

# Employment Situation in North Eastern Region of India: Recent Trends and Emerging Challenges

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Partha Pratim Sahu



V. V. Giri National Labour Institute



# **Employment Situation in North Eastern Region of India: Recent Trends and Emerging Challenges**

**Partha Pratim Sahu**



**V.V. Giri National Labour Institute**

Partha Pratim Sahu is Assistant Professor at the Institute for Studies in Industrial Development (ISID), New Delhi.

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## Preface

North East Research Centre (NERC) at V.V.Giri National Labour Institute has been set up with an objective of promoting research on themes specially related to labour and employment issues pertaining to India's North Eastern Region, comprising of Assam, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Tripura and Sikkim. Identifying and involving concerned institutions and individuals who are working on similar issues was the first task before NERC. It is in this context that a National Workshop was organized during 19-20th November, 2009 at Agartala, Tripura in which invited resource persons presented papers and proposals on their ongoing and proposed research on various dimensions of labour in North Eastern States. As a follow up to this Workshop, a set of research projects were commissioned by the NERC on relevant and prioritized areas/themes. The present working paper by Dr. Partha Pratim Sahu, titled, '*Employment Situation in North Eastern Region of India: Recent Trends and Emerging Challenges*' is an outcome of one of these projects.

Based on NSS data on employment-unemployment, the present study examines the structure, growth and dimension of employment in eight north-eastern states of India. It critically examines the various dimensions of employment by analysing labour force participation rate (LFPR), workforce participation (WPR) and status of workers. It also discusses the pace and pattern of growth of employment and gross state domestic product (GSDP). The growth rate of GSDP accelerated, especially during post-2000 period and there was a significant shift in the sectoral composition from the primary sector to the secondary and tertiary sectors. But the degree of employment diversification is very low, with 60 per cent of workers still engaged in agriculture. Analyzing the behaviour of employment elasticity and per worker productivity the paper raises concern over the issue of how the high level of economic growth has not been translated into generating gainful employment in north-eastern region. The author attempts a detailed analysis of employment situation in this region and highlights the emerging challenges which are to be addressed.

I am sure that this working paper, focusing on the challenges of generating employment opportunity at a rising levels of productivity in India and more specifically in North Eastern Region, will be of immense interest and use to policy planners, academicians and other concerned actors – dealing with issues of labour and employment. I congratulate the author for the excellent and time bound work and thank Shri Anoop K. Satpathy for skillfully coordinating this project for the NERC/VVGNI.

**V.P. Yajurvedi**  
Director General



# Contents

	Page
<b>I Introduction.....</b>	<b>1-8</b>
1.1 The Study	
1.2 Objectives	
1.3 Data Sources, Methodology and Scope	
<b>II Changing Structure of Employment .....</b>	<b>9-12</b>
2.1 Labourforce and workforce participation rate	
2.2 Sectoral distribution of employment	
2.3 Employment avenues for female workers	
<b>III Composition of Workers.....</b>	<b>13-17</b>
3.1 Incidence of poverty and unemployment	
<b>IV Sectoral Trends in Employment Growth .....</b>	<b>18-20</b>
<b>V Sectoral Composition and Growth of GSDP .....</b>	<b>20-23</b>
5.1 Growth of Real GSDP	
<b>VI Employment Elasticity and Labour Productivity.....</b>	<b>23-27</b>
<b>VII Conclusion .....</b>	<b>27-28</b>
<b>Reference .....</b>	<b>28-30</b>
<b>NLI Research Studies Series.....</b>	<b>31-36</b>





# Employment Situation in North Eastern Region of India: Recent Trends and Emerging Challenges

Partha Pratim Sahu<sup>1</sup>

## I. Introduction

### 1.1. The Study

Now that the Indian economy has experienced almost two decades of new economic policy regime, it is an appropriate time to review and examine the precise impact of the reform process on various segments of our economy. The issue of employment in particular is crucial, especially from the point of view of income generation and poverty reduction. In this context, the concern for creating jobs in massive number and at a rising levels of productivity have been subjects of intense public debates, especially in view of the fact that the employment situation since 1990s or so has not been encouraging. While there are numbers of studies dealing with the national employment scenario, state specific studies are not many to come by (Abraham, 2009; Rangarajan *et al* 2007; Chadha and Sahu, 2002; Sundaram, 2001, 2007). Even studies evaluating the state level employment scenario, have limited their analysis to seventeen major states, Assam being the only north-eastern state featured in this list (Rangarajan *et al*, 2008; Bhaumik, 2007; Ramaswamy, 2007; Bhattacharya and Sakthive<sup>1</sup>, 2004; Chadha and Sahu, 2004). Thus, the north-eastern region (NER) has not received due attention in labour research and policy, partly due to the problem of inadequacy or non-availability of statistically authentic data. Notwithstanding, the thin sample coverage of the north-eastern region due to geographic limitations and consequently the statistical reliability of the data, few researchers have attempted a detailed and incisive assessment of various facets employment based on different rounds of NSS data. (Srivastav and Dubey, 2003; Das, Dubey, Veronica and Thomas, 2006; Das, Dubey and Veronica, 2007). However, in view of the revival of employment situation as per the latest 61<sup>st</sup> round of NSS data, it would be worth examining the recent trend and dimension of employment in

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<sup>1</sup>Partha Pratim Sahu is Assistant Professor at the Institute for Studies in Industrial Development (ISID), New Delhi. This working paper is part of a research study titled "Employment Challenges in North-eastern States of India: Role and Potential of the Unorganized Manufacturing Sector", supported by the North East Research and Training Centre (NERC), VVGNLI, Noida. This paper was prepared and finalized prior to the release of employment data of 2009-10 (66th Round) by the NSSO. Therefore, discussion on employment in this paper is till the year 2004-05. The author is very grateful for the constructive comments of the anonymous referee. Thanks are also due to Mr Rajeev Kumar for research support and useful suggestions. The views expressed herein are personal and the usual disclaimer applies for any errors, inaccuracy and omission.

NER. Further, the issue of employment assumes prime significance in view of the current strategy, both at the central and state government levels to provide added emphasis towards achieving faster and inclusive growth. In this regard, it is important to examine whether an overarching omnibus employment strategy is adequate or is it necessary to formulate state-specific (and/or sector specific) employment perceptives.

The north-eastern region consists of eight states, namely, Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura<sup>2</sup>. Creation of gainful employment opportunities is probably the single most critical problem in NER, because this region still portrays the combined outcome of dominance of subsistence agrarian economies, poor industrial base, lack of infrastructure, significant dependence on public sector employment, political insurgency and violence and gross negligence by the centre and respective state government towards overall development. In spite of rich endowment of natural resources, the region is being lagging behind the rest of the country in terms of various developmental outcomes. In addition to historical reasons, there exist vast disparities within the NER, dominance of tribal population and high incidence of poverty and migration. Under such circumstances, to put forward an inclusive development strategy for the region is a stupendous challenge (Govt. of India, 2008). However, to accelerate the socio-economic development of this region, efforts are being made both at the level of centre and state governments. To address the development concerns of this region, first the Department of Development of North Eastern Region was created in 2001, which was later converted into a full fledged ministry in 2004. Since then a large number of projects are being undertaken in different sectors such as infrastructure (power, road, railways, air connectivity, inland waterways, telecommunication and information technology), plantations, irrigation and flood control, tourism, human resource development (education and health), handlooms and handicrafts, and food processing<sup>3</sup>.

## **1.2. Objectives**

Broadly the study aims to analyse the structure and growth of employment among the states in the NER of India. The specific objectives of the study are to:

- (a) Analyse the changing pattern of work force and labour force participation rates and discusses the sectoral distribution of workers by broad sectors and the employment opportunities that have been available to female workers.

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<sup>2</sup>The NER constitutes 7.9 per cent of the country's total geographical area and 3.8 per cent of the total population of the country (Census, 2001). As on 2004-05, NER constitutes 3.6 per cent of India's total workforce. And per capita gross state domestic product in 2004-05 was Rs. 18,027. Assam is the largest state in NER accounting nearly 70 per cent of the population, labourforce and workforce and nearly 60 per cent of total GSDP of the region.

<sup>3</sup>See Annual reports of Ministry for the Development of North East Region for various years.

- (b) Understand the changing nature of employment and the trends in poverty and unemployment.
- (c) Discuss the changes in employment growth rates and associated developments between 1993–94/1999–2000 and 1999–2000/2004–05.
- (d) Explore the behaviour of economic growth and employment and their relationship.

### **1.3. Data Sources, Methodology and Scope**

The present paper is based exclusively on NSS data on employment and unemployment. Since our main concern has been to understand the post-reform employment scenario, we have used data for the years, 1993–94, 1999–2000 and 2004–05<sup>4</sup>. Since NSS estimates are known to understate the size of population as compared to the census, to compute absolute number of workers at above mentioned three points of time, some adjustments to NSS data were effected. The adjusted estimates of employment are based on NSS data combined with population census data<sup>5</sup>. The NSS gives Workforce Participation Rate (WPR) for four categories: rural male (RM), rural female (RF), urban male (UM) and urban female (UF) separately. We obtain estimates of the total work force in each year by applying WFPR to the total population of each category (RM, RF, UM and UF) obtained from the interpolation for inter-census years. Further, the NSS gives the percentage distribution across broad sectors of each of the four categories of workers. We apply this distribution to the absolute numbers of workers of each category for each year and add up the four categories in each sector to derive estimates of total workers in each sector. Employment estimates in this paper are based on the concept of usual (principal + subsidiary) status<sup>6</sup>. Further to understand the employment changes in the north-eastern region in the context of Indian economy as a whole, separate estimates for north-eastern

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<sup>4</sup>The previous two thick rounds of employment surveys of 1980s (1983 and 1987–88) are not included in our analysis, because in 1983 the rural areas of Nagaland was not covered and for some reason, the published report excludes the results relating to Arunachal Pradesh. With the exclusion of two states, it is difficult to arrive at comparable figures for the total north-eastern region. The year 1987–88 was not a normal year, because of severe drought in many parts of India and hence excluded. It is worth noting that even in 50th, 55th and 61st rounds some interior villages of Nagaland could not be surveyed. Thus, lack of adequate sample size and coverage has always been a problem in this region.

<sup>5</sup>Mid-year population figures were (for 1st January 1994, 1st January 2000 and 1st January 2005) estimated by interpolating population census data.

<sup>6</sup>The status of activity on which a person spends relatively longer time of the preceding 365 days from the date of survey is considered as the principal usual status activity of the person. A person categorized as a non-worker who pursued some economic activity in a subsidiary capacity is called a 'subsidiary status worker'. These two groups, namely, principal status workers and subsidiary status workers together constitute 'all workers' according to the usual (principal + subsidiary) status classification. For definitions of other approaches such as current daily status and current weekly status, see Govt. of India, 2006, pp. 14-15.

region and national total are provided in most of the tables, though most of our analysis is focussed on the individual states and north-eastern region. To assess the employment content of economic growth, sectoral and state level elasticity of employment<sup>7</sup> with respect to gross state domestic product<sup>8</sup> has also been estimated.

## II. Changing structure of employment

### 2.1. Labourforce and workforce participation rate

In tables 1 and 2 we report the LFPR and WPR for male and female workers by their place of residence respectively. Table 1 clearly indicates a general increase in the LFPR during 2000/2005 both in rural and urban areas as compared to the previous period, 1994/2000. The rural LFPR in the NER increased from 37.6 to 41.6 per cent and urban LFPR increased from 35.3 to 37.5 per cent during 2000/2005. The increase was also observed both for the male and female workers, but female LFPR is lower than that of their male counterpart, both in rural and urban areas. In 2004–05, male LFPR were 56.5 and 55.4 per cent and female LFPR were 25.8 and 18.0 per cent in rural and urban areas respectively. The lower female LFPR may be attributed to several factors, i.e. continuing with their education and not joining the labour market or improvement in their economic conditions or they have been locked out of labour market due to their inadequate access to human capital or is it a reflection of the *discouraged workers' effect* (Chadha and Sahu, 2002)? Perhaps a more disaggregated analysis of LFPR by age, social group and level of education is required to validate these arguments.

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<sup>7</sup>Employment elasticity = growth rate of employment/growth rate of gross state domestic product.

<sup>8</sup>The GSDP data are taken from the National Accounts Statistics, available at [www.mospi.gov.in](http://www.mospi.gov.in).

**Table 1: Labourforce Participation Rates (UPSS)**

<i>States</i>	<i>Year</i>	<i>Rural</i>			<i>Urban</i>		
		<i>Male</i>	<i>Female</i>	<i>Person</i>	<i>Male</i>	<i>Female</i>	<i>Person</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>
1. Arunachal Pradesh	1993-94	50.6	41.0	52.5	52.5	10.9	33.5
	1999-00	42.5	31.0	37.1	40.6	11.0	27.5
	2004-05	50.5	41.3	46.2	46.6	15.1	32.3
2. Assam	1993-94	54.1	17.2	37.3	55.9	12.4	35.2
	1999-00	54.6	16.1	36.4	56.5	13.8	36.8
	2004-05	56.4	21.6	40.1	59.1	12.0	36.2
3. Manipur	1993-94	48.3	31.1	39.7	45.6	23.0	34.3
	1999-00	50.6	25.7	38.7	47.8	22.5	35.3
	2004-05	53.1	35.4	44.5	48.2	23.6	35.8
4. Meghalaya	1993-94	62.2	49.3	55.9	50.5	19.6	35.4
	1999-00	55.9	41.9	48.8	40.7	21.1	31.0
	2004-05	57.2	48.0	52.7	47.0	31.4	38.7
5. Mizoram	1993-94	53.7	31.8	43.5	48.6	26.6	37.8
	1999-00	56.3	44.1	50.3	48.7	26.5	37.4
	2004-05	59.7	44.1	52.3	49.1	28.8	39.0
6. Nagaland	1993-94	44.8	21.6	33.8	40.6	10.5	28.0
	1999-00	53.2	45.1	49.4	43.3	21.7	33.5
	2004-05	56.1	51.1	53.7	47.9	27.7	38.5
7. Sikkim	1993-94	56.6	19.4	40.1	58.8	14.8	39.3
	1999-00	51.9	24.5	39.1	55.7	22.5	40.7
	2004-05	57.0	32.3	45.3	56.4	17.7	38.3
8. Tripura	1993-94	53.0	13.6	34.1	52.9	15.0	34.1
	1999-00	50.7	7.6	30.7	52.2	8.1	31.3
	2004-05	60.7	12.5	37.3	60.5	23.0	41.4
North-eastern Region (NER)	1993-94	53.7	20.4	37.6	52.8	15.4	35.3
	1999-00	53.7	19.7	37.2	52.2	16.1	35.1
	2004-05	56.5	25.8	41.6	55.4	18.0	37.5
India	1993-94	56.1	33.0	44.9	54.3	16.5	36.3
	1999-00	54.0	30.2	42.3	54.2	14.7	35.4
	2004-05	55.5	33.3	44.6	57.0	17.8	38.2

Source: Author's own estimates, based on unit record data of NSS employment-unemployment for various rounds.

There are differences among the eight states of the region with respect to the levels of and temporal changes in LFPR. In 2004–05 Nagaland and Tripura

recorded the highest LFPR in rural and urban areas respectively. Similarly, Tripura and Arunachal Pradesh recorded the lowest LFPR in rural and urban areas respectively. Barring very few exceptions, LFPR registered an increase in all the north-eastern states during 2000/2005. This holds true both in rural and urban areas and for both categories of workers. During 2000/2005, Arunachal Pradesh and Nagaland in rural areas and Sikkim in urban areas witnessed varying degrees of decline in LFPR. There are significant rural-urban and male-female differences in LFPR. First, in all the north-eastern states the rural LFPR is higher than urban LFPR. Second, both in rural and urban areas, LFPR are much lower for females compared with males.

**Table 2: Workforce Participation Rates (UPSS)**

<i>States</i>	<i>Year</i>	<i>Rural</i>			<i>Urban</i>		
		<i>Male</i>	<i>Female</i>	<i>Person</i>	<i>Male</i>	<i>Female</i>	<i>Person</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>
1. Arunachal Pradesh	1993-94	49.7	40.9	45.5	51.5	10.1	32.6
	1999-00	42.2	31.0	36.9	39.9	10.0	26.7
	2004-05	50.0	41.0	45.8	46.1	14.8	31.9
2. Assam	1993-94	51.6	15.9	35.3	52.8	9.2	32.1
	1999-00	52.9	15.1	34.9	52.2	11.2	33.2
	2004-05	55.1	20.9	39.1	55.1	10.9	33.6
3. Manipur	1993-94	47.7	30.8	39.3	43.4	22.3	32.9
	1999-00	49.5	25.3	38.0	44.5	21.1	33.0
	2004-05	52.4	35.1	44.0	45.6	22.1	33.8
4. Meghalaya	1993-94	61.9	49.3	55.7	50.0	18.9	34.8
	1999-00	55.7	41.8	48.6	39.3	19.7	29.6
	2004-05	57.2	47.8	52.5	45.4	30.3	37.3
5. Mizoram	1993-94	52.9	31.7	43.0	48.4	26.4	37.6
	1999-00	55.5	44.0	49.9	47.1	25.9	36.3
	2004-05	59.4	44.1	52.1	48.4	28.1	38.3
6. Nagaland	1993-94	43.9	21.6	33.3	37.8	9.9	26.1
	1999-00	51.8	44.1	48.2	39.3	19.9	30.5
	2004-05	54.9	50.4	52.7	45.7	25.7	36.4
7. Sikkim	1993-94	56.3	19.1	39.8	58.0	13.6	38.2
	1999-00	50.2	24.1	38.0	51.9	20.0	37.5
	2004-05	55.4	31.8	44.3	54.5	16.8	36.9
8. Tripura	1993-94	52.2	12.8	33.3	49.7	12.4	31.2
	1999-00	50.4	7.3	30.3	49.4	7.5	29.5
	2004-05	54.9	8.5	32.3	50.4	10.0	29.8

North-eastern Region (NER)	1993-94	51.7	19.4	36.1	50.3	13.2	32.9
	1999-00	52.3	18.8	36.1	48.7	14.1	32.3
	2004-05	55.0	25.0	40.4	51.7	15.8	34.5
India	1993-94	55.3	32.8	44.4	52.1	15.5	34.7
	1999-00	53.1	29.9	41.7	51.8	13.9	33.7
	2004-05	54.6	32.7	43.9	54.9	16.6	36.5

*Source:* Author's own estimates, based on unit record data of NSS employment-unemployment for various rounds.

While LFPR shows the supply side, WPR reveals the demand side of the labour market. WPR in north-eastern states and region behaved in a similar fashion like LFPR discussed above. First let us analyse the figures of the whole NER. In 2004–05, in the NER as a whole, the WPR were 40.4 and 34.5 per cent in rural and urban areas. As compared to the previous two rounds of NSS data, WPR registered varying degrees of increase; while in rural areas WPR increased from 36.1 in 1993–94 to 40.4 in 2004–05, in urban areas it increased from 32.9 to 34.5 during the same period. Similar improvements in WPR were also visible for male and female workers. But in 2004–05, female WPRs were considerably lower than male WPRs both in rural and urban areas. The levels of female WPR were 30.0 and 36.0 per cent point lower than that of their male counterparts. Further, there are significant rural-urban differences in female WPR. For instance, urban female WPR (15.8%) in 2004–05 was noticeably lower than that of rural female WPR (25.0%). It is also interesting to note that the rural-urban gap in female WPR has widened during 1994/2005.

There are wide variations in WPR across states. First, all north-eastern states had witnessed increase in WPRs both in rural and urban areas, increase being more marked in the rural areas. Second, in all the states there are huge rural-urban as well as male-female differences in WPR. On an average, difference of about 20.0 and 29.1 per cent point was reported in 2004–05 between male and female WPR. The differences are more pronounced in urban areas. Similarly, in 2004–05, on an average, difference of about 10.6 per cent was reported between rural and urban WPR. Further the rural-urban differences have widened over the different NSS rounds. Thus during 2000/2005, there is clear improvement in the LFPR and WPR both for the male and female workers. These trends, although indicate an overall improvement in employment situation; it also raises varying puzzles regarding the type and nature of job available in the region. The changing pattern of LFPR and WPR need further analysis with respect to age, education level and other socio-cultural attributes.

## 2.2. Sectoral distribution of employment

The above discussion points towards an expansion of employment opportunities in the north-eastern states. But it is worth noting that a small increase in WPR does not rule out worsening of employment situation. Because, as we will discuss later in the paper, much depends on the changes in the absolute number of workers and their sectoral composition. Sectoral distribution of workers at three different NSS rounds is presented in Table 3. In 2004–05 nearly 64.4, 8.4 and 27.2 per cent of total workers are engaged in primary, secondary and tertiary sector respectively in NE. The share of secondary and tertiary sectors witnessed marginal increase during 1994/2005. But the degree of employment diversification is very low, since the most important sector generating employment has been primary sector. The above pattern is observed in most of the north-eastern states as well, especially in rural areas. In contrast, in urban areas the tertiary sector has been the major employment source. In urban NE, tertiary sector accounted for 73.2 per cent of the total employment in 2004–05. Thus, there are significant rural urban contrasts so far as the sectoral composition of employment is concerned. But over the years there has not been any major structural change, notwithstanding marginal increase in the share of tertiary and secondary sectors.

Let us now look at the figures of individual states. On an average, primary sector accounted for more than 60 per cent of the total employment. During 1994/2005 in rural areas the share of primary sector employment declined at varying rates in five states. Manipur, Nagaland and Sikkim are the other three states showing an increase in the primary sector employment. Thus, in all the north-eastern states agricultural employment still constitutes a preponderant share and the secondary and tertiary sectors have failed to expand their employment base.

**Table 3: Sectoral Distribution of UPSS Workers (%)**

States	Locale	1993-94			1999-2000			2004-05		
		Primary	Secondary	Tertiary	Primary	Secondary	Tertiary	Primary	Secondary	Tertiary
1	2	3	4	5	6	7	8	9	10	11
1. Arunachal Pradesh	Rural	86.5	4.4	9.1	83.4	7.5	9.1	82.1	5.3	12.7
	Urban	7.8	26.3	65.8	8.7	13.4	77.9	11.6	11.8	76.7
	Total	77.7	6.8	15.5	72.5	8.4	19.1	69.5	6.4	24.1
2. Assam	Rural	79.3	4.7	16.0	67.8	6.1	26.1	74.7	5.9	19.4
	Urban	2.9	19.9	77.2	6.0	13.5	80.5	4.7	19.5	75.8
	Total	70.9	6.4	22.8	60.4	7.0	32.6	66.2	7.6	26.3
3. Manipur	Rural	63.8	15.4	20.8	75.2	9.2	15.6	69.3	12.3	18.4
	Urban	29.3	18.1	52.5	28.3	15.7	55.9	28.2	19.2	52.6
	Total	55.9	16.0	28.1	65.0	10.6	24.4	61.8	13.5	24.7
4. Meghalaya	Rural	86.0	3.3	10.6	86.5	3.0	10.4	81.9	7.5	10.6
	Urban	3.0	11.0	86.0	1.3	14.5	84.2	2.0	13.2	84.8
	Total	75.5	4.3	20.2	75.6	4.5	19.9	69.7	8.4	21.9



5. Mizoram	Rural	89.1	1.8	9.1	85.5	2.4	12.1	87.4	2.0	10.6
	Urban	41.0	9.8	49.2	29.9	14.9	55.1	36.1	10.4	53.5
	Total	67.9	5.3	26.7	62.4	7.6	30.0	65.2	5.6	29.2
6. Nagaland	Rural	75.1	2.8	22.1	80.0	2.2	17.8	79.2	4.2	16.6
	Urban	6.3	12.8	80.9	8.3	12.1	79.6	12.7	11.4	75.9
	Total	65.5	4.2	30.3	71.4	3.4	25.3	70.5	5.1	24.4
7. Sikkim	Rural	58.8	10.9	30.3	60.7	9.9	29.3	60.5	12.6	27.0
	Urban	0.8	15.7	83.4	2.1	16.1	81.8	0.2	19.8	80.0
	Total	53.2	11.4	35.4	54.5	10.6	34.9	54.3	13.3	32.4
8. Tripura	Rural	47.7	12.3	39.9	45.7	11.9	42.3	43.2	16.5	40.3
	Urban	6.0	12.6	81.4	2.7	8.1	89.2	4.1	14.7	81.1
	Total	41.4	12.4	46.2	38.6	11.3	50.1	36.6	16.2	47.2
North-eastern Region (NER)	Rural	76.6	5.7	17.7	69.6	6.2	24.2	73.4	7.0	19.6
	Urban	9.5	17.4	73.1	9.7	13.4	76.8	9.8	17.0	73.2
	Total	67.7	7.3	25.0	61.3	7.2	31.5	64.4	8.4	27.2
India	Rural	78.4	10.2	11.4	76.2	11.3	12.5	72.6	13.6	13.9
	Urban	12.3	32.1	55.6	8.7	32.1	59.2	8.7	34.0	57.4
	Total	64.0	15.0	21.1	60.3	16.2	23.5	56.5	18.7	24.8

*Note:* Primary = Agriculture; Secondary = Mining & Quarrying, Manufacturing, Utilities and Construction; Tertiary = Trade, Hotel & Restaurants, Transport, Storage, Communication etc, Finance, Insurance, Real estate & business services; and Community, social and personal services

*Source:* Author's own estimates, based on unit record data of NSS employment-unemployment for various rounds.

In Table 4 we have further disaggregated the sectoral distribution of employment by broad economic activity. The non-farm activities constituted nearly one-third of the total employment and there has been a marginal increase in the share from 32.3 in 1993–94 to 35.6 per cent in 2004–05. Within non-farm activities a sizeable proportion of workers were engaged in community-social-personal services, trade-hotelling and manufacturing. In 2004–05 these sectors constituted 13.0, 10.5 and 4.2 per cent of total employment respectively. This clearly shows the slow pace of diversification of economic activities in general and non-farm activities in particular. The situation in manufacturing appears to be worse, because it accounts for merely 4 per cent of total workforce and in many states its share has been declining during 1994/2005.

**Table 4: Distribution of UPSS Workers by Broad Sectors (%)**

States/Sectors	Year	I	II	III	IV	V	VI	VII	VIII	IX	Non farm
1	2	3	4	5	6	7	8	9	10	11	12
1. Arunachal Pradesh	1993-94	77.7	0.1	2.2	1.2	3.4	1.9	2.0	0.7	10.9	22.3
	1999-00	72.5	0.0	2.4	0.5	5.4	5.4	0.2	0.4	13.1	27.5
	2004-05	69.5	0.0	0.9	0.7	4.8	5.9	0.9	0.8	16.5	30.5
2. Assam	1993-94	70.9	0.8	4.4	0.3	0.9	9.3	2.0	0.5	11.1	29.1
	1999-00	60.4	0.3	4.4	0.1	2.2	10.8	3.3	0.9	17.6	39.6
	2004-05	66.2	0.4	3.9	0.5	2.8	11.1	3.7	0.4	11.0	33.8
3. Manipur	1993-94	55.9	0.0	12.8	0.4	2.7	6.6	1.9	1.2	18.4	44.1
	1999-00	65.0	0.7	8.3	0.0	1.6	7.3	1.8	0.4	14.9	35.0
	2004-05	61.8	0.4	9.8	0.0	3.3	9.1	2.4	0.4	12.8	38.2
4. Meghalaya	1993-94	75.5	0.4	1.2	0.3	2.4	6.6	1.1	0.2	12.3	24.5
	1999-00	75.6	0.6	1.1	0.0	2.8	6.5	1.6	0.2	11.6	24.4
	2004-05	69.7	1.1	4.1	0.6	2.6	7.0	1.7	0.2	13.0	30.3
5. Mizoram	1993-94	67.9	0.1	2.3	0.2	2.8	7.4	0.7	0.1	18.5	32.1
	1999-00	62.4	0.8	2.1	0.0	4.7	9.4	1.4	0.9	18.4	37.6
	2004-05	65.2	0.0	2.7	0.0	2.8	9.4	1.5	0.6	17.7	34.8
6. Nagaland	1993-94	65.5	0.7	0.7	0.2	2.6	6.9	1.0	0.2	22.2	34.5
	1999-00	71.4	0.1	1.3	0.7	1.3	3.9	1.2	0.3	19.9	28.6
	2004-05	70.5	0.0	2.7	0.5	1.9	9.6	1.9	0.4	12.6	29.5
7. Sikkim	1993-94	53.2	2.1	4.8	0.7	3.9	8.7	1.8	0.2	24.6	46.8
	1999-00	54.5	1.0	2.9	2.7	4.0	9.2	2.8	0.9	21.9	45.5
	2004-05	54.3	0.6	3.3	1.2	8.2	11.2	4.0	0.5	16.6	45.7
8. Tripura	1993-94	41.4	0.1	5.9	0.2	6.2	11.8	3.6	0.9	29.9	58.6
	1999-00	38.6	0.0	4.0	0.0	7.3	13.8	2.7	0.5	33.0	61.4
	2004-05	36.6	0.0	5.6	0.1	10.5	13.7	3.9	0.4	29.3	63.4
North-eastern Region (NER)	1993-94	67.7	0.6	4.5	0.3	1.8	8.7	2.0	0.5	13.9	32.3
	1999-00	61.3	0.3	4.1	0.2	2.7	9.8	2.8	0.8	18.1	38.7
	2004-05	64.4	0.4	4.2	0.4	3.4	10.5	3.2	0.4	13.0	35.6
India	1993-94	64.0	0.7	10.6	0.4	3.2	7.6	2.9	1.0	9.7	36.0
	1999-00	60.3	0.6	11.0	0.3	4.4	10.3	3.7	1.2	8.3	39.7
	2004-05	56.5	0.6	12.2	0.3	5.7	10.8	4.1	1.7	8.2	43.5

*Note:* I = Agriculture; II = Mining & Quarrying; III = Manufacturing; IV = Utilities; V = Construction; VI = Trade, Hotel & Restaurants; VII = Transport, Storage, Communication etc; VIII = Finance, Insurance, Real estate & business services; and IX = Community, social and personal services

*Source:* Author's own estimates, based on unit record data of NSS employment-unemployment for various rounds.

### 2.3. Employment avenues for female workers

There is a general perception that female workers are largely dumped in agriculture. It is indeed true that, the most visible presence of the female workers has been discernible in agriculture and their share in it has increased over time. In NER, the share of female employment in agriculture has increased from 27.8 in 1993–94 to 35.0 per cent in 2004–05 (Table 5). Thus agricultural sector seems

**Table 5: Share of Female (UPSS) Workers in Broad Sectors (%)**

<i>States/ Sectors</i>	<i>Year</i>	<i>I</i>	<i>II</i>	<i>III</i>	<i>IV</i>	<i>V</i>	<i>VI</i>	<i>VII</i>	<i>VIII</i>	<i>IX</i>	<i>Non farm</i>	<i>Total</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>	<i>11</i>	<i>12</i>	<i>13</i>
1. Arunachal Pradesh	1993-94	46.9	0.0	27.9	5.1	13.8	3.5	7.4	3.4	11.5	11.8	39.0
	1999-00	45.6	-	38.2	0.0	8.1	16.6	0.0	22.8	10.4	13.5	36.8
	2004-05	49.4	-	11.6	0.0	24.8	12.0	0.0	9.4	18.9	17.0	39.5
2. Assam	1993-94	23.4	5.8	44.7	0.0	3.7	5.2	1.0	9.7	19.1	16.2	21.3
	1999-00	24.7	0.0	37.4	6.8	2.0	4.2	3.6	6.3	18.7	14.2	20.5
	2004-05	31.1	0.0	25.6	0.0	6.9	4.0	4.2	6.6	23.1	12.9	25.0
3. Manipur	1993-94	35.3	0.0	81.0	13.1	7.3	47.7	0.8	25.7	17.7	39.4	37.1
	1999-00	30.5	65.5	76.3	-	1.3	47.2	7.3	10.0	17.6	37.3	32.9
	2004-05	38.2	44.0	74.6	-	1.0	48.3	0.0	28.8	21.4	38.7	38.4
4. Meghalaya	1993-94	45.8	46.8	38.5	38.4	13.0	39.7	6.2	11.3	24.6	27.7	41.3
	1999-00	42.5	6.2	29.3	0.0	1.5	47.8	1.1	74.2	44.1	36.1	40.9
	2004-05	46.5	14.1	47.0	21.4	2.4	45.9	2.3	12.4	48.2	39.0	44.2
5. Mizoram	1993-94	38.7	20.4	29.9	8.5	4.2	54.4	6.7	12.8	19.0	26.3	34.7
	1999-00	44.2	19.8	35.6	-	14.0	51.3	9.1	21.2	25.7	30.3	39.0
	2004-05	42.4	0.0	38.1	0.0	11.9	57.6	3.2	34.8	22.3	31.7	38.7
6. Nagaland	1993-94	37.2	50.7	0.0	12.5	5.3	8.3	11.1	0.0	16.5	14.1	29.2
	1999-00	50.6	0.0	34.4	16.8	2.7	30.5	0.0	44.3	21.8	21.8	42.4
	2004-05	53.2	-	54.8	6.9	17.8	28.4	3.3	10.5	17.8	23.4	44.4

7. Sikkim	1993-94	25.9	22.4	18.7	0.0	24.3	14.2	0.0	0.0	20.8	18.5	22.4
	1999-00	34.2	34.2	23.6	7.8	12.0	16.6	0.0	11.0	32.6	23.1	29.2
	2004-05	39.8	50.2	8.7	9.8	11.3	35.2	0.0	0.0	30.1	23.2	32.2
8. Tripura	1993-94	22.3	26.4	28.5	0.0	15.9	3.5	2.2	5.8	21.4	16.5	18.9
	1999-00	13.0	-	18.3	6.8	7.1	3.7	2.0	6.4	16.1	11.7	12.2
	2004-05	14.3	-	23.5	0.0	7.3	4.6	0.3	7.1	18.4	12.8	13.4
North-eastern Region (NER)	1993-94	27.8	10.8	48.2	5.6	9.8	10.4	1.9	11.2	19.5	19.0	25.0
	1999-00	29.4	13.1	40.7	8.6	4.0	10.6	3.5	9.7	20.0	17.2	24.7
	2004-05	35.0	8.2	35.8	3.3	7.8	12.2	3.4	9.5	23.8	17.9	28.9
India	1993-94	39.5	19.5	28.8	10.5	13.6	13.8	3.1	11.9	25.3	20.5	32.6
	1999-00	38.9	17.3	28.3	3.5	11.6	12.7	3.0	11.3	28.9	19.4	31.1
	2004-05	41.7	16.6	31.1	4.1	10.8	12.3	3.2	11.8	34.0	20.6	32.5

*Note:-* Not estimated; I = Agriculture; II = Mining & Quarrying; III = Manufacturing; IV = Utilities; V = Construction; VI = Trade, Hotel & Restaurants; VII = Transport, Storage, Communication etc; VIII = Finance, Insurance, Real estate & business services; and IX = Community, social and personal services

*Source: Author's own estimates, based on unit record data of NSS employment-unemployment for various rounds.*

to have retained its significant position in respect of absorption of female workers. On the contrary, in non-farm activities female employment share has declined from 19.0 to 17.9 per cent during the same period. Within non-farm activities a fairly high proportion of female workers are engaged in manufacturing and community-social-personal services. The proportion of female employment in other non-farm activities thus reveal anything but pleasing. Unlike agriculture, to get into the non-farm sector one would require a minimum level of training or skill. But in general the education attainment is low for the female workers in many north-eastern states as compared to their male counterparts. Thus the entry of female job seekers in the many branches of non-farm sector seems to have become even more difficult in recent years. However, only a more detailed sub-sector break-up would indicate the branches of activity under each broad sector where the females are gaining advantages over their male counterparts and vice versa.

### III. Composition of workers

This section discusses various aspects of the composition of the workforce and trends and magnitude of poverty and unemployment. Table 6 presents the distribution of workers by their status. In NER during 2004–05 nearly 70 per cent of total workers were of self-employed category and 14.0 and 16.0 per cent of them were regular salaried and casual workers respectively. Both in north-eastern states and region there has been an increase in the share of self-employment and corresponding decline in casual and regular salaried employment. Thus, there is growing trend of casual and regular salaried employment being converted into self-employment.

**Table 6: Distribution of UPSS Workers by their Status and Rural-Urban Location (%)**

<i>States</i>	<i>Locale</i>	<i>1993-94</i>			<i>1999-2000</i>			<i>2004-05</i>		
		<i>SE</i>	<i>RS</i>	<i>CW</i>	<i>SE</i>	<i>RS</i>	<i>CW</i>	<i>SE</i>	<i>RS</i>	<i>CW</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>	<i>11</i>
1. Arunachal Pradesh	Rural	85.3	12.5	2.2	79.3	12.7	8.1	83.4	10.6	5.9
	Urban	22.0	69.5	8.5	24.0	58.7	17.3	42.9	48.8	8.3
	Total	78.2	18.9	2.9	71.2	19.4	9.4	76.2	17.4	6.4
2. Assam	Rural	57.6	14.5	28.0	58.1	16.6	25.3	71.0	9.1	19.9
	Urban	45.3	43.0	11.7	44.6	42.9	12.5	42.5	45.0	12.6
	Total	56.2	17.6	26.2	56.5	19.7	23.8	67.6	13.4	19.0
3. Manipur	Rural	82.9	12.2	4.9	80.2	9.9	9.9	85.1	9.4	5.4
	Urban	63.5	33.5	2.9	60.4	30.4	9.2	65.5	29.9	4.6
	Total	78.4	17.1	4.5	75.9	14.4	9.8	81.5	13.2	5.3
4. Meghalaya	Rural	79.8	6.2	14.0	79.6	4.5	15.9	81.0	4.9	14.1
	Urban	34.0	55.9	10.1	26.3	56.4	17.3	20.4	70.2	9.4
	Total	73.9	12.6	13.5	72.7	11.1	16.1	71.7	14.9	13.4
5. Mizoram	Rural	91.2	7.5	1.3	88.9	8.5	2.6	91.5	6.7	1.8
	Urban	60.9	33.2	5.9	49.1	34.1	16.7	58.8	34.2	6.9
	Total	77.9	18.8	3.3	72.4	19.1	8.5	77.3	18.6	4.0
6. Nagaland	Rural	92.0	4.8	3.1	82.4	16.4	1.3	88.3	11.0	0.7
	Urban	39.2	54.6	6.2	24.1	71.9	4.0	62.0	34.0	4.0
	Total	83.6	12.8	3.6	75.3	23.0	1.6	84.8	14.0	1.1
7. Sikkim	Rural	57.3	26.7	16.0	62.1	26.0	11.9	67.7	25.2	7.0
	Urban	45.3	48.1	6.6	33.5	56.9	9.6	40.2	56.9	2.8
	Total	56.2	28.7	15.1	59.0	29.3	11.6	64.9	28.5	6.6

8. Tripura	Rural	57.0	12.7	30.3	47.0	11.2	41.8	52.8	10.2	37.0
	Urban	38.8	48.4	12.8	31.1	53.2	15.7	40.9	45.8	13.3
	Total	54.2	18.1	27.7	44.4	18.1	37.5	50.8	16.2	33.0
North-eastern Region (NER)	Rural	63.3	13.2	23.4	63.0	14.8	22.2	73.4	9.3	17.3
	Urban	46.2	44.0	9.9	42.4	44.9	12.7	45.1	44.5	10.4
	Total	61.1	17.3	21.6	60.1	19.0	20.9	69.5	14.2	16.3
India	Rural	58.0	6.4	35.6	55.8	6.8	37.4	60.1	7.1	32.8
	Urban	42.4	39.5	18.2	42.2	40.1	17.7	45.4	39.5	15.1
	Total	54.6	13.6	31.8	52.6	14.6	32.8	56.4	15.2	28.3

*Note:* SE = Self employed; RS = Regular Salaried and CW = Casual Worker

*Source:* Author's own estimates, based on unit record data of NSS employment-unemployment for various rounds.

The rise of self-employed workers raises a lot of questions regarding the quality of employment. Firstly, how to ensure decent working condition in the absence of a direct employer? Secondly, how to assess and ensure “living wages” when wages are not received at all by such workers? Thirdly, is it due to the non-availability of paid jobs or people are shifting towards different forms of self-employment out of choice? The latest 2004–05 NSS data gives some very interesting insights on whether self-employed workers perceive their activities as remunerative. In NER around 45 per cent of these workers do not find their work as remunerative enough. Nearly 48 per cent of them reported that they would have been satisfied with an earning of Rs 3001 and more per month (Table 7). It obviously reflects that expansion of self-employment is mostly of subsistence in nature and distress-driven due to lack of gainful wage employment. Thus the overall improvement in aggregate employment during 2000/2005 may be more an outcome of the search for survival strategies than a demand-led expansion of productive income opportunities (Abraham, 2009). The dominance of self-employment thus reiterates the need to consider the basic social security that covers not just general workers in the unorganized sector, but also those who typically work for themselves (Chandrasekhar and Ghosh, 2006). Various proposals made by National Commission for Enterprises in the Unorganised Sector (NCEUS) on unorganized sector worker in general and self-employed in particular are required to be considered seriously in this regard.

**Table 7: Perceptions regarding Remuneration in Self-employment: 2004–05**

States	% of self-employed workers reporting their activity as <i>non-remunerative</i>	Per cent finding this amount of Rs. per month <i>remunerative</i>					
		Up to Rs. 1000	Rs. 1001 to 1500	Rs. 1501 to 2000	Rs. 2001 to 2500	Rs. 2501 to 3000	Rs. 3001 & Above
Arunachal Pradesh	43.7	11.5	20.1	21.2	9.3	10.3	27.6
Assam	48.8	4.6	9.1	9.4	8.6	14.8	53.6
Manipur	22.0	28.9	19.1	15.2	10.6	12.0	14.4
Meghalaya	16.9	2.5	9.5	21.2	21.1	20.7	25.1
Mizoram	51.6	4.4	11.8	12.8	10.1	6.5	54.4
Nagaland	49.4	1.7	7.5	8.8	7.4	8.9	65.7
Sikkim	54.9	0.4	2.7	7.9	12.7	16.0	60.2
Tripura	62.4	6.5	8.7	11.4	9.1	14.8	49.4
North-eastern Region (NER)	45.2	6.2	10.0	11.4	10.0	14.6	47.7
India	46.9	15.0	17.0	15.1	11.4	12.5	29.0

*Source:* Author's own estimates, based on unit record data of NSS employment-unemployment or various rounds.

### **3.1. Incidence of poverty and unemployment**

The preceding discussion raises a lot of doubt on the issue of generation of gainful employment opportunities and its impact on reduction of poverty and unemployment in NER. Table 8 presents the number and proportion of people below poverty line. Notwithstanding, the methodological inconsistencies and smaller sample size in different NSS rounds, the incidence of poverty has declined in all the north-eastern states, at varying degree. Poverty reduction is, however, marked for many states in 2004–05. While temporal change is not uniform, during 1994/2005, there has been, on an average, a reduction of 50 per cent in poverty ratios in these states. This declining pattern of poverty incidence has to be analysed in juxtaposition with the level and rate of economic growth and their implications for social and economic outcomes. The declining poverty ratios also need to be examined in the context of availability of and access to land, forest and other common property resources and education and health. Perhaps this issue of whether there has been significant improvement in the socio-economic conditions of this region or it is merely a statistical delusion need to be further investigated.

**Table 8: Percentage and Number of Person below Poverty Line (%)**

States	% of person below poverty line			No. of person below poverty line (in lakhs)		
	1993-94	1999-00	2004-05	1993-94	1999-00	2004-05
Arunachal Pradesh	39.4	28.4	17.6	3.73	3.38	2.03
Assam	40.9	30.6	19.7	96.36	80.27	55.78
Manipur	33.8	24.2	17.3	6.80	6.10	3.96
Meghalaya	37.9	28.8	18.5	7.38	6.99	4.52
Mizoram	25.7	16.5	12.6	1.94	1.57	1.18
Nagaland	37.9	27.7	19.0	5.05	4.66	3.99
Sikkim	41.4	31.0	20.1	1.84	1.74	1.14
Tripura	39.0	29.2	18.9	11.79	11.05	6.38
North-eastern Region (NER)	-	-	-	134.89	115.76	78.98
India	36.0	26.1	27.5	3203.68	2602.50	3017.20

Source: Government of India, Planning Commission's press release on estimate of poverty, various issues.

Table 9 reports the incidence of unemployment by gender and place of residence. First, unemployment rate in NER is higher as compared to national average. This is true both in rural and urban areas and for both category of workers as well. Second, although, the individual north-eastern states recorded a low rate of unemployment, urban areas have significantly higher incidence of unemployment. In NER the magnitude of unemployment in urban areas has increased from 7.5 in 1993–94 to 9.0 per cent in 2004–05. Third, the gender-wise break-up shows that female unemployment rates are high than that of male.

The trends and pattern of unemployment need to be analysed by age-group, social group, level of education and other demographic characteristics. Because it has been observed that the incidence of unemployment is highest in the age-group 15-23 years. Further, youth unemployment is more acute in urban areas. There is inverse relationship between the level of education and unemployment rates; the incidence of unemployment declines with the increase in level of education. Unemployment is also more pronounced among the schedule caste (SCs) workers (Srivastav and Dubey, 2003). High incidence of poverty and unemployment has several socio-economic ramifications such as insurgencies, social tensions, youth unrest that has been prevailing in NER since many years. The coexistence of declining poverty and a low but increasing rate of unemployment raises questions about the nature and magnitude of growth of employment and gross state domestic product, which we have discussed in the following two sections.



**Table 9: Unemployment Rates, as a % of Labourforce (UPSS)**

<i>States</i>	<i>Year</i>	<i>Rural</i>	<i>Urban</i>	<i>Total</i>	<i>All Male</i>	<i>All Female</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>
1. Arunachal Pradesh	1993-94	1.1	2.5	1.3	1.7	0.6
	1999-00	0.6	3.0	0.9	1.0	0.8
	2004-05	0.9	1.6	1.0	1.1	0.8
2. Assam	1993-94	8.1	9.8	8.3	6.2	15.5
	1999-00	6.3	11.4	6.9	5.3	13.0
	2004-05	4.1	8.4	4.6	3.6	7.7
3. Manipur	1993-94	1.6	5.0	2.4	2.8	1.8
	1999-00	2.4	8.3	3.8	3.5	4.2
	2004-05	1.7	6.3	2.6	2.7	2.4
4. Meghalaya	1993-94	0.2	1.8	0.4	0.5	0.3
	1999-00	0.4	4.5	1.0	0.9	1.0
	2004-05	0.3	4.0	0.9	0.7	1.1
5. Mizoram	1993-94	1.2	0.5	0.9	1.1	0.6
	1999-00	1.4	3.8	2.4	3.1	1.3
	2004-05	0.5	2.0	1.1	1.2	1.1
6. Nagaland	1993-94	1.5	6.9	2.3	2.9	0.6
	1999-00	3.4	9.7	4.2	4.0	4.4
	2004-05	4.7	7.8	5.1	5.8	4.3
7. Sikkim	1993-94	1.4	2.1	1.4	0.7	4.1
	1999-00	3.1	7.5	3.6	3.9	2.8
	2004-05	2.6	3.7	2.8	3.2	1.9
8. Tripura	1993-94	2.8	9.2	3.9	2.2	10.4
	1999-00	1.3	5.9	2.1	1.6	5.3
	2004-05	13.9	28.2	16.7	11.0	41.9
North-eastern Region (NER)	1993-94	6.0	7.5	6.2	4.9	10.1
	1999-00	4.8	9.3	5.5	4.4	8.6
	2004-05	4.2	9.0	4.9	4.0	7.1
India	1993-94	1.8	5.3	2.6	2.7	2.4
	1999-00	1.9	5.3	2.7	2.9	2.4
	2004-05	2.5	5.4	3.2	2.8	4.1

*Source:* Author's own estimates, based on unit record data of NSS employment-unemployment for various rounds.

#### IV. Sectoral trends in employment growth

Employment growth significantly varies among sectors and states in NE. But in totality, we witnessed a marked improvement in employment growth during 2000/2005 period as compared to previous period (1994/2000). Table 10 provides employment growth in all north-eastern states as well as for all-India. The growth of employment almost doubled in NE; it increased from 2.0 per cent in 1994/2000 to 4.2 per cent in 2000/2005. Except Nagaland, in all other states total employment witnessed an improvement during 2000/2005. Although the magnitudes differ, the broad trends are similar. At sectoral level, employment in agriculture, manufacturing, construction and trade grew at a faster rate, while mining and utilities witnessing negative growth rates in 1994/2000 registered significant positive growth rates in 2000/2005, but shares of these sectors are not so significant. Two important components of tertiary sector, i.e. financing-insurance-real estate and community-social and personal services experienced negative growth rates. Therefore, the growth of non-farm employment declined from 5.1 to 2.5 per cent during 2000/2005. Agricultural employment registered fairly high rate of growth in all the non-eastern states, except Nagaland. Thus in NE it grew from a low of 0.3 per cent to 5.3 per cent during 2000/2005. But this unprecedented high growth in agriculture needs to be analysed in greater detail. Because agriculture in NE is still characterised of traditional agriculture practices and in many parts of hilly areas, shifting cultivation and in plane areas single crop traditional farming still continue. But there is tremendous scope in plantation sector (tea and rubber), horticulture, floriculture and sericulture to generate productive employment avenues.

**Table 10: Growth of UPSS Workers by Broad Sectors (%)**

<i>States/Sectors</i>	<i>Period</i>	<i>I</i>	<i>II</i>	<i>III</i>	<i>IV</i>	<i>V</i>	<i>VI</i>	<i>VII</i>	<i>VIII</i>	<i>IX</i>	<i>Non farm</i>	<i>Total</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>	<i>11</i>	<i>12</i>	<i>13</i>
1. Arunachal Pradesh	93-94/99-00	-2.6	NE	0.1	-13.7	6.4	17.9	-30.7	-11.7	1.6	2.1	-1.4
	99-00/04-05	5.8	NE	-12.1	14.4	3.9	8.6	39.0	24.2	11.7	8.9	6.7
	93-94/04-05	1.2	NE	-5.6	-1.9	5.3	13.6	-4.9	3.1	6.1	5.1	2.2
2. Assam	93-94/99-00	-0.8	-15.3	2.0	-9.0	18.5	4.4	11.3	14.5	10.1	7.2	1.9
	99-00/04-05	5.7	9.9	1.3	31.6	9.1	4.5	5.6	-10.6	-5.5	0.5	3.7
	93-94/04-05	2.1	-4.6	1.7	7.6	14.1	4.4	8.7	2.3	2.7	4.1	2.7
3. Manipur	93-94/99-00	4.7	60.2	-5.0	NE	-6.7	3.7	1.8	-14.8	-1.4	-1.8	2.1
	99-00/04-05	4.4	-4.1	9.0	NE	22.0	10.3	11.4	3.3	2.3	7.3	5.4
	93-94/04-05	4.5	26.8	1.1	NE	5.4	6.6	6.1	-7.0	0.2	2.3	3.6
4. Meghalaya	93-94/99-00	0.4	6.8	-0.9	-31.2	2.8	0.2	5.7	0.3	-0.6	0.2	0.3
	99-00/04-05	2.9	17.9	36.3	83.9	3.5	6.0	6.1	6.0	7.1	9.3	4.6
	93-94/04-05	1.5	11.7	14.5	7.5	3.1	2.8	5.9	2.8	2.8	4.2	2.2

5. Mizoram	93-94/99-00	2.4	54.4	2.9	NE	13.0	8.0	17.0	45.3	3.7	6.7	3.9
	99-00/04-05	4.3	-47.0	8.7	NE	-6.6	3.5	4.8	-3.4	2.6	1.8	3.4
	93-94/04-05	3.3	-5.1	5.5	-10.8	3.6	5.9	11.3	20.7	3.2	4.4	3.7
6. Nagaland	93-94/99-00	12.9	-15.0	23.3	32.6	-1.0	1.2	15.0	15.6	9.3	7.9	11.3
	99-00/04-05	7.0	NE	24.7	2.3	16.5	28.5	17.9	13.1	-2.2	7.9	7.3
	93-94/04-05	10.2	NE	23.9	17.8	6.6	12.8	16.3	14.5	3.9	7.9	9.5
7. Sikkim	93-94/99-00	2.9	-9.3	-5.5	29.6	3.0	3.5	10.3	29.2	0.6	2.1	2.5
	99-00/04-05	5.7	-4.2	8.3	-10.2	22.4	10.0	13.4	-6.9	0.1	5.8	5.8
	93-94/04-05	4.2	-7.0	0.5	9.7	11.4	6.4	11.7	11.3	0.4	3.8	4.0
8. Tripura	93-94/99-00	-1.5	NE	-6.6	-26.2	2.4	2.4	-5.0	-8.3	1.3	0.4	-0.3
	99-00/04-05	2.1	NE	10.6	26.5	11.1	3.0	10.8	-3.0	0.8	3.9	3.2
	93-94/04-05	0.1	NE	0.8	-5.7	6.3	2.6	1.9	-5.9	1.1	2.0	1.3
North-eastern Region (NER)	93-94/99-00	0.3	-9.7	0.2	-5.9	9.1	4.0	8.3	9.0	6.7	5.1	2.0
	99-00/04-05	5.3	6.9	5.0	22.1	9.5	5.7	6.9	-7.0	-2.5	2.5	4.2
	93-94/04-05	2.5	-2.5	2.4	5.9	9.3	4.8	7.7	1.4	2.4	3.9	3.0
India	93-94/99-00	0.1	-2.8	1.6	-5.9	6.4	6.3	5.3	5.3	-1.4	2.7	1.0
	99-00/04-05	1.8	2.7	5.3	3.4	8.4	4.2	5.1	9.7	2.8	5.0	3.1
	93-94/04-05	0.8	-0.3	3.2	-1.8	7.3	5.3	5.2	7.3	0.5	3.7	2.0

*Note:* I = Agriculture; II = Mining & Quarrying; III = Manufacturing; IV = Utilities; V = Construction; VI = Trade, Hotel & Restaurants; VII = Transport, Storage, Communication etc; VIII = Finance, Insurance, Real estate & business services; and IX = Community, social and personal services

NE = Not estimated

*Source:* Author's own estimates, based on unit record data of NSS employment-unemployment for various rounds.

During the post-2000 period, manufacturing sector also witnessed varying degree of positive employment growth rates in NER as well as in states, except in Arunachal Pradesh and Assam. NER as a whole recorded 5.0 per cent growth rate in manufacturing during 2000/2005 as compared to 0.2 per cent in 1994/2000. But such impressive manufacturing employment growth need to be further analysed to identify the emerging manufacturing activities which are responsible for such high growth rate. Since overall industrial development of this region is not so encouraging. The major industries in this region are oil and petroleum products, timber, plywood, saw mills and manufacturing activities related to tea and rubber. Further, within north-eastern region, there is significant regional disparity in terms of industrial development. For instance, out of around 181 large and medium scale industries, more than 70 per cent of these are located in Assam. Small scale industries have not been viable in this region and there is also large scale sickness among these industries.

Within tertiary sector, trade witnessed positive growth rate of 5.7 per cent in 2000/2005 as compared to 4.0 per cent in the previous period, i.e. 1994/2000. Barring Arunachal Pradesh and Mizoram, all other states also registered high growth rates of employment in trade and hotelling activities during the same period. Finance-insurance-real estate and community-social-personal services also registered high growth rate, but overall growth rate for the region showed a substantial decline, largely because, Assam the largest state in this region witnessed negative growth rates in these two sectors. To sum up the above discussion, there has been an overall improvement in employment scenario in NER. Agriculture, manufacturing, utilities, construction, trade, and transport-storage-communication showed varying degrees of high and positive employment growth rates.

## **V. Sectoral composition and growth of GSDP**

To assess the employment content of growth, it is necessary to analyse the sectoral composition and growth of gross state domestic product (GSDP). The sectoral distribution of GSDP reveals that the share of agriculture in GSDP has continuously declined from 36.8 per cent in 1993–94 to 32.4 per cent in 1999–2000 and then to 28.6 per cent in 2004–05 (Table 11). Thus it is evident that there has been a decline in the agriculture sector. The sectoral shares of manufacturing, utilities, trade did not witness any significant change. On the contrary, all the other sub-sectors of tertiary sector did register a considerable increase in their share in total GSDP. Thus in NER, non-farm sector as a whole contributed two-third of the total GSDP and its share increased from 63.2 to 71.4 per cent during 1994/2005.

The change in the sectoral shares of employment and GSDP from the primary sector to the secondary and tertiary sectors indicates the nature and magnitude of economic diversification of an economy. The experience of north-eastern states and region over the period 1994/2005 is given in Table 11. It shows that the share of primary sector employment declined from 67.7 per cent in 1993–94 to 61.3 per cent in 1999–2000 but it increased to 64.4 per cent in 2004–05. The secondary and tertiary sectors have shown a higher contribution over the years; however, the share of the tertiary sector has shown a higher degree of change as compared to that of the secondary sector. Thus in terms of employment, though diversification has taken place, it is still of low order. But the sectoral distribution of GSDP gives a complete turn around picture. In NER, there has been a substantial shift from the primary sector to secondary and tertiary sectors, most markedly in recent years. The share of primary sector income has declined from a high of 36.8 per cent in 1993–94 to 28.6 per cent in 2004–05. There has been corresponding increase in the share of secondary sector and tertiary sector, during this period. The share of secondary and tertiary sectors income

have increased from 20.6 per cent and 42.6 per cent in 1993–94 to 21.3 per cent and 50.1 per cent in 2004–05 respectively.

**Table 11: Sectoral Share of Employment and GSDP**

States		1993-94			1999-2000			2004-05		
		Primary	Secondary	Tertiary	Primary	Secondary	Tertiary	Primary	Secondary	Tertiary
1. Arunachal Pradesh	EMP	77.7	6.8	15.5	72.5	8.4	19.1	69.5	6.4	24.1
	GSDP	43.4	25.3	31.2	34.1	23.8	42.1	27.0	29.5	43.5
2. Assam	EMP	70.9	6.4	22.8	60.4	7.0	32.6	66.2	7.6	26.3
	GSDP	39.4	22.4	38.2	35.2	21.9	42.9	29.2	22.3	48.5
3. Manipur	EMP	55.9	16.0	28.1	65.0	10.6	24.4	61.8	13.5	24.7
	GSDP	35.5	18.6	45.9	28.8	23.0	48.2	26.4	24.9	48.7
4. Meghalaya	EMP	75.5	4.3	20.2	75.6	4.5	19.9	69.7	8.4	21.9
	GSDP	25.3	20.6	54.1	25.5	22.1	52.4	22.2	25.8	52.0
5. Mizoram	EMP	67.9	5.3	26.7	62.4	7.6	30.0	65.2	5.6	29.2
	GSDP	29.6	16.3	54.1	26.2	16.1	57.7	20.2	17.3	62.5
6. Nagaland	EMP	65.5	4.2	30.3	71.4	3.4	25.3	70.5	5.1	24.4
	GSDP	24.4	13.9	61.7	30.4	12.8	56.7	35.6	13.6	50.9
7. Sikkim	EMP	53.2	11.4	35.4	54.5	10.6	34.9	54.3	13.3	32.4
	GSDP	34.3	21.0	44.7	22.0	21.9	56.1	21.2	27.1	51.7
8. Tripura	EMP	41.4	12.4	46.2	38.6	11.3	50.1	36.6	16.2	47.2
	GSDP	35.3	11.0	53.7	28.1	17.4	54.5	31.4	14.2	54.3
North-eastern Region (NER)	EMP	67.7	7.3	25.0	61.3	7.2	31.5	64.4	8.4	27.2
	GSDP	36.8	20.6	42.6	32.4	20.8	46.8	28.6	21.3	50.1
India	EMP	64.0	15.0	21.1	60.3	16.2	23.5	56.5	18.7	24.8
	GSDP	31.0	26.3	42.8	25.0	26.7	48.3	25.1	25.9	47.3

Note: EMP = Employment; GSDP = Gross State Domestic Product

Source: Author's own estimates based on unit record data of NSS employment-unemployment for various rounds and CSO, State Gross Domestic Product (available at [www.mospi.gov.in](http://www.mospi.gov.in)).

## 5.1. Growth of Real GSDP

In order to understand the above diverse pattern of transformation in income and employment generation, we have also examined the growth rates of income and employment across sectors. In total NER, growth of GSDP has almost doubled; it grew at the rate of 6.1 per cent during 2000/2005 as compared to 3.6 per cent during 1994/2000 (Table 12). Growth rates in agricultural GSDP registered an increase in several north-eastern states, except Arunachal Pradesh, Meghalaya and Mizoram. Similarly, GSDP in manufacturing also exhibited impressive growth rates in five of the eight states. In three states, Arunachal Pradesh, Manipur and Tripura the growth rates in manufacturing GSDP declined during 2000/2005 as compared to 1994/2000. Growth in mining, finance-insurance-real estate and community-social-personal services, have slowed down during 2000/2005. Out of the eight states, three states, i.e. Manipur, Meghalaya and Mizoram witnessed positive but lower growth rates in these sectors during 2000/2005 as compared to 1994/2000. This may be due to a significant decline in public sector employment in NER.

Assam being the largest state in NER let us discuss how it has fared in terms of growth of GSDP. Assam registered a growth rate of 5.2 per cent during 2000/2005 as compared to 2.1 per cent during the previous period, i.e. 1994/2000. At sectoral level, it is worth noting that agriculture, manufacturing, utilities and transport-storage-communication witnessed high positive growth rates during 2000/2005; construction and trade sectors recovered from a negative growth to a higher growth path. But, employment declined at a higher rate in finance-insurance-real estate and community-social and personal services.

**Table 12: Growth of Gross State Domestic Product (%)**

<i>States/Sectors</i>	<i>Period</i>	<i>I</i>	<i>II</i>	<i>III</i>	<i>IV</i>	<i>V</i>	<i>VI</i>	<i>VII</i>	<i>VIII</i>	<i>IX</i>	<i>Total</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>	<i>11</i>	<i>12</i>
1. Arunachal Pradesh	93-94/99-00	-1.1	-4.7	3.6	43.4	-2.4	-1.6	12.8	9.0	9.7	2.9
	99-00/04-05	0.0	14.6	1.0	1.0	13.4	-0.9	9.4	5.0	5.7	4.8
	93-94/04-05	-0.6	3.6	2.4	22.3	4.5	-1.3	11.2	7.2	7.8	3.8
2. Assam	93-94/99-00	0.2	2.2	2.8	0.5	-1.2	-1.5	1.4	8.7	8.4	2.1
	99-00/04-05	1.4	-2.0	7.2	11.8	11.3	10.8	19.1	5.1	3.4	5.2
	93-94/04-05	0.7	0.3	4.8	5.5	4.3	3.9	9.1	7.1	6.1	3.5
3. Manipur	93-94/99-00	1.9	NE	7.5	2.9	14.2	4.3	6.6	5.3	7.3	5.5
	99-00/04-05	2.4	NE	5.9	-26.4	11.6	0.7	12.7	8.3	3.2	4.2
	93-94/04-05	2.1	NE	6.8	-11.6	13.0	2.6	9.3	6.7	5.4	4.9

4. Meghalaya	93-94/99-00	7.1	10.7	3.9	1.2	11.2	7.7	6.8	4.3	6.6	6.9
	99-00/04-05	3.4	10.9	11.1	1.5	10.6	7.4	12.1	4.8	4.3	6.2
	93-94/04-05	5.4	10.8	7.1	1.3	10.9	7.6	9.2	4.5	5.6	6.6
5. Mizoram	93-94/99-00	7.8	28.7	0.1	3.2	17.1	6.7	8.4	17.3	10.7	10.1
	99-00/04-05	0.1	-3.5	3.3	4.6	9.0	-0.4	12.4	9.5	7.9	5.4
	93-94/04-05	4.2	12.9	1.5	3.8	13.3	3.4	10.2	13.7	9.4	7.9
6. Nagaland	93-94/99-00	8.1	NE	-11.6	-3.2	7.8	2.9	1.6	3.9	2.8	4.2
	99-00/04-05	14.4	49.2	5.6	11.2	12.8	10.1	6.8	12.0	7.1	10.9
	93-94/04-05	10.9	NE	-4.2	3.1	10.1	6.1	3.9	7.5	4.8	7.2
7. Sikkim	93-94/99-00	-1.7	-0.5	1.3	11.4	7.5	0.1	12.9	5.9	13.1	5.8
	99-00/04-05	6.6	-19.7	0.2	14.4	14.4	5.6	14.2	6.6	4.4	7.4
	93-94/04-05	2.0	-9.8	0.8	12.8	10.6	2.6	13.5	6.2	9.1	6.5
8. Tripura	93-94/99-00	3.6	15.0	0.5	37.8	19.5	5.6	8.0	10.3	8.7	7.6
	99-00/04-05	12.4	-0.4	19.7	-12.0	4.7	11.0	6.1	11.8	9.5	9.9
	93-94/04-05	7.5	7.7	8.8	12.4	12.5	8.0	7.1	11.0	9.0	8.6
North-eastern Region (NER)	93-94/99-00	1.4	3.1	2.8	4.1	5.4	0.5	3.4	8.1	8.0	3.6
	99-00/04-05	3.6	0.1	7.5	5.0	10.6	9.4	14.3	6.7	5.0	6.1
	93-94/04-05	2.4	1.7	4.9	4.5	7.7	4.5	8.2	7.5	6.7	4.8
India	93-94/99-00	2.9	5.2	7.3	6.9	6.4	9.2	9.4	8.4	8.6	6.6
	99-00/04-05	7.2	7.3	4.2	5.2	13.2	5.4	10.3	6.5	6.3	7.2
	93-94/04-05	4.8	6.2	5.9	6.1	9.4	7.5	9.8	7.5	7.5	6.9

*Note:* I = Agriculture; II = Mining & Quarrying; III = Manufacturing; IV = Utilities; V = Construction; VI = Trade, Hotel & Restaurants; VII = Transport, Storage, Communication etc; VIII = Finance, Insurance, Real estate & business services; and IX = Community, social and personal services; NE = Not estimated

*Source:* Author's own estimates based on CSO, State Gross Domestic Product (available at [www.mospi.gov.in](http://www.mospi.gov.in)).

## VI. Employment elasticity and labour productivity

The elasticity of employment measures the sensitivity of employment growth to the GDP growth. The relationship, however, is not simple and straightforward as factors other than GDP like wage rate, technology, improvement in infrastructure also impact employment growth rates. Notwithstanding these qualifications, employment elasticities are commonly used to track sectoral potential for generating employment and in forecasting future growth in employment. Table 13 shows changing levels of the elasticity of employment with respect to gross state domestic product in broad sectors over the period 1994/2000, 2000/2005 and 1994/2005.

**Table 13: Elasticity of Employment with respect to GSDP (%)**

<i>States/Sectors</i>	<i>Period</i>	<i>I</i>	<i>II</i>	<i>III</i>	<i>IV</i>	<i>V</i>	<i>VI</i>	<i>VII</i>	<i>VIII</i>	<i>IX</i>	<i>Total</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>	<i>11</i>	<i>12</i>
1. Arunachal Pradesh	93-94/99-00	2.30	21.49	0.03	-0.32	-2.64	-11.31	-2.40	-1.29	0.17	-0.49
	99-00/04-05	233.45	NE	-12.11	14.83	0.29	-9.54	4.15	4.82	2.08	1.38
	93-94/04-05	-1.92	-27.44	-2.33	-0.09	1.19	-10.66	-0.43	0.43	0.78	0.57
2. Assam	93-94/99-00	-3.86	-7.06	0.69	-17.90	-15.55	-2.94	8.33	1.67	1.21	0.89
	99-00/04-05	4.10	-5.07	0.18	2.67	0.80	0.41	0.29	-2.05	-1.61	0.71
	93-94/04-05	2.79	-17.11	0.34	1.39	3.26	1.14	0.96	0.33	0.44	0.77
3. Manipur	93-94/99-00	2.46	-0.60	-0.67	-34.36	-0.47	0.86	0.27	-2.79	-0.19	0.38
	99-00/04-05	1.86	NE	1.54	NE	1.89	14.57	0.90	0.40	0.70	1.30
	93-94/04-05	2.15	-0.27	0.17	8.61	0.41	2.51	0.65	-1.05	0.04	0.74
4. Meghalaya	93-94/99-00	0.05	0.64	-0.23	-26.10	0.25	0.03	0.84	0.06	-0.10	0.05
	99-00/04-05	0.86	1.65	3.26	56.70	0.33	0.81	0.50	1.25	1.67	0.74
	93-94/04-05	0.28	1.09	2.05	5.69	0.29	0.37	0.64	0.62	0.50	0.34
5. Mizoram	93-94/99-00	0.31	1.90	35.69	-31.60	0.76	1.20	2.02	2.62	0.35	0.39
	99-00/04-05	61.07	13.63	2.66	NE	-0.74	-8.64	0.39	-0.35	0.33	0.63
	93-94/04-05	0.77	-0.39	3.62	-2.82	0.27	1.75	1.10	1.51	0.34	0.46
6. Nagaland	93-94/99-00	1.59	NE	-2.01	-10.11	-0.13	0.42	9.29	3.95	3.28	2.69
	99-00/04-05	0.49	-2.03	4.44	0.20	1.28	2.81	2.64	1.09	-0.30	0.67
	93-94/04-05	0.93	NE	-5.75	5.80	0.65	2.09	4.15	1.92	0.83	1.31
7. Sikkim	93-94/99-00	-1.67	17.12	-4.23	2.60	0.40	24.54	0.80	4.99	0.04	0.44
	99-00/04-05	0.87	0.21	36.74	-0.71	1.55	1.79	0.95	-1.05	0.02	0.78
	93-94/04-05	2.14	0.72	0.63	0.76	1.08	2.49	0.87	1.83	0.04	0.61
8. Tripura	93-94/99-00	-0.42	-6.66	-12.82	-0.69	0.12	0.43	-0.63	-0.81	0.15	-0.04
	99-00/04-05	0.17	NE	0.54	-2.20	2.37	0.27	1.78	-0.26	0.08	0.33
	93-94/04-05	0.02	-12.94	0.09	-0.46	0.50	0.33	0.27	-0.54	0.12	0.15
North-eastern Region (NER)	93-94/99-00	0.22	-3.11	0.06	-1.45	1.71	7.67	2.44	1.11	0.83	0.55
	99-00/04-05	1.48	60.01	0.67	4.45	0.90	0.61	0.48	-1.04	-0.49	0.69
	93-94/04-05	1.06	-1.44	0.48	1.33	1.21	1.07	0.93	0.19	0.36	0.63
India	93-94/99-00	0.02	-0.53	0.22	-0.85	1.00	0.68	0.57	0.63	-0.17	0.16
	99-00/04-05	0.24	0.37	1.24	0.65	0.64	0.77	0.50	1.50	0.45	0.43
	93-94/04-05	0.17	-0.06	0.55	-0.29	0.77	0.71	0.53	0.97	0.06	0.28

*Note:* I = Agriculture; II = Mining & Quarrying; III = Manufacturing; IV = Utilities; V = Construction; VI = Trade, Hotel & Restaurants; VII = Transport, Storage, Communication etc; VIII = Finance, Insurance, Real estate & business services; and IX = Community, social and personal services

NE = Not estimated; there are few erratic levels of elasticities, which may be ignored while reading this table.

*Source:* Author's own estimates based on unit record data of NSS employment-unemployment for various rounds and CSO, State Gross Domestic Product (available at [www.mospi.gov.in](http://www.mospi.gov.in)).



To begin with, the value of employment elasticity witnessed a mild increase in NER as a whole, i.e. from 0.55 during 1994/2000 to 0.69 during 2000/2005. Except in Assam and Nagaland, the overall employment elasticity improved at varying degree during 2000/2005. In agriculture, there has been a significant increase in employment elasticity in NER and its states, except Nagaland. But the overall improvement in employment elasticity in agriculture is to be seen in the context of level of per worker productivity. Because productivity in this sector is relatively low with considerable under-employment. The elasticity of employment in manufacturing, too, witnessed an increase in the post-2000 period, in five north-eastern states. In Arunachal Pradesh, Assam and Mizoram, it declined during the same period. But in construction, trade and transport-storage-communications, the levels of employment elasticities declined during 2000/2005 as compared to previous period, i.e. 1994/2000. Similarly two important components of tertiary sector, i.e. finance-insurance-real estate and community-social-personal services have witnessed negative employment elasticities in 2000/2005. Thus in some of the sectors that witnessed a varying degree of increase in employment growth rate during the post-2000 years, the magnitude of employment elasticity too witnessed a varying degree of increase. In other words, the rising or declining labour content of growth has indeed been a strong driving factor behind accelerating or decelerating pace of employment expansion in individual sectors.

Whether improved growth rates of GDP has led to any significant changes in the level and growth of worker productivity is an important issue that needs crucial examination. The overall labour productivity indicates an increasing trend. The level of overall labour productivity in NER has increased from Rs 19223 in 1993–94 to Rs. 21126 in 1999–00 and to Rs. 23154 in 2004–05 (Table 14). At sectoral level also per worker productivity has witnessed varying degree of improvement. In agriculture, the level of productivity is not only abysmally low, but also declined during post 2000 period. In the NER as a whole, per worker earning differential between agriculture and other sectors are very high. For example, in 2004–05 the per worker productivity in agriculture is 26, 19, 33, 21 and 29 times lower than that of manufacturing, construction, trade, transport-storage-communication and community-social and personal services respectively. The very low level of per worker productivity compared with some of the other sectors indicates higher magnitude of underemployment. It is, therefore, reasonable to assume that growth of state domestic product in this sector should not be expected to generate a big increase in total employment; instead, it would rather go to reduce the degree of under-employment with an increase both in wage rates for agricultural workers and earnings of cultivators.

Except in agriculture, mining and utilities the average per worker productivity increased in all economic activities during 2000/2005. Thus though the temporal

changes are not uniform, there is marked improvement in the level of per worker productivity in majority of sectors. During 2000/2005 per worker productivity in agriculture declined at varying rate in Arunachal Pradesh, Assam, Manipur and Mizoram. Similarly, in manufacturing sector as well, it declined in Manipur, Meghalaya, Mizoram, Nagaland and Sikkim. The declining levels of per worker productivity in majority of sectors, in spite of high growth rates of GSDP, indicate significant presence of underemployment and working poor.

**Table 14: Level of per Worker Productivity  
(Rs. at constant 1993-94 prices)**

<i>States/Sectors</i>	<i>Year</i>	<i>I</i>	<i>II</i>	<i>III</i>	<i>IV</i>	<i>V</i>	<i>VI</i>	<i>VII</i>	<i>VIII</i>	<i>IX</i>	<i>Total</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>	<i>11</i>	<i>12</i>
1. Arunachal Pradesh	1993-94	12423	744323	37926	12750	124466	73427	39214	105099	37139	22211
	1999-00	13570	0	46648	269024	73860	24828	726192	371909	58571	28829
	2004-05	10255	NE	93472	143872	114053	15729	219357	160907	44279	26415
2. Assam	1993-94	10468	173753	37427	107496	98445	32730	37872	251827	20552	18840
	1999-00	11143	534122	39423	194897	33150	23074	21594	184171	18703	19088
	2004-05	9060	301584	52442	86359	36763	30958	39393	413478	29348	20499
3. Manipur	1993-94	11144	1410	10207	176221	42902	29065	40873	76408	24050	17549
	1999-00	9481	0	21447	NE	144837	30097	53789	272080	40067	21359
	2004-05	8598	0	18515	NE	92788	19115	56927	344686	41982	20116
4. Meghalaya	1993-94	5119	237222	34077	219847	43662	30219	67498	935203	27052	15277
	1999-00	7539	294045	45071	2233589	69779	46570	71885	1186798	41388	22364
	2004-05	7711	215914	16269	114175	97254	49757	94756	1120424	36187	24175
5. Mizoram	1993-94	10366	65341	30859	907398	54680	46610	80751	2351256	33032	23767
	1999-00	14116	21845	26136	NE	67612	43246	51203	649368	48799	33613
	2004-05	11480	440131	20225	4807622	146282	35698	72790	1215408	62853	36996
6. Nagaland	1993-94	11538	0	150064	323303	97668	25664	525064	1723300	37153	30980
	1999-00	8893	3297	20467	48959	162778	28341	249962	911769	25769	20849
	2004-05	12426	NE	8908	74322	138994	13096	152143	867901	40477	24615
7. Sikkim	1993-94	15184	2645	26856	89261	78359	20214	28317	983939	24109	23584
	1999-00	11492	4608	40856	35968	101196	16552	32498	297230	48827	28469
	2004-05	11976	1906	27753	120603	72332	13490	33626	585967	60429	30679
8. Tripura	1993-94	16108	142130	10894	44102	19548	25682	27484	99438	17631	18908
	1999-00	21788	NE	16955	1865146	49426	30851	59180	300505	26845	29919
	2004-05	35143	NE	25181	304162	36680	44866	47542	612042	40659	40895
North-eastern Region (NER)	1993-94	10445	161989	30267	125311	64801	31857	47151	266054	22741	19223
	1999-00	11162	358534	35319	228467	52434	25912	35743	253064	24529	21126
	2004-05	10289	258761	39638	107444	55083	30786	49867	502302	35524	23154

India	1993-94	10104	75084	31533	127021	33515	35002	47683	247707	25909	20867
	1999-00	11945	120661	43834	273962	33505	41167	59888	294914	46289	28821
	2004-05	15535	150338	41754	299150	41587	43738	76025	253804	54583	35061

*Note:* I = Agriculture; II = Mining & Quarrying; III = Manufacturing; IV = Utilities; V = Construction; VI = Trade, Hotel & Restaurants; VII = Transport, Storage, Communication etc; VIII = Finance, Insurance, Real estate & business services; and IX = Community, social and personal services

NE = Not estimated

*Source:* Author's own estimates based on unit record data of NSS employment-unemployment for various rounds and CSO, State Gross Domestic Product (available at [www.mospi.gov.in](http://www.mospi.gov.in)).

## VII. Conclusion

In the present paper we analyzed the employment situation in north-eastern region and among its eight individual states. An empirical assessment of various rounds of NSS data suggests that the overall employment situation especially during the post 2000 period has been encouraging. But it does pose many signs of concern. The concluding note puts together major developments during post 2000 period that in our view need further in-depth empirical analysis. We believe that a more disaggregated level analysis would further enhance our understanding of the impact of economic reforms on employment.

First, the changing levels of WPR and LFPR need to be analyzed more carefully, especially in the context of crucial demographic features and the changing levels of socio-economic development of each state in NER. Second, the significant rise in self-employed worker raises doubt on the nature and quality of employment available for these workers. Third, whether the low and declining share of female worker in many non-farm activities indicate their incapability of getting access to non-farm jobs because of their low human capital base? Perhaps a more disaggregated level analysis is needed to identify sectors and activities that will generate or dislodge female workers in coming years. Fourth, although there has been overall improvement in employment growth, questions can be raised about the nature, quality and duration of employment. Concerns can also be made about the level of productivity of these jobs and prospect of their sustainability. Fifth, why has the overall improvement in economic growth not been translated into generation of gainful employment?

The paper attempts to link the growth of income and employment, analyzing the behaviour of employment elasticity and per worker productivity. Although there has been an overall improvement in the level of per worker productivity across sectors, the level of labour productivity in agriculture is still very low and also witnessed decline in recent years. Further, per worker earning differential

between agriculture and non-agriculture sectors has widened in recent years. The diverse and uneven pattern of income and employment further indicate towards weak and diffused farm: non-farm linkages.

To accelerate the pace of economic growth and realize its desired impacts on employment generation and poverty reduction, first, there is an urgent need to strengthen the agricultural base, through reversing the recent trend of down-swing in the rate of growth of public investment on crucial agricultural infrastructure. Special agricultural policies relating to technology and research and extension services need to be formulated, keeping the peculiar nature of agriculture in NER. Second, given its high employment potential, the growth of non-farm sector is also to be further promoted. Third, there is an urgent need to improve the human capital by investing on health, education, skill and training and also to expand economic activities to boost employment opportunities in this region. Fourth, the scope and reach of public work programmes such as Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) need to be expanded. Fifth, the recent initiatives towards inclusive growth, the growth should not only be high and broad-based to include the poor, it must also be accompanied by social protection measures. Thus to put NER on an accelerated and inclusive growth path a balanced blend of investment, infrastructure and commercial policies need to be formulated. Needless to say that, while above issues are critical to achieve the goal of high growth of income and employment, effective implementation and monitoring of these policy changes will be of utmost importance.

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## **V.V. Giri National Labour Institute**

Post Box No. 68, Sector 24, NOIDA-201301  
Uttar Pradesh (INDIA)

E-mail : [vvgnl@vsnl.com](mailto:vvgnl@vsnl.com)

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