

**WORK FORCE PARTICIPATION AMONG TRIBALS
IN THE NORTH - EASTERN REGION OF INDIA
1981-1991**

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

UNGSUNGMI A. SHIMRAY

**CENTRE FOR THE STUDY OF REGIONAL DEVELOPMENT
SCHOOL OF SOCIAL SCIENCES
JAWAHARLAL NEHRU UNIVERSITY
NEW DELHI - 110067
1999**



जवाहरलाल नेहरू विश्वविद्यालय
JAWAHARLAL NEHRU UNIVERSITY
NEW DELHI-110067

**CENTRE FOR THE STUDY OF REGIONAL DEVELOPMENT
SCHOOL OF SOCIAL SCIENCES**

CERTIFICATE

This is to certify that this dissertation entitled "*WORK FORCE PARTICIPATION AMONG TRIBALS IN THE NORTH - EASTERN REGION OF INDIA*", submitted by *Ungshungmi A. Shimray*, Centre for the Study of Regional Development, Jawaharlal Nehru University, New Delhi, for the award of the degree of *MASTER OF PHILOSOPHY* is an original work to the best of my knowledge and may be placed before the examiners for evaluation.

Date: 6/5/99

M. H. QURESHI

CHAIRPERSON
Chairperson
Centre for the Study of Reg. Dev.
School of Social Sciences,
Jawaharlal Nehru University,
New Delhi-110 067

M.D. VEMURI

SUPERVISOR

*Dedicated
To
My Parents.*

Acknowledgement

Unlike other regions of India, North-Eastern Region exhibits unique features in terms of the social, economic and demographic characteristics. North-Eastern Region is strategically important, surrounded by international borders of four countries viz., Bangladesh, Myanmar, China and Bhutan. Another characteristics that is, different from other regions of India is its predominantly tribal population. The tribals have their special problems that has been recognized by policy-makers. However, there has been no initiative on the important issues of demography and development in the context of the tribals. Substantial literature on insurgency related problems as also anthropological studies of the region are available. But the studies on work force and occupational structure of tribal population is rare.

The present study is an attempt towards presenting a tribal work force and their economic activities in the North-Eastern Region based on population census of 1981 and 1991. The prevailing economic situation of the North-Eastern tribals cannot be properly explained without studying the work force participation and the fundamental processes and mechanism of the development occurring in such areas.

I am highly grateful to my teacher and supervisor Professor M.D. Vemuri for his constant unimpeachable advices. He is perennial source of inspiration for me for writing the text more and more comprehensive.

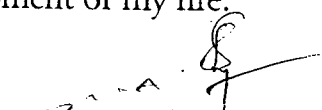
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ABBREVIATION USED IN THE TEXT

NER	North-Eastern Region
TWPR	Tribal Work Force participation Rate
TMWPR	Tribal Males Work Force Participation Rate
TFWPR	Tribal Females Work Force Participation Rate

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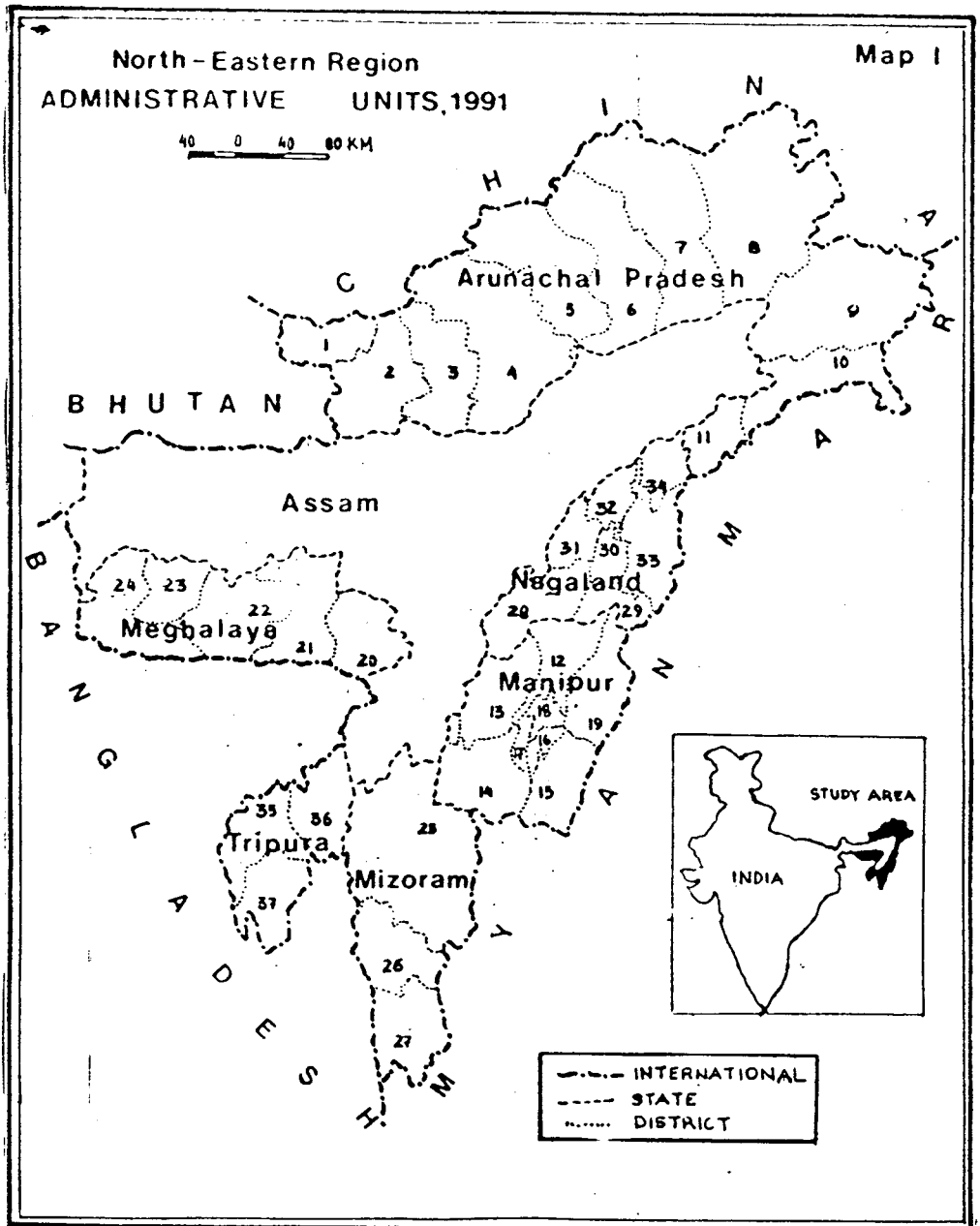
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**NAME OF THE DISTRICTS IN THE NORTH-
EASTERN REGION - 1991.**

ARUNACHAL PRADESH

1. Tawang
2. West Kameng
3. East Kameng
4. Lower Subansiri
5. Upper Subansiri
6. West Siang
7. East Siang
8. Dibang Valley
9. Lohit
10. Changlang
11. Tirap

MANIPUR

12. Senapati
13. Tamenglong
14. Churachandpur
15. Chandel
16. Thoubal
17. Bishnupur
18. Imphal
19. Ukhrul

MEGHALAYA

20. Jaintia Hills
21. East Khasi Hills
22. West Khasi Hills
23. East Garo Hills
24. West Garo Hills

MIZORAM

25. Aizawl
26. Lunglei
27. Chhimtuipui

NAGALAND

28. Kohima
29. Phek
30. Zunheboto
31. Wokha
32. Mokokchung
33. Tuensang
34. Mon

TRIPURA

35. West Tripura
36. North Tripura
37. South Tripura

Chapter I

Introduction

1.1 Statement of the Problem

The tribes of India generally live in areas which are by and large unfavourable for settled agriculture. Their occupations and way of life are intrinsically linked with the environmental setting of these areas. Most of the areas in which tribals live are very rich in natural resource like forests and minerals. Their livelihood is closely associated with subsistence cultivation and even today most of them spend the greater part of their lives in the primary activities. North-Eastern Region of India comprising Assam, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland and Tripura which have a large tribal population. The major tribal groups in the region are Naga tribes of Nagaland; Mizo (Lushai), Chakma, Himar of Mizoram; Khasi, Garo and Jaintia of Meghalaya; Naga tribes, Kuki-Chin (Zomi) of Manipur; Bodo, Deori, Kachari of Assam; Tripura, Reang, Jamatia of Tripura; Apatani, Adi, Nissi, Monpa, Tangsa, Nocte, Wancho of Arunachal Pradesh. Apart from these there are several minor ethnic groups in the region. (see Appendix I)

These tribal groups belong to Mongoloid stock and speak Austeric language and Sino-Tibetan dialects. These tribals possess distinct socio-

cultural and linguistic identities. But at the same time, they share many common characteristics, especially in economic activities. In fact, the common economic activities and work participation are directly derived and determined, as mentioned, by the surrounding natural physiography and ecological settings.

The tribals are mostly involved in primary economic activities, which is characterized by diverse typology. Several scholars such as, Majumdar and Madan (1956), Prasad (1960), Danda (1990), etc, have made attempts to classify economic activities of tribes in India on the basis of the following criteria: (i) gathering, hunting and fishing, (ii) shifting cultivation, (iii) settled cultivation, (iv) handicraft and, handloom weaving, (v) pastoralism, (vi) industrial labour, (vii) simple, artisan, (viii) blacksmith, etc.

In the context of North-Eastern Region, B.K. Roy Burman (1971), Saha (1978), Majumdar (1978) classified the tribal occupation according to whether they practised "*jhum*" (shifting cultivation) or terraced cultivation (settled cultivation). In addition to agriculture, the tribals also engaged in dry farming, husbandry, forestry and food-gathering. Their economic activities are highly diversified ranging from cultivation, forestry and hunting, traditional handicrafts, blacksmith and a small proportion in manufacturing and service sectors. In fact, in tribal society, work

participation is greatly influenced by the social structure and cultural ethos. “Economy of the tribes is a projection of tribal society, a response to the ecosystem in which it is placed, its function of production and distribution are governed by the bonds of kinship within or between families, clans and kindred” (Singh, 1982, p.viii).

In the North-Eastern Region, agriculture is the backbone of the tribal economy. And the main activity is shifting cultivation or jhumming which is predominant among the hill tribes of the region. It is widely practice in Arunachal Pradesh, Nagaland, Mizoram, Mikir Hills and North Cachar Hills of Assam and Garo Hills of Meghalaya. Manipur and Tripura have jhumming carried out sporadically in the hill areas by certain tribal groups. Studies on jhumming cultivation showed that the jhumias (tribal shifting cultivators) of the region are strongly influenced by their customary and cultural traditions (Saha, 1978).

Coming into contact with non-tribals, a change can be observed in the economic activities of tribals, specially in trade and commerce, transport and communication. Due to the influx of immigrants into the hill areas, especially into trade and commerce, the local tribals could not withstand the competition with the outsiders. The tragic part of the fact is that most of the tribals are not in a position to compete with outsiders who have strong financial support and business links with other parts of the

country. In fact, the non-tribal immigrants in the tribal areas have caused distortion in their economic and social structure. Gogoi (1990) in his study on tribal demography in the North-Eastern Region rightly pointed out that these migrants have faced no resistance from the tribal people because of their superior skill in agriculture, dairy, farming, trade and commerce.

Today tribal economy is being progressively linked with the urban areas. Their customary socio-economic relations are dying out, and a new structure of social and economy based on private ownership of property and stratification of the society into economic groups has gradually emerged. Besides these, other changes such as wage-labour, household industry and salaried employee, etc. have also emerged.

A rapid diversification of economy in the tribal dominant states is also pointed out by Roy Burman (1990). He noticed a slight decline among the cultivators. Yogi (1988) also noted that the share of primary sector is declining; the secondary sector is more or less stagnant (in real terms), and it is the tertiary sector which is expanding rapidly. "The region is more like on economic transit point rather than an active theatre for viable economic activity on a sustained basis" (Yogi, 1988, p.54). Apart from these studies, there is not much literature regarding work force participation rate among tribals in the North-Eastern Region.

Despite the changes that are occurring in the work participation and occupational structure in the North-East among the tribals, there has been limited research work that has examined these aspects using the data available with the exception of the study conducted by Roy Burman (1970, 1990) for the whole region using census data of 1961, 1971 and 1981. However, the individual states/districts in the region need to be studied separately and also using the data of 1991 census. The prevailing economic situation of the North-Eastern tribals cannot be properly explained without studying the work force participation. For this reason, we analyze the work force participation among tribals of six states that is, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland and Tripura (excluded Assam*) of North-Eastern Region for the last two recent censuses, 1981 and 1991.

1.2 Objectives

In this study, we examine the pattern and changes in tribal work force participation of main workers across sex (males-females) and residence (rural - urban). We investigate the changes in the pattern of the 9 (nine) industrial categories as classified by census of India. And also, we analyze the factors that contribute to tribal work force participation.

* In Assam, 1981 census could not be held owing to disturb conditions prevailing there at the time of the census. And also there has been changes in some district boundaries.

The analysis of this study is carried out using data from the population Census 1981 and 1991 (Published by Office of the Registrar General and Census Commissioner, Ministry of Home Affairs, Government of India).

1.3 Chapter Organization

The present study has been organized four chapters. The next chapter describes the population of the North-Eastern Region. In this chapter an analysis of general population and tribal population is presented. The chapter III we examine the work force participation rate among tribals in the North-Eastern Region. The district level analysis of work force participation is presented in chapter IV. In this chapter, we also analyse some of the socio-economic and demographic factors influencing tribal work force participation. In the last chapter, on the basis of the results conclusions arrived at are presented.

Population of the North-Eastern Region

2.1 Population of North-Eastern Region

In this chapter we describe the population scenario in the North-Eastern Region. The size, share and growth rate of the population of both the tribal population and non-tribal population (general population minus tribal population) in different states of the North-Eastern Region are presented. To understand the population situation at the micro level we discuss the distribution of the tribal population at the district level. In this chapter, we also analyse the sex ratio, literacy rate and urbanisation among the tribal and non-tribal population in the region.

The North-Eastern region has an aggregate area of 2,55,037 sq. km. which is nearly 9 percent of the total geographical area of the country. As per 1991 census, the region has a population of 31.6 million which constitutes 3.7 percent of the country's total population. Table 2.1 shows the data of the total population of the North-Eastern Region. Among the seven states of the region, according to 1991 census, Assam's share is the largest which was 22.4 million, accounting for 71.0 percent of the region's population, followed by Tripura 8.7 percent, Manipur 5.8 percent,

Meghalaya 5.5 percent, Nagaland 3.8 percent, Arunachal Pradesh 2.7 percent and Mizoram 2.1 percent.

Table 2.1
Size, Share and Growth Rate of population in the North-Eastern Region of India by States, 1981 and 1991

<i>Region/State</i>	<i>Total Population</i>		<i>Percentage Share of Population to the Region's Total, 1991</i>	<i>Growth Rate 1981-1991</i>
	<i>1981</i>	<i>1991</i>		
Arunachal Pradesh	631839	864558	2.7	3.6
Assam	-	22414322	71.0	-
Manipur	1420953	1837149	5.8	2.9
Meghalaya	1335819	1760624	5.5	3.2
Mizoram	493757	686217	2.2	3.9
Nagaland	774930	1215573	3.8	5.6
Tripura	2053058	2744827	8.7	3.4
N.E. Region*	6710356	31547314	100	3.6
India	683329097	846302688	3.7**	2.1

* Excluding Assam.

** Percentage Share of N.E. Region to the Country's Total.

Source: Office of the Registrar General and Census Commissioner (1981a, 1991a).

The annual population growth rate of the region has been found to be much higher (3.6 percent per annum, during 1981-91) than the national average (2.1 percent per annum during 1981-91). Among the states of the region Nagaland exhibits the highest annual growth rate with 5.6 percent, Arunachal Pradesh with 3.6 percent, Tripura with 3.4 percent and Meghalaya with 3.2 percent per annum. Manipur records a relatively lower growth with 2.9 percent per annum in the region, but still it is higher than the national average.

Table 2.2
Tribal Population and Percentage to the Total Population in the
North-Eastern Region by States, 1981 and 1991

<i>Region/State</i>	<i>Tribal Population</i>		<i>Percentage of Tribal Population</i>	
	<i>1981</i>	<i>1991</i>	<i>1981</i>	<i>1991</i>
Arunachal Pradesh	441167	550351	69.8	63.6
Manipur	387977	63173	27.3	34.4
Meghalaya	1076345	1517927	80.6	85.6
Mizoram	461907	653565	93.5	94.7
Nagaland	650885	1060822	83.4	87.7
Tripura	583920	853345	28.4	30.9
N.E. Region*	3602201	5268187	65.4	53.7
India	5128638	67758380	7.8	8.0

* Excluding Assam.

Source: Office of the Registrar General and Census Commissioner (1981a, 1991a).

2.2 Tribal Population in the North-Eastern Region

In the North Region a large tribal population is found especially in the hilly states, like Mizoram, Nagaland, Meghalaya and Arunachal Pradesh. Table 2.2 shows the size and share of the tribal population in 1981 and 1991. In the region, in 1981 there are 3.6 million persons who belong to Scheduled Tribes and they increased in 1991 to 5.3 million. During the last two censuses, we observe a decline in the percentage of tribal population to the total population in the North-Eastern Region. In 1991 census the region accounted for 53.7 percent of tribal population as against 66.4 percent of tribal population in 1981.

As per 1981 census, the percentage of tribal population is recorded highest in Mizoram, of 93.5 percent, followed by Nagaland, of 83.4 percent, Meghalaya, of 80.6 percent and Arunachal Pradesh, of 69.8

percent. In the states of Tripura and Manipur there is a lower percentage of tribal population. The tribal population in these states were 28.4 percent and 27.2 percent respectively. In 1991 census, the percentage of the tribal in population has increased in most of the states. The figures were 94.7 percent in Mizoram, 87.7 percent in Nagaland, 85.5 percent in Meghalaya, 34.4 percent in Manipur and 30.4 percent in Tripura. In the case of Arunachal Pradesh the percentage has declined to 63.6 percent. The reason for the changes in the percentage distribution of tribal in the North-Eastern Region is not clear. It may be due to enumeration coverage or procedure in the two censuses.

2.3 Growth Rate of Tribal and Non-Tribal Population

The annual growth rate of tribal population and non-tribal population in the North-Eastern Region during 1971-81 and 1981-91 is shown in table 2.3. During the decade 1971-81, the annual growth rate of the tribal population in the North-Eastern Region was 3.1 percent. In the latter decade 1981-91, we observe an increase in the growth rate to 4.6 percent. Amongst non-tribal population of the region the growth rate recorded was very high in 1971-81 with 4.1 percent. However, the percentage of the annual growth rate has drastically fallen in 1981-81 to 2.4 percent. This suggests that there is an out migration especially sojourner or non-local community. At the regional level, in 1971-81, the annual growth

rate of tribal population is 4.1 percent but it has declined to 3.1 percent in 1981-91, whereas in non-tribal population the growth rate has increased from 2.0 percent in 1971-81 to 2.6 percent in 1981-91.

The annual growth rate of tribal population among the states range from low of 2.4 percent in Arunachal Pradesh to high of 6.3 percent in Manipur and Nagaland. From the table 2.3, we observe an increase of tribal population growth rate in all the states of the region during 1971-81 and 1981-91. And the states of Manipur and Nagaland showed a remarkable increase in the annual growth rate. In Manipur and Nagaland the annual growth rate of tribal population during 1971-81 and 1981-91 is 1.6 percent and 6.3 percent in the former, and 4.2 percent and 6.3 percent in the latter.

Among the non-tribal population a high growth rate is observed in the tribal dominant states of Arunachal Pradesh, Nagaland, Meghalaya and Mizoram. In 1971-81 the state of Nagaland, Arunachal Pradesh, the annual growth rate was 11.0 percent, 10.5 percent and 6.9 percent respectively. But in 1981-91, there has been a drastic change in the figures. All the states of the region experienced a decline in the growth rate of non-tribal population. In fact, a negative growth rate is observed in Meghalaya, of - 1.0 percent. An important reason for the negative growth rate may be the anti-foreigners (outsiders) agitation by the Khasi-Jaintia students' organisation.

during 1980s. Another possible reason could be the prevailing insurgency activities in the region.

Table 2.3
Annual Growth Rate of Tribal and Non-Tribal Population in the North-Eastern Region (in percent) by States, 1971-81 and 1981-81

<i>Region/State</i>	<i>1971-81</i>		<i>1981-91</i>	
	<i>Tribal</i>	<i>Non-Tribal</i>	<i>Tribal</i>	<i>Non-Tribal</i>
Arunachal Pradesh	1.9	10.5	2.5	6.5
Manipur	1.6	4.0	6.3	1.7
Meghalaya	3.2	3.1	4.1	1.0
Mizoram	4.8	6.7	4.1	1.4
Nagaland	4.2	11.0	6.3	2.0
Tripura	3.0	3.3	4.6	3.0
North-Eastern Region*	3.1	4.0	4.7	2.4
India	4.1	2.0	3.1	2.6

* Excluding Assam

Source: Office of the Registration General and Census Commissioner, (1971,1981a, 1991a)

2.4 Distribution of Tribal Population of District Level

Table 2.4 shows the distribution of tribal population in the districts of the North-Eastern region during 1991 census. The concentration of tribals is very high in most of the districts of the tribal dominant states (Mizoram, Nagaland, Meghalaya and Arunachal). The percentage of tribal population is highest in East Garo Hills (96.83 percent) of Meghalaya and the lowest is Thoubal district (0.96 percent) of Manipur state.

The distribution of tribal population is categorized as follows:

1. High proportion of tribal population (above 90 percent).

2. Medium high proportion of tribal population (70-90 percent).
3. Medium low proportion of tribal population (50-70 percent).
4. Low proportion of tribal population (30-50 percent).
5. Very low proportion of tribal population (below 30 percent).

Table 2.4
**Percentage of Tribal Population to Total Population in the North-
Eastern Region by Districts, 1991**

	<i>Region/State</i>	<i>1991</i>
	North-Eastern Region*	57.7
	Arunachal Pradesh	
1.	Tawang	78.6
2.	West Kameng	53.0
3.	East Mameng	85.6
4.	Lower Subaansiri	70.9
5.	Upper Subansiri	85.9
6.	West Siang	78.5
7.	East Siang	68.6
8.	Dibang Valley	45.4
9.	Lohit	37.3
10.	Changlang	34.4
11.	Manipur	
12.	Senapati	84.1
13.	Tamenglong	96.6
14.	Churachandpur	93.5
15.	Chandel	84.7
16.	Thoubal	1.0
17.	Bishnupur	5.3
18.	Imphal	4.8
19.	Ukhrul	93.2
	Meghalaya	
20.	Jaintia Hills	95.5
21.	East Khasi Hills	78.4
22.	West Khasi Hills	98.1
23.	East Garo Hills	96.8
24.	West Garo Hills	80.6
	Mizoram	
25.	Aizawl	94.7
26.	Lunglei	94.4
27.	Chhimituipui	95.6
	Nagaland	
28.	Kohima	74.5
29.	Phek	94.1
30.	Zunheboto	97.1
31.	Wokha	93.6
32.	Mokokchung	92.6
33.	Tuensang	95.1
34.	Mon	92.1
	Tripura	
35.	West Tripura	25.2
36.	North Tripura	28.4
37.	South Tripura	43.0

* Excluding Assam.

Source: Office of the Registration General and Census Commissioner (1991a)

There are 15 districts in the category of above 90 percent. These districts

are Tamenglong, Churachandpur and Ukhrul of Manipur; Jaintia Hills, West Khasi Hills and East Khasi Hills of Meghalaya; Aizawl, Lunglei and Chhimituipui of Mizoram and Phek, Zunheboto, Wokha, Mokokchung, Tuensang and Mon of Nagaland.

In the 70-90 percent category, there are 11 districts that is, East Kameng, Upper Subansiri, Tirap, Tawang, Lower Subansiri and West Siang districts of Arunachal Pradesh; Senapati and Chandel districts of Manipur; West Garo Hills and East Khasi Hills districts of Meghalaya and Kohima district of Nagaland.

In the third category of 50-70 percent, there are only two districts from Arunachal Pradesh that is, East Siang and West Kameng districts.

The category 30-50 percent, there are three districts from Arunachal Pradesh (i.e. Dibang, Lohit and Changlang) and South Tripura district of Tripura.

In the percentage below 30 category, there are three districts from Manipur that is, Imphal, Bishnupur and Thoubal and two districts from Tripura state that is, West Tripura and North Tripura districts.

DISTRIBUTION OF THE TRIBAL
POPULATION . 1991

Map II

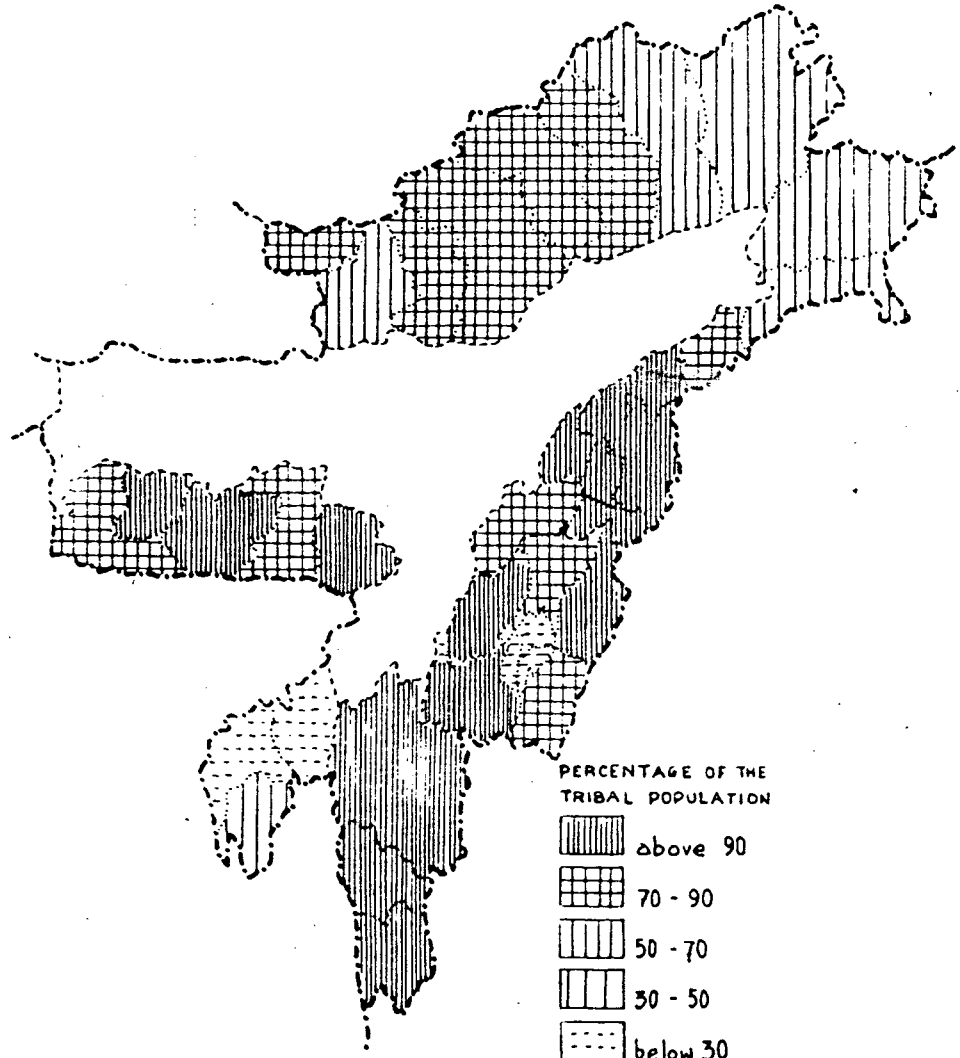


Table 2.5
Distribution of the Districts to the Percentage of the Tribal Population to the Total Population in the North-Eastern Region, 1991

<i>State</i>	<i>Percentage</i>			<i>Categories</i>		<i>Total</i>
	<i>Above 90</i>	<i>70-90</i>	<i>50-70</i>	<i>30-50</i>	<i>10-30</i>	
Arunachal	-	6	2	3	-	11
Manipur	3	2	-	-	3	8
Meghalaya	3	2	-	-	-	5
Mizoram	3	-	-	-	-	3
Nagaland	6	1	-	-	-	7
Tripura	-	-	-	10	2	3
Total	15	11	2	4	5	37

2.5 Sex Ratio

The sex composition of India's population shows a shortage of females per 1000 males. In 1991 census, the sex ratio in India is 929 females per 1000 males. And it has been continuously declining since 1921. The same trend is observed in the North-Eastern tribals also, although the sex ratio is much higher as compared to national average. The table 2.6 shows the tribal and non-tribal sex ratio in the North-Eastern Region. In 1981, the sex-ratio of the tribal population in the region is 983 but it has reduced to 974 in 1991. For the non-tribal population, the sex ratio is found much lower with 876 in 1981 and 874 in 1991. The tribal sex ratio in the national average is 982 in 1981 and 971 in 1991 which is similar to the North Eastern Region's average. In the non-tribal population, however, the sex ratio recorded was much higher than the non-tribals of the North-Eastern Region. The figures were 930 in 1981 and 924 in 1991.

Among the states, only Tripura state has shown an increase in sex ratio from 962 in 1981 to 965 in 1991. In other states, the tribal sex ratio has shown a decrease during 1981 and 1991. In the last census, Arunachal Pradesh recorded the highest sex ratio with a value of 998 and the lowest was found in Nagaland with a value of 945.

As mentioned the non-tribal population in the North-Eastern Region exhibits a very low sex ratio. And it is more prominent in the tribal dominant states like Mizoram, Nagaland, Arunachal Pradesh and Meghalaya. In 1991 census, the highest sex ratio was recorded in Manipur with a value 962 and the lowest was in Mizoram with a value of 215. During the last two censuses we observe a decline in the non-tribal sex ratio in most of the states, except Arunachal Pradesh and Nagaland. The declining and growing imbalances especially in non-tribal population strongly suggest that there has been male migration, either as a sojourner or as a permanent resident.

Table 2.6
Sex Ratio (Females Per 1000 Males) for the States of the North-Eastern Region for Tribal and Non-Tribal Population, 1981-81

<i>Region/State</i>	<i>1981</i>		<i>1991</i>	
	<i>Tribal</i>	<i>Non-Tribal</i>	<i>Tribal</i>	<i>Non-Tribal</i>
Arunachal Pradesh	1004	594	998	657
Manipur	974	969	958	962
Meghalaya	1001	776	996	684
Mizoram	997	226	982	215
Nagaland	954	505	965	577
Tripura	962	940	965	937
N.E. Region*	983	876	974	874
India	982	930	971	924

* Excluding Assam

Source : Office of the Registrar General and Census Commissioner (1981a, 1991a)

2.6 Literacy Rate

According to 1991 census of India, 52.8 percent of the North-East Region's tribal population could read and write a letter with understanding. Table 2.7 shows the literacy rate of tribals and non-tribals in the North Eastern Region. In 1981, 44.9 percent of the tribals of the region were registered as literate. However, the figure remarkably increases to 52.7 percent in 1991 which is similar to the national average of 52.1 percent. The corresponding figures of the non-tribal population is 46.1 percent in 1981 and 60.21 percent in 1991. As compared to the country's tribal literacy rate, in both censuses, the percentage for the country is found to be very low with 16.3 percent in 1981 and 23.6 percent in 1991. Moreover, for the country, in the non-tribal population, the literacy figures are considerably low with 37.9 percent in 1981 and 44.5 percent in 1991.

Mizoram state recorded a tremendously high tribal literacy rate with 82.7 percent in 1991. This is followed by Nagaland, of 60.6 percent, Manipur, of 53.6 percent, Maghalaya, of 46.7 percent, Tripura, of 40.4 percent. And the lowest is Arunachal Pradesh with only 34.4 percent. Between the 1981 and 1991 censuses, a high tribal literacy growth rate can be observed in the different states of the region.

Table 2.7
Percentage of Tribal and Non-Tribal Literacy Rate in the North-Eastern Region by States, 1981-1991

<i>Region/State</i>	<i>1981</i>		<i>1991</i>	
	<i>Tribal</i>	<i>Non-Tribal</i>	<i>Tribal</i>	<i>Non-Tribal</i>
Arunachal Pradesh	14.0	36.4	34.4	43.2
Manipur	39.7	42.0	53.7	52.6
Meghalaya	31.5	44.6	46.7	51.5
Mizoram	59.6	56.0	82.7	68.4
Nagaland	40.3	54.4	60.6	58.4
Tripura	23.0	49.7	40.4	57.3
N.E. Region*	44.9	46.1	52.7	60.2
India	16.4	37.9	23.6	44.5

* Excluding Assam

Source : Office of the Registrar General and Census Commissioner (1981a, 1991a)

We also examined the literacy rate between tribals and non-tribals in the state of the North-Eastern Region. In the state like Mizoram, Nagaland and Manipur the tribal literacy rate is more than non-tribal literacy rate. While in the states of Tripura, Meghalaya and Arunachal Pradesh it is the other way round. The higher the literacy rate among tribals compare to non-tribal can be observed only in the North-Eastern Region of the country. Among the groups contributing to the literacy in the North-Eastern Region are mostly the Christian organisations.

2.7 Urbanisation

In Table 2.8, we examine the tribal and non-tribal population in urban areas in the North-Eastern Region. In the region, a very low proportion of tribal population is found in urban areas. As per 1981 census, about 10.2 percent of tribal population is enumerated in urban areas. In 1991, there has been a marginal increase in the percentage to 13.8 percent. These figures are, however, much higher than the country's average of tribals living in urban areas which is only 6.2 percent in 1981 and 7.4 percent in 1991. For non-tribals, 24.4 percent were living in urban areas in 1981 and 29.9 percent were living in urban areas in 1991. Interestingly, the corresponding figures are similar to the national average of 25.2 percent in 1981 and 27.3 percent in 1991.

From the table 2.8 we observe a marginal increase of tribal urban population in all the states except Manipur. According to 1991 census, Mizoram recorded the highest percentage of tribal population in urban areas with 45.0 percent, followed by Meghalaya 13.0 percent, Nagaland 12.7 percent, Manipur 8.4 percent and Arunachal 5.8 percent. The lowest is Tripura with 1.6 percent.

In the North-Eastern Region, the non-tribal population were mostly found in urban areas. In a tribal dominant states like Mizoram, Nagaland

and Meghalaya nearly half of the non-tribal population were enumerated in urban areas. According to 1991 census, the figures were 66.1 percent in Mizoram, 53.3 percent in Nagaland and 50.8 percent in Meghalaya. This suggest that most of the non -tribal were migrants and were living in urban areas. The state like Manipur, Arunachal Pradesh and Tripura has lesser non-tribal population living in urban areas. However, these two states have lesser tribal population.



Table 2.8
Percentage of Tribal and Non-Tribal Population in Urban Area in North-Eastern Region by States, 1981-1991

Region/State	1981		1991	
	Tribal	Non-Tribal	Tribal	Non-Tribal
Arunachal Pradesh	2.3	16.5	5.8	23.6
Manipur	11.6	32.0	8.4	37.9
Meghalaya	12.4	41.5	13.0	56.8
Mizoram	23.5	41.9	45.0	66.1
Nagaland	9.8	45.6	12.7	53.3
Tripura	1.3	14.8	1.7	21.4
N.E. Region*	10.2	24.4	13.8	29.9
India	6.2	25.2	7.4	27.3

TH-75-16

* Excluding Assam

Source : Office of the Registrar General and Census Commissioner (1981a, 1991a)

In sum, we found unprecedented growth of population in the North-Eastern Region especially tribal population. The highest annual growth rate was recorded in Nagaland which account for 5.6 percent during 1981-91. A state like Mizoram, Nagaland, Meghalaya and Aruanchal Pradesh a large proportion of tribal population is found. In the last two decades, the annual growth rate in tribal population is seen to have increased. whereas in non-

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tribal population has decreased in the region as well as states. A high sex ratio is observed among tribals population. In contrast, sex ratio of non-tribal population is very low especially in tribal dominant states. For instance, sex ratio of non-tribals in Mizoram is 215 and Nagaland is 577 in 1991. Literacy rate among tribals is found to be high in the region. And both these for the North-Eastern Region can be compared to non-tribals either at the regional or national level. The tribal population living in urban areas is very low in the region. Mizoram is an exception as there are 45 percent tribals living in urban areas. A considerable population of non-tribals are enumerated in urban areas.

Chapter III

Trends and Distribution of Work Force Participation in the State

In this chapter we describe trend in the tribal work force participation, sectoral distribution and industrial division in the North-Eastern Region by states. The labour force of a country is comprised of persons who can work and choose to do so. This is often called the economically active population. "Economically active person may be either employed, underemployed, or unemployed. The persons who are not economically active can be students, rentier, pensioners, beggars, etc. Those who are employed were further classified to the nature of their job (occupation, industry, status, etc)" (Suri, Bauer and Rele, 1988, p.1)

Information on economic activities of the individual was collected in India right from the 1872 population census. The concepts and definitions of economic activities underwent changes from census to census, although efforts were made to maintain uniformity and comparability to the extent possible. Due to the conceptual changes in the census on work/workers, it could not be strictly compared and no firm statement can be made about the time trend in the workforce participation rates.

In the first post-independence census of 1951, classification of workers and non-workers was based on the *income-approach* in the persons were classified as *self-supporting*, *earning dependants* and *non-earning dependants*. The terms were defined as: “*Self-supporting*- a person who was in receipt of an income, whether in cash or kind, which was sufficient at least his own maintenance was regarded as a self supporting person. *None-earning dependants*-a person who did not secure any income in cash or kind, and was wholly dependent on the earning of someone else was regarded as non-earning dependent. *Earning dependants*- A person who secured a regular income but whose income was not sufficient to support him was regarded as earning dependants” (Srivastava, 1971, p.233).

However, this approach was abandoned at the time of 1961 census operations which instead categorized a person as worker. According to 1961 population census *work* is defined as, “any person whose main activity was participation in any economically productive work either by his/her physical or by his/her mental activity”. In such activities like, cultivation, dairying, household industry, etc., if a person had some regular work of more than one hours a day throughout the greater part of the working season, he/she was to be regarded as worker. “In case of regular employment in any trade, profession, service, business or commerce, a

person was taken as a worker if he/she was employed during any of the 15 (fifteen) days preceding the day on which he was enumerated. A person who was working but was absent from his work during the fifteen days preceding the day of enumeration due to illness or other cause was a worker. Also a public or social service worker or political worker who is actively engaged in public service activity is consider as worker. Non-workers are those adult woman engaged in household duties, beggars, pensioners, students etc.” (Srivastava, 1971, p.234).

The 1971 population census considered a person who worked on any one of the day during the reference period of one week prior to the date of enumeration as a worker if the person had participated in any activity like trade, profession, service or business. Also seasonal work like cultivation, livestock keeping, plantation, some types of household industry, etc., which are not carried on throughout the year was also considered work. The criteria for non-workers is the same as described in 1961 census.

The 1981 census divided the entire population into three categories that is, *main workers*, *marginal workers* and *non-workers*. The *main workers* were those who have worked in some economic activity over a period of six months. In other words, the main workers were those who had worked for the major part of the year preceding the enumeration, while

marginal workers, on the other hand, were those who have worked any time at all in the year preceding the enumeration but have not worked for the major part of the year. *Non-workers* were those who had not participated in any gainful economic activity during the last one year preceding the day of enumeration.

In the 1991 population census the time criterion regarding engagement in work remained the same in both main workers and marginal workers. Even the definition of work was unchanged, but here it included unpaid work on farm or in family enterprises.

In the present study, inter-censal comparison in tribal work force participation rate for 1981 and 1991 is analysed because these two censuses have adopted the same definition for all workers. As in 1981, in 1991 census also for main workers, the time criterion of engagement in work was the major part of the year, that is at least 183 days in the preceding one year, while those who worked for sometime during the last year but not for the major part of the year were treated as marginal workers. Moreover, the nine industrial categories in 1981 and 1991 are comparable. The 1981 census classified main workers as:

- i) Cultivator,
- ii) Agriculture Labourers.

- iii) Livestock, Forestry, Fishing, Hunting, Plantations and Orchard and allied activities,
- iv) Mining and Quarrying,
- v) Manufacturing Processing, Servicing and Repairs in-
 - (a) Household Industry
 - (b) Other than household industry
- vi) Constructions,
- vii) Trade and Commerce,
- viii) Transport, Storage and Communication and
- ix) Other Services.

All these nine industrial categories of main workers can be grouped into three economic sectors that is, *primary*, *secondary* and *tertiary*. In the primary sector the first four categories that is, cultivators, agriculture labourers, livestock, forestry, fishing, hunting, plantation, orchards and allied activities, and mining and quarrying are included. In secondary sector they are, manufacturing processing, servicing and repairs in-(a) household industry and (b) other than household industry and constructions. The tertiary sector includes, trade and commerce, transport, storage and communication and other services.

The population census of Indian have been publishing detailed information on castes and tribes who were scheduled in the constitution of

India since the censuses of 1951. The latest census which contains the information on Scheduled Castes and Scheduled Tribes is the population census of 1991 (see Appendix - II).

The trends in Tribal Work Force Participation Rates (TWPR) analyzed across the Rural-Urban and Males-Females components were calculated by using the following methods:

(i) Total TWPR

$$= \frac{\text{Tribal Workers}}{\text{Total Tribal Population}} \times 100$$

(ii) TWPR in Rural/Urban Areas

$$= \frac{\text{Tribal Rural/Urban Workers}}{\text{Total Tribal Rural/Urban Population}} \times 100$$

(iii) TWPR among males/females

$$= \frac{\text{Total Tribal Male/Female Workers}}{\text{Total Tribal Male/Female Population}} \times 100$$

In the calculation of TWPR we have considered main workers only. Marginal workers form a very small proportion of total tribal work force in the North-Eastern region. In 1981 census, the percentage of tribal marginal workers was 2.7 percent and in 1991 census this proportion was 2.5 percent. There is also no significant state variation in the marginal workers.

3.1 Indian Scenario in Work Force Participation

The pattern of work force participation rates vary from region to region as well as among the society of a particular region or a country. The differences in the participation rate of working population becomes apparent even at micro level. Broadly speaking, an under-developed economy is generally characterized by an abundance of labour and shortage of gainful and suitable employment for the entire labour force.

In order to understand the relative position of the North-Eastern states with respect to other states of India, we present in table 3.1 the percentage of main workers to total population as obtained from 1981 and 1991 censuses. The 1991 census has recorded 34.2 percent of population as main workers in India. Among the major states, it varied from a high of 42.8 percent in Andhra Pradesh to a low of about 28.7 percent in Kerala. It is rather interesting to note that smaller hilly states has higher percentage of main workers. According to the last census Arunachal Pradesh has recorded 45.2 percent , Nagaland 42.3 percent, Mizoram 42.0 percent. Meghalaya 40.3 percent and Manipur 38.6 percent. This could be due to the higher proportion of tribal population which reflects high participation in traditional subsistence agriculture mostly in shifting cultivation and dry upland cultivation. Dignity of labour, topography and the social setting of the region demand maximum participation both from men and women.

Table 3.1
Percentage of Main Workers to Total Population in India and States,
1981 and 1991

	<i>India/States/Union Territory</i>	<i>1981</i>	<i>1991</i>
	India*	33.5	34.2
1.	Andhra Pradesh	42.3	42.8
2.	Arunachal Pradesh	49.6	45.2
3.	Assam	**	31.2
4.	Bihar	29.7	29.7
5.	Goa	30.6	32.8
6.	Gujrat	32.2	34.1
7.	Haryana	28.4	28.7
8.	Himachal Pradesh	34.4	34.4
9.	Jammu & Kashmir	30.4	**
10.	Karnataka	36.8	38.5
11.	Kerala	26.7	28.5
12.	Madhya Pradesh	38.4	37.7
13.	Maharashtra	38.7	39.3
14.	Manipur	40.4	38.6
15.	Meghalaya	43.4	40.3
16.	Mizoram	41.7	42.1
17.	Nagaland	47.5	42.3
18.	Orissa	32.8	32.8
19.	Punjab	29.4	30.1
20.	Rajasthan	30.5	31.6
21.	Sikkim	46.6	40.5
22.	Tamil Nadu	39.3	40.8
23.	Tripura	29.6	29.1
24.	Uttar Pradesh	29.2	29.7
25.	West Bengal	28.3	30.2
Union Territory			
1.	Andman and Nicobar	33.2	32.4
2.	Chandigarh	49.6	34.8
3.	Dadra and Nagar Haveli	34.7	43.9
4.	Daman and Diu	40.8	31.7
5.	Delhi	31.9	31.5
6.	Lakshdweep	19.7	24.0
7.	Pondicherry	28.7	32.4

* Excluding Assam in 1981 and J&K in 1991

** No census taken

Source : Office of the Registrar General and Census Commissioner (1981b, 1991b).

When we compare the work force participation among tribals and non-tribals in India we find the situation is similar to that of the North-Eastern Region. In table 3.2, we show the percentage of tribal main workers to total tribal population in India and state during 1981 and 1991.

The proportion of work force in the tribal population in India is comparatively much more than that of non-tribals. In 1991 census, the proportion of tribal main workers to the total tribal population of the country was 42.0 percent against the country's total main workers which was only 34.2 percent. However, it does not really mean that tribals are better placed in terms of employment or economic activities. As mentioned, tribals are mostly engaged in primary activities especially subsistence cultivation and its allied activities and low participation in secondary and tertiary activities.

In the 1991 census, we observed a marginal fall in the tribal main workers of India from 42.5 percent in 1981 to 42.0 percent in 1991. The states of India where the proportion of tribal main workers are above the national average of 42.0 percent were in Andhra Pradesh, Arunachal Pradesh, Karnataka, Madhya Pradesh, Maharashtra, Manipur, Tamil Nadu and West Bengal. The highest percentage was recorded in Andhra Pradesh with 50.7 percent, followed by Tamil Nadu with 49.1 percent and lowest was recorded in Tripura and Assam with 32.3 percent and 33.8 percent respectively.

Table 3.2
Percentage of Tribal Main Workers to Total Tribal Population in
India and States, 1981 and 1991

	<i>India/States/Union Territory</i>	<i>1981</i>	<i>1991</i>
	India*	42.5	42.0
1.	Andhra Pradesh	49.4	50.7
2.	Arunachal Pradesh	50.4	44.9
3.	Assam	**	33.8
4.	Bihar	37.1	37.6
5.	Goa	38.9	37.5
6.	Gujrat	40.6	40.9
7.	Himachal Pradesh	40.8	36.8
8.	Karnataka	43.0	43.7
9.	Kerala	40.5	40.3
10.	Madhya Pradesh	46.3	44.4
11.	Maharashtra	47.9	47.7
12.	Manipur	47.9	44.9
13.	Meghalaya	45.0	40.9
14.	Mizoram	39.7	40.5
15.	Nagaland	47.0	41.6
16.	Orissa	39.8	40.2
17.	Rajasthan	32.2	34.9
18.	Sikkim	44.5	39.5
19.	Tamil Nadu	48.2	49.1
20.	Tripura	36.1	32.3
21.	Uttar Pradesh	36.9	35.9
25.	West Bengal	41.5	43.1
Union Territory			
1.	Andman and Nicobar	26.3	29.9
2.	Dadra and Nagar Haveli	41.9	44.6
3.	Daman and Diu	***	37.4
4.	Lakshdweep	17.7	21.5

*** Goa, Daman & Diu are taken together, ** No census taken in Assam. * Excluding Assam.

Note: In Jaryana, J&K Punjab, Chandigarh, Delhi and Pondicherry no tribes was scheduled.

Source : Office of the Registrar General and Census Commissioner (1981c, 1991c).

3.2 Tribal Work Force Participation in the North-Eastern Region

(a) Regional Analysis

Table 3.3 contains data of the tribal main workers in the states of the North-Eastern Region in the last two census years. According to 1991

census, the region has recorded 40.5 percent of tribal population as main workers (percentage change* is -3.7) which is just below the national average of 42.0 percent of tribal work force participation rate (TWPR). The decline in the proportion of main workers has occurred in both males and females. Tribal male work force participation rate (TMPWR) in the region has declined by 4.1 percent from 50.4 percent in 1981 to 46.2 percent in 1991. Tribal female work force participation rate (TFWPR) from 37.9 percent to 34.6 percent in 1991. In the rural areas, the TWPR has decreased by 3.4 percentage points from 45.9 percent in 1981 to 42.5 percent in 1991. This decrease in rural areas has been observed in both males and females. A marginal increase has been found in urban areas by 1.8 percent from 29.1 percent in 1981 to 30.9 percent in 1991. In urban areas TFWPR has declined more than the that for TMWPR.

* Percentage Change; 1991 subtract by 1981.

Table 3.3

Percentage of Tribal Main Workers in the North-Eastern Region by States and Residence, 1981 and 1991

Region/ District	Area	1981			1991			Percentage Change		
		P	M	F	P	M	F	P	M	F
N.E. Region*	T	44.2	50.4	37.9	40.5	46.2	34.6	-3.7	-4.1	-3.3
	R	45.9	51.7	40.1	42.5	47.3	36.7	-3.4	-4.4	-3.4
	U	29.1	40.2	18.7	30.9	39.7	22.0	1.8	-0.5	-3.3
Arunachal Pradesh	T	50.4	52.9	48.0	44.9	47.4	42.5	-5.5	-5.5	-5.5
	R	50.4	53.2	48.6	46.1	48.1	44.1	-4.3	-5.1	-4.5
	U	29.7	39.9	17.0	26.8	36.7	15.9	-3.0	-3.2	-1.2
Manipur	T	47.9	48.7	47.0	44.9	49.0	43.2	-3.0	0.3	-3.9
	R	50.2	50.3	50.1	46.6	47.7	45.5	-3.6	-2.6	-4.6
	U	30.2	36.8	23.4	25.5	34.1	17.6	-4.7	-2.7	5.8
Meghalaya	T	45.0	52.1	37.8	40.9	48.1	33.8	-4.0	-4.0	-4.0
	R	47.0	53.7	40.3	42.9	49.6	36.1	-4.1	-4.1	-4.3
	U	30.2	40.2	20.8	28.5	37.7	19.7	-1.7	-2.6	-1.1
Mizoram	T	39.7	46.4	32.9	40.5	46.6	34.4	-0.8	-0.2	1.5
	R	42.8	48.5	37.2	44.0	48.5	39.4	1.2	0.1	2.2
	U	29.9	39.9	19.0	36.2	44.0	28.5	6.4	4.2	9.5
Nagaland	T	47.0	47.6	46.4	41.6	43.5	39.6	-5.4	-4.1	-6.8
	R	49.3	50.0	49.7	43.9	44.6	42.9	-5.4	-5.4	-6.8
	U	25.7	35.8	14.1	25.3	35.4	14.4	-0.3	-0.4	-0.3
Tripura	T	36.1	52.6	19.0	32.3	45.2	18.8	-3.9	-7.4	-0.2
	R	36.2	52.7	19.1	32.2	45.2	18.8	-4.0	-7.5	-0.3
	U	28.8	44.0	10.9	32.8	45.2	16.2	4.1	-1.2	5.4

*Excluding Assam.

T-Total, R-Rural and U-Urban

P-Persons, M-Males and F-Females

Source : Office of the Registrar General and Census Commissioner (1981c, 1991c)

(b) State Level Analysis

As already mentioned, the TWPR of the region has declined in the last two censuses. The same pattern was observed in all the states of the region. In 1991, Arunachal Pradesh and Manipur recorded highest TWPR with 44.9 percent each, followed by Nagaland 41.6 percent, Meghalaya

40.9 percent and Mizoram 40.5 percent. the lowest was recorded in Tripura with 32.2 percent. Among the states in 1981-91, a decreased in TWPR found highest in Arunachal Pradesh by 5.5 percentage and Nagaland by 5.4 percentage. This is followed by Meghalaya 4.0 percent, Tripura 3.9 percent and Manipur 3.0 percent. In the case of Mizoram, a marginal decline of 0.8 percent in TWPR was observed. The fall of TWPR in all the states of the region could be due to the declined in the proportion of workers in cultivation and other primary activities.

In 1991, the TMWPR is found highest in Manipur with 49.0 percent. This is closely followed by Meghalaya 48.1 percent, Arunachal Pradesh 47.4 percent, Mizoram 46.6 percent, Tripura 45.2 percent and Nagaland 43.5 percent. The trend in TMWPR during the two censuses in the state of the region showed that it increased in Manipur by 0.3 percent. But other states shows a decline in TMWPR of 7.8 percent in Tripura, followed by 5.5 percent in Arunachal Pradesh, 4.1 percent Nagaland, and 4.0 percent in Meghalaya.

In both 1981 and 1991 censuses, a high proportion of TFWPR is recorded in all the states except Tripura. In 1991, Manipur registered TFWPR of 43.2 percent, followed by Arunachal Pradesh of 42.5 percent, Nagaland 39.6 percent, Mizoram 34.4 percent and Meghalaya 33.8 percent. In the case of Tripura, the proportion is very low with only 18.8 percent of

the tribal females in the work force. During the 1981-91 there has been a decline by varying degrees in TFWPR in most of the states. The decline was about 6.8 percent in Nagaland, 5.5 percent in Arunachal Pradesh, 4.0 percent in Meghalaya, 3.9 percent in Manipur and a negligible decline in Tripura with 0.2 percent. For Mizoram, a marginal increase of 1.5 percent was registered in TFWPR. A reason for this may be the more enterprising quality of the Mizo women which contributes to an increase in female work force participation.

(c) Work Force Participation in Rural and Urban areas by Sex

The table 3.3 gives the TWPR of the state in the North-Eastern Region by sex and residence (rural and urban). A high TMWPR was observed in rural areas of all the states. As per 1991 census TMWPR in Meghalaya was 49.6 percent, Mizoram 48.5 percent, Arunachal Pradesh 48.1 percent, Manipur 47.7 percent, Tripura 45.2 percent and Nagaland 42.9 percent. Between 1981 and 1991, TMWPR in rural areas has declined in most of the state except Mizoram. The percentage decline was found highest in Tripura, by 7.5 percent, Nagaland 5.4 percent, Arunachal Pradesh by 5.1 percent, Meghalaya by 4.1 percent and Manipur by 2.6 percent. However, in Mizoram, there has been a marginal increase in TMWPR of 0.1 percent. For TFWPR, in rural areas there is high degree of variation among the states. In 1991, TFWPR in rural areas is 45.5 percent

in Manipur, 44.1 percent in Arunachal Pradesh, 42.9 percent in Nagaland, 39.4 percent in Mizoram and 36.1 percent in Meghalaya. In the case of Tripura the participation rate is very low of 18.8 percent. During the two census years, the states except Mizoram, of the region experienced a decline in TFWPR. But in Mizoram, TFWPR has increased by 2.2 percent.

In urban areas, TMWPR in 1991 was 45.2 percent in Tripura, 44.0 percent in Mizoram, 37.7 percent in Meghalaya, 36.7 percent in Arunachal Pradesh, 35.4 percent in Nagaland and 34.0 percent in Manipur. A high participation of tribal workers in Tripura could be due to the low percentage of tribal population in urban areas (1.7 percent in 1991). Among the states, only Mizoram showed an increase in TMWPR by 4.2 percent during 1981-91, whereas in other states there has been a decline in TMWPR. A decline in tribal male participation in urban areas may be a delay in entering the work force of tribal labour force especially students.

For TFWPR in urban areas, a low percentage is observed in all the states. In the last census, Mizoram recorded highest TFWPR of 28.4 percent, followed by Meghalaya with 19.7 percent, Manipur 17.6 percent, Tripura 16.2 percent, Arunachal Pradesh 15.9 percent and Nagaland 14.4 percent. Interestingly, TFWPR in three states viz., Manipur, Mizoram and Tripura showed an increase during 1981-1991. Mizoram exhibits a

remarkable increase with 9.5 percent. However, in the remaining states TFWPR has decreased.

The trend of TWPR in the North-Eastern region shows a decline with a high variation among the states. A marginal increase in TWPR in urban areas has been recorded. It is mainly because of participation rates of tribal males and females in Mizoram. In contrast, there is a sharp fall in TMWPR in Tripura and a negligible decline in TFWPR. In Manipur TMWPR has marginally increased whereas TFWPR has declined. Nagaland and Meghalaya experienced an equal decline in both TMWPR and TFWPR.

3.3 Sectoral Distribution of Work Force

The important studies in the transformation of work force of Kuznets (1966), Clark (1967), suggest that in the wake of development, a region registers change in the structure of its work force. It normally experiences a shift from primary to secondary and tertiary functions. "In this shifting pattern, any region or country where per capita income grew significantly, the proportion of the labour force engaged in agriculture declined and that engaged in non-agricultural industries increased" (Kuznets, 1965, p.24). Growth of urban centre is one important factor to open more employment avenue for labour force. Generally in urban areas a

large proportion of labour are engaged in non-agricultural pursuits. And the process of urbanization affects the grouping of population by social and economic status and transforms the basic pattern of life.

The economy of any region may be categorized into three sectors- *Primary, Secondary* and *Tertiary* on the basis of the nature of the production process of the commodity or commodities produced in the particular sector. As mentioned earlier, the primary sector engages itself mainly in the production of commodities, whose production processes involve utilization of natural resources, that is, cultivation, agricultural labourers, forestry, hunting, plantations, mining and quarrying. Secondary sector concentrates on the production of commodities whose creation involves manipulation of materials to create for utility, that is, manufacturing processes, servicing and repairs and constructions. And the tertiary sector produces services, that is, trade and commerce, transport, storage and communication and other services. It can be easily seen from the above discussion that the pattern in which a country's labour force is distributed among the various sectors may be taken as an index of economic development. In this context we are going to analyze the pattern of sectoral distribution of tribal work force in the North-Eastern Region.

(a) Regional Analysis

The agrarian nature of economy is a marked feature in the North-Eastern Region as majority of tribal work force is engaged in the primary sector, whereas the proportion of workers in the other two sectors viz., secondary and tertiary sectors, is quite small. At the regional level, during 1991 census, 83.3 percent of tribal main workers were engaged in primary sector, while the proportion in secondary sector and tertiary sectors are 2.3 percent and 14.4 percent respectively. The corresponding figures during 1981 census were 87.4 percent in the primary sector, 2.3 percent in secondary sector and 10.4 percent in the tertiary sector. From the table 3.4, we have examined the trend of sectoral shift between 1981 and 1991. From this table, we can observe that the share of primary sector has decreased by 4.1 percent and tertiary sector has increased by 4.0 percent. But there is no changes in the secondary sector. The above figures shown the low level of development of the tribal economy. "The primary sector has failed to have significant multiplication effect in the secondary and tertiary sectors" (Roy Burman, 1971, p.49). The fact is that tribals generally live in hospitable terrian where the productivity of the soil is low.

Table 3.4

Percentage of Tribal Workers in the Three Economy Sectors and Percentage Change in North-Eastern Region by States 1981 and 1991

<i>Region/State</i>	<i>Primary Sector</i>		<i>Secondary Sector</i>		<i>Tertiary Sector</i>		<i>Percentage Change</i>		
	<i>1981</i>	<i>1991</i>	<i>1981</i>	<i>1991</i>	<i>1981</i>	<i>1991</i>	<i>Prim.</i>	<i>Sec.</i>	<i>Tert.</i>
N.E. Region*	87.4	83.5	2.3	2.3	10.4	14.4	-4.1	0.0	4.0
Arunachal Pradesh	92.8	87.2	2.3	3.0	4.5	9.9	-5.6	0.7	5.4
Manipur	88.9	86.9	1.8	1.8	9.3	11.3	-2.0	0.0	2.0
Meghalaya	87.1	82.1	2.9	2.5	10.1	15.4	-5.0	-0.4	5.3
Mizoram	81.9	71.1	3.2	3.4	15.0	25.4	-10.8	0.2	10.4
Nagaland	84.5	83.2	1.6	2.2	13.9	14.6	-1.3	0.6	7.0
Tripura	94.3	89.3	1.3	1.3	4.4	9.5	-5.0	0.0	5.1

*Excluding Assam.

Source : Office of the Registrar General and Census Commissioner (1981c, 1991d, 1991c).

(b) State Level Analysis

Among the six states of the region, the highest proportion in the primary sector is recorded in Tripura, of 89.3 percent, followed by Arunachal Pradesh 87.2 percent, Manipur 86.9 percent, Nagaland 83.2 percent, Meghalaya 82.1 percent and Mizoram 71.1 percent in 1991. However, trend in primary sector in all the states has shown declined during 1981-1991. Mizoram has declined by 10.8 percent, Tripura 5.0 percent, Manipur 2.0 percent, Nagaland 1.3 percent. The share of proportion in the secondary sector is very minimal. The highest percentage recorded is in Mizoram of 3.4 percent and the lowest is in Tripura of 1.3 percent. Despite the fact that in secondary sector has very low proportion,

there has been a marginal increased in all the states except Meghalaya during the intercensal period. In the case of Meghalaya the proportion was declined by 0.4 percent. Low work force participation in the secondary sector could be due to lack of manufacturing and industrial development in the region. In the tertiary sector, the proportion of workers in Mizoram is remarkably high with 25.4 percent which is distantly followed by Meghalaya 15.4 percent, Nagaland 14.6 percent, Manipur 11.3 percent, Arunachal Pradesh 9.9 percent and Tripura 9.5 percent. The tribal workers engaged in the tertiary sector showed a remarkable increased in all the states. During 1981 to 1991 Mizoram exhibits with an increased of 10.4 percent. followed by Arunachal Pradesh 5.4 percent, Meghalaya 5.3 percent, Tripura 5.1 percent and Manipur 2.0 percent. In Nagaland there is a marginal increased with 0.7 percent only. The increase in the tertiary sector shows a diversification of employment is taking place especially in administrative set up of the region and states.

3.4 Distribution of Tribal Work Force by Industrial Categories

(a) Regional Analysis

In the foregoing paragraphs, we have shown the spatial distribution the tribal workers in the different sectors of the economy in the North-Eastern Region. And in the following paragraphs we will describe the

distribution of tribal workers in different industrial categories. From the table 3.5, we observe that the North-Eastern region accounts for 71.9 percent of workers as cultivators in 1991 census. However, comparing with 1981 census the proportion of cultivators in 1991 decreased by 5.7 percent in the region. The proportion in agriculture labourers increased from 7.5 percent in 1981 to 8.6 percent in 1991. The proportion of tribal workers in livestock, fishing, plantation and other related activities, remained almost the same in 1981 and 1991. The respective percentages are 2.6 percent and 2.5 percent. The tribal workers engaged in mining and quarrying, household industries and other than household industries and construction are insignificant with 0.1 percent in 1981 and 0.2 percent in 1991. A marginal increase of tribal workers has been recorded in trade and commerce with 1.1 percent in 1981 and 2.1 percent in 1991. But in the transport, storage and communication the proportion again is negligible. However, a considerable proportion of tribal workers are registered in service sector with 8.4 percent in 1981 and 11.7 percent in 1991.

Table 3.5

Percentage of Tribal Workers in Different Industrial Categories, 1981, 1991

REGION/STATE	CAT I		CAT II		CAT III		CAT IV		CAT V(A)		CAT V(B)		CAT VI		CAT VII		CAT VIII		CAT IX	
	1981	1991	1981	1991	1981	1991	1981	1991	1981	1991	1981	1991	1981	1991	1981	1991	1981	1991	1981	1991
N E Region*	77.6	71.9	7.5	8.6	2.6	2.5	0.1	0.2	0.5	0.5	0.5	0.8	1.1	1.1	1.1	2.1	0.4	0.7	8.4	11.7
Arunachal	91.4	85.0	0.7	1.4	0.7	0.7	0.0	0.1	0.1	0.1	0.2	0.3	2.3	2.5	0.5	0.9	0.1	0.5	3.9	8.5
Manipur	86.2	84.1	2.2	2.3	0.4	0.4	0.0	0.0	0.8	1.0	0.3	0.3	0.8	0.4	0.6	0.9	0.0	0.3	8.6	10.1
Meghalaya	69.6	61.5	10.0	13.1	7.1	7.0	0.4	0.6	0.6	0.3	0.9	1.2	1.3	0.9	1.8	3.3	0.7	1.0	7.6	11.0
Mizoram	80.0	66.7	2.4	3.3	0.6	1.0	0.1	0.2	0.9	1.0	1.2	1.4	1.1	1.0	2.4	5.1	0.9	1.2	11.7	19.2
Nagaland	83.9	81.6	0.3	0.5	0.3	1.0	0.0	0.1	0.2	0.3	0.5	0.5	0.8	1.4	0.5	1.1	0.2	0.5	13.2	13.1
Tripura	64.0	57.3	28.7	29.9	1.5	1.9	0.0	0.2	0.2	0.3	0.9	0.7	0.2	0.2	0.3	0.8	0.2	0.4	3.8	8.2

*Excluding Assam.

Note: CAT I-Cultivators, CAT II-Agricultural Labourers, CAT III-Livestock, Fishing, Hunting and Plantations, Orchard and Allied Activities, CAT IV-Mining and Quarrying, CAT V- Manufacturing, Processing, Servicing and Repairs in (a)-Household Industry, (b) other than Household Industry, CAT VI-Constructions, CAT VII-Trade and Commerce, CAT VIII-Transport, Storage and Communication and CAT IX-Other services

Source: Office of the Registrar General and Census Commissioner (1981c, 1981d, 1991c).

(b) State and Analysis

Cultivators

The share of tribal workers engaged in cultivation is largest in all the states of the region. Arunachal Pradesh recorded highest proportion of tribal workers with 85.0 percent and it is closely followed by Manipur, 84.1 percent and Nagaland 81.6 percent during 1991 census. Mizoram, Meghalaya and Tripura have lesser proportion of cultivators with 66.6 percent, 61.4 percent and 57.3 percent respectively. The corresponding figures in 1981 census are Arunachal Pradesh 91.3 percent, Manipur 86.1 percent, Nagaland 84.8 percent, Mizoram 79.9 percent, Meghalaya 69.0 percent and Tripura 64.0 percent. During the two censuses observed a decline in the proportion of the tribal workers engaged in cultivation. The decline is prominent in the state of Mizoram, Meghalaya, Tripura and Arunachal Pradesh, whereas in Manipur and Nagaland the change is not much.

Agriculture Labourers

In 1981 and 1991 censuses, a considerable proportion of tribal main workers were engaged in agricultural labourers category in the state of Meghalaya and Tripura. The figures in 1981 are 28.7 percent in Tripura and 10.0 percent in Meghalaya. Moreover, the percentages increased in the latest

census to 29.9 percent in Tripura and 13.0 percent in Meghalaya. But in the case of Arunachal Pradesh, Manipur Mizoram and Nagaland the tribals engaged in this activity is insignificant. This shows agricultural labourers do not constitute a very important sector of the tribal working force with the exception of the tribal groups from Meghalaya and Tripura.

Livestock, Fishing, Hunting and Plantation, Orchard and Allied Activities

The tribal work force participating in these activities is below 1.0 percent in most of the states. However, in Meghalaya the data shows a relatively high proportion in both censuses. In 1981, Meghalaya recorded 7.1 percent and 7.0 percent in 1991 in this category.

Mining and Quarrying

The percentage of the tribal workers engaged in this sector is negligible in all the states.

Household Industries and Other than Household Industries

The proportion of tribal workers engaged in industrial activities is minimal. In both censuses the data shows all the states are below 1.0 percent. Tribals are known for their traditional handlooms, handicrafts and other cottage industries but these are taken up during their spare time.

Construction

In this activity, Arunachal Pradesh recorded the highest percentage 2.3 in 1981 and 2.5 in 1991. Other states the participation rate is below 1.0 percent in the both census years.

Trade and Commerce

A very low percentage of tribal workers participate in trade and commerce. In spite of low proportion there has been a significant improvement during 1981-1991. In 1991 the highest is recorded in Mizoram with 5.0 percent followed by Meghalaya with 3.3 percent and Nagaland with 1.0 percent.

Transport, Storage and Communication

The percentage of the tribal workers engaged in these activities as below 1.0 percent in all the states during 1981 and 1991.

Other Services

During 1981-1991, we observe a considerable percentage of tribal workers engaged in these activities. As per 1981 census, Nagaland accounts for highest proportion of workers in this sector with 13.1 percent, followed by Mizoram 11.7 percent, Manipur 8.6 percent, Meghalaya 7.5 percent, Arunachal Pradesh 3.9 percent and Tripura 3.8 percent. In 1991, the

percentages show an increase, as Mizoram registered 19.1 percent followed by Nagaland 13.1 percent, Meghalaya 10.9 percent, Manipur 10.0 percent, Arunachal Pradesh 8.5 percent and Tripura 8.2 percent. In the case of Nagaland the proportion remained the same while in the state of Arunachal Pradesh, Mizoram and Tripura there has been a remarkable increase during the two censuses.

In sum, the proportion of the main workers in the country has remained fairly low. However, the tribal proportion in the country shows that the percentage of tribal main workers is comparatively higher than the non-tribal population. The important reason for this is concentration of tribal labour force in the primary activities.

In the North-Eastern Region, we observed a decline in TWPR in all the states. A decline in TWPR is found mostly in rural areas whereas in urban areas a marginal increase has been recorded at regional level. TMWPR have declined in both rural and urban areas in all the states except Mizoram, though TFWPR have increased in urban areas of Manipur, Mizoram and Tripura.

The preceding statement reveals that the concentration of the tribal workers is very high in the primary sector. Nevertheless, there is a decline in the proportion of tribal work force engaged in primary sector especially in

the cultivation activities. Tribal work force in the secondary sector is negligible and more or less stagnant which could be due to non-development in industry in the region. Proportion of tribal workers in the tertiary sector is relatively high. This is due to the fact that a remarkable increase in percentage of the tribal workers engaged in trade and commerce and service sectors during 1981-91. These sectors account for the second largest proportion in the tribal main workers. The above indicates that a diversification of employment in service sector has taken shape in the region.

Chapter IV

District Level Analysis of Work Force Participation

In the preceding chapter, we have examined the work force participation, sectoral and industrial of TWPR in the North-Eastern Region. Although, the preceding chapter brought about important differences among the states of the North-Eastern Region, it is important to examine TWPR in different districts of the states. The reason for carrying out such analysis is that certain districts have higher concentration of TWPR which are not reflected at the aggregate level. Therefore in this chapter, we will examine the pattern of TWPR by sex and areas. We will also analyse the socio-economic and demographic factors influencing TWPR.

4.1 Tribal Work Force Participation in the Districts of the Region

In the North-Eastern Region there are 37 districts in all, and these districts have been arranged state-wise in table 4.1. In this table, we give the TWPR by districts in 1981 and 1991 and percentage change during the intercensal period. As in the case of the state-wise data discussed in the last chapter, there is a decline of tribal workers from 1981 to 1991. Among the districts, there is a decline during 1981-1991 in the proportion of tribal workers except the districts in the state of Mizoram. The lowest percentage change is observed for East Garo Hills in Meghalaya of 0.2 percent and the

1. MAN'S RELATION TO NATURE:

We noted above that *EPM* is located in the interstice between natural and human history. A question may now be asked: What is the relation between the two histories? Does human history emerge out of natural history? Do the processes in nature provide the starting-point for human history, so that they all along underlie and circumscribe the latter? These are big questions and have raised lot of dust within Marxist circles. I shall try to cull out some responses to this debate, from a study of *EPM*.

Marx's attempt to link human history with natural history can, I think, be identified at three levels:

- i) man's pre-human or pre-society activity on nature,
- ii) human labour as, at one level, a natural process,
- iii) man-nature intercourse as just one of the many subject-object interactive processes in nature,

(i) Man's Pre-human Activity on Nature

The man-nature relationship is conceived by Marx as a relation between two living entities, mutually transforming each other. Nature is not a mere agglomeration of material objects with which man has only an external relation of utility. Nature is part of man's essential being, a confirmation of his existence as a living, sensuous being. Man and nature are, therefore, actively related to each other.

For Marx, society or even man himself is the result of man's intercourse with nature. Man and nature do not exist in mutual isolation. Man must be in constant intercourse with nature if he is not to die. This intercourse entails man's work on nature. It means labour, activity on nature. It is activity which makes man more than just a natural being -- a social, or rather a human being.³ There is,

-
3. Marx in *EPM* regarded labour, activity, as defining man's distinctiveness and also breaking the thinking-being antithesis. However, he could not view it as giving rise to social forms, social relations and hence, in the productive forces providing the key to the movement of human history. Hence, in *EPM*, history is seen as the process of the self-realization of man through the movement of the human essence according to the form of the Hegelian dialectic. More on it below.

highest percentage is recorded in Dibang Valley in Arunachal Pradesh of 9.7. In the following districts of Mizoram, there has been an increase in the percentage of workers of 0.3 percent in Aizawl. 1.4 percent in Chhimtuipui and 2.3 percent in Lunglei.

Table 4.1
Percentage of Tribal Main Workers in the North-Eastern Region by Districts, 1981-1991

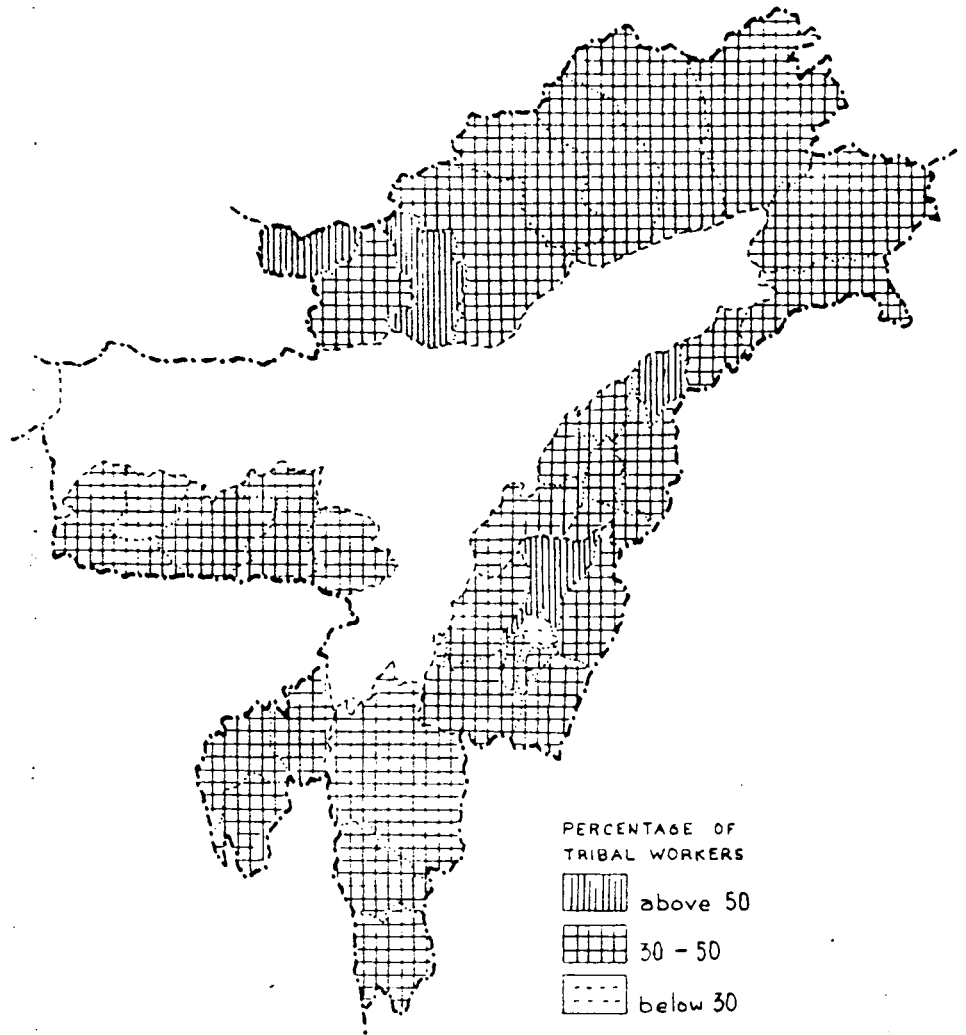
<i>State/District</i>	<i>1981</i>	<i>1991</i>	<i>Percentage Change 1981 to 1991</i>
Arunachal Pradesh			
Tawang	*	55.6	
West Kameng	52.1	43.6	-8.5
East Kameng	55.7	50.6	-5.1
Lower Subansiri	53.2	45.6	-7.6
Upper Subansiri	49.0	42.1	-6.9
West Siang	48.2	40.7	-7.5
East Siang	44.9	41.5	-3.4
Dibang Valley	52.3	42.5	-9.7
Lohit	44.6	41.7	-2.9
Changlang	*	43.9	
Tirap	51.6	45.8	-5.8
Manipur			
Senapati	55.4	51.3	-4.1
Tamenglong	50.5	44.8	-5.8
Churachandpur	41.4	41.9	-0.5
Chandel	54.8	48.4	-6.3
Thoubal	*	36.4	
Bishnupur	*	47.1	
Imphal	28.4	26.2	-2.2
Ukhrul	48.9	42.9	-6.0
Meghalaya			
Jaintia Hills	47.9	44.3	-3.7
East Khasi Hills	42.2	38.5	-3.7
West Khasi Hills	50.0	43.1	-6.9
East Garo Hills	39.7	39.5	-0.2
West Garo Hills	46.7	41.5	-5.2
Mizoram			
Aizawl	39.5	39.9	0.3
Lunglei	38.5	40.8	2.3
Chhimtuipui	41.9	43.3	1.4
Nagaland			
Kohima	44.0	37.0	-7.1
Phek	51.5	44.5	-7.0
Zunheboto	44.9	41.9	-3.0
Wokha	41.6	38.5	-3.2
Mokokchung	39.7	37.3	-2.5
Tuensang	50.9	44.5	-6.5
Mon	57.7	50.9	-6.9
Tripura			
West Tripura	35.1	32.2	-2.9
North Tripura	36.3	35.0	-1.3
South Tripura	37.4	30.7	-6.7

* after 1991

Source: Office of the Registrar General and Census Commissioner (1981c, 1991c)

DISTRIBUTION OF TRIBAL
WORKERS, 1991

Map III



In order to understand the changes in the TWPR in the districts, we have categorised the districts into three categories. These categories are 50 percent and above 35-50 percent and less than 35 percent. We have selected these categories to indicate the number of districts which have nearly one-third percent of tribal workers and those which are one-third and an half of TWPR and districts which are more than the 50 percent TWPR. In table 4.2, we present the changes in the number of districts in the three categories of TWPR during 1981-1991.

Table 4.2
Distribution of the Districts According to the Percentage of the Tribal Workers, 1981-1991

<i>Percentage</i>	<i>Number of Districts</i>	
	<i>1981</i>	<i>1991</i>
50 and above	11	4
35-50	21	29
Less than 35	1	4

Comparing TWPR of the two censuses, there has been declined in the proportion, in the category of 50 percent and above. In this category, the districts were Tawang and East Kameng of Arunachal Pradesh, Senapati district of Manipur and Mon of Nagaland. But the number of districts increased in 35-50 percent category and less than 35 percent category. This indicates that TWPR in the North-Eastern Region is concentrated in the 35-50 percentage range.

It is important to note here that the percentage of the tribal workers in the districts were observed highest where the proportion of the tribal population is 70 to 90 percent. However, districts with very high tribal population which is above 90 percent have lower proportion of TWPR. And districts with low tribal proportion of population below 30 percent have the least TWPR. The reason for such relationship between tribal population and TWPR is not clear.

(a) Sex Distribution

Table 4.3 shows the proportion of tribal workers among males and females and percentage change in the districts of the region. From the table we observe a decline in TMWPR in most of the districts during 1981-91 except Aizawl and Lunglei districts of Mizoram and Mon district of Nagaland. The highest percentage decline in TMWPR is recorded in South Tripura district of 13.7 percent, and the lowest percentage change is recorded in Churachandpur district in Manipur of 0.4 percent. In the case of Mon district of Nagaland, the percentage increase is 1.2 whereas that of Aizawl and Lunglei are 0.3 and 0.6 respectively.

Table 4.3
Percentage of Tribal Male and Female-Work Force in the North-Eastern Region by District, 1981 and 1991

<i>Districts</i>	<i>Males</i>		<i>Females</i>		<i>Percentage Change (1981-1991)</i>		<i>Male-Female Differentials</i>	
	<i>1981</i>	<i>1991</i>	<i>1981</i>	<i>1991</i>	<i>Males</i>	<i>Females</i>	<i>1981</i>	<i>1991</i>
N.E. Regions #	50.4	46.2	37.9	34.6	-4.2	-3.3	12.4	11.6
Arunachal Pradesh	52.9	47.4	48.0	42.5	-5.5	-5.5	4.9	4.9
Tawang	*	53.8	*	50.6	0.0	0.0	0.0	3.2
West Kameng	56.2	49.9	48.1	37.3	-6.4	-10.8	8.1	12.5
East Kameng	60.9	51.9	50.6	49.4	-0	-1.2	10.3	2.5
Lower Subansiri	53.7	47.4	52.7	44.5	-6.4	-8.2	1.1	2.9
Upper Subansiri	49.6	44.3	48.5	40.0	-5.3	-8.5	1.1	4.3
West Siang	49.0	42.9	47.5	38.6	-6.1	-8.9	1.5	4.3
East Siang	48.7	44.9	41.0	38.1	-3.8	-2.9	7.7	6.8
Dibang Valley	51.6	45.0	52.8	40.1	-6.7	-12.7	-1.2	4.8
Lohit	51.2	48.1	37.9	35.1	-3.1	-2.7	13.4	13.0
Changlang	*	47.9	*	39.7	0.0	0.0	0.0	8.3
Tirap	54.3	50.3	48.8	50.8	-4.1	2.0	5.6	-0.5
Manipur	48.7	49.0	47.0	43.2	0.3	-3.9	1.7	5.8
Senapati	52.7	51.0	58.2	51.6	-1.8	-6.5	-5.5	-0.7
Tamenglong	47.8	43.8	53.3	45.7	-3.9	-7.6	-5.5	-1.8
Churachandpur	46.8	46.4	36.0	37.2	-0.4	1.3	10.8	9.2
Chandel	56.4	50.3	48.2	46.5	-6.1	-1.7	8.2	3.9
Thoubal	*	44.7	*	26.7	0.0	0.0	0.0	18.0
Bishnupur	*	52.7	*	40.6	0.0	0.0	0.0	12.2
Imphal	37.0	55.0	18.6	16.7	-2.0	-1.9	18.5	18.3
Ukhrul	46.1	42.4	51.8	43.5	-3.7	-8.3	-5.7	-1.1
Meghalaya	52.1	48.1	37.8	33.8	-4.0	-4.0	14.2	14.3
Jaintia Hills	53.9	50.3	42.1	38.3	-3.6	-3.8	11.8	12.0
East Khasi Hills	50.4	47.1	34.2	30.2	-3.4	-4.0	16.3	16.9
West Khasi Hills	53.0	46.7	46.8	39.3	-6.3	-7.6	6.2	7.5
East Garo Hills	49.1	46.7	29.9	32.0	-2.4	2.1	19.1	14.7
West Garo Hills	54.2	49.6	29.1	34.4	-4.6	5.3	25.1	15.1
Mizoram	46.4	46.6	32.9	34.4	-0.2	1.5	0.6	4.7
Aizawl	45.8	46.0	33.3	33.6	0.3	0.3	12.5	12.5
Lunglei	46.9	47.5	30.1	34.0	0.6	3.9	16.7	13.5
Chhimituipui	49.4	47.7	34.3	38.7	-1.7	4.4	15.1	9.0
Nagaland	47.6	43.5	46.4	39.6	-4.1	-6.8	14.2	14.3
Kohima	46.7	41.5	41.2	32.2	-5.2	-9.0	5.5	9.3
Phek	47.9	43.2	55.3	45.8	-4.7	-9.5	-7.4	-2.6
Zunheboto	45.0	42.3	44.7	41.4	-2.7	-3.3	0.3	1.0
Wokha	40.6	38.7	42.7	38.2	-1.9	-4.5	-2.1	0.5
Mokokchung	41.7	39.8	37.6	34.6	-1.9	-3.0	4.1	5.2
Tuensang	50.6	45.4	51.3	43.5	-5.2	-7.8	-0.7	1.9
Mon	50.8	52.0	56.6	49.6	1.2	-7.0	-5.8	2.4
Tripura	52.6	45.2	19.0	18.8	-7.4	-0.2	33.6	26.4
West Tripura	49.9	46.7	19.9	17.3	-3.3	-2.7	30.0	29.4
North Tripura	53.6	49.1	17.9	20.1	-4.6	2.3	35.7	28.9
South Tripura	55.2	41.5	18.7	19.5	-13.7	0.8	36.4	22.0

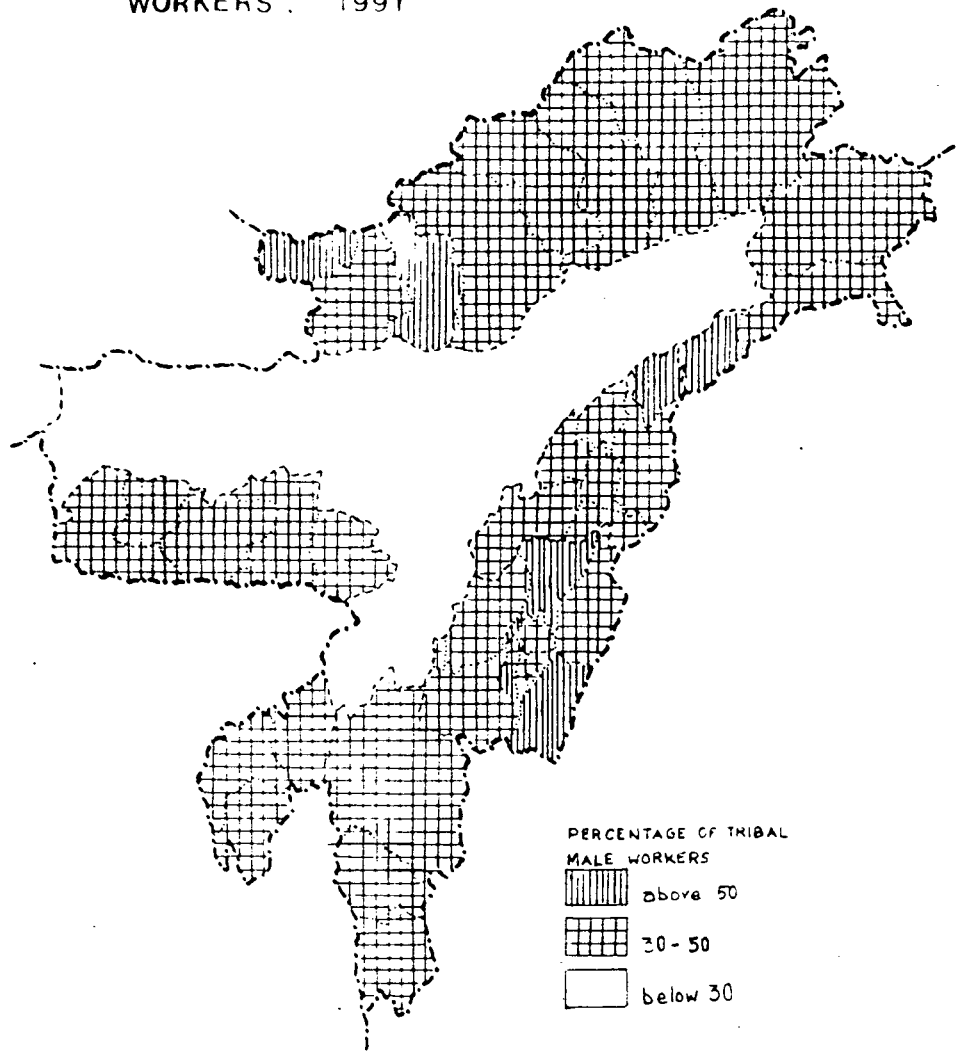
excluding Assam

* district created after 1981

Source: Office of the Registrar General and Census Commissioner (191c, 1991c).

DISTRIBUTION OF TRIBAL MALE
WORKERS . 1991

Map IV



DISTRIBUTION OF TRIBAL FEMALE
WORKERS . 1991

Map V

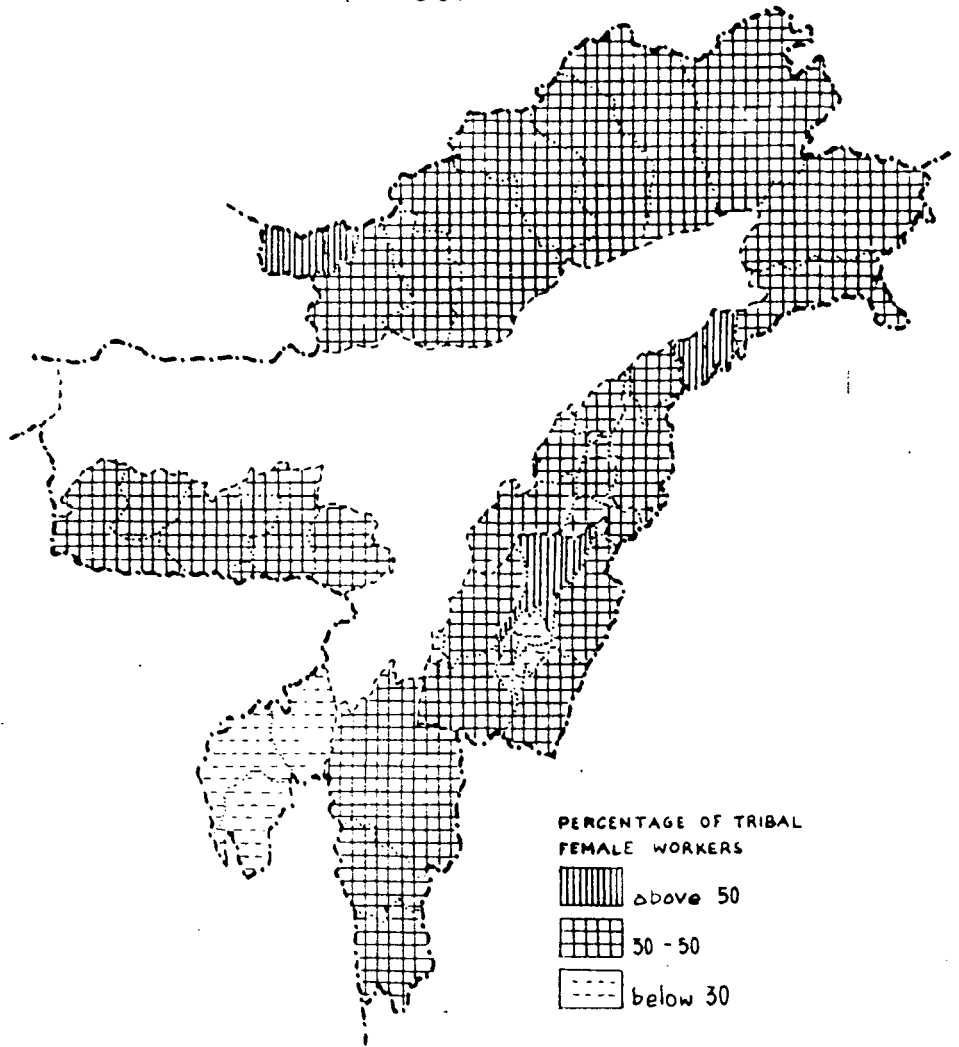


Table 4.4 shows change in number of districts in the three percentage categories. In 1991, there is a sharp fall of districts which is in the category of 50 percent and above. In this category, the districts were Tawang, East Kameng and Tirap of Arunachal Pradesh; Senapati, Chandel and Bishnupur of Manipur; Jaintia Hills of Meghalaya and Mon district of Nagaland. A large number of districts are found in 35-50 percent category. TMWPR in the North-Eastern Region is mostly concentrated in the category between 35 and 50 percent.

Table 4.4
Distribution of the Districts According to the Percentage
of the TMWPR, 1981-1991

<i>Percentage</i>	<i>Number of Districts</i>	
	<i>1981</i>	<i>1991</i>
50 and above	16	8
35-50	16	29
Less than 35	1	1

For TFWPR in the districts of the region, we again find a decline in most of the districts. The variation of decline is from a high of 12.7 percent in East Siang of Arunachal Pradesh to a low of -1.2 percent in East Kameng of Arunachal Pradesh. However, there is an increase in TFWPR in nine districts. The districts are Tirap of Arunachal Pradesh by 2.0 percent, Churachandpur of Manipur by 1.3 percent, East Garo Hills and West Garo Hills of Meghalaya by 2.1 percent and 5.3 percent. All the districts of Mizoram recorded an increase with 0.3 percent in Aizawl, 3.9 percent in Lunglei and 4.4 percent in Chhimituipui. In North Tripura and South Tripura also there is an increase of 2.3 percent.

Table 4.5
Distribution of the Districts According to the Percentage
of the TFWPR, 1981-1991

<i>Percentage</i>	<i>Number of Districts</i>	
	<i>1981</i>	<i>1991</i>
50 and above	0	3
35-50	15	22
Less than 35	9	12

In table 4.5 shows the distribution of districts according to the percentage of TFWPR. During 1981-91, there has been a decline in the number of districts which is in the category of 50 percent and above. But in 1991, a large number of districts are concentrated in the percentage between 35 and 50.

Comparing between TMWPR and TFWPR among the districts, we notice an increase in TFWPR in 9 district, whereas in the case of TMWPR we find only in 3 districts. However, the decline in TFWPR is very high in most of the tribal dominant districts in states like Arunachal Pradesh, Nagaland and tribal dominant districts of Manipur. In fact, a sharp decline in some districts has contributed to the fall of TFWPR at the regional level.

In table 4.3, we have shown male-female differentials. In 1981, male-female differential in TWPR was 12.4 percent (50.4 percent in TMWPR and 37.9 percent in TFWPR) in the entire North-Eastern Region. In 1991, the corresponding figure declined was 11.6 percent (46.2 percent for TMWPR and 34.6 percent of TFWPR). The decline in male-female differentials suggest that there has been a narrowing of the gap between

males and females work force participation rate. But this decline is not very large.

Among the states Manipur and Mizoram showed increase in male-female differentials in 1991. The figures were 1.7 percent in 1981 and 5.8 percent in 1991 for Manipur. In Mizoram, the corresponding figures were 0.6 percent and 4.7 percent respectively. But in the states of Nagaland and Meghalaya the male-female differentials is not much. In the state of Tripura, male-female differentials in work force participation rate has shown a decline from 33.6 percent in 1981 to 26.4 percent in 1991.

Among the districts, we find a high variation in male-female differentials in TWPR. in 1991, the differentials is recorded highest in West Tripura by 29.4 percent and lowest in Wokha of Nagaland by 0.5 percent. In the districts of Tripura, Meghalaya and Mizoram a high differentials between TMWPR and TFWPR is found. Also a similar situation exists in Thoubal, Bishnupur and Imphal districts of Manipur.

From the above analysis, it is observed that in a tribal dominant districts in Nagaland, Arunachal Pradesh and hill districts of Manipur, there is a narrower male-female differentials in TWPR. A fairly low difference between males and females participation in work is because of low economic development in the region. In tribal society both male and female enjoy more or less equal status and there is no social servitude by

birth unlike the caste based society. Moreover, in the subsistence agrarian economy, maximum amount of labour is required in carrying out their economic activities. These are carried out with the sense of collective responsibility by organizing themselves into labour groups. The members work on each other's fields on rotational basis to meet the labour demands.

(b) Rural-Urban Distribution

As mentioned earlier there is a high TWPR in rural areas in the region. The same trend is observed among the districts also. Table 4.6 shows the TWPR in rural and urban areas and percentage change in the districts of the North-Eastern Region. Between 1981 and 1991, there is a decline in the proportion of tribal workers in rural areas except the districts of Mizoram and East Garo Hills district of Meghalaya. Among the districts, West Kameng recorded a highest decline of 8.3 percent and the lowest of 0.3 percent in Dibang Valley district of Arunachal Pradesh. All the three districts of Mizoram registered an increase of 3.6 percent in Lunglei 1.5 percent in Chintuipui and 0.3 percent in Aizawl. Whereas in the case of Meghalaya only Garo Hills district is found an increase of 0.3 percent.

Table 4.6
Percentage of Tribal Work Force in Rural Areas and Urban Areas in
the North-Eastern Region by Districts, 1981 and 1991

<i>Districts</i>	<i>Rural</i>		<i>Urban</i>		<i>Percentage Change (1981-1991)</i>		<i>Rural-Urban Differentials</i>	
	<i>1981</i>	<i>1991</i>	<i>1981</i>	<i>1991</i>	<i>Rural</i>	<i>Urban</i>	<i>1981</i>	<i>1991</i>
N.E. Regions #	45.9	42.5	29.1	30.9	-3.4	1.8	16.8	11.6
Arunachal Pradesh	50.4	46.1	29.7	26.8	-4.3	-3	20.7	19.3
Tawang	*	52.2	*	**	0.0	0.0	0.0	0.0
West Kameng	52.7	44.6	30.7	29.7	-8.1	-1.0	22.0	14.9
East Kameng	55.7	50.6	**	**	-5.1	0.0	0.0	0.0
Lower Subansiri	53.9	48.7	34.3	27.4	-5.2	-6.8	19.7	21.3
Upper Subansiri	49.0	42.1	**	**	-6.9	0.0	0.0	0.0
West Siang	49.1	42.1	29.6	24.3	-6.9	-5.3	19.5	17.9
East Siang	45.9	42.5	24.0	25.7	-3.4	1.7	21.9	16.8
Dibang Valley	52.3	44.0	**	22.5	-8.3	0.0	0.0	21.4
Lohit	45.1	42.6	27.3	30.0	-2.5	2.7	17.8	12.6
Changlang	*	43.9	*	**	0.0	0.0	0.0	0.0
Tirap	51.6	51.3	**	26.2	-0.3	0.0	0.0	25.1
Manipur	50.2	46.6	30.2	25.5	-3.6	-4.7	20.0	21.1
Senapati	55.6	51.3	52.3	**	-4.3	0.0	3.3	0.0
Tamenglong	50.8	44.8	**	**	-6.1	0.0	0.0	0.0
Churachandpur	44.3	45.1	24.3	27.0	0.8	2.8	20.1	18.1
Chandel	56.3	49.2	31.7	33.2	-7.1	1.6	24.6	15.9
Thoubal	*	36.3	*	36.9	0.0	0.0	0.0	-0.6
Bishnupur	*	48.7	*	35.4	0.0	0.0	0.0	13.3
Imphal	35.2	31.2	23.6	22.5	-4.0	-1.0	11.6	8.7
Ukhrul	49.7	42.9	38.1	**	-6.8	0.0	11.6	0.0
Meghalaya	47.0	42.9	30.2	28.5	-4.1	-1.7	16.8	14.4
Jaintia Hills	49.1	45.5	33.6	31.0	-3.6	-2.6	15.5	14.5
East Khasi Hills	46.0	41.5	30.5	29.3	-4.5	-1.2	15.5	12.2
West Khasi Hills	50.2	44.0	38.3	29.4	-6.3	-8.9	11.9	14.6
East Garo Hills	39.8	40.1	32.1	28.2	0.3	-3.9	7.7	11.9
West Garo Hills	48.7	43.8	36.4	24.1	-4.9	-12.3	12.3	19.7
Mizoram	42.9	44.0	29.9	36.2	1.2	6.4	13.0	7.8
Aizawl	43.1	43.4	29.9	36.8	0.3	6.9	13.2	6.6
Lunglei	41.1	44.8	27.1	34.5	3.6	7.4	14.0	10.3
Chhimituipui	43.6	45.1	27.3	31.5	1.5	4.2	16.3	13.6
Nagaland	49.3	43.9	25.7	25.3	-5.4	-0.3	23.6	18.6
Kohima	46.7	39.6	28.7	26.1	-7.1	-2.6	18.0	13.5
Phek	51.5	45.2	**	33.9	-6.3	0.0	0.0	11.3
Zunheboto	46.8	44.0	27.2	23.9	-2.8	-3.3	19.6	20.1
Wokha	44.5	41.5	20.2	22.3	-3.0	2.1	24.2	19.2
Mokokchung	42.9	39.4	21.5	23.4	-3.6	1.9	21.4	15.9
Tuensang	52.5	45.9	25.8	26.2	-6.6	0.3	26.6	19.7
Mon	59.7	52.6	27.7	23.1	-7.1	-4.5	32.0	29.5
Tripura	36.2	32.2	28.8	44.0	-4.0	4.1	7.4	-11.8
West Tripura	35.3	32.2	26.4	31.9	-3.1	5.4	8.9	0.4
North Tripura	36.2	35.0	43.7	36.5	-1.3	-7.1	-7.4	-1.6
South Tripura	37.4	30.7	42.1	36.2	-6.7	-5.9	-4.7	-5.5

excluding Assam, * district created after 1981

Source: Office of the Registrar General and Census Commissioner (191c, 1991c).

In the latest census, there are five districts which recorded above 50 percent in TWPR in rural areas. The districts are Tawang, East Kameng and Tirap of Arunachal Pradesh; Senapati of Manipur and Mon of Nagaland. A large number of districts are in the category of 35 to 50 percent as shown in table 4.7. This indicates that TWPR in rural areas is mostly concentrated between 35 and 50 percent.

Table 4.7
Distribution of the Districts According to the Percentage of the TWPR in Rural Areas, 1981-1991

<i>Percentage</i>	<i>Number of Districts</i>	
	<i>1981</i>	<i>1991</i>
50 and above	9	5
35-50	24	29
Less than 35	-	3

In urban areas, the proportion of TWPR is quite low as compared to rural areas. During 1981-1991, the percentage change in urban TWPR has increased in nine districts registering a high of 7.3 percent in Lunglei of Mizoram and lowest of 0.3 percent in Tuensang of Nagaland. However, in fourteen districts, the proportion of TWPR in urban areas declined. In spite of an increased in TWPR in urban areas, in seven districts there is no urban area during 1991 census.

Table 4.8
Distribution of the Districts According to the Percentage of the TWPR in Urban Areas, 1981-1991

<i>Percentage</i>	<i>Number of Districts</i>	
	<i>1981</i>	<i>1991</i>
50 and above	1	-
35-50	5	5
Less than 35	21	25

TWPR in urban areas is also reflected in table 4.8 which shows the

distribution of districts according to percentage in urban areas. In this table, as expected, we observe that a substantial number of districts are concentrated in percentage which is less than 35.0.

The rural-urban differentials in TWPR was also observed in the North-Eastern Region which is already shown in table 4.6. In 1991, North-Eastern Region recorded TWPR of 42.5 percent in rural and 30.9 percent in urban with a difference of 11.6 percent. The corresponding figures in 1981 were 45.9 percent in rural and 29.1 percent in urban. The difference was 16.8 percent. Comparing the two censuses, the differential has increased in percentage.

At the state level, the rural-urban differentials in TWPR is very high except in Tripura. In 1991, the differentials is observed prominently in tribal dominant states. The differences were in Arunachal Pradesh 19.3 percent; Meghalaya 22.4 percent, Nagaland 18.6 percent, Manipur 21.1 percent and Mizoram 7.8 percent. In the case of Tripura the difference was only 0.5 percent. The reason for this could be the low percentage of tribal population living in urban areas (1.7 percent) which may have contributed to the high TWPR in urban areas (31.9 percent) of the states.

Among the districts of the region, we note a high degree of variation in rural-urban differentials. In 1991 census, Mon district of Nagaland recorded a high of 29.7 percent rural-urban difference and West-Tripura

recorded only 0.4 percent. Compared with 1981 census, the rural-urban difference in TWPR in 1991 was narrower in most of the districts. In 1991, the rural-urban difference increased in six districts. The districts are West Khasi Hills, West Garo Hills and East Garo Hills of Meghalaya, lower Subansiri of Arunachal Pradesh, Zunheboto of Nagaland and South Tripura of Tripura. However, rest of the districts exhibited narrower rural-urban differentials.

From the above analysis we can say that the prevailing high degree of differentials between rural and urban in TWPR is because of the limited development of urban areas in the region. Another reason as mentioned earlier may be the low work participation of tribals in urban areas. In tribal society the members start working at an early age irrespective of sex and help their parents in their subsistence cultivation. In urban areas, on the other hand, most of the jobs require education and/or specialized skills and therefore only a select few migrate to the urban areas. Because of the above reasons there is a low tribal work force participation in urban areas.

4.2 Sectoral Distribution Among the Districts

Primary

In chapter III, we have observed a decline of TWPR in the primary sector among the states. The distribution of tribal work force in the three economy sectors and percentage change in districts during 1981-1991 are

shown in table 4.9. Between 1981 and 1991, the proportion of tribal work force engaged in this sector decreased in most of the districts except Mokokchung and Mon districts of Nagaland. The highest percentage change of 13.7 percent was observed in Aizawl of Mizoram and the lowest was 0.7 percent in Tuensang of Nagaland. In the case of Mokokchung and Mon districts, the proportion increased by 1.6 percent and 1.0 percent respectively. As per 1991 census, seven districts of the region registered a percentage of above 90 of tribal workers in primary sector. These districts were Tirap of Arunachal Pradesh; Senapati and Tamenglong of Manipur, West Khasi Hills and East Garo Hills of Meghalaya, Mon of Nagaland and South Tripura. The lowest tribal work force participation in the primary sector was found in Imphal district of Manipur. In Imphal, percentage of tribal living in urban area was 45.2 percent. This may have contributed to a low work force participation in the district.

Secondary Sector

As shown in the foregoing paragraph that in the districts, an overwhelming tribal population participate in the primary sector. The share of proportion in secondary sector is insignificant. In both the censuses, the highest proportion of tribal work force engaged in this sector is recorded in Imphal district of Manipur with 10.0 percent in 1991. The lowest is same for Mon district of Nagaland and South Tripura district with 0.7 percent. Interestingly, a marginal increase is observed in most of the districts during the inter-censal period. Despite the increase, this sector does not constitute an important sector for the region.

Table 4.9
Percentage of Tribal Work Force in the Different Sector of the
Economy in Districts of North-East Region, 1981-1991

<i>Districts</i>	<i>Primary Sector</i>		<i>Secondary Sector</i>		<i>Tertiary Sector</i>		<i>Percentage Change (1981-1991)</i>		
	<i>1981</i>	<i>1991</i>	<i>1981</i>	<i>1991</i>	<i>1981</i>	<i>1991</i>	<i>Prim.</i>	<i>Sec.</i>	<i>Tert.</i>
Arunachal Pradesh									
Tawang	**	79.3	**	1.7	**	19.0	0.0	0.0	0.0
West Kameng	93.4	81.5	2.7	3.5	3.9	15.0	-11.9	0.8	11.1
East Kameng	93.6	89.0	3.6	4.1	2.8	12.1	-4.6	0.5	9.2
Lower Subansiri	96.4	85.5	1.1	3.5	2.5	11.0	-10.9	2.3	8.5
Upper Subansiri	93.8	85.8	1.2	3.7	5.1	10.5	-8.0	2.5	5.4
West Siang	93.4	87.1	2.1	2.7	4.6	10.4	-6.2	0.7	5.9
East Siang	94.1	88.6	1.4	1.9	4.5	9.6	-5.5	0.5	5.1
Dibang Valley	97.1	85.8	0.6	3.5	2.3	10.7	-11.3	3.0	8.4
Lohit	94.9	89.4	1.0	2.1	4.1	8.5	-5.5	1.1	4.4
Changlang	**	88.8	**	2.4	**	8.9	0.0	2.4	0.0
Tirap	96.6	91.5	1.8	3.0	1.5	5.5	-5.1	1.2	3.9
Manipur									
Senapati	93.1	92.6	0.9	0.8	6.0	6.6	-0.5	0.0	0.6
Tamenglong	95.4	91.2	0.5	0.7	4.1	8.1	-4.2	0.2	4.0
Churachandpur	86.3	84.9	2.7	2.5	11.0	12.6	-1.4	-0.2	1.6
Chandel	91.7	89.4	1.1	1.5	7.2	9.1	-2.3	0.4	1.9
Thoubal	**	72.3	**	4.6	**	23.1	0.0	0.0	0.0
Bishnupur	**	78.6	**	4.3	**	17.1	0.0	0.0	0.0
Imphal	48.7	36.1	11.4	10.0	39.9	53.9	-12.6	-1.4	14.0
Ukhrul	88.7	85.0	1.2	1.7	10.0	13.4	-3.8	0.4	3.4
Meghalaya									
Jaintia Hills	89.0	82.7	2.8	1.7	8.2	15.6	-6.3	-1.1	7.4
East Khasi Hills	75.4	68.8	5.8	4.7	18.5	26.5	-6.6	-1.1	8.0
West Khasi Hills	95.9	90.2	0.9	2.3	3.3	8.5	-5.6	1.5	5.2
East Garo Hills	94.0	91.7	0.2	0.8	6.0	7.6	-2.3	0.6	1.6
West Garo Hills	91.9	89.4	1.3	1.6	6.8	8.9	-2.5	0.3	2.1
Mizoram									
Aizawl	80.1	66.4	3.8	4.4	16.1	29.2	-13.7	0.7	13.1
Lunglei	83.9	78.7	2.2	1.7	13.9	19.6	-5.2	-0.5	5.7
Chhimituipui	87.9	84.0	1.3	0.9	10.8	15.2	-3.9	-0.4	4.4
Nagaland									
Kohima	76.5	73.3	2.6	3.5	21.0	23.3	-3.2	0.9	2.3
Phek	87.3	83.5	1.1	2.6	11.6	14.0	-3.8	1.5	2.4
Zunheboto	83.2	81.7	1.5	1.8	15.3	16.6	-1.6	0.3	1.3
Wokha	83.0	79.0	1.5	3.0	15.5	18.0	-4.0	1.5	2.5
Mokokchung	78.5	80.1	2.7	3.4	18.8	16.6	1.6	0.7	-2.2
Tuensang	90.2	89.5	0.6	0.9	9.2	9.7	-0.7	0.2	0.5
Mon	93.3	94.4	1.0	0.7	5.7	4.9	1.0	-0.2	-0.8
Tripura									
West Tripura	92.5	85.0	1.6	1.4	6.0	13.5	-7.4	-0.1	7.6
North Tripura	93.8	89.1	1.4	1.9	4.8	9.1	-4.7	0.5	4.3
South Tripura	96.9	93.8	0.9	0.7	2.2	5.5	-3.1	-0.2	3.3

** district created after 1991

Source: Office of the Registrar General and Census Commissioner (1981c, 1981d, 1991c).

Tertiary Sector

During 1981-1991, we observe an increase in tribals participating in the tertiary sector in all the districts except Mokokchung and Mon of Nagaland. Imphal district of Manipur registered an increased of 14.0 percent during 1981-1991. This is followed by Aizawl district of Mizoram by 13.1 percent and West Kameng of Arunachal Pradesh by 11.1 percent. In 1991, the proportion of tribal work force in the tertiary sector is exceptionally high in Imphal district with 53.9 percent, followed by Aizawl of Mizoram with 29.2 percent, East Khasi Hill of Meghalaya with 26.5 percent and Kohima of Nagaland with 23.3 percent. The lowest proportion is found in the district of Mon of Nagaland with only 4.9 percent in 1991. As mentioned earlier, in Imphal, the percentage of tribals living in urban areas is relatively high. Therefore, tribal workers participating in the tertiary sector is very high.

From the above analysis we find that tribal work force engaged in the primary sector has declined between 1981 and 1991. But the proportion is very high. As per 1991 census, the proportion of workers in primary sector in the districts is concentrated between the range of 70 and 90 percent. In the secondary sector, the proportion is very minimal rather insignificant, though, there is marginal increase in most of the districts

during 1981-1991. The fact is that in the region the percentage of tribal population in urban areas is relatively low. And this may be the reason which has led to a low participation of tribals in the secondary sector. Also there is a popular suggestion that growth of urban areas contributes and provides more employment for labour force, specially in the non-agricultural sectors. Interestingly, in the tertiary sector the proportion of workers is relatively high. During the inter-censal period, there is an increase of tribal workers engaged in this sector. The increase of tribal work force in the tertiary sector suggests that a diversification of employment is taking place but this may be limited to administrative institutions.

4.4 Distribution of Tribal Work Force According to Industry

Cultivators

In the table 10.10, we have shown the tribal work force participating in the different industrial categories in the districts for 1981 and 1991. The proportion of tribals engaged in this activity is very high in all the districts. In districts like Tirap of Arunachal, Mon of the Nagaland and Senapati and Tamenglong of Manipur recorded a high percentage of the tribals engaged in cultivation which was above 90 percent. The percentage change in this sector will be discussed later.

Agricultural Labourers

The tribals participating as labourer in agriculture is exceptionally high in some districts. South Tripura district and West Tripura district recorded more than 20 percent workers as agricultural labourers. And in the Jaintia Hills, East Khasi Hills and East Garo Hills of Meghalaya and North Tripura the percentage lies between 15.0 and 20.0. But in the rest of the districts in the region it was below 5 percent.

Livestock, Fishing, Hunting and Plantation, Orchard and Allied Activities

The tribals working in these activities are very insignificant as in most of the districts in the region, the proportion of workers are all below 2.0 percent. An exception is the West Khasi Hills district of Meghalaya which recorded a very high percentage of 19.0 percent.

Mining and Quarrying

The percentage of the tribal workers engaged in this sector was negligible.

Household Industries and Other than Household Industries

The proportion of tribal workforce participating in these activities are insignificant. As the data show in most of the districts, the percentage was below 1.0.

Construction

In most of the districts, the percentage of the tribal workers in construction activities was below 1.0 percent.

Trade and Commerce

Among the districts, Aizawl of Mizoram and East Khasi Hills of Meghalaya recorded a relatively high percentage of workers in trade and commerce in 1991. The respective percentages were 6.6 and 6.2. This is followed by Imphal district of Manipur with 5.6 percent, Jaintia Hills of Meghalaya with 4.8 percent, Thoubal district of Manipur with 3.1 percent and 2.2 percent in Kohima of Nagaland. The rest of the districts have below 1.0 percent of workers in trade and commerce. The high proportion of tribal force in the trade and commerce among the five districts may have been due to a large tribal population in urban areas in 1991: the percentage of tribal population in urban of Aizawl, East Khasi Hills, Imphal, Jaintia Hills, Thoubal and Kohima are 53.5, 24.2, 57.1, 8.8, 18.0 and 19.7 respectively.

Transport, Storage and Communication

Tribal work force engaged in service sector is exceptionally high in Imphal district of Manipur with 45.6 percent in 1991. This is followed by Aizawl (Mizoram) 21.0 percent, Kohima (Nagaland) 19.9 percent, Thoubal (Manipur) 18.3 percent, East Khasi Hills (Meghalaya) 18.3 and Tawang (Arunachal Pradesh) 17.1 percent.

Table 4.10

**Percentage of Tribal Workers in Different Industrial Categories in the
North-Eastern Region by Districts, 1981-1991**

State/District	CAT I		CAT II		CAT III		CAT IV		CAT V (A)		CAT V (B)		CAT VI		CAT VII		CAT VIII		CAT IX		
	1981	1991	1981	1991	1981	1991	1981	1991	1981	1991	1981	1991	1981	1991	1981	1991	1981	1991	1981	1991	
Arunachal Pradesh																					
Tawang	**	69.4	**	7.7	**	2.3	**	0.0	**	0.3	**	0.3	**	1.0	**	1.4	**	0.5	**	17.1	
West Kameng	80.9	77.1	2.0	3.3	3.5	1.0	0.0	0.0	0.3	0.3	0.8	0.4	4.3	2.8	1.0	2.0	0.4	0.4	6.4	12.6	
East Kameng	92.7	87.6	0.8	1.1	0.2	0.3	0.0	0.0	0.0	0.1	0.1	0.2	3.5	3.8	0.4	0.7	0.0	0.1	2.4	6.1	
Lower Subansiri	91.9	83.8	0.6	1.2	0.3	0.5	0.0	0.0	0.1	0.1	0.2	0.3	1.9	3.2	0.7	0.8	0.1	0.4	4.1	9.7	
Upper Subansiri	92.7	84.9	0.4	0.7	0.1	0.2	0.0	0.0	0.0	0.4	0.0	0.1	1.6	3.2	0.7	1.5	0.1	1.1	4.3	7.9	
West Siang	92.4	85.9	0.7	0.6	0.2	0.3	0.0	0.0	0.2	0.1	0.2	0.3	1.8	2.3	0.3	0.9	0.1	0.8	4.2	8.8	
East Siang	93.3	86.0	0.6	1.9	0.2	0.7	0.0	0.0	0.1	0.0	0.1	0.2	1.2	1.6	0.3	0.6	0.1	0.4	4.2	8.5	
Dibang Valley	93.6	84.3	0.3	0.5	0.3	1.0	0.0	0.0	0.1	0.0	0.2	0.4	1.0	3.1	0.3	0.8	0.1	0.5	4.2	9.3	
Lohit	94.1	87.2	0.5	1.2	0.3	1.0	0.0	0.0	0.1	0.1	0.3	0.7	0.7	1.3	0.5	0.6	0.1	0.7	3.5	7.2	
Changlang	**	85.9	**	0.6	**	1.2	**	1.1	**	0.0	**	0.5	**	1.8	**	0.8	**	0.2	**	7.8	
Tirap	92.1	90.6	0.5	0.3	0.7	0.5	0.0	0.0	0.0	0.0	0.3	0.5	3.3	2.5	0.3	0.4	0.1	0.3	2.7	4.8	
Manipur																					
Senapati	90.4	90.5	2.5	1.9	0.3	0.1	0.0	0.0	0.3	0.6	0.1	0.1	0.5	0.2	0.2	0.4	0.1	0.2	5.7	6.0	
Tamenglong	93.2	90.2	0.1	0.8	0.1	0.2	0.0	0.0	0.2	0.3	0.1	0.1	0.2	0.3	0.2	0.6	0.1	0.1	3.9	7.4	
Churachandpur	84.3	81.8	1.5	2.6	0.5	0.4	0.0	0.0	1.2	1.8	0.6	0.4	1.0	0.3	0.8	1.1	0.2	0.3	10.0	11.2	
Chandel	87.1	84.4	4.3	4.5	0.3	0.5	0.0	0.0	0.8	1.0	0.1	0.3	0.1	0.2	0.7	1.1	0.1	0.3	6.5	7.8	
Thoubal	**	63.7	**	7.2	**	1.4	**	0.0	**	3.3	**	1.2	**	0.0	**	3.1	**	1.4	**	18.6	
Bishnupur	**	74.4	**	3.8	**	0.4	**	0.0	**	4.0	**	0.1	**	0.2	**	0.4	**	0.3	**	16.3	
Imphal	39.8	24.1	6.9	8.8	1.9	3.2	0.0	0.0	5.5	3.6	1.7	2.2	4.3	4.2	3.9	5.6	1.5	2.7	34.5	45.6	
Ukhrul	87.9	83.1	0.6	1.1	0.2	0.7	0.0	0.0	0.2	0.5	0.2	0.4	0.9	0.7	0.2	0.7	0.1	0.4	9.7	12.2	
Meghalaya																					
Jaintia Hills	70.4	62.8	11.7	15.7	6.8	3.4	0.1	0.8	0.6	0.2	1.1	1.0	1.1	0.5	1.5	4.8	0.4	1.3	6.7	9.5	
East Khasi Hills	43.0	33.5	6.8	15.2	9.0	19.1	0.6	1.1	0.7	0.5	1.0	2.7	1.2	1.5	1.9	6.2	0.8	2.0	13.1	18.3	

West Khasi Hills	90.2	73.9	5.2	15.7	0.3	0.5	0.1	0.1	0.1	0.1	0.2	0.7	0.5	0.5	0.3	1.7	0.2	0.6	2.9	6.1
East Garo Hills	85.9	86.8	7.1	4.6	0.8	0.3	0.1	0.0	0.1	0.2	0.1	0.2	0.6	0.4	0.4	0.6	0.1	0.1	4.5	6.2
West Garo Hills	82.9	77.0	8.4	11.3	0.5	0.9	0.0	0.3	0.2	0.4	0.2	0.3	0.9	1.0	0.8	1.1	0.3	0.4	5.7	7.4
Mizoram																				
Aizawl	76.8	61.2	2.5	3.4	0.7	1.5	0.1	0.2	1.1	1.3	1.4	1.9	1.2	1.3	0.0	6.6	1.0	1.6	12.1	21.0
Lunglei	81.2	75.2	2.1	3.5	0.6	0.1	0.0	0.0	0.4	0.6	0.7	0.5	1.1	0.6	1.3	2.0	0.9	0.5	11.7	17.2
Chhimituipui	85.7	81.5	1.8	2.5	0.4	0.0	0.0	0.0	0.3	0.3	0.3	0.3	0.7	0.2	0.7	1.4	0.7	0.4	9.4	13.4
Nagaland																				
Kohima	75.5	70.0	0.5	1.3	0.5	1.7	0.0	0.0	0.3	0.8	1.1	0.9	1.1	1.7	1.1	2.2	0.5	1.1	19.4	19.9
Phek	87.1	82.0	0.1	0.3	0.1	1.2	0.0	0.0	0.1	0.2	0.3	0.2	0.7	2.1	0.4	1.3	0.2	0.4	11.0	12.3
Zunheboto	82.7	80.8	0.3	0.1	0.2	0.7	0.0	0.0	0.2	0.1	0.5	0.2	0.7	1.5	0.3	1.1	0.2	0.4	14.7	15.2
Wokha	82.6	77.4	0.2	0.1	0.3	1.5	0.0	0.0	0.3	0.2	0.4	0.5	0.8	2.3	0.5	0.9	0.2	0.4	14.8	16.7
Mokokchung	77.5	78.3	0.5	0.4	0.5	1.4	0.0	0.0	0.4	0.2	0.7	1.1	1.6	2.1	0.8	1.1	0.5	0.6	17.5	15.0
Tuensang	89.8	88.9	0.2	0.2	0.2	0.4	0.0	0.0	0.2	0.1	0.6	0.2	0.2	0.6	0.3	0.3	0.2	0.1	3.0	9.2
Mon	92.7	93.8	0.3	0.1	0.2	0.4	0.8	0.0	0.1	0.1	0.2	0.1	6.6	0.5	0.2	0.2	0.1	0.1	5.5	4.6
Tripura																				
West Tripura	57.5	52.1	34.3	31.0	1.3	1.6	0.1	0.3	0.3	0.3	1.1	1.1	0.2	0.1	0.4	0.8	0.3	0.6	5.3	12.1
North Tripura	71.9	67.7	19.2	17.3	3.0	3.8	0.0	0.2	0.3	0.6	0.8	0.8	0.3	0.3	0.4	0.9	0.3	0.6	3.9	7.5
South Tripura	66.2	55.6	30.0	37.4	0.7	0.8	0.0	0.0	0.2	0.2	0.6	0.4	0.2	0.1	0.2	0.6	0.1	0.1	1.9	4.7

**district created after 1981

Note: Same as table in chapter 3.

Source: Office of the Registrar General and Census Commissioner (1981c, 1981d, 1991c).

After having discussed the percentage of workers in various industrial categories we now discuss the changes that have taken place in these industrial categories between 1981 and 1991. From the above figures it is clear that industrial categories that are important in the North-Eastern Region are cultivation and other services. We will discuss below the changes in these categories. From the table 4.10 we observe that cultivation and services share the largest proportion among the tribal workers in all the districts of the region. In table 4.11 we have shown the percentage change among cultivators and service workers in the districts in the two censuses. During 1981-1991, there has been a decline in the proportion of the tribals engaged in cultivation. The percentage decline was highest in West Khasi Hills district of Meghalaya of 16.3 percent. Other districts that have shown a high decline are Imphal of Manipur, of 15.7 percent, Aizawl of Mizoram of 15.6 percent, South Tripura of 10.6 percent and Dibang Valley and Lower Subansiri of Arunachal Pradesh of 9.3 percent and 8.1 percent respectively. However, two districts from Nagaland that is, Mokokchung and Mon and east Garo Hills of Meghalaya registered an increase in the proportion of cultivators. And the percentage are 0.7, 1.0 and 0.9 respectively.

For the services, a considerable percentage increase has occurred in all the districts except Mon and Mokokchung district of Nagaland. The highest percentage increase is 11.1 percent in Imphal of Manipur which are

followed by 8.9 percent in Aizawl (Mizoram), 6.2 percent in East Kameng and 5.5 percent in Lower Subansiri of Arunachal Pradesh and 5.3 percent in East Khasi Hills of Meghalaya (In spite of the percentage increase in service sector, the total TWPR has declined in 1991. This indicates that the decline in the percentage of cultivators is contributing to the decreased TWPR in the region).

In sum, the decline in TWPR is contributed by both males and females. However, among the districts there is a high degree of variation in the decline of TWPR. In case of the TMWPR only three districts have shown increase during 1981-1991 that is, Aizawl, Lunglei and Chhingtupui of Mizoram. On the other hand, in TFWPR there are nine districts that have registered an increase in the region. A decline in TFWPR is prominently seen in the tribal dominant districts specially in the state of Arunachal Pradesh, Nagaland and hill districts of Manipur. This suggests that these districts could have contributed to the overall decline of TFWPR in the region. In contrast for TWPR in rural and urban areas there is a wide gap. And this is because of the low participation of tribal workers in urban areas.

The proportion of tribal work force engaged in the primary sector exhibits a sharp decline in all the districts. However, the proportion in this sector still remained fairly high. In the secondary sector, the proportion is insignificant. A considerable proportion of tribal work force is noticed in the tertiary sector. The reason for high participation in the primary sector

Table 4.11
Percentage Change among Cultivators and Service Workers between
1981 and 1991 by Districts

<i>Districts</i>	<i>Cultivators</i>		<i>Services</i>		<i>Percentage Change (1981-1991)</i>	
	<i>1981</i>	<i>1991</i>	<i>1981</i>	<i>1991</i>	<i>Cultivators</i>	<i>Services</i>
Arunachal Pradesh						
Tawang	**	69.4	**	17.1	0.0	0.0
West Kameng	80.9	77.1	6.4	12.6	-3.8	6.2
East Kameng	92.7	87.6	2.4	6.1	-5.1	3.7
Lower Subansiri	91.9	83.8	4.1	9.7	-8.1	5.5
Upper Subansiri	92.7	84.9	4.3	7.9	-7.8	3.5
West Siang	92.4	85.9	4.2	8.8	-6.5	4.6
East Siang	93.3	86.0	4.2	8.5	-7.3	4.4
Dibang Valley	93.6	84.3	4.2	9.3	-9.3	5.1
Lohit	94.1	87.2	3.5	7.2	-6.9	3.7
Changlang	**	85.9	**	7.8	0.0	0.0
Tirap	92.1	90.6	2.7	4.8	-1.5	2.2
Manipur						
Senapati	90.4	90.5	5.7	6.0	0.2	0.3
Tamenglong	93.2	90.2	3.9	7.4	-3.0	3.6
Churachandpur	84.3	81.8	10.0	11.2	-2.5	1.3
Chandel	87.1	84.4	6.5	7.8	-2.8	1.3
Thoubal	**	63.7	**	18.6	0.0	0.0
Bishnupur	**	74.4	**	16.3	0.0	0.0
Imphal	39.8	24.1	34.5	45.6	-15.7	11.1
Ukhrul	87.9	83.1	9.7	12.2	-4.9	2.5
Meghalaya						
Jaintia Hills	70.4	62.8	6.7	9.5	-7.6	2.8
East Khasi Hills	43.0	33.5	13.1	18.3	-9.5	5.3
West Khasi Hills	90.2	73.9	2.9	6.1	-16.3	3.3
East Garo Hills	85.9	86.8	4.5	6.2	0.9	1.7
West Garo Hills	82.9	77.0	5.7	7.4	-5.9	1.7
Mizoram						
Aizawl	76.8	61.2	12.1	21.0	-15.6	8.9
Lunglei	81.2	75.2	11.7	17.2	-6.0	5.5
Chhimituipui	85.7	81.5	9.4	13.4	-4.2	4.0
Nagaland						
Kohima	75.5	70.0	19.4	19.9	-5.4	0.5
Phek	87.1	82.0	11.0	12.3	-5.1	1.3
Zunheboto	82.7	80.8	14.7	15.2	-1.9	0.4
Wokha	82.6	77.4	14.8	16.7	-5.2	1.9
Mokokchung	77.5	78.3	17.5	15.0	0.7	-2.5
Tuensang	89.8	88.9	3.0	9.2	-0.9	6.2
Mon	92.7	93.8	5.5	4.6	1.0	-0.8
Tripura						
West Tripura	57.5	52.1	5.3	12.1	-5.4	6.8
North Tripura	71.9	67.7	3.9	7.5	-4.2	3.6
South Tripura	66.2	55.6	1.9	4.7	-10.6	2.9

**district created after 1981.

Sources: Office of Registrar General and Census Commissioner (1981c, 1981d, 1991c).

is because of a large concentration of tribal workers in the cultivation activity. The other primary activities like livestock, fishing, plantation, etc. and agriculture labourers do not contribute much. The nature of the tribal economy is largely dependent on rudimentary cultivation system. Nevertheless, there is a decrease in tribals engaged in cultivation during the inter-censal period. The reason for a decline in cultivators is not clear. A possible reason for the decline in the primary sector may be increasing educational opportunity for the youths in the region. An educated person prefer non-agricultural activities. Tribals who work as agricultural labourers were concentrated in only a few districts especially in the state of Tripura and Meghalaya. A reason may be that the tribal workers are engaged as wage labourers in tea gardens in these two states.

In the manufacturing and other household industries the proportion of tribal workers is insignificant.

In the tertiary sector, the proportion has marginally increased during the two censuses in most of the districts. This is largely contributed by trade and commerce and services sectors. In trade and commerce a marginal increased has been found though the proportion is low. In the services, diversification of employment is only taking place in the administrative institutions and the increased percentage has not shown any specific change as reflected by the labour force during the intercensal period.

4.4 Analysis of Factors Contributing Work Force Participation

In the foregoing paragraphs we have examined the pattern of TWPR and sectoral distribution in the districts of the North-Eastern Region. We now analyze the factors that influences TWPR. Work force participation of any region is strongly influenced and determined by the socio-economic and demographic factors which influence TWPR.

To explain TWPR, 8 (eight) variables have been selected for correlation analysis. The correlation analysis has been carried out for both males and females separately and combined together. For males and females separately the variables are:

- 1) Percentage of tribal males/females work force participation rate,
- 2) Percentage of tribal males/females literacy rate,
- 3) Tribal Sex Ratio (in percent),
- 4) Percentage of tribal males/females in rural areas,
- 5) Percentage of tribal males/females in urban areas,
- 6) Percentage of tribal male/female workers in cultivation,
- 7) Percentage of TMWPR/TFWPR,
- 8) Percentage of tribal male/female workers in service.

For correlation analysis for total work force participation, variables retained are:

1. Percentage of tribal work force participation rate,
2. Tribal Sex Ratio (in percent),
3. Percentage of tribal population in rural areas,
4. Percentage of tribal population in urban areas,
5. Percentage of tribal literacy rate,
6. Percentage of tribal workers in cultivation,
7. Percentage of tribal workers in service. In addition for total work force participation rate we have include percentage of tribal population to total population.

The above described variables were calculated from the population census in the form of proportion, ratio and rates. Table 4.12 (a) and 4.12 (b) gives the distribution of these variables for all the districts in the North-Eastern Region for 1981 and 1991. We first present the correlation analysis for total work force participation for 1981 and 1991. This analysis is followed by for males and females separately.

Table 4.12 (a)
Percentage Distribution of Selected Variables, for Males and Females
together, for Analyzing TWPR in the Districts of North-Eastern
Region, 1981

<i>Districts</i>	<i>X1</i>	<i>X2</i>	<i>X3</i>	<i>X4</i>	<i>X5</i>	<i>X6</i>	<i>X7</i>	<i>X8</i>
Arunachal Pradesh								
West Kameng	52.1	66.3	100.8	97.7	2.8	12.6	80.9	6.4
East Kameng	55.7	87.2	102.5	100.0	0.0	3.8	92.7	2.4
Lower Subansiri	53.2	77.8	101.2	96.5	3.5	10.4	91.9	4.1
Upper Subansiri	49.0	91.7	104.8	100.0	0.0	9.1	92.7	4.3
West Siang	48.2	84.0	101.5	95.5	4.5	18.5	92.4	4.2
East Siang	44.9	72.0	98.8	95.5	4.5	23.0	93.3	4.2
Dibang Valley	52.3	48.6	104.0	100.0	0.0	20.4	93.6	4.2
Lohit	44.6	43.4	98.1	97.5	2.5	21.4	94.1	3.5
Tirap	51.6	62.2	97.3	100.0	0.0	12.5	92.1	2.7
Manipur								
Senapati	55.4	68.0	97.6	93.4	6.6	32.7	90.4	5.7
Tamenglong	50.5	47.0	100.4	99.0	1.0	35.9	93.2	3.9
Churachandpur	41.4	86.3	97.6	85.5	14.5	44.8	84.3	10.0
Chandel	54.8	68.1	98.4	93.9	6.1	33.3	87.1	6.5
Imphal	28.4	2.6	92.0	43.6	56.4	54.2	39.8	34.5
Ukhrul	48.9	89.5	97.5	93.2	6.8	41.8	87.9	9.7
Meghalaya								
Jaintia Hills	47.9	95.1	102.7	92.3	7.7	23.6	70.4	6.7
East Khasi Hills	42.2	73.1	103.1	75.5	24.5	39.2	43.0	13.1
West Khasi Hills	50.0	97.2	96.1	58.0	42.0	31.6	90.1	2.9
East Garo Hills	39.7	91.1	96.7	97.6	2.4	32.7	85.9	4.5
West Garo Hills	46.7	73.6	99.0	91.6	8.9	24.7	82.9	5.7
Mizoram								
Aizawl	39.5	93.9	100.4	72.8	27.2	65.1	76.8	12.1
Lunglei	38.5	92.0	99.1	81.3	18.7	55.9	81.2	11.7
Chhimituipui	41.9	93.7	97.2	89.5	10.5	36.2	85.7	9.4
Nagaland								
Kohima	44.0	65.5	93.2	85.0	15.0	47.3	75.5	19.4
Phek	51.5	93.5	92.8	100.0	0.0	38.4	87.1	11.0
Zunheboto	44.9	95.2	101.1	90.0	1.0	44.5	82.7	14.7
Wokha	41.6	94.4	96.2	88.2	11.8	44.7	82.6	14.8
Mokokchung	39.7	91.6	97.6	85.0	15.0	61.8	77.5	17.5
Tuensang	50.9	93.5	95.5	94.2	5.8	28.5	89.8	3.0
Mon	57.7	89.4	95.5	93.3	6.1	15.6	92.7	5.5
Tripura								
West Tripura	35.0	25.0	97.9	97.3	2.7	30.7	57.5	5.3
North Tripura	36.3	27.3	94.4	99.9	0.4	21.0	71.9	3.9
South Tripura	37.4	35.8	95.6	99.8	0.2	14.9	66.2	1.9

X-1 Percentage of tribal work force participation rate, X2-Percentage of tribal population to total population, X3-Tribal sex ratio (in percent), X4-Percentage of tribal population in rural areas, X5-Percentage of tribal population in urban areas, X6-Percentage of tribal literacy rate, X7-Percentage of tribal workers in cultivation and X8-Percentage of tribal workers in service.

Sources: Office of Registrar General and Census Commissioner (1981c).

Table 4.12 (b)
Percentage Distribution of Selected Variables, for Males and Females
together, for Analyzing TWPR in the Districts of North-Eastern
Region, 1991

	X1	X2	X3	X4	X5	X6	X7	X8
Arunachal Pradesh								
Tawang	55.6	78.6	103.6	100.0	0.0	20.8	69.4	17.1
West Kameng	43.6	54.0	98.4	93.5	6.5	36.4	77.1	12.6
East Kameng	50.6	85.6	103.0	100.0	0.0	20.0	87.6	6.1
Lower Subansiri	45.6	70.9	100.8	86.8	13.2	31.1	83.8	9.7
Upper Subansiri	42.1	85.9	98.8	100.0	0.0	35.5	84.9	7.9
West Siang	40.7	78.5	100.7	92.2	7.8	40.8	85.9	8.8
East Siang	41.5	68.6	100.3	94.4	5.6	42.3	86.0	8.5
Dibang Valley	42.5	45.4	99.9	93.4	6.6	45.3	84.3	9.3
Lohit	41.7	37.3	98.1	93.0	7.0	45.1	87.2	7.2
Changlang	43.9	34.8	96.0	100.0	0.0	59.0	85.9	7.8
Tirap	45.8	80.4	98.0	96.9	3.1	21.9	90.6	4.8
Manipur								
Senapati	51.3	84.0	96.6	100.0	0.0	46.2	90.5	6.0
Tamenglong	44.8	96.6	95.9	100.0	0.0	50.0	90.2	7.4
Churachandpur	41.9	93.5	96.6	82.1	17.9	57.4	81.8	11.2
Chandel	48.4	84.7	97.9	95.3	4.7	44.6	84.4	7.8
Thoubal	36.4	1.0	84.3	82.1	17.9	58.0	63.7	18.6
Bishnupur	47.1	5.3	85.3	88.4	11.6	60.5	74.4	16.3
Imphal	26.2	4.8	92.0	43.0	57.1	77.7	24.1	45.6
Ukhrul	42.9	93.2	94.9	100.0	0.0	60.2	83.1	12.2
Meghalaya								
Jaintia Hills	44.3	95.5	101.7	91.2	8.8	34.7	62.8	9.5
East Khasi Hills	38.5	78.4	102.0	75.8	24.2	55.6	33.5	18.3
West Khasi Hills	43.1	98.1	96.1	93.6	6.4	50.3	73.9	6.1
East Garo Hills	39.5	96.8	97.5	94.5	5.5	48.1	86.8	6.2
West Garo Hills	41.5	80.6	98.5	90.3	9.7	38.2	77.0	7.4
Mizoram								
Aizawl	39.9	94.7	98.7	46.5	53.5	88.8	61.2	21.0
Lunglei	40.8	94.4	97.7	61.8	38.2	77.6	75.2	17.2
Chhimituipui	43.3	95.6	96.3	86.5	13.5	59.1	81.5	13.4
Nagaland								
Kohima	37.0	74.5	94.8	80.3	19.7	70.5	70.0	19.9
Phek	44.5	94.1	93.4	93.9	6.1	61.8	82.0	12.3
Zunheboto	41.9	97.1	99.6	89.4	10.6	64.0	80.8	15.2
Wokha	38.5	93.6	96.1	84.5	15.5	74.8	77.4	16.7
Mokokchung	37.3	92.6	97.2	86.7	13.3	75.7	78.9	15.0
Tuensang	44.5	95.1	91.9	93.0	7.0	47.3	88.9	9.2
Mon	50.1	92.1	92.5	94.1	5.9	33.6	93.8	4.6
Tripura								
West Tripura	32.2	25.2	96.8	96.6	3.4	52.5	52.1	12.1
North Tripura	35.0	28.4	94.9	98.9	11.1	38.7	67.7	7.5
South Tripura	30.7	43.0	97.2	99.7	0.3	29.5	55.6	4.7

Note: Same as Table 4.12 (a).

Sources: Office of Registrar General and Census Commissioner (1981c, 1991c).

Correlation Analysis for 1981 (Total Work Force Participation)

In table 4.13 (a), we have shown the correlation coefficients among the variables for 1981. We first discuss the correlation between TWPR and other variables. The important correlation among other variables other than TWPR is discussed later.

Among the variables the highest coefficient of correlation has been found TWPR and percentage of tribal workers engaged in cultivation. The value of coefficient is 0.7068. It is statistically significant at less than 1.0 percent. It means that proportion of tribal workers engaged in cultivation is high, TWPR is also high. This confirms that in tribal work force, cultivators constitutes a major proportion.

The correlation coefficient between TWPR and percentage of tribals in rural areas is 0.4534 which is statistically significant at less than 1.0 percent. This shows that where the proportion of tribal population is high, there is higher participation in work force. As mentioned earlier that TWPR is found relatively high in the rural areas.

As in the case of the variable TWPR and percentage of tribal population to total population, a correlation is positive. The value is 0.4040 which is statistically significant at 2.0 percent. This signifies that the more tribal population in the districts, higher the work force participation. It has

been observed earlier that in tribal dominant districts there is higher TWPR.

The relationship between TWPR and sex ratio is also positive. The value is 0.3334 which is statistically significant at nearly 5.0 percent. It implies that a high sex ratio significantly influences the TWPR. As we have mentioned in the North-Eastern Region the contribution of females to the total work force participation is high.

The variables TWPR and percentage of tribal workers in service is negatively correlated. The coefficient has a value of -0.5420 . It is statistically significant at less than 1.0 percent. This correlation signifies that higher the TWPR, lower the percentage of tribal workers in service.

A negative correlation is found between TWPR and tribal literacy rate. The value is -0.5332 which is statistically significant at less than 1.0 percent. It indicates that where the literacy is low, TWPR is high. As we observed earlier that the proportion of tribal workers in the secondary and tertiary sector is relatively low. For these sectors educated and highly skilled professional people are necessary. And interestingly these sectors has not being developed and are reason for it is that skilled manpower is not available.

A correlation between TWPR and percentage of tribals in urban areas is negative. The value is -0.4494 . It is statistically significant at less

than 1.0 percent. It means lower the population of tribals in urban areas, higher the TWPR. In fact, this was observed in the previous analysis that TWPR is very low in the urban areas.

Among all the other variables, the highest positive correlation has been found between percentage of tribal workers in service sector and literacy rate. The value is 0.7254 which is statistically significant at less than 1.0 percent. It means that, as can be expected, in the districts where the proportion of literacy rate is high, the proportion of service is also high.

The relationship between percentage of tribals in urban areas and percentage of tribal workers in service is also positive. The value is 0.6768 which is statistically significant at less than 1.0 percent. When the proportion of tribals, in urban areas is high, the proportion of tribals in service is also high.

A very high negative correlation has been found between percentage of tribals in urban areas and percentage of tribals in rural areas. The value is -0.9921 . It is statistically significant at less than 1.0 percent level. This correlation means that in district where the percentage of tribals in rural areas is high, the percentage of tribals in urban areas is low.

The coefficient of correlation between percentage of tribals in rural areas and percentage of tribal workers in service is -0.7039 . It is statistically significant at less 1.0 percent. This negative correlation indicates that workers in service sectors are generally not available in rural areas.

Table 4.13 (a)
Zero-Order Correlation Coefficient for Males and Females together,
1981

<i>Variables</i>	<i>X1</i>	<i>X2</i>	<i>X3</i>	<i>X4</i>	<i>X5</i>	<i>X6</i>	<i>X7</i>	<i>X8</i>
<i>X1</i>	1							
<i>X2</i>	0.4040*	1						
<i>X3</i>	0.3334	0.2567	1					
<i>X4</i>	0.4534*	0.0754	0.02839	1				
<i>X5</i>	-0.4494*	-0.0976	-0.2999	-0.9921**	1			
<i>X6</i>	-0.5332*	0.1263	0.3237	-0.5992	0.5755**	1		
<i>X7</i>	0.7068**	0.4763*	0.2040	0.5401*	-0.5397*	-0.3761	1	
<i>X8</i>	-0.5420*	-0.1502	-0.3634	-0.7039**	0.6768**	0.7254**	-0.6080**	1

Note: *-Significant at 5 percent, **-Significant at 1 percent

X1- Percentage of tribal work force participation rate, X2-Percentage of tribal population to total population, X3-Tribal sex ratio (in percent), X4-Percentage of tribal population in rural areas, X5-Percentage of tribal population in urban areas, X6-Percentage of tribal literacy rate, X7-Percentage of tribal workers in cultivation and X8-Percentage of tribal workers in Service.

Source: Computed from table 4.12 (a).

Correlation for 1991 (Total Work Force Participation)

In table 4.13 (b), we shows the correlation coefficients between the variables for 1991. Among the variables, the highest coefficient has been found between TWPR and percentage of tribal workers in cultivation. The value is 0.6537. It is statistically significant at less than 1.0 percent. When compare with 1981 value the correlation coefficient has marginally decreased.

TWPR and percentage of tribals in rural areas shows a positive relationship. The coefficient of correlation is 0.4569 which is statistically significant at less than 1.0 percent. This correlation is also similar to that for 1981.

The coefficient of correlation between TWPR and percentage of

tribal population to total population show a positive relationship. The value is 0.4334. It is statistically significant at less than 1.0 percent.

All the correlation coefficients between TWPR and other variables as well as the correlation among other variables other than TWPR are similar for 1991. The similarity in the correlation suggests that the relationships described for 1981 have remained the same even after 10 years. As mentioned above there have been only marginal changes in the work force structure of tribals. This reflects that economic development among tribals is rather poor.

Table 4.13 (b)
Zero-Order Correlation Coefficient for Males and Females together, 1991

Variables	X1	X2	X3	X4	X5	X6	X7	X8
X1	1							
X2	0.4334*	1						
X3	0.2334	0.4723*	1					
X4	0.4569*	0.1081	0.0151	1				
X5	-0.4861*	-0.1395	-0.1624	-0.9925**	1			
X6	-0.4568	0.0088	-0.3802	-0.6918*	0.6830**	1		
X7	0.6537**	0.4440*	0.0763	0.5899**	-0.6058**	-0.3144	1	
X8	-0.4747*	-0.3311	-0.2619	-0.8100**	0.8037**	0.6287**	-0.7105*	1

Note: *-Significant at 5 percent, **-Significant at 1 percent

X1- Percentage of tribal work force participation rate, X2-Percentage of tribal population to total population, X3-Tribal sex ratio (in percent), X4-Percentage of tribal population in rural areas, X5-Percentage of tribal population in urban areas, X6-Percentage of tribal literacy rate, X7-Percentage of tribal workers in cultivation and X8-Percentage of tribal workers in Service.

Source: Computed from table 4.12 (b).

Correlation Coefficient for Males and Females

Correlation among the variables for males and females separately was also examined. These correlations are given in table 4.15 (a) and 4.15 (b) for males and table 4.17 (a) and 4.17 (b) for females. Interestingly,

there is striking similarity in correlation coefficient between the total TWPR and males and females separately. This results separately for sex suggest that there is little different between the male and female workers in tribal areas. Also the nature of work done by both males and females is similar in these areas.

To sum up, in the districts of the North-Eastern Region, percentage of cultivator, sex ratio and percentage in rural areas are the main variables influencing TWPR in both 1981 and 1991. Among the variables a positive relationship is found between the population of tribal workers in services and literacy rate, proportion of tribal workers in services and proportion of tribals in urban areas. A negative correlation is observe between the proportion of tribals in rural areas and service workers. However, these variables that have been selected cannot be regarded as the only variables effecting TWPR. There can be other variables influencing TWPR but we have no data for the correlation.

Table 4.14 (a)
Percentage Distribution of Selected Variables, for Males, for
Analyzing TMWPR in the districts of North-Eastern Region, 1981

<i>Districts</i>	<i>X1</i>	<i>X2</i>	<i>X3</i>	<i>X4</i>	<i>X5</i>	<i>X6</i>	<i>X7</i>	<i>X8</i>
Arunachal Pradesh								
West Kameng	56.2	18.4	100.8	97.2	2.8	72.2	56.2	9.9
East Kameng	60.9	6.7	102.5	100.0	0.0	88.3	60.9	4.2
Lower Subansiri	53.7	16.3	101.2	96.1	3.9	85.1	53.7	7.6
Upper Subansiri	49.6	14.9	104.8	100.0	0.0	86.3	49.6	8.5
West Siang	49.0	26.9	101.5	94.8	5.2	86.6	49.0	7.7
East Siang	48.7	32.1	98.8	94.9	5.1	89.2	48.7	6.7
Dibang Valley	51.6	30.2	104.0	100.0	0.0	88.1	51.6	7.9
Lohit	51.2	30.0	98.1	97.4	2.6	91.0	51.2	5.4
Tirap	54.3	18.9	97.3	100.0	0.0	86.4	54.3	4.7
Manipur								
Senapati	52.7	43.9	97.6	93.4	6.6	86.1	52.7	10.3
Tamenglong	47.8	45.8	100.4	98.9	1.1	89.4	47.8	7.3
Churachandpur	46.8	52.7	97.6	85.8	14.2	78.1	46.8	15.1
Chandel	56.4	40.5	98.4	93.9	6.1	83.8	56.4	10.4
Imphal	37.0	64.4	91.4	42.9	57.1	39.9	37.0	39.7
Ukhrul	46.1	51.9	97.5	93.1	6.9	78.8	46.1	17.5
Meghalaya								
Jaintia Hills	53.9	22.9	102.7	92.5	7.5	70.5	53.9	6.2
East Khasi Hills	50.4	41.0	103.1	76.3	23.7	41.3	50.4	13.5
West Khasi Hills	53.0	33.3	96.1	97.8	2.2	87.6	53.0	4.1
East Garo Hills	49.1	37.6	96.7	97.4	2.6	83.8	49.1	6.1
West Garo Hills	54.2	30.0	99.0	91.1	8.9	80.5	54.2	7.4
Mizoram								
Aizawl	45.8	68.9	100.4	73.0	27.0	71.3	45.8	16.2
Lunglei	46.9	61.2	99.1	81.5	18.6	75.6	46.9	15.5
Chhimitupui	49.4	43.6	97.2	89.2	10.8	79.9	49.4	13.6
Nagaland								
Kohima	46.7	56.0	93.2	84.7	15.3	63.2	46.7	29.1
Phek	47.9	47.4	92.8	100.0	0.0	76.3	47.9	20.3
Zunheboto	45.0	51.1	101.1	89.4	10.6	69.0	45.0	24.9
Wokha	40.6	54.0	96.2	87.1	12.9	71.1	40.6	26.6
Mokokchung	41.7	65.7	97.6	84.9	15.1	65.6	41.7	26.4
Tuensang	50.6	34.3	95.5	93.7	6.3	81.8	50.6	16.0
Mon	50.8	20.0	95.5	93.3	6.7	87.4	50.8	9.4
Tripura								
West Tripura	49.9	43.2	97.9	97.2	2.8	61.0	49.9	6.1
North Tripura	53.6	30.4	94.4	99.5	0.5	73.2	53.6	4.3
South Tripura	55.2	23.6	95.6	99.7	0.3	68.8	55.2	2.0

X1-Percentage of TMWPR, X2-Percentage of tribal males literacy rate, X3-Tribal sex ratio (in percent), X4-Percentage of tribal males in rural areas, X5-Percentage of tribal males in urban areas, X6-Percentage of tribal male workers in cultivation, X7-Percentage of TFWPR, X8-Percentage of tribal male workers in service.

Source: Office the Registrar General and Census Commissioners (1981c).

Table 4.14 (b)
Percentage Distribution of Selected Variables, for Males, for
Analyzing TMWPR in the districts of North-Eastern Region, 1991

<i>Districts</i>	<i>X1</i>	<i>X2</i>	<i>X3</i>	<i>X4</i>	<i>X5</i>	<i>X6</i>	<i>X7</i>	<i>X8</i>
Arunachal Pradesh								
Tawang	53.8	28.4	103.6	100.0	0.0	65.3	50.5	26.6
West Kameng	49.9	44.9	98.4	93.4	6.7	69.6	37.3	17.9
East Kameng	51.9	30.8	103.0	100.0	0.0	79.4	49.4	10.8
Lower Subansiri	47.4	39.7	100.8	86.3	13.7	74.7	44.4	15.0
Upper Subansiri	44.3	45.7	98.8	100.0	0.0	75.9	40.0	12.9
West Siang	42.9	49.2	100.7	91.6	8.4	78.1	38.6	13.5
East Siang	44.9	50.4	100.3	94.2	5.8	79.5	38.1	12.6
Dibang Valley	45.0	59.1	99.9	92.2	7.8	76.4	40.1	13.3
Lohit	48.1	55.7	98.1	92.7	7.3	82.1	35.1	9.4
Changlang	47.9	26.9	96.0	100.0	0.0	78.6	39.7	11.1
Tirap	50.3	14.0	98.0	97.0	3.1	83.6	50.8	8.1
Manipur								
Senapati	51.0	55.2	96.6	100.0	0.0	87.2	51.6	10.6
Tamenglong	43.8	59.5	95.9	100.0	0.0	84.3	45.7	13.8
Churachandpur	46.4	65.3	96.6	82.5	17.5	76.7	37.2	18.7
Chandel	50.3	54.4	97.9	95.3	4.7	80.0	46.5	4.1
Thoubal	44.7	69.6	84.3	81.5	18.5	61.1	26.7	29.9
Bishnupur	52.7	70.9	85.3	88.6	11.5	70.8	40.6	26.4
Imphal	35.0	85.2	92.0	42.8	57.2	22.6	16.7	59.8
Ukhrul	42.4	68.7	94.9	100.0	0.0	73.5	43.5	21.2
Meghalaya								
Jaintia Hills	50.3	33.4	101.7	91.4	8.6	63.2	38.3	9.5
East Khasi Hills	47.1	56.7	102.0	76.7	23.3	31.9	30.2	18.4
West Khasi Hills	46.7	52.4	96.1	93.7	6.3	69.6	39.3	8.4
East Garo Hills	46.7	54.3	97.5	94.3	5.7	84.0	32.0	9.5
West Garo Hills	49.6	45.7	98.5	90.2	9.8	74.6	34.4	9.7
Mizoram								
Aizawl	46.0	91.8	98.7	47.0	53.0	56.1	33.6	26.0
Lunglei	47.5	82.5	97.7	62.1	37.9	69.1	34.0	22.4
Chhimituipui	47.7	66.6	96.3	86.5	13.5	74.6	38.7	20.0
Nagaland								
Kohima	41.5	77.6	94.8	80.0	20.0	60.3	32.2	27.0
Phek	43.2	72.3	93.4	93.6	6.4	69.8	45.8	20.5
Zunheboto	42.3	70.3	99.6	89.2	10.8	69.4	41.4	23.8
Wokha	38.7	82.6	96.1	84.0	16.0	62.5	38.2	27.6
Mokokchung	39.8	76.4	97.2	86.8	13.2	68.9	34.6	20.7
Tuensang	45.4	52.3	91.9	92.8	7.2	81.5	43.5	15.5
Mon	52.0	38.7	92.5	93.8	6.2	89.6	49.6	7.7
Tripura								
West Tripura	46.7	66.0	96.8	96.5	3.5	53.8	17.3	13.5
North Tripura	49.1	51.0	94.9	98.8	1.2	67.5	20.1	8.3
South Tripura	41.5	41.2	97.2	99.7	0.3	57.4	19.5	5.7

Note: Same as Table 4.14 (a)

Source: Office the Registrar General and Census Commissioners (1991c).

Table 4.15 (a)
Zero-Order Correlation Coefficient for Males, 1981

<i>Variables</i>	<i>X1</i>	<i>X2</i>	<i>X3</i>	<i>X4</i>	<i>X5</i>	<i>X6</i>	<i>X7</i>	<i>X8</i>
<i>X1</i>	1							
<i>X2</i>	-0.8009**	1						
<i>X3</i>	0.3444	-0.3877	1					
<i>X4</i>	0.6603**	-0.6427**	0.2725	1				
<i>X5</i>	-0.6603**	0.6427	-0.2724	-1.0000**	1			
<i>X6</i>	0.4617*	-0.4903*	0.2372	0.7246**	-0.7245**	1		
<i>X7</i>	1.0000**	-0.8009*	0.3444	0.6603*	-0.6603*	0.4617	1	
<i>X8</i>	-0.8154**	0.7435*	-0.4167	-0.7470**	0.7470**	-0.6093**	-0.8154**	1

Note: 1. *-Significant at 5 percent, **-Significant at 1 percent

2. Same as table 4.14 (a)

Source: Computed from Table 4.14 (a)

Table 4.15 (b)
Zero-Order Correlation Coefficient for Males, 1991

<i>Variables</i>	<i>X1</i>	<i>X2</i>	<i>X3</i>	<i>X4</i>	<i>X5</i>	<i>X6</i>	<i>X7</i>	<i>X8</i>
<i>X1</i>	1							
<i>X2</i>	-0.5856**	1						
<i>X3</i>	0.1680	0.3943	1					
<i>X4</i>	0.3891	-0.6528**	0.1553	1				
<i>X5</i>	-0.3887	0.6530**	-0.1559	-1.0000**	1			
<i>X6</i>	0.4460*	-0.4215*	0.0609	-0.6393*	0.6393**	1		
<i>X7</i>	0.4562*	0.3937	0.2172	0.4145	-0.4144	0.6795**	1	
<i>X8</i>	-0.5252**	0.6517**	0.3794	-0.7256**	0.7445	-0.6673**	-0.3352	1

Note: 1. *-Significant at 5 percent, **-Significant at 1 percent

2. Same as table 4.14 (a)

Source: Computed from Table 4.14 (b)

Table 4.16 (a)
Percentage Distribution of Selected Variables, for Females, for
Analyzing TFWPR in the Districts of North-Eastern Region, 1981

<i>Districts</i>	<i>X1</i>	<i>X2</i>	<i>X3</i>	<i>X4</i>	<i>X5</i>	<i>X6</i>	<i>X7</i>	<i>X8</i>
Arunachal								
West Kameng	48.1	6.9	100.8	97.2	2.8	91.1	48.1	2.4
East Kameng	50.6	1.0	102.5	100.0	0.0	97.8	50.6	0.3
Lower Subansiri	52.7	4.6	101.2	96.8	3.2	97.9	52.7	0.7
Upper Subansiri	40.5	3.6	104.8	100.0	0.0	98.9	48.5	0.3
West Siang	47.5	10.3	101.5	96.3	3.8	98.3	47.5	0.6
East Siang	41.0	13.9	98.8	96.1	3.9	98.3	41.0	1.0
Dibang Valley	52.8	11.1	104.0	100.0	0.0	98.7	52.8	0.8
Lohit	37.9	12.6	98.1	97.7	2.3	98.4	37.9	1.0
Tirap	48.8	6.0	97.3	100.0	0.0	98.5	48.8	0.4
Manipur								
Senapati	58.2	22.3	97.6	93.4	6.6	94.3	58.2	1.5
Tamenglong	53.3	26.1	100.4	99.1	0.9	96.6	53.3	0.8
Churachandpur	36.0	36.8	97.6	85.2	14.8	92.5	36.0	3.0
Chandel	48.2	26.6	98.4	93.8	6.2	90.7	48.2	2.3
Imphal	18.6	42.9	92.0	44.3	55.7	39.4	18.6	23.0
Ukhrul	51.8	31.5	97.5	93.3	6.8	96.2	51.8	2.6
Meghalaya								
Jaintia Hills	42.1	24.3	102.7	92.1	7.9	72.3	42.1	6.3
East Khasi Hills	34.2	37.6	103.1	94.8	5.2	45.5	34.2	12.3
West Khasi Hills	46.8	29.8	96.1	98.0	2.0	93.2	46.8	1.3
East Garo Hills	29.9	27.7	96.7	97.7	2.3	89.6	29.9	1.9
West Garo Hills	29.1	19.4	99.0	90.9	9.1	86.3	29.1	3.3
Mizoram								
Aizawl	33.3	61.3	100.4	72.6	27.4	54.0	33.3	6.4
Lunglei	30.1	50.6	99.1	81.2	18.8	89.9	30.1	5.8
Chhimituipui	34.3	28.7	97.2	89.7	10.3	94.4	34.3	3.0
Nagaland								
Kohima	41.2	37.9	93.2	85.3	14.7	90.4	41.2	7.6
Phek	55.3	24.6	92.8	100.0	0.0	97.1	55.3	2.4
Zunheboto	44.7	38.0	101.1	90.7	9.3	96.0	44.7	4.6
Wokha	42.7	35.0	96.2	89.1	10.6	94.3	42.7	3.0
Mokokchung	37.6	57.7	97.6	85.1	14.9	91.2	37.6	7.4
Tuensang	51.3	22.5	95.5	94.7	5.3	98.1	51.3	1.6
Mon	56.6	11.0	95.5	94.4	5.6	98.5	56.6	1.2
Tripura								
West Tripura	19.9	18.0	97.9	97.4	2.6	48.4	19.9	3.1
North Tripura	17.9	11.0	94.4	99.7	0.3	66.4	17.9	3.2
South Tripura	18.7	5.8	95.6	99.9	0.2	58.3	18.7	1.3

X1-Percentage of TFWPR, X2-Percentage of Tribal Females Literacy Rate, X3-Tribal sex ratio (in percent), X4-Percentage of tribal females in rural areas, X5-Percentage of tribal females in urban areas, X6-Percentage of tribal female workers in cultivation, X7-Percentage of TMWPR, X8-Percentage of tribal females in service

Source: Office of the Registrar General and Census Commissioner (1981c).

Table 4.16 (b)
Percentage Distribution of Selected Variables, for Females, for
Analyzing TFWPR in the Districts of North-Eastern Region, 1991

<i>Districts</i>	X1	X2	X3	X4	X5	X6	X7	X8
Arunachal Pradesh								
Tawang	50.6	13.6	103.6	100.0	0.0	73.6	53.8	12.4
West Kameng	37.3	27.8	98.4	93.6	6.4	87.3	49.9	5.4
East Kameng	49.4	9.5	103.0	100.0	0.0	96.2	51.9	1.2
Lower Subansiri	44.5	22.7	100.8	87.3	12.7	93.4	47.4	4
Upper Subansiri	40.0	25.2	98.8	100.0	0.0	95.0	44.3	2.2
West Siang	38.6	32.4	100.7	92.7	7.3	94.6	42.9	3.6
East Siang	38.1	31.8	100.3	94.2	5.8	93.5	44.9	3.8
Dibang Valley	40.1	31.9	99.9	92.2	7.8	93.2	45.0	4.9
Lohit	35.1	34.5	98.1	92.7	7.3	94.3	48.1	4.1
Changlang	39.7	35.1	96.0	100.0	0.0	95.0	47.9	3.6
Tirap	50.8	11.8	98.0	97.0	3.1	97.7	50.3	1.5
Manipur								
Senapati	51.6	36.8	96.6	100.0	0.0	94.0	51.0	2.5
Tamenglong	45.7	40.1	95.9	100.0	0.0	96.1	43.8	2.4
Churachandpur	37.2	49.3	96.6	81.7	18.3	88.3	46.4	4.8
Chandel	46.5	34.6	97.9	95.4	4.6	89.1	50.3	3.6
Thoubal	26.7	44.0	84.3	82.8	17.2	68.0	44.7	7.5
Bishnupur	40.6	48.0	85.3	88.2	11.8	79.9	52.7	2.9
Imphal	16.7	69.6	92.0	43.1	56.9	27.5	35.0	40.5
Ukhrul	43.5	51.3	94.9	100.0	0.0	92.9	42.4	4.6
Meghalaya								
Jaintia Hills	38.3	36.5	101.7	91.0	9.0	62.3	50.3	9.5
East Khasi Hills	30.2	54.5	102.0	75.0	25.0	35.9	47.1	18.1
West Khasi Hills	39.3	48.1	96.1	93.6	6.4	79.3	46.7	3.3
East Garo Hills	32.0	41.7	97.5	94.6	5.3	91.0	46.7	3
West Garo Hills	34.4	42.1	98.5	90.4	9.6	80.6	49.6	3.9
Mizoram								
Aizawl	33.6	85.7	98.7	46.0	54.0	68.4	46.0	14
Lunglei	34.0	72.5	97.7	61.6	38.4	83.8	47.1	9.2
Chhimituipui	38.7	51.3	96.3	86.4	13.6	90.3	47.7	5.1
Nagaland								
Kohima	32.2	62.9	94.8	80.5	19.5	83.2	41.5	10.8
Phek	45.8	12.5	93.4	94.3	5.7	94.3	43.2	4
Zunheboto	41.4	11.5	99.6	89.5	10.5	92.6	42.3	6.3
Wokha	38.2	66.7	96.1	84.9	15.1	93.1	38.7	5.2
Mokokchung	34.6	75.1	97.2	86.6	13.4	89.4	39.8	8.2
Tuensang	43.5	41.5	91.9	93.2	6.8	97.3	45.4	2.1
Mon	49.6	28.0	92.5	94.4	5.6	98.6	52.0	1.1
Tripura								
West Tripura	17.3	38.6	96.8	96.7	3.4	47.3	46.7	8.2
North Tripura	20.1	25.6	94.9	99.1	0.9	68.3	49.1	5.6
South Tripura	19.5	17.4	97.2	99.8	0.2	51.7	41.5	2.5

Note: Same as table 4.16 (a)

Source: Office of the Registrar General and Census Commissioner (1991c).

Table 4.17 (a)

Zero-Order Correlation Coefficient for Females, 1981

Variables	X1	X2	X3	X4	X5	X6	X7	X8
X1	1							
X2	-0.2350	1						
X3	0.2439	-0.2219	1					
X4	0.3904	-0.6554**	0.3240	1				
X5	-0.3906	0.6550**	-0.3235	-1.0000**	1			
X6	0.7306**	-0.2999	0.1427	0.4845*	-0.4850*	1		
X7	0.9928**	-0.2617	0.2854	0.4035	-0.4036	0.7412*	1	
X8	-0.4707*	0.5873	-0.2615	-0.8516**	0.8519**	-0.6864**	-0.4835*	1

Note: 1. *-Significant at 5 percent, **-Significant at 1 percent

2. Same as table 4.16(a)

Source: Computed from table 4.16 (a)

Table 4.17 (b)

Zero-Order Correlation Coefficient for Females, 1991

Variables	X1	X2	X3	X4	X5	X6	X7	X8
X1	1							
X2	-0.3722	1						
X3	0.2177	-0.2625	1					
X4	0.4117	-0.7221**	0.1409	1				
X5	-0.4116	0.7221**	-0.1409	-1.0000**	1			
X6	0.7467**	-0.2848	0.0702	0.4900**	-0.4900**	1		
X7	0.4583*	-0.4093	0.1675	0.3809	-0.3809	0.2051	1	
X8	-0.5057	0.4711	-0.0431	-0.7656**	0.7656*	-0.7482**	-0.4229*	1

Note: 1. *-Significant at 5 percent, **-Significant at 1 percent

2. Same as table 4.16 (a)

Source: Computed for table 4.16 (b)

Chapter V

Conclusions

The present study TWPR in the North-Eastern region is based on population census data. In the North-Eastern region, tribals constitute more than half of the total population. Each tribal groups possess distinct socio-culture and linguistic identities. However, they share many common characteristics especially in economic activities. The tribals were mostly involved in the primary activities especially in the subsistence cultivation. The two distinct kind of agricultural practice are – (a) settled plough cultivation in the narrow valley and gentle slopes (terrace cultivation) and (b) jhumming. So far, much organized effort has not been made to replace jhumming by settled cultivation or other hill enriching cultivation like horticulture, sericulture, orchards, etc. Nevertheless, tribal economy is being progressively linked with the urban areas.

As mentioned in this study, we have relied upon the data available in the population censuses of 1981 and 1991. However, separate economic table for scheduled tribes in censuses are not available for further analysis. Another limitation is the undercount of tribals in the North-Eastern Region which is because of poor infrastructure especially means of transport and communication to interior tribal areas. Another difficulty concerns comparison of data on tribal population over time due to the constitutional scheduling of tribe. Even today there are many ethnic groups who are yet to

be scheduled by the President of India in the region.

In the post independence India, the North-Eastern region experienced an unprecedented growth of population especially in tribal population. In the last two decades, the annual growth rate of tribal population has increased in all the states of the region. But in non-tribal population the growth has decreased. However, in non-tribal population the annual growth rate is much higher than in tribal population. A possible reason for increase in growth rate of tribal population during 1971-81 and 1981-91 could be due to –(a) decline in mortality rate and (b) inter-marriage between non-tribal males and tribal females which former prosylitised to tribal in order to take advantage of the special provisions in the Constitution for the tribal peoples.

A low sex ratio is observed among non-tribals and a high sex ratio among tribals. This suggests that there has been a male inigration either as sojourner or as a permanent residence among non-tribals. Also a relatively high non-tribals were enumerated in urban areas especially in tribal dominant states.

In the North-Eastern Region, TWPR has declined during 1981-1991. The decline is contributed by both males and females in all the states. However, TMWPR has increased in Manipur and in Mizoram TFWPR has increased. In rural areas, there has been declined in TWPR in the region as well as states, but in urban areas a marginal increase has been recorded in Mizoram and Tripura. An increase of TWPR in urban areas at the region level

is contributed mostly by Mizoram and Tripura. TFWPR has declined in both rural and urban in all the states except Mizoram, though TFWPR has increased in urban areas of Manipur, Mizoram and Tripura.

Among the districts, TWPR was observed highest where the proportion of the tribal population is high. The proportion of tribal workers in both males and females has declined in most of the districts. The percentage change in female workers is relatively lower than male workers. However, in tribal dominant districts like Arunachal Pradesh, Nagaland and hill districts of Manipur the decline in TFWPR is very high. In fact this has contributed to the fall of TFWPR at the regional level. The male-female differential in work force participation is found to have narrowed in tribal dominant districts as mentioned above. A fairly low difference between tribal males and females work force participation is because of low economic development in the region. In a subsistence cultivation a maximum amount of labour is required. This type of economy requires participation of every able person, including children, to work for the maintenance of the household. Therefore, in such an economy, larger proportions of the population go for work and hence relatively higher work participation rate. The same is evident from the census returns. Also another reason of high tribal participation may be the high sex ratio in the tribal population.

TWPR in rural areas is high in all districts of the region. In urban areas, the proportion of TWPR is quite low. The rural-urban differentials in

work force participation are relatively wider in tribal dominant states like Arunachal Pradesh, Meghalaya, Nagaland and Manipur. The prevailing high degree of difference between rural and urban work force participation rate is because of the limited development of urban areas in the region. And a low work participation in urban areas. In urban areas, most of the jobs require education and / or specialized skills and therefore only a selected few migrate to the urban areas.

Tribal workers participating in the primary sector is very high. This is because a considerable proportion of tribal workers are concentrated in the cultivation activity. However, there is a relative decline of tribal work force participation in the cultivation activity. A decline in the cultivation activity may be due to the increasing trend of literacy rate and opportunity for youth in other activities of the region. The educated person prefers non-agricultural activities. Tribal workers in the secondary sector is negligible and more or less stagnant. In the tertiary sector, the proportion has marginally increased. This is largely contributed by service workers. This indicates that diversification of employment is only taking place in the administrative institutions and the increase has not shown any specific change during the intercensal period.

In the North-Eastern Region, the correlation analysis shows that the main factors which influence TWPR are tribals engaged in cultivation activities, sex ratio and proportion of tribals in rural areas during the two

census years. The similarity in the relationship between TWPR and the factors contributing to work force even after 10 years suggests that economic development among tribals is rather poor. Also it indicates that there is not much change in the work force structure of tribals even after ten year period.

In spite of rich natural resources such as forest products, coal and oil, the North-Eastern Region is still backward and undeveloped. The tribals of the region still practice traditional subsistence cultivation. And the knowledge and motivation for new techniques are low. "Ecological and ethnic factors determined the economic conditions, experience of achievement and entrepreneurial capability of the small states in very specific manner. 'Lack of entrepreneurship' and the absence of 'Industrial culture' has resulted in the invasion by non-tribals in trade and commerce and secondary activities. Thus, the local tribal community is left with the age-old subsistence economy" (Sinha, 1984, P.121). These outsiders or non-tribals who are running business in the tribal areas often do not invest back any tangible return, in forms of infrastructure or facilities. A major part of the natural resources of the region is taken out in raw form, to feed the industries of other developed states. "The cause of the backwardness can be traced to the period of British colonialism and the slow rate of agricultural and industrial growth during the Plan periods. North-Eastern Region is a flourishing market for industrial products of other parts of the country (Saikia, 1984, p.82).

The non-development and backwardness of North-Eastern Region

could be the topography, political and social factors. The present study shows the developing nature of the economy of the North-Eastern Region as reflected by the labour force. Unless sufficient investment is made the labour force structure will remain the same. In all these states of the North-Eastern Region it is important to educate the youth and offer specialised skill to them so, that they can be profitably employed in non-agricultural sectors.

APPENDIX I

Scheduled Tribes and Other Ethnic Groups in the North-Eastern Region

Arunachal Pradesh

Arunachal Pradesh (previously known as NEFA or North-East Frontier Agency) came into existence in 1972. Arunachal Pradesh is the largest state area-wise in the North-Eastern Region with 83,743 sq. km. The state is also known as India's land of the rising sun or the '*Land of the Dawn-Lit Mountains*'. In the Arunachal Pradesh there are numerous ethnic groups more than 80 (eighty) tribal groups. The Constitution of India listed 12 (Twelve) tribes and they are:

- | | | |
|------------|------------|---------------------|
| 1. Abor | 5. Galong | 9. Monba |
| 2. Aka | 6. Khampti | 10. Any Naga Tribes |
| 3. Apatani | 7. Khowa | 11. Sherdukpen |
| 4. Dajla | 8. Mishmi | 12. Singpho |

Manipur

The state of Manipur, also known as the '*jewel of India*' lies in the eastern most part of the North-Eastern Region. It has an area of 22,327 sq. km. The tribal of the Manipur state could be broadly categorize as Naga groups, Kuki-Chin (Zomi) groups and others. In the state the Constitution of India recognized 29 (twenty nine) tribes Scheduled Tribes.

- | | | |
|-------------|-----------------------|--------------|
| 1. Aimol | 11. Koirao | 20. Moyon |
| 2. Anal | 12. Koireng | 21. Paite |
| 3. Angami | 13. Kom | 22. Purum |
| 4. Chiru | 14. Lam Kang | 23. Ralte |
| 5. Chothe | 15. Mao | 24. Sema |
| 6. Gangte | 16. Maram | 25. Simte |
| 7. Hmar | 17. Maring | 26. Suhte |
| 8. Kabui | 18. Any Mizo (Lushai) | 27. Tangkhul |
| 9. Kacha | 19. Monsang | 28. Thadou |
| 10. Vaiphei | | |

Meghalaya

The state of Meghalaya, which is known as the '*abode of clouds*'. It comprised an area of 22,429 sq. km. In the state 17 (seventeen) tribes are recognized as Scheduled Tribes and they are:

- | | | |
|----------------------|------------------------------|----------------|
| 1. Boro Kacharis | 8. Koch | 15. Pawi |
| 2. Chakma | 9. Any Kuki tribes | 16. Raba, Rava |
| 3. Dimasa | 10. Lakher | 17. Synteng |
| 4. Garo | 11. Man (Tai speaking) | |
| 5. Hajong | 12. Any Mizo (Jushai) tribes | |
| 6. Hmar | 13. Mikir | |
| 7. Khasi and Jaintia | 14. Any Naga Tribes | |

Mizoram

The word "Mizo" refer to the people and "Ram", the land. Mizoram is situated at the eastern most corner of North-Eastern Region. It covers an area of 21080 sq. km. In the state there are 14 (fourteen) tribal groups listed as the Scheduled Tribes that is,

- | | | |
|-----------|------------------------------|---------------------|
| 1. Chakma | 6. Khasi and Jaintia | 11. Mikir |
| 2. Dimasa | 7. Any Kuki tribes | 12. Any Naga Tribes |
| 3. Garo | 8. Lakher | 13. Pawi |
| 4. Hajong | 9. Man (Tai speaking) | 14. Synteng |
| 5. Hmar | 10. Any Mizo (Lushai) tribes | |

Nagaland

Nagaland state lies at the extreme corner of the North-Eastern Region. The total area of the state is 16,579 sq. km. In Nagaland state there are 5 (five) tribes listed as Scheduled Tribes that is,

- | | |
|------------|----------|
| 1. Garo | 4. Mikir |
| 2. Kachari | 5. Naga |
| 3. Kuki. | |

Tripura

Tripura is one of the seven states of the North-Eastern Region adjoining Assam and Mizoram. The total area of the state is 10,486 sq km. In the state 19(Nineteen) tribal groups has be recognized as Scheduled Tribes. The following are the name of the tribes

- | | | |
|------------|--------------------|--------------------------------|
| 1. Bhil | 9. Any Kuki tribes | 17. Santhal |
| 2. Bhutia | 10. Lepcha | 18. Tripuri, Trupiri, Treppera |
| 3. Chaimal | 11. Lushai | 19. Uchai |
| 4. Chakma | 12. Nag | |
| 5. Garo | 13. Munda | |
| 6. Halam | 14. Noatia | |
| 7. Jamatia | 15. Orang | |
| 8. Khasi | 16. Reang | |

APPENDIX II

Scheduled Tribes

The statutory lists of Scheduled Tribes are notified in pursuance of Article 342 of the Constitution of India. The Scheduled Tribes include the tribes or tribal communities specified in the "Constitution (Scheduled Tribes) Order of 1950", and the "Constitution (Scheduled Tribes) (Part C States) Order of 1950".

In pursuance of Article 342 of the Constitution:

- (1) The President of India may with respect to any state or Union Territories, and where it is a state after consultation with the Governor thereof, by public communities or parts of a groups within tribes or tribal community which shall for the purposes of this constitution be deemed to be Scheduled Tribes in relation to that state or union territories, is the case may be.
- (2) Parliament may by law include or exclude from the list of Scheduled Tribes specified in a notification issued under the said clause shall not be varied by any subsequent notification.

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