	0.88	2.20
CALCUTTA	TA2B5	0.77	0.60	-1.30	3.95	0.72	0.74
HAORA	TA2B5	0.33	0.49	2.86	1.44	0.62	0.86
HUGLI	TA2B5	0.35	0.49	1.63	15.97	1.18	1.45
MEDINIPUR	TA2B5	0.27	0.16	2.54	6.05	0.99	1.45
BANKURA	TA2B5	0.55	0.19	4.74	0.00	1.73	1.80
PURULIYA	TA2B5	0.35	0.49	2.14	0.00	0.96	1.97
BARDDHAMAN	TA2B5	0.24	0.15	2.69	-0.29	0.94	1.51
BIRBHUM	TA2B5	0.41	0.24	2.54	0.00	1.48	0.75
SAMBALPUR	TA2B5	0.38	0.32	8.85	12.33	0.90	0.61
SUNDERGARH	TA2B5	0.25	0.18	0.71	-4.54	0.88	0.65
KENDUJHAR	TA2B5	0.16	0.08	0.00	0.00	1.17	0.60
MAYURBHANG	TA2B5	0.40	0.00	7.64	0.00	1.17	0.92
BALASORE	TA2B5	0.30	0.00	4.81	0.00	0.90	1.09
CUTTACK	TA2B5	0.77	0.65	4.86	3.71	1.18	0.97
DHENKANAL	TA2B5	0.20	0.21	11.61	0.00	1.39	1.13
PHULBANI	TA2B5	0.27	0.31	-6.33	0.00	1.62	0.36
BALANGIR	TA2B5	0.22	0.00	-3.57	0.00	1.40	0.58
KALAHANDI	TA2B5	0.27	0.00	3.61	0.00	1.80	0.34
KORAPUT	TA2B5	0.45	0.18	4.72	0.00	0.99	0.35
GANJAM	TA2B5	0.43	0.02	5.76	-16.74	1.52	0.60
PURI	TA2B5	0.54	0.11	10.11	-6.33	0.85	0.76
PATNA	TA2B5	0.44	0.15	3.38	-3.28	1.23	0.83
GAYA	TA2B5	0.52	1.72	4.90	1.84	1.72	1.88
BHOJPUR	TA2B5	0.33	0.42	2.24	-7.58	0.90	1.01
SARAN	TA2B5	0.29	0.00	5.55	0.00	1.11	1.64
CHAMPARAN	TA2B5	0.28	0.00	-1.35	0.00	0.99	2.53
MUZAFFARPUR	TA2B5	0.65	1.74	4.40	-9.03	0.98	0.94
DARBHANGA	TA2B5	0.44	0.10	3.55	-10.40	1.49	1.23
MUNGER	TA2B5	0.27	0.10	3.67	-17.47	0.87	0.79
BHAGALPUR	TA2B5	0.41	0.14	3.57	-17.85	0.94	0.66
SAHARSA	TA2B5	0.23	0.33	2.61	1.26	0.85	0.21
PURNIA	TA2B5	0.64	0.85	8.34	11.00	0.70	1.30
SPARGANA	TA2B5	0.28	0.16	1.84	3.42	0.10	0.87
PALAMU	TA2B5	0.47	0.44	13.02	0.00	0.82	0.50
HAZARIBAG	TA2B5	0.17	0.17	3.63	13.02	0.66	0.72
RANCHI	TA2B5	0.83	0.96	11.99	32.28	1.33	1.14
DHANBAD	TA2B5	0.14	0.11	4.28	2.92	1.17	1.58
SINGHBHUM	TA2B5	0.19	0.02	1.62	0.00	0.93	1.70
E. INDIA	TA2B5	0.46	0.37	2.44	2.93	1.12	1.05
JHARKHAND	TA2B5	0.29	0.25	5.44	12.49	0.98	1.16

Contd.....

State/ District	Industrial Division	Participation Rate		Growth Rate		Location Quotient	
		Male	Female	Male	Female	Male	Female
INDIA	TA2B6	2.28	0.83	2.96	8.30		
WEST BENGAL	TA2B6	1.72	0.63	1.61	5.64	0.84	1.00
ORISSA	TA2B6	2.54	1.06	4.03	7.22	1.27	0.83
BIHAR	TA2B6	2.03	0.77	5.21	7.78	1.24	1.11
KOCHBIHAR	TA2B6	1.89	0.51	1.37	-0.91	1.35	1.31
JALPAIGURI	TA2B6	1.64	0.63	5.46	23.72	0.74	1.20
DARJILING	TA2B6	3.66	1.77	6.87	2.19	0.74	0.96
W. DINAJPUR	TA2B6	2.03	0.47	1.94	2.92	1.35	1.42
MALDA	TA2B6	2.50	1.00	3.60	37.41	1.12	0.98
MURSHIDABAD	TA2B6	2.03	0.32	4.93	26.14	1.41	0.96
NADIA	TA2B6	1.52	0.35	5.21	2.87	1.35	7.40
24 PARGANA	TA2B6	1.23	0.56	3.94	11.05	0.92	2.31
CALCUTTA	TA2B6	2.27	0.66	-1.30	0.50	0.59	0.77
HAORA	TA2B6	1.67	0.91	3.06	13.35	0.69	0.95
HUGLI	TA2B6	1.33	0.59	1.79	15.43	0.90	1.10
MEDINIPUR	TA2B6	1.72	0.96	4.43	15.97	1.23	0.97
BANKURA	TA2B6	2.01	0.39	4.46	14.87	1.09	0.68
PURULIYA	TA2B6	1.91	0.16	11.89	0.00	0.85	0.82
BARDDHAMAN	TA2B6	1.25	0.42	2.52	4.42	1.03	1.27
BIRBHUM	TA2B6	2.33	1.63	6.13	10.25	1.44	0.79
SAMBALPUR	TA2B6	2.43	0.87	5.32	2.28	1.42	0.70
SUNDERGARH	TA2B6	2.56	0.89	3.18	4.85	1.06	0.76
KENDUJHAR	TA2B6	2.08	0.53	3.89	4.81	1.53	0.59
MAYURBHANG	TA2B6	2.22	0.87	3.69	0.00	1.37	1.19
BALASORE	TA2B6	1.84	1.87	-0.55	15.41	1.07	1.04
CUTTACK	TA2B6	2.38	1.33	1.67	6.61	0.99	1.11
DHENKANAL	TA2B6	2.10	0.63	6.76	0.00	1.29	0.46
PHULBANI	TA2B6	3.39	1.55	10.80	17.46	1.86	1.10
BALANGIR	TA2B6	1.58	1.67	2.04	18.66	1.91	0.79
KALAHANDI	TA2B6	2.18	0.27	6.83	-4.98	1.34	0.60
KORAPUT	TA2B6	2.32	1.39	5.82	7.12	1.07	0.45
GANJAM	TA2B6	2.92	0.36	3.74	-2.95	1.42	0.80
PURI	TA2B6	3.58	1.86	6.28	12.18	1.47	0.99
PATNA	TA2B6	2.20	0.83	6.29	7.27	0.92	1.25
GAYA	TA2B6	2.13	0.93	4.80	11.74	1.02	0.90
BHOJPUR	TA2B6	1.65	0.52	4.23	4.48	1.17	1.23
SARAN	TA2B6	1.86	0.68	9.68	18.37	1.04	1.46
CHAMPARAN	TA2B6	2.10	1.56	7.82	10.84	0.94	1.13
MUZAFFARPUR	TA2B6	2.62	1.72	5.97	7.18	1.05	1.10
DARBHANGA	TA2B6	2.77	1.28	3.85	0.80	1.28	0.92
MUNGER	TA2B6	1.77	0.48	5.15	13.87	0.93	1.30
BHAGALPUR	TA2B6	1.43	0.49	-0.39	-6.88	1.35	0.95
SAHARSA	TA2B6	2.74	0.33	6.64	5.45	1.54	1.77
PURNIA	TA2B6	2.73	1.15	3.70	12.33	0.84	0.89
SPARGANA	TA2B6	2.68	1.11	2.53	16.98	1.05	1.63
PALAMU	TA2B6	2.25	0.69	10.50	0.00	1.14	1.02
HAZARIBAG	TA2B6	1.89	0.26	9.29	2.66	0.73	0.80
RANCHI	TA2B6	1.87	1.05	7.03	12.53	1.04	1.06
DHANBAD	TA2B6	1.42	0.37	3.85	6.87	1.08	1.12
SINGHBHUM	TA2B6	2.01	0.68	3.45	7.18	1.05	0.93
E. INDIA	TA2B6	1.92	0.75	3.03	6.64	1.04	0.87
JHARKHAND	TA2B6	1.79	0.78	4.73	7.77	1.11	0.93

Contd.....

State/ District	Industrial Division	Participation Rate		Growth Rate		Location Quotient	
		Male	Female	Male	Female	Male	Female
INDIA	TA2B7	0.47	1.49	2.62	1.39		
WEST BENGAL	TA2B7	0.27	0.59	10.35	13.55	0.80	1.10
ORISSA	TA2B7	0.31	0.50	-3.99	-9.30	1.57	1.18
BIHAR	TA2B7	0.75	4.59	7.99	5.21	1.18	0.63
KOCHBIHAR	TA2B7	0.19	0.12	8.20	0.00	0.96	0.25
JALPAIGURI	TA2B7	0.03	0.07	16.98	0.00	0.75	0.86
DARJILING	TA2B7	0.31	0.31	20.92	0.00	0.98	1.33
W. DINAJPUR	TA2B7	0.07	0.47	-2.84	6.44	0.57	0.19
MALDA	TA2B7	0.02	0.00	-14.87	0.00	0.51	0.00
MURSHIDABAD	TA2B7	0.07	0.03	0.00	0.00	0.87	0.40
NADIA	TA2B7	0.24	1.01	3.26	34.02	1.04	6.61
24 PARGANA	TA2B7	0.12	0.20	20.81	31.36	0.81	2.06
CALCUTTA	TA2B7	0.64	1.12	12.47	17.81	0.79	0.99
HAORA	TA2B7	0.19	0.36	47.23	14.08	0.62	0.84
HUGLI	TA2B7	0.21	1.39	8.13	13.53	0.94	3.32
MEDINIPUR	TA2B7	0.05	0.17	-13.28	-5.93	0.66	1.29
BANKURA	TA2B7	0.10	0.10	7.18	-6.70	1.22	1.71
PURULIYA	TA2B7	0.38	2.82	0.42	5.57	1.01	3.05
BARDDHAMAN	TA2B7	0.02	0.03	-18.10	-22.82	0.71	0.86
BIRBHUM	TA2B7	0.09	0.36	6.05	4.14	0.89	0.46
SAMBALPUR	TA2B7	0.19	0.19	-10.12	9.79	0.48	0.61
SUNDERGARH	TA2B7	0.26	0.23	-0.44	-6.87	0.84	0.86
KENDUJHAR	TA2B7	0.15	0.35	-3.97	-3.50	1.39	0.92
MAYURBHANG	TA2B7	0.12	0.00	-11.95	0.00	1.05	1.36
BALASORE	TA2B7	0.15	0.00	-5.25	0.00	1.53	0.35
CUTTACK	TA2B7	0.66	0.10	1.60	-30.08	1.31	0.70
DHENKANAL	TA2B7	0.44	0.00	5.42	0.00	1.83	0.00
PHULBANI	TA2B7	0.10	1.24	-13.96	14.87	1.92	1.87
BALANGIR	TA2B7	0.71	0.28	2.59	-19.66	1.71	4.56
KALAHANDI	TA2B7	0.49	0.00	-3.78	0.00	0.58	0.37
KORAPUT	TA2B7	0.07	0.52	-18.10	-1.26	1.52	1.01
GANJAM	TA2B7	0.45	2.05	5.77	33.44	2.32	1.26
PURI	TA2B7	0.07	0.00	-20.85	0.00	2.61	1.94
PATNA	TA2B7	0.39	1.88	-4.47	-8.15	1.11	0.95
GAYA	TA2B7	0.57	2.49	4.81	-3.54	1.52	0.74
BHOJPUR	TA2B7	0.84	5.41	5.48	-3.75	0.49	0.40
SARAN	TA2B7	0.63	6.22	5.46	2.89	0.30	0.00
CHAMPARAN	TA2B7	0.95	7.88	10.08	10.54	0.64	0.75
MUZAFFARPUR	TA2B7	1.05	8.98	9.48	-0.04	0.68	0.54
DARBHANGA	TA2B7	1.07	9.07	7.97	10.82	1.29	0.75
MUNGER	TA2B7	0.49	3.02	7.13	23.97	0.79	0.00
BHAGALPUR	TA2B7	0.81	4.20	3.68	-5.11	0.86	0.44
SAHARSA	TA2B7	0.26	0.33	1.05	-11.85	0.47	0.84
PURNIA	TA2B7	0.63	3.07	21.52	0.00	0.80	0.30
SPARGANA	TA2B7	0.96	5.31	5.78	0.00	5.95	2.33
PALAMU	TA2B7	0.85	2.27	1.03	6.29	0.42	3.42
HAZARIBAG	TA2B7	0.59	2.99	10.53	6.02	1.11	4.24
RANCHI	TA2B7	0.62	3.50	7.25	9.28	0.59	0.32
DHANBAD	TA2B7	1.00	7.36	18.30	16.35	0.47	0.57
SINGHBHUM	TA2B7	1.17	7.71	21.45	33.22	0.58	0.39
E. INDIA	TA2B7	0.42	1.72	6.69	4.27	0.85	0.61
JHARKHAND	TA2B7	0.58	3.13	8.85	11.53	1.03	1.26

Contd.....

State/ District	Industrial Division	Participation Rate		Growth Rate		Location Quotient	
		Male	Female	Male	Female	Male	Female
INDIA	UT	1.33	0.29	5.68	8.81		
WEST BENGAL	UT	1.17	0.33	5.84	14.50		
ORISSA	UT	2.01	0.21	6.23	16.38		
BIHAR	UT	1.82	0.27	6.38	-3.96		
KOCHBIHAR	UT	1.44	0.00	9.76	0.00		
JALPAIGURI	UT	0.38	0.00	3.81	0.00		
DARJILING	UT	1.61	0.33	9.32	19.22		
W. DINAJPUR	UT	0.61	0.00	12.19	0.00		
MALDA	UT	0.94	0.38	5.45	6.05		
MURSHIDABAD	UT	0.96	0.07	4.20	0.96		
NADIA	UT	0.72	0.15	-1.26	10.44		
24 PARGANA	UT	1.02	0.21	4.86	7.80		
CALCUTTA	UT	1.04	0.37	3.29	13.89		
HAORA	UT	0.50	0.03	5.69	0.00		
HUGLI	UT	1.15	0.49	4.22	15.84		
MEDINIPUR	UT	1.09	0.24	3.53	18.80		
BANKURA	UT	0.53	0.19	13.02	0.00		
PURULIYA	UT	4.56	1.60	25.97	0.00		
BARDDHAMAN	UT	2.84	1.11	11.17	21.68		
BIRBHUM	UT	1.45	0.33	12.33	0.00		
SAMBALPUR	UT	1.92	0.17	2.29	0.00		
SUNDERGARH	UT	1.41	0.32	3.14	22.48		
KENDUJHAR	UT	0.93	0.00	-3.54	0.00		
MAYURBHANG	UT	2.31	0.00	10.97	0.00		
BALASORE	UT	1.02	0.11	6.57	0.00		
CUTTACK	UT	1.62	0.04	3.92	0.00		
DHENKANAL	UT	5.09	0.42	29.19	0.00		
PHULBANI	UT	3.02	0.00	12.00	0.00		
BALANGIR	UT	2.24	0.32	7.81	0.00		
KALAHANDI	UT	2.50	0.40	9.51	0.00		
KORAPUT	UT	2.09	0.12	7.88	13.02		
GANJAM	UT	1.94	0.19	4.42	0.00		
PURI	UT	2.55	0.51	7.58	15.06		
PATNA	UT	1.90	0.16	8.39	0.00		
GAYA	UT	2.12	0.17	3.90	0.00		
BHOJPUR	UT	1.45	0.08	5.95	0.00		
SARAN	UT	1.11	0.10	19.37	0.00		
CHAMPARAN	UT	1.06	0.00	8.24	0.00		
MUZAFFARPUR	UT	2.03	0.31	8.91	0.00		
DARBHANGA	UT	1.33	0.00	9.63	0.00		
MUNGER	UT	1.10	0.10	7.81	0.00		
BHAGALPUR	UT	1.95	0.14	7.41	0.00		
SAHARSA	UT	1.48	0.00	6.36	0.00		
PURNIA	UT	0.68	0.00	8.30	0.00		
SPARGANA	UT	1.05	0.28	2.24	0.00		
PALAMU	UT	1.62	0.00	9.33	0.00		
HAZARIBAG	UT	5.47	1.84	4.85	-10.26		
RANCHI	UT	2.04	0.24	15.91	0.00		
DHANBAD	UT	1.80	0.57	2.12	-1.00		
SINGHBHUM	UT	0.97	0.08	7.81	-4.36		
E. INDIA	UT	1.47	0.29	6.11	5.44		
JHARKHAND	UT	1.80	0.38	5.29	-2.88		

Contd.....

State/ District	Industrial Division	Participation Rate		Growth Rate		Location Quotient	
		Male	Female	Male	Female	Male	Female
INDIA	UT1	1.11	0.24	5.26	7.78		
WEST BENGAL	UT1	1.02	0.30	6.34	15.38	1.04	0.99
ORISSA	UT1	1.62	0.11	5.67	10.21	0.84	0.56
BIHAR	UT1	1.48	0.26	5.27	-4.46	0.99	1.35
KOCHBIHAR	UT1	1.26	0.00	9.03	0.00	1.05	0.00
JALPAIGURI	UT1	0.30	0.00	2.06	0.00	0.81	1.07
DARJILING	UT1	1.56	0.33	9.90	19.22	1.49	1.28
W. DINAJPUR	UT1	0.58	0.00	12.53	0.00	0.86	0.57
MALDA	UT1	0.82	0.38	6.42	6.05	0.77	0.73
MURSHIDABAD	UT1	0.87	0.07	4.05	0.96	1.17	3.27
NADIA	UT1	0.59	0.15	-1.91	10.44	0.96	7.40
24 PARGANA	UT1	0.85	0.20	5.56	7.85	1.02	1.90
CALCUTTA	UT1	0.83	0.33	3.26	15.64	1.28	1.15
HAORA	UT1	0.43	0.03	6.04	-6.70	0.84	1.14
HUGLI	UT1	1.08	0.46	4.66	15.15	0.98	1.26
MEDINIPUR	UT1	1.01	0.24	3.81	18.80	0.46	0.37
BANKURA	UT1	0.48	0.19	13.84	0.00	1.03	0.62
PURULIYA	UT1	4.48	1.41	27.71	0.00	0.58	1.31
BARDDHAMAN	UT1	2.70	1.09	11.56	23.32	0.67	0.52
BIRBHUM	UT1	1.32	0.33	15.24	0.00	0.89	0.56
SAMBALPUR	UT1	1.33	0.10	-0.44	0.00	0.81	1.27
SUNDERGARH	UT1	1.19	0.14	6.21	0.00	0.61	0.53
KENDUJHAR	UT1	0.79	0.00	-3.14	0.00	0.40	0.29
MAYURBHANG	UT1	2.01	0.00	12.43	0.00	0.73	0.00
BALASORE	UT1	0.82	0.00	5.14	0.00	0.66	0.00
CUTTACK	UT1	1.55	0.04	5.62	0.00	1.30	1.53
DHENKANAL	UT1	5.03	0.21	29.50	0.00	0.55	0.49
PHULBANI	UT1	2.10	0.00	9.20	0.00	0.50	1.02
BALANGIR	UT1	2.22	0.32	8.86	0.00	0.52	0.00
KALAHANDI	UT1	2.23	0.40	8.54	0.00	0.61	0.00
KORAPUT	UT1	1.63	0.09	5.86	10.03	0.92	0.60
GANJAM	UT1	1.52	0.06	2.53	0.00	0.83	0.10
PURI	UT1	1.47	0.19	3.59	4.37	0.84	0.25
PATNA	UT1	1.43	0.13	7.28	0.00	0.82	0.53
GAYA	UT1	1.76	0.13	2.87	0.00	0.99	6.20
BHOJPUR	UT1	1.30	0.08	6.14	0.00	0.69	1.36
SARAN	UT1	0.76	0.10	17.84	0.00	0.65	0.00
CHAMPARAN	UT1	0.70	0.00	4.13	0.00	0.62	0.00
MUZAFFARPUR	UT1	1.66	0.31	8.35	0.00	1.12	4.10
DARBHANGA	UT1	0.87	0.00	6.60	0.00	0.75	0.23
MUNGER	UT1	0.79	0.10	5.30	0.00	0.65	0.44
BHAGALPUR	UT1	1.59	0.08	6.83	0.00	0.85	0.48
SAHARSA	UT1	1.15	0.00	3.79	0.00	0.60	3.09
PURNIA	UT1	0.43	0.00	4.51	0.00	1.36	3.89
SPARGANA	UT1	0.75	0.28	-0.98	0.00	0.51	0.47
PALAMU	UT1	0.77	0.00	2.00	0.00	0.84	1.34
HAZARIBAG	UT1	5.20	1.75	4.47	-10.71	0.43	0.45
RANCHI	UT1	1.29	0.24	15.79	0.00	1.70	2.47
DHANBAD	UT1	1.70	0.57	2.66	-1.00	0.47	0.42
SINGHBHUM	UT1	0.70	0.05	8.16	-7.88	0.52	0.07
E. INDIA	UT1	1.24	0.25	5.83	4.54	0.85	0.90
JHARKHAND	UT1	1.54	0.33	4.95	-4.17	0.71	0.77

Contd.....

State/ District	Industrial Division	Participation Rate		Growth Rate		Location Quotient	
		Male	Female	Male	Female	Male	Female
INDIA	UT2	0.03	0.01	4.59	6.36		
WEST BENGAL	UT2	0.07	0.01	3.76	1.84	0.84	0.73
ORISSA	UT2	0.01	0.01	17.81	0.00	1.18	1.61
BIHAR	UT2	0.02	0.00	0.78	0.00	1.29	1.26
KOCHBIHAR	UT2	0.00	0.00	0.00	0.00	0.67	0.57
JALPAIGURI	UT2	0.02	0.00	0.00	0.00	0.63	0.67
DARJILING	UT2	0.01	0.00	0.00	0.00	1.24	1.89
W. DINAJPUR	UT2	0.00	0.00	0.00	0.00	0.78	0.55
MALDA	UT2	0.00	0.00	0.00	0.00	0.90	0.95
MURSHIDABAD	UT2	0.00	0.00	0.00	0.00	1.07	0.83
NADIA	UT2	0.03	0.00	24.29	0.00	0.80	3.23
24 PARGANA	UT2	0.07	0.01	4.16	0.00	0.69	1.33
CALCUTTA	UT2	0.12	0.02	2.03	-0.51	0.89	0.62
HAORA	UT2	0.04	0.00	-0.69	0.00	1.00	1.04
HUGLI	UT2	0.02	0.00	1.26	0.00	0.89	0.74
MEDINIPUR	UT2	0.01	0.00	4.14	0.00	0.68	1.10
BANKURA	UT2	0.00	0.00	0.00	0.00	0.89	0.61
PURULIYA	UT2	0.00	0.00	0.00	0.00	0.75	0.21
BARDDHAMAN	UT2	0.09	0.00	0.00	0.00	0.85	0.70
BIRBHUM	UT2	0.01	0.00	-10.40	0.00	1.20	1.89
SAMBALPUR	UT2	0.02	0.00	0.00	0.00	1.23	1.67
SUNDERGARH	UT2	0.02	0.09	16.98	0.00	1.45	1.25
KENDUJHAR	UT2	0.00	0.00	0.00	0.00	1.21	0.92
MAYURBHANG	UT2	0.00	0.00	0.00	0.00	0.95	1.50
BALASORE	UT2	0.02	0.00	0.00	0.00	0.95	3.28
CUTTACK	UT2	0.01	0.00	7.18	0.00	0.95	1.54
DHENKANAL	UT2	0.00	0.00	0.00	0.00	1.36	0.72
PHULBANI	UT2	0.00	0.00	0.00	0.00	1.53	2.50
BALANGIR	UT2	0.00	0.00	0.00	0.00	0.90	2.47
KALAHANDI	UT2	0.00	0.00	0.00	0.00	1.15	0.45
KORAPUT	UT2	0.01	0.00	0.00	0.00	1.13	2.24
GANJAM	UT2	0.02	0.00	11.61	0.00	1.33	0.75
PURI	UT2	0.00	0.00	0.00	0.00	1.32	2.07
PATNA	UT2	0.02	0.00	29.63	0.00	0.98	1.42
GAYA	UT2	0.00	0.00	0.00	0.00	0.96	1.65
BHOJPUR	UT2	0.00	0.00	0.00	0.00	0.83	0.83
SARAN	UT2	0.00	0.00	0.00	0.00	0.99	1.45
CHAMPARAN	UT2	0.00	0.00	0.00	0.00	1.08	2.53
MUZAFFARPUR	UT2	0.01	0.00	0.00	0.00	1.07	1.99
DARBHANGA	UT2	0.00	0.00	0.00	0.00	1.12	1.44
MUNGER	UT2	0.09	0.00	0.00	0.00	1.00	1.07
BHAGALPUR	UT2	0.00	0.00	0.00	0.00	0.71	0.84
SAHARSA	UT2	0.00	0.00	0.00	0.00	1.72	1.52
PURNIA	UT2	0.00	0.00	0.00	0.00	1.38	2.58
SPARGANA	UT2	0.00	0.00	0.00	0.00	1.14	1.57
PALAMU	UT2	0.00	0.00	0.00	0.00	0.95	1.02
HAZARIBAG	UT2	0.01	0.00	7.18	0.00	1.13	0.33
RANCHI	UT2	0.05	0.00	-0.29	0.00	0.91	1.32
DHANBAD	UT2	0.00	0.00	-12.94	0.00	1.09	0.69
SINGHBHUM	UT2	0.03	0.00	-11.80	0.00	1.30	0.93
E. INDIA	UT2	0.05	0.01	3.62	5.76	0.92	0.72
JHARKHAND	UT2	0.01	0.01	-4.15	0.00	1.07	1.17

Contd.....

State/ District	Industrial Division	Participation Rate		Growth Rate		Location Quotient	
		Male	Female	Male	Female	Male	Female
INDIA	UT3	0.19	0.05	8.82	17.95		
WEST BENGAL	UT3	0.08	0.01	2.21	11.36	0.60	0.30
ORISSA	UT3	0.38	0.09	8.75	34.66	0.65	0.34
BIHAR	UT3	0.32	0.01	15.13	0.00	2.15	3.29
KOCHBIHAR	UT3	0.17	0.00	17.22	0.00	0.31	0.06
JALPAIGURI	UT3	0.06	0.00	16.23	0.00	0.05	0.03
DARJILING	UT3	0.04	0.00	-0.89	0.00	0.48	0.14
W. DINAJPUR	UT3	0.03	0.00	7.70	0.00	0.13	0.24
MALDA	UT3	0.12	0.00	0.39	0.00	0.04	0.00
MURSHIDABAD	UT3	0.09	0.00	7.18	0.00	0.16	0.04
NADIA	UT3	0.10	0.00	0.07	0.00	0.58	4.07
24 PARGANA	UT3	0.10	0.02	-0.33	10.84	0.30	0.21
CALCUTTA	UT3	0.09	0.02	5.32	0.00	1.14	0.46
HAORA	UT3	0.03	0.00	20.27	0.00	0.51	0.18
HUGLI	UT3	0.05	0.03	-1.54	0.00	0.62	0.77
MEDINIPUR	UT3	0.07	0.00	0.11	0.00	0.10	0.08
BANKURA	UT3	0.05	0.00	7.18	0.00	0.19	0.07
PURULIYA	UT3	0.08	0.16	1.84	0.00	0.67	1.61
BARDDHAMAN	UT3	0.04	0.02	1.15	0.00	0.05	0.02
BIRBHUM	UT3	0.13	0.00	2.46	0.00	0.21	0.18
SAMBALPUR	UT3	0.57	0.07	14.12	0.00	0.43	0.16
SUNDERGARH	UT3	0.20	0.09	-6.13	8.20	0.67	0.14
KENDUJHAR	UT3	0.13	0.00	-5.59	0.00	0.39	0.27
MAYURBHANG	UT3	0.30	0.00	4.52	0.00	0.23	0.00
BALASORE	UT3	0.18	0.11	15.43	0.00	0.35	0.00
CUTTACK	UT3	0.06	0.00	-11.08	0.00	1.19	0.05
DHENKANAL	UT3	0.06	0.21	15.97	0.00	1.27	0.00
PHULBANI	UT3	0.92	0.00	24.57	0.00	0.21	0.87
BALANGIR	UT3	0.01	0.00	-17.68	0.00	1.82	0.18
KALAHANDI	UT3	0.27	0.00	27.55	0.00	1.17	0.00
KORAPUT	UT3	0.44	0.03	23.57	0.00	0.16	0.37
GANJAM	UT3	0.40	0.13	19.52	0.00	0.93	1.86
PURI	UT3	1.07	0.32	18.83	0.00	0.12	0.00
PATNA	UT3	0.45	0.04	12.37	0.00	0.78	1.41
GAYA	UT3	0.36	0.04	11.84	0.00	1.17	1.93
BHOJPUR	UT3	0.15	0.00	5.42	0.00	1.89	3.73
SARAN	UT3	0.13	0.00	14.04	0.00	1.52	5.78
CHAMPARAN	UT3	0.36	0.00	36.83	0.00	2.22	5.60
MUZAFFARPUR	UT3	0.36	0.00	11.54	0.00	1.93	4.54
DARBHANGA	UT3	0.46	0.00	20.29	0.00	1.96	4.48
MUNGER	UT3	0.21	0.00	17.14	0.00	1.26	2.92
BHAGALPUR	UT3	0.35	0.08	11.21	0.00	1.81	3.12
SAHARSA	UT3	0.32	0.00	0.00	0.00	0.74	0.66
PURNIA	UT3	0.24	0.00	24.67	0.00	1.44	3.01
SPARGANA	UT3	0.30	0.00	33.51	0.00	1.84	3.30
PALAMU	UT3	0.85	0.00	45.73	0.00	1.63	1.47
HAZARIBAG	UT3	0.26	0.00	19.47	0.00	1.60	1.67
RANCHI	UT3	0.70	0.00	19.26	0.00	1.35	1.92
DHANBAD	UT3	0.10	0.00	1.52	0.00	3.47	5.96
SINGHBHUM	UT3	0.25	0.02	18.24	0.00		
E. INDIA	UT3	0.19	0.03	9.05	23.49	1.56	2.05
JHARKHAND	UT3	0.25	0.04	10.11	25.89	1.00	0.92

Contd.....