

**RURAL NON-FARM EMPLOYMENT IN UTTAR  
PRADESH: A REGIONAL ANALYSIS**

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**MASTER OF PHILOSOPHY**

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**DECLARATION**

I, Manoj Kumar, hereby declare that the dissertation entitled “**RURAL NON-FARM EMPLOYMENT IN UTTAR PRADESH: A REGIONAL ANALYSIS**” submitted by me for the award of the degree of **MASTER OF PHILOSOPHY** is my bonafide work and that it has not been submitted so far in part or in full, for any degree or diploma of this university or any other university.

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**CERTIFICATE**

It is hereby recommended that the dissertation may be placed before the examiners for evaluation.

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affectionately dedicated  
to  
my revered parents  
and  
loving siblings

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## **LIST OF ABBREVIATIONS**

RNFL	Rural Non-Farm Employment
RNFE	Rural Non-Farm Economy
RNFS	Rural Non-Farm Sector
RNFY	Rural Non-Farm Income
RI	Rural Industry

# Chapter I

## INTRODUCTION

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### 1.1 Introduction:

In transitional economies like India the shift of workforce from agriculture to non-agricultural sector has been an important feature of employment diversification in rural areas. Rural people harness this shift as an opportunity to diversify their sources of income. The occupational structure in the Indian economy remained almost unchanged during 1950s and 1960s, but in 1970s it started changing (Sharma, 2005). However, the rate of change got fillip only after economic reform. The percentage increase in non-farm employment during 1972-73 to 1993-94 was only 7.3 per cent (from 14.3 per cent in 1972-73 to 21.6 per cent in 1993-94), while it was 10.5 per cent during 1993-94 to 2009-10 (from 21.6 per cent in 1993-94 to 32.1 per cent in 2009-10) (NSSO). The growing non-farm sector can be helpful in resolving some of the critical problems particularly in reduction of poverty, generation of employment and the most important in supporting family income in the rural areas (Lanjouw and Lanjouw, 2001; Nayyar and Sharma, 2005).

Non-farm sector has outpaced farm sector not only in generation of employment but also in the growth of productivity. As Sen and Jha (2005) pointed out that the ratio of per worker domestic product in non-agriculture to that in agriculture, which was about 2 in the 1950s, is now well over 4. Further they stated that the widening gap between incomes in agriculture and non-agriculture is generally accepted to be one of the major factors for persistent poverty in the country. Table 1 gives the rate of growth of GDP along with separate contribution of agricultural and non-agricultural sector for three periods 1993-94 to 1999-00, 1999-00 to 2004-05 and 2004-05 to 2007-08. A perusal look at the table shows that growth in GDP has been higher in the non-agricultural sector than that of agricultural sector in all the periods. Moreover, the difference between the growth rates of non-agriculture GDP to that of agriculture is widening continuously, from 5.37 per cent during 1993-94 to 1999-00 to 5.74 per cent during 1999-00 to 2004-05 and finally it rose to 6.01 per cent during 2004-05 to 2007-

08. It demonstrated that the increase in productivity of non-farm sector was greater than farm sector in absolute as well as in relative terms.

**Table1.1: Growth Rate of GDP at constant prices (% per annum)**

	1993-94 to 1999-00	1999-00 to 2004-05	2004-05 to 2007-08
Agriculture	3.99	1.56	4.55
Non-agriculture	9.36	7.30	10.56
Total	7.86	5.98	9.47

**Source; Himanshu (2011), “Employment Trends in India: A Re- examination”**

Over a period of time, it has become clear that agriculture cannot absorb all the growing labour force in the developing countries like India. It is due to the fact that as growth takes place in such countries, the agriculture also becomes more capital intensive which thereby will make pressure on agriculture to release the surplus labour. The released labour from agricultural sector can be employed in non-agricultural activities, which is generally less capital intensive and more labour absorbing (Chadha, 2003) in the rural economy.

## **1.2 Statement of the Problem:**

One of the most critical features of India’s economic development in post-independence era is the mismatch between the dependence of workforce on agriculture and the share of gross domestic product (GDP) originating from it. Although the share of agriculture in total employment has declined from about 70 per cent in 1951 to over 50 per cent at present (Datt and Sundharam, 2008), it is still a major contributor in total employment generation, on the other hand, share of agriculture in GDP has reduced drastically from over 50 per cent in 1950-51 to less than 15 per cent in 2009-10 (Economic Survey, 2011-12). This has led to widening the gap between incomes in agricultural and non-agricultural sector which implies slower growth of labour productivity in agriculture than rest of the sectors; resulting in the persistence of rural poverty (Nayyar and Sharma, 2005). The gap between the number of new rural workers joining agriculture and the new jobs created in the agriculture sector is enlarging. The rural areas in the country are going through the transformation and the contribution of rural non-farm sector to rural income and

employment can be significant. Several studies on rural employment diversification have shown that share of non-farm employment has grown significantly and agriculture is not able to absorb rural labour force anymore (Chdhha, 2003; Lanjouw and Lanjouw, 2001; Ranjan, 2006). Therefore, the employment diversification towards non-agricultural sector in the rural areas has gained critical importance over time.

The economic development in Uttar Pradesh has been sluggish despite its geographical enormity. With respect to the all India level, the percentage share of the state in total income declined from 16.4 per cent in 1950 to 8.3 per cent in 2008-09. Table 2 reveals the declining trend of state's income in the country's total income over the period 1950-51 to 2008-09. The per capita income of the state at Rs 11981 in 2007-08 was one of the lowest among all the states in the country (state income estimate, 2008-09). Moreover, 40.9 per cent people of the state were living in poverty in 2004-05; which was one of the highest among all the states in the country. Overall, Uttar Pradesh is one of the poorest states in India, as its position in Human Development Index (HDI) was 12<sup>th</sup> among 15 major states of the country (Economic Survey, 2011-12).

**Table 1.2: Total Income of India and Uttar Pradesh (at constant prices); from 1951-50 to 1987-88 at 1970-71 prices and 1999-00 to 2008-09 at 1999-00 prices**

Year	Total Income (Crores Rs.)		Percentage share of UP
	India	UP	
1950-51	16731	2738	16.4
1960-61	24250	3321	13.7
1970-71	34235	4256	12.4
1980-81	47414	5693	12.0
1987-88	62500	7375	11.8
1999-00	1786526	175159	9.8
2000-01	1864301	178997	9.6
2001-02	1972606	182885	9.3
2002-03	2048286	189682	9.3
2003-04	2222758	199682	9.0
2004-05	2388768	210462	8.8
2005-06	2616101	222242	8.5
2006-07	2871120	239070	8.3
2007-08*	3129717	258067	8.2
2008-09#	3339375	276677	8.3

**Note:** \* Provisional Estimates, and # Quick Estimates

**Source:** From 1950-51 to 1987-88 (Ranjan, 1994) and between 1999-00 to 2008-09 (State income estimate); Uttar Pradesh, 2008-09



However, the performance of agriculture in the state was also sluggish in relation to rest of the sectors. It was being reflected in the increasing gap between the share of agricultural sector income in the state and the total workforce engaged in it. The contribution of agriculture in the total state income was 57 per cent in 1971, which came down to 35.5 per cent in 2000-01, while its share in the total workforce in the corresponding years was 78 per cent and 66 per cent respectively, which indicates a fast reduction of 21.5 per cent in the former during a period of thirty years (1971-2001) as compared to only marginal decline of 12 per cent in the latter (Jha, 2007). This reveals two important points first a far higher segments nearly three-fourth of state's workers with a much lower share in the state income, is engaged in the agriculture sector and second the growing imbalances in the distribution of income between agricultural sector and rest of the sectors in the state.

So far, as employment is concerned, nearly 67 per cent of the total rural workforce of the state is engaged in the agricultural sector in 2009-10. This indicates the relative importance of the agricultural sector from the point of view of employment. But, in recent years, there has been rural employment diversification towards non-farm sector in the state, and the rate of this diversification was even higher than all India level. As during 1993-94 to 2009-10 the increase in non-farm employment in the state was 13.1 per cent against only 10.5 per cent in all India. Overall, this has brought about faster employment growth in the rural non-farm sector than in the farm sector. In light of the above facts the present study endeavours to evaluate employment situation in non-farm sector in Uttar Pradesh at the regional level.

### **1.3 Study Area:**

Uttar Pradesh is the most populous state in the country. According to the census data of 2011, its population is 199.5 million, which is approximately 16.49 per cent of the country's total population. The area of the state is 241000 square kilometres, which turns out to be 7.3 per cent of the country's total area and it is fifth largest state in the country. Uttar Pradesh is one of the most densely populated states in the country; its population density is 828 against only 382 of the national average. Administratively, the whole state has been divided into 70 districts, 311 tehsils and 820 development

blocks<sup>1</sup>. From the economic point of view, these districts have been grouped under four economic regions viz., western region, central region, eastern region, and Southern (Bundelkhand) region having 26, 10, 27 and 7 districts respectively. The first three regions falls under fertile Indo-gangetic plains, while Bundelhand forms part of the southern plateau. The western region of the state is relatively most developed in terms of economic prosperity. Next to Western region, is the Central region, while rest of the two regions, namely east U. P. and Bundelkhand are backward regions in the state. Given the wide variations in the level of development among different regions, factors driving non-farm employment in the rural areas may also vary. It is expected that in more developed western region, pull factors may be at work, while in the less developed eastern and southern region push factors can cause diversification of employment (Singh, 2005).

Uttar Pradesh is classified into 70 districts and four regions<sup>2</sup> namely western, central, eastern and southern. The classification of the districts into four regions is as follows.

- **WESTERN REGION:** SAHARANPUR, MUZAFFARNAGAR, BIJNOR, MORADABAD, RAMPUR, JYOTIBA PHULE NAGAR, MEERUT, BAGHPAT, GHAZAIBAD, GAUTAM BUDHHA NAGAR, BULANDSHAHR, ALIGARH, HATHRAS, MATHURA, AGRA, FIROZABAD, ETAH, MAINPURI, BUDAUN, BAREILLY, PILIBHIT, SHAHJAHANPUR, FARRUKHABAD, KANNAUJ, ETAWAH and AURAIYA. (26)
- **CENTRAL REGION:** KHERI, SITAPUR, HARDOI, UNNAO, LUCKNOW, RAE BARELI, KANPUR DEHAT, KANPUR NAGAR, FATEHPUR and BARABANKI. (10)
- **EASTERN REGION:** PRATAPGARH, KAUSHAMBI, ALLAHABAD, FAIZABAD, AMBEDKAR NAGAR, SULTANPUR, BAHRAICH, SHRAWASTI, BALRAMPUR, GONDA, SIDDHARTHANAGAR, BASTI, SANT KABIR NAGAR, MAHARAJGANJ, GORAKHPUR, KUSHINAGAR, DEORIA, AZAMGARH, MAU, BALLIA, JAUNPUR,

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<sup>1</sup>Human Development Report, Uttar Pradesh, 2008.

<sup>2</sup>National Sample Survey Report, 61<sup>st</sup> round (2004-05) on employment and unemployment situation in India

GHAZIPUR, CHANDAULI, VARANASI, SANT RAVIDAS NAGAR (BHADOHI), MIRZAPUR and SONBHADRA. (27)

- **SOUTHERN REGION:** JALAUN, JHANSI, LALITPUR, HAMIRPUR, MAHOBA, BANDA and CHITRAKOOT. (7)

#### **1.4 Objectives of the Study:**

This study attempts to assess the nature of employment diversification towards non-farm sector in the rural areas of Uttar Pradesh. The specific objectives of the present study are:

- To study the level and trends of rural non-farm employment in Uttar Pradesh during 1993-2010.
- To analyse these trends at a more disaggregated regional and district level in Uttar Pradesh.
- To characterise the prevailing nature of rural non-farm employment in Uttar Pradesh.
- To estimate the determinants of rural non-farm employment in Uttar Pradesh.

#### **1.5 Hypotheses:**

This study has the following hypotheses.

- Small and marginal farmers and landless agricultural labourer have a greater level of non-farm diversification in rural Uttar Pradesh.
- Rural employment diversification in Uttar Pradesh is largely distress diversification that is push factors are stronger than pull factors.
- The factors cause diversification of rural employment towards non-farm sector in Uttar Pradesh is not uniform across the regions.

#### **1.6 Data Sources:**

There are two major data collection agencies which collect information on various aspects of employment and unemployment situation in India. These are Census of India and National Sample Survey Organisation (NSSO). The Census of India provides information on the population and the workforce by age, gender, social

group etc. at disaggregated state and districts level. The NSSO collects data on employment in its quinquennial employment and unemployment surveys. To cover the different aspects of employment and unemployment in the country NSS uses three reference periods on the basis of activity pursued by workers. These three are one year, one week and each day of the reference week and termed as usual status, current weekly status and current daily status respectively. Further, usual status is categorised into two categories viz. usual principal activity status (UPS) and usual subsidiary status. The usual status, determined on the basis of the usual principal activity and usual subsidiary economic activity of a person taken together, is considered as the usual activity status of a person and written as usual status (ps+ss) or UPSS. According to UPSS; which has been taken in the study, workers are those who perform some work activity either in the principal status or in the subsidiary status.

The present study is based on the unit level data of NSS 55<sup>th</sup> Round (Schedule No. 10), 61<sup>st</sup> Round (Schedule No. 10), 66<sup>th</sup> Round (Schedule No. 10) and 50<sup>th</sup> Round (from report only). All these rounds have information on the different aspects of employment and unemployment like labour force participation, workforce participation, unemployment etc. by different categories like rural/urban, male/female, social group, religion etc. However, in the current study employment growth is analysed by only nine broad categories (that is one digit level as per NIC classification<sup>3</sup>). The other data sources are Economic Survey (2010-11), Census of India (2011), State Income Estimate of Uttar Pradesh (2008-09), District wise development indicators of Uttar Pradesh (2009), Himanshu (2011), Ranjan (1994), Datt and Sundharam (2008).

## **1.7 Methodology:**

The present study is strictly concentrated to different aspects of rural non-farm employment (RNFL). To examine the level and trends of non-farm employment at state as well as regional level the frequencies and crosstabs have been done with the help of SPSS. For the analysis at the regional level, all the districts of the Uttar

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<sup>3</sup>Industry classification for 50<sup>th</sup> round is based on NIC code 1987 and for 55<sup>th</sup> and 61<sup>st</sup> round it is based on NIC code 1998 and for 66<sup>th</sup> round it is based on NIC code 2004. There are no differences in these classifications at one digit level. The NIC code at one digit level has been mentioned for 1987, 1998 and 2004 in appendix tables A5, A6 and A7 respectively.

Pradesh have been classified into four different regions at the macro level. The classification of regions is based on the National Sample Survey Organisation of 61<sup>st</sup> round (2004-05)<sup>4</sup>.

**Logistic Regression:** To examine the determinants of rural non-farm employment the logit model (binary logistic) has been used in the analysis. Binary logistic regression is a type of regression analysis where the dependent variable is dichotomous, coded 1 for occurrence of event and 0 for the absence of event.

Here, in the study, our objective is to identify workforce participation in rural non-farm economy (RNFE). Since a worker would be either in the non-farm or not (then in the farm sector). So working in the non-farm sector is yes and no type of response. Thereby the response variable or regressand can take only two values, say 1 if the person is in the non-farm and 0 if he or she is not. In our model the dependent variable and independent variables are as follows.

Dependent variable is the employment in the RNFS.

Independent variables are age, sex, general education, technical education, land possessed, social group, religion, household size, monthly per capita consumption expenditure (MPCE) and region. The functional form of the logistic regression would be of following type.

$$\text{Logit} = \ln \left[ \frac{p}{1-p} \right] = \alpha + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_i X_i + u_i$$

Where,  $p$  is the probability that worker is employed in the RNFS.

$\left[ \frac{p}{1-p} \right]$  is the “odds ratio”.

$\ln \left[ \frac{p}{1-p} \right]$  is the log odds ratio, or “logit”.

$\alpha$  is the intercept.

$\beta_1$  to  $\beta_i$  are the slop coefficients associated with independent variables  $X_1$  to  $X_i$

$X_1$  to  $X_i$  are the independent variables associated with the participation in RNFE.

$u_i$  is the error term.

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<sup>4</sup>Classification of the regions is based on 61<sup>st</sup> round (2004-05) of NSSO data. In this round there are four regions in Uttar Pradesh namely Western region, Central region, Eastern region and Southern region. 66<sup>th</sup> round survey of NSS has five regions in Uttar Pradesh, but it has also been categorised into four regions as per 61<sup>st</sup> round. In case of 55<sup>th</sup> round also there was five regions including the Himalayan region, but for comparison purpose it has not been taken in the study.

The analysis has been further carried out as per different types of employment like self-employed workers, regular workers and casual workers in non-agricultural activities. The coding of independent variables in terms of categorical variables is given in Table 1.3.

**Table 1.3: The Coding of Independent Variables in Logistic Regression**

<b>Independent variables</b>		<b>Categories of variables</b>
Age	1	15-29
	2	30-44
	3	45-59
Sex	1	Male
	2	Female
General Education	1	Illiterate
	2	Primary
	3	Middle
	4	Secondary & Higher secondary
	5	Graduate & above including Diploma
Technical Education	1	Non-Technical education
	2	Technical education
Land Possessed	1	Landless
	2	Sub marginal
	3	Marginal
	4	Small
	5	Medium & Large
Social Group	1	Schedule Tribes
	2	Schedule Caste
	3	Other Backward Class
	4	Others
Religion	1	Hindu
	2	Muslim
	3	Other
Household Size	1	0-4
	2	05-07
	3	8 and above
MPCE	1	Lowest through 540.6
	2	540.6 to 646.7
	3	646.7 to 786.3
	4	786.3 to 986.0
	5	986.0 through highest
Region	1	Western
	2	Central
	3	Eastern
	4	Southern

## **1.8 Organisation of the Chapters:**

This study is classified into six chapters. The first chapter introduces the issue of concern along with statement of the problem, study area, objectives, Hypotheses, data sources and methodology. The second chapter deals with the importance of rural non-farm economy and review of literature. The literature on rural non-farm economy mainly focuses upon its conceptual, empirical, theoretical and linkages issues. Studies have also been mentioned on the push and pull factors along with residual sector hypothesis and in last some literatures on Uttar Pradesh has been reviewed. Chapter three explains level and temporal change in rural non-farm employment in India and its seventeen major states. Next chapter examines the incidence and change in rural non-farm employment in Uttar Pradesh as well as in its four regions namely western, central, eastern and southern. In chapter five the determinants of participation in rural non-farm activities have been analysed. Finally, chapter six presents the concluding remarks of the study.

## Chapter II

### **The Rural Non-farm Economy: A Theoretical Underpinning**

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#### **2.1 Importance of RNFS in Rural Economy:**

The rural non-farm sector (RNFS) has gained importance in the recent years as a source of generation of income and employment, in reduction of poverty, and in economic growth across the developing world (Lanjouw and Lanjouw 2001; Haggblade et al., 2008). However, Mishra (2007) emphasised that one should not look RNFS only as a source of employment generation, but also in terms of the proportion of income coming from this sector, allocation of time and its relationship with household level vulnerabilities, risk coping and risk dispersing mechanism as well as its significance in the overall livelihood diversification strategies. Apart from the significant role that rural non-farm sector plays in the agricultural development, it can also be useful in solving some of the critical problems not only in the rural areas but in the urban centres as well. Some of the important contributions which RNFS can make in rural areas are as follows.

1. A planned and strategic development of this sector may prevent many rural people to migrate in the urban industrial and commercial centres for their livelihood. In the face of growing social and economic problems related to urbanisation; such as increasing urban slums, problem of congestion, traffic jam, poverty and increasing intensity of crime can be tackled via a good network of rural non-farm activities through stopping the urban-in and rural-out migration. So, through localising employment in the rural areas in terms of non-farm activities can contribute in easing urban congestion and reducing the pressures on inadequate urban infrastructure facilities (e. g. housing, water, transport, sanitation, and education etc.) (Lanjouw and Lanjouw, 2001; Chadha, 2003; Ranjan, 2006 and Sabharwal, 2011).
2. Some activities in the non-farm sector provide workers with low returns even relative to casual agricultural wage labour; it is particularly true in case of non-farm labour performed by women. Nevertheless, non-farm activities may be very important from a welfare perspective in general and reducing income



inequality in particular; as it provides employment in the slack period of the season when most of the rural workers are partially or fully unemployed may benefit even from low non-farm returns (Lanjouw and Lanjouw, 2001; Chadha, 2003). Lanjouw and Shariff (2004) have put it in the following way, *“Where agriculture was unable to provide widespread employment, the non-farm sector played an important role in picking up part of the slack”*.

3. The rural-urban economic gaps and many other aspects associated with the life of rural people are bound to get narrower when the economic base of the rural economy extends beyond agriculture. It is much more likely to see rural people assimilate and adopt urban work patterns and higher earnings expectations when their own non-farm sector is expanding. So, the development of non-farm sector can play an important role in mitigating the differences between rural-urban areas (Chadha, 2003; Ranjan, 2006).
  
4. Generally it is seen that, people in the rural areas are excessively employed in agriculture; that depends on the size of household in relation to amount of land they owned. So some members of the household can be shifted in other type of activities, due to availability of surplus labour in agriculture; (Lanjouw and Shariff, 2004; Kumar et al., 2011). The development of RNFS via rural industries<sup>5</sup>; which is supposed to be generally less capital intensive and more labour absorbing (Chadha, 2003) can be a good initiative to utilise the potentialities of surplus labour available in agriculture. So, the surplus labour available in agricultural sector can be shifted to rural non-farm sector. In this process rural non-farm sector can help in generation of higher employment as well as of output gains in the rural economy. In the words of Chadha (2003), *“The social objectives of deriving higher employment and output gains for every unit of capital invested is likely to be more readily fulfilled through a chain of rural industrial activities.”*

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<sup>5</sup> “Rural industries include all industrial enterprises located in the rural areas, irrespective of their size of operation either in terms of volume of output or employment technology-in-use, range of market operation, etc.” (Chadha, 2003) or in terms of non-farm employment “Rural industry constitutes only one component of the total rural non-farm activity; and that is rural manufacturing” (Haggblade et al., 2008).

5. Poverty in the rural areas is reported to come down more readily through wide network of non-farm activities because, for people without a land base of their own, per worker productivity and earning are higher in non-farm than farm employment (Chadha, 2003).
6. Rural non-farm activities use the local talent (which is generally unskilled and semi-skilled) and either under-utilised or unutilised resources, which could be difficult to transferred and utilised in urban modern industries (Chadha, 2003).
7. The dependence of rural households on non-farm income are increasing rapidly; as rural people in developing countries derive a significant share of its total income from rural non-farm activities (Davis, 2001). In central and eastern European countries (CEEC) rural household derive almost 30-50 per cent of their total income from non-farm (Davis and Pearce, 2000). This proportion was more in case of African, Asian and Latin American countries; which is 35-55 per cent (Haggblade et al., 2008).
8. It may help in the development of agriculture; as the modern agriculture is based on strong backward and forward linkages with industry and other non-agricultural sectors (Mellor, 1976; Start, 2001). Haggblade et al. (2008) talked about the direct and indirect contribution of this sector in economic growth; directly because of its size<sup>6</sup> and its linkages to agriculture, urban and export market and indirectly through the provision of financing, processing, and marketing services that stimulate and accelerate agricultural growth.

Finally we conclude this section by quoting Saith (1992: 7).

*“Such activities and industries, which are usually labour and local resource intensive, would be in the line with the perceived comparative advantage of most developing economies. Furthermore, rural industrialisation policies also fit in well*

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<sup>6</sup> To the size of rural non-farm sector, here we mean its proportion in the household total income, which is substantial across the world as Haggblade et al. (2008) found that rural household derive 37 per cent, 51 per cent and 47 per cent of their income from non-farm activities in Africa, Asia and Latin America respectively.

*with the industrial location strategies being followed by multinational enterprises and national industrialists alike in a wide range of products of light industry... ”<sup>7</sup>*

Thus, rural non-farm sector has touched almost every sphere of economic life of the rural people. So it would be wrong to consider RNFS only as a defensive survival strategy for rural people but, it has to be considered as a part of growth strategy in the rural economy (Davis, 2001).

## **2.2 Literature Review:**

There is no dearth of literature on rural non-farm employment. Several views on rural non-farm employment have emerged in last couple of decades. Here an attempt has been made to summarise these literatures. RNFS is being increasingly acknowledged as an important factor in reduction of poverty levels in rural areas, both by way of contributing to the growth of output as well as employment potentials by absorbing surplus labour from agriculture sector (Nayyar and Sharma, 2005). The remarkable success of rural industries in China and East Asian countries has provided strong evidence of significant role that this sector can play in generation of employment and in increasing the levels of income in rural areas (Chadha, 2003).

### **2.2.1 Conceptual framework of Rural Non-farm Economy:**

The issue to develop rural non-farm sector is closely associated with the question of what comes under the purview of rural non-farm activities. There is lack of consensus among scholars about the definition of rural non-farm sector mainly because of the two reasons. **First**, there is no exact number, when a rural area turns into urban ones. **Second**, that is related to the type of activities that would fall under non-farm categories<sup>8</sup>. The rural non-farm economy (RNFE) is generally defined as comprising all those non-agricultural activities, which generate income to rural households (including income in kind and remittance), either through waged work or in self-employment (Mishra, 2007). In other words it includes all economic activities in the rural areas except agriculture, livestock, fishing and hunting (Lanjouw and Lanjouw, 2001). Since it is defined negatively, as non-agriculture, it can't be considered

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<sup>7</sup>Quoted in Chadha, G. K. (2003), “Rural industry in India: Policy perspectives, past performance and future options”

<sup>8</sup>“Promoting the rural non-farm sector in Bangladesh”, World Bank (2004).

homogeneous; rather it is heterogeneous. Thus it is composed of services, commerce and transport, construction and mining, and manufacturing (Lanjouw and Lanjouw, 2001).

One should not be confused about the rural non-farm income (RNFY) and off-farm income<sup>9</sup>. RNFY is smaller than total “off-farm income” by the amount of wage earnings in agriculture. Davis (2001) made it clearer when he stated that rural non-farm economy includes all those income generating economic activities associated with waged work or self-employment, which are located in rural areas but should not be in agriculture. So it might include agro-processing, setting up of a small business, or the receipt of transfer payments such as pensions, interest and dividends plus remittances from temporary or seasonal migration to urban areas (Davis 2001). The meaning of rural has its own importance in understanding the RNFE (Lanjouw and Lanjouw, 2001). To understand different aspects of RNFE from spatial and locational perspective have its own significance, but there are some difficulties in defining RNFE from spatial perspective<sup>10</sup>.

RNFE can also be defined from the sectoral distribution of economic activities like primary, secondary and tertiary sector. Primary activities include any activity in the production or gathering of unprocessed crops, livestock, and forest or fish products from natural product. So non-farm includes all other forms of activity and income which may come from processing, transport or trading of unprocessed products (Start, 2001). Islam (1997) identified five distinct sources of non-farm income: (i) non-agricultural activities within the household; (ii) activities in the small rural towns; (iii) work in large cities (involving commuting); (iv) remittances from household members in cities; and (v) remittances from household members overseas<sup>11</sup>.

In the present study, RNFS has been defined on the basis of industrial classification given in quinquennial survey of NSSO on employment and unemployment situation

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<sup>9</sup>Haggblade et al., (2008) noted that “The ‘rural non-farm economy’ includes all rural economic activity outside of agriculture. Non-farm activity may take place at home or in factories or to be performed by itinerant traders” while “The ‘off farm income’ means off the owners own farm. Consequently, off-farm income includes wage employment in agriculture earned on other people’s farms along with non-farm earnings from the owner’s non-farm enterprises or from non-farm wage earnings.”

<sup>10</sup>Barrett and Reardon (2000) noted that ‘activities can be “local” with two sub-categories (a) at home (on-farm); (b) local away from home, with sub categories of (i) countryside or strictly rural, (ii) nearby rural town, and (iii) intermediate city’ these distinction are important, in particular with respect to the extent to which the household is dependent on the local economy (Quoted in Davis and Pearce, 2000).

<sup>11</sup>Quoted in Davis and Pearce (2000), “The Rural Non-farm Economy in Central and Eastern Europe”

in India; according to this non-farm sector includes all the economic activities except agriculture, hunting, forestry and fishing in rural areas. Thus non-farm is composed of activities like mining and quarrying, manufacturing, construction, electricity, gas and water and all kind of services in the rural areas.

### **2.2.2 Empirical Literature on Rural Non-farm Economy:**

Vaidyanathan (1986) study, based on census and NSS data, found the increasing share of non-agricultural employment in rural India. The level of non-farm employment was dissimilar across the regions as ratio of non-farm employment to total employment was not same for each region. He advanced the view that increasing employment in rural non-agricultural sector might be the function of (a) the level of rural demand for non-agricultural goods and services produced locally, which includes inputs for agriculture and animal husbandry, manufactured goods and services. (b) the level of extra local demand for rural goods and services by urban areas, which is further positively related to the proximity of urban centres, the size of urban centres and facility of transportation services etc. (c) location, scale technology of activities catering to these demands. The first would be depend on agricultural prosperity of the region and is identified as per capita income of agricultural classes and degree of inequality in income distribution. Based on regression analysis he found a positive relationship between the incidence of non-agricultural employment and crop output per head of agricultural population, but a negative relationship between non-agricultural employment and inequality of operational holdings (NSS, 32<sup>nd</sup> round). From this he concluded that consumption (demand) inter-linkages between agriculture and non-agriculture are strong.

Eapen (1994) in her study made significant effort to find out salient features of the rural non-farm employment during 1970s and 80s. She found that there was paramount shift of employment towards non-agricultural sector during 1970s at all India level. She pointed out that the diversification of employment from agriculture to non-agriculture is a universal phenomenon at the aggregate level, although differences could exist in the dimensions like industrial composition or sequence of changes during the process etc. She concluded that there was growth in employment in the tertiary and secondary sector both because of the high demand in consumer goods and services which led to the diversification of employment in Kerala. She further added

that since the demand for manufactured goods was found to be low in both rural as well as in urban areas, therefore employment base in this sector was low which was also reflected at the sectoral level because growth in tertiary sector was more than the secondary sector.

Based on her above findings she argued that the growth in non-agricultural activities had occurred because of the increase in consumer demand. She further added that due to absence of right production structure that is good productive capacity, the benefits of these demand went away to the other states. In her next paper (Eapen, 1995) she studied the changes in the structure of rural non-farm employment during 1970s and 80s among different districts and also saw the determinants of rural non-farm employment. In her analysis she found that there was variation among districts in the share of non-agricultural employment, although the coefficient of variation was low and the trend was declining over time. All the districts recorded an increase in the share of non-agricultural employment. Furthermore, she found that education was one of the important factors in determining non-agricultural employment. She also found a strong and positive relationship between the levels of per capita consumption and growth of non-agricultural employment in Kerala.

Lanjouw and Shariff (2004) analysed the different aspect of rural non-farm employment in general and its contribution to the rural household income in particular across population quintiles in India. They utilised National Centre of Applied Economic Research (NCEAR) data on household survey for 1993-94 and concluded that non-farm sector contributed significantly in household income; which is on an average almost one third of the household income. They also observed the considerable differences in the share of non-farm income across population quintiles; majority of the agricultural wage labourer and non-farm labourer were from the poorest quintile while majority of regular employed workers were from Upper quintile. The share of non-farm income in the total income of the household varied among different states. In Himachal Pradesh, Tamil Nadu, West Bengal and North Eastern states its share was high and it was also increasing with income quintiles. On the other hand, in Gujarat, Madhya Pradesh, Andhra Pradesh, Maharashtra and Karnataka its share was low and it was also declining with the income quintiles.

In case of determinants, they found that education, wealth and social status played an important role in access to non-farm employment. They argued that a small education can have significant impact compared to no education at all in getting non-farm employment and even its nature as well. There may be appreciable changes in the nature and pattern of rural non-farm employment with the improvement in education level. To see the impact of wealth on rural non-farm employment they took per capita land holding as a proxy for an ability to pay bribes and for access to network of contacts. The effect of this was positive in getting non-farm employment in rural areas.

Further, they found gender biasedness in participation in rural non-farm activities; women were less likely to employ in the non-farm sector than their men counterpart. Social status was another significant factor in determining rural non-farm employment, as it was found that socially backward classes like SCs and STs had fewer share in it and were casually employed.

Their analyses suggest that the poor are not well placed in getting non-farm employment. Low levels education, wealth and social status, all appear to restrict poor to get access to relatively more attractive non-farm employment. They found positive impact of non-farm employment on agricultural wages; which can have a good impact on the reduction of rural poverty. They made two suggestions to policy maker's for improving the access of poor people in the non-farm employment (1) Removing the barriers of entry for the poor into non-farm sector such as education, social discrimination etc. (2) Policy makers should note the strong evidence of the impact on agricultural wages, by the expansion of non-agricultural work, which can help in reducing poverty in rural areas.

Bhaumik (2002, 2007) compared the development of rural non-farm employment between pre (1983 to 1993-94) and post (1993 to 2004-05) economic reforms. He concluded that both in absolute numbers as well as in percentage, rural non-farm activities have increased more in post reform period than pre reform period. The increase in RNFL was for both male and female, but it sounds more in case of male workers. The concentration of female employment was in manufacturing sector, while in case of male it was in construction, wholesale, retail and trade. Majority of the non-farm employment were on enduring basis both during pre and post economic reform

period. He attributed such advancement to the poor performance of agriculture in the post reform period and hence diversification of employment towards rural non-farm sector took place faster.

Sabharawal (2011) made effort to analyse the impact of non-farm jobs on migration. He pointed out about the presence of reverse migration (from urban to rural) in china recently. Non-farm jobs in China are higher than in India. There may be many factors behind it; but one that got more importance among the scholars is the availability of relatively better infrastructure in China. As he points out “*Non-farm job creation tends cluster and requires soft and hard infrastructure that many of our villages are too small for*”. He advanced the reason behind the reverse migration in China is the availability of non-farm jobs in the Chinese villages. Such type of migration has taken Chinese economy to a halt as workers are evacuating cities for their villages. In case of India he stated that; Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) has been able to create jobs in the rural areas, which can help in reducing migration from rural to urban areas in India.

### **2.2.3 Studies on Uttar Pradesh:**

Ranjan (1996) tried to explore the diversification of employment from agriculture to non-agricultural sector in the Uttar Pradesh especially in western and eastern region of the state by utilising census data for the period 1971-91. He witnessed the diversification of employment towards non-farm sector in the rural areas. Within the non-farm sector, the growth was more for tertiary sector than secondary sector. He found higher diversification in case of western region than that of eastern region. He concluded the analysis as follows (1) NSS data shows higher rural non-farm activities than census data. (2) The proportional increase in rural non-farm employment in the state was not consistent as it was in case of all India level (3) Casualization of workforce was experienced both at the state as well as all India level.

Singh (2005) investigated the structure of rural non-farm employment using the census and NSS data for Uttar Pradesh. He found in his analysis that the growth of RNFS has accelerated in 1990s; he cited some reasons for this acceleration viz. modernisation of agriculture and expansions of government employment among others. He further argued that due to structural transformation many of the traditional



industries like carpet industry are declining while some of other industries like chicken industry of Lucknow have experienced growth. In regional analysis he found that the prosperous western region of the state has relatively higher non-agricultural income than eastern Uttar Pradesh. The level of poverty was high in RNFS especially in manufacturing and construction sectors and income levels were higher for regularly employed workers than self-employed which indicated the distress diversification in the state. He extended the view that the growth of RNFS is necessary for the overall development of rural areas; especially in raising employment and reducing poverty. The role of infrastructures like roads, electricity and credit facilities are important for the growth of farm as well as non-farm sector. He also pointed out that the role of NGO's in promoting RNFS may be the important.

Ranjan (2006) in his next study investigated the driving force behind diversification of employment from agriculture to non-agricultural activities. He concluded that (1) employment growth in the farm sector was found to be lower than non-farm sector between 1972-73 to 2004 (2) Majority of the non-farm workers were employed as the self-employed worker, but employment in regular and casually employed were also significant (3) In case of sectoral employment manufacturing units has the highest number of workers and it followed by construction, trade, hotels etc. (4) distress induced push factors were more dominant than prosperity induced pull factors.

In his subsequent study, he looked at the factors which are responsible for the adaption of non-farm employment in Uttar Pradesh. This study (Ranjan, 2008) was based on primary survey of two villages in Uttar Pradesh. The uniqueness of this study was to ascertain reasons for joining non-farm sector, he categorised all the factors into two categories Pull<sup>12</sup> and push<sup>13</sup> and asked workers the reason for the adaption of rural non-farm activities. He concluded that important factors for the adaption of non-farm employment are size of land holdings; which is inversely related with the non-farm activities, caste affinity is the other important factor because it was seen that people are continually pursued their traditional activities irrespective of the productivity of the activity involved. He further advanced the view that general cast people do not work at all in the activities traditionally associated with any other

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<sup>12</sup>**Pull factors:** (1) Relatively more profitable (2) pre-existing skill (3) Agricultural related work (4) Interest in the activity (5) Easy to start financially (6) Inspired by friends and relatives (7) Scope of the work in the village.

<sup>13</sup>**Push factor:** No other work available

community or characterised with any social stigma. Pre-existing skills in the family, expectation of greater income, educational attainment, gender and place of work are the other important factors to join non-farm sector. Finally, he stated that the diversification is basically driven by distress induced push factors in the Uttar Pradesh.

#### **2.2.4 Theoretical Foundations of Rural Non-farm Economy**

In economic theory, it is assumed that economic development brings, rising national per capita income with certain broad changes in the structure of production and sectoral distribution of workforce. As Kuznets pointed out, “The economic growth of nations involves a sustained increase in output per capita (or individual), or per worker, most often accompanied by an increase in population and usually by greater structural changes, that is, changes in social and economic institutions, or practices. In modern times the main structural changes have been in the movement from agricultural towards non-agricultural production (the process of industrialisation)”. And, as per Engels law the demand for food items are income inelastic which means that demand for it will rise less proportionately than the rise in income. H. Working (1943) has put it in the following way, “the total expenditure that is devoted to food tends to increase in arithmetic progression as total expenditure increase in geometric proportion”<sup>14</sup>. So with the increase in per capita income (due to economic growth), demands of manufactured goods and services of various kinds would go up. It is due to the fact that elasticity of non-agricultural goods such as manufacturing and services are relatively more elastic than agricultural products. Further Kuznets (1959, pp. 58-59) stated that, if demand shifts away from the agricultural sector then its share in real national income will decline and so will its share in labour force unless productivity per unit of labour force falls. Thereby it’s become usual explanation of the decline in the share of the agricultural sector in labour force and national income.

Abraham (2011) in his study pointed out that since in India the substantial share of workforce is still associated with primary sector so the service oriented structural transformation in the composition of GDP has not been in commensurate with the transformation of workforce. He further added that this has, in fact, failed the

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<sup>14</sup>Quoted in Gujarati, D. (2011), “Econometrics by Example”, pp. 34

theoretical predictions of Lewis-type dual sector models<sup>15</sup>. Hazell and Haggblade (1991) saw rural non-farm sector (RNFS)<sup>16</sup> as a missing link between Lewisian prediction and structural change hypothesis.

Davis (2001) supporting development of RNFS stated that with the commencement of economic growth, as income rises, there will be shift in the pattern of demand towards industry and services. He further added, it does not mean that the growth rate of agriculture declines as economy grow, but it is the share of agriculture in total output declines. So the growth of agricultural output would be slower than the growth of other sectors, once economic growth has taken place at the national level.

### **2.2.5 Linkages Literature on Rural Non-farm economy:**

Probably one of the most predominant views among development practitioner about the development of non-farm sector is the growth of agricultural productivity; because growth in it may lead to the growth of non-farm sector if linkages between these two are working at their best. In other words linkages between farm and non-farm economic sectors are important in creating multiplier effects for growth and rural development (Davis et al. 2002). The growth of rural non-farm sector can be helpful in the development of relatively isolated rural areas in general and rural people who cannot afford import of goods and services from the urban centres in particular. Hirschman (1958) saw agriculture as a weaker stimulant than industry to start the new activities through linkages effects. While Mellor (1976) advocated that the linkages between farm and non-farm sector may be the best way for the development of rural economy. Most of the studies have pointed out the positive spill over effects of farm sector over non-farm sector and vice versa and this effect emerges through linkages between these two sectors. There are mainly two types of linkages; production and expenditure, which work between farm and non-farm sectors (Davis 2001, Davis et al. 2002). A brief introduction these two are as follows.

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<sup>15</sup>Lewis in his structural transformation model suggested to withdrawing labour from agricultural sector and transferring it into modern industrial sector which leads to rise in productivity and growth of both the sectors.

<sup>16</sup>Quoted in Abraham, V. (2011), "Agrarian distress and rural non-farm sector employment in India", pp. 3

**(1) Production Linkages-** It can be further divided into backward and forward linkages. Backward production linkages refer to linkages from farm to the part of non-farm sector that provides inputs for agricultural production, such as fertiliser, agrochemical etc. Forward production linkages refer to the part of non-farm sector that uses agricultural output as an input. The distribution and processing of agricultural output are fundamental components of forward production linkages.

**(2) Expenditure Linkages-** refer to the fact that household deriving income from one type of activity, farm or non-farm, are likely to spend that income on products of other activities. It can further be divided into consumption and investment linkages. Consumption linkages refer to expenditures related to household consumption; and investment linkages refer to expenditure used to finance farm and non-farm activities. Returns on farm activities may be invested to initiate or expand non-farm activities and vice versa.

The above linkage between farm and non-farm sectors has been summarised in the following table. Table 2.1 show the functioning of linkages between farm and non-farm sectors (secondary and tertiary sectors).

**Table: 2.1 Agricultural growth-linked RNFE activities, by sector**

Linkages to agriculture	Secondary sector (construction and manufacturing)	Tertiary Sector (Trading and services)
Production Forward	Processing & packaging industries. Construction of storage & marketing facilities	Transport & trade.
Production Backward	Agricultural tools & equipment	Agricultural & veterinary services. Input supply
Consumption	Household items. Home improvements	Domestic services. Transport. Sale of consumer goods

**Source: Start (2001), “The Rise and Fall of the Rural Non-farm Economy: Poverty Impacts and Policy Options”**

Linkages between farm and non-farm sectors can be helpful in the development of rural economy. The Agricultural development has been a powerful factor which has impacted the rural non-farm sector in a positive way (Unni, 1991).

The changes in agricultural sector have positive as well as negative impact on the rural non-farm economy (RNFE). As in general terms growth in the farming sector has a positive influence on the RNFE and vice-versa, but at the same time RNFE is expanded in order to improve rural livelihood in the long-run when the farming sector is expected to contract (Davis, 2001).

### **2.2.6 Factors determining Rural Non-farm economy:**

In transitional economies, it is not easy to identify the driving factors; that is push or pull, behind diversification of employment from farm to non-farm sector (Davis, 2001). Diversifications of workers towards non-farm activities in rural areas are region specific and depend upon the prevailed situation in the region. There are mainly two types of factors which work in the diversification process; these are distress induced push and demand-led pull factors (Davis & Pearce, 2000; Bhalla, 2000; Davis, 2001). “Push” factors are at work when available employment in agriculture are not sufficient to fulfil the desired need of the rural household so they go for non-farm activities to support their family income, such type of diversification fall into distress-induced diversification. In such type of diversification the relative wages of non-farm workers in most of the cases have been found lower than farm workers (Davis, 2001). Thus it can be inferred that rural poor don’t have alternative option except to choose non-farm activities to earn their livelihood in abject poverty. On the other hand “Pull” factors are at work when many prosperous farm household in rural areas diversify into non-farm activities because non-farm being relatively more remunerative which reduces the risk of farming and in such cases relative wages of the rural households have been found to be more than the wages in farming. Davis (2001) pointed out that *“when relative returns are higher to the RNFE than to farming, and returns to farming are relatively more risky, “Pull” factors are at work.”* And when *“farm output is inadequate and opportunities for consumption smoothing, such as credit and crop insurance, are missing, or when input markets are absent are fail and household needs cash to pay for farm inputs, “push” factors are at work*<sup>17</sup>.

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<sup>17</sup>Davis, Junior (2001), “Conceptual Issues in Analysing the Rural Non-Farm Economy in transition Economies”, Cited from Reardon et al. (1998).

**Table 2.2: The “push” and “pull” factors of RNFE diversification**

“Push factors”	“Pull factors”
<ul style="list-style-type: none"> <li>• Population growth</li> </ul>	<ul style="list-style-type: none"> <li>• Higher return on labour in the RNFE</li> </ul>
<ul style="list-style-type: none"> <li>• Increasing scarcity of arable land and decreasing access to fertile land</li> </ul>	<ul style="list-style-type: none"> <li>• Higher return on investment in the RNFE</li> </ul>
<ul style="list-style-type: none"> <li>• Decline farm productivity</li> </ul>	<ul style="list-style-type: none"> <li>• Lower risk of RNFE compared to on-farm activities</li> </ul>
<ul style="list-style-type: none"> <li>• Declining returns to farming</li> </ul>	<ul style="list-style-type: none"> <li>• Generation of cash in order to meet household objectives</li> </ul>
<ul style="list-style-type: none"> <li>• Lack of access to farm input markets</li> </ul>	<ul style="list-style-type: none"> <li>• Economic opportunities, often associated with social advantage, offered in urban centers and outside of the region or country.</li> </ul>
<ul style="list-style-type: none"> <li>• Decline of the natural resource base</li> </ul>	<ul style="list-style-type: none"> <li>• Appeal of urban life, in particular to younger people.</li> </ul>
<ul style="list-style-type: none"> <li>• Temporary events and shocks</li> </ul>	
<ul style="list-style-type: none"> <li>• Absence or lack of access to rural financial markets</li> </ul>	

**Source: Davis and Pearce (2000), “The Rural Non-farm Economy in Central and Eastern Europe”.**

Davis and Pearce (2000) explained the importance of policies to make distinction between distress-induced push and demand-led pull factors because each may require different policy response. The former may require policymakers to develop appropriate social safety-net and investment policies to mitigate the short-run negative effects that sometimes accompany this type of diversification (for example over rapid urbanisation placing tremendous pressure on urban centres, negative environmental impacts etc.). Whereas, in case of demand-led pull factors policy makers might seek to provide a suitable “enabling environment” to support the development of the RNFE and sustainable rural livelihoods. The key features of distress-induced push and demand-led pull factors have been outlined in table 2.2.

### **2.2.7 Residual Sector Hypothesis:**

One of the most important concepts that emerged from the growth of RNFS is the formulation of residual sector hypothesis (RSH), according to which the increase in

the rural non-farm employment (RNFL) is due to the surplus labour over its demand in the agricultural sector. So, the argument can be made that the growth of RNFL is due to distress induced factor.

Vaidyanathan (1986) tested the residual sector hypothesis; his study was based on 16 major Indian states. He took person days unemployment rate (PDUR) for NSS 32<sup>nd</sup> (1977-78) round to measure the mismatch between labour supply and demand in rural areas, which pushes persons into non-agricultural activities. He introduced two propositions for the fulfilment of RSH; the proposition are (1) The positive association between rural unemployment rate (UR) and the share of the rural non-agricultural employment (RNAE) in the total rural employment and (2) Negative association between UR and the ratio of the wages of non-agriculture to agriculture (Murty, 2005). He found strong positive association between unemployment rate and non-agricultural employment and said the existence of forces that relate to the residual sector hypothesis. However, the conclusion that rural non-agricultural employment has become residual type in rural areas was moderated by the finding that the ratio of non-agricultural to agricultural wage rates was not inversely related to the unemployment rate, “this relationship being implicit in the residual sector hypothesis”

Murty (2005) tested the Residual sector hypothesis (RSH) in a different way, he used Usual status unemployment rate (USUR) instead of Current daily unemployment rate (CDUR), as it was done by Vaidyanathan (1986) and others for measuring unemployment rate. He named USUR and CDUR as less inclusive and more inclusive formulation respectively. He took cross section data of 1977-78 (32<sup>nd</sup> round) from National Sample Survey (NSS) for 15 major states. With the help of correlation analysis he found the applicability of first of the two hypotheses that is (Positive relationship between USUR and CDUR to the share of RNAE). His second proposition (Inverse relationship between USUR and CDUR to the share of RNAE) does not validate for less inclusive USUR or more inclusive CDUR by regression analysis. He concluded that the rejection of second proposition is not adequate proof for the rejection of the whole hypothesis and in favour of his argument he stated that it may be possible due imperfectability of labour market. It is unlikely that an increase in USUR or CDUR brings down the wage ration significantly.

### **2.2.8 Role of some other factors:**

The levels and growth in literacy and urbanisation are expected to have a positive impact on rural non-farm economy, but the levels of urbanisation have not led to an increase in the rural non-farm activities in 1980s and 1990s (Kundu et al., 2003). The growth in literacy has been positively associated with the non-farm employment ((Lanjouw and Shariff, 2004).



## CHAPTER III

### **Rural Non-farm Employment: Level and Trends at the state level**

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#### **3.1 Introduction:**

In the present chapter we analyse the level and trends of rural non-farm employment in India and its 17 major states. Here we use data for the last four quinquennial rounds of national sample survey on employment/ unemployment. This chapter is organised into five broad sections. Section 3.2 examines the level as well as trend of rural non-farm employment in all India. In the section 3.3 a comparison of levels and trends of non-farm employment among major states of India have been done. Next section 3.4 deals with industrial distribution of rural non-farm workers in 2009-10 for all India and its 17 major states. In the same section we have also seen the change in the industrial distribution of non-farm workers during 1993-94 to 2009-10. These analyses have also been done separately for male and female. Finally, section 3.5 presents summary of the chapter.

#### **3.2 Level and trends of Rural Non-farm Employment: All India**

Table 3.1 provides broad trends of rural non-farm employment at all India level for 1993-94 to 2009-10. It is clear from table 3.1 that the incidence of rural non-farm employment increased gradually during the period 1993-1994 to 2009-10; as it increased from 21.6 per cent in 1993-94 to a level of 32.1 per cent in 2009-10. A perusal look at the table shows that the percentage addition into rural non-farm employment has continuously increased. The percentage increase in it was 2.1 per cent, 3.6 per cent and 4.8 per cent during 1993-94 to 1999-00, 1999-00 to 2004-05 and 2004-05 to 2009-10 respectively. It can also be observed that the relative increase in rural non-farm employment was more in 2000s than 1990s.

**Table: 3.1: Percentage of Rural Non-farm workers to total workers in all India (US-PS+SS Basis)**

NSS Round/Year	Percentage of rural-non-farm Employment		
	Male	Female	Persons
50 <sup>th</sup> (1993-94)	25.9	13.8	21.6
55 <sup>th</sup> (1999-00)	28.6	14.6	23.7
61 <sup>st</sup> (2004-05)	33.5	16.7	27.3
66 <sup>th</sup> (2009-10)	37.2	20.6	32.1

**Source: Computed by the Author using various National Sample Survey Reports (50<sup>th</sup>, 55<sup>th</sup>, 61<sup>st</sup>, and 66<sup>th</sup> Rounds) on ‘Employment and Unemployment situation in India’.**

Further, if we look at the incidence of rural non-farm employment separately for males and females, it was found more impressive for male workers throughout the period 1993-94 to 2009-10. The incidence of female non-farm workers increased from 13.8 per cent in 1993-94 to only 20.6 per cent in 2009-10, while in case of male non-farm workers it increased considerably from 25.9 to 37.2 per cent during the same period. Table 3.1 shows that except between 2004-05 to 2009-10, the relative increase in rural non-farm female workers was less than male workers.

### **3.3 Rural Non-farm Employment at the State level:**

To analyse the incidence of rural non-farm employment in the states, we have arranged the states in descending order of percentage of rural non-farm workers to total workers for all four points of time. Here, we followed the categorisation done by Bhaumik (2007)<sup>18</sup>; we have formed three categories of states on the basis of their incidence of rural non-farm workers. These three categories are: (a) States with ‘high’ incidence of rural non-farm employment (where percentage of rural non-farm workers to total workers exceed 35.0); (b) States with ‘medium’ incidence of rural non-farm employment (where percentage of rural non-farm workers to total workers being in the range of 25.1 to 35); (c) States with ‘low’ incidence of rural non-farm employment (where percentage of rural non-farm workers to total workers being less

<sup>18</sup>Bhaumik (2007) categorised rural non-farm employment into three categories on the basis of its level in different states. In case of Bhaumik it was High (Above 30.0 per cent), Medium (20.1-30.0) and Low (Up to 20.0 per cent). In the present study it has been increased by 5 percentage points in each category in the light of increasing share of rural non-farm employment in the total employment.

than or equal to 20.0). The analyses have been done only for the major states<sup>19</sup>. Here major states are Andhra Pradesh, Assam, Bihar, Chhattisgarh, Gujarat, Haryana, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, Uttarakhand and West Bengal. To avoid comparability problems in the analysis, we have dropped the states created in 1999 viz. Chhattisgarh, Jharkhand and Uttarakhand.

Tables 3.2, 3.3 and 3.4 show the percentage of rural non-farm workers to total workers for male, female and total person respectively. The following points can be made in this regard.

- (a) It is clear from table 3.2 that incidence of non-farm employment was highest in Kerala and Lowest in Madhya Pradesh at all four points of time for male workers. In 2009-10, 67.2 per cent of rural male workers were engaged in non-farm activities in Kerala, while in Madhya Pradesh it was only 20.1 per cent. However, the scenario changed for female workers; the first two positions were shared by West Bengal and Kerala during 1993-94 to 2009-10. West Bengal occupied first position at all points of time except in 2004-05, when employment in Kerala was 48.3 per cent, which was higher than West Bengal, where the percentage of female non-farm workers was 41.2 per cent. The lowest share of non-farm employment was in Himachal Pradesh during 1993-94 to 2004-05, but in 2009-10 Gujarat held the last position, when it experienced deceleration in female non-farm employment. In 2009-10, 57.6 per cent of female non-farm workers in West Bengal were engaged in non-farm activities, while it was only 7.8 per cent in case of Gujarat. The incidence and trends of rural non-farm workers for total person were found to be similar to that of male workers.
- (b) As far as Uttar Pradesh is concerned, for rural male non-farm workers its position in 1993-94 was in 'low category' of states with 23.7 per cent of non-farm employment. In the period 1993-94 to 1999-00 the increase in proportion of non-farm workers was 4.5 per cent and it was less only to few states namely Assam, Himachal Pradesh and Kerala. Thereby, it shifted from 'low' to

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<sup>19</sup>According to National Sample Survey (2009-10) 66<sup>th</sup> round report on "Employment and Unemployment Situation in India", major states are those which population size is one crore or more as per population census 2001 in respect of rural and urban areas separately.

'medium category' of states in 1999-00. In this period there were some states where there was decline in the percentage of non-farm workers. In the next period (1999-00 to 2004-05) the trend of increase in the proportion of non-farm workers continued and the increase was also one of the highest among all the states in that period but still it remained in the 'medium category' of states in 2004-05. However, in 2009-10 it moved into 'high category' of states with 39.1 per cent of rural non-farm workers. The proportionate increase in this period was 5.4 per cent which was less only to Bihar, Jammu and Kashmir and Himachal Pradesh. In this period also some states experienced decline in the share of non-farm workers. Overall, during 1993-94 to 2009-10 the increase in the percentage of non-farm workers in Uttar Pradesh was one of the highest among all states with 15.4 per cent increase. When we considered the diversification of employment for female workers, then it was not similar to their male counterpart. The increase in the proportion of female non-farm workers during 1993-94 to 1999-00 was only 2.5 per cent and in the next periods the rate of increase declined; as the increase was only 1 per cent and 1.1 per cent respectively during 1999-00 to 2004-05 and 2004-05 to 2009-10. Its position was among 'low category' of states throughout the study period for female non-farm workers. Overall, also the increase in the percentage for female non-farm workers was one of the lowest among all the states with only 4.6 per cent increase during 1993-94 to 2009-10. Thus, the pace of diversification of rural employment towards non-farm activities in Uttar Pradesh was one of the highest among all the states for male workers while, in case of female workers it was among one of the lowest.

- (c) For rural male non-farm workers, in 1993-94, a good number of the states (8 out of 17) fell in the 'low' category where the incidence of non-farm employment being less or equal to 25.0 per cent. These states in descending order of rural non-farm employment are Maharashtra, Andhra Pradesh, Uttar Pradesh, Assam, Odisha, Karnataka, Bihar and Madhya Pradesh. During the same time, the incidence of non-farm employment in the 'high' and 'medium' categories were not considerable, as only 5 and 4 states fell into these two categories respectively. Similarly for the rural non-farm female workers, in 1993-94 a vast majority of the states (15 out of 17) fell into 'low' incidence of

non-farm employment, while only 2 states namely West Bengal and Kerala belong to 'high' incidence of non-farm employment and from 'medium' category none of the states belonged. When we considered for all workers (male and females both) we call it rural persons, then 2, 3 and 12 states respectively belong from 'high' 'medium' and 'low' categories in 1993-94. The states which belonged to high category are Kerala and West Bengal and from 'medium' category, Tamil Nadu, Haryana and Punjab. In a nutshell it is found that most of the states were in 'low' and 'medium' incidence of non-farm employment during 1993-94.

- (d) There was considerable change in the incidence of rural non-farm employment after 2000, as it is clear from the Tables 3.2, 3.3 and 3.4 that most of the states moved from 'low' to 'medium' and 'medium' to 'high' category. In 2009-10, as many as 11 states out of 17 had high incidence of non-farm employment in case of rural males. These states, in descending order of incidence of male non-farm employment are Kerala, Himachal Pradesh, Jammu & Kashmir, Haryana, Punjab, Rajasthan, Tamil Nadu, West Bengal, Uttar Pradesh, Andhra Pradesh and Odisha. During same period for rural males, 5 states fell into 'medium' while only one belong to the 'low' category. As far as rural females are concerned, only 2 states had 'high' and 2 had 'medium' incidence of non-farm employment in 2009-10. West Bengal and Kerala are from 'high' category while Tamil Nadu and Rajasthan are from 'medium' category. Here, in case of female workers, it can be noticed that very few states shifted in 'medium' and 'high' category of non-farm employment during 1993-94 to 2009-10. When we considered male and female non-farm workers together that is rural person, in 2009-10, 8 out of 17 states belong to 'high' category these states are Kerala, West Bengal, Jammu & Kashmir, Haryana, Punjab, Himachal Pradesh, Rajasthan and Tamil Nadu in descending order of incidence of non-farm employment. 5 and 4 states respectively fell into 'medium' and 'low' incidence of non-farm employment in 2009-10. These states are Uttar Pradesh, Bihar, Odisha, Andhra Pradesh and Assam in 'medium' category and Karnataka, Gujarat, Maharashtra and Madhya Pradesh in 'low' category. Thus, after considering male, female and all workers, it

seems that the process of rural employment diversification towards non-farm sector has been relatively faster 2000s in relation to 1990s.

**Table: 3.2: State arranged in Descending Order of percentage of Rural Non-farm Employment to total Employment (US- PS+SS): Male Workers**

Percentage of RNFL	1993-94	1999-00	2004-05	2009-10
High (Above 35)	Kerala (46.8) Haryana (39.1) J. & K. (38.7) Tamil Nadu (36.0) West Bengal (35.3)	Kerala (57.2) H P (46.2) Haryana (40.4) Tamil Nadu (37.8) Punjab (36.3) Assam (35.3)	Kerala (62.6) H P (50.6) Haryana (50.6) J & K (46.2) Punjab (45.3) Tamil Nadu (41.3) Rajasthan (39.8) West Bengal (36.1)	Kerala (67.2) H P (57.9) J & K (54.9) Haryana (49.1) Punjab (46.8) Rajasthan (43.0) Tamil Nadu (42.5) West Bengal (40.6) U P (39.1) A P (37.0) Odisha (36.0)
Medium (25.1-35)	H. P. (34.2) Punjab (31.9) Rajasthan (30.4) Gujarat (28.9)	West Bengal (33.6) J & K (33.1) Rajasthan (32.7) Gujarat (28.6) U P (28.2) Maharashtra (26.2) A P (25.6)	Odisha (34.1) U P (33.7) A P (33.6) Gujarat (30.7) Assam (30.4) Maharashtra (28.6)	Bihar (35.0) Assam (33.4) Maharashtra (29.0) Gujarat (28.6) Karnataka (27.4)
Low (UP to 25.0)	Maharashtra (24.7) A P. (24.4) U P. (23.7) Assam (21.8) Odisha (21.3) Karnataka (21.2) Bihar (18.0) M P. (12.8)	Odisha (23.0) Karnataka (21.5) Bihar (21.0) M P (15.8)	Bihar (24.2) Karnataka (22.3) M P (20.9)	M P (20.1)

**Note: Figures in Parentheses are percentages of rural non-farm employment to total employment. A. P. –Andhra Pradesh, H. P. –Himachal Pradesh, J. & K. – Jammu and Kashmir, M. P. –Madhya Pradesh, U. P. –Uttar Pradesh**

**Source: Computed by the Author using various National Sample Survey Reports (50<sup>th</sup>, 55<sup>th</sup>, 61<sup>st</sup>, and 66<sup>th</sup> Rounds) on ‘Employment and Unemployment situation in India’.**

**Table: 3.3: States arranged in Descending Order of Percentage of Rural Non-farm Employment to Total Employment (US- PS+SS Basis): Female Workers**

Percentage of RNFL	1993-94	1999-00	2004-05	2009-10
High (Above 35)	West Bengal (41.1) Kerala (37.0)	West Bengal (45.9) Kerala (40.2)	Kerala (48.3) West Bengal (41.2)	West Bengal (57.6) Kerala (57.2)
Medium (25.1-35)			Tamil Nadu (26.2) Odisha (25.4)	Tamil Nadu (27.6) Rajasthan (27.2)
Low (UP to 25.0)	Tamil Nadu (21.5) Assam (16.8) A P (16.3) Karnataka (15.4) Odisha (15.0) U P (10.0) Gujarat (9.7) Maharashtra (8.8) Bihar (8.1) Punjab (7.3) Rajasthan (7.0) Haryana (6.8) M P (6.1) J & K (4.6) H P (4.5)	Tamil Nadu (24.1) Assam (20.6) Odisha (19.6) A P (15.7) Bihar (14.3) U P (12.5) Karnataka (12.2) Punjab (9.4) M P. (8.4) Rajasthan (8.1) Gujarat (8.0) Haryana (7.9) J & K (6.5) Maharashtra (6.1) H P. (4.9)	A P. (21.5) Karnataka (14.5) Bihar (13.6) U P. (13.5) J & K (13.4) M P. (11.9) Assam (11.7) Gujarat (10.9) Rajasthan (10.5) Punjab (10.3) Haryana (9.4) Maharashtra (9.3) H P. (9.0)	Odisha (23.8) A P. (23.6) Karnataka (19.3) Haryana (18.6) Punjab (17.7) Bihar (17.0) U P. (14.6) Assam (13.8) H P. (12.7) M P. (12.2) J & K (10.8) Maharashtra (7.9) Gujarat (7.8)

**Note: Figures in Parentheses are percentages of rural non-farm employment to total employment. A. P. –Andhra Pradesh, H. P. –Himachal Pradesh, J. & K. – Jammu and Kashmir, M. P. –Madhya Pradesh, U. P. –Uttar Pradesh**

**Source: Computed by the Author using various National Sample Survey Reports (50<sup>th</sup>, 55<sup>th</sup>, 61<sup>st</sup>, and 66<sup>th</sup> Rounds) on ‘Employment and Unemployment situation in India’.**

**Table: 3.4: States arranged in descending order of percentage of Rural Non-farm employment to total employment (US- PS+SS Basis): Person workers**

Percentage of RNFL	1993-94	1999-00	2004-05	2009-10
High (Above 35)	Kerala (43.6) West Bengal (36.7)	Kerala (51.7) West Bengal (36.4)	Kerala (58.0) West Bengal (37.3) J & K (36.1) Haryana (35.9)	Kerala (64.3) West Bengal (43.7) J & K (40.3) Haryana (40.2) Punjab (38.2) H P. (37.1) Rajasthan (36.7) Tamil Nadu (36.3)
Medium (25.1-35)	Tamil Nadu (29.5) Haryana (28.1) Punjab (25.3)	Assam (32.3) Tamil Nadu (32.1) Haryana (31.5) Punjab (27.4) H P. (26.4)	Tamil Nadu (34.6) Punjab (33.1) Odisha (31.0) H P. (30.4) A P. (28.2) Assam (27.5) U P. (27.2) Rajasthan (27.1)	U P. (33.1) Bihar (33.1) Odisha (32.4) A P. (31.3) Assam (29.5)
Low (Up to 25.0)	J & K (24.2) Gujarat (21.3) Assam (20.8) A P. (20.7) Rajasthan (20.1) U P. (20.0) H P. (19.7) Odisha (19.1) Karnataka (18.8) Maharashtra (17.4) Bihar (15.7) M P. (10.2)	U P. (23.8) J & K (23.7) Rajasthan (22.3) Odisha (21.8) A P. (21.2) Gujarat (20.2) Bihar (19.4) Karnataka (17.9) Maharashtra (17.4) M P. (12.9)	Gujarat (22.7) Bihar (22.1) Maharashtra (20.0) Karnataka (19.0) M P. (17.5)	Karnataka (24.3) Gujarat (21.7) Maharashtra (20.6) M P. (17.6)

**Note: Figures in Parentheses are percentages of rural non-farm employment to total employment. A. P. –Andhra Pradesh, H. P. –Himachal Pradesh, J. & K. – Jammu and Kashmir, M. P. –Madhya Pradesh, U. P. –Uttar Pradesh**

**Source: Computed by the Author using various National Sample Survey Reports (50<sup>th</sup>, 55<sup>th</sup>, 61<sup>st</sup>, and 66<sup>th</sup> Rounds) on ‘Employment and Unemployment situation in India’.**



### **3.4 Sectoral Distribution of Rural Non-farm Employment: State level**

The following section contains the composition of rural non-farm employment (RNFL) in India as well as its 17 major states at two points of time namely 1993-94 and 2009-10. The tables 3.5, 3.6 and 3.7 give data on percentage distribution of rural non-farm employment as per different sectors for male, female and persons respectively. The key points are as follows.

- (a) Sectoral distribution of RNFL has been higher in the secondary sector than in the tertiary sector in 2009-10. As far as; share of sub-sectors are concerned, the highest contribution has been from construction sector, which is 29.28 per cent of total RNFL and it is followed by manufacturing, trade hotels & restaurant, other services and transport & communication. These five sectors together shared more than 97 percentages of rural non-farm workers in 2009-10. When we considered the distribution of RNFL separately for male and female, it was found that female workers are mainly employed in the secondary sector while male workers in tertiary sector. In 2009-10 male non-farm employment was found to be highest in construction followed by trade, hotels & restaurant, manufacturing, other services and transport & communication. These five sectors together accounted for nearly 97 per cent of male non-farm employment. In the same period, for female workers, manufacturing has been the most important sub-sector; which appeared to have more than 36 per cent of female non-farm employment. It is followed by construction, other services and trade, hotels & restaurant. Similarly, as it were in case of male these five sectors together accounted for 97.57 per cent of female non-farm workers.
  
- (b) The shift of non-farm employment from tertiary to secondary sector is clearly observed in all India during 1993-94 to 2009-10. The decrease in the share of tertiary sector was more noticeable for male workers than their female counterpart. In case of sub-sectors it appeared that manufacturing and other services are losing their shares. However, for female workers the declining percentage was only for manufacturing sector, while in case of male it was for both manufacturing as well as other services. The sector gained was mainly construction for both males and females, and it was by 18.02 and 18.72 per cent respectively.

(c) While analysing the composition of RNFL in the states, it was observed that construction was the most important sector for male non-farm employment in most of the states in 2009-10, which was followed by manufacturing. In tertiary sector, trade, hotels & restaurant and other services occupied the first two positions for the same year. In 2009-10 construction sector alone accounted for more than 25 per cent of total male non-farm employment in Bihar, Haryana, Himachal Pradesh, Jammu & Kashmir, Kerala, Madhya Pradesh, Odisha, Punjab, Rajasthan, Tamil Nadu and Uttar Pradesh. And in rest of the states except Andhra Pradesh and Karnataka it was less than 20 per cent. There were only three states namely Gujarat, Tamil Nadu and West Bengal to have more than 25 per cent share of male non-farm workers in manufacturing during 2009-10. Other states, except Andhra Pradesh, Haryana, and Maharashtra have less than 20 per cent share. Contribution of mining & quarrying has been minimal in most of the states for male workers. However, Karnataka, Madhya Pradesh, Odisha and Rajasthan have more than 6 per cent non-farm employment in mining and quarrying. Only two states namely Himachal Pradesh and Jammu & Kashmir have more than 2 per cent of RNFL share in electricity, gas & water. In the same year, trade, hotels & restaurant have more than 20 per cent of male non-farm employment in 10 states namely Andhra Pradesh, Assam, Bihar, Jammu & Kashmir, Karnataka, Kerala, Maharashtra, Odisha, Uttar Pradesh and West Bengal. In rest of the states it was between 15 to 20 per cent. Except Assam and Jammu & Kashmir, in all the state, other services accounted for less than 20 per cent of male non-farm employment in 2009-10. In these two states, the share of other services has been 31.74 and 25.50 per cent respectively. When we considered transport and communication except Gujarat (here it was 18.53 Per cent) all the states have less than 15 per cent of male non-farm employment in it in 2009-10.

(d) Although declining importance of manufacturing sector for female workers are clearly visible in all the states during 1993-94 to 2009-10, nevertheless manufacturing still dominates in the provision of non-farm employment in 2009-10. In states such as Andhra Pradesh, Bihar, Jammu & Kashmir, Odisha, Tamil Nadu, Uttar Pradesh and West Bengal rural manufacturing accounted for more than 40 per cent of female non-farm employment. In the remaining states, except

Karnataka, Kerala and Madhya Pradesh its share has been less than 30 per cent. After manufacturing, construction seemed to provide significant employment to female workers in 2009-10. In construction sector four states namely Gujarat, Himachal Pradesh, Madhya Pradesh and Rajasthan have more than 30 per cent of female non-farm employment. In other states, the share is less than 20 per cent except Odisha, Tamil Nadu, where it is 25.63 and 27.89 per cent respectively. From tertiary sector other services seemed to contribute significantly in female non-farm employment in 2009-10. Seven states out of 20 appeared to have more than 30 per cent of female non-farm employment in other services. These states are Assam, Bihar, Haryana, Himachal Pradesh, Jammu & Kashmir, Kerala and Punjab. In rest of the states, except Gujarat and Maharashtra it accounted for less than 25 per cent. The role of trade, hotels & restaurant has also been significant for female non-farm employment in 2009-10. As five states namely Andhra Pradesh, Assam, Karnataka, Maharashtra and Uttar Pradesh have more than 15 per cent female non-farm employment in this sub-sector. Rest of the states except Bihar, Gujarat, Haryana, Kerala, Odisha and Tamil Nadu, its share has been less than 10 per cent for female non-farm workers. Remaining sectors viz. mining & quarrying and transport & communication do not appeared important for female non-farm employment except in few states. As mining & quarrying seemed important in Andhra Pradesh, Karnataka, Madhya Pradesh and West Bengal only and transport & communication in Bihar and Gujarat.

- (e) When we considered sectoral distribution for all workers (male and females both), then also, the declining importance of manufacturing and other services were visible in all the states except Haryana, where there was fillip in manufacturing sector by 9.10 per cent during 1993-94 to 2009-10 (Table 3.7). The gain was observed by construction sector in all the states during same time period.

**Table: 3.5: Percentage Distribution of Rural Non-farm Employment into Different Sectors (US-PS+SS Basis): Male Workers**

State	Year	Mining & Quarrying	Manufacturing	Electricity, gas & water	Construction	Secondary	Trade, hotels & restaurant	Transport & communication	Other Services	Tertiary
Andhra Pradesh	1993-94	3.69	26.64	0.41	10.65	41.39	22.13	7.78	29.09	59.00
	2009-10	2.70	20.81	0.81	23.24	47.56	22.70	14.32	15.41	52.43
Assam	1993-94	0.92	10.09	1.37	3.67	16.05	37.61	7.34	38.99	83.94
	2009-10	1.19	11.07	0.29	12.27	24.82	33.53	9.88	31.74	75.15
Bihar	1993-94	2.78	18.89	1.67	8.89	32.22	29.44	7.22	31.11	67.77
	2009-10	0.00	13.71	0.28	33.43	47.42	24.85	11.43	16.57	52.85
Gujarat	1993-94	2.42	42.56	0.69	10.38	56.05	14.53	8.65	20.76	43.94
	2009-10	1.39	27.27	0.35	18.88	47.89	19.23	18.53	14.68	52.44
Haryana	1993-94	2.05	13.55	1.53	16.11	33.24	18.93	13.04	34.27	66.24
	2009-10	0.00	22.19	1.42	29.33	52.94	17.51	11.81	17.52	46.84
Himachal Pradesh	1993-94	0.58	14.04	3.80	34.79	53.21	15.20	4.68	26.90	46.78
	2009-10	0.00	9.49	5.18	42.48	57.15	14.33	9.67	18.82	42.82
J & K	1993-94	0.26	14.73	5.17	25.58	45.74	11.11	11.88	31.27	54.26
	2009-10	0.00	15.48	2.36	26.23	44.07	20.95	8.93	25.50	55.38
Karnataka	1993-94	4.72	25.47	1.42	9.43	41.04	22.64	5.66	30.19	58.49
	2009-10	4.01	19.71	0.36	20.44	44.52	27.37	12.04	16.06	55.47
Kerala	1993-94	4.27	20.72	0.85	16.03	41.87	24.78	12.39	21.37	58.54
	2009-10	2.08	12.95	0.45	28.57	44.05	23.51	14.88	17.86	56.25
Madhya Pradesh	1993-94	11.72	25.00	1.56	9.37	47.65	17.18	5.47	28.91	51.56
	2009-10	9.95	13.43	0.00	36.82	60.20	19.90	4.48	14.92	39.30
Maharashtra	1993-94	2.02	26.72	1.21	13.76	43.71	18.22	7.69	30.77	56.68
	2009-10	1.72	21.72	1.03	19.31	43.78	23.79	13.10	19.65	56.54
Odisha	1993-94	5.16	26.76	0.94	10.33	43.19	24.41	5.16	26.76	56.33
	2009-10	3.05	17.22	0.55	30.55	51.37	22.22	11.11	14.72	48.05
Punjab	1993-94	0.00	19.44	4.70	14.73	38.87	19.75	11.28	30.09	61.12
	2009-10	0.64	19.01	1.49	38.67	59.81	15.26	11.32	12.82	39.40
Rajasthan	1993-94	8.22	17.43	0.98	34.54	61.17	12.17	6.25	20.06	38.48
	2009-10	5.35	11.16	1.39	43.72	61.62	17.20	9.53	11.62	38.35
Tamil Nadu	1993-94	1.39	35.55	1.11	10.00	48.05	17.78	10.00	24.72	52.50
	2009-10	0.94	25.65	0.47	27.29	54.35	19.29	13.88	12.70	45.87
Uttar Pradesh	1993-94	0.84	29.53	0.84	10.97	42.18	21.52	8.86	27.43	57.81
	2009-10	1.02	19.69	0.00	39.89	60.60	20.46	8.18	10.48	39.12
West Bengal	1993-94	0.57	33.33	0.28	7.69	41.87	25.64	9.97	22.79	58.40
	2009-10	1.23	29.55	0.00	17.24	48.02	25.86	12.80	13.55	52.21
India	1993-94	2.70	27.02	1.16	12.35	43.23	21.23	8.49	27.03	56.75
	2009-10	2.15	18.81	0.54	30.37	51.87	22.04	11.02	14.78	47.84

**Source: Computed by the Author using various National Sample Survey Reports (50<sup>th</sup>, and 66<sup>th</sup> Rounds) on 'Employment and Unemployment situation in India'.**

**Table: 3.6: Percentage Distribution of Rural Non-farm Employment into Different Sectors (US-PS+SS Basis): Female Workers**

State	Year	Mining & Quarrying	Manufacturing	Electricity, gas & water	Construction	Secondary	Trade, hotels & restaurant	Transport & communication	Other Services	Tertiary
Andhra Pradesh	1993-94	3.07	45.39	0.00	3.68	52.14	20.86	0.00	26.38	47.24
	2009-10	2.97	42.37	0.00	16.95	62.29	18.64	1.27	18.22	38.13
Assam	1993-94	0.00	51.78	0.00	0.59	52.37	11.30	0.59	35.12	47.01
	2009-10	0.00	20.29	0.00	6.52	26.81	20.29	0.00	53.62	73.91
Bihar	1993-94	3.70	48.15	0.00	2.47	54.32	23.56	0.00	19.75	43.31
	2009-10	0.00	48.23	0.00	2.94	51.17	12.35	5.88	30.59	48.82
Gujarat	1993-94	1.06	43.62	1.06	14.89	60.63	10.64	0.00	27.66	38.30
	2009-10	0.00	21.79	0.00	30.77	52.56	12.82	6.41	28.20	47.43
Haryana	1993-94	0.00	20.58	0.00	5.88	26.46	19.12	5.88	50.00	75.00
	2009-10	0.00	29.03	0.00	13.44	42.47	13.98	0.54	41.94	56.46
Himachal Pradesh	1993-94	0.00	35.55	4.44	8.89	48.88	13.33	0.00	33.33	46.66
	2009-10	0.00	10.24	1.57	33.86	45.67	7.87	0.78	48.03	56.68
J & K	1993-94	2.17	19.56	0.00	15.21	36.94	4.35	0.00	54.35	58.70
	2009-10	0.00	50.93	0.00	5.55	56.48	1.85	1.85	38.89	42.59
Karnataka	1993-94	2.59	54.54	0.00	4.54	61.67	14.28	0.00	23.37	37.65
	2009-10	1.55	35.23	0.00	11.91	48.69	27.46	0.52	23.83	51.81
Kerala	1993-94	1.08	51.89	0.27	5.67	58.91	9.73	1.08	30.00	40.81
	2009-10	0.87	32.52	0.87	10.84	45.10	11.89	1.22	41.26	54.37
Madhya Pradesh	1993-94	13.11	52.46	1.64	6.56	73.77	11.47	1.64	14.75	27.86
	2009-10	2.46	38.52	0.00	38.52	79.50	6.56	0.00	13.11	19.67
Maharashtra	1993-94	2.27	34.09	0.00	13.63	49.99	20.45	1.34	28.41	50.20
	2009-10	1.26	26.58	0.00	15.19	43.03	26.58	0.00	29.11	55.69
Odisha	1993-94	6.67	50.00	0.00	7.33	64.00	19.33	0.00	17.33	36.66
	2009-10	0.84	44.96	0.00	25.63	71.43	10.50	0.00	18.07	28.57
Punjab	1993-94	0.00	17.81	2.74	0.00	20.55	13.69	0.00	64.38	78.07
	2009-10	0.00	22.59	0.56	5.64	28.79	7.90	0.00	62.71	70.61
Rajasthan	1993-94	14.28	20.00	0.00	35.71	69.99	10.00	0.00	21.43	31.43
	2009-10	0.37	6.68	0.00	82.35	89.70	3.31	0.73	6.98	11.02
Tamil Nadu	1993-94	0.93	60.00	0.00	3.26	64.19	13.02	0.46	21.86	35.34
	2009-10	0.36	42.39	0.36	27.89	71.00	14.49	0.00	14.49	28.98
Uttar Pradesh	1993-94	0.00	47.00	0.00	2.00	49.00	21.00	0.00	28.00	49.00
	2009-10	0.00	43.15	0.00	13.69	56.84	17.81	0.68	23.28	41.77
West Bengal	1993-94	0.48	72.99	0.00	3.89	77.36	6.57	0.73	15.57	22.87
	2009-10	2.43	64.76	0.00	1.74	68.93	7.98	0.69	22.57	31.24
India	1993-94	2.89	50.72	0.72	6.52	60.85	15.21	0.72	24.64	40.57
	2009-10	1.46	36.41	0.00	25.24	63.11	13.59	0.97	22.33	36.89

**Source: Computed by the Author using various National Sample Survey Reports (50<sup>th</sup>, and 66<sup>th</sup> Rounds) on 'Employment and Unemployment situation in India'.**

**Table: 3.7: Percentage Distribution of Rural Non-farm Employment into Different Sectors (US-PS+SS Basis): Person Workers**

State	Year	Mining & Quarrying	Manufacturing	Electricity, gas & water	Construction	Secondary	Trade, hotels & restaurant	Transport & communication	Other Services	Tertiary
Andhra Pradesh	1993-94	3.38	33.33	0.00	8.21	44.92	21.74	4.83	28.02	54.59
	2009-10	2.87	27.79	0.32	21.41	52.39	21.41	10.22	16.29	47.92
Assam	1993-94	0.96	16.82	1.44	3.36	22.58	33.17	6.25	37.98	77.40
	2009-10	1.02	11.86	0.00	11.86	24.74	32.20	9.15	33.89	75.24
Bihar	1993-94	3.18	21.66	1.91	8.28	35.03	28.66	6.37	29.29	64.32
	2009-10	0.00	15.71	0.30	30.72	47.73	24.17	11.18	16.92	52.27
Gujarat	1993-94	2.35	43.19	0.94	11.27	57.75	13.62	7.04	21.59	42.25
	2009-10	1.38	26.73	0.46	20.27	48.84	18.43	17.05	16.13	51.61
Haryana	1993-94	2.14	14.23	1.42	15.30	33.09	18.86	12.45	35.58	66.89
	2009-10	0.00	23.13	1.24	27.11	51.48	17.46	10.45	20.89	48.50
Himachal Pradesh	1993-94	0.51	16.75	4.06	31.98	53.30	15.23	4.06	27.92	47.21
	2009-10	0.00	9.70	4.58	41.23	55.51	13.21	8.36	23.45	45.02
J & K	1993-94	0.41	14.87	4.54	24.79	44.61	10.33	11.15	33.06	54.54
	2009-10	0.00	18.61	2.23	24.32	45.16	19.35	8.19	26.55	54.09
Karnataka	1993-94	3.72	35.64	1.06	7.98	48.40	19.68	3.72	27.66	51.06
	2009-10	3.29	24.28	0.00	18.12	45.69	27.57	8.64	18.12	54.33
Kerala	1993-94	3.44	29.36	0.69	13.07	46.56	20.64	9.17	23.62	53.43
	2009-10	1.71	18.19	0.62	23.95	44.47	20.37	11.19	23.95	56.23
Madhya Pradesh	1993-94	11.76	31.37	1.96	8.82	53.91	15.68	4.90	24.51	45.09
	2009-10	7.95	19.32	0.00	37.50	64.77	17.04	3.97	14.20	35.21
Maharashtra	1993-94	2.29	28.74	1.15	13.79	45.97	18.96	6.32	29.88	55.16
	2009-10	1.45	22.82	0.97	18.45	43.69	24.27	11.16	20.87	56.30
Odisha	1993-94	5.76	33.50	0.52	9.42	49.20	23.04	3.66	24.61	51.31
	2009-10	2.47	23.15	0.31	29.63	55.56	19.44	8.95	16.05	44.44
Punjab	1993-94	0.00	19.37	4.74	13.83	37.94	19.37	10.27	32.81	62.45
	2009-10	0.52	19.37	1.31	34.03	55.23	14.92	9.68	19.37	43.97
Rajasthan	1993-94	8.95	17.91	0.99	34.83	62.68	11.94	4.97	20.39	37.30
	2009-10	3.81	10.08	0.82	55.04	69.75	13.08	6.81	10.08	29.97
Tamil Nadu	1993-94	1.35	43.73	0.68	7.79	53.55	16.27	6.78	23.73	46.78
	2009-10	0.83	30.85	0.55	27.55	59.78	17.63	9.64	12.95	40.22
Uttar Pradesh	1993-94	1.00	32.00	0.50	10.00	43.50	21.50	7.50	27.50	56.50
	2009-10	0.91	22.05	0.00	37.16	60.12	20.24	7.55	12.69	40.48
West Bengal	1993-94	0.54	43.87	0.27	6.53	51.21	20.44	7.36	20.71	48.51
	2009-10	1.60	37.98	0.00	13.50	53.08	21.51	9.84	15.79	47.14
India	1993-94	2.78	32.40	0.93	11.11	47.22	19.91	6.48	26.39	52.78
	2009-10	1.87	22.43	0.62	29.28	54.20	19.94	9.03	16.82	45.79

**Source: Computed by the Author using various National Sample Survey Reports (50<sup>th</sup>, and 66<sup>th</sup> Rounds) on 'Employment and Unemployment situation in India'.**

### **3.5 Summary of the chapter:**

1. The increasing trend into the rural non-farm employment is witnessed at all India level during 1993-94 to 2009-10; but the relative increase was more in 2000s than 1990s.
2. The increase in rural non-farm employment pronounced more in case of male workers than female workers in all the periods except during 2004-05 to 2009-10, when the increase in females non-farm employment was more than their males counterpart at all India level.
3. As far as the incidence of male rural non-farm employment among different states is concerned, the 'highest' and 'lowest' positions (as per our categorisation of incidence non-farm employment) were occupied by Kerala and Madhya Pradesh respectively in each period. In case of female, West Bengal has the 'highest' position in all the periods except in 2004-05, when Kerala took this position and at the 'lowest' position Himachal Pradesh was for the first three periods but in 2009-10 Gujarat held this position, when it experienced decline in the percentage of female non-farm workers during 2004-05 to 2009-10.
4. The pace of diversification of rural employment towards non-farm activities in Uttar Pradesh was one of the highest among all the states for male workers. Thereby, the position of male workers shifted from 'low' category of non-farm employment in 1993-94 to 'medium' category in 1999-00 and finally in 'high' category in 2009-10, whereas for female workers it was among one of the lowest and so that it remained in the 'low' category for all points of time.
5. During 1993-94, majority of the states fell in 'low' (less or equal to 25.0 per cent) and 'medium' (25.1 per cent to 35.0 per cent) of incidence of non-farm employment, while in 2009-10, they fell in 'high' (more or equal to 35.0 per cent) incidence of non-farm employment.
6. At the sectoral level, the sign of employment shift from tertiary to secondary sector was found, and at the sub-sectoral level importance of manufacturing

and other services were declining, while that of construction gained during 1993-94 to 2009-10.

7. Female workers were mainly found to employed in manufacturing sector, while that of male workers in construction activities during 2009-10.



## CHAPTER IV

### **Rural Non-Farm Employment: Level and Trends at the Regional Level (Uttar Pradesh)**

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#### **4.1 Introduction:**

This chapter contains the level, trends and industrial composition of rural non-farm employment in Uttar Pradesh and its four NSS regions<sup>20</sup>. The analysis has been further extended at the district level. The present chapter is organised into five broad sections. Section 4.2 examines the level, trends and industrial composition of rural non-farm employment in Uttar Pradesh. This section also includes the distribution of rural workers by their status and sector (farm and non-farm) of employment in the state. In the next section 4.3, a comparison of level and trends of non-farm workers among the four regions of the state namely western, central, eastern and southern have been done. Section 4.4 analyses the sectoral distribution of non-farm workers in the regions. Next section deals with the non-farm employment at the district level and changes in it during 2004-05 to 2009-10. To see the sectoral share in non-farm at the districts level, data for secondary sector employment has also been given. Separate analysis for male and female in all the sections have been done.

#### **4.2.1 Trends in Rural Non-farm Employment: State Level**

The diversification of employment from agriculture to non-agricultural sector has been a general phenomenon in India. It is growing very fast and now providing almost one third of total employment in rural areas. Here, we begin by analysing the level and trends of rural non-farm employment (RNFL) in India and Uttar Pradesh. Data presented in table 4.1 clearly shows that there was continuous increase in the RNFL, both in India as well as in Uttar Pradesh. The increase was more noticeable in the state than all India; during 1993-94 to 2009-10 the increase was by 13.1 per cent and 10.5 per cent respectively in Uttar Pradesh and in all India. The percentage increase in rural non-farm employment was largest during 2004-05 to 2009-10 than any other

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<sup>20</sup> There are four NSS regions in Uttar Pradesh as per 61<sup>st</sup> round (2004-05), "Employment and Unemployment Situation in India". These are Western, Central, Eastern and Southern.

period taken here. The increase was mainly for casual non-farm workers in this period, which tells us about casualization of non-farm workers in the state (Table 4.3).

However, if we examine RNFL separately for males and females, it was found more impressive for male workers through the period 1993-94 to 2009-10 for both Uttar Pradesh and all India. The increase in male non-farm workers was 15.4 per cent and 11.3 per cent for Uttar Pradesh and all India respectively; while it was only 4.6 per cent and 6.8 per cent in case of female.

**Table: 4.1: Percentage of Rural Non-farm workers to total workers in Uttar Pradesh and all India (US- PS+SS Basis):**

NSS Rounds/Year	Percentage of rural non-farm employment					
	Uttar Pradesh			India		
	Male	Female	Person	Male	Female	Person
50 <sup>th</sup> (1993-94)	23.7	10.0	20.0	25.9	13.8	21.6
55 <sup>th</sup> (1999-00)	28.2	12.5	23.8	28.6	14.6	23.7
61 <sup>st</sup> (20004-05)	33.7	13.5	27.2	33.5	16.7	27.3
66 <sup>th</sup> (2009-10)	39.1	14.6	33.1	37.2	20.6	32.1

**Source: Computed by the Author using various National Sample Survey Reports (50<sup>th</sup>, 55<sup>th</sup>, 61<sup>st</sup>, and 66<sup>th</sup> Rounds) on ‘Employment and Unemployment situation in India’.**

#### **4.2.2 Sectoral distribution of Rural Non-farm Workers: Uttar Pradesh**

It would be good to see the industrial composition of rural workers in the state. Data given in table 4.2 shows that there is continuous decline in the share of primary sector throughout the period, as it came down by 13.1 per cent during 1993-94 to 2009-10 and reached to the level of 66.9 per cent in 2009-10. A perusal look at the table displays that the decline in the level of employment in the primary sector was largely because of fall in the proportion of male workers rather than female workers. The proportion of female workers in the primary sector remained 85.4 per cent even in 2009-10. The increased share of non-farm is being divided in both the sectors namely secondary and tertiary but it more evident for secondary sector.

In the secondary sector, the share of Mining & Quarrying and Electricity, Gas & Water for both male and female remained marginal and static throughout the period. Manufacturing sector has a good share of 6.4 per cent in 1993-94 but increased only by a nominal proportion over the period. However, rise in the share of secondary sector employment attributed to the rise in proportion of construction sector only and the rise in it was by 10.3 per cent during 1993-94 to 2009-10. The growth in construction sector was almost 92 per cent of the increase in secondary sector employment during same period. Since construction sector basically depends on casual workers and seasonal employment, so increment in it appears to be because of distressed induced factors. This finding is complying with our hypothesis that rural employment diversification in Uttar Pradesh is largely distress diversification, that push factor are stronger than pull factors.

In the tertiary sector, trade, hotels & restaurant remained at the forefront in terms of providing non-farm employment, as its proportion increased from 4.3 per cent in 1993-94 to 6.7 per cent in 2009-10. Other services from tertiary sector also employed a significant proportion of workers but it witnessed continuous decline in its share; it reduced from 5.5 per cent in 1993-94 to 4.2 per cent in 2009-10. Transport & communication experienced continuous increase in its share, but by a marginal amount that is 1 per cent over the period.

However, if we examine the sectoral distribution of non-farm employment separately for males and females, the analysis revealed that in the secondary sector, males were essentially employed in the construction and manufacturing sector. As far as trend is concerned, only construction sector recorded a noticeable growth of 13 per cent during 1993-94 to 2009-10. In case of female workers for secondary sector, manufacturing plays an important role, since employment in this sector was almost 76 per cent of the total secondary sector employment. At the same time employment in the remaining two sub-sectors namely mining & quarrying and electricity, gas & water remained minimal and stagnant throughout the period.

**Table: 4.2: Sectoral distribution of Usual Status (PS+SS) Rural workers in Uttar Pradesh:**

**Rural person**

Sectors	1993-94	1999-00	2004-05	2009-10
<b>Primary sector</b>	80.0	76.2	72.8	66.9
<b>Secondary sector</b>	<b>8.7</b>	<b>11.3</b>	<b>14.5</b>	<b>19.9</b>
Mining and quarrying	0.2	0.1	0.2	0.3
Manufacturing	6.4	7.8	8.9	7.3
Electricity, gas and water	0.1	0.1	0.1	0.0
construction	2.0	3.3	5.3	12.3
<b>Tertiary sector</b>	<b>11.3</b>	<b>12.4</b>	<b>12.8</b>	<b>13.4</b>
Trade, hotels and restaurants	4.3	5.4	6.2	6.7
Transport and Communication	1.5	2.1	2.1	2.5
Other services	5.5	4.9	4.5	4.2
<b>Total non-farm</b>	<b>20.0</b>	<b>23.7</b>	<b>27.3</b>	<b>33.3</b>

**Rural Male**

Sectors	1993-94	1999-00	2004-05	2009-10
<b>Primary sector</b>	76.3	71.8	66.3	60.9
<b>Secondary sector</b>	<b>10.0</b>	<b>13.1</b>	<b>17.3</b>	<b>23.7</b>
Mining and quarrying	0.2	0.2	0.2	0.4
Manufacturing	7.0	8.3	9.6	7.7
Electricity, gas and water	0.2	0.2	0.1	0.0
construction	2.6	4.4	7.4	15.6
<b>Tertiary sector</b>	<b>13.7</b>	<b>15.1</b>	<b>16.3</b>	<b>15.3</b>
Trade, hotels and restaurants	5.1	6.7	8.2	8.0
Transport and Communication	2.1	2.9	3.0	3.2
Other services	6.5	5.5	5.1	4.1
<b>Total non-farm</b>	<b>23.7</b>	<b>28.2</b>	<b>33.6</b>	<b>39.0</b>

**Rural Female**

Sectors	1993-94	1999-00	2004-05	2009-10
<b>Primary sector</b>	90.0	87.5	86.5	85.4
<b>Secondary sector</b>	<b>4.9</b>	<b>6.9</b>	<b>8.2</b>	<b>8.3</b>
Mining and quarrying	0.0	0.0	0.2	0.0
Manufacturing	4.7	6.4	7.4	6.3
Electricity, gas and water	0.0	0.0	0.0	0.0
construction	0.2	0.5	0.6	2.0
<b>Tertiary sector</b>	<b>4.9</b>	<b>5.5</b>	<b>5.1</b>	<b>6.1</b>
Trade, hotels and restaurants	2.1	1.9	1.8	2.6
Transport and Communication	0.0	0.0	0.1	0.1
Other services	2.8	3.6	3.2	3.4
<b>Total non-farm</b>	<b>9.8</b>	<b>12.4</b>	<b>13.3</b>	<b>14.4</b>

**Source: Computed by the Author using various National Sample Survey Reports (50<sup>th</sup>, 55<sup>th</sup>, 61<sup>st</sup>, and 66<sup>th</sup> Rounds) on 'Employment and Unemployment situation in India'.**

In the tertiary sector, males are basically employed in the trade, hotels & restaurant, the proportionate share of this sector was 8 per cent in 2009-10. This sector also observed an increase of almost 3 per cent during 1993-94 to 2009-10. The other two sub-sectors namely transport & communication and other services have 3.2 per cent and 4.1 per cent share respectively. In these two sub-sectors, transport & communication shows marginal increase of 1.1 per cent during the period, while other services experienced a sign of decline in the same period. However, majority of the female workers, are employed in trade, hotels & restaurant and other services, in which only other services has sign of increment during the period.

#### **4.2.3 Status distribution of Rural Non-farm Workers: Uttar Pradesh**

An analysis of the employment by status during 1999-00 to 2009-10 reveals that it is composed of self-employed and casual employed workers. The proportion of regular salaried employees is very small in total workforce, specifically in rural areas. The share of self-employed and casual employed workers was 66.5 per cent and 28.0 per cent respectively, whereas it was only 5.5 per cent for regular salaried employees in the state in 2009-10. Table 4.3 reveals that there is continuous decline in the regular salaried workers; as its percentage in total employment came down from 6.3 per cent to 5.5 per cent during 1999-00 to 2009-10. The share of self-employed workers first increased slightly and then came down to a level of 66.5 per cent in 2009-10. The casualization of workforce was being reflected in the state as there was significant increase in the proportionate share of casual employment during 2004-05 to 2009-10; the increase was by 7.3 per cent. However, male workers displayed more or less similar trend that of rural person<sup>21</sup>, but this trend was not so in case of their female counterpart. There was sharp increase and then decline in female self-employed workers respectively during 1999-00 to 2004-05 and 2004-05 to 2009-10. Casualization of female workforce is also being reflected from the table.

The pattern of status distribution of non-farm workers differed from the pattern of status distribution of farm and non-farm workers taking together in the rural economy of the state. In non-farm sector the share of self-employed workers was 42.4 per cent in 2009-10, but it was almost 67 per cent; when we take farm and non-farm workers together. The proportion of regular and casual employed workers was higher in non-farm sector than farm and non-farm sector taking together. In the non-farm sector

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<sup>21</sup> This is because of the fact that the proportionate share of rural male non-farm workers is very high in the state.

continuous increase in casual employment was observed, but the increase was more pronounced for 2004-05 to 2009-10, where it was by 18.1 per cent. Secular decline in the proportion of regular and self-employed workers was observed during 1999-00 to 2009-10 in Uttar Pradesh. This indicates the casualization of workforce in general and for non-farm workers in particular; that had started after economic reforms became faster in 2000s. Casualization of workforce can be believed to be a sign for the presence of distress-led employment diversification towards non-farm sector in the state. However, when we considered status of non-farm workers separately for males and females, it was perceived that casualization in case of male workers were taking place from 1999-00 and continued till present. But for female workers it started only after 2004-05 and during 2004-05 to 2009-10, it became more than double in terms of percentage. Which strengthen our finding that the distress induced push factor is working in the diversification process? Male workers are losing their share in both self as well as in regular employment, but for female workers there is increase in regular employment.

**Table: 4.3: Percentage distribution of rural workers by status and sector of Employment in Uttar Pradesh (UPS)**

Status/Sector of Employment	55 <sup>th</sup> (1999-00)			61 <sup>st</sup> (2004-05)			66 <sup>th</sup> (2009-10)		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
Self-employed	70.1	70.0	70.1	71.6	77.9	72.8	65.7	71.0	66.5
Regularly employed	7.3	2.3	6.3	7.3	3.1	6.5	5.5	4.9	5.5
Casually employed	22.6	27.6	23.6	21.1	19.0	20.7	28.7	24.0	28.0
Total	100	100	100	100	100	100	100	100	100
Non-farm sector									
Self-employed	53.7	74.2	56.2	52.4	73.5	54.9	41.1	54.7	42.4
Regularly employed	22.9	13.3	21.7	20.1	14.8	19.4	13.1	22.0	13.9
Casually employed	23.4	12.5	22.1	27.5	11.6	25.6	45.7	23.4	43.7
Total	100	100	100	100	100	100	100	100	100

**Source: Computed by the Author using unit level records of National Sample Survey of various Rounds (55<sup>th</sup>, 61<sup>st</sup>, and 66<sup>th</sup>) on 'Employment and Unemployment situation in India'.**

### **To conclude broad trend at the state level are following**

1. India and Uttar Pradesh both observed continuous increase in the share of non-farm employment, but it was more evident in the Uttar Pradesh over the period 1993-94 to 2009-10.
2. The increase in non-farm employment was largest during 2004-05 to 2009-10 than any other period in the study.
3. Though the increase in non-farm employment was witnessed for both male and female during 1993-94 to 2009-10, but it was more noticeable in case of male workers.
4. In terms of sectoral composition, the increase in non-farm employment was witnessed for both the sectors namely secondary and tertiary, but the increase was more apparent for the secondary sector.
5. Employment in the secondary sector was mainly composed of manufacturing and construction activities; however increased share in the secondary sector was basically attributed to construction sector only.
6. In tertiary sector, trade, hotels and restaurant and other services had considerable share, however other services experienced decline in its share continuously over the period.
7. Male workers are found to employ in manufacturing and construction both, whereas female were mainly engaged in manufacturing sector only.
8. Employment in non-farm sector was mainly of self and casual employed type and the proportion of regular employment was very small. Casualization of non-farm workers was visible in Uttar Pradesh.
9. Role of push factors were more apparent than pull factors for employment diversification towards non-farm sector.

### **4.3 Trends in Rural Non-farm Employment at the Regional Level:**

As per 61<sup>st</sup> round of National Sample Survey, Uttar Pradesh is divided into four economic regions namely western, central, eastern and southern. An analysis at the regional level shows somewhat higher proportion of non-farm employment in western and southern regions than central and eastern regions (Table 4.4). Of the total rural workers, western and southern regions have 35.9 per cent and 36.1 per cent of non-farm workers respectively. On the other side remaining two regions namely central and eastern regions have only 32.8 per cent and 30.8 per cent non-farm workers respectively. The trends of non-farm employment also appeared to be dissimilar among these regions. Western region shows continuous increase in its proportion of non-farm workers, from 25.7 per cent in 1999-00 to 31.2 per cent in 2004-05 and then 35.9 per cent in 2009-10. Almost similar trend was also found in eastern region of the state, where it was 23.6 per cent, 27.4 per cent and 30.8 per cent in 1999-00, 2004-05 and 2009-10 respectively. Other two regions namely central and southern could get fillip in the proportion of non-farm employment only after 2004-05. As between 1999-00 to 2004-05 there was only marginal increase in the proportion of non-farm employment in central region, while southern region witnessed decline in its proportion. The increase was noticeable during 2004-05 to 2009-10 in both these two regions, which was by 10.1 per cent and 16.5 per cent in central and southern regions respectively.



**Table: 4.4: Percentage of Rural Non-farm workers to total workers in Uttar Pradesh at regional level**

	55 <sup>th</sup> (1999-00)			61 <sup>st</sup> (2004-05)			66 <sup>th</sup> (2009-10)		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
Western <sup>22</sup>	28.5	13.9	25.7	36.4	16.3	31.2	39.6	14.4	35.9
Central <sup>23</sup>	22.4	12.4	20.0	26.0	15.4	22.7	37.3	13.8	32.8
Eastern <sup>24</sup>	29.8	12.5	23.6	35.7	11.9	27.4	38.9	13.9	30.8
Southern <sup>25</sup>	25.5	12.3	21.9	27.5	7.7	19.6	42.8	21.3	36.1
U. P.	28.2	12.5	23.6	33.7	13.4	27.3	39.1	14.6	33.1

**Source: Computed by the Author using unit level records of National Sample Survey of various Rounds (55<sup>th</sup>, 61<sup>st</sup>, and 66<sup>th</sup>) on 'Employment and Unemployment situation in India'.**

A comparison of the non-farm employment separately for males and females brings out interesting results; which can be summarised in the following points.

1. There were not considerable differences in the proportion of male non-farm workers among the regions. But this did not hold true when we compared female non-farm workers in these regions. Southern region has 21.3 per cent of female workers engaged in non-farm activities. While this proportion was between 13-15 per cent in rest of the regions. The higher proportion of female non-farm workers in the southern region shows distress diversification of employment towards non-farm sector. It has been argued so since female workers go for non-farm employment particularly in the construction sector to support the family income in destitute conditions only. As it is shown by table 4.7 that construction sector employ 13.1 per cent of female workers which is more than 82 per cent of secondary sector employment in 2009-10 in the southern region. On this stage it can be argued that in southern region push factor are stronger than pull factor in diversification process.

<sup>22</sup>**Western region** Includes Saharanpur, Muzaffarnagar, Bijnor, Moradabad, Rampur, JyotibaPhule Nagar, Meerut, Baghpat, Ghaziabad, GautamBudhha Nagar, Bulandshahr, Aligarh, Hathras, Mathura, Agra, Firozabad, Etah, Mainpuri, Budaun, Bareilly, Pilibhit, Shahjahanpur, Farrukhabad, Kannauj, Etawah and Auraiya (26).

<sup>23</sup>**Central region** includes Kheri, Sitapur, Hardoi, Unnao, Lucknow, Rae Bareli, Kanpur Dehat, Kanpur Nagar, Fatehpur and Barabanki (10).

<sup>24</sup>**Eastern region** includes Pratapgarh, Kaushambi, Allahabad, Faizabad, Ambedkar Nagar, Sultanpur, Bahraich, Shrawasti, Balrampur, Gonda, Siddharthnagar, Basti, SantKabir Nagar, Maharajganj, Gorakhpur, Kushinagar, Deoria, Azamgarh, Mau, Ballia, Jaunpur, Ghazipur, Chandauli, Varanasi, SantRavidas Nagar (Bhadohi), Mirzapur and Sonbhadra. (27)

<sup>25</sup>**Southern region** includes Jalaun, Jhansi, Lalitpur, Hamirpur, Mahoba, Banda and Chitrakoot. (7)

2. The continuous increase in the percentage share of male non-farm workers during 1999-00 to 2009-10 have been there in all the regions. When we considered female workers, we found that western and central regions showed almost similar trends. In these two regions the proportion of non-farm workers first increases during 1999-00 to 2004-05 and then declines during 2004-05 to 2009-10. Rest of the two regions namely eastern and southern show similar trend. In these two regions the share of female non-farm workers first decline during 1999-00 to 2004-05 and then increases during 2004-05 to 2009-10.

#### **4.4 Region-wise sectoral distribution of Rural Non-farm Employment in Uttar Pradesh:**

Table 4.5 gives region-wise percentage distribution of employment by broad industrial categories in Uttar Pradesh. The table reveals that share of secondary sector is higher than tertiary sector in all the four regions. Further southern region has the highest percentage of non-farm workers in the secondary sector followed by central region. The lowest percentage of secondary sector employment was in the eastern region. The higher share of secondary sector in southern and central region is attributed to the construction activities. Southern and central regions have 22.7 per cent and 17.0 per cent employment in construction sector respectively, which is almost 88 per cent and 75 per cent of the total secondary sector employment in these two regions in 2009-10. It is to be noticed here, that the high share of construction activities in central region is due to only participation of male workers, while in case of southern region it is owing to participation of male and female workers both. This clearly reflects the presence of distressed induced push factors for the diversification of employment in the non-farm sector for both regions but particularly for southern region. In the remaining two regions namely western and eastern, secondary sector employment is accredited to manufacturing activities. In Electricity, gas & water, all the regions have negligible percentage. But in case of mining & quarrying eastern and southern region have marginal share while in rest of the two regions its share were almost negligible.

In tertiary sector, it was observed that the western region has the highest percentage of non-farm workers among all regions and it was followed by eastern region. Remaining two regions namely central and southern have almost similar percentage; and it was 10.1 per cent and 10.4 per cent respectively. There were not considerable differences in the composition of tertiary sector among the regions. Trade, hotels & restaurant were the prime contributor of non-farm employment in the tertiary sector in all regions followed by other services.

In order to get gender disparities in the industrial distribution of non-farm workers among regions; data for male and female workers as per industrial category is also given in tables 4.6 and 4.7 respectively. A perusal look at the table shows that, in secondary sector, the male workers were mostly employed in manufacturing and construction activities in all the regions, except southern region in 2009-10. In southern region male workers are mainly employed in construction activities, where its share in employment was 27.0 per cent in the same period. Female workers, on the other hand, are principally employed only in manufacturing activities in two regions namely western and eastern. In rest of the regions share of manufacturing was small. It is interesting to examine the female's share of construction activities among the regions. Female's participation in the construction activities was marginal in all the regions except the southern region, where its percentage was 13.1 per cent in 2009-10. It was perceived that employment of both male and female workers in electricity, gas & water is negligible in all the regions. However share of female workers is negligible again in case of mining & quarrying in all the regions, but male workers have marginal proportion in all the regions except western region.

In the tertiary sector, male workers essentially work in trade, hotels & restaurant in all the regions followed by other services. Contrary to this, female workers were largely employed in other services followed by trade, hotels & restaurant. Transport & communication has negligible share of female workers, but this do not hold true in case of male workers where it is 3.5 per cent, 2.7 per cent, 3.5 per cent and 1.6 per cent share respectively in western, central, eastern and southern region in 2009-10.

To see the temporal change of industrial distribution of rural non-farm employment, data have also been given for the industrial distribution of non-farm employment from 1999-00 to 2009-10. There was continuous decline in the share of manufacturing sector in the eastern region during 1999-00 to 2009-10, while in rest of the regions, it first increased between 1999-00 to 2004-05 and then declined in the next period. In all the regions, construction sector experienced sustained increase in its share by substantial amount, but it was more pronounced for central and southern region. In these two regions the increase in the share of construction sector are 14.6 and 13.1 per cent respectively during 1999-0 to 2009-10. There was not significant change in rest of the two sub-sectors namely mining & quarrying and electricity, gas & water. In tertiary sector trade, hotels & restaurants continuously increased in only western region during 1999-00 to 2000-10; which can be inferred to the presence of pull factors in this region. In rest of the three regions, in two regions viz. central and southern it first declined during 1999-00 to 2004-05 and then increased in the next period. In eastern region it first increased during 1999-00 to 2004-05 and then stabilised in the next period. Western and eastern region showed continuous decline in their share of other services during 1999-00 to 2009-10. In central region it first increases during 1999-00 to 2004-05 and then declines in the next period, southern region has the just opposite trend as it is in case of central region. In case of transport and communication, western and southern regions after some changes during 1999-00 to 2004-05 stabilises in the next period. Eastern region has continuous increase in its share, while in central region first there was small fall during 1999-00 to 2004-05, and then increased in the next period.

There were little differences in the trends for the composition of rural non-farm employment between males and females. During 1999-00 to 2009-10, male workers in the construction sector observed continuous increase in their share, but it was more marked for central and southern region. While in case of female workers the continuous increase is only for two regions namely central and eastern. In rest of the two regions, it first declined during 1999-00 to 2004-05 and then increased through 2004-05 to 2009-10. Again, the increased share was more noticeable for southern region only, which tells us about working of push factor in southern region. In similar

way for the manufacturing sector, there was first increase and then decline in the share for male workers for all the regions, but for female workers, it was so only in three regions, namely western, central and southern. In the eastern region, it declined during 1999-00 to 2004-05 and then rose in the next period. The trend of mining & quarrying and electricity, gas & water appeared to be almost similar for both male and female.

Employment of female workers in the transport & communication is almost negligible in all the year for all regions. But, for male workers it increased in all the regions during 1999-00 to 2004-05 and then declined in the next period in all the regions except the central region. In case of other services it increased during 1999-00 to 2004-05 in all regions for female workers and then declined in the next period for western and eastern regions. For male workers, there was increase in the share of other services for two regions namely eastern and southern and for rest of the regions it declined. But, during 2004-05 to 2009-10, the increase was only for southern region, while in remaining regions it declined. For trade, hotels and restaurant, in case of male workers, there was an increase in its share for western and eastern regions only during 1999-00 to 2004-05 and in the next period the increase was only for southern region. While, for female workers trade, hotels & restaurant declined in western and southern region for 1999-00 to 2004-05 and then increased in all the regions in the next period.

**Table: 4.5: Region-wise sectoral distribution of Usual Status (PS+SS) workers in Uttar Pradesh: Rural Person**

1999-00

Sectors	Western Region	Central Region	Eastern Region	Southern Region
<b>Primary sector</b>	74.3	80.0	76.4	78.1
<b>Secondary sector</b>	<b>12.3</b>	<b>8.9</b>	<b>11.1</b>	<b>13.3</b>
Mining and quarrying	0.1	0.0	0.1	1.1
Manufacturing	8.4	6.3	9.0	2.6
Electricity, gas and water	0.2	0.2	0.0	0.0
construction	3.5	2.4	2.0	9.6
<b>Tertiary sector</b>	<b>13.4</b>	<b>11.1</b>	<b>12.5</b>	<b>8.6</b>
Trade, hotels and restaurants	5.3	5.6	5.4	4.8
Transport and Communication	3.1	1.7	1.7	1.1
Other services	5.0	3.8	5.4	2.8
<b>Total non-farm</b>	<b>25.7</b>	<b>20.0</b>	<b>23.6</b>	<b>21.9</b>

2004-05

Sectors	Western Region	Central Region	Eastern Region	Southern Region
<b>Primary sector</b>	68.8	77.3	72.6	80.4
<b>Secondary sector</b>	<b>16.2</b>	<b>12.5</b>	<b>14.1</b>	<b>14.5</b>
Mining and quarrying	0.2	0.1	0.3	0.0
Manufacturing	10.6	8.4	8.5	4.0
Electricity, gas and water	0.1	0.0	0.1	0.0
construction	5.2	3.9	5.3	10.5
<b>Tertiary sector</b>	<b>15.0</b>	<b>10.2</b>	<b>13.2</b>	<b>5.1</b>
Trade, hotels and restaurants	7.0	4.5	6.9	2.5
Transport and Communication	3.0	1.6	1.8	1.2
Other services	5.0	4.1	4.6	1.4
<b>Total non-farm</b>	<b>31.2</b>	<b>22.7</b>	<b>27.4</b>	<b>19.6</b>

2009-10

Sectors	Western Region	Central Region	Eastern Region	Southern Region
<b>Primary sector</b>	64.1	67.2	69.2	63.9
<b>Secondary sector</b>	<b>20.6</b>	<b>22.7</b>	<b>17.5</b>	<b>25.7</b>
Mining and quarrying	0.0	0.3	0.5	0.5
Manufacturing	8.3	5.4	8.2	2.4
Electricity, gas and water	0.1	0.0	0.0	0.0
construction	12.3	17.0	8.8	22.7
<b>Tertiary sector</b>	<b>15.3</b>	<b>10.1</b>	<b>13.3</b>	<b>10.4</b>
Trade, hotels and restaurants	7.8	4.9	6.8	5.4
Transport and Communication	3.0	2.2	2.4	1.1
Other services	4.5	3.0	4.1	3.9
<b>Total non-farm</b>	<b>35.9</b>	<b>32.8</b>	<b>30.8</b>	<b>36.1</b>

**Source: Computed by the Author using unit level records of National Sample Survey of various Rounds (55<sup>th</sup>, 61<sup>st</sup>, and 66<sup>th</sup>) on 'Employment and Unemployment situation in India'.**

**Table: 4.6: Region-wise sectoral distribution of Usual Status (PS + SS) workers in Uttar Pradesh: Rural Male**

1999-00

Sectors	Western Region	Central Region	Eastern Region	Southern Region
<b>Primary sector</b>	71.5	77.6	70.2	74.5
<b>Secondary sector</b>	<b>13.8</b>	<b>9.2</b>	<b>13.2</b>	<b>15.7</b>
Mining and quarrying	0.1	0.0	0.1	1.5
Manufacturing	9.0	5.8	9.9	2.8
Electricity, gas and water	0.3	0.2	0.0	0.0
construction	4.3	3.1	3.1	11.3
<b>Tertiary sector</b>	<b>14.8</b>	<b>13.2</b>	<b>16.6</b>	<b>9.8</b>
Trade, hotels and restaurants	6.1	6.9	7.2	5.8
Transport and Communication	3.8	2.2	2.6	1.5
Other services	4.8	4.1	6.8	2.5
<b>Total non-farm</b>	<b>28.5</b>	<b>22.4</b>	<b>29.8</b>	<b>25.5</b>

2004-05

Sectors	Western Region	Central Region	Eastern Region	Southern Region
<b>Primary sector</b>	63.6	74.0	64.3	72.5
<b>Secondary sector</b>	<b>18.4</b>	<b>13.3</b>	<b>18.1</b>	<b>19.5</b>
Mining and quarrying	0.3	0.1	0.2	0.0
Manufacturing	10.9	8.0	9.9	4.1
Electricity, gas and water	0.2	0.1	0.1	0.0
Construction	7.0	5.2	7.9	15.4
<b>Tertiary sector</b>	<b>18.0</b>	<b>12.7</b>	<b>17.6</b>	<b>8.0</b>
Trade, hotels and restaurants	8.9	5.8	9.4	4.0
Transport and Communication	4.0	2.2	2.7	2.0
Other services	5.1	4.6	5.4	2.0
<b>Total non-farm</b>	<b>36.4</b>	<b>26.0</b>	<b>35.7</b>	<b>27.5</b>

2009-10

Sectors	Western Region	Central Region	Eastern Region	Southern Region
<b>Primary sector</b>	60.4	62.7	61.1	57.2
<b>Secondary sector</b>	<b>22.8</b>	<b>26.9</b>	<b>21.9</b>	<b>30.1</b>
Mining and quarrying	0.0	0.4	0.7	0.8
Manufacturing	8.6	6.0	8.5	2.3
Electricity, gas and water	0.0	0.0	0.0	0.0
construction	14.2	20.6	12.7	27.0
<b>Tertiary sector</b>	<b>16.8</b>	<b>10.4</b>	<b>17.0</b>	<b>12.6</b>
Trade, hotels and restaurants	8.8	5.3	8.7	6.8
Transport and Communication	3.5	2.7	3.5	1.6
Other services	4.5	2.4	4.8	4.2
<b>Total non-farm</b>	<b>39.6</b>	<b>37.3</b>	<b>38.9</b>	<b>42.8</b>

**Source: Computed by the Author using unit level records of National Sample Survey of various Rounds (55<sup>th</sup>, 61<sup>st</sup>, and 66<sup>th</sup>) on 'Employment and Unemployment situation in India'.**

**Table: 4.7: Region-wise sectoral distribution of Usual Status (PS + SS) workers in Uttar Pradesh: Rural Female**

1999-00

Sectors	Western Region	Central Region	Eastern Region	Southern Region
<b>Primary sector</b>	86.1	87.6	87.5	87.7
<b>Secondary sector</b>	<b>6.3</b>	<b>7.8</b>	<b>7.3</b>	<b>7.0</b>
Mining and quarrying	0.1	0.0	0.0	0.0
Manufacturing	6.0	7.6	7.3	2.2
Electricity, gas and water	0.0	0.0	0.0	0.0
construction	0.2	0.2	0.0	4.8
<b>Tertiary sector</b>	<b>7.6</b>	<b>4.7</b>	<b>5.2</b>	<b>5.3</b>
Trade, hotels and restaurants	1.7	1.6	2.2	1.9
Transport and Communication	0.0	0.0	0.0	0.0
Other services	5.8	3.0	3.0	3.4
<b>Total non-farm</b>	<b>13.9</b>	<b>12.4</b>	<b>12.5</b>	<b>12.3</b>

2004-05

Sectors	Western Region	Central Region	Eastern Region	Southern Region
<b>Primary sector</b>	83.7	84.6	88.1	92.3
<b>Secondary sector</b>	<b>9.7</b>	<b>10.6</b>	<b>6.7</b>	<b>6.9</b>
Mining and quarrying	0.0	0.1	0.4	0.0
Manufacturing	9.7	9.5	5.9	3.9
Electricity, gas and water	0.0	0.0	0.0	0.0
construction	0.0	1.1	0.4	3.0
<b>Tertiary sector</b>	<b>6.6</b>	<b>4.7</b>	<b>5.2</b>	<b>0.8</b>
Trade, hotels and restaurants	1.6	1.7	2.2	0.3
Transport and Communication	0.2	0.2	0.1	0.0
Other services	4.8	2.9	3.0	0.5
<b>Total non-farm</b>	<b>16.3</b>	<b>15.4</b>	<b>11.9</b>	<b>7.7</b>

2009-10

Sectors	Western Region	Central Region	Eastern Region	Southern Region
<b>Primary sector</b>	85.6	86.2	86.1	78.7
<b>Secondary sector</b>	<b>7.7</b>	<b>5.2</b>	<b>8.3</b>	<b>15.8</b>
Mining and quarrying	0.0	0.0	0.0	0.0
Manufacturing	6.8	2.8	7.6	2.7
Electricity, gas and water	0.1	0.0	0.0	0.0
construction	0.8	2.4	0.8	13.1
<b>Tertiary sector</b>	<b>6.7</b>	<b>8.6</b>	<b>5.6</b>	<b>5.6</b>
Trade, hotels and restaurants	2.1	3.3	2.7	2.3
Transport and Communication	0.4	0.0	0.0	0.0
Other services	4.2	5.3	2.9	3.2
<b>Total non-farm</b>	<b>14.4</b>	<b>13.8</b>	<b>13.9</b>	<b>21.3</b>

**Source: Computed by the Author using unit level records of National Sample Survey of various Rounds (55<sup>th</sup>, 61<sup>st</sup>, and 66<sup>th</sup>) on 'Employment and Unemployment situation in India'.**



To get some idea about the changing patterns of rural non-farm employment into the regions, the industrial distribution of non-farm workers in rural areas for three time periods namely 1999-00, 2004-05 and 2009-10 has been shown for rural person, rural male and rural female in tables 4.5, 4.6 and 4.7 respectively. Table 4.5 demonstrated that there has been continuous growth of employment in the secondary sector for all the regions, but it was more pronounced for the central and southern regions. Employment in the secondary sector increased from 8.9 per cent and 13.3 per cent in 1999-00 to 22.7 per cent and 25.7 per cent in 2009-10 in central and southern regions respectively. The increased employment in the secondary sector is attributed to construction activities throughout the period. In the secondary sector, manufacturing activities observed a minor increase in its proportion between 1999-00 to 2004-05 in all the regions except the eastern region. Eastern region in this period has marginal decline from 9.0 per cent to 8.5 per cent. However, during 2004-05 to 2009-10 share of manufacturing employment declined in all the regions. On the other side construction activities has modest growth in its proportion between 1999-00 to 2004-05, but witnessed ample increase during 2004-05 to 2009-10 in all the regions. The increase was more marked in central and southern regions, where it increased by 13.1 per cent and 12.2 per cent respectively during 2004-05 to 2009-10. It is of interest to note that there is shift of employment from manufacturing to construction activities in all the regions during 2004-05 to 2009-10. This phenomenon tells two things. First, casualization of workforce has been there during this period in all the regions and second, distressed induced push factor is helping in the diversification of employment from farm to non-farm sector in all the regions. The share of remaining two sub-sectors namely mining & quarrying and electricity, gas & water were negligible and remained stagnant throughout the period in all the regions.

In the tertiary sector, there are considerable differences in the trends of rural non-farm employment among the regions. Western and eastern region witnessed continuous increase in the share of tertiary sector employment throughout the period, but by a small amount. Contrary to this, central region has continuous decline in the share of non-farm employment over the period. In a different way tertiary sector in the southern region first declined during 1999-00 to 2004-05 and then increased during 2004-05 to 2009-10.

**To conclude the broad trends at the regional level, following points can be made in this regard.**

1. Proportionately higher non-farm employment is found in western and southern regions than central and eastern regions.
2. One of the unique finding is that central and southern regions witnessed huge increase in the non-farm employment only after 2004-05.
3. Male and female both show continuous increase in the share of non-farm workers in all the regions, but it was more evident in case of male workers.
4. Employment in the secondary sector was higher than tertiary sector for all the four regions.
5. Higher share of secondary sector employment was attributed to construction activities in all the regions, but it was more apparent in southern and central region.
6. Higher share in the construction activities in central region on account of only male workers, whereas in southern region it was due to participation of both male and female workers.
7. In western and eastern regions employment in the secondary sector was mainly contributed by manufacturing activities
8. Contribution of electricity, gas and water for both male and female was negligible in all the regions.
9. Tertiary sector employment was highest in the western region followed by eastern region.
10. Trade, hotels and restaurant was the prime contribution in the tertiary sector employment and it was followed by other services.
11. All the regions of the state observed distress diversification, but it is more apparent for southern and central regions.

#### 4.5.1 Rural Non-farm employment at the District Level:

This section includes rural non-farm employment at the districts level. Here, we selected 10 districts having HNFE and the same number of districts having LNFE<sup>26</sup> in Uttar Pradesh for 2009-10. It will be interesting to compare and contrast some of the development indicators like literacy rate, urbanisation, per capita electricity consumption, per capita gross value of agricultural produce and per capita net district domestic product for these districts. These development indices have been given in tables 4.8 and 4.9 respectively for HNFE and LNFE districts.

**Table: 4.8 Development indicators of 10 districts having High Non-farm Employment (HNFE).**

2009	2011	2001	2008-09	2006-07	2006-07
	Literacy rate	Urbanisation	Per capita Electricity consumption (K. W. H.)	Per capita gross value of Agricultural produce (Rs.) at current prices, base year 1999-00	Per capita net district domestic product (Rs.) at current prices, base year 1999-00
Varanasi	77.05	40.2	343.5	1441	13037
Lucknow	79.33	63.6	613.4	2765	24419
G. Buddha Nagar	82.2	37.4	1628	2960	46496
Mathura	72.65	28.3	380.5	5343	19873
Mirzapur	70.38	13.5	162	2946	10722
Jhansi	76.37	40.8	284.2	4564	19250
Baghpat	73.54	19.7	339.2	9225	24009
Agra	69.44	43.3	528.1	4203	18799
Saharanpur	72.03	25.8	341.9	7435	21298
Pratapgarh	73.1	5.3	69	2533	7917
Uttar Pradesh	69.72	20.8	205.4	4711	14685

**Source: District wise development indicators, Uttar Pradesh, 2009. Census of India 2011 for literacy rate**

<sup>26</sup>The term HNFE and LNFE refers to high non-farm employment and low non-farm employment respectively. Districts which belong from HNFE have non-farm employment more than the state average while districts which belong from LNFE have non-farm employment less than state average.

**Table: 4.9 Development indicators of 10 districts having Low Non-farm Employment (LNFE).**

2009-10	2011	2001	2008-09	2006-07	2006-07
	Literacy rate	Urbanisation	Per capita Electricity consumption (K. W. H.)	Per capita gross value of Agricultural produce (Rs.) at current prices, base year 1999-00	Per capita net district domestic product (Rs.) at current prices, base year 1999-00
Fatehpur	68.78	10.3	168.7	4192	10868
Ghazipur	74.27	7.7	130.0	3452	9683
Kanpur Dehat	77.52	6.9	242.2	5660	12810
Bahraich	51.10	10.0	63.5	4578	8918
Shrawasti	49.10	2.8	17.9	2787	5456
Mainpuri	78.26	14.6	116.9	6867	14393
Etah	73.27	17.3	96.7	6286	14672
J. Phule Nagar	65.70	24.6	218.2	8651	21488
Basti	69.69	5.6	82.0	4055	9405
Banda	68.11	15.9	140.9	3642	12435
Uttar Pradesh	69.72	20.8	205.4	4711	14685

**Source: District wise development indicators, Uttar Pradesh, 2009. Census of India 2011 for literacy rate**

A perusal of these tables show that, districts which belong from HNFE category are relatively better placed in terms of development indicators than LNFE category of districts. Literacy which has been considered to have a significant impact on the growth of non-farm employment (Eapen, 1994, 1995; Unni, 1997; Davis and Pearce, 2000) was seen to be more in HNFE category than LNFE category of districts. In HNFE category, all the districts except Agra had the literacy rate above the state average, whereas in case of LNFE category, majority of the districts had literacy below state average. In case of urbanisation also, we observe almost similar kind of trend to that of literacy rate as the levels of urbanisation was higher in HNFE category than LNFE category of districts. For per capita electricity consumption (which can be considered a proxy for the development of infrastructure) also, districts in HNFE category had substantially higher consumption than LNFE category of districts. When we considered per capita net district domestic product (NDDP), it was observed that majority of the districts in HNFE category had much high NDDP than the state

average, whereas LNFE category of districts had lower NDDP. Finally, in case of per capita gross value of agricultural produce, there were mix results, as districts from both the category viz. HNFE and LNFE had higher as well as lower value of it.

Overall, it was observed that the level of non-farm employment was higher in those districts which are relatively better placed for development indicators. Thus it can be conclude that the level of non-farm employment would increase with the level of development.

As far as location of these districts is concerned, 5 out of 10 districts in HNFE category are from relatively developed western region<sup>27</sup>. These districts are G. Buddha Nagar, Mathura, Baghpat, Agra and Saharanpur. Central and southern both the regions have one-one district in this category and these districts are Lucknow and Jhansi respectively. Eastern region has 3 districts namely Varanasi, Mirzapur and Pratapgarh in this category. In case of LNFE, 4 out of 10 districts are from eastern region. These districts are Ghazipur, Bahraich, Shrawasti and Basti. One district namely Banda is from southern region and two districts that are Fatehpur and Kanpur Dehat are from central region. Thus, overall 7 districts are from relatively backward region. Here only three districts namely Mainpuri, Etah and J. Phule Nagar are from western region.

#### **4.5.2 Changes in Rural Non-farm Employment at the Districts level:**

This section includes the changes in rural non-farm employment at the districts level for all the regions. To see the sectoral composition of non-farm employment at the district level, proportion of secondary sector employment (the residual being the workers engaged in tertiary sector) has also been given. For the purpose of analysis we classified the districts into two groups with relation to non-farm employment in 2004-05, districts which are below regional average and those which are above it. The former will be referred as LNFE and later as HNFE<sup>28</sup> category.

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<sup>27</sup>The western region is relatively the most developed region of the state in terms of economic development. Next to western region, comes the central region. The remaining two regions namely eastern and southern have been officially designated as the backward regions in the state (Human Development Report, 2008, Uttar Pradesh).

<sup>28</sup> The term LNFE and HNFE refers to low non-farm employment and high non-farm employment respectively.

In the western region, the districts which are having higher non-farm employment than regional average in 2004-05 remained so in 2009-10 except Etawah. This does not hold when we considered LNFE category of districts, since there are some districts in this category which surpassed the regional average in 2009-10. These districts are Auraiya, Kannauj, Bulandshahr, Saharnpur, Farrukhabad and Mathura where employment in 2009-10 are 40.0 per cent, 40.3 per cent, 43.5 per cent, 46.7 per cent, 43.0 per cent and 57.4 per cent respectively. It was observed that non-farm employment increased substantially in LNFE category of districts and on the other hand decline in the HNFE category of districts.

In terms of sectoral distribution of non-farm employment, it was found that the proportion of secondary sector (the residual being the proportion of workers engaged in tertiary sector) employment was higher in LNFE category of districts and vice versa, with the notable exception being Etawah and G. Bhuddha Nagar from HNFE category of districts. The increase in the secondary sector employment during 2004-05 to 2009-10 was witnessed for both categories of districts, but it was more apparent for HNFE category of districts. Most of the districts for LNFE category showed decline in the secondary sector employment during 2004-05 to 2009-10, but very few from HNFE category showed decline in its share of secondary sector employment.

**Table: 4.10: Proportion of Rural Non-farm and Secondary Sector Employment in the districts of Uttar Pradesh: Western Region**

Districts	Rural Non-farm employment		Non-farm employment in the Secondary sector	
	2004-05	2009-10	2004-05	2009-10
<b>LNFE</b>				
Mainpuri	11	19.7	8.7	30.9
Buduan	14.7	22.6	22.8	64.6
Auraiya	15.5	40	47.3	63.8
Shahjahanpur	15.8	24	35.5	36.2
Kannauj	18.1	40.3	54	32.1
Etah	19.4	20	34	60
J Phule Nagar	20.9	20.6	61.7	69.3
Rampur	21.7	27.6	63.6	40.4
Hathras	26.1	35.1	49.3	51.5
Moradabad	27.5	29.7	60.2	21.9
Bulandshahr	27.9	43.5	55.8	55.6
Saharanpur	28.3	46.7	62.3	46.6
Farrukhabad	29.8	43	50.5	42.3
Bareilly	30.1	35.2	64.9	62.4
Mathura	30.5	57.4	44.9	65
Bijnor	31	35.5	53.4	71.5
<b>HNFE</b>				
Baghpat	33.8	52.8	45.8	87.4
Agra	34.8	47.7	40.7	81.6
Firozabad	38	40.4	48.4	80.5
Muzaffarnagar	39.4	36	45.3	58.6
Etawah	43.8	22.7	66.7	85.6
Aligarh	44	42.1	34.4	74.2
Meerut	49.8	44.1	61.3	63.5
Pilibhit	50	41	54.5	51.3
Ghaziabad	58.8	43.1	50.2	45.7
G Buddha Nagar	75.2	60.6	80	54.2
<b>Region Average</b>	<b>31.2</b>	<b>35.9</b>	<b>51.9</b>	<b>57.4</b>

**Source: Computed by the Author using unit level records of National Sample Survey of various Rounds (61<sup>st</sup>, and 66<sup>th</sup>) on 'Employment and Unemployment situation in India'.**

As noticed earlier, in the central region, the percentage of non-farm employment increased by large proportion during 2004-05 to 2009-10. It was also observed for most of the districts except Fatehpur and Kanpur dehat in LNFE and Unnao in HNFE category, in case of these districts there was decline in the share of non-farm employment. The districts which showed substantial increase were Hardoi from LNFE and Sitapur & Lucknow from HNFE category of districts.

The sectoral composition suggests that secondary sector employment (the residual being percentage employed in the tertiary sector) is lower in LNFE category and higher in HNFE category of districts. During 2004-05 to 2009-10, all the districts irrespective of their category have growth in the proportion of secondary sector employment. This is more evident for HNFE category of districts, except the Kheri district from LNFE category where it increased from 36.9 per cent in 2004-05 to 81.8 per cent in 2009-10.

**Table: 4.11: Proportion of Rural Non-farm and Secondary Sector Employment in the districts of Uttar Pradesh: Central Region**

Districts	Rural Non-farm employment		Employment in the Secondary sector	
	2004-05	2009-10	2004-05	2009-10
<b>LNFE</b>				
Hardoi	13.1	35.6	44.4	52.4
Fatehpur	14.8	13.2	59.4	62.3
Kanpur Dehat	18.3	17	28.1	40.2
Rae Bareli	19.9	33.4	42.9	56.2
Kheri	20.6	34.2	36.9	81.8
<b>HNFE</b>				
Sitapur	23.7	44.5	63.2	90.4
Kanpur Nagar	25.3	35.8	67.6	70.2
Barabanki	27.3	31.9	52.7	61.8
Unnao	32	27.7	66.2	71.7
Lunknow	44.4	64.4	69	72.3
<b>Region Average</b>	<b>22.7</b>	<b>32.8</b>	<b>55.1</b>	<b>69.2</b>

**Source: Computed by the Author using unit level records of National Sample Survey of various Rounds (61<sup>st</sup>, and 66<sup>th</sup>) on 'Employment and Unemployment situation in India'.**



In the eastern region, the districts which have lower than the regional average non-farm employment in 2004-05 remained so in 2009-10 except two districts, Sonbhadra and Kaushambi. This is despite the fact that non-farm employment rose in all the districts. It should be noticed that, the increase in the non-farm employment were for both the category of districts but it is more marked for LNFE category of districts. In the HNFE category, none of the districts except Pratapgarh and Varanasi observed substantial increase in non-farm employment; in case of these two districts it increased by 16.8 per cent and 16.2 per cent respectively during 2005-05 to 2009-10.

In terms of sectoral composition, Table 4.10 which gives the percentage of non-farm employment in the secondary sector (the residual being the tertiary sector) suggests that districts in the HNFE category also have a higher proportion of secondary sector employment and vice-versa, exception being the Sonbhadra district. During 2004-05 to 2009-10, the percentage of employment in the secondary sector increased in most of the districts, both for LNFE and HNFE categories, but it was more noticeable in LNFE category of districts.

**Table: 4.12: Proportion of Rural Non-farm and Secondary Sector Employment in the districts of Uttar Pradesh: Eastern Region**

Districts	Rural Non-farm employment		Employment in the Secondary sector	
	2004-05	2009-10	2004-05	2009-10
<b>LNFE</b>				
S. Kabir Nagar	7.5	43	33.8	69.4
Balrampur	10	26.6	65.8	85.6
Shrawasti	11.6	19.6	32.9	58.5
Gonda	13	23	37	40.1
Bahraich	14	18.6	23.3	56.6
Ballia	15.9	28.3	28.2	42.8
Azamgarh	18.1	29.9	48.3	70.8
Siddharthnagar	19.3	28.9	49.3	30.8
Sonbhadra	20.3	34.4	80.1	68.7
Sultanpur	20.6	28.5	36.5	70.1
Ambedkar Nagar	21.2	22.2	51	75
Maharajganj	21.3	26	30	62.7
Jaunpur	24	28.2	45.3	53.7
Basti	25.2	21.2	41.3	33.9
Kaushambi	25.2	40.7	73.2	74.5
Ghazipur	25.8	15.9	42.6	46.5
<b>HNFE</b>				
Pratapgarh	29.8	46.6	40.5	59.4
Kushinagar	33.1	29	49.9	44.3
Gorakhpur	33.5	30	45.3	56.6
Faizabad	31.6	28.7	42.8	62.3
Mau	33.7	30.5	51.1	66.1
Deoria	33.9	32.2	42.5	42.3
Chandauli	38.1	27.6	59.5	48.6
Allahabad	44.6	39	70.9	52.3
Mirzapur	47.7	53.5	69.6	60.6
Varanasi	48.2	64.4	51.5	52.5
S. Ravidasnagar	49.9	35.8	65.1	63.2
<b>Region Avarage</b>	<b>27.4</b>	<b>30.8</b>	<b>51.5</b>	<b>56.8</b>

Source: Computed by the Author using unit level records of National Sample Survey of various Rounds (61<sup>st</sup>, and 66<sup>th</sup>) on 'Employment and Unemployment situation in India'.

Southern region also has substantial increase in the share of non-farm employment during 2004-05 to 2009-10; this is also observed in case of districts. All the districts of both the category witnessed increase in non-farm employment in this region, but increase was highly apparent in HNFE category of districts, except Lalitpur form LNFE where it increased from 5 per cent in 2004-05 to 42.2 per cent in 2009-10.

When we considered sectoral employment of the districts, it is found that more than 50 per cent of workers were employed in the secondary sector (the residual being percentage of workers employed in the tertiary sector) in both the categories of districts. Secondary sector employment was too high in Mahoba from LNFE category and Hamirpur form HNFE category, where it were 95.8 per cent and 86.3 per cent respectively in 2004-05. The results were mixed up in terms increase in the share of secondary sector employment during 2004-05 to 2009-10. Most of the districts have increase in their share of secondary sector employment, with the exception being Lalitpur, Mahoba and Chitrakoot. Overall there was decrease in the proportion of secondary sector employment in the region, as it decreased from 74 per cent in 2004-05 to 71.2 per cent in 2009-10.

**Table: 4.13: Proportion of Rural Non-farm and Secondary Sector Employment in the districts of Uttar Pradesh: Sothern Region**

Districts	Rural Non-farm employment		Employment in the Secondary sector	
	2004-05	2009-10	2004-05	2009-10
<b>LNFE</b>				
Lalitpur	5	42.2	50.6	40.4
Banda	10.4	21.4	63.6	68.6
Jalaun	18.7	25	79.4	82.8
Mahoba	19.2	35.4	95.8	79.5
<b>HNFE</b>				
Chitrakoot	21.9	27.9	78	47.4
Jhansi	29.5	53.1	57.2	76.6
Hamirpur	30.4	45.6	86.3	88.9
<b>Region Average</b>	<b>19.6</b>	<b>36.1</b>	<b>74</b>	<b>71.2</b>

**Source: Computed by the Author using unit level records of National Sample Survey of various Rounds (61<sup>st</sup>, and 66<sup>th</sup>) on 'Employment and Unemployment situation in India'.**

In a nutshell, there was mixed results at the districts level for different regions. Overall, the increase in non-farm employment was found for both category of districts, but it was more apparent for LNFE category of districts. However in case of sectoral employment, the increase in the share of secondary sector was more evident at the district level for HNFE category of districts.

## CHAPTER V

### **Determinants of Rural Non-farm Employment: Uttar Pradesh**

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#### **5.1 Introduction:**

This chapter comprises the determinants of rural non-farm employment (RNFL) in Uttar Pradesh. Relationship of RNFL with some important explanatory variables like land possession, education levels, social group and religion has also been analysed. The chapter is divided into five broad sections. In section 5.2 a brief outline of the explanatory variables has been given. Next section includes relationship of RNFL with variables like land possession, religion, social group and education of household/individual. The analyses of the regression results have been discussed in section 5.4. Finally section 5.5 summarises the chapter.

#### **5.2 Description of Explanatory Variables:**

There are basically two type of factors viz. 'distressed induced' push factor and 'prosperity induced' pull factors which bring employment diversification toward non-farm activities<sup>29</sup>. Here endeavour has been made to find out the determinants of RNFL in Uttar Pradesh by using national sample survey data of 66<sup>th</sup> round on employment/unemployment. The analyses have also been done as per employment by status like Self, Regular and casual employment. The explanatory variables used in the study are Age group, Gender, General education, Technical education, Land possession, Social group, Religion, Household size, monthly per capita consumption quintile (MPCE), and region. These explanatory variables are of two type- individual level variables and household level variables. Under first type (individual level) of variables, age group, gender, general education and technical education would belong. And in second type (household level) of variables land possession, social group, religion, household size and monthly per capita consumption expenditure (MPCE) would come. One remaining independent Variable that is region is related with the

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<sup>29</sup> Definition and explanations of these two factors have been given in section 2.2.6 of the chapter 2.

levels of development in the regions. A brief description of these variables has been mentioned in the following section

**Age:** Age of the workers plays an important role in the individual decision making to go for non-farm activities in rural areas. Non-farm sector requires certain characteristics like skill, mobility, and training etc. that workers are supposed to have (Bhaumik, 2007). These characteristics are likely to increase with age of the workers. As Abraham (2011) rightly pointed out that being in the non-farm will also depend on greater information flow, which can be achieved only through good social networks, and these networks are likely to get strengthened with age.

**Gender:** Gender has been considered as an important factor to participate in rural non-farm activities. Women participation in the non-farm activities is limited due to several reasons. Some of them are their role in the household, social prejudice against them, restriction on their mobility and inability to work outside among others are identified important constraint. So females are having limited choice to be employed in the non-farm activities than their male counterparts. Wandschneider (2003)<sup>30</sup> pointed out that men are having greater opportunities to diversify into non-traditional activities which include carpentry and construction, while women are preponderantly involved in traditional activities such as handicrafts alcohol brewing etc. Thus, it can be assume that females in the rural areas are compelled to work in agriculture, since they are not having any alternative.

**General education:** The attainment of education and skills has been an important factor in determining the level of non-farm activities in the literature (Chadha, 1993; Ranjan, 2010). The impact of education on RNFL is expected to be positive, as the better educated individuals are likely to possess skills which facilitate successful involvement in the non-farm activities. Educated workers are also better informed about non-farm employment job opportunities than their illiterate counterpart (Wandschneider, 2003<sup>31</sup>; Ranjan, 2010). Mecharla (2002) made it clearer when he

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<sup>30</sup>Wandschneider, tiago (2003), "Determinants of access to rural non-farm employment: Evidence from Africa, South Asia and transition economies" Natural Resource Institute Report No. 2758.

<sup>31</sup>Ibid.

stated that non-farm activities are of two types, traditional and modern<sup>32</sup>. In case of traditional non-farm activities, education may be a discouraging factor to participation while it might have a favourable impact in case of modern non-farm activities.

**Land Possessed:** The amount of land possessed has been an important factor in influencing the decision to participate in the non-farm activities. It also determines the extent of labour absorption in agriculture. Theoretically, the relationship between landholding size and RNFL has to be negative. This is because rural household with good access to land are not compelled to diversify into off-farm employment to the same extent as landless or marginal farming household. But, for those having limited or no access to land will have to work as agricultural labourers or engage in non-farm activities in order to earn livelihood (Wandschneider, 2003<sup>33</sup>; Ranjan, 2010). Lanjouw and Shariff (2004) elucidated it clearer by stating *“Landownership might proxy wealth and contacts, and thereby provided some indication of the extent to which individuals are better placed to take advantage of opportunities in the non-farm sector”* For the analysis purpose, we have divided land size in five different categories viz. (a) Landless; household who does not possess any piece of land (b) Sub-marginal; farmers who possessed land between 0.001-0.40 hectares; (c) Marginal; for the household possessed land between 0.41-1.00 hectares; (d) Small for whom who possessed land between 1.01-2.00 hectares; and (e) Large for the farmers who are possessing land with 2.01 hectares and above it.

**Social group:** Caste structure in the rural areas plays an important role in choosing the type and nature of economic activities. Available literatures suggest that upper caste people, especially the Brahmins and Kshatriyas are reluctant to participate in the activities traditionally assigned to lower caste group, they consider them dirty and tedious (Wandschneider, 2003<sup>34</sup>; Ranjan, 2010). Generally possession of land in rural

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<sup>32</sup> He stated that traditional non-farm activities include blacksmith, carpentry, pottery, weaving, washing, toddy tapping, barbering, cobbling, shepherd rearing and cotton cording and modern non-farm activities consist modern manufacturing and processing that includes sugar and textiles factories, oil and grain mills, small factories producing engineering goods, shoes, paper, furniture, soap, matches and small scale quarries.

<sup>33</sup>Wandschneider, tiago (2003), “Determinants of access to rural non-farm employment: Evidence from Africa, South Asia and transition economies” Natural Resource Institute Report No. 2758.

<sup>34</sup>Ibid.

areas are in the hands of upper caste people and since, the amount of land a particular household possessed also determines their social status in the community. Thereby workers from lower caste have larger probability to join the RNFS than the higher caste workers (Abraham, 2011).

**Religion:** Muslim workers are more likely to employ in the non-farm activities because of their relatively less share in total population. As Wandschneider (2003)<sup>35</sup> rightly pointed out that member from minority community due to their small numbers tend to develop strong networks in and out of the community and these networks were found to facilitate them in getting non-farm employment. Ranjan (2010) in his study of two villages in Uttar Pradesh found that members from the Muslims community were found to employ mainly in brick making, hawking, and shop keeping, weaving and tailoring.

**Household Size:** Generally it has been observed that; people in the rural areas are excessively employed in agriculture; that depends on household size and the amount of land they owned. If size of the household is relatively big then some members of the household can be shifted in other type of activities like non-farm without adversely affecting agricultural operations (Lanjouw and Shariff, 2004; Kumar and et al., 2011). So the relationship between household size and engagement in non-farm activities is likely to be positive. The reason is that households with a large numbers of members may tend to diversify into non-farm sector if the size of land holdings is small (Abraham, 2011).

**MPCE:** Economic status of an individual also influences the decision to join RNFS. Here, to measure economic status we have taken monthly per capita consumption expenditure (MPCE); a close proxy of household income. MPCE quintile groups have been computed from NSS unit level data for Uttar Pradesh.

**Region:** The type and nature of employment in any region also depend on prevailed socio-economic and geographical factors or in other words the level of development in the region. As we know that Uttar Pradesh is divided into four well defined

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<sup>35</sup>Ibid.



economic regions viz. western region, central region, eastern region and southern region. The first three regions fall in the fertile Gangetic plains, while southern region is the part of dry Indian peninsula. Economically western region is relatively the most developed region of the state. Agricultural productivity is higher in this region. The region has also good industrial base. Next to western region, comes the Central region of the state in terms of economic development. The remaining two regions, namely eastern and southern are backward regions in the state<sup>36</sup>.

### **5.3 Relationship of RNFE with Land Possession, Education, Religion and Social Group:**

In section 5.2 we mentioned a short introduction of explanatory variables taken in the analysis for determinants of RNFL. This section deals with the relationship of RNFL with some of these variables like land Possessed by the household, Education and religion of the individuals and their social group.

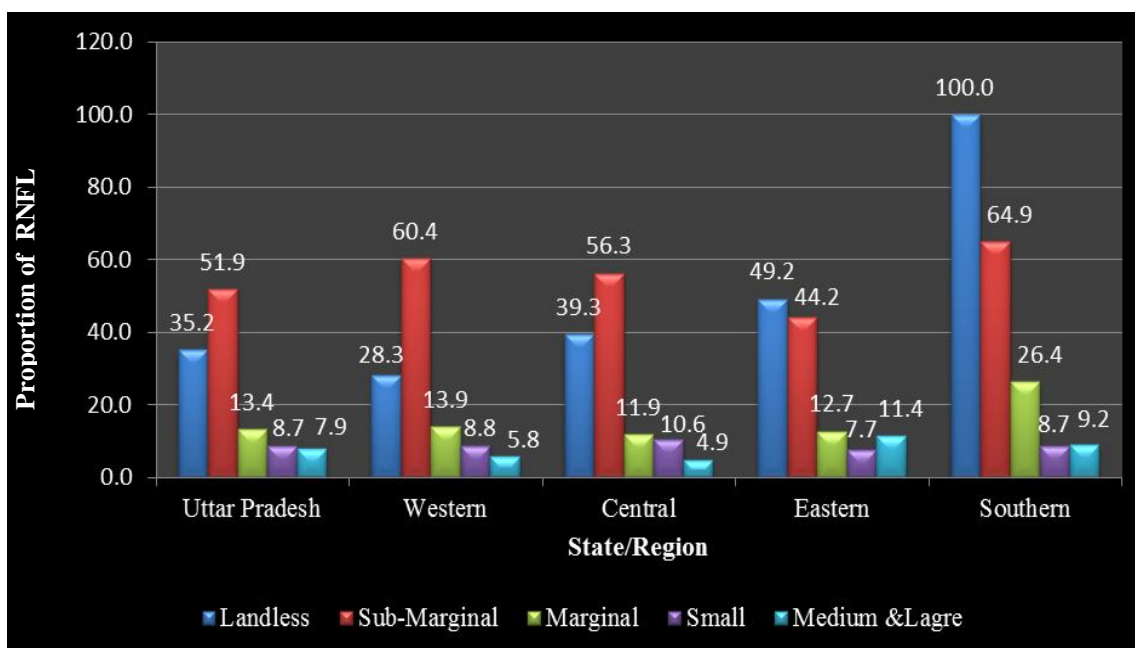
#### **5.3.1 Land Possession structure and Non-farm Employment:**

The inverse relationship between Possession of land and RNFL is clearly visible from Figure 5.1 both at the state as well as regional level. In Uttar Pradesh 35.2 per cent landless household are involved in the non-farm activities. This proportion is continuously coming down as the size of land possessed by the household going up. Figure 5.1 shows that for marginal, small and medium & large sizes of land the share of non-farm employment was 13.4, 8.7 and 7.9 percentage points' respectively in Uttar Pradesh. It should be noticed here is that the household in sub-marginal category of land possession are having highest percentage of workers employed in non-farm sector, even more than landless workers also. The high proportion of non-farm workers in this category is attributed to the fact that land holding size in the state is mostly sub-marginal (Table 5.1).

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<sup>36</sup> Human Development Report of Uttar Pradesh, December, (2008) Department of planning, Government of Uttar Pradesh

**Figure: 5.1; Relationship between Land Possession and RNFL in Uttar Pradesh and its regions**



Source: Computed by the Author using unit level records of National Sample Survey 66th Round ‘Employment and Unemployment situation in India’ (2009-10).

**Table; 5.1 Possession of Land Structure in Uttar Pradesh along with its four Regions**

Region/Land	Landless	Sub-marginal	Marginal	Small	Medium & Large
Uttar Pradesh	5.5	52.5	22.2	11.7	8.1
Western	10.2	51.2	19.2	11.7	7.6
Central	5.2	46.7	27.1	12.1	8.8
Eastern	2.4	57.2	23.5	11.1	5.8
Southern	.8	40.6	13.8	15.7	29.2

Source: Computed by the Author using unit level records of National Sample Survey 66th Round ‘Employment and Unemployment situation in India’ (2009-10).

The relationship is found to be similar at the regional level as has been found for Uttar Pradesh. Figure 5.1 shows that in all the regions the proportion of non-farm workers are highest for sub-marginal household followed by landless household. Proportion is lowest for the household who have land equal to 2.01 hectares or more.

To examine whether the diversification of rural employment towards non-farm activities is due to pull or push factor, we organize land possession structure with educational achievement and assume that higher education brings relatively higher non-farm income to workers than their illiterate counterpart (Ranjan, 2008). Table 5.2 shows that in Uttar Pradesh almost half (49.3 per cent) of the landless workers are illiterate. This percentage becomes more than 89 per cent when we include primary and middle levels of educated workers with landless category. In landless category only 9.3 per cent of workers are educated up to secondary and higher secondary level, in similar way, the percentage of workers educated till graduation and above was only 1.7 per cent. Thereafter it declines with the level of education in landless category. But the situation is not the same when we considered workers possessing land either equal to 2.01 hectares or more than this. Here the percentages of workers who are illiterate were only 28.7 per cent and this went up to 76.7 per cent when we include Primary and middle levels of education with it. The percentage of workers educated till secondary & higher secondary and graduation & above this were 17.5 and 5.8 per cent respectively. Thus we can say that percentage of workers under higher education is more in case of larger farmers. The pattern of education for non-farm workers is almost similar in all the regions as it was in the case of Uttar Pradesh. As most of the landless workers in all the regions are either illiterate or educated up to primary or middle levels only, very few workers are educated up to graduation and above it (table 5.2). In a nutshell it can be stated that the levels of education is positively associated with possession of land structure in the state. Such a low level of education level among the landless and marginal workers in the rural areas would not provide them sufficient amount of remuneration to fulfil their family needs. Therefore, it can be conclude that it is not the pull factors instead push factors that are playing important role in diversification of employment from farm to non-farm sector. Here, one may argue that the engagement of small and large farmers in the non-farm is due to pull factors, since they are having substantial quantity of land along with better education. It is true but, in case of Uttar Pradesh their proportion is very low (Table 5.1), hence it will not be good to generalise this.

**Table: 5.2 Percentage distributions of Non-farm workers by land Possession ship vis-à-vis their educational level in Uttar Pradesh and its regions**

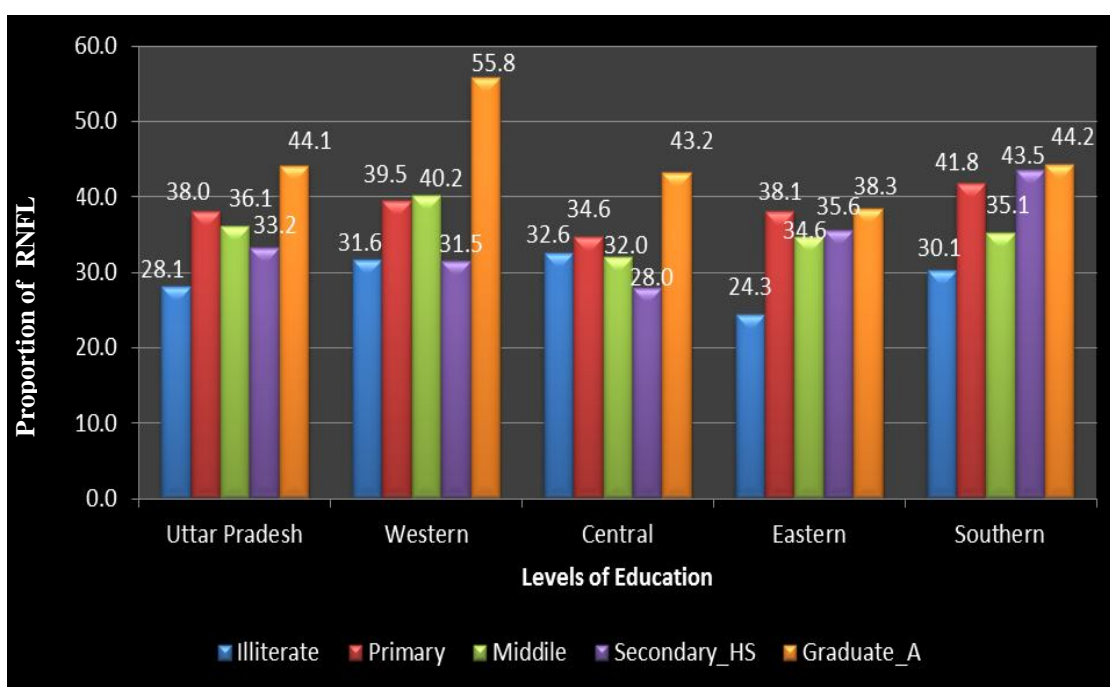
	Education level				
Land Possession	Illiterate	Primary	Middle	Secondary_HS	Graduate_Above
<b>Uttar Pradesh</b>					
Landless	49.3	28.6	11.2	9.3	1.7
Sub-marginal	48.4	32.3	11.0	6.7	1.7
Marginal	42.1	33.6	12.0	10.1	2.2
Small	35.7	32.4	14.0	13.3	4.6
Large	28.7	31.6	16.4	17.5	5.8
<b>Western</b>					
Landless	52.6	28.0	10.1	7.2	2.1
Sub-marginal	46.2	33.5	11.5	7.0	1.8
Marginal	40.1	34.4	14.5	9.7	1.3
Small	33.4	33.3	16.0	14.1	3.2
Large	27.6	25.8	16.2	24.7	5.8
<b>Central</b>					
Landless	53.2	23.6	13.2	9.9	0.0
Sub-marginal	53.7	31.0	9.9	4.2	1.2
Marginal	38.3	39.5	12.1	8.2	1.8
Small	36.3	31.8	15.3	15.8	0.8
Large	23.7	36.4	23.4	11.0	5.5
<b>Eastern</b>					
Landless	35.1	35.3	11.8	16.3	1.4
Sub-marginal	48.5	31.8	10.7	7.3	1.7
Marginal	45.0	30.4	10.0	11.4	3.2
Small	37.9	31.4	10.9	11.9	8.0
Large	31.7	33.0	11.6	16.8	7.0
<b>Southern</b>					
Landless	20.6	30.9	41.3	0.0	7.2
Sub-marginal	45.1	32.3	14.4	5.2	3.0
Marginal	46.1	32.0	15.5	6.1	0.3
Small	33.2	36.0	18.5	10.4	1.8
Large	31.2	34.6	17.5	12.4	4.2

**Source: Computed by the Author using unit level records of National Sample Survey 66th Round 'Employment and Unemployment situation in India' (2009-10).**

### 5.3.2 Education and Non-farm Employment

It is clearly visible from the figure 5.2 that the attainment of education promotes non-farm employment in Uttar Pradesh as well as in its regions. The Figure shows that in Uttar Pradesh 28.1 per cent of illiterate workers are employed in the non-farm activities. The proportion of workers having primary and middle level of schooling was 38.0 per cent and 36.1 per cent respectively. This proportion goes up to more than 44 per cent in case of education equal to graduation and above it. The patterns at the regional level were also found almost similar to that of Uttar Pradesh as proportion of illiterate workers in the regions- western, central, eastern and southern is 31.6 per cent, 32.6 per cent, 24.3 per cent and 30.1 per cent respectively. While this was 55.8 per cent, 43.2 per cent, 38.3 per cent and 44.2 per cent respectively in case of education equal graduation and above this.

**Figure: 5.2; Relationship between Education level and RNFL in Uttar Pradesh and its regions**



**Source:** Computed by the Author using unit level records of National Sample Survey 66th Round 'Employment and Unemployment situation in India' (2009-10).

**Table: 5.3**

**Levels of Educational attainment of Rural Non-farm Workers, Uttar Pradesh and its Regions**

State/Education	Illiterate	Primary	Middle	Secondary	Graduate
Uttar Pradesh	35.6	24.5	19.3	14.6	6.1
Western	32.3	23.5	22.0	15.9	6.3
Central	39.9	27.9	18.3	10.1	3.9
Eastern	37.0	23.4	16.9	15.6	7.0
Southern	32.0	26.5	22.6	13.7	5.3

**Source: Computed by the Author using unit level records of National Sample Survey 66th Round ‘Employment and Unemployment situation in India’ (2009-10).**

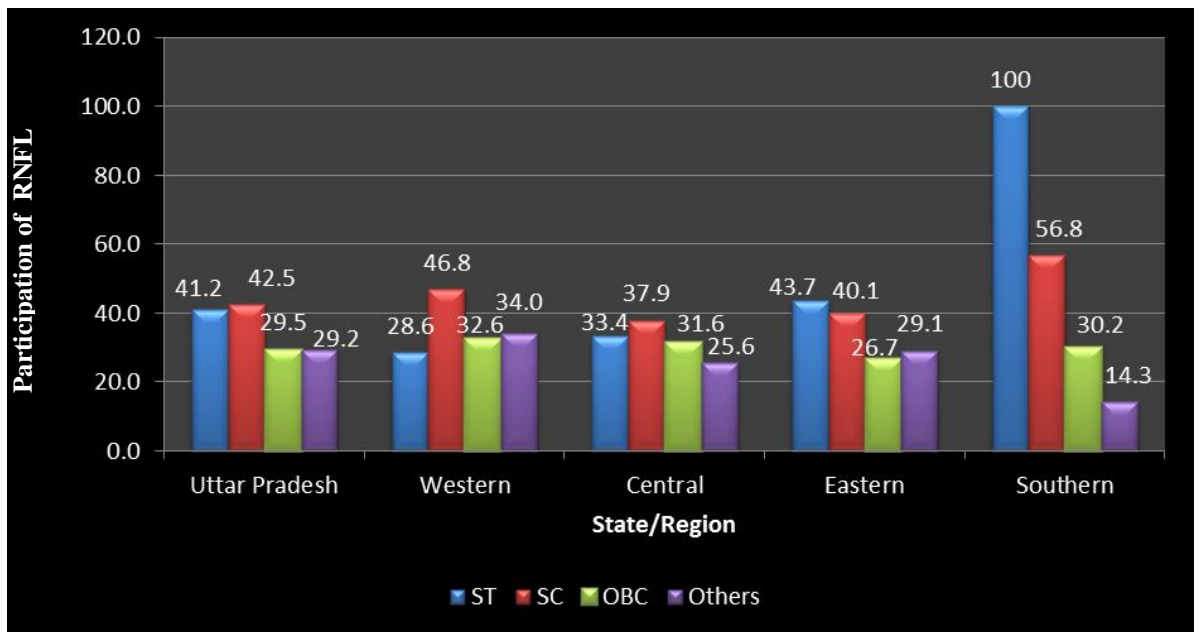
Here, in the analyses it is interest to note that, although educational attainment seems to be an important determining factor for non-farm employment, but the table 5.3 shows that RNFL is dominated by either illiterate or low educated workers. The percentage of illiterate non-farm workers was 35.6 per cent whereas only 6.1 per cent of non-farm workers were educated up to graduation and above it in Uttar Pradesh. And rest of the non-farm workers had education equal to primary, middle and secondary and its proportion was 24.5 per cent, 19.3 per cent and 14.6 per cent respectively. In brief it can be said that the share of non-farm workers was continuously declining with the rising level of education. Such a higher share of illiterate and poor workers in non-farm sector is a sign of distressed induced diversification of employment in rural areas (Ranjan, 2010).

### **5.3.3 The social Groups and Non-farm Employment**

In Uttar Pradesh, the possibilities of being employed in non-farm sector were more for socially deprived category viz. SC and ST. Figure 5.3 clearly shows that in Uttar Pradesh the highest proportion of SC followed by ST workers were employed in non-farm activities and it was lowest for ‘others’. From the figure 5.3 it is being observed that almost in all the regions except the western region, the proportion of SC and ST workers are more in the non-farm sector. In case of western region the highest proportion in non-farm was of SC category followed by ‘others’ and it was lowest for ST. In terms of percentage it is 46.8 per cent, 34.0 per cent, and 28.6 per cent

respectively. The thing which should be noticed here is the percentage of STs and SCs workers in southern region. It is 100 and 56.8 per cent respectively for ST and SC. In rest of the two regions namely central and eastern also the proportion was high for SC and ST workers. Higher proportions of socially deprived category (SC and ST) workers in non-farm activities reflect the presence of push factor in employment diversification from farm to non-farm in sector. It is argued so, since majority of the scheduled caste and schedule tribes workers are poorly placed in terms of assets distribution in the state (Ranjan, 2008). Hence these categories of workers, having no alternate option except to join low paid non-farm sector in distressed condition in rural areas to support their family income.

**Figure: 5.3; Relationship between social Groups and RNFL in Uttar Pradesh and its Regions**



**Source: Computed by the Author using unit level records of National Sample Survey 66th Round 'Employment and Unemployment situation in India' (2009-10).**

**Table: 5.4 Percentage distributions of Non-farm workers by Social group vis-à-vis their educational level in Uttar Pradesh and its regions**

Social Group	Education				
	Illiterate	Primary	Middle	Secondary_HS	Graduate_Above
<b>Uttar Pradesh</b>					
ST	62.9	22.1	5.6	7.0	2.4
SC	47.8	32.9	11.7	6.1	1.5
OBC	45.8	32.2	11.4	8.6	2.0
OTHERS	33.6	31.7	14.5	15.0	5.1
<b>Western</b>					
ST	56.3	16.2	9.3	15.2	3.0
SC	41.4	35.9	13.6	7.7	1.3
OBC	45.8	31.5	12.2	8.8	1.8
OTHERS	36.1	31.4	14.4	14.2	3.9
<b>Central</b>					
ST	27.9	35.7	19.7	16.6	0.1
SC	51.5	34.6	10.2	2.9	0.8
OBC	43.9	33.3	12.7	9.1	1.0
OTHERS	36.9	31.5	16.0	11.6	4.1
<b>Eastern</b>					
ST	70.9	21.3	2.0	3.1	2.7
SC	51.2	29.6	10.6	6.8	1.9
OBC	46.6	32.3	10.0	8.6	2.6
OTHERS	30.1	32.6	13.2	17.7	6.5
<b>Southern</b>					
ST	100	0	0	0	0
SC	43.3	34.4	15.1	5.6	1.7
OBC	42.6	34.5	16.2	5.8	0.9
OTHERS	27.1	29.3	18.4	16.9	8.3

**Source: Computed by the Author using unit level records of National Sample Survey 66th Round 'Employment and Unemployment situation in India' (2009-10).**

To ascertain diversification of rural employment towards non-farm sector is due to push factor, we present levels of education of non-farm workers as per their social group. From Table 5.4 it is clearly discernible that socially backward categories viz. schedule caste and schedule tribes are poorly educated in relation to 'others' category. In Uttar Pradesh 62.9 per cent ST and 47.8 per cent of SC non-farm workers were



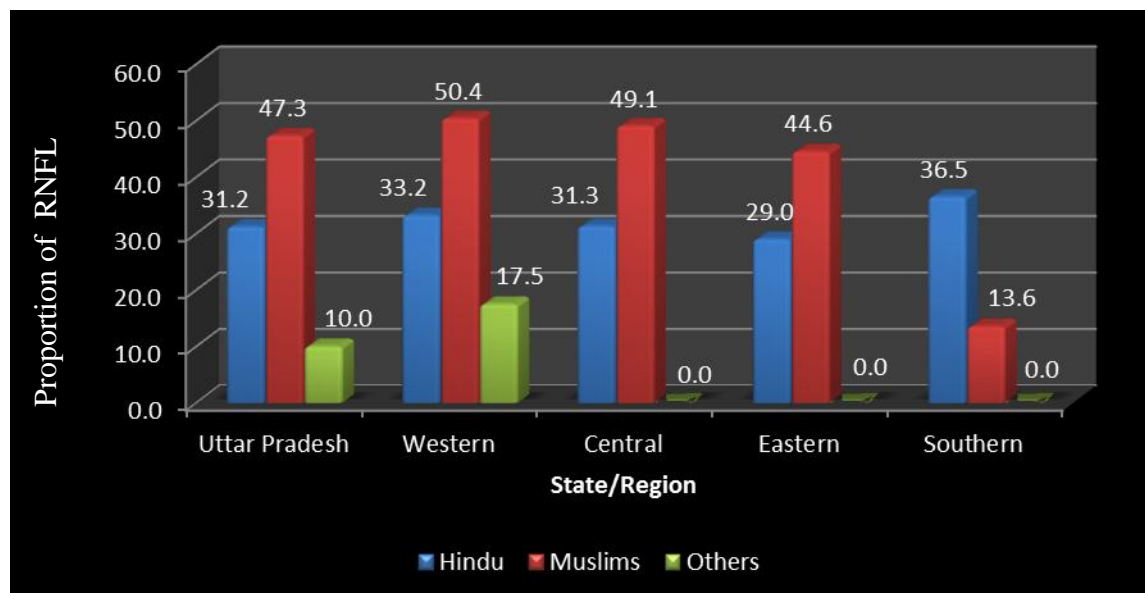
illiterate while this proportion for 'others' category was only 33.6 per cent. At the same time when we considered education equal to graduation and above then it comes out more for 'others' category and in terms of percentage it was 5.1 per cent. While in case of SC and ST is was only 2.4 and 1.5 per cent respectively. For other categories of education like primary, middle and secondary also 'others' category was better placed than socially deprived class. The position of other backward class (OBC) was between deprived class (SC and ST) and upper caste (others) for all categories of education. The pattern of education seems out to be almost similar to that of state for all the regions except the central region. As most of the SC and ST workers in all the regions are either illiterate or educated up to primary and middle level only, very few from them are having education equal to graduation and above it (table 5.4). In central region except schedule tribes other things were similar to that of other regions of the state. Here STs in some cases were better educated than other category of education. So, in brief we can say that levels of education largely depend upon the caste of the workers. Such a low level of education among socially deprived caste would not provide them good opportunities to earn sufficient income to fulfil their family requirements. Thereby, it can be conclude that it is not the pull factors instead push factors are playing important role in diversification of employment from farm to non-farm sector. Here, diversification of upper caste workers towards non-farm seemed due to pull factors, it is argued so since they are possessing assets along with better education.

#### **5.3.4 Religion and Non-farm Employment:**

Figure 5.4 shows that in Uttar Pradesh almost half (47.3 per cent) of the Muslim workers are involved in the non-farm activities, while only 31.2 and 10 per cent respectively of Hindu and others are involved in it. All the regions except southern region show almost similar kind of pattern to that of Uttar Pradesh for non-farm employment. In the southern region the proportion of Muslim workers in the non-farm activities being less to Hindu religion workers, and no workers from other religion were found to be employed in non-farm activities. In other three regions namely western, central and eastern the percentage of Muslim workers in the non-farm work are found to be more than Hindu and Others workers. In case of religion

also diversification seems to be affected by distressed induced factor, it is argued so since Muslims are not well placed in development<sup>37</sup>.

**Figure: 5.4; Relationship between Religion and RNFL in Uttar Pradesh and its Regions**



Source: Computed by the Author using unit level records of National Sample Survey 66th Round ‘Employment and Unemployment situation in India’ (2009-10).

#### 5.4 Results and discussion of Logistic Regression:

In previous section we discussed the relationship of rural non-farm employment with some important variables like possession of land by the household, education and religion of the individuals and their social group. Now in this section, we analyse determinants of non-farm employment with help of logistic regression analyses. The results of the logistic regression have been presented in terms of odds ratio.

<sup>37</sup>Human Development Report of Uttar Pradesh, December, (2008) Department of planning, Government of Uttar Pradesh

**Table: 5.5 Results (Odds Ratio) of Binary Logistic Regression for determinants of RNFL in the Uttar Pradesh.**

Characteristics of Independent Variables in the Model	1 = Non-farm; 0 = Other workers	1 = Non-farm: Self-employed; 0 = Other workers	1 = Non-farm: Regular workers; 0 = Other workers	1 = Non-farm: Casual workers; 0 = Other workers
	1	2	3	4
<b>Age (Ref: 15-29)</b>				
30-44	1.081***	1.164***	0.877***	0.910***
45-59	0.926***	1.344***	1.324***	0.623***
<b>Gender (Ref: Male)</b>				
Female	0.188***	2.220***	2.104***	0.229***
<b>G_Education (Ref: Illiterate)</b>				
Primary	1.519***	1.182***	2.223***	0.658***
Middle	1.355***	1.616***	3.029***	0.422***
Secondary_HS	1.405***	1.563***	5.280***	0.277***
Graduate & Above (Diploma)	3.434***	0.624***	22.612***	0.027***
<b>T_Education (Ref: NO)</b>				
Yes	4.132***	2.086***	0.412***	0.000
<b>Land Possessed (Ref: Landless)</b>				
Sub_marginal	3.068***	1.068***	1.050***	0.945***
Marginal	0.338***	0.981***	1.822***	0.707***
Small	0.173***	1.073***	1.691***	0.406***
Medium & Large	0.114***	1.160***	1.463***	0.300***
<b>Social Group (Ref: Others)</b>				
ST	1.131***	0.788***	1.256***	1.510***
SC	1.498***	0.571***	0.344***	3.768***
OBC	0.999	1.419***	0.460***	1.297***
<b>Religion (Ref: Hindu)</b>				
Muslims	1.628***	1.814***	0.396***	0.770***
Others	0.313***	49.070***	0.075***	0.000
<b>Household Size (Ref: 0-4)</b>				
HS 5-7	1.278***	1.382***	1.315***	0.589***
HS 8 & Above	2.051***	1.529***	1.743***	0.465***
<b>MPCE Quintile (Ref: Lowest Quintile)</b>				
Fourth Quintile	0.856***	1.182***	1.454***	0.735***
Third Quintile	1.439***	1.458***	1.463***	0.594***
Second Quintile	1.599***	1.280***	1.360***	0.667***
First/Highest Quintile	1.647***	1.540***	2.389***	0.375***
<b>Region (Ref: Western)</b>				
Central	1.198***	0.755***	0.749***	1.480***
Eastern	0.998**	1.098***	0.863***	0.932***
Southern	2.527***	0.420***	0.800***	3.062***
Constant	0.214***	0.276***	0.050***	2.408***

(Note: \*\*\* indicates significance at 1 per cent level, \*\* indicates significance at 5 per cent level.)

Source: Computed by the Author using unit level records of National Sample Survey 66th Round 'Employment and Unemployment situation in India' (2009-10).

**Age:** In our study age has been found to be an important determining factor in joining non-farm sector. Here, the probability of being in the non-farm sector is highest in age group 30-44 (odds ratio: 1.081) than any other age group. It is lowest for age group (age: 45-59). Therefore, it can be inferred that younger workforce prefers to work somewhere else instead of RNFS and it is only after a certain age they go in the non-farm sector and again at later stage of life they are likely to employ elsewhere<sup>38</sup>. But, when we consider it as per various categories of employment namely casual, regular and self-employment, then it does not match with above findings. The probability of casual employment was highest among younger age group (age: 15-29) and lowest in age group population (age: 45-59). It is possible in the rural areas that due to lack of or asymmetry of information initially younger people got employed as a casual worker. And it is only when they will come to know about better jobs on self and regular basis, which are likely to increase with age; they may prefer to be employed in such type of jobs. It has been argued so since last age group population (age: 45-59) has highest possibility of being employed on self and regular basis.

**Gender:** Findings are complying with the hypothesis, as results show the Gender predominance towards men in the participation of non-farm activities. Male workers are having greater probability of being employed in the non-farm activities than their female counterpart. The odds ratio is only 0.188 for the female workers, where male being the reference category. Lanjouw and Shariff (2004) and Abraham (2011) also confirmed this phenomenon that female workers prefer to work in agriculture instead of joining non-farm workforce. However, female workers having greater possibility to be employed on self and regular employment basis; as odds ratio are considerably high (2.220 and 2.104 respectively) in these two cases. But again the probability of being casual worker was in the favour of male as the odds for female is only 0.229.

**General Education:** Here all the categories of education have greater odds ratio than their illiterate counterpart, which suggests that as the level of education increases the probability of getting non-farm job also increases. However, education up to primary, middle, secondary and higher secondary has almost similar impact on non-farm

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<sup>38</sup>Lanjouw and Shariff (2004) also came to similar kind conclusion when they say, "The parameter estimate on age indicates that the young are relatively more likely to be active in agricultural wage labour. Relative to agricultural wage labour, the probability of employment in other occupations increases until at least 50 years of age (75 years in the case of cultivation), whereupon the probability declines".

employment. The odds of joining non-farm is 3.434 times greater for those having education equal to graduation & above including diploma certificates than illiterate person, thus it seems that higher education has considerable impact in getting non-farm jobs. Among different categories of employment, the probability of joining non-farm sector is the highest for regular workers and lowest for the casual workers. Workers from self-employed category displays almost similar kind of pattern to that of non-farm workers in all cases of education except the level of education equal to graduation & above including diploma. In this case, the odd was lower by 0.624 times to illiterate workers. The odds for casual workers decline continuously with the rising levels of education. Converse to this it was constantly increasing for regular workers with the rising levels of education and in case of education equal graduation & above it including diploma the odds was 22.612 greater than illiterate workers. It seems logical as well, because in the rural areas a person educated equal to graduation & above it would not be expecting to be employed on self and casual basis instead they may look regularly paid jobs.

**Technical Education:** Technical education appeared to be an important determinant of non-farm employment. As odds ratio of being employed in the non-farm is 4.132 greater for those having technical education than those do not having technical education. However, when we considered its impact as per employment status, then it does not appear same for each type of employment category. In case of casual employment the coefficient turns out to be statistically insignificant. The probability of being in the self-employment is 2.086 greater for those workers having technical education than those do not having it. But, it was 0.412 less for regular workers.

**Land Possessed:** Possession of land is found to be inversely associated with non-farm employment, as odds ratio for this is continuously declining with the increase in the amount of land possessed. It indicates that the distress induced push factor is working in the shifting of labour force from farm to non-farm activities. It has been argued so because in the rural areas landless labourer would not be having any alternate option except to join low paid non-farm activities to earn their livelihood. One glaring exception is the household possessed sub-marginal land; in case of this the odds being employed in the non-farm is 3.068 greater from landless household. The bigger odds in case of sub-marginal may be due to its large sample size in the state (Table; 5.1). However, large farming household have less probability to be casually employed in

the RNFS. As the odds ratio in this case declines with the increase in the size of land possessed. The probability of getting jobs on regular basis was lowest for landless category followed by sub-marginal household. In rest of the three categories it was considerably higher to landless and sub-marginal household. Once again the probability of being self-employed was highest among medium and large farming household.

**Social Group:** Compared to the general category, the socially deprived caste especially SCs and STs seem to have more probability of being employed in the non-farm sector. The possibility of joining non-farm activities by other backward classes (odds ratio: 0.999) was almost equal to general category, but it was not statistically significant. However OBCs have the highest chances of being self-employed followed by general category. On the other hand the probability of being casual workers was highest among SC followed by ST, while it was lowest for general category. It is so because most of the workers from socially deprived category in general and Scheduled caste in particular are employed in the construction activities in the rural areas. It is also being supported by the data, since there was huge increase in the construction workers in the state (Chapter 4). It implies once again that push factor is stronger than pull factor in the transformation of labour force towards non-farm sector in the rural areas. Regular employment was lowest among SC category and then followed by OBCs, it was highest for STs.

**Religion:** Results show that Muslims workers have much greater probability of joining non-farm sector than Hindu workers. But, the chances of other religion workers to join non-farm were very low, in term of odds ratio, its probability was 0.313 times less than their Hindu counterpart. The reason for this is the few numbers of other religion workers in the state (table; 5.5). Both the minority groups namely Muslims and other religion workers have more probability of being self-employed but it was significantly high in case of others, where the odds were 49.070 times greater than Hindu workers. Muslims and other religion workers were less likely to engage on regular as well as on casual basis.

**Household Size:** The coefficients show that the size of the household has a positive impact on the probability of joining non-farm sector, as the odds are continuously increasing with increase in the household's size. The probability of being in the non-

farm for household having members 8 or more is 2.051 times greater to those household having members up to four. A separate analysis as per employment status show that the observed patterns in the non-farm also stand with self-employed and regularly employed workers. However, casual workers show negative relationship between household size and the probability of joining non-farm.

**MPCE:** The results show that the probability of being employed in the non-farm increases with the increase in MPCE quintiles. But one glaring exception is for fourth quintile (odds ratio; 0.856) to participate in the non-farm; it was also lowest among all quintiles. Participation by casual workers was declining with the increase in the MPCE quintiles. Self and regular employment show the same pattern as it is observed in case of non-farm workers with little variation. In both type of employment the probability of being employed in the non-farm sector was increasing with increase in the MPCE quintiles, and it was highest for the first quintile. The results demonstrated that push factors are working in the diversification for poor household. It has been stated so because their proportions are high in casual type of employment and low in rest of the category.

**Region:** Analysis at the regional level shows that workers in Southern region have the highest probability to join non-farm sector than any other region in the state. The odds for this region was significantly high (2.527) than the Western region. Eastern region has the lowest possibility to participate in the non-farm sector followed by Western region. The higher possibility of Southern region to participate in the non-farm sector than rest of the regions tells us about working of the push factor in the diversification of workforce from farm to non-farm sector. It has been argued so because Southern region is the most backward region in the state. When we consider non-farm as per their employment status, then it does not appear same for all the categories. Eastern region has highest possibility to join non-farm sector in self-employment category followed by Western region; however it is lowest for the Southern region. To participate in the non-farm sector as of casual workers is significantly high (3.062 in terms of odds ratio) in the Southern region than Western region. It is lowest for the Eastern region. Probability of regular employment was highest in western region and in rest of the region it was almost same.

## 5.5 Summary of the Chapter:

In this chapter we analysed the determinants of rural non-farm employment in Uttar Pradesh. The existing literature on non-farm employment shows that the diversification of rural workers towards non-farm activities are affected by mainly two type of factors viz. 'distress induced' push factors and 'prosperity-led' pull factors. Here in the present study an attempt has been made to get further support for these two factors in Uttar Pradesh. Two types of variables that are individual level and household level have been utilised in the analysis. Individual level variables include age, gender, education etc. and household level variables include possession of land, social group, religion, household size, and monthly per capita expenditure (MPCE).

Above analysis shows that the rural people go for non-farm activities only after a certain age (in the present study it is between 30-44 years) and then again at the later stage of life they prefer to employ in other activities but not in the non-farm. However, this was not applicable for all types of employment viz. self, regular and casual; as probability of being casual labourer in the non-farm activities was highest for young people among all age groups. As far as gender is concerned, male workers have greater propensity to join non-farm sector than their female counterpart. Nevertheless, female workers are more likely to employ in non-farm activities on self and regular employment basis. Educational attainment by workers has positive impact in joining non-farm sector. However, this was not so in case of casual non-farm workers, since probability of being casual workers were more for low educated people.

Results for the possession of land show inverse relationship between possibility of joining non-farm sector and the amount of land possessed by individuals, further probability of being casual non-farm workers were also high for landless and marginal land possessed household. It indicates that landless and marginal land possessed household diversifying towards non-farm due to distress induced push factors. In case of social group it was found that backward castes particularly SC and ST have more propensities to join non-farm activities in the rural areas and the probability of being casual labourer in non-farm was also higher for theses castes. It strengthens our proposition for the existence of distress diversification in Uttar Pradesh among poor household. Results for religious group show that the probability of being non-farm



workers was highest among Muslims workers and it was lowest for other religion workers. Less chances of joining non-farm sector by other religion workers may be due to their fewer numbers in the rural areas. However, possibility of being self-employed workers in non-farm was considerably high for other religion workers that their counterparts Hindu and Muslims both. In the analysis it was found that the size of household has considerable impact on workers to come in non-farm sector; as it was positively associated with non-farm activities.

Monthly Per Capita Expenditure (MPCE) was positively associated with the chances of being in non-farm sector. Further lower quintiles workers also have more possibility of joining non-farm sector as casual labourer. As far as region is concerned, it was found that the backward region of the state that is southern region has the highest probability of having non-farm workers followed by relatively better region; the central region. Moreover, the possibility of being casual workers was also more in these two regions than rest of the two regions namely western and eastern. This tells us about distress diversification in Southern and central regions. Crosstabs of some independent variables with RNFL also displayed almost similar kind of results to that of logistic regression. In the whole analysis of determinants it was observed that in case of poor landless household distress induced push factors were working in diversification process, while in case of relatively rich and medium and large land owned household prosperity led pull factors playing important role.

## CHAPTER VI

### Summary and Conclusions

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The occupational structure in Indian economy was almost unchanged in 1950s and 1960s, but since early seventies it started changing. However, the rate of change got fillip only after economic reform. The share of rural workers employed in the non-farm sector has steadily increased since then, from 14.3 per cent in 1972-73 to 21.6 per cent in 1993-94 to 32.1 per cent in 2009-10. The rural non-farm sector is being increasingly acknowledged as an important factor in the reduction of poverty levels in the rural areas, both by way of contributing to growth of output as well as employment potential by absorbing surplus labour from agriculture sector (Nayyar and Sharma, 2005). Non-farm sector has outpaced farm sector not only in generation of employment but also in the growth of productivity. Studies on it have shown that the diversification process is driven mainly by two types of factors viz. distressed induced push and prosperity induced pull factors. During literature review, it was noticed that the economic development in Uttar Pradesh has been sluggish in relation to all India. Further, the performance of agriculture in the state was slow than rest of the sectors. So far as employment is concerned, almost 67 per cent of the total workers of the state are engaged in agriculture sector at present. This indicates the relative importance of rural non-farm sector from the point of view of employment. But in recent years, there has been rural employment diversification towards non-farm sector in the state, and the rate of this diversification was even greater than all India level. Overall, this has brought about faster employment growth in the rural non-farm sector than in the farm sector. In this context the present study made an attempt to evaluate employment situation in non-farm sector in Uttar Pradesh at the regional level.

The main objective of the current study is to analyse level and trends of non-farm employment in Uttar Pradesh at the regional level. To characterise the factors playing important role in employment diversification in rural areas like push and pull factors along with determinants of it. This study is based on employment and unemployment

data of National Sample Survey for last four quinquennial rounds (50<sup>th</sup>, 55<sup>th</sup>, 61<sup>st</sup>, and 66<sup>th</sup>), but data from some other sources such as economic survey, district wise indicator of Uttar Pradesh, some books and writers have also been utilised. Although detailed findings of this work have been discussed in each chapter yet, it is useful to bring them altogether in the present chapter.

The first chapter presents rural non-farm employment succinctly followed by the statement of problem, study area, data sources and methodology. In the second chapter a broad literature has been reviewed on rural non-farm sector.

The analysis part of rural non-farm employment starts with chapter third. In this chapter we analysed the level and trends of rural non-farm employment in India with its 17 major states. It was noted that the increase in non-farm employment was more in 2000s than 1990s at all India level. The increased employment in non-farm sector was more pronounced for male workers than female workers during 1993-94 to 2009-10. At the state level, the growth of non-farm employment was witnessed in each state, but the 'highest' and 'lowest' positions (as per our categorisation of incidence of non-farm employment) were occupied by Kerala and Madhya Pradesh respectively in each period. When we considered the positions of states for non-farm employment then it was found that during 1993-94, majority of the states fell in 'low' (less or equal to 25.0 per cent) and 'medium' (25.1 per cent to 35.0 per cent) category, while in 2009-10, they fell in 'high' (more or equal to 35.0 per cent) category. As far as Uttar Pradesh is concerned, the diversification of employment towards non-farm sector was one of the highest among all the states for male workers, whereas in case of female workers it was not so. Thereby, the position of male workers shifted from 'low' category of non-farm employment in 1993-94 to 'medium' category in 1999-00 and finally in 'high' category in 2009-10 and in case of female workers it remained in the 'low' category for all points of time. At the sectoral level, the shift of non-farm employment from tertiary to secondary sector was observed in almost all the states during 1993-94 to 2009-10 and in case of sub-sectoral level the importance of manufacturing and other services were declining, while that of construction gained importance in the same period. Female workers were mainly found to be employed in

manufacturing sector, while that of male workers in the construction activities during 2009-10.

In Chapter four, level, trends and industrial composition of rural non-farm employment in Uttar Pradesh and its comparison to all India has been given. This chapter also includes these level and trends at regional and district level in Uttar Pradesh. During the analysis it was noticed that the proportion of rural non-farm workers was lower in Uttar Pradesh in 1993-94 than national average but due to consistent rise in its proportion, it surpassed the national average by 2009-10 when 33.1 per cent of rural workers in Uttar Pradesh were engaged in non-farm activities. On the other hand, in all India the proportion has risen by relatively less amount, at 21.6 per cent in 1993-94 to 32.1 per cent in 2009-10. The increase of non-farm employment sounds more for male workers than their female counterparts for both Uttar Pradesh and all India; as the increase of male non-farm workers has been 15.4 and 11.3 per cent respectively for Uttar Pradesh and all India, while in case of female this was only 4.6 and 6.8 per cent. Non-farm employment growth was highest during 2004-05 to 2009-10 than any other period in the study. In terms of sectoral composition, there was consistent increase in the share of both the sectors namely secondary and tertiary but the increase was more apparent in secondary sector. At sub-sectoral level employment in the secondary sector was mainly composed of manufacturing and construction activities; however increased share in the secondary sector was basically attributed to construction sector only. Trade, hotels and restaurant had considerable share in the tertiary sector employment but other services suffer decline in its share over the period. Male workers were mainly employed in manufacturing and construction both, whereas female were mainly engaged in manufacturing sector only. This chapter also talks about the trends of status distribution of non-farm employment in Uttar Pradesh. Here employment was of mainly self and casual type and the proportion of regular employment was very small, casualization of workforce was also observed from the analysis. The role of distress induced Push factors was more visible than pull factors in the diversification of employment from farm to non-farm sector.

At the regional level, the proportion of non-farm employment was higher in western and southern regions than central and eastern regions. The increase in the share of non-farm workers in central and southern regions was seen only after 2004-05. Following the state level patterns, employment in the secondary sector was higher than tertiary sector for all the four regions. The share of construction activities was higher in all the regions but in case of central and southern region it was more apparent. Higher share of construction activities in central region was due to only participation of male workers but in case of southern region it was due to participation of male and female both type of workers. Employment in the secondary sector in western and eastern region was mainly attributed to manufacturing activities. The contribution of electricity, gas and water for both male and female was negligible in all the regions. Employment in the tertiary sector was highest in western region followed by eastern region. Trade, hotels and restaurant was the prime contributor in the tertiary sector employment and it was followed by other services. All the regions of the state observed distressed diversification but it was more apparent in case of southern and central region.

In Chapter five we analysed the determinants of rural non-farm employment in Uttar Pradesh with the help of Logit model. This analysis has been further extended as per employment by status like Self, Regular and casual employment. For this we take following explanatory variables Age group, Gender, General education, Technical education, Land possession, Social group, Religion, Household size, monthly per capita consumption expenditure (MPCE), and region. And the dependent variable is RNFL.

In our study the probability of being in the non-farm sector was highest in the age group 30-44 followed by young age group (age: 15-29). However, being casual workers in non-farm activities was continuously declining with the increase in age but being self-employed in non-farm activities was increasing continuously with age group. In case of gender, male workers have greater opportunities to work in non-farm sector than female workers; in terms of odds ratio it was only 0.188 for female when male being the reference category. Nonetheless female workers have more chances to employ in non-farm sector on self and regular employment basis. The

impact of education and skill on RNFL is expected to be positive and in our study the odds ratio of all the categories of education are greater than illiterate. Moreover the possibility of getting regular employment in non-farm was also considerably high among educated people; however there was continuous decline in the possibility of being employed in non-farm sector as casual workers with attainment of education.

In the study technical education has been found an important factor which influences the decision of workers to join non-farm sector, here the odds ratio was 4.132 times greater for those having any type of technical education than those not having technical education at all. As far as possession of land is concerned, there was inverse relationship between the possibility of joining non-farm sector and the amount of land possessed by individuals, further probability of being casual non-farm workers were also high for landless and marginal land possessed household. For social group it was found that compared to general category backward castes particularly SC and ST have more propensities to join non-farm activities in the rural areas and the probability of being casual labourer in non-farm was also higher for these castes. The probability of being employed in the non-farm was highest for Muslims workers followed by Hindu workers, it was very low in case of other religion workers, and the less probability for other religion workers may be due to their fewer numbers in the rural areas. However, possibility of being self-employed workers in non-farm was considerably high for other religion workers than Hindu and Muslims both. The size of household has positive impact on joining non-farm sector; it was also applicable in all types of employment except casual employment, where the probability of getting employment in non-farm sector was declining with increase in the size of household. Monthly Per Capita Expenditure (MPCE) was positively associated with the chances of being in non-farm sector. Further lower quintiles workers also have more possibility of joining non-farm sector as casual labourer. Which is a sign of distress diversification towards non-farm sector among poor workers?

In case of regions it was found that southern region has the highest probability of having non-farm workers followed by central region. The odds ratio in these two cases was 2.527 and 1.198 respectively for southern and central region. Moreover, the possibility of being casual workers was also more in these two regions than rest of the

two regions namely western and eastern. It strengthened our earlier findings of distress diversification in southern and central regions. Crosstabs of some independent variables with RNFL also displayed almost similar kind of results to that of logistic regression. In the whole analysis of determinants it was observed that in case of poor landless household distress induced push factors were working in diversification process, while in case of relatively rich and medium and large land owned household prosperity led pull factors playing important role.

On the whole it was observed that diversification of rural employment towards non-farm sector in Uttar Pradesh was significantly high among all the states in India. At the regional level it was found that western and eastern regions had diversification since long time, but in case of southern and central regions it was witnessed only after 2004-05. Distress diversification was clearly seen in southern and central regions, while in case of western and eastern regions diversification was caused by both type of factors that is push and pull.

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## APPENDIX TABLES

**Table A1: Sample size of districts for agriculture and non-agriculture sector: Western region**

Districts	61st (2004-05)			66th (2009-10)		
	Agriculture	Non-agriculture	Total	Agriculture	Non-agriculture	Total
Mainpuri	108	36	144	50	37	87
Buduan	187	91	278	153	68	221
Auraiya	106	32	138	51	43	94
Shahjahanpur	145	60	205	70	50	120
Kannauj	96	50	146	43	49	92
Etah	196	79	275	126	58	184
J Phule Nagar	181	50	231	75	33	108
Rampur	146	57	203	63	47	110
Hathras	119	48	167	84	53	137
Moradabad	289	130	419	168	80	248
Bulandshahr	187	72	259	92	66	158
Saharanpur	176	69	245	101	87	188
Farrukhabad	79	48	127	35	42	77
Bareilly	209	132	341	117	102	219
Mathura	104	53	157	46	53	99
Bijnor	232	110	342	68	53	121
Baghpat	103	52	155	57	52	109
Agra	161	78	239	44	46	90
Firozabad	104	50	154	71	51	122
Muzaffarnagar	248	119	367	119	92	211
Etawah	83	57	140	61	43	104
Aligarh	179	103	282	62	41	103
Meerut	90	87	177	60	49	109
Pilibhit	80	80	160	54	54	108
Ghaziabad	71	73	144	109	75	184
G Buddha Nagar	29	38	67	48	56	104

**Table A2: Sample size of districts for agriculture and non-agriculture sector:  
Central region**

Central	61st (2004-05)			66th (2009-10)		
Districts	Agriculture	Non-agriculture	Total	Agriculture	Non-agriculture	Total
Hardoi	324	102	426	88	96	184
Fatehpur	189	58	247	113	42	155
Kanpur Dehat	84	44	128	68	47	115
Rae Bareli	269	88	357	120	84	204
Kheri	248	118	366	99	78	177
Sitapur	340	146	486	102	83	185
Kanpur Nagar	96	49	145	61	51	112
Barabanki	193	116	309	124	99	223
Unnao	239	126	365	96	81	177
Lunknow	108	86	194	48	69	117

**Table A3: Sample size of districts for agriculture and non-agriculture sector:  
Southern region**

Southern	61st (2004-05)			66th (2009-10)		
Districts	Agriculture	Non-agriculture	Total	Agriculture	Non-agriculture	Total
Lalitpur	91	12	103	100	64	164
Banda	142	33	175	84	38	122
Jalaun	141	36	177	101	43	144
Mahoba	76	19	95	109	57	166
Chitrakoot	87	19	106	115	43	158
Jhansi	142	61	203	75	60	135
Hamirpur	90	27	117	109	68	177



**Table A4: Sample size of districts for agriculture and non-agriculture sector: Eastern region**

Eastern	61st (2004-05)			66th (2009-10)		
Districts	Agriculture	Non-agriculture	Total	Agriculture	Non-agriculture	Total
S. Kabir Nagar	145	33	178	50	46	96
Balrampur	113	31	144	68	56	124
Shrawasti	122	31	153	50	54	104
Gonda	214	67	281	125	97	222
Bahraich	168	56	224	67	36	103
Ballia	198	112	310	166	96	262
Azamgarh	403	137	540	182	126	308
Siddharthnagar	212	82	294	82	53	135
Sonbhadra	116	39	155	67	50	117
Sultanpur	203	84	287	155	101	256
Ambedkar Nagar	202	78	280	110	44	154
Maharajganj	173	71	244	84	49	133
Jaunpur	411	154	565	199	105	304
Basti	156	82	238	99	56	155
Kaushambi	131	43	174	79	50	129
Ghazipur	222	98	320	214	95	309
Pratapgarh	260	112	372	124	101	225
Kushinagar	182	109	291	160	87	247
Gorakhpur	213	100	313	177	86	263
Faizabad	97	76	173	100	47	147
Mau	130	73	203	85	47	132
Deoria	204	111	315	144	115	259
Chandauli	108	59	167	85	38	123
Allahabad	314	195	509	132	107	239
Mirzapur	177	123	300	57	64	121
Varanasi	169	107	276	47	65	112
S. Ravidasnagar	107	75	182	77	56	133

**Table A5: National Industrial Classification (NIC) – 1987 at one digit level:**

	<b>NIC-code at one digit level 1987</b>
<b>0</b>	Agriculture, hunting, forestry and fishing
<b>1</b>	Mining and Quarrying
<b>2 &amp; 3</b>	Manufacturing
<b>4</b>	Electricity, gas and water
<b>5</b>	Construction
<b>6</b>	Wholesale and retail trade & restaurants and hotels
<b>7</b>	Transport, storage and communication services
<b>8</b>	Financial, insurance, real estate and business services
<b>9</b>	Community, social and personal services
<b>X</b>	Activities not adequately defined

**Table A6: National Industrial Classification (NIC) – 1998 at one digit level:**

	<b>NIC-code at one digit level 1998</b>
<b>A</b>	Agriculture, hunting and forestry
<b>B</b>	Fishing
<b>C</b>	Mining and Quarrying
<b>D</b>	Manufacturing
<b>E</b>	Electricity, gas and water
<b>F</b>	Construction
<b>G</b>	Wholesale and retail trade; Repair of Motor Vehicles, Motorcycles and personal and household goods
<b>H</b>	Hotels and Restaurant
<b>I</b>	Transport, Storage and communication
<b>J</b>	Financial Intermediation
<b>K</b>	Real Estate, Renting and Business activities
<b>L</b>	Public Administration and defence; Compulsory social security
<b>M</b>	Education
<b>N</b>	Health and social work
<b>O</b>	Other community, Social and personal service activities
<b>P</b>	Private Household with employed person
<b>Q</b>	Extra-Territorial Organisation and bodies

**Table A7: National Industrial Classification (NIC) – 2004 at one digit level:**

	<b>NIC-code at one digit level 2004</b>
<b>A</b>	Agriculture, hunting and forestry
<b>B</b>	Fishing
<b>C</b>	Mining and Quarrying
<b>D</b>	Manufacturing
<b>E</b>	Electricity, gas and water
<b>F</b>	Construction
<b>G</b>	Wholesale and retail trade; Repair of Motor Vehicles, Motorcycles and personal and household goods
<b>H</b>	Hotels and Restaurant
<b>I</b>	Transport, Storage and communication
<b>J</b>	Financial Intermediation
<b>K</b>	Real Estate, Renting and Business activities
<b>L</b>	Public Administration and defence; Compulsory social security
<b>M</b>	Education
<b>N</b>	Health and social work
<b>O</b>	Other community, Social and personal service activities
<b>P</b>	Activities of Private Households as employers and undifferentiated production activities of private households
<b>Q</b>	Extra-Territorial Organisation and bodies