

**RURAL LABOUR IN INDIA: 1981-2001
AN INTER-STATE ANALYSIS OF WAGES,
EARNINGS AND LEVELS OF LIVING**

*Dissertation Submitted to Jawaharlal Nehru University
in Partial Fulfillment of the Requirements
for the Award of the Degree of*

MASTER OF PHILOSOPHY

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2004



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ACKNOWLEDGEMENTS

It gives me great pleasure to express my gratitude to all those who have been instrumental in the preparation of this dissertation. First and foremost, I earnestly acknowledge my deep sense of gratitude to my supervisor Professor. Ravi Srivastava, Centre for Studies in Regional Development, Jawaharlal Lal Nehru University, New Delhi, whose amiable and patient supervision, able guidance, deep insights into the problems of the rural labour and profound knowledge of the subject helped me in completing this dissertation and giving it the present shape. I am also thankful to him and his wife Dr. Nisha Srivastava for their affection and hospitality.

I am also thankful to Professor M.H. Qureshi, Professor R.K. Sharma and Professor P.M. Kulkarni, Centre for Studies in Regional Development, Jawaharlal Lal Nehru University, New Delhi, who as members of the advisory committee provided valuable comments which helped me in the finalization of this dissertation. I would also like to thank Professor S.K. Thorat, Director, Institute for Dalit Studies, New Delhi, for his valuable suggestions that helped me in a more focused analysis of the issues.

I am extremely thankful to my parents whose blessings and affection were a constant source of encouragement. I am particularly indebted to my father, Dr. Ajit Kumar Singh, Professor, Giri Institute of Development Studies, Lucknow, whose constant encouragement and prodding helped me in completion this dissertation in time. I also benefited immensely from long discussions with him which helped clarifying many issues.

I would specially like to thank Mr. Niranjana Sarangi who graciously extended his help in providing me with the latest NSS data.

I would like to thank the staff of the Central Library, Jawaharlal Nehru University, New Delhi; the documentation centre at Centre for Studies in Regional Development, Jawaharlal Lal Nehru University, New Delhi; the documentation centre at Krishi Bhawan, Ministry of Agriculture, New Delhi, and the Library at Giri Institute of Development Studies, Lucknow, for their cooperation in making available the required literature to me..

In the end, I would like to especially express my gratitude to my Uncle and Aunt, Dr. Arun Kumar, M.D. and Smt. Madhu for providing me with a home away from home. I am extremely thankful to their family for their hospitality and affection shown to me. I would also like to mention the names of my elder sister Ira, my brother in law Binayak and my dear friend Meha, all of whom have been a constant source of encouragement to me.

July 21, 2004
New Delhi

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CHAPTER 1

INTRODUCTION

OBJECTIVES, METHODOLOGY AND REVIEW OF LITERATURE

1.1. Introduction

Rural labour constitutes a large and growing segment of the rural population. With growing population pressure leading to increasing sub-division of land holdings, landlessness is growing in the rural areas swelling the ranks of rural labour. With no or negligible productive assets of their own, rural labourers belong to the category of the poorest of the poor. They are truly regarded the most disadvantageous section of the rural population.

Studies show that some improvement in the levels of living of rural labour did take place in the wake of the green revolution particularly during the 1980s. However, the favourable trends in income and wage levels witnessed during the 1980s seem to have reversed during the 1990s. This led to a heated debate among Indian economists about the impact of economic reforms initiated since the beginning of the nineties on the rural poor. Fears were expressed that with little skills and assets of their own and poor access to resources, rural labour households had limited possibilities of sharing in the gains of the market-oriented process of economic reforms.

It is in this context that our study aims to examine the trends in the economic conditions of the rural labour in the pre and post economic reform period. We begin with a brief survey of literature dealing with different aspects of economic conditions of the rural labour. This is followed by a discussion of the objectives, data sources and methodology of the study.

1.2 Survey of Literature

The problems of rural labour in India have attracted the attention of scholars for a long time. Researchers have been looking into various aspects of the economic conditions of the rural labour, e.g., trends in real wages, employment days, consumption pattern,

poverty levels, inter-linkages between labour and capital market, etc. We have classified these studies under three sub headings for purpose of discussion, viz. studies dealing with trends in rural wages, studies dealing with trends in employment and studies dealing with trends in poverty levels.

1.2.1 Studies on Rural Wages

Agricultural wage rate is identified as a critical indicator of economic well being of rural labour. Krishnaji (1971) and A.V. Jose (1974) used Agricultural Wages in India (AWI) data to make inter-state comparisons and concluded that agricultural wages were poorly adjusted to, and lag behind, the rise in the cost of living. Moreover, there were considerable regional disparities, which were further accentuated in the green revolution period.

Deepak Lal (1976), who found that poverty levels declined during the period 1956-57 and 1970-71, questioned these conclusions. He argued that wages operated within the demand and supply framework and responded to agricultural growth. Laxminarayan (1977), too, disagreed with the view that wages had not increased. He emphasized the need to consider wage income of agricultural labourer along with income from other sources, which had increased faster than the wage income.

Jose in another paper (Jose 1978) argued that real earnings by themselves did not reveal the whole picture and were dependent on wage rates and on the quantum of employment per year available per worker along with the prices of wage goods consumed. In 1988 Jose undertook another study with a view to capture trends in agricultural wages and assess the magnitude of regional and gender disparities in real agricultural wages (Jose 1988). His study revealed that size and proportion of rural population dependent on wage employment was continuously increasing in all states of the country. According to him, real wage rates started showing a rising trend from 1974-75 till the mid eighties. The increase was higher in case of female workers, thereby narrowing down gender disparities. Another important conclusion of the study was that there is a strong linkage between the wage rate and the absolute level of product per worker.

Later studies by scholars like Sheila Bhalla (1997) and Abhijit Sen (1994), revealed that the tendency of wages to rise in the eighties was reversed during the

nineties. An important observation by Sheila Bhalla (1997) was that there has taken place a de-linking of rural poverty from agricultural growth on one hand and growth of per capita income on the other. Real wages were found by her to be inversely related with poverty and directly related with availability of non-farm employment. Ruthven and Sushil Kumar (2002) further confirmed that terms of farm labour are influenced more by the availability of off-farm employment rather than by self-employment, as it raises income expectations and reduces the dependence of the workers on the farm.

Parthasarthy (1996) also supported the view that real wage rate growth declined during the nineties. Jeemol Unni (1997) also arrived at the conclusion that the tendency of the real wage to increase observed during the seventies to mid-eighties could not be sustained during the nineties. She also found that while real wage rate in the agricultural sector has remained stagnant, in the non-agricultural sector it has shown a tendency to decline during the nineties, thereby narrowing the wage gap between the two sectors.

A more recent study (Sarmah 2002) confirms that there is a tendency towards deceleration in growth rates of real wages in the post mid eighties period, particularly so in the nineties. The study also indicated that this phenomenon was accompanied by increased inter-regional disparities in agricultural wages.

Some recent studies, however, do not support the trend of deceleration in real agricultural wages. H. R. Sharma (2001), for instance, using RLE data concluded that the agricultural wages did not witness a decline during the nineties contrary to the findings of studies based on AWI data. Sundaram (2001) also rejects the view that there has been a slow down in the rate of growth of average daily wage earnings of adult labourer during 1990's. Thus, the debate on trends in real wages during the post reform period remains inconclusive.

1.2.2 Studies on Rural Employment

There is strong evidence indicating that labour absorption in agriculture has been slowing down in the recent years. The opportunities in the non-farm sector have not expanded fast enough to assimilate the growing proportion of rural labourers. This has led to an increase in proportion of rural labour and a significant decline in that of self-employed in agriculture. The low-income self-employed rural workers, e.g. marginal farmers, artisans and those employed in traditional household industries and services are

joining the ranks of rural wage labour. This process is likely to worsen the poverty situation as pointed out in the Report of the National Commission on Rural Labour (1991).

Most of the studies in the post green revolution period (Hanumantha Rao 1975, Rudra 1971, Acharya 1973 and Krishna Raj 1974) primarily dealt with the impact of the technological transition in the agricultural sector and the factors that contributed to the rise in proportion of agricultural labour witnessed during the period. The main debate was regarding the impact of the technological change on employment levels. On one hand, there were concerns regarding the rise in use of labour saving farm implements like tractors and harvesters having an adverse effect on farm employment. While at the same time, there was a possibility of rise in demand of hired labour because of the nature of the new methods of production with emphasis on HYV seeds and irrigation and fertilizers. The technological change with its emphasis on use of controlled irrigation and purchased inputs and with a bias towards large farmers, led to a decline in the proportion of self-employed and a consequent rise in the proportion of wage-employed. This was in conjunction with a rise in overall demand for agricultural labourers.

Sheila Bhalla (1987) has argued that with the spread of labour saving technology there was a concurrent increase in public and private investment in irrigation, which contributed to a favourable shift in cropping pattern and increase in gross cropped area. These developments had a positive impact on total employment in rural areas.

Scholars have explained agricultural employment in terms of the changes in demand and supply of labour. Bardhan (1984) has explained supply and demand of labour with assets ownership, size of household, age, education levels of household as also with the irrigation extension. Jeemol Unni (1988) linked it primarily with the level of agricultural output. Her study based on the Rural Labour Enquiry Reports revealed that in a year of low agricultural output the demand for labour declines, while the supply of labour in such years increases, thus reducing total available employment.

Sheila Bhalla (1993) observed that the labour absorptive capacity of agriculture has declined due to the slow increase in labour productivity in agriculture. She noted that from the employment point of view efforts to increase yields through more intensive use of intermediate inputs like fertilizer and irrigation would result in increase of employment

especially in low productivity states. She emphasized the importance of expanding gross cropped area to tackle the problem of mounting backlog of under-employed and unemployed.

Sheila Bhalla (1994) examines the links between rural poverty, rural urban migration and the labour market adjustment process. She argued that in Indian markets, it is neither wages nor employment which adjust when labour markets do not clear, but rather it is the per worker productivity. Thus, the farm worker productivity has declined continuously relative to per worker productivity in the economy as a whole. The presence of the massive number of unproductive workers tends to depress real wages. Stagnant per capita incomes in the agricultural sector as a whole acts as a drag on the rest of the economy, depressing the demand for non-agricultural goods and services, which in turn holds down derived demand for workers in this sector. Thus, there is a sort of a vicious circle operating in the rural economy.

Abhijit Sen (1994) analysed trends in rural labour markets in India during the eighties in terms of slow down in agricultural employment, expansion in the non-agricultural employment and the growing casualisation of rural labour. These trends contrast with a decline in rural poverty observed during the same period. This study reveals a complex situation. There has been a rise in rural wages along with occupational shift and a decline in unemployment rates. Yet the process can be termed as distress phenomenon for the fact that most of the employment generated in the rural sector was due to the efforts of the state, which is more accessible to better-off and powerful sections of the rural society that caused the wages to rise. Thus, according to Sen the trends in rural poverty and employment were not due to internal dynamism of the rural economy, but due to external factors such as the policies of the state.

A study by Jeemol Unni (1997) revealed that along with casualisation of rural workforce the character of the more recent entrants to the workforce has been changing, as they increasingly belonged to households with small land holdings and a more diversified portfolio of economic activity. This has led to an increased supply of casual labour and has been putting a pressure on employment in the agricultural and the non-agricultural sectors. On the other hand, there has been a decline in the demand for wage labour in the two sectors. She further observed that the non-agricultural sector is unable

to create employment rapidly enough and distress employment situation in that sector still prevails.

Shariff and Gamber (1999), however, find that in the post reform period employment growth in agriculture had improved, while in the non-agriculture sector it had declined. The study by H. R. Sharma (2001) also revealed an increase in employment days and wages, along with increased diversification of employment. He also observed a decline in wage employment indicating an increase in percentage of self-employment.

According to Bhalla and Hazel (2003), the main cause of decline in employment growth in agriculture during the nineties has been the deceleration in the growth rates in agriculture and increasing capitalization of agriculture during the period. They also find that increase in output has taken place along with a relatively lower increase in employment. The growth rate of employment in non-agriculture sector as observed from NSS data was found to be higher than in case of agriculture sector indicating a gradual though slow rate of diversification of the rural economy. They also find that labour productivity and wages in the agriculture sector have been increasing. Hence, they reject the view that the shift from agriculture to non-agriculture has been a distress phenomenon.

1.2.3 Studies on Rural Poverty

There is a consensus that poverty in India has declined in the nineties. But opinions diverge regarding the extent of decline. A heated debate has been raging among scholars regarding the accuracy of the various estimates whether official or non-official. In particular, concerns have been raised regarding the comparability of the poverty estimates based on the 55th round of NSS with estimates based on earlier rounds due to changes in the survey methodology used to calculate household per capita consumption expenditure.

Several economists are of the view that the process of decline in rural poverty, which has been in motion since the mid seventies, has slowed down during the nineties. While some economists attribute it to a slow down in growth rate of agricultural wages and agricultural output, others associate it with the slackening of the process of occupational diversification.

Indira Hirway (1995) attempted to understand the nature of rural poverty and its inter-linkage with rural labour markets and economic growth. It was observed by her that although there are several positive linkages between economic growth, labour market and reduction in rural poverty, there are several structural issues related to the labour market, which create obstacles in these positive linkages during different stages of growth. According to her total product and economic growth on the one hand and the functioning of the labour market on the other hand, determine the extent of poverty of weaker sections in the rural economy.

Sheila Bhalla (1997) holds the view that the favorable long-term trends in poverty reduction, real wages, and workforce structure established during the eighties were reversed during the nineties, while unfavorable trends such as the widening of productivity gap between farm workers and those employed in the non-farm activities and the collapse of employment in household industry, persisted. Employment elasticities recovered during the nineties but at the cost of low labor productivity.

In the post reform period trends in poverty appeared to be de-linked with agricultural performance on one the one hand and growth rate of per capita income on the other. Rural wages showed an inverse relationship with poverty. Decline in poverty was also associated with the increased opportunities in the non-farm sector, where wages were higher than in agriculture. In the 1990's such opportunities declined and thus there was a rise in poverty. Real wages are thus still inversely related with poverty and directly related with availability of non-farm employment.

Gaurav Datt, Valerie Kozel and Martin Ravallion (2003) find that agricultural yields, non-farm growth, developmental spending and inflation are the key determinants of poverty reductions. They also report that the pace of poverty decline slowed down in the nineties.

K. Sundaram's (2001) analysis of NSS data from the 55th round Employment and Unemployment Survey revealed that poverty ratios have declined over the nineties. However, the extent of decline has been smaller than as indicated by the 55th Round Consumer Expenditure Survey.

The survey of literature reveals that the initiation of the green revolution during the mid sixties brought significant changes in the agrarian economy of the country and

the rural labour market. Employment opportunities expanded during this period along with the adoption of capitalist farming. Simultaneously, the number of landless labourers also increased substantially leading to casualisation of rural labour force. This phase of agrarian transformation, which lasted till mid-eighties, saw a high growth in agricultural output along with rise in employment and real wages in the rural sector. Overall, these changes had a favourable impact on the economic conditions of rural labour

Indian economy witnessed a major shift in the policy regime in the early nineties with the adoption of the New Economic Policy committed to greater liberalization and opening up of the economy. It was feared by many that these changes would have an adverse effect on the economic conditions of the rural poor. Several studies provided empirical support to these apprehensions showing that although rural poverty levels continued to decline in the nineties, employment growth in agricultural declined and growth rate in real wages decelerated as compared to the eighties. Inter-regional and gender disparities in real wages also worsened during the period. Some studies, however, disputed these conclusions.

Thus, the debate on the impact of economic reforms on the conditions of rural labour is still inconclusive. Moreover, most of the earlier studies have analyzed the situation till the mid-nineties only and fail to capture the full impact of economic reforms. The present study seeks to fill these gaps.

1.3 Objective of the Study

The main objective of the study is to examine the changes in the economic well being of the rural labour during the pre and post economic reform period. More specifically the proposed study seeks to:

- 1) Analyse trends in incidence and asset ownership of rural labour;
- 2) Analyse the trends in real wages of agricultural and non-agricultural wages;
- 3) Identify the factors that determine agricultural wages;
- 4) Analyse trends in employment of rural labour;
- 5) Examine trends in gender disparities in wage rates and employment levels;
- 6) Examine changes in earnings and consumption expenditure of the rural labourers;
- 7) Examine trends in poverty levels and indebtedness of rural labour.

1.4 Hypotheses

The study seeks to test the following hypotheses statistically:

- 1) Higher agricultural productivity leads to a rise in real agricultural wage, through increased demand for labour.
- 2) Average size of holding is positively related with agricultural wages.
- 3) An increase supply of labour is expected to depress the wage levels.
- 4) Increased diversification of rural economy is expected to raise wage levels of agricultural labourers through tightening the rural labour market.
- 5) Growth in real wages leads to reduction in poverty levels of rural labour through its positive effect on income and consumption levels.
- 6) The level of consumption expenditure of rural labour households depends upon wage levels, employment days, NSDP agriculture per ha and percentage of households with land.
- 7) The proportion of expenditure on cereals and food items declines with a rise in the level of income of labour households.
- 8) The incidence of indebtedness depends on the creditworthiness of the labour households as reflected in the average size of their holding, proportion of households owning land and the level of wage earnings.
- 9) Inter-state and inter-regional differences in agricultural wages are related to agricultural productivity differentials.
- 10) Incidence of poverty among agricultural labour households is much higher than in case of non-agricultural labour households as well as non-labour households.

1.5. Data Sources

There are three major sources of data on wages of rural labour:

- (a) Agricultural Wages in India (AWI) published annually by Directorate of Economics and Statistics, Ministry of Food and Agriculture, GOI;
- (b) Rural Labour Enquiry Reports (RLE) for various years; and
- (c) Farm management studies (SFM) carried out in selected districts by the Directorate of Economics and Statistics, Ministry of Agriculture.

We may briefly examine the limitations of these data sources. AWI is the only published source available to researchers, which provides a continuous and comprehensive data set on agricultural wages for different states. Sources such as Rural Labour Enquiries and SFM provide data only for particular years or locations. Further SFM data are not collected from samples of agricultural labour households, the wage data for field labour forms as an item of background information.

Doubts have been raised regarding comparability of NSS data due to differences in methodology in various rounds (Deepak Lal 1976). V.M. Rao (1972) conducted a reliability analysis on the various data sources. He pointed out that whereas the NSS data was scientifically collected the AWI data was not. Besides AWI data had a tendency to be higher than NSS figures as richer villages and richer strata was over represented. The data reflected the level and movement of agricultural wages as they prevail in the bigger and semi-urban villages rather than in the general run of villages in rural areas. The data was thus found to be too crude to capture the finer components of temporal and spatial variations in agricultural wages. However, V.M Rao concludes that despites some systematic errors, the AWI data may still be found to be of use in research investigations involving qualitative hypotheses about behaviour of agricultural wages cross sectionally or over time. Though there has been a hesitance on the part of some researchers regarding use of AWI data, it has been used to analyze trends in wages by prominent economists such as Jose (1988) and Acharya (1989).

For data on employment, indebtedness and consumption among rural labour households and related aspects the main sources are the Rural Labour Enquiry Reports for various years published by the Labour Bureau, Shimla in collaboration with NSSO. The NSS Employment and Unemployment Surveys also give information regarding wages and earnings, employment and unemployment among different social groups. CACP Cost on Cultivation surveys have also been used to asses farm incomes and its distribution. These surveys, however, do not give information regarding non-agricultural rural activities.

For arriving at real wages Labour Bureau's Agricultural Labour Price indices (CPIAL) published in the Indian Labour Journal is generally made use of by researchers.

State Statistical Bureaus also collect data on rural wages and consumer price index, but are not suitable for inter-state comparison.

In our study, we have used AWI series for analysis of trends in rural wages. CPIAL index prepared by Labour Bureau, Shimla has been used for deflating money wages to calculate real wages. Data from Rural Labour Enquiry Reports and NSS Reports have been used to analyse trends in employment days, earning, consumption and indebtedness levels.

1.6 Scope and Methodology

Apart from analyzing trends in wages, earnings, etc. at the all India level we have also examined the trends in main variables selected for study for major states of India. The study further focuses on the gender differences in wages and employment. Both time series analysis and cross section analysis have been used to study the behaviour of wages and its determinants. The study of wages covers the period 1981 to 2001, which is divided into two sub-periods-Periods I from 1981 to 1991 representing the pre reform period and Period II from 1991 to 2001 representing the post reform period. Trends in wages have been examined by fitting log-linear growth models and quadratic functions.

In addition, we have also analysed trends in agricultural and non-agricultural wages of rural labour households (RLHH) and agricultural labour households (ALHH) for the period 1983 to 1999-00 based on RLE reports. Changes in employment and earnings have been examined for the period 1983 to 1993-94 by using absolute change and compound annual growth rates over different periods for which data are available. Trends in consumption expenditure and poverty levels are analysed by computing compound annual growth rates for the period 1983 to 1999-00. Variations in wages across regions and states have been analysed by computing coefficient of variation for different years. Inter-state variations in employment days, earnings and consumption expenditure of rural labour have also been analysed with the help of coefficient of variations and Gini coefficient.

Multiple regression models have been used on cross section data for states For analyzing determinants of wages and consumption expenditure.

1.7 Structure of Dissertation

The dissertation is divided into six chapters including this introductory chapter. Chapter I presents a review of literature and spells out the objective, hypotheses, data sources, scope and methodology of the thesis. Chapter II deals with the general characteristics of rural labour based on Rural Labour Enquiry Reports. In Chapter III an in depth analysis of trends in agricultural wages for the period 1981 to 2001 have been presented and determinants of agricultural wages have been analysed. The chapter also discusses trends in agricultural and non-agricultural wages for RLHH and ALHH for the period 1983 to 1999-00 based on RLE on Wages and Earnings for Rural Labour Households. Chapter IV presents trends in wage employment and earnings for the period 1983 to 1993-94 based on RLE Reports on Employment and Unemployment of Rural Labour Households. In Chapter V we have discussed trends in poverty, consumption expenditure and indebtedness of rural labour based on RLE Reports. Chapter VI presents the summary and conclusions of the study.

1.8 Importance of Study

Improvement in the economic conditions of the rural labour is crucial for reduction of rural poverty in the country, as this segment constitute a large proportion of the rural poor. Earlier studies have mainly focused on analysis of wages and employment of agricultural labourers alone. Little attention has been paid so far on the relative conditions of agricultural and non-agricultural labourers. Our study aims to cover both of these important sections of rural labour. Moreover, earlier studies have largely examined the trends in wages and not the overall economic condition of rural labour. Our study aims to present a more comprehensive picture of overall economic well being of rural labour by examining trends in indicators like employment and consumption expenditure of rural labour apart from analysis of wages.

Earlier studies generally cover the period up to the mid-nineties only and thus fail to capture the full impact of economic reforms on the economic conditions of rural labour. Our study, by incorporating recent data in our analysis, presents a more comprehensive and up to date picture of the conditions of the rural labour.

CHAPTER 2

ECONOMIC PROFILE OF RURAL LABOUR

2.1 Introduction

Given the complex character of rural economy, it is difficult to arrive at a universally acceptable definition of rural labour. The complexity arises because of the combination of self-employment and wage employment adopted by rural workers. A thin dividing line lies between the hirer and hired, that is the demand and supply side of the rural labour market. Economically too it is difficult to make a distinction, as the living condition of the former is often no better than that of the latter.

The National Commission on Rural Labour (1991) took a broader view and described rural labour as “. . . *persons living and working in rural areas subsisting partly or wholly from wage income. Besides, there are self-employed workers forming part of the petty production system who neither hire labour nor offer their services for a wage. They should also be classified as rural labour, since their living conditions are no better. Rural labour so defined would comprise wage-paid manual workers engaged in agricultural and non-agricultural activities, small and marginal farmers, tenants and sharecroppers and artisans*”. (Report of the National Commission on Rural Labour 1991, p.9)

This section has been described by the National Commission on Rural Labour as poverty stricken, marginalized section of the rural populace with extremely low levels of income and consumption expenditure and engaged in low productivity occupations and lacking organization, which has made them subject to all kinds of economic and social oppression.

The RLE Report 1983, on the other hand, defined rural labour as “*manual labour (by a person living in rural area) in agricultural and/or non-agricultural occupations in return for wages/salaries either in cash or kind (excluding exchange labour)*” (RLE 1983, p.7). According to RLE reports a household is classified as rural labour household if its income during the last 365 days was more from wage paid manual labour

(agricultural and/or non-agricultural) than either from paid non-manual employment or from self-employment. The RLEs clearly exclude the self-employed from the category of rural labour unlike the definition of the NCRL (1991). Since our analysis is primarily based on data derived from various RLE Reports we have adopted the definition of rural labour as given in RLE reports for purpose of analysis.

In this chapter we have delineated the economic profile of rural labour based on economic characteristics like incidence of rural labour, average size of household, earning strength and asset ownership. The discussion covers the period 1983 to 1999-00. Data have been taken from Rural Labour Enquiry Reports (RLEs). We first discuss the all India profile of rural labour in Section I. This is followed by a state level discussion in economic characteristics of rural labour in Section II.

Section I

All India Profile of Rural Labour

2.2 Growth and Economic Characteristics

We begin with an overview of the economic profile of rural labour at the all India level based on the main findings of various RLEs. Table 2.1 presents the overall economic status of rural labour in terms of their share in rural population and their income, consumption and employment levels. The proportion of Rural Labour Households (RLHH) in total rural households has steadily increased from 25.4% in 1963 to 40.2% in 1999-00. The proportion of Agricultural Labour Households (ALHH) increased from 21.8% to 32.2% over the same period. It may be noted that bulk of the rise in the proportion of ALHH/RLHH took place during the period 1963-64 to 1977-78. The pace on increase slumped sharply after that.

Real consumption expenditure of RLHH has increased by around 50% between 1973-74 and 1999-00. There was a marked increase in consumption expenditure during the period 1977-78 to 1987-88. It remained constant during the period 1987-88 to 1993 but rose again during the period 1993 and 1999-00. Consumption expenditure of ALHH has followed a similar pattern. The consumption expenditure for RLHH has overall remained slightly higher than that of ALHH.

**Table 2.1: Main Findings of Rural Labor Enquiries: All India
1963-64 to 1999-00**

Variables	1st 1963-65	2nd 1974-75	3rd 1977-78	4th 1983	5th 1987-88	6th 1993-94	7th 1999-00	
Percent to Total Rural Households								
RLHH	25.4	30.3	36.8	37.3	39.7	38.3	40.2	
ALHH	21.8	25.3	29.9	30.7	30.7	30.3	32.2	
Real Total Annual Consumption Expenditure per Households at 1970-71 prices								
RLHH	N.A	1318	1806	1898	2095	2095	2442	
ALHH	N.A	1281	1693	1813	1984	1979	2312	
Percentage of Indebted Households								
RLHH	59.2	65.4	50.5	50.4	39.1	35.1	25	
ALHH	60.6	66.4	52.3	51.1	39.4	35.5	25.5	
Average Daily Real Earnings in Agricultural Operations (in Rs) at 1970-71 prices								
RLHH	Male	N.A	1.71	2.26	1.75	2.81	3.62	4.28
	Female	N.A	1.20	1.60	1.31	2.09	2.58	3.01
ALHH	Male	N.A	1.70	2.23	1.78	2.80	3.59	4.23
	Female	N.A	1.16	1.57	1.34	2.08	2.55	2.99
Average Daily Real Earnings in Non-Agricultural Operations (in Rs) at 1970-71 prices								
RLHH	Male	N.A	N.A	N.A	2.7	3.3	5.5	6.8
	Female	N.A	N.A	N.A	1.4	2.4	2.9	5.9
ALHH	Male	N.A	N.A	N.A	1.9	3.0	4.5	5.7
	Female	N.A	N.A	N.A	1.1	2.4	2.7	3.6
Employment of Usually Occupied Workers (number of days worked in a year)								
Wage Employment								
	Male	N.A	212	227	225	223	235	222
	Female	N.A	147	182	187	186	203	192
Self Employment								
	Male	N.A	33	59	53	56	55	52
	Female	N.A	37	48	42	59	55	55
On Salary Basis								
	Male	N.A	5	7	8	17	15	24
	Female	N.A	1	2	4	9	7	9
Total								
	Male	N.A	250	293	286	296	305	298
	Female	N.A	185	232	233	254	265	256

Source: Rural Labour Enquiry, 1999-00: Report on Wages and Earnings

At the all India level, the percentage of indebted households among RLHH has declined significantly from 60% in 1963 to 25 % in 1999-00. The decline has been sharper during the recent period, i.e., 1987-88 to 1999-00. Real earnings of RLHH and ALHH have nearly doubled between 1974-75 and 1999-00. Earnings in non-agricultural operation have through out remained higher than earnings in of agricultural operations.

The rise in wages for non-agricultural operations has also been higher than in case of wages for agricultural operations. Male wages have remained substantially higher than female wages through out the period under study.

Total employment days have risen continuously during the period 1974-75 to 1993-94. However, the period between 1993-94 and 1999-00 saw a small decline. Overall, the rise in employment days for female workers has been higher than that for male workers. Wage employment is the major source of employment for RLHH/ALHH. Salary-based employment was insignificant.

Overall, the economic status of the rural labour households has improved in since the sixties at the all India level, as reflected in the rise in real earnings and consumption expenditure along with an increase in employment days and decline in the extent of indebtedness. We also observe a slow down in the growth of consumption expenditure, real earnings and employment days during the post reform period i.e. 1993-94 to 1999-00.

Section II

State Level Profile of Rural Labour

Given the large variations in the demographic and geographical conditions in different parts of the country, it is natural to find variations in the economic conditions of rural labour in different states and regions. In this section, we have presented state level profile of economic characteristics of rural labour.

2.3 Incidence and Growth of Rural Labour

Table 2.2 presents CAGR of the number of ALHH and RLHH in the pre (1983-94) and post (1994-00) reform period. The post reform period registers a higher growth rate in number of total rural households as well as rural labour households as compared to the pre-reform period. RLHH grew at a rate of 3.2% at the all India level in the post reform period as against a rate of 2% in the pre reform period. The corresponding rates of growth for ALHH 3.3% and 1.6% respectively.

In the majority of states, growth rate of rural labour households was faster than that of total rural households. This trend is most perceptible in states of West Bengal, Uttar Pradesh and Orissa. Thus, the low-income self-employed people have been joining

the ranks of wage labour in increasing numbers. One, however, notices a reverse trend in the states of Punjab, Rajasthan, Gujarat and M.P., where rural households show no change in their numbers, while labour households show negative growth rates. In these states, there is a shift towards self-employed or other non-manual categories of households. These differences are related to the relative employment opportunities in agricultural and non-agricultural occupations in different states.

Assam shows a negative growth rate for all categories of rural households indicating that there has been significant out migration from the rural areas in the state. State of Orissa registered a decline in total number of rural households along with a very high growth rate of rural labour households. States of Andhra Pradesh, Bihar, Haryana, Karnataka and Maharashtra registered an increase in total rural households as well as in labour households.

Table 2.2: CAGR of Number of Total Rural Households, RLHH and ALHH in the Pre and Post Reform Period (percentage)

STATES	Total Rural HH		RLHH		ALHH	
	Pre Reform	Post Reform	Pre Reform	Post Reform	Pre Reform	Post Reform
Andhra Pradesh	1.6	2.4	1.9	2.1	1.6	2.8
Assam	4.1	0.5	5.8	0.0	5.8	-4.2
Bihar	1.3	3.1	2.0	3.0	1.9	2.6
Gujarat	2.3	2.3	4.9	0.6	4.5	0.9
Haryana	-1.9	1.3	-2.4	-0.2	-4.3	4.1
H.P	1.6	2.3	9.3	8.4	4.3	8.3
Karnataka	1.8	3.4	1.6	5.5	2.2	5.1
Kerala	0.8	2.2	0.4	1.7	-0.4	-2.1
Madhya Pradesh	2.3	2.7	4.0	3.3	3.8	3.6
Maharashtra	2.0	3.3	2.8	3.1	2.6	3.5
Orissa	2.3	0.9	-1.1	9.6	-1.3	10.2
Punjab	1.4	1.4	2.4	1.3	2.3	-0.6
Rajasthan	1.6	1.6	6.1	-0.3	0.6	-2.3
Tamil Nadu	1.9	0.8	2.4	2.1	1.9	2.0
Uttar Pradesh	1.7	1.9	0.3	6.3	-0.3	5.7
West Bengal	2.0	2.0	1.2	2.4	0.4	4.8
ALL-INDIA	1.7	2.3	2.0	3.2	1.6	3.3

Source: Computed from Appendix Table A1

Table 2.3 shows the trends in the proportion of RLHH and ALHH in the total rural households. At the all India level, both categories of rural labour household showed almost no change in their share in total rural labour household during 1983 to 1993-94,

while between 1993-93 and 1999-00 there was a marginal increase in this share. In majority of states, the proportion of RLHH is above 35%. This proportion was relatively higher in the states of Andhra Pradesh, Tamilnadu and Kerala, while the states of Himachal Pradesh, Rajasthan and Uttar Pradesh have a relatively lower percentage of RLHH.

States of Assam, Gujarat, Bihar, Punjab and Rajasthan show a decline in proportion of RLHH and ALHH in the post reform period as against a significant rise in the pre reform period, while states of Orissa, Uttar Pradesh and West Bengal show a reverse trend. Haryana registered a decline in percentage of RLHH in both the periods, but recorded a rise in the percentage of ALHH in the post reform period.

Table 2.3: RLHH and ALHH as Percent of Total Labour Households

STATES	Rural Labour Household				Agricultural Labour Household			
	1983	1987-88	1993-94	1999-2000	1983	1987-88	1993-94	1999-2000
Andhra Pradesh	48.4	48.4	49.8	49.0	41.6	39.5	41.5	42.5
Assam	29.6	30.8	34.8	33.7	19.4	19.7	23.0	17.3
Bihar	39.9	42.4	42.6	42.3	37.1	36.1	39.2	38.0
Gujarat	37.4	50.5	47.8	43.5	30.7	34.3	37.8	34.8
Haryana	31.8	26.8	30.1	27.5	20.2	19.7	15.9	18.7
H.P	7.3	14.9	15.2	21.4	2.2	4.8	2.8	4.0
Karnataka	42.6	46.4	41.5	46.9	36.6	39.3	37.7	41.7
Kerala	49.3	47.9	47.8	46.6	31.7	30.1	28.2	21.8
Madhya Pradesh	33.6	35.4	39.8	41.3	30.1	31.4	34.9	36.7
Maharashtra	45.7	46.5	49.6	49.1	38.5	38.6	41.2	41.7
Orissa	41.0	42.8	29.1	47.9	36.4	35.2	25.5	43.3
Punjab	31.6	35.8	34.8	34.7	25.3	28.1	27.7	24.6
Rajasthan	17.3	34.2	26.4	23.5	11.1	12.7	10.0	7.9
Tamil Nadu	52.4	53.4	54.6	58.9	42.2	40.2	42.1	45.2
Uttar Pradesh	22.1	25.6	19.3	24.8	18.6	20.1	15.3	19.0
West Bengal	46.6	43.5	42.8	43.8	38.5	35.9	32.6	38.2
ALL-INDIA	37.3	39.7	38.3	40.2	30.7	30.7	30.3	32.2

Source: Computed from Appendix Table A1

Table 2.4 presents the proportion of ALHH in the total RLHH. ALHH comprise nearly 80% of RLHH at the all India Level. This proportion is even higher in the states of Bihar, Andhra Pradesh, M.P, Karnataka and Orissa. On the other hand, Assam, Kerala, and Haryana have around 60% of RLHH as ALHH. The proportion is less than 30% in H.P and Rajasthan. This low dependence of RLHH on agricultural activities can be attributed to the climatic conditions of these states that do not favor extensive cultivation. The proportion registered a declining trend in the period between 1983 and 1993-94 in all

states except Karnataka and Assam. Sharpest decline was in Haryana, H.P and Rajasthan. However during the period after that a rise in proportion of ALHH was recorded in six states the sharpest being in Haryana and West Bengal.

Table 2.4: Agricultural Labour Households as Percent of Rural Labour Households

States	1983	1987-88	1993-94	1999-2000
Andhra Pradesh	85.9	81.5	83.3	86.8
Assam	65.7	63.9	66.0	51.2
Bihar	93.0	85.0	92.0	89.8
Gujarat	82.2	68.0	79.1	80.1
Haryana	63.6	73.5	52.7	68.1
H.P	29.8	32.5	18.7	18.7
Karnataka	85.8	84.8	90.9	89.0
Kerala	64.3	63.0	59.1	46.9
Madhya Pradesh	89.6	88.8	87.5	88.9
Maharashtra	84.4	83.2	83.0	85.0
Orissa	88.9	82.3	87.4	90.4
Punjab	80.0	78.6	79.5	70.8
Rajasthan	64.3	37.1	37.8	33.6
Tamil Nadu	80.6	75.3	77.0	76.6
Uttar Pradesh	84.0	78.5	79.5	76.7
West Bengal	82.7	82.5	76.1	87.4
ALL-INDIA	82.4	77.4	79.2	80.1

Source: Computed from Appendix Table A1

We have calculated the coefficient of correlation between proportion of RLHH and ALHH in total rural households and percent area under marginal and small holdings. The value of 'R' came to 0.43 in case of RLHH and 0.36 in case of ALHH for 1999-00. Similar results were obtained for earlier years. Thus, we can conclude that the incidence of rural labour largely reflects demographic pressure on land.

Table 2.5 presents the percent distribution of males, females and child workers in rural labour households for the last decade. Males constitute 64% of the workforce, females 33% and children 2.5%. At the state level, there are some differences, with states like Haryana, Himachal Pradesh, Punjab and West Bengal having more than 80% of male labourers. In contrast, states like Andhra Pradesh, Karnataka, Maharashtra and Tamilnadu have around 50% male labourers. Children constitute a very small segment of rural labourers. It is almost negligible in states of Assam and Kerala. The southern states of Andhra Pradesh, Karnataka and Tamilnadu, have a slightly higher proportion of child labourers at around 5%.

Table 2.5: Percent Distribution of Number of Labourers in Rural Labour Households

STATES	1993 - 1994			1999 - 2000		
	Males	Females	Children	Males	Females	Children
Andhra Pradesh	51.2	43.1	5.8	51.1	43.3	5.7
Assam	75.7	23.7	0.6	72.1	27.2	0.7
Bihar	72.6	25.2	2.2	74.3	23.9	1.8
Gujarat	66.1	32.2	1.7	62.4	36.1	1.5
Haryana	85.3	13.4	1.3	91.7	7.2	1.1
Himachal Pradesh	90.7	8.0	1.3	94.7	5.3	0.0
Karnataka	53.8	40.8	5.4	55.2	40.6	4.2
Kerala	60.6	39.0	0.4	74.5	25.4	0.1
Madhya Pradesh	59.5	37.7	2.8	57.5	40.0	2.5
Maharashtra	51.8	45.5	2.7	53.1	44.1	2.8
Orissa	67.7	30.0	2.3	67.6	30.5	1.9
Punjab	90.2	7.6	2.2	93.4	4.7	1.9
Rajasthan	75.4	22.1	2.6	80.1	17.9	1.9
Tamil Nadu	52.2	43.4	4.4	56.9	41.7	1.3
Uttar Pradesh	77.8	20.2	2.0	76.3	22.2	1.5
West Bengal	81.8	15.5	2.7	81.4	16.6	2.0
ALL-INDIA	63.3	33.5	3.2	64.2	33.3	2.5

Source: Computed from Appendix Table A2

Table 2.6 presents CAGR of male, female and child labourers belonging to rural labour households during 1994-2000. At the all India level, number of both male and female labourers grew at a rate of 5% per annum, while child labourers grew at the rate of only 1% per annum. At the state level, a mixed picture emerges. Kerala and Orissa followed by Karnataka, Himachal Pradesh and Uttar Pradesh show relatively higher growth rate of male labourers. Assam shows a decline in male labourers. Haryana, Punjab and Rajasthan show a significant decline in the number of female labourers during this period. On the other hand, Orissa, Uttar Pradesh, Karnataka, Kerala, Madhya Pradesh and Gujarat show a high growth of female labourers. As many as seven states, namely, Bihar, Himachal Pradesh, Kerala, Punjab, Rajasthan Tamilnadu and West Bengal show a negative growth rate in case of child labourers. Orissa and Maharashtra, on the other hand, show a high growth of above 5% in case of child labourers.

The number of total rural labourers has grown at 5% at the all India level during the period 1994-2000. States of Kerala and Orissa have registered a very high growth rate of more than 10% in their number during this period. While in case of Kerala this growth is largely because of high growth of male labourers, in case of Orissa all three categories

have shown a rise. Thus, in Orissa it seems to be a distress phenomenon, whereby all members of family are forced to enter the labour market to maintain their subsistence level. Himachal Pradesh, Karnataka, Maharashtra and Uttar Pradesh registered growth rate in rural labour between 5 to 10 percent per annum. In contrast, rural labourers registered a low growth rate of less than 2% in Assam, Punjab and Haryana.

Table 2.6: CAGR of Male, Female and Child Labourers in Rural Labour Households: 1993-94 to 1999-000

STATES	Males	Females	Children	Total
Andhra Pradesh	3.7	3.8	3.4	3.7
Assam	-0.4	2.7	2.8	0.4
Bihar	3.8	2.5	-0.4	3.4
Gujarat	2.5	5.5	1.3	3.5
Haryana	3.3	-8.0	0.0	2.1
Himachal Pradesh	7.8	0.0	-100.0	7.1
Karnataka	8.5	7.9	3.5	8.0
Kerala	17.8	6.0	-8.2	13.8
Madhya Pradesh	4.4	6.0	3.0	4.9
Maharashtra	5.8	4.8	5.9	5.3
Orissa	11.8	12.1	8.2	11.8
Punjab	1.8	-6.6	-0.7	1.2
Rajasthan	4.3	-0.2	-1.6	3.3
Tamil Nadu	5.7	3.5	-14.4	4.2
Uttar Pradesh	7.1	9.1	2.0	7.4
West Bengal	3.4	4.8	-1.6	3.5
ALL-INDIA	5.3	5.0	1.0	5.1

Source: Computed from Appendix Table A2

2.4 Household Characteristics of Rural Labour Households

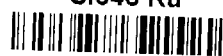
In this sub-section, we have discussed trends in household characteristics, such as, average size of household, earning strength and wage earners per household. Table 2.7 presents the average size of ALHH and RLHH. Average size of households of both categories of households has been remained almost unchanged between 1983 and 1999-00. At the all India level the average size of household has remained around 4.5 for both categories of households during the last two decades.

At the state level, there is only a marginal difference in the size of households. Haryana, Assam, Uttar Pradesh, Punjab, Madhya Pradesh and Rajasthan have more than five members per household, while Tamilnadu has the smallest size of household of less than four members. Between 1983 and 1993-94, all states except Uttar Pradesh show a

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decline in average size of household. However, between 1993-94 and 1999-00 all states except Haryana in case of ALHH and Tamilnadu in case of RLHH show a rise in averages size of household. Overall, during the last decade all states except Assam, Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh have shown a decline in average size of household.

Table 2.7: Average Size of Rural Labour Household
(Nos.)

STATES	Agricultural Labour Household				Rural Labour Household			
	1983	1987	1993-94	1999-00	1983	1987	1993-94	1999-00
Andhra Pradesh	4.20	4.19	3.95	4.13	4.22	4.27	3.99	4.14
Assam	4.45	4.68	4.45	5.13	4.49	4.57	4.46	5.01
Bihar	4.70	4.74	4.48	4.83	4.69	4.79	4.52	4.84
Gujarat	4.89	4.86	4.78	4.81	4.96	4.91	4.76	4.93
Haryana	5.39	5.16	5.5	5.26	5.45	5.26	5.19	5.2
Karnataka	5.00	4.65	4.72	4.75	5.05	4.7	4.75	4.76
Kerala	5.04	5.08	4.52	4.61	5.12	5.13	4.62	4.63
Madhya Pradesh	4.72	4.82	4.56	5.05	4.7	4.81	4.56	5.08
Maharashtra	4.71	4.68	4.49	4.66	4.7	4.69	4.53	4.65
Orissa	4.58	4.44	4.41	4.45	4.57	4.4	4.41	4.42
Punjab	5.13	4.85	4.97	5.06	5.09	4.93	4.96	5.05
Rajasthan	4.76	4.76	4.49	5.05	4.72	4.85	4.72	5.14
Tamil Nadu	4.05	4.03	3.89	3.91	4.07	4.06	3.95	3.9
Uttar Pradesh	4.68	4.67	4.71	5.13	4.68	4.67	4.77	5.14
West Bengal	4.79	4.65	4.64	4.76	4.75	4.63	4.63	4.74
All India	4.63	4.60	4.44	4.65	4.64	4.63	4.48	4.67

Source: Rural Labour Enquiry Reports 1983, 1987-88, 1993-94 and 1999-00

Table 2.8 shows the earning strength of ALHH and RLHH. Earning strength at the all India level has remained unchanged at two members per household for the two categories of households during 1983 and 1999-00. At the state level, there has been a marginal decline in the earning strength of labour households with as many as nine states showing a decline.

Table 2.9 presents the average number of wage earners per rural labour household. The number of wage earners per labour household showed a small decline between 1983 and 1993-94, followed by a marginal rise between 1993-94 and 1999-00. The number of wage earners per household is very close to the total number of earners per household, which implies that the labour households have hardly diversified into other means of livelihood and have largely remained wage labourers over the last two

decades. The proportion of wage earners is somewhat lower in Himachal Pradesh, Gujarat and Rajasthan, where opportunity of finding work as wage labour in agriculture are limited.

Table 2.8: State wise Average Earning Strength per Household (Nos.)

STATES	Agricultural Labour Household				Rural Labour Household			
	1983	1987	1993-94	1999-00	1983	1987	1993-94	1999-00
Andhra Pradesh	2.4	2.2	2.3	2.3	2.3	2.2	2.3	2.3
Assam	1.5	1.6	1.6	1.9	1.6	1.6	1.7	1.8
Bihar	1.8	1.7	1.7	1.7	1.8	1.7	1.7	1.7
Gujarat	2.3	2.3	2.2	2.4	2.3	2.2	2.1	2.3
Haryana	2.0	1.6	1.5	1.5	1.8	1.6	1.5	1.5
Himachal Pradesh	2.2	1.9	1.8	1.8	2.0	2.0	2.1	1.9
Karnataka	2.5	2.3	2.4	2.4	2.4	2.3	2.4	2.4
Kerala	1.8	1.8	1.7	1.8	1.7	1.8	1.7	1.7
Madhya Pradesh	2.4	2.3	2.2	2.3	2.3	2.3	2.2	2.3
Maharashtra	2.5	2.4	2.3	2.3	2.4	2.3	2.2	2.2
Orissa	2.0	1.9	2.0	1.8	2.0	1.9	1.9	1.8
Punjab	1.7	1.7	1.6	1.6	1.7	1.7	1.6	1.5
Rajasthan	2.0	2.0	1.8	2.0	2.0	2.2	2.1	2.1
Tamil Nadu	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0
Uttar Pradesh	1.7	1.8	1.7	1.7	1.7	1.8	1.7	1.7
West Bengal	1.7	1.6	1.5	1.7	1.6	1.6	1.6	1.7
ALL-INDIA	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0

Source: Rural Labour Enquiry Reports 1983, 1987-88, 1993-94 and 1999-00

Table 2.9: Average Number of Wage Earners per Household

STATES	Agricultural Labour Household				Rural Labour Household			
	1983	1987	1993-94	1999-00	1983	1987	1993-94	1999-00
Andhra Pradesh	2.1	1.4	1.9	2.1	2.1	1.4	1.9	2.0
Assam	1.4	1.4	1.5	1.8	1.5	1.4	1.5	1.5
Bihar	1.7	1.4	1.6	1.6	1.7	1.4	1.6	1.6
Gujarat	2.2	1.5	1.8	2.1	2.1	1.4	1.7	2.0
Haryana	1.8	1.2	1.4	1.3	1.7	1.1	1.1	1.3
Himachal Pradesh	1.4	1.0	1.0	0.9	1.2	1.0	1.1	1.0
Karnataka	2.2	1.5	1.9	2.2	2.2	1.5	1.8	2.1
Kerala	1.6	1.2	0.7	1.5	1.5	1.1	0.7	1.4
Madhya Pradesh	2.2	1.6	2.0	2.1	2.1	1.6	1.9	2.0
Maharashtra	2.3	1.4	1.9	2.1	2.2	1.4	1.8	2.0
Orissa	1.9	1.4	1.5	1.7	1.8	1.3	1.5	1.6
Punjab	1.5	1.1	1.4	1.4	1.5	1.1	1.4	1.4
Rajasthan	1.7	1.1	1.3	1.6	1.6	1.1	1.1	1.4
Tamil Nadu	2.0	1.5	1.7	1.9	1.9	1.4	1.6	1.8
Uttar Pradesh	1.5	1.2	1.4	1.5	1.4	1.2	1.4	1.4
West Bengal	1.6	1.2	1.4	1.4	1.5	1.1	1.3	1.4
ALL-INDIA	1.9	1.4	1.7	1.8	1.8	1.3	1.6	1.7

Source: Rural Labour Enquiry Reports 1983, 1987-88, 1993-94 and 1999-00

2.5 Asset Ownership of Rural Labour Households

Assetlessness is the major characteristic of rural labour. Table 2.10 presents the percent distribution of ALHH and RLHH with cultivated land. At the all India level, around 40% of ALHH and RLHH reported ownership of land. Across the states, some variation in the proportion of households owning land exists. In Himachal Pradesh around 80% percent of labour households own land. Kerala, M.P., Rajasthan, Orissa and U.P. are other states with a relatively higher proportion of households with land. In contrast, Haryana and Punjab had very low percentage of households with cultivated land.

The states of Bihar, West Bengal, Kerala, Tamil Nadu, Assam and Karnataka witnessed a decline in the percentage of rural labour households with cultivated land for both categories of households over the study period. On the other hand, Gujarat, Haryana and Rajasthan recorded a rise in percentage of households with cultivated households.

Table 2.10: Percentage Distribution of ALHH and RLHH with Cultivated Land

STATES	1983		1993-94		1999-00	
	ALHH	RLHH	ALHH	RLHH	ALHH	RLHH
Andhra Pradesh	39	37	42	39	39	37
Assam	43	44	51	44	38	38
Bihar	48	48	38	38	28	28
Gujarat	26	29	39	36	44	40
Haryana	5	8	15	12	17	18
Himachal Pradesh	78	79	72	75	83	80
Karnataka	46	45	48	45	43	42
Kerala	82	83	24	24	56	54
Madhya Pradesh	49	48	57	55	49	50
Maharashtra	42	40	42	40	45	41
Orissa	56	55	58	56	57	56
Punjab	5	7	5	6	9	9
Rajasthan	54	53	52	65	51	63
Tamil Nadu	28	28	25	23	24	21
Uttar Pradesh	54	50	62	60	62	57
West Bengal	47	45	49	44	36	35
ALL-INDIA	44	43	43	41	43	41

Source: Rural Labour Enquiry Reports 1983, 1987-88, 1993-94 and 1999-00

Table 2.11 presents the average size of cultivated land per cultivating households for ALHH and RLHH. The average size of holding in 1999-00 at the all India level was as low as 0.18 ha for both categories of households. The average size of holding is lowest in the states of Punjab, Kerala and Tamilnadu.

Table 2.11: Average Size of Land Cultivated per Cultivating household (in ha)

STATES	Agricultural Labour Household				Rural Labour Household			
	1983	1987	1993-94	1999-00	1983	1987	1993-94	1999-00
Andhra Pradesh	0.62	0.33	0.22	0.22	0.60	0.32	0.21	0.20
Assam	0.82	0.16	0.13	0.09	0.69	0.18	0.13	0.09
Bihar	0.26	0.18	0.12	0.11	0.28	0.19	0.13	0.11
Gujarat	0.60	0.31	0.26	0.18	0.65	0.41	0.25	0.17
Haryana	0.75	0.11	0.21	0.06	1.20	0.13	0.14	0.06
Himachal Pradesh	0.25	0.20	0.22	0.25	0.26	0.21	0.21	0.21
Karnataka	0.87	0.48	0.36	0.30	0.86	0.45	0.34	0.28
Kerala	0.19	0.13	0.04	0.08	0.19	0.11	0.04	0.07
Madhya Pradesh	0.90	0.53	0.45	0.36	0.91	0.52	0.44	0.37
Maharashtra	1.19	0.56	0.44	0.35	1.17	0.54	0.42	0.32
Orissa	0.48	0.26	0.26	0.21	0.49	0.25	0.27	0.21
Punjab	0.40	0.11	0.03	0.03	0.40	0.11	0.04	0.03
Rajasthan	1.86	1.45	0.60	0.32	1.69	1.19	0.72	0.42
Tamil Nadu	0.43	0.14	0.09	0.08	0.44	0.13	0.09	0.07
Uttar Pradesh	0.36	0.21	0.20	0.14	0.36	0.21	0.20	0.13
West Bengal	0.89	0.14	0.11	0.07	0.80	0.13	0.10	0.07
ALL-INDIA	0.70	0.31	0.23	0.18	0.85	0.32	0.23	0.18

Source: Rural Labour Enquiry Reports 1983, 1987-88, 1993-94 and 1999-00

2.6 Conclusion

The main conclusions of the chapter are summarised below:

Rural labour households account for a sizeable and increasing proportion of rural households. In most of the states, growth rate of labour households has been higher than that of total rural households indicating a shift of rural workforce towards wage labour as against self-employment. This trend was stronger in more densely populated states of West Bengal, Uttar Pradesh and Orissa. A reverse trend was noticeable in case of Punjab, Rajasthan, Gujarat and M.P.

ALHH comprise more than 80% of the RLHH. This proportion was particularly high in Bihar and Orissa, but relatively low in Kerala, H.P and Rajasthan where there are limited opportunities for agricultural activities.

Females constitute about one-third of total rural labourers. Their proportion was particularly low in Haryana, Himachal Pradesh, Punjab and West Bengal. Children constitute a very small segment of rural labourers, hardly around 2.5%.

The number of rural labourers has grown at a high rate of 5% at the all India level during the post reform period, i.e. 1994-2000. States of Kerala and Orissa have recorded a growth of more than 10%.

The average size of rural labour households has remained static around 4.5 at the all India level for both categories of households during the last two decades. Haryana, Assam, Uttar Pradesh, Punjab, Madhya Pradesh and Rajasthan have a slightly higher size of rural labour households. Earning strength of rural labour households has also remained unchanged at two members per household for the two categories of households during 1983 and 1999-00 at the all India level. But, there has been a marginal decline in the earning strength of labour households in as many as nine states.

The number of wage earners per household is very close to the total number of earners per household, which implies that the labour households have largely remained wage labourers over the last two decades and have hardly diversified into other means of livelihood.

The proportion of households with cultivated land has practically remained unchanged at around 40% for both categories of households. The average size of holding per cultivating household is also extremely low at 0.18 ha.

At the all India level, an improvement in the economic status of the rural labour households is noticeable since the sixties as reflected in the rise in real earnings and employment days along with a decline in indebtedness. However, we observe a slow down in the growth of consumption expenditure, real earnings and employment days during the post reform period (1993-94 to 1999-00) at the all India level.

To conclude, the number of rural labour has been continuously increasing during the last two decades, which have witnessed large-scale marginalisation of holdings and casualisation of rural labour force. There are some pointers indicating that the reform process has adversely affected the rural labour. We have discussed these issues in more detail in the following chapters.

CHAPTER 3

TRENDS IN RURAL WAGES

3.1 Introduction

In this chapter we have analysed trends in rural wages in India since 1980-81. The main issues looked into are those related to trends in growth rates, regional and inter state variations and gender disparity in rural wages/earnings. Wage trends have been analysed at two levels, namely, for NSS regions and for the 16 major states. Regional and state level wages have been computed by taking the weighted averages for the districts falling in the region/state with proportion of agricultural labourers in the state as weights. Trends in agricultural wages and non-agricultural rural wages have been discussed separately. Wage data have been taken from (i) *Agricultural Wages in India* (AWI) published by the Directorate of Economics and Statistics, Ministry of Agriculture and. (ii) the *Rural Labour Enquiry Reports* (RLE) on Wages and Earnings published by Labour Bureau, Shimla. We begin with a discussion on trends in agricultural wages based on data derived from AWI in section I. This is followed by the discussion of rural wages based on RLEs in section II. Finally, in section III we discuss determinants of agricultural wages.

Section I

3.2 Trends Based on Agricultural Wages in India Reports

The AWI publishes wage rates prevailing in agricultural year that is the peak season in each year covering the months of July to August. Data is reported for various categories of agricultural labour like ploughing, sowing, weeding and reaping/harvesting. The first category is reported only for male workers under the assumption that the task is undertaken mostly by male labourers, while all other categories are reported for males, females and children. For certain states like Andhra Pradesh, Karnataka and Maharashtra a consolidated figure for 'field labour' is published. The wage reported is a simple average (monthly and annual) of the wage paid both in cash and kind with the latter being converted into monetary form. All wage rates are in rupees per day. Besides wage rates

for certain categories of skilled non-agricultural male labourers such as carpenters, blacksmith and cobblers is also published. The series gives data both at district and state level.

3.3 Methodology

Several earlier studies have analysed trends in agricultural wages on the basis of AWI data (Krishnaji 1971, Jose 1974 and 1988, Acharya 1989, Parthasarthy 1996, Haque 1998 and Sarmah (2001). The methodology adopted in these studies is summarized in Table 3.1.

Table 3.1: Methodology Adopted by Various Studies Based on AWI Data

Study	Level/Period	Category of operation covered	Wage rate analysed	Methodology
Krishnaji (1971)	State wise Period: 1956-65	Field labour. For states where a consolidated figure was not available, simple average for operations reported, was taken	Peak season wage rate (male)	1.Simple average of villages for each district 2. Weighted average for state level wage rates with weights being the proportion of Male agricultural labour. 3.Nominal wage converted to real wage by deflating with CPIAL
A.V. Jose (1988)	State Level Period: 1970-1985	Male: Ploughmen Female: Sowers In case of non availability of these categories the order of preference was sowing, weeding, harvesting and other agricultural operations for both males and females.	Simple Average of monthly wages to arrive at annual district wage rates	Same as above
Sarathi Acharya (1989)	NSS Region Level Period:1971-1985	Field Labour for both male and Female workers. Where not reported a simple average of categories reported was taken	Same as above	Same as above
Parthasarthy (1996)	District and centre wise for men Period 1985-1994	Field labour followed by sowing. Harvesting wages considered separately	Same as above	CPIAL used as deflator
Haque (1998)	State wise Period: 1970-1995	Not cited	Not cited	CPIAL used as deflator
Sarmah (2001)	1.NSS Region Level Period: updated Sarathi till 1995 2.State Level Period 1970-1990	1. For NSS region same approach as followed by Sarathi 2.Field Labour and Ploughmen for males	Same as above	Same as Sarathi Acharya.

Broadly the approach followed has been similar in the above mentioned studies with some variations. For the present study we have adopted the methodology followed by Acharya (1989) and Sarmah (2001). Agricultural wages from the AWI have been

calculated at two levels, that is, the NSS region level and at the State level. The analysis is confined to the ~~17~~¹⁶ major states of the country.

For all states, except Andhra Pradesh, Karnataka and Maharashtra, a simple average of wages rates reported for various operations like ploughing, sowing, and weeding is taken, while for the three states mentioned above we have used the consolidated figure of field labour as reported in the AWI. To arrive at the annual wage rate an un-weighted simple average of monthly figures is taken. Weighted average of nominal wage rates at the NSS region level and state level (male) has been calculated. Weights used reflect the proportion of agricultural labour population derived from the decennial population Census for 1981 and 1991. Methodology used for calculating ~~weighted~~^{district weight} wage rate is described below. Let weighted wage rate be denoted by

$$W_i = (P_i + Q_i) / 2$$

Where,

P_i = No. of agricultural labourers in i th district in a region/state in 1981

Q_i = No. of agricultural labourers in i th district in a region/state in 1991

District weight is thus arrived at as

$$\mu_i = W_i / \sum W_i \quad (i = 1 \text{ to } k)$$

k = number of districts in a region/ state.

Nominal wage so arrived were converted into real wage by deflating by Consumer Price Index for Agricultural Wages (CPIAL) collected from Indian labour Journal. The state level CPIAL has also been used to deflate wages at the district/regional level. The state level series is based only on male agricultural labourers. The figure represents the wage rate paid to ploughmen, except in Andhra Pradesh, Karnataka and Maharashtra where the figure is for field labour.

For the state level analysis, we have taken the series calculated by Sarmah (2001) upto the period 1991. It has been up dated upto the year 2001-02. The NSS region level series prepared by Sarmah (2001) is available upto the year 1994-95. This has been updated only till 1997-98 on the basis of AWI data. AWI series after that is not yet available. However, state level series has been updated for later years on the basis of data obtained from the Ministry of Agriculture.

The wage series both at the NSS regional level and at State level are given in the appendix Tables A3 to A5.

Growth rates of real wages have been estimated by fitting a simple log linear model of the following form:

$$\text{Log } Y = b_0 + b_1 t$$

Where,

Log Y = natural log of real wages

b_0 = constant

b_1 = growth rate

t = time

Three yearly moving averages of wages have been used to calculate growth rates to do away with any seasonal fluctuations. To examine acceleration or deceleration in growth rates during the period under consideration a quadratic function of the following form has been used:

$$\text{Log } Y = b_0 + b_1 t + b_2 t^2$$

The positive sign of b_2 indicates an accelerating trend in growth rate, while a negative sign indicates a decelerating trend. In order to determine the possible year of shift in the wage rates the technique of dummy variable is used as done by Dholakia for examining shifts in growth rates in SDP (Dholakia 1980). For this analysis, regression model of the following form has been used:

$$\text{Log } Y = a + bt + c(t-t^*)D + u$$

Where,

Log Y = Natural log of real wages (male)

t = year

t^* = chosen year of shift

D = dummy variable taking value 1 for years after t^* and 0 otherwise

u = error term

b = growth rate

c = coefficient of shift from t^* onwards

Sign of c coefficient determines direction of shift.

Growth rates have been computed for two sub-periods, that is, 1981-82 to 1990-91 and 1991-92 to 2000-01. The first period represents the pre reform period while the second period represents the post reform period.

3.4. Region wise Trends in Agricultural Wages

High wage regions seem to concentrate in a few states like Punjab, Kerala and Haryana and a few regions like Plains and Hills of Assam, Central Bihar, Dry lands and Saurashtra region of Gujarat, North Eastern and Western Rajasthan, Himalayan Uttar Pradesh and Coastal Maharashtra. This feature persists throughout the twenty years period considered. During the nineties, Northern region and the Malwa Plateau of Madhya Pradesh and Western Uttar Pradesh have also emerged as high wage regions. The trends have been similar for both males and female labourers. High wages in these regions can be associated with both natural and institutional factors like favourable weather and soil conditions and better infrastructure in terms of irrigation, technology benefits and credit facilities. These factors contribute to high agricultural productivity and a consequent high demand for labour leading to higher wages.

At the regional level the rising trend in wages during the seventies as observed by Sarmah (2001) continued into the eighties (Table 3.2). Thus, growth rates of real wages for male agricultural labour during the eighties have shown a steady rise in all regions except the state of Himachal Pradesh, which has shown a negative trend. 32 out of the 58 regions considered have registered a growth rate above 5 percent. Northern Madhya Pradesh, Coastal, Inland western and Eastern Maharashtra and Western Uttar Pradesh have shown exceptionally high growth rates in real wages (above 10 percent per annum).

In case of female labourers the rise in real wages is not so apparent. 16 regions have shown a negative growth rate. Assam hills, Inland Karnataka, all three regions of Orissa and Inland Tamilnadu in particular show a very sharp decline in female real wage rates. On the other hand, 25 regions have registered a growth rate of above 5 percent in real female wages. Inland southern (Karnataka), Central Bihar, Saurashtra (Gujarat), both regions of Haryana, four out of the seven regions of Madhya Pradesh, Western Rajasthan and Southern Uttar Pradesh have a registered exceptionally high growth rate of above 15 percent per annum.

Table 3.2: NSS Region wise Log Linear Growth Rate of Male and Female Real Agricultural Wages in the Pre and Post Reform Period

STATE	NSS REGION	MALE WAGES		FEMALE WAGES	
		1980-81 to 1989-90	1990-91 to 1997-98	1980-81 to 1989-90	1990-91 to 1997-98
Andhra Pradesh	Coastal	4.3 (0.66)	2.6 (0.31)	-2.7 (0.14)	2.2 (0.16)
	Inland, northern	6.4 (0.87)	0.8 (0.06)	1.7 (0.05)	2.8 (0.45)
	South Western	7.7 (0.78)	-3.5 (0.56)	-3.8 (0.38)	-6.7 (0.50)
	Inland southern	2.3 (0.26)	-0.4 (0.00)	15.1 (0.96)	2.5 (0.14)
Assam	Plains' Eastern	2.4 (0.35)	-2.0 (0.21)	4.2 (0.80)	-4.2 (0.53)
	Plains western	5.6 (0.92)	-2.4 (0.50)	-9.9 (0.76)	-3.4 (0.62)
	Hills	5.9 (0.62)	N.A	-14.5 (0.87)	N.A
Bihar	Southern	6.5 (0.92)	1.8 (0.29)	8.8 (0.93)	2.2 (0.13)
	Northern	6.7 (0.80)	-1.8 (0.38)	4.2 (0.32)	0.2 (0.00)
	Central	4.9 (0.88)	-1.5 (0.11)	14.2 (1.00)	-1.4 (0.02)
Gujarat	Eastern	6.1 (0.02)	-4.8 (0.64)	1.0 (0.02)	-6.1 (0.77)
	Plains Northern	4.9 (0.57)	-1.3 (0.08)	-4.7 (0.62)	0.2 (0.00)
	Plains Southern	4.2 (0.70)	-5.5 (0.78)	0.9 (0.02)	-6.6 (0.30)
	Dry areas	6.2 (0.78)	5.1 (0.55)	1.3 (0.13)	2.6 (0.17)
	Saurashtra	0.3 (0.01)	6.0 (0.89)	16.0 (0.97)	2.7 (0.09)
Haryana	Eastern	2.8 (0.64)	1.8 (0.64)	15.8 (0.93)	4.7 (0.21)
	Western	1.2 (0.20)	N.A	21.7 (0.95)	8.7 (0.49)
Himachal Pradesh		-0.6 (0.01)	3.8 (0.71)	5.2 (0.34)	6.0 (0.34)
Karnataka	Inland Eastern	1.6 (0.05)	1.0 (0.04)	-14.6 (0.50)	-1.7 (0.01)
	Inland southern	5.6 (0.58)	22.7 (0.27)	-3.9 (0.41)	0.5 (0.00)
	Inland Northern	6.7 (0.76)	-5.8 (0.21)	8.3 (0.98)	-13.6 (0.39)
Kerala	Northern	3.7 (0.83)	4.9 (0.90)	3.5 (0.39)	9.0 (0.82)
	Southern	1.5 (0.35)	4.4 (0.67)	4.3 (0.25)	5.8 (0.20)
Madhya Pradesh	Chatisgarh	6.2 (0.88)	-0.7 (0.06)	9.4 (0.95)	-1.6 (0.28)
	Vindhya	5.0 (0.76)	1.0 (0.30)	23.4 (0.78)	0.7 (0.04)
	Central	5.8 (0.80)	3.1 (0.55)	14.4 (1.00)	0.6 (0.04)
	Malwa Plateau	5.3 (0.82)	2.0 (0.42)	11.4 (0.79)	4.6 (0.28)
	South Central	1.1 (0.06)	1.5 (0.16)	5.6 (0.92)	-0.3 (0.01)
	South Western	6.5 (0.90)	2.9 (0.66)	3.9 (0.49)	1.4 (0.06)
	Northern	11.1 (0.91)	-1.4 (0.45)	15.7 (1.00)	-2.1 (0.43)
Maharashtra	Coastal	13.4 (0.85)	3.4 (0.13)	8.2 (0.05)	N.A
	Inland Western	11.7 (0.70)	7.7 (0.67)	7.2 (0.68)	9.7 (0.61)
	Inland Northern	2.7 (0.26)	N.A	5.0 (0.42)	N.A
	Inland Central	9.8 (0.60)	N.A	N.A	N.A
	Inland Eastern	7.1 (0.76)	2.5 (0.18)	1.0 (0.10)	0.9 (0.13)
	Eastern	11.9 (0.69)	-1.1 (0.05)	2.1 (0.06)	-10.9 (0.93)
Orissa	Coastal	5.2 (0.74)	-4.4 (0.81)	-15.8 (0.93)	-0.5 (0.02)
	Southern	4.3 (0.48)	1.1 (0.12)	-10.4 (0.71)	3.7 (0.36)
	Northern	6.4 (0.93)	1.0 (0.06)	-0.3 (0.11)	2.2 (0.17)
Punjab	Northern	4.8 (0.79)	-1.2 (0.24)	11.5 (0.62)	N.A
	Southern	3.8 (0.75)	1.0 (0.14)	-5.8 (0.89)	N.A
Rajasthan	Western	1.4 (0.08)	-2.3 (0.17)	18.3 (1.00)	6.8 (0.43)
	North Eastern	3.2 (0.28)	3.7 (0.53)	5.7 (0.94)	3.8 (0.26)
	Southern	1.0 (0.14)	3.0 (0.29)	-2.6 (0.44)	3.9 (0.51)
	South Eastern	7.7 (0.81)	2.6 (0.30)	-2.6 (0.53)	0.9 (0.11)
Tamil Nadu	Coastal northern	6.6 (0.79)	3.8 (0.52)	6.6 (0.56)	3.5 (0.18)
	Coastal	0.4 (0.02)	9.1 (0.66)	9.2 (0.51)	9.8 (0.68)
	Inland	1.9 (0.54)	1.9 (0.17)	-9.3 (0.82)	1.2 (0.09)
	Southern	3.1 (0.47)	2.8 (0.39)	5.5 (0.64)	3.6 (0.47)
Uttar Pradesh	Himalayan	2.8 (0.16)	-0.6 (0.02)	-6.9 (0.57)	-15.7 (0.63)
	Western	11.5 (0.90)	-4.3 (0.58)	9.2 (0.51)	-19.2 (0.77)
	Central;	8.6 (0.90)	-2.7 (0.32)	10.4 (0.98)	-15.2 (0.76)
	Southern	5.8 (0.78)	3.7 (0.55)	28.9 (0.76)	N.A
	Eastern	4.0 (0.60)	-0.5 (0.02)	4.4 (0.79)	-13.0 (0.77)
West Bengal	Himalayan	5.1 (0.83)	-3.8 (0.26)	-5.7 (0.64)	1.8 (0.07)
	Eastern plains	7.3 (0.77)	-4.4 (0.48)	-5.8 (0.91)	-6.2 (0.57)
	Central Plains	7.4 (0.77)	-5.5 (0.5)	-6.0 (0.84)	-5.1 (0.36)
	Western Plains	6.2 (0.60)	-8.0 (0.74)	7.3 (0.55)	-10.7 (0.83)

Note: Figures in parentheses give R²

A noticeable feature of the wage trends in this period is that low wage regions such as those of Madhya Pradesh, Tamilnadu and Orissa have witnessed a rising trend while high wage regions like Kerala and Haryana show a low growth rate.

During the nineties a downtrend in real wages is noticeable, particularly so in case of male wage rates. 24 regions show a negative growth rate in real wages in case of male agricultural labourers. Most perceptible decline has been in Gujarat Plains, Inland Northern Karnataka, Coastal Orissa, Western Uttar Pradesh and all the four regions of West Bengal. High growth rates in real wages have been registered in Saurashtra, dry land region of Gujarat, Inland southern Karnataka, both regions of Kerala, Inland Western Maharashtra and Coastal Tamil Nadu. Dry areas of Gujarat and Southern Inland Karnataka show a high growth rate in both the time periods.

In case of female wage labourers the number of regions with a negative growth trend has risen from 16 in the eighties to 20 in the nineties. A rapid decline is evident in all the regions of Uttar Pradesh and West Bengal. Parts of Northern Inland Karnataka and Eastern Maharashtra have also witnessed a decline. Regions like South Western Andhra, Western Plains of Assam, Inland Eastern Karnataka, Coastal Orissa, Himalayan U.P and parts of West Bengal have witnessed a decline in both the time periods.

In Table 3.3, we have classified different regions into four categories according to rate of growth in wage rate for male rural labourers. As the Table shows there was only one state in the category showing negative growth in real wages during the eighties. The number of regions in this category increased considerably in the nineties (Table 3.3). Highest concentration of regions in both time periods is in the moderate growth category (growth rates between 0 to 5%). The number of regions registering high growth rate (over 5%) has come down sharply in the nineties-from 21 in the eighties to 5 in the nineties.

Table 3.4 presents similar classification for female agricultural labourers. The picture is more balance between the two time periods in case of female labourers. 18 regions fall in the first category (negative growth) in both time periods with some changes in composition. In case of the second category (0 to 5% growth) the number rises from 14 in the eighties to 19 in the nineties. During the eighties 13 regions showed a growth rate above 10 %, while none of the regions in the nineties was found in this category.

Table 3.3: Classification of NSS Regions According to Growth Rate of Male Agricultural Wages

Category	1980-81 to 1989-90	1990-91 to 1997-98
Negative Growth	Himachal Pradesh	A.P: South Western & Inland Southern Assam: Plains eastern & Plains western Bihar: Northern & Central Gujarat: Eastern, Northern & Southern Plains Karnataka: Northern Inland M.P: Chatisgarh, & Northern Maharashtra: Eastern Orissa: Coastal Punjab: Northern Rajasthan: Western U.P: Himalayan, Western, Eastern, & Central W.B: Himalayan, Eastern, Western & Central plains (all regions)
Moderate Growth (Between 0-5%)	A.P: Coastal, Inland Southern Assam: Eastern Plains Bihar: Central Gujarat: Northern & Southern plains Karnataka: Inland eastern Kerala: Northern & Southern M.P: South Central Maharashtra: Inland Northern Orissa: Southern Punjab: Northern & Southern Rajasthan : Western, North western & southern Tamilnadu: Coastal, Southern & Inland	A.P: Coastal & Inland northern Bihar: Southern Haryana: Eastern Himachal Pradesh Karnataka: Inland eastern Kerala: Northern & Southern M.P: Vindhya, Central, Malwa Plateau, South Central & South Western Maharashtra: Coastal & Inland eastern Orissa: Northern & Southern Punjab: Southern Rajasthan: North eastern, Southern & South eastern Tamilnadu: Coastal northern, Inland, Southern U.P: Southern
High Growth (Between 5 to 10%)	AP: Inland northern & South western Assam : Plains western & Hills Bihar: Northern & Southern Gujarat: Eastern & Dry areas Karnataka: Inland southern & Inland northern M.P: Chatisgarh, Vindhya, Central, Malwa plateau & South western WB : Himalayan, Eastern, Central & Western plains (all regions)	Gujarat: Dry areas, Saurashtra Maharashtra: Inland western Tamilnadu: Coastal
Very High Growth (Over 10%)	M.P: Northern U.P: Western	Karnataka: Inland southern

Source: Based on Table 3.2

Table 3.4: Classification of NSS Regions According to Growth Rate of Female Agricultural Wages

Category	1980-81 to 1989-90	1990-91 to 1997-98
Negative Growth	A.P: Coastal & South Western Assam: Western Plains & Hills Gujarat: Northern Plains Karnataka: Inland Eastern & Southern Orissa: Coastal, Southern & Northern all three Punjab: Southern Rajasthan: Southern & South Eastern Tamilnadu: Inland U.P: Himalayan W.B: Himalayan, Eastern & Central plains	A.P: South Western Assam: Eastern & Western Plains Bihar: Central Gujarat: Plains Southern Karnataka: Inland Eastern & Northern M.P: Chatisgarh & Northern Maharashtra: Eastern Orissa: Coastal U.P: Himalayan, Western, Central & Eastern W.B: Eastern, Western & Central Plains
Moderate Growth (Between 0-5%)	A.P: Inland Northern Assam: Eastern Plains Bihar: Northern Gujarat: Eastern, Northern and Southern Plains & Dry areas Kerala: Northern & Southern M.P: South Western Maharashtra: Northern and Eastern inland & Eastern U.P: Eastern	A.P: Coastal, Inland Northern & Southern Bihar: Southern & Northern Gujarat: Plains Northern , Dry Areas & Saurashtra Haryana: Eastern Karnataka: Inland southern M.P: Vindhya, Central, Malwa Plateau & south Western Maharashtra: Inland Eastern Orissa: Southern & Northern
High Growth (Between 5 to 10%)	Bihar: Southern Himachal Pradesh Karnataka: Inland Northern M.P: Chatisgarh & South Central Maharashtra: Coastal & Inland Western Rajasthan: North Eastern Tamilnadu: Coastal northern, Coastal & Southern U.P: Western W.B: Western Plains	Rajasthan: North Eastern, Southern & South Eastern Tamilnadu: Coastal, Inland, & Southern W.B: Himalayan Haryana: Western Himachal Pradesh Kerala: Northern & Southern Maharashtra: Inland Western Rajasthan: Western Tamil Nadu: Coastal
Very High Growth (Over 10%)	Bihar: Central MP: Central, Malwa Plateau, Northern, Vindhya Punjab: Northern U.P: Central, Southern A.P: Inland Southern Gujarat: Saurashtra Haryana: Eastern, Western Rajasthan: Western	

Source: Based on Table 3.2

3.5 State wise Trends in Agricultural Wages

Table 3.5 shows the results of the log linear growth rate for the pre and the post reform period. All India annual growth rates of real wages stood at 4% and 2.8% respectively for the two periods. During the eighties low wage rate states such as Orissa and Madhya Pradesh perform better than the high wage rate states, such as, Kerala and Haryana. Highest growth rate during this period was registered by West Bengal (7.2%) followed by Maharashtra (6.9), while the lowest growth rate was recorded by Haryana and Rajasthan (1.9).

During the post reform period a slow down in real wage rates is palpably visible. Only five states show an improvement in growth rate, the most significant being that of Kerala (from 2.2% to 7.7%) followed by Gujarat and Rajasthan. The decline in growth rates is found to be very marked in the states of West Bengal (from 7.2% in the eighties to -2.3% in the nineties), Punjab (3.9% to -0.6%) Assam (4.3% to 0.8%), Bihar (5.2% to 2.1%) and Uttar Pradesh (from 5.3% to 2.5%), all of which had registered a high growth in the eighties. In Andhra Pradesh and Madhya Pradesh also the growth rates of wages remained at a dismally low level in the nineties as compared to the eighties. Thus, out of the 15 states studied as many as 10, show a declining trend in real agricultural wages in the post reform period as compared to the pre reform period.

Table 3.5: State wise Log Linear Growth Rate of Male Real Agricultural Wages (Percent Per Annum)

States	1981-82 to 1990-91	1991-92 to 2000-01	1981-82 to 2000-01
Andhra Pradesh	4.2 (0.89)	1.5 (0.95)	2.3 (0.77)
Assam	4.3 (0.95)	0.8 (0.36)	1.4 (0.54)
Bihar	5.2 (0.87)	2.1 (0.80)	2.7 (0.77)
Gujarat	2.2 (0.57)	5.9 (0.88)	2.9 (0.76)
Haryana	1.9 (0.81)	2.9 (0.86)	3.1 (0.90)
Karnataka	5.5 (0.92)	4.4 (0.82)	3.0 (0.72)
Kerala	2.2 (0.95)	7.9 (0.98)	4.7 (0.90)
Madhya Pradesh	4.6 (0.92)	1.9 (0.93)	3.8 (0.91)
Maharashtra	6.9 (0.63)	2.8 (0.74)	3.5 (0.63)
Orissa	5.7 (0.95)	0.6 (0.14)	3.3 (0.82)
Punjab	3.9 (0.94)	-0.6 (0.39)	1.7 (0.62)
Rajasthan	1.9 (0.59)	2.9 (0.66)	2.6 (0.72)
Tamil nadu	3.3 (0.93)	5.3 (0.98)	4.2 (0.94)
Uttar Pradesh	5.3 (0.93)	2.5 (0.91)	3.3 (0.86)
West Bengal	7.2 (0.94)	-2.3 (0.44)	2.9 (0.52)
India	4.0 (0.95)	2.8 (0.94)	3.1 (0.96)

Note: Figures in parentheses give R²

Table 3.6 classifies states into four categories in terms of growth rates of wages in the two decades. The number of states in the high growth category (above 5% growth per annum) has come down from six in the eighties to just three in the nineties. Again the number of states in the middle growth category (between 2.5% and 5% per annum) has come down from six in the eighties to four in the nineties. On the other hand, the number of states in the low growth category (Below 2.5% per annum) has increased from four in the eighties to six in the nineties, while there was no state with a negative growth rate during the eighties, two states featured in this category during the post reform period.

Table 3.6: Classification of States According to Growth Rate of Male Agricultural Wages

Category	1980-81 to 1989-90	1990-91 to 1999-00
High Growth (Above 5%)	Bihar, Karnataka, Maharashtra, Orissa, Uttar Pradesh, West Bengal	Gujarat, Kerala, Tamilnadu
Moderate Growth (2.5 to 5%)	Andhra Pradesh, Assam, Madhya Pradesh, Tamil Nadu, Punjab	Haryana, Karnataka, Maharashtra, Rajasthan
Low Growth (0 to 2.5%)	Gujarat, Haryana, Rajasthan, Kerala.	Andhra Pradesh, Assam, Bihar, Madhya Pradesh, Orissa, Uttar Pradesh
Negative Growth		West Bengal, Punjab

Source: Based on Table 3.5

To further probe the issue whether there is a deceleration in growth rate of real agricultural wages in the post-reform period, we have fitted a quadratic function. Table 3.7 shows the results of the quadratic function for different states. The high values of R square show that the quadratic function fits well on the data series in all states except Assam. Negative values of b_2 were noticed in as many as 9 out of 15 states, namely, Andhra Pradesh, Assam, Bihar, Madhya Pradesh, Maharashtra, Orissa, Punjab, Uttar Pradesh and West Bengal. This indicates that the phenomenon of slowing down in growth rate of real wages was quite widespread during the nineties. The remaining 6 states, namely, Gujarat, Haryana, Karnataka, Kerala, Rajasthan and Tamilnadu show a positive sign of b_2 coefficient suggesting acceleration in growth rate in recent years. Thus,

the analysis based on quadratic function also confirms the conclusion regarding deceleration in growth rate of real agricultural wages drawn earlier on the basis of comparison of growth rates in the two sub-periods. This is clear from a glance at the diagramme showing quadratic curve fit on real wages for different states during the period 1980-81 to 2000-01 (Appendix).

Table 3.7: Quadratic Regression on Real Male Agricultural Wages: 1980-81 to 2000-01

States	b ₀	b ₁	b ₂	R square	F
Andhra Pradesh	1.07	0.06 (6.6)	-0.0015 (-4.1)	0.88	67.6
Assam	1.30	0.04 (4.1)	-0.0013 (-2.8)	0.68	20.0
Bihar	0.98	0.06 (4.7)	-0.0013 (-2.6)	0.83	45.2
Gujarat	1.24	0.00 (0.25)	0.0011 (1.8)	0.80	37.6
Haryana	1.68	0.03 (2.7)	0.0002 (0.49)	0.90	89.5
Karnataka	0.91	0.02 (1.4)	0.0002 (0.31)	0.72	24.7
Kerala	1.86	-0.01 (-0.9)	0.0024 (6.4)	0.97	270.0
Madhya Pradesh	0.69	0.07 (10.8)	-0.0016 (-5.5)	0.97	277.1
Maharashtra	0.75	0.09 (4.3)	-0.0025 (-2.7)	0.74	26.5
Orissa	0.70	0.07 (6.1)	-0.0017 (-3.4)	0.88	72.0
Punjab	1.58	0.06 (9.3)	-0.002 (-7.9)	0.89	79.4
Rajasthan	1.30	0.02 (1.2)	0.0003 (0.51)	0.73	25.6
Tamil nadu	0.93	0.03 (2.9)	0.0006 (1.5)	0.95	172.0
Uttar Pradesh	0.85	0.06 (5.7)	-0.0013 (-2.7)	0.90	84.2
West Bengal	0.95	0.11 (6.2)	-0.0035 (-4.7)	0.78	33.6
India	1.18	0.04 (5.3)	-0.0006 (-2.6)	0.97	293.6

Note: Figures in parentheses give T test

We have used the technique of dummy variable to determine the impact of economic reforms on real wages. The period 1980-81 to 1989-90 has been taken as the pre reform period and the period 1990-91 to 2000-01 represents the post reform period. Dummy variable is given zero value for the pre-reform period, while it takes value one for the post reform period. The results of the exercise are given in Table 3.8. Eleven out of the fifteen states considered show a negative sign for the dummy variable indicating a clear and widespread process of deceleration in growth rate of real wages. Only four states show an upward trend in the wages during the post reform period, namely, Gujarat, Kerala, Rajasthan and Tamilnadu. Overall the reform process has failed to generate the conditions required to bring about acceleration in agricultural wages.

$$D = \begin{cases} 0 & \text{Pre-RP} \\ 1 & \text{Post RP} \end{cases}$$

**Table 3.8: State wise Estimates of Trend Rates of Growth
During 1980-81 to 2000-01**

State	Trend Rate	Shift Parameter	R-Square
Andhra Pradesh	1.60 (8.4)	-0.76 (-3.9)	0.87
Assam	1.60 (5.7)	-1.0 (-3.5)	0.72
Bihar	1.50 (6.6)	-0.63 (-2.9)	0.83
Gujarat	0.46 (1.9)	0.46 (1.9)	0.80
Haryana	0.85 (5.1)	-0.10 (-0.61)	0.91
Karnataka	0.93 (3.2)	-0.09 (-0.3)	0.72
Kerala	0.34 (3.7)	0.66 (7.1)	0.97
Madhya Pradesh	1.40 (12.7)	-0.50 (-4.4)	0.96
Maharashtra	1.40 (4.9)	-0.7 (-2.3)	0.71
Orissa	1.6 (9.3)	-0.72 (-4.4)	0.91
Punjab	1.9 (10.3)	-1.20 (-6.7)	0.86
Rajasthan	0.77 (2.7)	0.10 (0.34)	0.73
Tamil nadu	0.77 (6.3)	0.23 (1.9)	0.95
Uttar Pradesh	1.40 (8.1)	-0.50 (-2.9)	0.90
West Bengal	1.90 (7.9)	-1.30 (-5.4)	0.81
India	1.20 (12.9)	-0.27 (-2.8)	0.97

Note: Figures in parentheses give t values

We have also made use of the technique to ascertain possible year of shifts in real agricultural wages between 1980-81 and 2000-01. The optimum division of time period is done by comparing the residual sum of squares (RSS) or R^2 , the year with the lowest RSS is taken as the year of shift as done by some scholars earlier (Dholakia 1980, Reddy et. al. 1998). The results are summarized in Table 3.9.

At the all India level the year of shift in trend line is 1986-87. For most of the states also shift seems to occur during the mid eighties. Andhra Pradesh, Bihar, Madhya Pradesh and Uttar Pradesh have the year of shift during the mid eighties (1985-87), while in Assam and Maharashtra shift took place in the late eighties 1987-89. In case of Orissa, Punjab and West Bengal declining trend starts in the early nineties. Among the states showing acceleration in wages Haryana, Kerala and Tamilnadu have the year of shift in the early nineties while Gujarat, Karnataka, and Rajasthan have it in the late nineties. The process of economic reform it seems had a limited impact on the wage rates in the rural areas. It was not able to combat the recession in real wages that had set in during the

mid eighties in the majority of states. Only a small number of states showed a positive impact of the reforms on rural wages.

Table 3.9: State wise Estimates of Trend Rates of Growth and Optimal Year of Shifts in Trend Rates

State	Trend Rate	Shift Parameter	Optimal Year of shift	R-Square
Andhra Pradesh	3.03 (10.2)	-2.2 (-7.4)	1986-87	0.84
Assam	2.33 (5.8)	-1.7 (-4.1)	1988-89	0.76
Bihar	2.90 (8.2)	-2.1 (-5.8)	1986-87	0.91
Gujarat	0.53 (4.2)	0.47 (3.75)	1996-97	0.87
Haryana	0.75 (3.5)	0.22 (1.02)	1989-90	0.91
Karnataka	0.71 (4.8)	0.22 (1.5)	1998-99	0.75
Kerala	0.43 (5.3)	0.60 (7.7)	1992-93	0.97
Madhya Pradesh	2.50 (8.9)	-1.6 (-5.6)	1985-86	0.97
Maharashtra	2.70 (6.9)	-1.9 (-5.1)	1987-88	0.84
Orissa	1.60 (9.3)	-0.72 (-4.4)	1991-92	0.91
Punjab	1.90 (10.3)	-1.2 (-6.7)	1992-93	0.89
Rajasthan	0.69 (4.8)	0.25 (1.7)	1998-99	0.76
Tamil nadu	0.63 (3.5)	0.36 (1.96)	1988-89	0.95
Uttar Pradesh	2.76 (6.6)	-1.8 (-4.5)	1985-86	0.93
West Bengal	1.60 (9.2)	-1.07 (-6.1)	1993-94	0.92
India	1.80 (11.2)	-0.84 (-5.2)	1986-87	0.98

Note: figures in parentheses give t values

3.6 Inter State variation in Real wages

Trends in inter-state variation in real wages have been examined by calculating the coefficient of variation for the years from 1980-81 to 2001-02 (Table 3.10). A waning tendency is observed in inter-state disparities in wage rates during the period 1980-81 till 1989-90, the coefficient of variation coming down from 37.24% to 28.3%. These trends are in agreement with the findings of Jose (1988) and Sarmah (2001). However, during the post reform period, that is from 1990-91 onwards, there is a continuous and fairly sharp rise in the coefficient of variation in real wages. The value of the coefficient of variation has risen from 29.65% in 1990-91 to 46.94% in 2001-02.

Table 3.10: Coefficient of Variation in Male Real Wages

Year	Coefficient of Variation (%)	Year	Coefficient of Variation (%)
1980-81	37.24	1991-92	30.75
1981-82	39.86	1992-93	37.95
1982-83	39.23	1993-94	32.05
1983-84	35.95	1994-95	34.26
1984-85	34.81	1995-96	35.58
1985-86	29.38	1996-97	39.95
1986-87	29.18	1997-98	42.94
1987-88	31.97	1998-99	43.35
1988-89	30.40	1999-00	40.18
1989-90	28.30	2000-01	44.68
1990-91	29.65	2001-02	46.94

Source Computed from Appendix Table A3

Section II

3.7 Trends Based Upon Rural Labour Enquiry Reports

In this section we have discussed the trends in real rural earnings based on the Rural Labour Enquiry Reports (RLE). RLEs provide data on average daily wage earnings of workers by dividing the earnings recorded for a week for each activity by corresponding number of full days of employment in that activity. The data thus does not show the prevailing wage rate. Earnings are reported for Agricultural Labour Households and Rural labour Households separately. The data is reported at the state level for males, females and children. The RLE Reports give earning data, including earnings in cash and kind, for different types of agricultural and non agricultural operations, such as, ploughing, sowing, transplanting, weeding, harvesting, cultivation, forestry, plantation, animal husbandry and fisheries.

For the purpose of our analysis we have used the average daily earnings of males and females for all classes for agricultural labour households (ALHH) as well as rural labour households (RLHH) in agricultural and non agricultural operations. We have used the total earnings including both cash and kind payments. The money earnings are converted into real earnings by deflating with CPIAL. Since our study concentrates on the trends in last two decades, we have used the reports for 1983, 1987-88, 1993-94 and 1999-00.

3.8. Trends in Real Earnings

Growth rates have been calculated for both ALHH as well as RLHH for both agricultural and non agricultural operations. Growth rates have been calculated for three points of time taking last four RLEs covering the period from 1983 to 2000. The real wage earnings in agricultural and non agricultural operations for both ALHH and RLHH during 1983-1999-00 are given in appendix Tables A7 and A8 respectively.

Earnings of ALHH, for both operations, appear to be at parity with the earnings of RLHH. Difference in agricultural and non agricultural operations is apparently not very high, though in certain states earnings for non agricultural operations are found to be marginally higher than earnings for agricultural operations.

Rise in earnings for agricultural operations was faster during the period between 1983 and 1987-88 than in the subsequent periods. At the all India level the rate of increase was 10 % per annum for both males and females in both categories. The figure for female workers in non agricultural operations was as high as 16%. During this period earnings nearly doubled in some states, namely, Himachal Pradesh, West Bengal, Orissa, Maharashtra and Madhya Pradesh. Trends are similar for ALHH and RLHH. After 1987-88, a slow down set in, this accelerated during the period 1993 and 1999-00. In case of non-agricultural operations, the picture is slightly different with the rise in earnings continuing till 1993. The rise in earnings of ALHH is more noticeable than of RLHH in case of non agricultural operations. Once again the better performing states are Bihar, Orissa, Himachal Pradesh and West Bengal. A slow down in earnings is observed thereafter in most of the states.

3.8.1 Trends in Agricultural Earnings

Table 3.11 shows the state wise growth rates of earnings in agricultural operations during different sub-periods. During the period 1983 to 1987-88 all states except Assam and Haryana for males and Kerala (both for males and females) register a growth rate above 5 % in case of agricultural operations. In case of males ten out of the sixteen states studied have shown a growth rate above 9% while for females the figure is still higher at 12% per annum. The performance of Himachal Pradesh has been exceptional, registering a growth rate above 20 % per annum. In the states of Bihar, Gujarat, Rajasthan and Punjab growth rate in earnings was higher for females than for males.

Table 3.11: State wise CAGR (%) of Real Wages for Agricultural Operations

States	Agricultural Labour Households						Rural Labour Households					
	Male			Female			Male			Female		
	1983 to 1988	1988 to 1994	1994 to 2000	1983 to 1988	1988 to 1994	1994 to 2000	1983 to 1988	1988 to 1994	1994 to 2000	1983 to 1988	1988 to 1994	1994 to 2000
Andhra Pradesh	8.9	3.7	4.4	5.0	4.2	3.1	7.7	3.8	3.6	5.2	4.3	2.6
Assam	3.7	2.4	1.8	2.3	1.1	2.1	5.7	2.2	0.7	3.3	1.3	1.0
Bihar	9.8	1.0	5.0	10.5	0.9	5.2	10.3	-5.1	11.0	11.4	0.7	4.5
Gujarat	5.1	3.0	3.5	9.9	2.8	1.4	6.1	3.0	2.9	10.8	2.6	1.3
Haryana	3.9	5.8	5.4	2.0	8.1	6.9	5.2	6.4	3.7	3.8	7.8	5.4
H.P	20.6	3.2	4.5	27.0	1.5	5.9	27.3	2.3	4.3	57.1	2.4	4.1
Karnataka	12.5	3.5	3.9	9.3	3.9	2.2	13.1	3.5	3.4	9.5	3.9	2.2
Kerala	6.6	3.5	6.0	4.4	2.6	4.9	7.9	3.4	5.0	6.0	2.5	4.3
Madhya Pradesh	11.5	3.1	1.4	12.0	2.4	1.7	12.0	3.0	1.3	12.7	2.4	1.4
Maharashtra	11.7	3.4	2.5	10.8	2.6	3.1	11.7	3.4	2.1	11.1	2.6	2.6
Orissa	12.8	3.7	0.9	9.4	3.1	1.7	13.6	3.7	0.8	9.6	3.4	1.5
Punjab	5.0	4.6	-0.1	8.5	10.4	6.3	5.5	4.6	-0.1	10.2	10.9	4.0
Rajasthan	5.6	6.8	2.4	16.6	4.8	1.3	6.7	6.3	2.8	19.4	4.1	1.7
Tamil Nadu	9.7	6.2	4.2	9.2	5.6	3.7	10.7	6.3	3.8	10.4	5.6	3.3
Uttar Pradesh	11.0	3.4	2.3	12.2	3.3	2.3	11.7	3.6	2.0	14.0	3.5	1.8
West Bengal	14.6	2.3	-2.4	13.9	1.7	-2.5	14.9	2.6	-2.3	14.3	1.3	-1.8
All India	10.2	3.6	2.4	9.8	2.9	2.2	10.7	3.6	2.1	10.6	3.0	1.9

Source: Rural Labour Enquiry Reports for 1983, 1987-88, 1993-94, 1999-2000.

For the two following two sub-periods, that is 1988-94 and 1994-00, a slow down is evident. The all India average annual rate of increase for males was 3.6% and 2.4% in the two sub-periods respectively, which is considerably lower than the growth rate of 10.2% recorded in 1983. For females the rate of growth slipped sharply from 9.8% during 1983-87 to 2.9% and 2.2% in the two subsequent periods respectively. During 1988-94 only Haryana, Rajasthan and Tamilnadu record a growth rate above 5% for males, while in Punjab both males and females registered growth rates above 5%. Bihar, Assam and West Bengal in particular performed poorly. During 1993-94 to 1999-2000, a slow down set in Rajasthan and Tamilnadu, while Haryana continued to register a growth rate above 5%. Bihar, Himachal Pradesh and Kerala, however, show signs of a recovery. In case of Punjab a note worthy feature has been a higher growth rate for females as compared to males for all the three points of time.

Trends in earnings for agricultural operations in case of RLHH are similar to those for ALHH. Once again during the mid eighties from 1983-1988 a majority of states register a high growth in earnings with a slump setting in the succeeding period. Low wage rate states of Bihar, West Bengal, Madhya Pradesh, Orissa and the southern states show a rise in earnings. Only Assam and Haryana (females) show a growth rate lower

than 5 %. In the following period the high wage rate states of Haryana and Kerala once again emerge as the states with the highest growth rates in real earnings, while slow down is observed in other states.

3.8.2. Non-Agricultural Earnings

Growth rates for non-agricultural operations are given in Table 3.12. In case of non agricultural earnings the period 1983 to 1987-88 was a high growth rate period, as was observed in case of agricultural operations. At the all India level, the growth rates for females (16.7% for ALHH and 11.1% for RLHH) were higher than for their male counterparts (10.2% for ALHH and 7.6% for RLHH). For ALHH only Gujarat, Kerala, Rajasthan, Tamilnadu show a growth rate lower than 5 % for males during this period. Highest growth rate for males has been registered by Orissa (23.6%) followed by Bihar (21.5%), West Bengal (18.6%) and Himachal Pradesh (18.4%). For females the growth rates are exceptionally high, with five states having a growth rate above 20 %. Haryana shows a phenomenal growth of 37.4% per annum in real earnings for females in this period. Only Rajasthan and Tamil Nadu show a growth rate below 5 %.

Table 3.12: State wise CAGR (%) of Real Wages for Non Agricultural Operations

States	Agricultural Labour Households						Rural Labour Households					
	Male			Female			Male			Female		
	1983 to 1988	1988 to 1994	1994 to 2000	1983 to 1988	1988 to 1994	1994 to 2000	1983 to 1988	1988 to 1994	1994 to 2000	1983 to 1988	1988 to 1994	1994 to 2000
Andhra Pradesh	15.3	5.2	1.6	13.8	3.2	1.7	5.3	5.6	3.7	9.6	4.6	3.0
Assam	9.2	4.7	0.4	16.0	-6.3	4.8	-0.4	4.6	-0.1	12.5	0.1	1.9
Bihar	21.5	1.2	5.1	21.3	4.9	-1.8	2.9	3.3	3.3	13.6	0.5	2.3
Gujarat	4.6	7.5	1.4	10.6	3.6	2.9	-2.9	10.4	-2.5	4.1	1.4	4.2
Haryana	10.5	6.4	5.8	37.4	-3.0	3.2	10.5	4.1	3.6	0.9	-1.5	4.3
H.P	18.4	2.3	4.6	N.A	N.A	N.A	5.7	3.7	4.7	N.A	-4.2	N.A
Karnataka	7.5	7.2	3.2	15.2	5.0	7.1	4.6	6.3	3.8	15.2	6.0	2.1
Kerala	3.2	8.5	4.9	20.2	0.1	6.9	1.0	8.5	4.0	10.4	5.4	3.1
Madhya Pradesh	10.3	4.2	1.9	17.5	0.8	-0.1	8.4	2.5	4.8	14.5	3.3	-2.6
Maharashtra	7.9	4.7	5.9	10.6	4.3	-2.2	3.8	8.4	4.3	9.6	6.2	5.0
Orissa	23.6	3.7	0.9	24.8	3.3	2.2	13.1	5.0	1.6	14.4	1.2	4.8
Punjab	6.9	7.2	1.1	24.5	2.1	8.5	3.8	5.6	1.4	3.6	1.5	5.3
Rajasthan	2.7	7.3	-1.6	5.8	-4.7	12.8	-1.6	9.0	2.1	3.2	3.5	3.4
Tamil Nadu	3.3	8.5	4.7	6.7	2.9	7.7	2.4	7.8	6.2	4.8	N.A	4.7
Uttar Pradesh	8.1	5.8	0.8	18.3	4.3	3.9	5.5	5.6	1.4	10.8	3.3	4.1
West Bengal	18.6	3.4	-0.9	19.7	3.0	0.2	11.5	4.0	-1.7	18.7	-2.5	6.4
All India	10.2	5.8	3.0	16.7	2.1	3.7	4.2	7.6	2.9	11.9	10.1	3.0

Source: Computed appendix Table 8A

During the following sub-periods the experience is similar to that of agricultural wages, a slow down sets in with the all India average (males) coming down to 5.8% in 1988-94 and to a still lower to 3% in 1994-00. For females the picture is slightly different with the figure for 1988-94 at 2.1%, while for 1994-00 is slightly higher at 3.7%. During 1988-94 nine states show a growth rate between 5% to 10%, while for females none of the states have a growth rate above 5 %. In fact, three states namely Assam, Haryana and Rajasthan have registered a negative growth rate. States of Gujarat, Karnataka, Maharashtra and Uttar Pradesh performed relatively better. During 1994-00, states of Rajasthan and West Bengal (males) and Bihar, Madhya Pradesh and Maharashtra (females) have registered a negative growth rate. States with relatively higher growth rates have been those of Haryana, Bihar, Kerala and Maharashtra (for males) and Karnataka, Kerala, Punjab, Rajasthan and Tamil Nadu (for females). Nine states have registered a higher growth rate for female earnings as compared to male earnings, notably Karnataka, Punjab and Rajasthan.

Trends in growth rates for RLHH once again reflect the findings for ALHH. The period from 1983-88 has been a high growth rate period for both males and females, however the rise was more apparent in case of ALHH than RLHH, Assam, Gujarat and Rajasthan (males) have recorded a negative growth rate. A significant feature for RLHH has been a higher growth rate at the all India level for females for all three points of time. Assam, Gujarat and Rajasthan (males) had a negative growth rate during the first period, while for females a high growth rate was registered by all states except Haryana. For the second period the situation reverses with males recording a high growth rate in all states while females having a negative growth rate for Haryana, H.P and West Bengal. Between 1994-00 a slow down is striking with a negative growth rate for Assam, Gujarat and West Bengal (males) and Madhya Pradesh (Females).

We have also calculated the growth rates for the pre and post reform period to get an insight into the impact of the reform process on rural wages. The period 1983-94 has been considered as the pre reform period, while the period 1994-2000 is treated as the post reform period. Results have been shown in Table 3.13.

Table 3.13: State-wise CAGR (%) of Real Earnings in the Pre and Post Reform Period

States	Agricultural Labour Households								Rural Labour Households							
	Agricultural Operations				Non Agricultural Operations				Agricultural Operations				Non Agricultural Operations			
	Male		Female		Male		Female		Male		Female		Male		Female	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
A.P.	7.1	4.4	5.5	3.1	11.2	1.6	9.0	1.7	6.5	3.6	5.6	2.6	6.6	3.7	6.9	3.0
Assam	3.6	1.8	1.9	2.1	7.9	0.4	2.9	4.8	4.4	0.7	2.5	1.0	3.0	-0.1	7.5	1.9
Bihar	5.5	5.0	5.8	5.2	11.2	5.1	13.8	-1.8	1.2	11.0	6.1	4.5	3.8	3.3	8.3	2.3
Gujarat	4.7	3.5	6.9	1.4	7.6	1.4	7.8	2.9	5.1	2.9	7.2	1.3	5.6	-2.5	5.0	4.2
Haryana	6.0	5.4	6.7	6.9	9.8	5.8	14.7	3.2	7.2	3.7	7.3	5.4	8.1	3.6	3.5	4.3
H.P.	12.2	4.5	13.8	5.9	10.5	4.6	N.A	N.A	14.7	4.3	27.3	4.1	5.5	4.7	14.3	N.A
Karnataka	8.7	3.9	7.4	2.2	8.9	3.2	11.1	7.1	9.0	3.4	7.5	2.2	6.8	3.8	9.0	2.1
Kerala	5.7	6.0	4.0	4.9	7.6	4.9	9.8	6.9	6.4	5.0	4.7	4.3	6.4	4.0	7.4	3.1
M.P.	7.9	1.4	7.6	1.7	8.1	1.9	9.0	-0.1	8.1	1.3	7.9	1.4	5.9	4.8	5.0	-2.6
Maharashtra	8.2	2.5	7.1	3.1	7.3	5.9	8.3	-2.2	8.2	2.1	7.3	2.6	7.9	4.3	8.3	5.0
Orissa	9.0	0.9	6.9	1.7	14.1	0.9	14.2	2.2	9.4	0.8	7.2	1.5	10.1	1.6	10.6	4.8
Punjab	5.7	-0.1	11.7	6.3	8.5	1.1	13.2	8.5	6.0	-0.1	12.9	4.0	5.8	1.4	5.5	5.3
Rajasthan	7.6	2.4	11.6	1.3	6.5	-1.6	-0.6	12.8	7.9	2.8	12.4	1.7	5.4	2.1	4.0	3.4
Tamil Nadu	9.3	4.2	8.6	3.7	7.7	4.7	5.4	7.7	9.8	3.8	9.1	3.3	6.7	6.2	5.7	4.7
Uttar Pradesh	7.9	2.3	8.3	2.3	8.2	0.8	12.0	3.9	8.4	2.0	9.4	1.8	6.7	1.4	8.2	4.1
West Bengal	8.7	-2.4	8.0	-2.5	11.5	-0.9	11.6	0.2	9.1	-2.3	7.9	-1.8	8.5	-1.7	13.8	6.4
All India	7.6	2.4	6.9	2.2	9.2	3.0	9.6	3.7	7.9	2.1	7.3	1.9	7.4	2.9	8.0	3.0

Source: computed from appendix Tables 7A and 8A

Note: 1. Pre-Reform period refers to 1983-94

2. Post-Reform period refers to 1994-00

At the all India level, a deceleration in the post reform period is evident with the growth rates averaging around 3 % during the period, down from the 8% in the previous period for all categories and for both males and Females. Only Kerala and Haryana in case of ALHH in agricultural operations show an improvement in growth rates during the post reform period. The slow down is most marked in case of West Bengal in all categories, Punjab males in agricultural operations, Rajasthan males (ALHH) in non agricultural operations, Bihar, Maharashtra (ALHH) and M.P (both categories), females in non agricultural operations and Assam and Gujarat, males (RLHH) in non agricultural operations. All these states have recorded a negative growth rate during the post reform period. The results thus once again substantiate the findings based on AWI data, which also show a slow down in growth rate of real wages in the post reform period.

3.8.3 Differentials in Earnings in Agricultural and Non-agricultural Operations

We now look at the trends in the disparity in earnings in agricultural and non-agricultural operations. Table 3.14 shows the ratio of non-agricultural wages to agricultural wages for ALHH and RLHH in different years.

Table 3.14: State wise Ratio of Non Agricultural Real Earnings to Agricultural Real Earnings: 1983-2000

States	Agricultural labour Households								Rural Labour Households							
	Male				Female				Male				Female			
	1983	1987 to 1988	1993 to 1994	1999 to 2000	1983	1987 to 1988	1993 to 1994	1999 to 2000	1983	1987 to 1988	1993 to 1994	1999 to 2000	1983	1987 to 1988	1993 to 1994	1999 to 2000
A. P	0.8	1.1	1.2	1.1	0.7	1.1	1.0	1.0	1.3	1.2	1.3	1.3	0.9	1.1	1.1	1.2
Assam	0.9	1.1	1.3	1.2	0.6	1.1	0.6	0.8	1.5	1.1	1.3	1.2	0.6	0.9	0.9	0.8
Bihar	0.7	1.2	1.2	1.3	0.7	1.0	1.4	0.9	1.7	1.2	2.2	1.3	1.0	1.1	1.2	0.9
Gujarat	1.1	1.0	1.4	1.2	0.9	1.0	1.0	1.1	1.7	1.1	1.8	1.2	1.3	1.0	1.1	1.1
Haryana	0.9	1.3	1.3	1.4	0.3	1.3	0.6	0.5	1.2	1.6	1.3	1.3	1.1	1.0	0.8	0.5
H. P	1.4	1.3	1.2	1.2	0.7	N.A	N.A	0.9	2.7	1.1	1.2	1.2	5.4	N.A	1.8	1.0
Karnataka	1.3	1.1	1.3	1.3	0.9	1.2	1.3	1.9	1.8	1.2	1.5	1.5	1.1	1.4	1.2	1.6
Kerala	0.9	0.8	1.1	1.1	0.4	0.8	0.6	0.8	1.2	0.9	1.2	1.1	0.6	0.7	0.7	0.8
M. P	1.3	1.3	1.4	1.4	1.0	1.3	1.2	1.0	1.6	1.4	1.3	1.7	1.2	1.3	0.9	1.1
Maharashtra	1.3	1.1	1.2	1.5	1.3	1.3	1.4	1.0	1.8	1.2	1.7	2.0	1.3	1.2	1.5	1.9
Orissa	0.7	1.2	1.2	1.2	0.6	1.1	1.1	1.2	1.2	1.2	1.3	1.3	0.9	1.1	1.2	1.2
Punjab	0.8	0.9	1.0	1.1	0.4	0.8	0.5	0.6	1.0	1.0	1.0	1.1	1.3	0.9	0.7	0.6
Rajasthan	1.3	1.1	1.1	0.9	1.6	1.0	0.5	1.1	1.6	1.1	1.3	1.2	2.0	1.0	0.9	1.0
Tamil Nadu	1.3	0.9	1.1	1.2	1.1	1.0	0.8	1.1	1.6	1.1	1.2	1.4	1.3	1.0	1.0	N.A
U.P	1.4	1.2	1.4	1.3	0.8	1.0	1.1	1.2	1.6	1.2	1.4	1.3	1.4	1.2	1.2	1.4
West Bengal	0.8	1.0	1.1	1.2	0.5	0.7	0.8	0.9	1.3	1.1	1.2	1.3	0.5	0.6	0.9	0.9
All India	1.1	1.1	1.3	1.3	0.8	1.1	1.1	1.2	1.6	1.2	1.5	1.6	1.1	1.1	1.1	1.2*

Source: Computed from appendix Tables A7 and A8

Note: Calculations based on RLE report shows this figure as 2.0, which is obviously erroneous. Therefore, we have taken weighted average of state figures to arrive at the figure for India.

Overall, non-agricultural wages are found to be higher than agricultural wages, except in a few cases. In Haryana the ratio was as low as 0.3 in case of female ALHH in 1983. Kerala, Rajasthan and Punjab the ratio is low in case of females. In the states of Assam, Haryana, Kerala, Punjab and West Bengal agricultural earnings have been generally higher than non agricultural wages particularly for females. On average non-agricultural earnings are 1.3 times the agricultural wages.

Furthermore, the reform period shows a rising tendency in wage disparities. At the All India level the ratio has risen from 1.1 in 1983-84 to 1.3 in 1999-00 for ALHH males, while for females it has risen from 0.8 to 1.2 during the same period. In case of

RLHH male workers the ratio first declined between 1983 to 1987-88 from 1.6 to 1.2 and then regained its original value of 1.6 in 1999-00, while for females the ratio remained unchanged at 1.1 up till 1993-94, but then rose slightly to 1.2 in 1999-00.

3.9. Inter State Variations in Earnings

It is well known that very large inter-state differentials in rural wages and earnings exist in the country. Trends in inter-state variations in rural earnings have been examined with the help of the coefficient of variations. Table 3.15 presents the values of the coefficient of variations across states for four points of time between 1983 and 1999-00.

Table 3.15: Coefficient of Variation in Real Wage Earnings in Different States (%)

Category	Earnings in Agricultural Operations							
	Male				Female			
	1983	1987-88	1993-94	1999-00	1983	1987-88	1993-94	1999-00
ALHH	40.6	29.6	29.7	35.3	43.6	30.7	30.8	40.3
RLHH	40.1	29.5	32.2	34.7	48.7	31.3	31.7	38.4
Earnings in Non Agricultural Operations								
ALHH	31.5	21.2	23.0	31.6	32.6	20.7	18.2	24.0
RLHH	27.6	20.6	22.7	28.0	25.1	15.7	37.7	24.6

Source: Computed from appendix Tables A7 and A8

Coefficient of variation in real wage earnings in agricultural operations showed a decline between 1983 to 1993-94 for both categories for both males as well as females. For males C.V declined from 40% in 1983 to 30 % in 1993-94, but once again rose to 35% in 1999-00. Variation was observed to be higher for females. Similar trends in inter-state wage disparity were observed for females as in the case of males. Though there is a rise in CV in the post reform period, it is still lower in 1999-00 than what it was in 1983.

In case of non agricultural earnings the trend is similar as for agricultural earnings with variations first declining and then rising again in 1999-00. The C.V for males (ALHH) after rising initially has comedown to the same level in 1999-00 as it was in 1983. Variation in earnings in non-agricultural operations is lower as compared to the variation in earnings in agricultural operations. In case of females for ALHH the trend is similar to that of males with the C.V coming down from 32% in 1983 to 18% in 1993 and then rising again to 24% in 1999-00. The pattern for RLHH females is somewhat

different as C.V first declined from 25% to 15% between 1983 and 1987-88 and then more than doubles to 38% in 1993 and then once again came down to 25% in 1999-00.

Considering the period as a whole there has been a decline in inter-state variation in real earnings of rural workers. However, the reform period seems to have witnessed a rise in CV. This is in tune with the earlier finding based on the analysis of AWI data.

3.10 Gender Disparities in Earnings

Gender disparity in earnings has been analyzed on the basis of ratio of female earnings to male earnings. Trends in gender disparity in earnings for agricultural operations have been presented in Table 3.16, while Table 3.17 shows the trends for non agricultural operations.

Table 3.16: State wise Female-Male Ratio of Real Earnings in Agricultural Operations (Percent)

States	Agricultural Labourer Households				Rural Labourer Households			
	1983	1987-88	1993-94	1999-00	1983	1987-88	1993-94	1999-00
Andhra Pradesh	83.37	69.33	71.77	66.7	77.88	69.00	71.18	66.56
Assam	98.72	92.18	83.99	85.8	101.7	94.44	88.51	90.47
Bihar	85.19	87.89	87.43	88.4	84.29	89.02	88.22	88.21
Gujarat	78.86	98.38	96.95	85.4	78.73	97.75	95.56	85.73
Haryana	80.10	73.27	85.27	92.6	77.93	72.56	79.31	88.74
Himachal Pradesh	70.98	91.69	81.77	88.5	31.88	90.69	90.73	89.74
Karnataka	83.70	72.46	74.33	67.3	84.25	71.39	73.59	67.49
Kerala	81.51	73.48	69.42	65.3	81.36	73.92	69.20	65.83
Madhya Pradesh	85.59	88.06	83.64	85.1	85.29	87.87	83.86	84.77
Maharashtra	68.63	65.61	62.29	64.7	67.32	65.61	62.28	64.61
Orissa	89.50	76.52	73.74	77.3	91.26	76.17	74.17	77.76
Punjab	49.29	58.21	85.19	124.1	47.01	58.48	87.71	116.38
Rajasthan	58.37	95.22	83.60	78.3	53.97	94.32	81.56	75.70
Tamil Nadu	64.60	63.01	60.45	58.8	64.02	62.93	60.10	58.21
Uttar Pradesh	73.74	77.53	76.43	76.8	70.08	77.07	76.75	75.87
West Bengal	93.20	90.13	86.68	85.9	92.50	90.38	82.31	85.22
All India	75.42	74.31	71.13	70.7	74.73	74.52	71.24	70.40

Source: Computed from appendix Tables 7A and 8A

At the all India level the female-male earning ratio showed a consistent decline between 1983 (75%) and 1999-00 (70.7%), indicating a widening of gender disparities. The trends are similar for ALHH and RLHH. States of Maharashtra and Tamil Nadu have very low ratio signifying a higher gender disparity in rural earnings in these states. Nine states showed a decline in the ratio between 1983 to 1987-88. Highest fall was in case of Orissa, Assam, Andhra Pradesh and Kerala, while the highest gain was recorded in

Punjab, Rajasthan and Gujarat. Seven states show a decline in earnings ratio between 1993-94 and 1999-00, with Gujarat showing the highest fall. States of Punjab and Rajasthan have shown a major improvement in ratio, indicating a decline in gender disparity in earnings.

Table 3.17: State wise Female-Male Ratio of Real Earnings in Non-Agricultural Operations (Percent)

States	Agricultural Labourer Households				Rural Labourer Households			
	1983	1987-88	1993-94	1999-00	1983	1987-88	1993-94	1999-00
Andhra Pradesh	74.08	69.12	60.45	60.67	55.07	67.63	56.70	60.38
Assam	63.94	86.28	39.85	53.45	39.65	73.20	60.70	61.45
Bihar	77.04	76.19	97.57	60.45	49.35	80.68	75.67	62.81
Gujarat	68.90	90.89	69.93	77.67	63.20	89.18	59.17	78.01
Haryana	25.78	76.80	40.14	33.83	71.59	45.58	45.94	32.19
Himachal Pradesh	37.66	N.A	N.A	62.58	63.47	N.A	142.20	76.55
Karnataka	58.97	83.58	72.33	93.58	49.32	79.87	60.38	69.76
Kerala	33.63	72.67	41.23	47.20	38.90	60.83	42.50	46.60
Madhya Pradesh	66.16	90.25	71.61	62.21	65.45	86.30	60.28	54.49
Maharashtra	67.54	76.75	74.33	42.69	51.32	67.02	53.41	60.87
Orissa	71.02	73.95	72.03	78.73	67.88	71.99	71.28	69.17
Punjab	26.64	57.17	40.71	66.67	57.82	57.24	56.16	56.29
Rajasthan	73.45	84.83	37.05	96.68	67.23	85.19	58.89	64.94
Tamil Nadu	56.33	65.98	45.55	55.55	51.80	58.16	47.41	N.A
Uttar Pradesh	41.79	65.22	59.27	73.10	59.16	75.29	68.00	77.51
West Bengal	60.49	63.06	61.25	66.36	37.48	51.23	60.09	56.72
All India	58.20	77.42	60.15	63.01	50.89	72.64	53.73	86.46*

Source: Computed from appendix Tables A7 and A8

*Note: The high ratio appears to be erroneous because of some discrepancy in RLE data.

The female-male earning ratio for non-agricultural operations is still lower as compared to that for agricultural operations, implying a higher gender disparity in earnings in non-agricultural operations. At the all India level the ratio showed a major improvement between 1983 to 1987-88. However, thereafter a decline set in with a revival in 1999-00. For the entire period, there has been a visible decline in gender disparity in earnings of rural labourers at the national level. However, some differences in the pattern of change are observed among states. Between 1983 to 1987-88 Andhra Pradesh, Assam, Rajasthan and Tamil Nadu showed a major decline in ratio while Bihar, Haryana, Karnataka, Punjab and Uttar Pradesh showed an improvement. During 1993-94 to 1999-00 Bihar, Haryana, Madhya Pradesh and Maharashtra showed a decline, while a

high rise in ratio was experienced by Assam, Karnataka, Punjab, Rajasthan, Uttar Pradesh and Tamil Nadu.

Table 3.18 shows the rank of states in terms of female-male earning differentials in 1983 and 1999-00. States showing an improvement in ranking between 1983 and 1999-00 for ALHH agricultural operations are Bihar, Gujarat, Haryana, H.P, Punjab and Rajasthan, indicating a decline in gender disparity in earnings. Highest gain has been that of Punjab that has come up from the lowest to the top most, while several other states witnessed a widening of disparity. States showing a fall in ranks are A.P, Assam, Karnataka, Kerala, M.P, Maharashtra, Orissa T.N and W.B., while rank of U.P remained unchanged. In case of RLHH states showing an improvement are Bihar, Gujarat, H.P, Haryana, Rajasthan, Punjab and Uttar Pradesh. States showing a decline are Andhra Pradesh, Karnataka, Kerala, M.P, Maharashtra, Orissa, T.N and W.B, while rank for Assam remains unchanged.

Table 3.18: Ranking of States in Terms of Gender Differentials in Earnings

States	Agricultural Operations				Non- Agricultural Operations			
	ALHH		RLHH		ALHH		RLHH	
	1983	1999-00	1983	1999-00	1983	1999-00	1983	1999-00
Andhra Pradesh	7	13	1	13	2	10	9	10
Assam	1	6	2	2	8	13	14	8
Bihar	5	4	6	5	1	11	12	7
Gujarat	10	7	9	6	5	4	6	1
Haryana	9	2	10	4	16	16	1	15
H.P	12	3	16	3	13	8	5	3
Karnataka	6	12	7	12	10	2	13	4
Kerala	8	14	8	14	14	14	15	14
M.P	4	8	5	8	7	9	4	13
Maharashtra	13	15	12	15	6	15	11	9
Orissa	3	10	4	9	4	3	2	5
Punjab	16	1	15	1	15	6	8	12
Rajasthan	15	9	14	11	3	1	3	6
Tamil Nadu	14	16	13	16	11	12	10	N.A
Uttar Pradesh	11	11	11	10	12	5	7	2
West Bengal	2	5	3	7	9	7	16	11

Note: Ranks are in ascending order, higher ratio of female/male earnings higher the rank.

Source: Computed

In case of non-agricultural operations (ALHH), states showing an improvement in ranking between 1983 and 1999-00 are Gujarat, H.P, Karnataka, Orissa, Punjab, Rajasthan, U.P and W.B. States showing fall in rank are Andhra Pradesh, Assam, Bihar, M.P, Maharashtra and Tamil Nadu, while the rank for Haryana and Kerala remained unchanged. In case of RLHH states showing an improvement are Assam, Bihar, Gujarat, H.P, Karnataka, Kerala, Maharashtra, U.P and W.B. States showing a decline are Andhra Pradesh, Haryana, M.P, Orissa, Punjab, Rajasthan and T.N.

The pattern of change has been summarized in Table 3.19. Overall Himachal Pradesh has been showing an improvement in its rankings, followed by Bihar, U.P and Punjab, while Andhra Pradesh, Madhya Pradesh, Maharashtra, Tamil Nadu and Kerala have been showing a decline. In case of agricultural operations states with greater degree of gender equity are those of West Bengal, Himachal Pradesh, Bihar, Madhya Pradesh and Gujarat. Punjab and Rajasthan show a rapid movement towards greater equality. Higher disparity is found in states of Kerala, Maharashtra, Orissa, Tamil Nadu, Karnataka, Andhra Pradesh and Uttar Pradesh. In case of non-agricultural operations, greater equality in earnings is found in the states of Karnataka, Gujarat, Madhya Pradesh and to an extent in Orissa and West Bengal. Kerala, Punjab, Tamil Nadu and Haryana, on the other hand, show higher gender disparity in earning levels.

Table 3.19: States Showing Improvement/decline in Ranking in Gender Disparity Between 1983 and 1999-00

Agricultural Labourer Households				Rural Labourer Households			
Agricultural Operations		Non-Agricultural Operations		Agricultural Operations		Non-Agricultural Operations	
Rise	Decline	Rise	Decline	Rise	Decline	Rise	Decline
Bihar	A.P	Gujarat	A.P	Bihar	A.P	Assam	A.P
Gujarat	Assam	H.P	Assam	Gujarat	Karnataka	Bihar	Haryana
H.P	Karnataka	Karnataka	M.P	H.P	Kerala	Gujarat	M.P
Haryana	Kerala	Orissa	Maharashtra	Haryana	M.P	H.P	Orissa
Punjab	M.P	Punjab	T.N	Punjab	Maharashtra	Karnataka	Punjab
Rajasthan	Maharashtra	Rajasthan		Rajasthan	Orissa	Kerala	Rajasthan
	Orissa	U.P		U.P.	T.N	Maharashtra	T.N
	T.N	W.B			W.B	U.P	
	W.B					W.B	

Source: Based on Table 3.18

Section III

3.12 Determinants of Agricultural Wages

Determination of agricultural wages has been an area of interest for long for development economists. Economists like Leibenstein (1958), Mirrlees (1975) and Stiglitz (1975) approached the problem largely in terms of coexistence of surplus labour and rigid wages and developed what came to be known as the 'efficiency wage theory'. The theory, which was first proposed by Leibenstein and carried further by others, assumes a strong relationship between the levels of wages and effort per unit of time whereby there is a unique wage that minimizes the cost per unit of labour effort. However, the approach poses problems in empirical testing as it assumes homogeneity of efforts irrespective of the work involved as observed by Narayanmoorthy and Deshpande (2003).

Another approach has been the 'insider-outsider theory' of Lindbeck and Snower (1988). This, however, is believed to have limited applicability in an irrigated agricultural region. The 'implicit cooperation theory' of Osmani (1988) gives an explanation into the prevalence of higher wages in irrigated areas in terms of the timeliness of operation in such areas. Still another approach has been in terms of linking access to land, labour and capital with determination of labour and wages whereby determination of wages has been in terms of contractual arrangements and the transaction costs associated with it (Binswanger and Rosenzweig 1984). The main advantage of these models as pointed out by Sarmah (2001) has been a coherent integrated model for inter related markets for land, labour and credit.

In the Indian context the most common approach for wage determination has been the neoclassical demand and supply framework. Forces of demand and supply simultaneously determine wages. As Acharya (1994) has observed "*agricultural wages are determined in accordance with the prevalent productivity and product market buoyancy*". Productivity has been considered a dominant factor on the demand side, while on the supply side size of agricultural labour force and proportion of non-agricultural labour force have been used to explain determination of agricultural wages.

Lal (1976) used percent increase in cereal output and percent increase in agricultural labour force, while Jose (1988) used only agricultural product per worker as determinants of agricultural wages. During the nineties diversification of rural labour force was identified as an important factor in explaining agricultural wages. Sheila Bhalla (1993) and Parthasarthy (1996), for example, used share of non-agricultural workers along with labour productivity as explanatory variables in their models of wage determination. Landlessness and land-labour ratio have also been used as explanatory variables by some economists, e.g., Parthasarthy (1996), Haque (1998) and H.R Sharma (2001). More recently, Sarmah (2002) used urbanization, male literacy and child mortality as added variables to explain wage determination of agricultural workers. Broadly, productivity variables like per worker output or per hectare output along with irrigation and rural diversification have emerged as key determinants of wages. Human development related variables like male literacy and life expectancy have also been found to play a positive role in wage determination.

A large number of determinants of agricultural wages have been used in the earlier studies by different scholars. These may be classified can be divided into three groups: (a) demand side variables, (b) supply side variables and (c) variables influencing quality of labour. A brief discussion of these variables and their expected relationship with agricultural wages is given below.

Demand side variables

- *Irrigation*: is a proxy for productivity and is expected to lead to higher demand for labour as it increases cropping intensity and shifts cropping pattern in favour of labour intensive crop.
- *Food grain yield*: is also a proxy for agricultural productivity. It, however, leaves out commercial crops, which are more remunerative
- *NSDPAG per worker or per ha*: reflects agricultural productivity more comprehensively.
- *Average size of Holding*: reflects the scale of operation and hence the demand for labour as also the pressure on agricultural land.
- *Percentage of area under medium and large holdings*: has a same implication as average size of holding.

All the demand side variables mentioned above are expected to have a positive impact on level of agricultural wages. Higher irrigation area raises agricultural productivity resulting in higher demand for hired labour resulting in a rise in wages. Similarly, a rise in size of holding or alternatively a larger proportion of cultivated area under medium and large holdings would cause a rise in demand for hired labour. Supply of family labour would also be less in case of such households due to relative opulence or higher education level. Besides, the paying capacity of such farm owners would also be higher.

Supply side variables

- *Proportion of non-agricultural workforce*: reflects rural diversification and overall rural development, improved infrastructure and availability of alternative means of employment.
- *Urbanisation (% urban population)*: would also have similar implications as non agricultural workforce.
- *Proportion of Landless ALHH in total RHH*
- *Proportion of ALHH in total RHH*
- *Proportion of Agricultural labour / total rural labour*
- *Agricultural labour/ GSA or*
- *NSA / Rural person.*

A rise in the proportion of non-agricultural workers in the rural workforce or urbanisation ratio would reduce supply of labour for agricultural operations, resulting in a tightening of the agricultural labour market. With a given demand for agricultural hired labour, this would result in a rise in agricultural wages. On the other hand, a rise in proportion of agricultural labour households or landless AL/ ha would result in an increase in supply of rural labour, which would depress wages as increased supply with limited means of livelihood would reduce the bargaining power of agricultural labour. NSA/ rural person is an indicator of availability of land in relation to population as well as income per person affecting demand for labour. The demand for labour of any region is expected to be higher where NSA/rural person is higher. This variable is expected have a positive relationship with wage rate.

Quality of labour

Quality of labour is reflected by social indicators, such as:

- *Rural male literacy*
- *Rural life expectancy*

Higher literacy is expected to add to the skill and awareness of the labour and would have a positive impact on level of wages. Physical capacity depicted by health indicators like life expectancy would also have a positive impact on wages.

The expected relationship between the above variables with agricultural wages has been summarized below.

Table 3.20: Variables Influencing the Level of Agricultural Wages and their Expected Relationship with Agricultural Wages

Demand side variables	Expected relationship with agricultural wages	Supply side variables	Expected relationship with agricultural wages
1. Food Grain Yields	Positive	1. Proportion of non agricultural labourers in rural labour force	Positive
2. NSDPAG Per Ha Or Per Worker	Positive	2. Proportion of agricultural households in rural households	Negative
3. Irrigation	Positive	3. Agricultural labour in total labour force	Negative
4. % Area Under Medium And Large Holdings	Positive	4. Landlessness	Negative
5. Average Size Of Holding	Positive	5. NSA/rural person	Positive
		6. Agricultural labour/ GSA	Negative
		7. Urbanisation	Positive

3.13 Correlation Analysis

In the first stage we have tested these relationship with the help of correlation analysis. Table 3.21 shows the value of correlation coefficient between the level of agricultural wages and the selected variables at the state level. Productivity indicators depicting the demand side, e.g. irrigated area, food grain yield NSDP per workers and per ha. show high positive correlation with agricultural wages for 1981 and 1991. However, surprisingly for 2000 this relationship is found very weak except in case of agricultural productivity per ha. Proportions of non-agricultural workers again show high positive correlation with agricultural wages in all the three years. Urbanisation, however, does not seem to exert any noticeable affect on agricultural wages.

Table 3.21: Values of Correlation Coefficient between Real Agricultural Wages and Selected Variables at the State level

Selected Variables	1981	1991	2000
Irrigation/ GSA	0.43	0.55	0.07
Food Grain Yield	0.42	0.59	-0.04
NSDPAG / Worker	0.81	0.90	0.22
NSDPAG / Ha	0.72	0.77	0.65
Proportion Of Non Agricultural Worker	0.77	0.65	0.86
Proportion Of Landless ALHH / RHH	0.14	0.74	N.A
Proportion Of ALHH / RHH	-0.24	-0.38	N.A
Urbanisation	-0.16	-0.11	-0.02
Agricultural Labour / Ha	-0.36	-0.42	-0.41
Percent Area In Medium And Large Holdings	-0.02	0.02	-0.10
NSA/ Rural Person	-0.22	-0.25	-0.19
Agricultural Labour / Total Rural Workforce	-0.14	-0.22	-0.58
Average Size Of Holding	0.01	0.03	-0.15
Male Literacy (Rural)	0.53	0.44	0.71
Life Expectancy (Rural)	0.77	0.72	0.79

In case of several supply side variables such as proportion of landless ALHH and NSA / rural person, average size of holding and area under medium and large holdings the values of “r” were found to be quite low and the signs of the coefficients were found to be in unexpected direction in many cases. The overall supply factor represented by no. of agricultural labourers per ha. and proportion of agricultural labour to total labour did show the expected signs but the values of “r” were not very high. The quality of labour supply variables such as life expectancy and literacy were found strongly correlated with agricultural wages.

Table 3.22 shows the correlation matrix for the selected variables for the year 1991. As expected the productivity variables represented by irrigated area, food grain yield and NSDP per worker were found strongly correlated. All the three had a positive association with NSDP/ha, but value of coefficient was not very high. Proportion of non-agricultural workers was also strongly correlated with most of the selected variables. Average size of holding, percent area under medium and large holdings and NSA/per person were also found highly correlated.

Table 3.22: Correlation Matrix: 1991

	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12	X13	X14	X15	x16
X1	1.00															
X2	0.78	1.00														
X3	0.73	0.85	1.00													
X4	-0.13	-0.06	0.37	1.00												
X5	-0.58	-0.59	-0.76	-0.45	1.00											
X6	-0.37	-0.27	-0.45	-0.05	-0.04	1.00										
X7	-0.23	-0.06	0.29	0.85	-0.47	0.11	1.00									
X8	0.09	0.23	0.54	0.86	-0.73	0.08	0.83	1.00								
X9	-0.21	0.12	0.04	0.20	-0.24	0.44	0.49	0.35	1.00							
X10	-0.26	-0.03	-0.33	-0.28	0.41	0.22	-0.23	-0.30	-0.02	1.00						
X11	0.23	0.47	0.31	-0.44	-0.13	-0.26	-0.34	-0.24	0.11	0.08	1.00					
X12	-0.14	0.22	0.03	-0.44	0.17	-0.21	-0.26	-0.33	0.29	0.22	0.89	1.00				
X13	-0.16	-0.19	0.09	0.66	-0.36	0.02	0.52	0.56	0.05	-0.44	-0.48	-0.48	1.00			
X14	-0.12	-0.21	-0.33	0.03	-0.21	0.91	0.09	0.21	0.34	0.10	-0.38	-0.42	0.10	1.00		
X15	0.23	0.51	0.34	-0.41	-0.09	-0.32	-0.33	-0.24	0.16	0.00	0.97	0.89	-0.38	-0.46	1.00	
x16	0.38	0.22	0.55	0.77	-0.62	-0.11	0.57	0.74	-0.11	-0.43	-0.58	-0.77	0.62	0.12	-0.55	1.00

- X1 Irrigation/ GSA
- X2 Food grain yield
- X3 NSDPAG / worker
- X4 Proportion of Non Agricultural worker (Rural)
- X5 Proportion of landless ALHH in Total RHH-
- X6 Proportion of ALHH in Total RHH
- X7 Male literacy (rural)
- X8 Life Expectancy (rural)
- X9 Urbanization
- X10 Agricultural labour / GSA
- X11 % Area in Medium and Large Holdings
- X12 NSA/ Rural person
- X13 Non Agricultural workers R+U
- X14 Proportion of Agricultural labour / Total rural labour
- X15 Average Size of Holding
- x16 NSDPAG / Ha

3.14 The Explanatory Model

In view of the high degree of correlation among the independent variables, we had to drop variable showing very high value of 'r' from our explanatory model. Several specification of the model were attempted using SPSS package. Finally, we selected four explanatory variables namely NSDPAG/ha, average size of holdings, proportion of non-agricultural rural workers and agricultural labourers/ GSA to explain the variations in the agricultural wages at the state level. The first two are demand side variables while the last two are supply side variables.

The following linear regression model has been used by us:

$$Y = a + b_1.X_1 + b_2.X_2 + b_3.X_3 + b_4.X_4 + u$$

Where,

Y= real male agricultural wage AWI

X₁= NSDPAG / ha

X₂= Proportion of non agricultural rural workers

X₃= Average size of holding

X₄= Agricultural Labour / GSA

u = Error term

Following relationship between the dependent and the independent variables has been hypothesized:

- Higher agricultural productivity represented by NSDPAG / ha will lead to increase in demand for labour and hence cause a rise in wages.
- Increase in average size of holding, which implies an increase in scale of operation as well as higher capacity to pay of the farmers, would result in rise of wages.
- Increase in proportion of non-agricultural workers in rural workforce would affect supply of labour in agriculture and put upward pressure on agricultural wages.
- An increase in the number of agricultural labourers/ha would mean an increase in supply of labour which would cause a decline in wages.

The model was applied both to the AWI and RLE wage data for 15 selected states. The data for the independent variables were taken from the following sources:

1. NSDPAG/ha : Handbook of Indian Statistics, RBI
2. Proportion of Non-Agricultural Workers : Census of India
3. Average size of holding : Agricultural Statistics of India
4. Agricultural labourers/GSA : Calculated from Census of India and Agricultural Statistics of India

Table 3.23 presents summary of the selected variables. Detailed state-wise data for the selected variables have been given in the appendix.

Table 3.23: Summary of Variables

Variable	Mean			Standard Deviation			N
	1981	1991	2000	1981	1991	2000	
Y1(AWI)	3.4	4.9	6.4	1.3	1.5	2.7	15
Y2 (RLE)	2.1	4.1	4.8	0.8	1.3	1.8	15
X1	2575.9	3432.7	3811.7	385.1	1204.1	1571.5	15
X2	20.1	21.1	31.4	9.2	9.9	14.3	15
X3	2.1	1.8	1.7	1.2	1.1	1.1	15
X4	0.7	0.9	1.5	1.1	1.4	2.1	15

3.15 Results of the Regression Exercise

Table 3.24 presents the results of the regression analysis. The explanatory power of the model is quite high as it was able to explain over 70% of variance in most of the cases as is evident from the high value of adjusted R^2 for all points of time. Overall significance of the model is also high as shown by the high F values. All signs are in the expected direction, except for 2000 (RLE) where signs for X_1 and X_3 are unexpected.

Table 3.24: Linear Regression on State wise Agricultural Wages

Year	Dependent Y	Constant a	NSDPAG/ha X_1	RNA X_2	ASH X_3	AL/ha X_4
1981	AWI	-1.95 (-2.4)**	0.86 (4.3)***	0.28 (1.7)	0.61 (4.4)***	-0.09 (-0.7)
			$R^2 = 0.83$	$F = 17.3$		
1991	AWI	-6.7 (-0.07)	0.71 (3.3)***	0.30 (1.4)	0.47 (2.9)**	-0.09 (-0.6)
			$R^2 = 0.72$	$F = 9.90$		
2000	AWI	0.87 (0.42)	0.08 (0.21)	0.77 (2.22)*	0.11 (0.52)	-0.003 (-0.02)
			$R^2 = 0.53$	$F = 4.90$		
1981	RLE	1.2 (-2.4)**	0.63 (3.3)***	0.56 (3.7)***	0.58 (4.5)***	-0.05 (-3.99)***
			$R^2 = 0.74$	$F = 23.4$		
1991	RLE	-0.88 (-1.15)	0.58 (3.28)***	0.61 (4.18)***	0.51 (4.35)***	-0.01 (-0.05)
			$R^2 = 0.88$	$F = 11.8$		
2000	RLE	2.9 (2.3)*	-0.57 (-1.6)	1.33 (4.16)***	-0.14 (-0.77)	-0.09 (-0.57)
			$R^2 = 0.68$	$F = 11.8$		

Notes: 1. Figures in parentheses show t values

2. R^2 gives adjusted R^2

3. * significant at 2.5 %

**significant at 1%

***significant at 0.5%

In the results for the model with AWI wages as the dependent variable, land productivity (X_1), average size of holding (X_3) and proportion of non-farm employment emerge as the most significant variables in explaining regional variation in wages. Agricultural labour / ha (X_4) has the expected negative sign for all points of time. However, its significance is very low. For 2000, however, t values for land productivity and size of holding decline in significance, whereas the significance of non-farm employment increases.

In the model with RLE wages as dependent variable, similar results were obtained. Variables X_1 , X_2 and X_3 have expected signs and high t values for 1981 and 1991, while variable X_4 has expected negative sign but very low t value. For 2000, like for AWI, here too results are surprising and unexpected with coefficients of land productivity and average size of holding showing negative sign. Only non-farm employment (X_2) turns out to be a significant determinant for 2000. Thus, it looks that in recent years supply side factors have become more important than demand side factors.

3.16 Conclusion

We may briefly summarize the main findings of the present chapter. The findings support the view that the rural economy witnessed an uptrend in wages during the eighties. The upward tendency in wages was prominent in both agricultural and non-agricultural occupations. This was primarily a result of the favorable impact of the green revolution in operation since the seventies (Jose 1988). The high growth experienced in the agricultural sector led to a rise in demand for agricultural labour leading to a rise in their real wages. Alongside the increased diversification of the rural economy and a consequent rise in opportunities in the non-agricultural sector during the eighties also led to a rise in earnings in both the sectors (Sheila Bhalla 1997). Government employment programmes also created demand for rural labour and led to upward pressure on wages (Abhijit Sen 1994).

A positive feature of the high growth in real wages observed during this period was its spread to the low wage states of Orissa, Rajasthan, M.P. and Maharashtra. The agriculturally developed states of Haryana or the socially more organized states of Kerala no longer remained the high wage states. However, the post mid eighties, a slow down in growth of real rural wages began to set in most of the states. The decline was more marked in the states of West Bengal, Bihar, Assam and the Southern states. The deceleration appeared to have intensified in the post-reform period, during which a majority of states experienced a slump in growth rates of real wages. Haryana and Kerala, however, continued to experience high growth rate in wages.

Another important finding is that inter-regional and inter-state disparity in wages intensified in the nineties. Inter-state disparity in real wages, which showed a decline in the eighties, showed a rising tendency during the nineties.

Overall agricultural daily wage earnings were found to be lower than daily non-agricultural wage earnings. However, in 1983 agricultural wages were found to be higher than non-agricultural wages particularly for ALHH. Thereafter the non-agricultural wages took over agricultural wages and the gap widened continuously between 1983 and 1999-00. The differentials were particularly high in case of RLHH male labourers. On an average the ratio is around 1.3 for both categories of households.

The study also reveals that female labourers are paid lower wages than their male counter parts. Male-female gap was higher in case of non-agricultural daily wage earnings as compared to agricultural daily wage earnings. The gap saw a continuous rise since 1983 in case of agricultural wages. The decline was steeper between 1994 and 2000 than between 1983 and 1994. At the all India level the ratio came down to 70% in 1999-00 from 75% in 1983. However, in case of non agricultural wages the gap marginally declined during the period. It rose from 58% in 1983 to 63% in 1999-00. Across the states the gender disparities declined more sharply in the states of Punjab, Himachal Pradesh, Rajasthan, Haryana, Bihar and Uttar Pradesh. Surprisingly, very high gender disparity in male-female wages was found to exist in Kerala, which is noted as the state with the highest level of human development in the country and better status of women. Even states like Bihar and Orissa show much less gender inequality in wages than Kerala. Thus, it looks that wage levels or gender equality in wages in the rural areas are poorly linked with the level of human development. Other economic factors linked to rural labour market seem to be operating here.

Our analysis strongly indicates that the gains to the rural labour from the green revolution began to dwindle in the mid eighties. The structural changes in the economy which began with initiation of the reform process in the early nineties showed minimal impact on the rural economy, which has experienced a slow down in agricultural growth during the post reform period. Analysis based on both AWI and RLE data indicates a clear deceleration in growth rates of both agricultural and non agricultural wages accompanied by an increase in inter-state and gender disparity in wage/earning levels. The reforms have failed to impact favourably on the economic well being of the rural labour, the largest and most vulnerable section of the rural population.

The analysis of the determinants of agricultural wages revealed that demand side factors represented by NSDPAG / ha have a strong and positive affect on wage rates in the pre reform period. However, rural diversification represented by proportion of non-agricultural workers emerges as the most significant factor determining agricultural wages in the post reform period. Thus, in the recent years, supply side factors affecting agricultural wages have become more important than the demand side factors. This suggests that the nature of rural labour market is changing with growing diversification of the rural economy and declining labour absorption capacity of agriculture.

CHAPTER 4

TRENDS IN EMPLOYMENT AND EARNINGS LEVELS

4.1 Introduction

Economic well being of rural labour depends on number of employment days and the earning levels. In this chapter we have discussed the trends in employment and earnings levels for rural labour households for the 16 major states of India. The analysis is based on data compiled from RLE Reports on Employment and Unemployment of Rural Labour Households. The analysis covers the period 1983 to 1993-94. The period of analysis could not be extended to 1999-00 as the employment data 1999-00 are still not available. The chapter is divided into two sections. Section I deals with trends in employment levels of rural labour households. Section II presents the trends in total annual earnings of rural labour households.

Section I

Trends in Employment

4.2 Trends in Wage Employment

RLE Reports on Employment and Unemployment of Rural Labour Households, provide data on employment days in different types of employment such as self-employment, wage employment and employment on salary basis, for both ALHH and RLHH. We have made use of the full employment days of usually occupied persons. A person was considered as working for the entire day if he had worked for four hours or more on the day. Full employment days reflect the intensity of employment and hence give an unambiguous picture of the employment situation (Jeemol Unni, 1988). The concept of wage employment used by us includes wage employment in all types of occupations such as agricultural, non-agricultural and other types of wage employment in rural areas.

Table 4.1 gives the wage employment in terms of full employment days for both ALHH and RLHH.

**Table 4.1: State wise Wage Employment in All Types of Occupations
(in terms of full days in a year)**

States	Agricultural Labour Households						Rural Labour Households					
	Male			Female			Male			Female		
	1983	1988	1994	1983	1988	1994	1983	1988	1994	1983	1988	1994
A.P.	214	207	231	187	190	208	217	210	228	188	186	206
Assam	320	290	276	310	315	307	308	275	267	308	291	293
Bihar	257	267	287	209	234	255	257	261	282	209	230	252
Gujarat	243	248	246	192	197	233	228	236	233	182	194	220
Haryana	224	250	228	199	270	200	237	219	234	194	218	181
H.P.	190	212	226	109	82	77	205	205	177	53	24	31
Karnataka	220	242	247	217	213	237	221	238	245	216	214	232
Kerala	183	180	218	164	168	196	184	181	220	160	164	195
M.P.	243	229	241	207	198	201	241	225	238	204	192	200
Maharashtra	222	235	223	180	208	212	221	234	219	178	204	207
Orissa	216	211	213	166	162	181	214	210	209	168	158	181
Punjab	234	239	308	150	220	285	232	233	290	158	195	278
Rajasthan	228	207	247	184	140	193	226	191	223	188	102	106
Tamil Nadu	192	176	216	169	165	196	198	186	220	170	167	191
U.P.	228	217	221	168	176	191	225	217	213	160	165	180
W.B	218	241	230	195	219	167	219	241	229	191	216	177
All India	225	227	240	188	195	212	225	223	235	187	186	203

Source: Rural Labour Enquiry, 1987-88 & 1993-94: Report on Employment and Unemployment of Rural Labour Households.

There is little difference in the number of wage employment days for the two categories of households. ALHH report only marginally higher employment days than RLHH in most of the states. Wage employment days for female labourers are considerably lower as compared to their male counterparts for all the three points of time studied for all states. Assam is the only state where female labourers show higher number of days as wage employment than the male labourers in the state in the years 1987-88 and 1993-94. Wage employment days are relatively higher in the states of Assam, Bihar, Gujarat, Punjab and Karnataka. This figure is relatively low in the southern states of Tamilnadu, Kerala and Andhra Pradesh.

Table 4.2 presents wage employment as a percent of total employment days in all types of occupations for the two categories of households. Total employment includes wage employment, self-employment and employment on salary basis.

Table 4.2: Wage Employment as Percent of Total Employment days

States	Agricultural Labour Households						Rural Labour Households					
	Male			Female			Male			Female		
	1983	1988	1994	1983	1988	1994	1983	1988	1994	1983	1988	1994
A.P.	77	73	77	84	78	80	78	74	75	84	76	79
Assam	93	88	84	96	97	98	90	85	83	95	93	95
Bihar	85	84	87	87	85	90	85	81	86	86	82	89
Gujarat	82	85	80	79	79	82	77	81	75	76	78	77
Haryana	82	83	84	88	89	91	83	76	80	84	74	78
H.P	59	62	64	44	26	23	62	60	52	19	8	10
Karnataka	77	79	80	85	85	87	77	78	80	84	85	85
Kerala	81	78	80	83	78	82	79	78	79	80	74	77
M.P	77	74	77	79	76	76	77	73	77	78	74	75
Maharashtra	77	77	75	83	78	81	78	76	73	81	77	78
Orissa	72	71	70	74	66	68	73	70	70	75	63	69
Punjab	83	79	91	56	71	86	82	78	87	59	63	84
Rajasthan	76	69	76	69	56	65	75	65	66	69	39	33
Tamil Nadu	82	72	83	86	74	82	82	74	83	85	73	79
U.P.	75	71	71	69	67	70	74	70	69	65	63	65
W.B	83	81	78	84	79	74	82	81	77	83	78	74
All India	79	77	79	82	77	80	79	75	77	80	73	77

Source: Computed from Rural Labour Enquiry, 1987-88 & 1993-94: Report on Employment and Unemployment of Rural Labour Households.

Wage employment is the dominant form of employment for rural labour households. At the all India level, wage employment accounted for about 75% of total employment for males and 80% for females. The pattern of employment is similar across the states. However, in Himachal Pradesh wage employment accounts for less than 65% of total employment for males and less than 30% for females.

Table 4.3 presents the change in wage employment days during the period 1983-94. At the all India level, ALHH recorded an increase of 15 days and 24 days in wage employment for male and female labourers respectively, while in case of RLHH the respective figures were 10 and 16 days. In case of ALHH four states, namely Assam, U.P, Orissa and M.P showed a decline in wage employment for male labourers, while Assam, M.P, H.P and West Bengal showed a decline in case of female labourers. In case of RLHH seven states, namely, Assam, Haryana, H.P, M.P, Maharashtra, Orissa, Rajasthan and U.P, showed a decline in wage employment for male labourers. Wage employment for female labourers belonging to RLHH also declined in all these states excluding Orissa. Rest of the states showed a rise in the number of wage employment days. The rise was highest in Punjab, followed by Kerala, Bihar, Karnataka and Tamilnadu.

Table 4.3: Change in Wage Employment Days 1983 to 1993

States	Agricultural Labour Households						Rural Labour Households					
	Male			Female			Male			Female		
	1983 to 1988	1988 to 1994	1983 to 1994	1983 to 1988	1988 to 1994	1983 to 1994	1983 to 1988	1988 to 1994	1983 to 1994	1983 to 1988	1988 to 1994	1983 to 1994
A.P.	-7	24	17	3	18	21	-7	18	11	-2	20	18
Assam	-30	-14	-44	5	-8	-3	-33	-8	-41	-17	2	-15
Bihar	10	20	30	25	21	46	4	21	25	21	22	43
Gujarat	5	-2	3	5	36	41	8	-3	5	12	26	38
Haryana	26	-22	4	71	-70	1	-18	15	-3	24	-37	-13
H.P.	22	14	36	-27	-5	-32	0	-28	-28	-29	7	-22
Karnataka	22	5	27	-4	24	20	17	7	24	-2	18	16
Kerala	-3	38	35	4	28	32	-3	39	36	4	31	35
M.P.	-14	12	-2	-9	3	-6	-16	13	-3	-12	8	-4
Maharashtra	13	-12	1	28	4	32	13	-15	-2	26	3	29
Orissa	-5	2	-3	-4	19	15	-4	-1	-5	-10	23	13
Punjab	5	69	74	70	65	135	1	57	58	37	83	120
Rajasthan	-21	40	19	-44	53	9	-35	32	-3	-86	4	-82
Tamil Nadu	-16	40	24	-4	31	27	-12	34	22	-3	24	21
U.P.	-11	4	-7	8	15	23	-8	-4	-12	5	15	20
W.B.	23	-11	12	24	-52	-28	22	-12	10	25	-39	-14
All India	2	13	15	7	17	24	-2	12	10	-1	17	16

Source: Computed from Table 4.1

Table 4.4 presents the CAGR of wage employment days for the two categories of households.

Table 4.4: CAGR of Wage Employment Days for ALHH and RLHH: 1983-94

(Percent)

States	Agricultural Labour Households						Rural Labour Households					
	Male			Female			Male			Female		
	1983 to 1988	1988 to 1994	1983 to 1994	1983 to 1988	1988 to 1994	1983 to 1994	1983 to 1988	1988 to 1994	1983 to 1994	1983 to 1988	1988 to 1994	1983 to 1994
A.P.	-0.7	1.8	0.8	0.3	1.5	1.1	-0.7	1.4	0.5	-0.2	1.7	0.9
Assam	-1.9	-0.8	-1.5	0.3	-0.4	-0.1	-2.2	-0.5	-1.4	-1.1	0.1	-0.5
Bihar	0.8	1.2	1.1	2.3	1.4	2.0	0.3	1.3	0.9	1.9	1.5	1.9
Gujarat	0.4	-0.1	0.1	0.5	2.8	2.0	0.7	-0.2	0.2	1.3	2.1	1.9
Haryana	2.2	-1.5	0.2	6.3	-4.9	0.1	-1.6	1.1	-0.1	2.4	-3.1	-0.7
H.P.	2.2	1.1	1.8	-5.5	-1.0	-3.4	0.0	-2.4	-1.5	-14.7	4.4	-5.2
Karnataka	1.9	0.3	1.2	-0.4	1.8	0.9	1.5	0.5	1.0	-0.2	1.4	0.7
Kerala	-0.3	3.2	1.8	0.5	2.6	1.8	-0.3	3.3	1.8	0.5	2.9	2.0
M.P.	-1.2	0.9	-0.1	-0.9	0.3	-0.3	-1.4	0.9	-0.1	-1.2	0.7	-0.2
Maharashtra	1.1	-0.9	0.0	2.9	0.3	1.6	1.1	-1.1	-0.1	2.8	0.2	1.5
Orissa	-0.5	0.2	-0.1	-0.5	1.9	0.9	-0.4	-0.1	-0.2	-1.2	2.3	0.7
Punjab	0.4	4.3	2.8	8.0	4.4	6.6	0.1	3.7	2.3	4.3	6.1	5.8
Rajasthan	-1.9	3.0	0.8	-5.3	5.5	0.5	-3.3	2.6	-0.1	-11.5	0.6	-5.6
Tamil Nadu	-1.7	3.5	1.2	-0.5	2.9	1.5	-8.7	2.8	-2.9	-0.4	2.3	1.2
U.P.	-1.0	0.3	-0.3	0.9	1.4	1.3	-0.7	-0.3	-0.5	0.6	1.5	1.2
W.B.	2.0	-0.8	0.5	2.3	-4.4	-1.5	1.9	-0.8	0.4	2.5	-3.3	-0.8
All India	0.2	0.9	0.6	0.7	1.4	1.2	-0.2	0.9	0.4	-0.1	1.5	0.8

Source: Computed from Table 4.1

The number of days of agricultural employment per agricultural labourer in a particular year would reflect net changes in the demand and supply of labour (Jeemol Unni 1988). In a year of low agricultural output, the demand for labour would be low, while the supply of labour would be higher. Both these forces will tend to reduce wage paid employment in agriculture.

Table 4.5 shows the change in employment days of agricultural labourers in agricultural employment for both categories of households.

Table 4.5: Change in Employment Days in Agricultural Operations of Agricultural Labour in ALHH and RLHH

States	Agricultural labour Households				Rural Labour Households			
	Males		Females		Males		Females	
	1983 to 1988	1988 to 1994	1983 to 1994	1983 to 1988	1988 to 1994	1983 to 1994	1983 to 1988	1988 to 1994
Andhra Pradesh	-6	24	-39	68	-5	21	-42	66
Assam	-26	-19	11	-17	-26	-36	1	-30
Bihar	15	20	-13	58	15	19	-9	54
Gujarat	-30	28	-84	125	-29	19	-83	121
Haryana	10	-22	-91	74	11	-43	-86	72
Himachal Pradesh	70	-31	64	-104	82	-206	15	-92
Karnataka	33	4	-46	74	33	4	-46	74
Kerala	-10	64	-4	30	-4	38	1	17
Madhya Pradesh	-16	14	-52	50	-15	9	-53	48
Maharashtra	25	-5	-29	77	26	-11	-26	74
Orissa	-12	9	-50	61	-14	7	-52	57
Punjab	0	78	-40	151	14	57	-19	86
Rajasthan	-25	50	-95	124	-29	62	-103	75
Tamil Nadu	-12	45	-11	48	-10	41	-10	46
Uttar Pradesh	-9	-1	-82	105	-9	-14	-85	105
West Bengal	25	-12	-9	-18	23	-19	-12	-27
All India	4	16	-33	63	4	7	-32	58

Source: Computed from appendix Table A10.

There was a marginal rise in employment days for males at the all India level between 1983 and 1987-88, but there was a substantial decline in number of employment days in case of female labourers. During this period, 9 states in case of male labourers and 13 states in case of female labourers show a decline in employment days for both categories of households. These trends reflect the impact of the severe and wide spread drought, which took place in 1987-88. It is the drought prone states of Rajasthan, Madhya Pradesh, Gujarat and the southern states which show a decline in number of employment days during the period 1983 to 1987-88. The states of Bihar, Haryana, H.P, Karnataka,

Maharashtra and West Bengal registered a rise in male employment during this period. However, female agricultural employment shows a decline even in these states. It suggests that the female labourers bear the main burden of decline in demand for labour during the bad agricultural years.

During the subsequent period, i.e. 1987-88 to 1993-94, the number of employment days shows a rise at the all India level specially so in case of female labourers. However, seven states (i.e., Assam, Haryana, H.P., Maharashtra, U.P. and West Bengal) in case of male labourers and 3 states (i.e., Assam, H.P. and West Bengal) in case of female labourers belonging to ALHH show a decline in agricultural operations even during this period. More or less similar trends were observed in case of RLHH

4.3 Trends in Total Employment

Table 4.6 shows total employment days for ALHH and RLHH. The numbers of total employment days for the two categories of households are nearly of the same order. Total employment days are relatively higher in the states of Assam, Bihar, M.P, Rajasthan and Uttar Pradesh. On the other hand, number of employment days is lower in the southern states of Kerala, Tamilnadu and Andhra Pradesh. Total employment days of female labourers have been lower than that of their male counterparts, across all the states and for all three points of time.

Table 4.6: State wise Total Employment in All Types of Occupations

States	Agricultural Labour Household						Rural Labour Households					
	Male			Female			Male			Female		
	1983	1988	1994	1983	1988	1994	1983	1988	1994	1983	1988	1994
A.P	278	284	301	222	243	261	280	285	302	225	245	260
Assam	345	330	329	323	325	314	341	323	323	325	312	309
Bihar	301	319	330	240	274	282	303	321	329	244	279	283
Gujarat	296	293	307	242	248	285	297	290	310	238	248	285
Haryana	273	303	271	225	302	220	284	289	291	231	293	232
H.P.	321	342	352	250	316	335	332	344	343	279	319	299
Karnataka	286	306	309	254	250	272	287	305	308	257	253	272
Kerala	225	231	274	197	215	240	233	233	277	201	221	253
M.P	314	308	311	262	260	264	314	308	310	261	261	266
Maharashtra	289	307	296	218	265	263	285	307	299	219	265	264
Orissa	298	297	304	224	246	265	295	299	299	225	250	264
Punjab	283	301	338	268	310	331	284	299	334	268	312	329
Rajasthan	299	300	323	265	249	296	300	295	339	274	260	322
Tamil Nadu	234	243	260	196	223	240	242	253	266	201	230	242
U.P.	305	307	310	243	261	273	305	309	308	246	264	276
W.B	263	298	293	232	277	226	266	298	298	230	277	239
All India	284	295	303	230	253	264	286	296	305	233	254	265

Source: Same as Table 4.1

Table 4.7 presents the change in number of total employment days for the two categories of households. Total employment at the all India level, witnessed a sizeable increase during the decade 1983-94. The rise was greater in case of female labourers for both categories of households. At the state level, ALHH show a decline in employment days in Assam, Haryana and M.P. for male labourers, while Haryana, Punjab and West Bengal show a decline in total employment days in case of female labourers during this period. In case of RLHH, only Assam (both for male and female labourers) and Haryana (for male labourers) show a decline in total employment days. The decline is more widespread in case of ALHH as compared to RLHH. This contrasts with the pattern of change in wage employment observed during the same period.

Table 4.7: Change in Total Employment Days 1983 to 1993

States	Agricultural Labour Household						Rural Labour Households					
	Male			Female			Male			Female		
	1983 to 1988	1988 to 1994	1983 to 1994	1983 to 1988	1988 to 1994	1983 to 1994	1983 to 1988	1988 to 1994	1983 to 1994	1983 to 1988	1988 to 1994	1983 to 1994
A.P.	6	17	23	21	18	37	5	17	22	20	15	35
Assam	-15	-1	-16	2	-11	16	-18	0	-18	-13	-3	-16
Bihar	18	11	29	34	8	29	18	8	26	35	4	39
Gujarat	-3	14	11	6	37	49	-7	20	13	10	37	47
Haryana	30	-32	-2	77	-82	-18	5	2	7	62	-61	1
H.P.	21	10	31	66	19	16	12	-1	11	40	-20	20
Karnataka	20	3	23	-4	22	37	18	3	21	-4	19	15
Kerala	6	43	49	18	25	18	0	44	44	20	32	52
M.P.	-6	3	-3	-2	4	54	-6	2	-4	0	5	5
Maharashtra	18	-11	7	47	-2	20	22	-8	14	46	-1	45
Orissa	-1	7	6	22	19	49	4	0	4	25	14	39
Punjab	18	37	55	42	21	-26	15	35	50	44	17	61
Rajasthan	1	23	24	-16	47	51	-5	44	39	-14	62	48
Tamil Nadu	9	17	26	27	17	19	11	13	24	29	12	41
U.P.	2	3	5	18	12	44	4	-1	3	18	12	30
W.B.	35	-5	30	45	-51	-11	32	0	32	47	-38	9
All India	11	8	19	23	11	33	10	9	19	21	11	32

Source: Computed from Table 4.6

4.4 Inter State Variations in Employment Days

Inter state variations in wage and total employment days have been analysed in terms of coefficient of variations (CV). Table 4.8 gives the values of CV across states for three points of time for 1983, 1987-88 and 1993-94.

Table 4.8: Coefficient of Variation in Wage and Total Employment Days (%)

Category	Wage Employment Days						Total Employment Days					
	Male			Female			Male			Female		
	1983	1988	1994	1983	1988	1994	1983	1988	1994	1983	1988	1994
ALHH	14.0	13.1	11.3	22.3	26.8	24.7	10.5	9.3	8.1	12.8	12.1	12.4
RLHH	12.1	11.6	12.0	27.2	32.1	31.7	9.7	8.8	6.9	13.0	10.8	10.4

Source: Computed from Table 4.1 & 4.6.

The coefficient of variation in wage employment days is lower than that for total employment days. In case of wage employment, C.V showed a decline between 1983 to 1993-94 in case of male labourers. In case of female labourers, the value of C.V was comparatively higher and showed a rise over time. In case of total employment days, the value of CV were lower both for male and female labourers. Here too inter-state variation is larger in case of female labourers as compared to male labourers. RLHH showed slightly lower variation than ALHH in both types of employment days except in case of female wage employment.

Section II

Trends in Total Wage Earnings

4.5 Trends in Total Annual Real Wage Earnings

In this section, we have discussed trends in annual wage earnings of ALHH and RLHH for the period 1983 to 1993-94. The annual wage earnings per labourer have been computed by multiplying wage earnings in agricultural and non-agricultural operations with the total annual days of employment in agricultural and non-agricultural operations respectively and adding them up. The total annual earnings were deflated by CPIAL at 1970-71 prices to arrive at real annual earnings per labourer.

Table 4.9 presents the annual real wage earnings per labourer. There is little variation in the earning levels of the two categories of households. Earnings for female labourers are considerably lower than that of male labourers as both employment days and wage rates for female labourers are lower. Earnings per labourer are relatively higher in the states of Punjab, Assam, Himachal Pradesh and Kerala. In Punjab, due to a combination of high number of wage employment days and high wage rates there were

high annual earnings per labourer. In case of Assam, the number of employment days was high even while the wage rate was low. Opposite was true for Kerala. Earnings per labourer were relatively lower in the states of Orissa, Uttar Pradesh, Madhya Pradesh, Tamil Nadu, Karnataka and Andhra Pradesh in that order.

**Table 4.9: Total Annual Real Earnings per Labourer in Wage Employment
In Rs. At 1970-71 Prices**

STATES	Agricultural Labour Households						Rural Labour Households					
	Male			Female			Male			Female		
	1983	1988	1994	1983	1988	1994	1983	1988	1994	1983	1988	1994
Andhra Pradesh	393	593	831	275	276	534	425	595	837	272	269	527
Assam	1045	1152	1299	963	1120	1140	974	1172	1294	956	1128	1162
Bihar	443	755	868	310	481	671	446	752	579	301	494	669
Gujarat	533	713	880	337	420	787	506	720	892	317	410	776
Haryana	576	784	1058	424	275	746	537	796	1228	381	275	785
H. P.	318	1075	1439	210	917	608	244	1091	1100	99	708	1532
Karnataka	344	698	868	267	319	601	346	677	886	263	315	598
Kerala	804	1054	1810	590	728	1022	725	1048	1860	525	708	1025
Madhya Pradesh	355	554	737	250	348	510	353	589	736	245	344	505
Maharashtra	384	702	840	209	262	483	399	694	866	205	268	486
Orissa	290	517	693	195	232	414	284	518	695	194	226	423
Punjab	898	1169	2033	344	830	1622	885	1147	2000	343	887	1555
Rajasthan	484	533	1098	248	323	774	461	578	1474	216	292	702
Tamil Nadu	341	539	924	188	274	514	328	499	932	176	272	508
Uttar Pradesh	348	559	718	197	196	490	338	561	738	180	189	499
West Bengal	427	951	1055	357	656	710	432	956	1095	353	652	700
All India	424	702	946	263	352	587	423	708	974	257	355	595

Source: Computed from Appendix Table A11.

Table 4.10 shows the CAGR of total annual real earnings per labourer in wage employment for the two categories of households for the sub-periods as well as for the period 1983 to 1993-94. Taking the period as a whole, we find that real wages have increased at a high rate. Both high growth rate of real wage rates as well as increase in wage employment days contributed to the fast increase in real earnings.

At the all India level, growth rate in case of ALHH was 8.4% for both male and female labourers, while the corresponding figures for RLHH was at 6.7% and 8.8% for male and female labourers respectively. In general, all states also registered high growth rates of annual real earnings per labourer. However, Assam registered a relatively lower growth rate of 2% for both categories of households and for both male and female labourers. Bihar also recorded a low growth rate in case of male labourers belonging to RLHH.

Table 4.10: CAGR of Total Annual Real Earnings in Wage Employment (%)

States	Agricultural Labour Households						Rural Labour Households					
	Male			Female			Male			Female		
	1983 to 1988	1988 to 1994	1983 to 1994	1983 to 1988	1988 to 1994	1983 to 1994	1983 to 1988	1988 to 1994	1983 to 1994	1983 to 1988	1988 to 1994	1983 to 1994
Andhra Pradesh	8.6	5.8	7.8	0.0	11.7	6.9	7.0	5.9	7.0	-0.2	11.8	6.8
Assam	2.0	2.0	2.2	3.1	0.3	1.7	3.8	1.7	2.9	3.4	0.5	2.0
Bihar	11.3	2.4	7.0	9.2	5.7	8.0	11.0	-4.2	2.6	10.4	5.2	8.3
Gujarat	6.0	3.6	5.1	4.5	11.0	8.8	7.3	3.6	5.8	5.3	11.2	9.3
Haryana	6.3	5.1	6.3	-8.3	18.1	5.8	8.2	7.5	8.6	-6.3	19.1	7.5
Himachal	27.6	5.0	16.3	34.4	-6.6	11.2	35.0	0.1	16.3	48.1	13.7	31.5
Karnataka	15.2	3.7	9.7	3.6	11.1	8.5	14.4	4.6	9.9	3.6	11.3	8.5
Kerala	5.5	9.4	8.4	4.3	5.8	5.6	7.6	10.0	9.9	6.2	6.4	6.9
Madhya Pradesh	9.3	4.9	7.6	6.8	6.6	7.4	10.8	3.8	7.6	7.0	6.6	7.5
Maharashtra	12.8	3.0	8.1	4.6	10.7	8.7	11.7	3.8	8.0	5.5	10.4	9.0
Orissa	12.3	5.0	9.1	3.6	10.1	7.8	12.7	5.0	9.3	3.1	11.0	8.1
Punjab	5.4	9.7	8.5	19.3	11.8	16.8	5.3	9.7	8.5	20.9	9.8	16.3
Rajasthan	1.9	12.8	8.5	5.4	15.7	12.0	4.6	16.9	12.3	6.2	15.7	12.5
Tamil Nadu	9.6	9.4	10.5	7.8	11.1	10.6	8.8	11.0	11.0	9.1	11.0	11.2
Uttar Pradesh	10.0	4.3	7.5	-0.1	16.5	9.5	10.6	4.7	8.1	1.0	17.5	10.7
West Bengal	17.4	1.7	9.5	12.9	1.3	7.1	17.2	2.3	9.7	13.1	1.2	7.1
All India	10.6	5.1	8.4	6.0	8.9	8.4	10.8	5.5	8.7	6.7	9.0	8.8

Source: Computed from Table 4.9

Total household earnings have been derived by multiplying the annual earnings per labourers (male/females) with the number of wage earners (male/female) per households separately males and females and then adding them up. Table 4.11 presents the total household annual earnings in wage employment. Highest household real earnings in wage employment were observed in the states of Punjab, Assam, Gujarat, Kerala and Haryana in that order. Household earnings were relatively low in the states of Orissa, Uttar Pradesh, Tamilnadu, Rajasthan and Madhya Pradesh. Household earnings of ALHH were slightly higher than that of RLHH. This difference was more marked in the states of Bihar and Punjab.

Table 4.12 gives the CAGR of total annual household real earnings in wage employment for the two categories of households. During the decade 1983 to 1993-94, a substantial growth was observed at the all India level at 7% for both categories of households. Growth rates were higher during the second sub-period (1988-94). Overall, all states except Assam and Haryana in case of ALHH and Bihar and Assam in case of RLHH registered growth rates above 5%.

**Table 4.11: Total Household Real Earnings in Wage Employment
in Rs. at 1970-71 Prices**

STATES	Agricultural Labour Households			Rural Labour Households		
	1983	1987-88	1993-94	1983	1987-88	1993-94
Andhra Pradesh	726	699	1348	741	666	1285
Assam	1471	1604	1900	1425	1593	1881
Bihar	690	1001	1339	680	988	952
Gujarat	972	963	1525	891	935	1450
Haryana	970	917	1367	817	892	1309
Himachal Pradesh	405	1065	1259	266	1043	1227
Karnataka	688	865	1433	675	812	1398
Kerala	1147	1154	1005	980	1093	1124
Madhya Pradesh	680	784	1292	651	801	1242
Maharashtra	699	828	1263	687	790	1213
Orissa	480	632	924	466	617	885
Punjab	1288	1319	2882	1224	1253	2651
Rajasthan	659	524	1345	605	567	1464
Tamil Nadu	532	641	1254	495	565	1163
Uttar Pradesh	455	635	949	430	621	929
West Bengal	646	1080	1415	626	1025	1322
All India	687	850	1373	659	821	1311

Source: Computed from RLE Reports.

**Table 4.12: CAGR of Total Annual Household Real Earnings in Wage Employment
(Percent)**

States	Agricultural Labour Households			Rural Labour Households		
	1983-88	1988-94	1983-1994	1983-88	1988-94	1983-1994
Andhra Pradesh	-0.8	11.6	6.4	-2.1	11.6	5.7
Assam	1.7	2.9	2.6	2.3	2.8	2.8
Bihar	7.7	5.0	6.9	7.8	-0.6	3.4
Gujarat	-0.2	8.0	4.6	1.0	7.6	5.0
Haryana	-1.1	6.9	3.5	1.8	6.6	4.8
Himachal	21.3	2.8	12.0	31.4	2.7	16.5
Karnataka	4.7	8.8	7.6	3.8	9.5	7.6
Kerala	0.1	-2.3	-1.3	2.2	0.5	1.4
Madhya Pradesh	2.9	8.7	6.6	4.2	7.6	6.7
Maharashtra	3.4	7.3	6.1	2.8	7.4	5.8
Orissa	5.7	6.5	6.8	5.8	6.2	6.6
Punjab	0.5	13.9	8.4	0.5	13.3	8.0
Rajasthan	-4.5	17.0	7.4	-1.3	17.1	9.2
Tamil Nadu	3.8	11.8	9.0	2.7	12.8	8.9
Uttar Pradesh	6.9	6.9	7.6	7.6	6.9	8.0
West Bengal	10.8	4.6	8.2	10.4	4.3	7.8
All India	4.3	8.3	7.2	4.5	8.1	7.1

Source: Computed from Table 4.11

**Table 4.13: Per capita Annual Real Earnings in Wage Employment
in Rs. at 1970-71 Prices**

STATES	Agricultural Labour Households			Rural Labour Households		
	1983	1987-88	1993-94	1983	1987-88	1993-94
Andhra Pradesh	173	167	341	175	156	322
Assam	330	343	427	317	348	422
Bihar	147	211	299	145	206	211
Gujarat	199	198	319	180	190	305
Haryana	180	178	249	150	169	252
H.P	84	232	300	57	225	258
Karnataka	138	186	304	134	173	294
Kerala	228	227	222	191	213	243
Madhya Pradesh	144	163	283	139	167	272
Maharashtra	148	177	281	146	169	268
Orissa	105	142	210	102	140	201
Punjab	251	272	580	241	254	535
Rajasthan	139	110	300	128	117	310
Tamil Nadu	131	159	322	122	139	294
Uttar Pradesh	97	136	201	92	133	195
West Bengal	135	232	305	132	221	286
All India	148	185	309	142	177	293

Source: Computed from RLE reports.

Table 4.14: CAGR of Per Capita Annual Real Earnings from Wage Employment

STATES	Agricultural Labour Households			Rural Labour Households		
	1983-88	1988-94	1983-1994	1983-88	1988-94	1983-1994
Andhra Pradesh	-0.7	12.7	7.0	-2.3	12.8	6.3
Assam	0.7	3.7	2.6	1.9	3.2	2.9
Bihar	7.5	6.0	7.4	7.3	0.4	3.8
Gujarat	-0.1	8.3	4.8	1.2	8.1	5.4
Haryana	-0.3	5.7	3.3	2.5	6.9	5.3
H.P.	22.5	4.4	13.6	31.5	2.3	16.2
Karnataka	6.2	8.5	8.2	5.3	9.3	8.2
Kerala	0.0	-0.4	-0.2	2.2	2.2	2.4
Madhya Pradesh	2.5	9.7	7.0	3.8	8.5	7.0
Maharashtra	3.6	8.0	6.6	2.9	8.0	6.2
Orissa	6.3	6.7	7.2	6.6	6.2	7.0
Punjab	1.6	13.5	8.7	1.1	13.2	8.3
Rajasthan	-4.5	18.2	8.0	-1.8	17.7	9.2
Tamil Nadu	3.9	12.5	9.4	2.7	13.3	9.2
Uttar Pradesh	6.9	6.8	7.6	7.6	6.6	7.8
West Bengal	11.5	4.6	8.5	10.9	4.3	8.0
All India	4.5	9.0	7.6	4.6	8.7	7.5

Source: Computed from Table 4.13.

We have also calculated per capita annual total real earnings in wage employment by dividing household earnings with average size of household. Table 4.13 presents per capita annual real earnings from wage employment. Per capita earnings of ALHH were slightly higher than that of RLHH. Punjab, Assam, Gujarat, Andhra Pradesh, Kerala and West Bengal have relatively higher per capita annual earnings in wage employment for both categories of households. On the other hand, Uttar Pradesh showed lowest per capita earnings followed by the states of Orissa, Rajasthan, Haryana, M.P and Maharashtra.

CAGR of per capita earnings are presented in Table 4.14. Per capita real earnings from wage employment registered a high increase of around 7.5% per annum at the all India level. The growth rate was much sharper during 1987-88 and 1993-94 as compared to the preceding period. Bihar, H.P and West Bengal, however, show a reverse trend. For the whole period i.e., 1983 to 1993-94, growth rates were found to be much lower in the states of Assam, Gujarat, Haryana and Kerala as compared to the other states. Similar pattern was observed for RLHH.

4.6 Inter State Variations in Annual Real Earnings in Wage Employment

A high level of inter-state variations in total annual real earnings per labourer is evident from the high value of C.V (Table 4.15). The variations are higher in case of female labourers as compared to male labourers. However, while C.V. for female labourers consistently declined between 1983 and 1993-94, in case of male labourers C.V. declined between 1983 and 1988 but then a rose between 1988 and 1994. The trends are similar for the two categories of households.

Table 4.15: Coefficient of Variation in Total Annual Real Earnings per Labourer in Wage Employment (%)

Category	Male Labourers			Female Labourers		
	1983	1987-88	1993-94	1983	1987-88	1993-94
ALHH	45.1	30.3	36.5	58.8	59.2	42.7
RLHH	43.6	30.1	38.0	63.2	58.9	46.2

Source: Computed from Table 4.9

Table 4.16 gives values of C.V. for household and per capita real earnings for the two categories of households. Inter-state variations in household and per capita real earnings are somewhat lower as compared to the variations in real earnings per labourer. Inter-state disparities in household and per capita real earnings saw a substantial decline

between 1983 and 1987-88, but increases moderately 1987-88 and 1993-94, as was the case with inter-state disparities in real earnings per labourer.

Table 4.16: Coefficient of Variation in Total Annual Real Household and Per Capita Earnings

Category	Agricultural Labour Households			Rural Labour Households		
	1983	1988	1994	1983	1988	1994
Household Earnings	39.2	30.9	32.5	40.3	31.1	31.5
Per capita Earnings	38.3	29.2	29.3	39.7	30.1	29.1

Source: Computed from Table 4.11 and 4.13.

4.7 Conclusions

The main conclusions of the present chapter have been summarized below.

Our analysis reveals that wage employment constitutes over three-fourth of total employment of rural labour households. The major exception is that of Himachal Pradesh, where this proportion is around two-thirds for males and around one-third for females

Wage employment days for ALHH are marginally higher than that for RLHH in most of the states. Wage employment days are higher in the states of Assam, Bihar, Gujarat, Punjab and Karnataka. The southern states of Tamilnadu, Kerala and Andhra Pradesh along with Maharashtra, Orissa, Uttar Pradesh and Haryana show relatively lower wage employment.

Wage employment days for female labourers are considerably lower as compared to their male counterparts for all three points of time and across majority of the states.

During the period 1983-94, there was a small rise in number of wage employment days at the all India level, which was higher in case of female labourers as compared to male labourers. Four states in case of ALHH and seven states in case of RLHH showed a decline in wage employment for male labourers. Wage employment for female labourers belonging to RLHH also declined in most of these states. Rest of the states showed a rise in the number of wage employment days. The rise was highest in Punjab, followed by Kerala, Bihar, Karnataka and Tamilnadu.

Changes in the number of wage employment days in agriculture are determined by demand and supply factors. The latter are influenced by weather conditions affecting the level of agricultural output. This was corroborated by the fall in number of employment days in agriculture in the several states during the drought year of 1987-88. Our analysis also indicated that the female labourers bear the main burden of decline in demand for labour during the bad agricultural years.

Total employment days were found to be higher in the states of Assam, Bihar, M.P, Rajasthan and Uttar Pradesh. The southern states of Kerala, Tamilnadu and Andhra Pradesh have lower number of total employment days. Total employment at the all India level, witnessed a sizeable increase during the period from 1983 to 1993-94. The rise was greater in case of female labourers in both categories of households. However, some states recorded a decline, which was more widespread in case of ALHH as compared to RLHH.

Inter state variations in employment days declined in case of male labourers during the period under study, but increased in case of female labourers.

During the decade 1983-1993-94, high growth rates were registered in annual real earnings per labourer in all states, reflecting the high growth rates of real wages as well as employment days. Total household real earnings also registered a high growth rate of 7% per annum at the all India level.

Per capita earnings of RLHH like household earnings were found to be marginally lower than that of ALHH. Uttar Pradesh followed by Orissa, Rajasthan, Haryana, M.P and Maharashtra show lower per capita earnings for rural labour households.

Analysis also revealed a high level of inter-state variation in case of total earnings from wage employment, particularly so in case of female labourers. C. V. in total earnings showed a consistent decline between 1983 and 1993-94 for female labourers. But, in case of male labourers there was first a decline between 1983 and 1987-88, followed by a rise between 1987-88 and 1993-94.

Inter-state disparities in household and per capita real earnings similarly saw a substantial decline between 1983 and 1987-88, but increased moderately between 1987-88 and 1993-94.

CHAPTER 5

TRENDS IN POVERTY, CONSUMPTION EXPENDITURE AND INDEBTEDNESS

5.1 Introduction

In this chapter, we propose to discuss trends in poverty levels of rural labour households based on consumption expenditure levels of the households. Consumption expenditure is one of the most important indicators of economic well being. It indicates an individual's command over resources as well as the opportunities and attainments that it facilitates in other aspects of well being. We have analysed trends in consumption expenditure of rural labour in India for the period 1983 to 1999-00. The key aspects looked into are those related to trends in growth rates in consumption expenditure, inter state variations in its level and growth, composition of consumption expenditure, inequalities in consumption expenditure and trends in poverty levels of rural labour. Consumption expenditure trends have been analysed for 15 major states. In addition, we have also discussed trends in rural indebtedness at the state-level for the period 1983 to 1993-94.

The chapter is divided into three sections. Section I deals with trends in poverty of rural labour households. In Section II examines the trends in rural consumption expenditure along with inequalities in consumption expenditure. Section III presents trends in indebtedness of rural labour households.

Section I

5.2 Trends in Rural Poverty

We begin with a discussion of poverty levels of ALHH and RLHH. The analysis is constrained by the fact that state level poverty estimates for different socio-economic groups are not readily available. Some scholars have derived poverty estimates from household

In the absence of poverty estimates for livelihood categories at the state level, we have attempted a rough approximation of poverty level based on MPCE class wise data given in RLE Report for 1993-94 and data extracted from NSS EUS² (Employment Unemployment Survey) for 1999-00. Sundaram and Tendulkar have estimated rural poverty lines at the all India level based on NSS-EUS data, as Rs. 211.30 for 1993-94 and 335.46 for 1999-00 respectively. We have taken all households having MPCE level below Rs 210 in 1993-94 as falling below the poverty line for all the states. For 1999-00, we have taken all rural persons belonging to labour households with MPCE below Rs. 340 as falling below the poverty line. Table 5.2 presents the state level poverty level for ALHH and RLHH as derived by us along with overall rural poverty ratios as estimated by Sundaram and Tendulkar (2003) on NSS-EUS data.

Poverty level among ALHH is marginally higher than that of RLHH in most of the states in both the years. Significant differences exist at the state level in the poverty levels of rural households. Poverty levels are distinctly higher in the states of Bihar, Orissa, Madhya Pradesh and Uttar Pradesh, which are among the poorest states in the country. Poverty levels among rural labour population are much lower in the states of Punjab and Kerala. The relative positions of the states have practically remained unchanged between 1993-94 and 1999-00.

Poverty levels for both categories of labour households show a decline by 3 percent points between 1993-94 and 1999-00, at the all India level. At the state level, ten states register a decline with the states of Haryana and Bihar registering the sharpest decline in poverty ratios for both categories. However, poverty levels show a rise in the states of Assam, Gujarat, Punjab and M.P while it remains unchanged in the states of Orissa, West Bengal and Tamilnadu. The pace of decline overall has been slow.

Poverty among rural labour households is markedly higher than that of other livelihood classes at the all India level for both the years in most of the states level for both points of time. The gap is more pronounced in the states of Andhra Pradesh, Haryana, Madhya Pradesh, Rajasthan and Uttar Pradesh. However, states of Assam, Kerala, and West Bengal, have been exceptions, where poverty ratios for rural labour

² We have used the NSS EUS results for 1999-00 as RLE data is collected in conjunction with the NSS employment and unemployment quinquennial rounds and hence makes it comparable with the RLE data

level NSS data¹. Table 5.1 shows the poverty estimates for different socio-economic groups at the all India level as derived by Sundaram and Tendulkar (2003). Incidence of poverty is highest in case of agricultural labour followed by other labour, making rural labour as a whole the poorest group in the rural population. It is noteworthy that within the labour households, poverty levels are markedly higher in case of agricultural labour as compared to other labour. Poverty levels have declined during the period 1993-94 and 1999-00 for all categories of rural households including labour households. The decline is highest in case of agricultural labour households by 7.5 percent points followed by other labour by 5.9 percent points.

Table 5.1: Percentage of Rural Households below the Poverty Line by Livelihood Categories: All-India: 1993-94 - 1999-2000.

Household/Type	1993-94	1999-2000
Self-Employed in Agriculture	27.8	24.1
Self-Employed in Non-Agriculture	29.7	27.0
Agricultural Labour	54.5	46.9
Other Labour	35.2	29.2
Others	23.6	18.4
All	35.2	31.5

Source: Sundaram K, and S.D Tendulkar (2003)

Notes: 1. Estimates are based on:

1993-94: Results on Employment Situation in India, Fifth Quinquennial Survey, NSS 50th Round (July 1993-June 1994), Sarvekshana vol. 20, no.1, July-September 1996.

1999-2000: Results on Employment-Unemployment in India, 1999-2000, NSS 55th Round, July 1999-June 2000

¹ Concerns have been raised regarding the comparability of the poverty estimates based on the 55th round of NSS with estimates based on earlier rounds due to changes in the survey methodology such as changes in reference period used to calculate household per capita consumption expenditure. The issue has been extensively discussed and largely resolved by analysis of NSS unit record data by Abhijit Sen and Himanshu in their paper titled "*Poverty and Inequality in India, Getting Closer to the Truth*". Tendulkar and Sundaram have also made adjustments in their poverty estimates based on NSS data in light of the suggestion of this paper.

households were lower as compared to total rural poverty ratios for both points of time. The gap has further deepened in 1999-00 in the states of Gujarat, Haryana, Madhya Pradesh, Punjab, Rajasthan and Uttar Pradesh indicating that the post reform period saw a worsening of poverty scenario for rural labour households as compared to other rural economic groups in these states.

Table 5.2: Percentage of Population Below Poverty Line: 1993-94 to 1999-2000

STATES	1993-94			1999-00		
	ALHH	RLHH	Rural Population	ALHH	RLHH	Rural Population
Andhra Pradesh	43	42	28	38	38	25
Assam	43	46	58	56	53	62
Bihar	70	69	64	61	60	59
Gujarat	30	28	29	34	31	26
Haryana	43	34	31	25	23	15
Karnataka	51	49	38	45	43	39
Kerala	21	20	34	16	13	27
Madhya Pradesh	61	59	37	66	66	39
Maharashtra	58	54	50	49	45	50
Orissa	70	68	59	69	68	63
Punjab	14	13	18	16	15	14
Rajasthan	31	34	26	26	26	15
Tamil Nadu	47	42	37	47	42	39
Uttar Pradesh	56	53	39	52	49	30
West Bengal	48	48	54	48	46	56
All India	52	49	39	49	45	36

Source: Col 1, 2, 4 & 5 computed from RLE Report on Consumption Expenditure of Rural labour Households 1993 and from data extracted from NSS survey on Employment and Unemployment 1999-00.

Col 3&6: Sundaram and Tendulkar (2003), based on NSS-EUS 1993-94 and 1999-00

Section II

Trends in Consumption Expenditure

5.3 Trends in Real Per Capita Consumption Expenditure

For analysis of consumption expenditure, we have made use of the RLE reports on Consumption Expenditure of Rural Households for 1983, 1987-88 and 1993-94. However, RLE Report on Consumption Expenditure for 1999-00 is still unpublished. In order to get comparable data for the year we have made use of per capita consumption expenditure figures extracted from the EUS of the NSS (1999-00) based on schedule

10.0. To compute real consumption expenditure we have deflated annual per capita expenditure using CPIAL prepared by Labour Bureau, Shimla.

Table 5.3 shows the level of per capita real consumption expenditure for ALHH and RLHH for the years 1983, 1993-94 and 1999-00. The annual real per capita consumption expenditure levels for ALHH are lower than that of RLHH in all the states throughout the period. The gap is more pronounced in the states of Haryana, Kerala, Maharashtra and Tamil Nadu.

Table 5.3: Ranking of States on the Basis of Average Real Per Capita Annual Consumption Expenditure

States	Agricultural Labourer Household			Rural Labourer Household		
	1983	1993-94	1999-00	1983	1993-94	1999-00
Andhra Pradesh	464 (7)	533 (3)	507 (4)	473 (6)	541 (3)	508 (5)
Assam	471 (6)	450 (10)	412 (10)	461 (7)	444 (11)	420 (10)
Bihar	317 (14)	370 (14)	407 (11)	322 (14)	372 (14)	408 (11)
Gujarat	495 (4)	508 (4)	493 (5)	489 (5)	526 (4)	515 (4)
Haryana	535 (2)	467 (6)	550 (2)	553 (2)	491 (6)	571 (2)
Karnataka	428 (8)	451 (9)	442 (9)	440 (8)	460 (10)	458 (9)
Kerala	521 (3)	591 (1)	636 (1)	548 (3)	613 (1)	675 (1)
Madhya Pradesh	359 (10)	407 (12)	370 (13)	367 (12)	415 (12)	370 (14)
Maharashtra	397 (9)	452 (8)	447 (7)	425 (9)	491 (7)	475 (7)
Orissa	314 (15)	406 (13)	385 (12)	318 (15)	413 (13)	393 (12)
Punjab	592 (1)	568 (2)	548 (3)	614 (1)	595 (2)	555 (3)
Rajasthan	476 (5)	459 (7)	457 (6)	499 (4)	465 (9)	462 (8)
Tamil Nadu	350 (12)	450 (11)	446 (8)	371 (10)	486 (8)	475 (6)
Uttar Pradesh	342 (13)	348 (15)	369 (14)	361 (13)	355 (15)	382 (13)
West Bengal	353 (11)	497 (5)	359 (15)	369 (11)	507 (5)	366 (15)

Source: based on Appendix Table A12

Note: figures in parentheses give the rank of the state.

There is an overall stability in ranks for the two categories of households for all the three points of time. The value of 'R' was above 0.8 in nearly all the cases. The states of Bihar, Madhya Pradesh, Orissa, U.P and W.B, occupy the lowest ranks in all the three years for both types of households. Kerala, Punjab and Haryana continued to remain at the higher ranks during the period under study. Some changes in the ranking of states, however, have taken place between 1983 and 1999-00. Assam, Rajasthan, U.P and W.B experienced a decline in their ranks, while Bihar, Maharashtra, Orissa, and Tamilnadu

show improvement in their ranks. Punjab, however, moves down to third rank in 1999-00. West Bengal and A.P experienced a steep rise in their ranks between 1983 and 1993-94, but slipped back in 1999-00. Haryana recorded a fall in its rank between 1983 and 1993-94 but showed a rise in its rank in 1999-00.

Table 5.4 classifies states into three categories according to the level of per capita annual real consumption expenditure: high (above Rs. 600), moderately high (between Rs. 500 to Rs. 600), low (between Rs. 400 to 500) and very low (below Rs. 400).

Table 5.4: Distribution of States by Range of Real per Capita Annual Consumption Expenditure (in Rs)

Agricultural Labour Households			Rural Labour Households		
1983	1993-94	1999-00	1983	1993-94	1999-00
High (Above Rs 600)					
		Kerala (636)	Punjab (614)	Kerala (613)	Kerala (675)
Moderately High (Between Rs 500-600)					
Punjab (592) Haryana (535) Kerala (521)	Kerala (591) Punjab (568) A.P (533) Gujarat (508)	Haryana (550) Punjab (548) A.P. (508)	Haryana (553) Kerala (548)	Punjab (595) A.P (541) Gujarat (526) W.B (507)	Haryana (571) Punjab (555) Gujarat (515) A.P. (508)
Low (Between Rs. 400-500)					
Gujarat (495) Rajasthan (476) Assam (471) A.P (464) Karnataka (428)	W.B (497) Haryana (467) Rajasthan (459) Maharashtra (452) Karnataka (451) Assam (450) T.N (450) M.P (407) Orissa (406)	Gujarat (493) Rajasthan (457) Maharashtra (447) T.N. (446) Karnataka (442) Assam (412) Bihar (407)	Rajasthan (499) Gujarat (489) A.P (473) Assam (461) Karnataka (440) Maharashtra (425)	Haryana (491) Maharashtra (491) T.N (486) Rajasthan (465) Karnataka (460) Assam (444) M.P (415) Orissa (413)	T.N. (475) Maharashtra (475) Rajasthan (462) Karnataka (458) Assam (420) Bihar (408)
Very Low (less than Rs. 400)					
Maharashtra (397) M.P (359) T.N (350) U.P (342) W.B (353) Bihar (317) Orissa (314)	Bihar (370) U.P (348)	Orissa (385) M. P (370) U.P (369) W.B (359)	T.N (371) W.B (369) M.P (367) U.P (361) Bihar (322) Orissa (318)	U.P (355)	Orissa (393) U.P (382) M. P (370) W.B (366)

Source: based on Table 5.3

Note: figures in parentheses give real per capita annual consumption expenditure

During 1983, none of the states featured in the highest category of consumption expenditure for ALHH while for RLHH Punjab had the highest level of consumption

expenditure. In 1993-94, Kerala replaced Punjab in the highest category of consumption expenditure in case of RLHH while for ALHH, yet again none of the states featured in this category. During 1999-00, Kerala continued to have the highest level of consumption expenditure for both ALHH and RLHH. Between 1993-94 and 1999-00, a decline in consumption level is evident as there is an increase in the number of states in the very low category of consumption expenditure. For all the three years, there is a high concentration of states in the low category of consumption expenditure level with some modifications in composition. States of Bihar, M.P., Orissa, W.B and U.P show the lowest level of consumption expenditure for all the three years and for both categories of households.

5.4 Growth Rates of Consumption Expenditure

Table 5.5 presents the CAGR of per capita real consumption expenditure of ALHH and RLHH respectively during the three sub-periods, i.e., 1983-1988, 1988-1994 and 1994-2000. The growth trends for both categories of households are almost similar for all the three sub-periods. At the all India level, consumption expenditure increased at a high growth rate of 2.7% during 1983-88. The growth rate slowed down to 0.5% in 1988-94 and turned into a negative growth of -0.6% during 1994-00.

At the state level, a mixed picture has emerged. In the first period (1983-88) in case of ALHH, five states recorded a decline in consumption expenditure, namely, Andhra Pradesh, Assam, Gujarat, Punjab and Rajasthan. The severe drought of 1987-88 seems to have caused this decline in consumption expenditure. The states of Bihar, M.P, Orissa and West Bengal, however, registered high growth rates in consumption expenditure during this period. The picture for RLHH was broadly similar to that of ALHH.

During the period 1988-94, growth rate of consumption expenditure slowed down in most of the states with as many as six states experiencing a negative growth in case of ALHH. The notable exceptions were the states of Andhra Pradesh, Gujarat and Tamilnadu, which show a rise in growth rate of consumption expenditure during this period. Consumption expenditure trends were similar in case of RLHH. The period 1994-00, witnessed a further deceleration in consumption expenditure of both ALHH and

RLHH. The number of states with a negative growth rate increased to ten and eleven for ALHH and RLHH respectively. Only Bihar, Haryana, Kerala and U.P registered positive growth rates of consumption expenditure during this period.

**Table 5.5: CAGR of Total Per capita Real Consumption Expenditure
(Percent)**

STATES	Agricultural Labour Household			Rural Labour Households		
	1983-88	1988-94	1994-00	1983-88	1988-94	1994-00
Andhra Pradesh	-0.3	2.6	-0.9	-0.1	2.3	-1.0
Assam	-0.7	-0.1	-1.5	0.9	-1.3	-0.9
Bihar	4.5	-1.1	1.6	4.8	-1.5	1.6
Gujarat	-1.6	1.8	-0.5	-1.1	2.2	-0.4
Haryana	0.9	-3.0	2.8	0.5	-2.4	2.5
Karnataka	0.5	0.4	-0.3	0.6	0.2	-0.1
Kerala	1.7	0.7	1.2	1.9	0.3	1.6
Madhya Pradesh	2.0	0.4	-1.6	2.0	0.4	-1.9
Maharashtra	1.8	0.7	-0.2	1.6	1.1	-0.6
Orissa	2.6	2.2	-0.9	2.8	2.1	-0.8
Punjab	-0.7	-0.1	-0.6	-0.7	0.0	-1.2
Rajasthan	-0.4	-0.3	0.0	-3.3	1.7	-0.1
Tamil Nadu	1.7	2.8	-0.1	2.4	2.6	-0.4
Uttar Pradesh	1.0	-0.5	1.0	0.4	-0.6	1.2
West Bengal	4.8	1.8	-5.3	4.9	1.4	-5.3
All India	2.6	0.5	-0.6	2.7	0.5	-0.6

Source: computed from RLE Report on Consumption Expenditure of Rural labour Households 1983 to 1993, statement 3.1 a) & b)

1999-00: computed from data extracted from NSS survey on Employment and Unemployment

Since the severe drought of 1987-88 has affected growth rate of consumption expenditure in some states, we have analysed growth rates in consumption expenditure for two periods ignoring 1987-88. The first period covers 1983 to 1993-94 and the second period covers 1993-94 to 1999-00. The two sub-periods represent broadly the pre and post economic reform period. CAGR of consumption expenditure for the two periods have been shown in Table 5.6.

**Table 5.6: Growth rate of Per capita Real Consumption Expenditure
In the Pre and Post Reform period**

(Percent)

STATES	Agricultural Labour Household		Rural Labour Households	
	Pre Reform Period	Post Reform Period	Pre Reform Period	Post Reform Period
Andhra Pradesh	1.4	-0.9	1.3	-1.0
Assam	-0.4	-1.5	-0.4	-0.9
Bihar	1.6	1.6	1.5	1.6
Gujarat	0.3	-0.5	0.7	-0.4
Haryana	-1.4	2.8	-1.2	2.5
Karnataka	0.5	-0.3	0.4	-0.1
Kerala	1.3	1.2	1.1	1.6
Madhya Pradesh	1.3	-1.6	1.2	-1.9
Maharashtra	1.3	-0.2	1.5	-0.6
Orissa	2.6	-0.9	2.6	-0.8
Punjab	-0.4	-0.6	-0.3	-1.2
Rajasthan	-0.4	0.0	-0.7	-0.1
Tamil Nadu	2.5	-0.1	2.8	-0.4
Uttar Pradesh	0.2	1.0	-0.2	1.2
West Bengal	3.5	-5.3	3.2	-5.3
All India	1.6	-0.6	1.6	-0.6

Source: Same as Table 5.5

At the all-India level, a deceleration in growth rate of consumption expenditure in the post reform period is evident for both categories of labour households. CAGR has come down from 1.6% in the pre reform period to -0.6% in the post reform period. The decline is widespread across the states with as many as eleven states showing a negative trend in consumption expenditure during the post-reform period. Only four states show a positive trend in the post-reform period, namely, Bihar, Haryana, Kerala and U.P as observed earlier.

Table 5.7 classifies states into four categories according to rate of growth in real per capita total consumption expenditure during the pre and the post reform period. A deceleration in growth rate of consumption expenditure is evident. While most of the states concentrated in the moderate growth rate category in the pre-reform period, during the post reform period majority of states had a negative growth rate. None of the states had a growth rate above 3% in the post reform period.

Table 5.7: Classification of States According to Growth Rate of Real Per Capita Total Consumption Expenditure in the Pre and Post Reform Period

CATEGORY	Agricultural Labour Household		Rural Labour Households	
	Pre Reform Period	Post Reform Period	Pre Reform Period	Post Reform Period
Negative Growth	Assam Haryana Punjab Rajasthan	Andhra Pradesh Assam Gujarat Karnataka Madhya Pradesh Maharashtra Orissa Punjab Tamil Nadu West Bengal	Assam Haryana Punjab Rajasthan Uttar Pradesh	Andhra Pradesh Assam Gujarat Karnataka Madhya Pradesh Maharashtra Orissa Punjab Rajasthan Tamil Nadu West Bengal
Low Growth (Between 0 to 1%)	Gujarat Karnataka Madhya Pradesh Uttar Pradesh	Rajasthan Uttar Pradesh	Gujarat Karnataka	
Moderate Growth (Between 1-3%)	Andhra Pradesh Bihar Kerala Madhya Pradesh Maharashtra Orissa Tamil Nadu Uttar Pradesh	Bihar Kerala Haryana	Andhra Pradesh Bihar Kerala Madhya Pradesh Maharashtra Orissa Tamil Nadu Uttar Pradesh	Kerala Uttar Pradesh Haryana
High Growth (Above 3%)	West Bengal		West Bengal	

Source: Based on Table 5.6

5.5 Linkage between Poverty levels and Growth Rates of Consumption Expenditure

A strong and inverse relationship was observed between poverty ratios and consumption expenditure levels. The value of correlation coefficient between poverty ratios and consumption expenditure levels for 1993-94 and 1999-00 was negative and statistically significant at -0.84 and -0.81 for ALHH and -0.80 and -0.86 for RLHH for the two points of time. States with higher poverty ratios such as those of Assam, Bihar, M.P, Orissa, U.P and West Bengal have shown lower levels of consumption expenditure.

The value of correlation coefficient between change in poverty ratio and CAGR of APCE in the period 1993-94 to 1999-00 was -0.60 and -0.51 for ALHH and RLHH respectively indicating a strong inverse relation between the two. States of Assam, Gujarat and M.P that have registered a rise in poverty ratios of rural labour during 1993-94 and 1999-00 have also experienced a decline in APCE during the period, while on the

other hand states such as Haryana, Kerala, Bihar and U.P where poverty ratios have declined the APCE has increased. 'R' between growth rate of real male agricultural as well as non-agricultural wage and change in poverty ratio for ALHH was also negative and statistically significant at -0.50 and -0.57 respectively during the post reform period. The corresponding figures for RLHH were -0.50 and -0.34. Thus, growth in real wages seems to be an important factor in reducing poverty of rural labour through its positive effect on income and consumption levels. Other scholars have also observed that growth in real wages is a strong force in reducing poverty (Sundaram and Tendulkar 2003, p. 5276).

5.6 Factors Determining Consumption Expenditure

The level of consumption expenditure of rural labour households is hypothesized to depend upon factors such as real agricultural/non-agricultural wages, total wage employment days, NSDP agriculture per ha, per capita real earnings, percentage of households with land and amount of debt taken for household consumption purposes. 9 presents the correlation matrix between the selected variables for the year 1993-94. All the selected variables except employment days show a statistically significant correlation with consumption expenditure of rural labour. The signs for all variables except for percentage of households with cultivable land are in the expected direction. This may be because households with higher percentage of land ownership are engaged in wage employment for lesser number of days, which depresses their income levels leading to a lower level of consumption expenditure. 'R' between real household earnings form wage employment and percentage of households with cultivable land was negative and significant.

Table 5.8: Correlation Matrix between Determinants of Consumption Expenditure of Agricultural Labour Households, 1993-94

VARIABLES		Y	X ₁	X ₂	X ₃	X ₄	X ₅	X ₆
Y	Consumption Expenditure 1993-94 ALHH	1						
X ₁	Real Male Agricultural Wage	0.79	1					
X ₂	NSDPAG/Ha At Const Prices	0.51	0.77	1				
X ₃	Total Wage Employment	-0.03	0.08	0.12	1			
X ₄	Real Per Capita Total Earnings	0.44	0.38	0.20	0.35	1		
X ₅	% Of ALHH With Cultivable Land	-0.63	-0.68	-0.66	-0.11	-0.47	1	
X ₆	Amount Of Debt For HH Consumption Exp	0.35	0.19	0.08	-0.22	0.15	-0.44	1

The explanatory variables also show a high degree of correlation among themselves. To avoid the problem of multi-colinearity, real male wages in agricultural operations was selected as the main explanatory variable of variations in the consumption expenditure levels of rural labour households. A stepwise regression analysis was also attempted using SPSS package by incorporating other explanatory variables identified above. However, addition of other explanatory variables did not improve the explanatory power of the model significantly.

We have finally used the following linear regression model to explain consumption expenditure levels:

$$Y = a + b_1.X_1 + u$$

Where,

Y = Real per capita consumption expenditure of ALHH / RLHH

X₁ = Real male wages in agricultural operations for ALHH / RLHH

u = Error term

Table 5.9 gives the results of the regression model for both categories of households and for both points of time.

Table 5.9: Linear Regression on State wise Consumption Expenditure

Equation	Year	Dependent Y	Constant a	Real male wage X ₁	R ²	F
(1)	1983	CE (ALHH)	288.7 (6.4)	0.76 (4.2)	0.55	18
(2)	1993-94	CE (ALHH)	288.9 (7.4)	0.79 (4.6)	0.43	11.7
(3)	1999-00	CE (ALHH)	265.9 (8.3)	0.87 (6.3)	0.73	39.4
(4)	1983	CE (RLHH)	273.9 (6.4)	0.76 (4.6)	0.55	17.9
(5)	1993-94	CE (RLHH)	288.9 (6.7)	0.79 (4.6)	0.59	21.5
(6)	1999-00	CE (RLHH)	259.4 (7.9)	0.88 (6.7)	0.76	45.5

Notes: 1. Figures in parentheses show t values

The model explained 43% to 76% of variance in consumption expenditure across states as is evident from the value of adjusted R-Square for all points of time. The explanatory power was much higher in 1999-00 as compared to the years 1983 and 1993-94. Overall significance of the model is also high as shown by the high F values. All signs are in the expected direction. The model strongly validates the hypothesis that higher wages lead to a higher consumption level. Thus, wage level can be regarded as the immediate determinant of consumption level of rural labour households. Wage level itself is determined by a number of factors, which have been discussed in Chapter 3.

5.7 Inter State Variations in Consumption Expenditure

In the pre-reform period a high tendency towards convergence was visible as the correlation between per capita consumption expenditure in 1983 and growth rate of consumption expenditure in different states was found to be negative with 'R' being -0.70 and -0.64 for ALHH and RLHH respectively. However, during the post reform period a tendency towards divergence is visible as 'R' between the initial consumption level and growth rate of consumption level during this period was 0.24 and 0.23 for ALHH and RLHH respectively. Thus, states with higher consumption expenditure registered higher growth rate in the post reform period while in the pre reform period it was the states with lower consumption expenditure level that registered higher growth in consumption expenditure.

Table 5.10: Coefficient of Variation in Real Consumption Expenditure of ALHH and RLHH at State Level (%)

Year	Agricultural Labour Household	Rural Labour Household
1983	20.5	20.3
1987-88	15.7	16.1
1993	14.7	15.4
1999-00	17.4	18.4

Source: Computed from Appendix Table A12

These trends are further confirmed by the analysis of the coefficient of variations (CV) in consumption expenditure across states for four points of time from 1983 to 1999-00. The coefficient of variation followed a similar pattern for both ALHH and RLHH. The value of CV declined sharply from around 20% in 1983 to around 15% in 1993-94 but rose to 18% in 1999-00. Thus, the post reform period has witnessed a rise in

inter-state variations in real consumption expenditure in contrast to the pre reform period when there was a fall in inter-state disparities.

5.8 Pattern of Consumption Expenditure

Distribution of consumption expenditure between food and non-food items is an important indicator of the levels of living of the people. Table 5.11 shows the proportion of total expenditure on food items by ALHH and RLHH. Expenditure on food items accounted for over half to three-fourths of the total consumption expenditure in both categories of households. However, this proportion has been slowly declining over time in all the states. In Punjab, Kerala, Haryana and Maharashtra the ratio of expenditure on food items has come down below 60%. However, in states of Assam, Bihar, Orissa and West Bengal it still exceeds 65%. This is reflective of the fact that rural labour households by and large are living near the subsistence level.

Table 5.11: Expenditure on Food Items as Percent of Total Consumer Expenditure Of ALHH and RLHH

STATES	Agricultural Labour Households				Rural Labour Households			
	1983	1987-1988	1993	1999-2000	1983	1987-1988	1993	1999-2000
A. P	63	62	61	67	63	62	61	63
Assam	73	75	71	66	73	73	71	68
Bihar	76	71	72	61	76	71	72	68
Gujarat	66	70	70	63	67	69	69	62
Haryana	64	60	60	51	63	60	61	57
Karnataka	64	65	63	61	64	64	63	61
Kerala	67	63	65	48	66	62	64	58
M.P	72	67	65	59	71	67	64	59
Maharashtra	64	65	63	57	63	64	61	57
Orissa	78	73	71	66	78	73	71	67
Punjab	62	64	61	43	62	63	60	54
Rajasthan	62	63	65	66	62	63	60	58
Tamil Nadu	69	69	67	61	68	67	65	61
Uttar Pradesh	66	64	64	58	66	64	64	59
West Bengal	78	75	71	70	77	74	71	68
All India	71	67	66	63	66	66	65	61

Source: Computed from RLE Report on Consumption Expenditure of Rural labour Households 1983 to 1993, statement 3.1 a) & b)

1999-00: NSS Report No. 472: Difference in Level Of Consumption Among Socio-Economic Groups, 1999-00, Table 5R & 6R

A break up of expenditure on food items between cereal and non-cereal items like pulses, milk, fruits, vegetables, meat, fish and other food items reflects the nutritional aspect of the food consumption. Higher expenditure on cereals shows an imbalance in

diet and also lower nutritional levels. Table 5.12 shows the proportion of expenditure on cereals as percent of total expenditure on food items in different states. The consumption pattern is almost similar for ALHH and RLHH. Cereals accounted for more than half of the expenditure on food items in most of the states in 1983. This proportion was much higher in states of Orissa, Bihar, West Bengal and Madhya Pradesh. The exceptions were the relatively richer states of Punjab, Gujarat and Haryana, where consumption of cereals accounted for less than 40% of total expenditure on food items.

Table 5.12: Expenditure on Cereals as Percent of Expenditure on Food Items

STATES	Agricultural Labour Households				Rural Labour Households			
	1983	1987-1988	1993	1999-2000	1983	1987-1988	1993	1999-2000
A. P	56	47	45	43	55	46	44	45
Assam	58	50	48	55	55	48	47	55
Bihar	73	64	59	62	73	62	59	56
Gujarat	38	33	28	29	38	32	27	29
Haryana	39	31	29	30	37	30	29	27
Karnataka	53	42	41	39	52	42	40	38
Kerala	49	37	36	40	46	36	35	33
M.P	65	54	50	46	64	53	50	46
Maharashtra	48	37	33	45	46	36	32	43
Orissa	77	70	65	65	77	70	65	63
Punjab	29	24	23	33	29	23	23	25
Rajasthan	46	41	32	31	45	43	34	36
Tamil Nadu	61	51	46	57	59	48	43	55
Uttar Pradesh	57	47	44	44	54	46	43	42
West Bengal	68	60	59	53	67	58	57	54
All India	56	49	46	43	59	47	44	42

Source: Computed from *RLE Report on Consumption Expenditure of Rural labour Households 1983 to 1993, statement 3.2 a) & b)* and *Difference in Level Of Consumption Among Socio- Economic Groups, 1999-00, NSS Report No. 47, Table 5R.*

A somewhat more balanced picture emerges in 1999-00. At the all India level the share of cereals in total expenditure on food items declined from 56% in 1983 to 43% in 1999-00 in case of ALHH and from 59% to 41% in case of RLHH (Table 5.12). All states except Punjab in case of ALHH and Assam in case of RLHH have experienced a decline in the share of expenditure on cereals and a corresponding rise in the share of non-cereal items between 1983 and 1999-00. The change was more marked in the states of Bihar, Karnataka, Madhya Pradesh, Orissa, Rajasthan and West Bengal. However, in states of Assam, Bihar, Orissa and Tamil Nadu, cereals still account for more than 55 percent of total expenditure on food items. On the other hand, the share of cereals in total

expenditure on food items has come down to one-third to one-fourth in some states, e.g., Gujarat, Haryana, Punjab and Rajasthan.

The proportion of expenditure on food is generally expected to decline with a rise in the level of income. Furthermore, it is hypothesized that poor household spend a greater proportion of their total expenditure on cereals as against other food items like milk, fish, vegetables and meat and that this proportion declines with a rise in income. We have examined the above hypotheses with the help of regression analysis using consumption expenditure data for 1999-00. The linear regression model of the form $Y = a - bX_1$ was used taking (i) % expenditure on food to total consumption expenditure (Y_1), (ii) % expenditure on cereals to total consumption expenditure (Y_2), and (iii) % expenditure on cereals as % of total expenditure on food (Y_3) as the dependent variables and average per capita consumption expenditure (APCE) as the independent variables (X).

The following results were obtained:

Equation	Dependent Y	Constant a	Independent X	\bar{R}^2	F
(1)	Y_1 (ALHH)	75.7 (16.1)	-0.68 (-3.3)	0.42	10.9
(2)	Y_2 (ALHH)	63.2 (5.9)	-0.69 (-3.5)	0.44	12.1
(3)	Y_3 (ALHH)	89.3 (8.3)	-0.77 (-4.3)	0.56	18.9
(4)	Y_1 (RLHH)	73.0 (14.4)	-0.56 (-2.5)	0.26	6.4
(5)	Y_2 (RLHH)	83.7 (7.4)	-0.70 (-3.7)	0.45	13.4
(6)	Y_3 (RLHH)	57.8 (6.9)	-0.71 (-3.8)	0.47	14.2

The regression exercise corroborates the negative relationship between proportion of consumption expenditure on food/cereals and APCE. This relationship is also evident from the following charts. There is a clustering of states around the

downward sloping regression line. Certain outliers do exist. For instance, in Punjab and A.P percent expenditure on food is relatively high though per capita expenditure in these states is relatively high in case of ALHH (Chart 5.1 a). Maharashtra presents an opposite case where proportion of expenditure on food is less relative to its level of APCE in case of RLHH (Chart 5.3 b). Such exceptions may be explained in terms of differences in eating habits, composition and physical characteristics of population, climatic conditions, etc. that are peculiar to certain states or regions.

Chart 5.1 (a) State wise APCE and Percentage Expenditure on Food Of ALHH, 1999-00

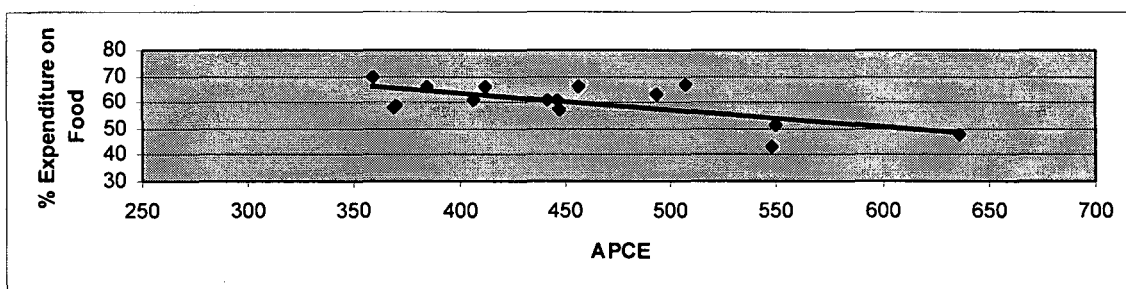


Chart 5.1(b): State wise APCE and Percentage Expenditure on Food Of RLHH 1999-00

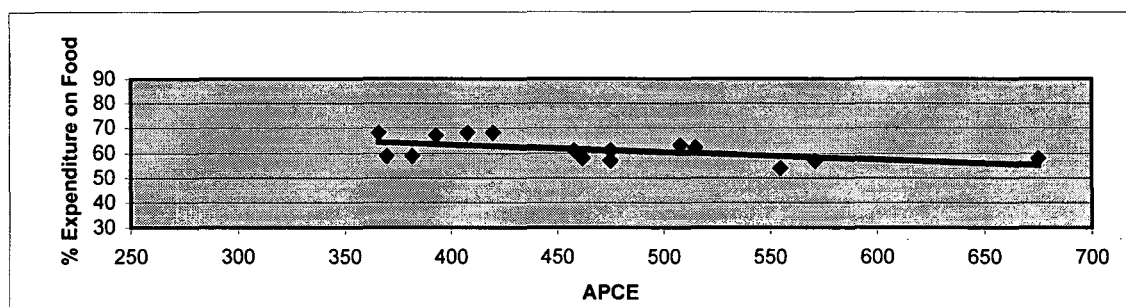


Chart 5.2 (a): State wise APCE and Percentage of Expenditure on Cereals ALHH: 1999-00

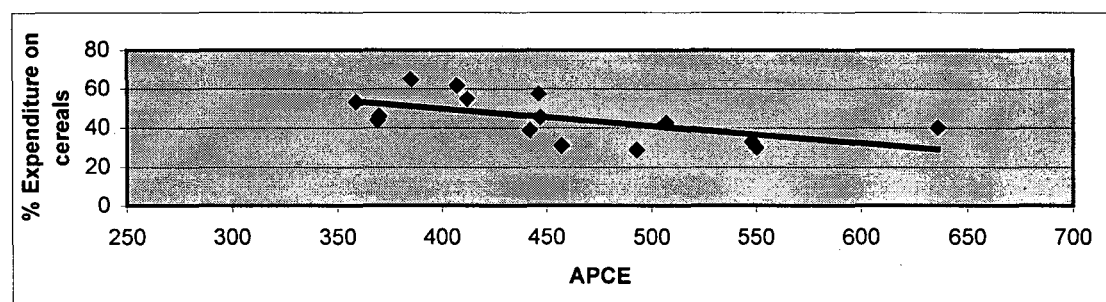


Chart 5.2 (b): State wise APCE and Expenditure on Cereals as Percentage of Expenditure on Food: RLHH, 1999-00

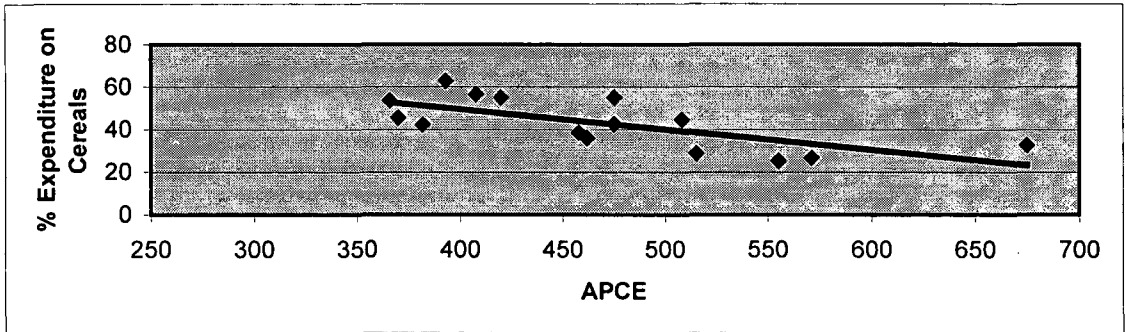


Chart 5.3 (a): State wise APCE and Expenditure on Cereals as Percentage of Expenditure on Food: ALHH, 1999-00

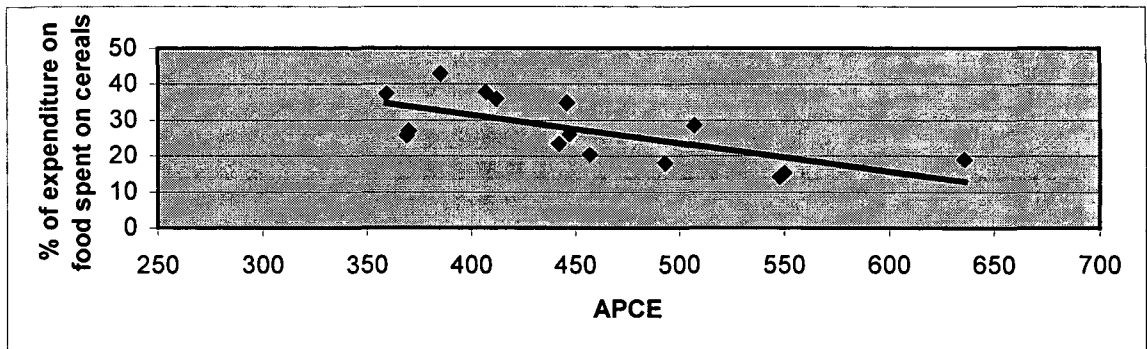
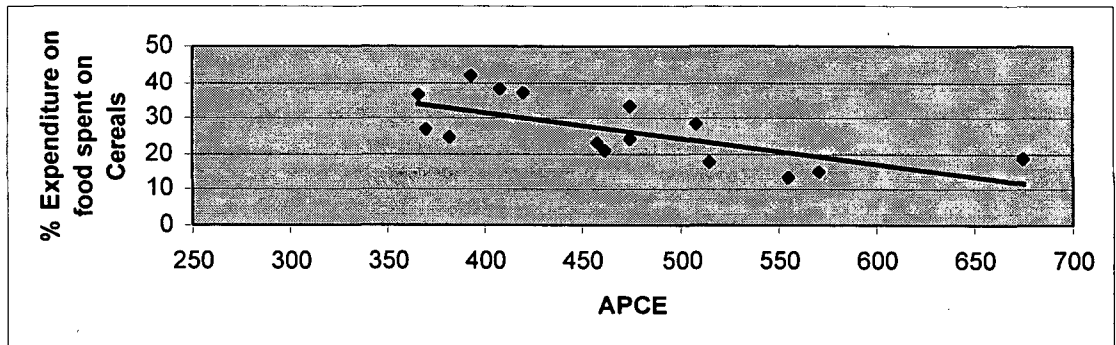


Chart 5.3 (b): State wise APCE and Expenditure on Cereals as Percentage of Expenditure on Food: RLHH, 1999-00



5.9 Inequalities in Consumption Expenditure

We have discussed inequalities in consumption expenditure of rural labour in terms of measures of inequality like concentration ratio in order to observe the trends in equality levels across the states. We have also grouped households into four MPCE classes that broadly represent the quartile distribution, based on all India picture. Table 5.13 presents the distribution of rural households by four MPCE classes for the year 1993-94. At the all India level, around one-fifth of households fall in the first group with MPCE of less than Rs. 165 and around one-third in the second group with MPCE between Rs. 165 and Rs. 235. In the states of Bihar, Orissa, Uttar Pradesh, Madhya Pradesh and Maharashtra, around two-thirds or more of the households are in the first two groups showing a very high degree of skewness in distribution of consumption expenditure in these states. In contrast, in the states of Haryana, Gujarat, Kerala and Punjab less than 30 % of labour households fall in this category. A more even distribution across the four groups exists in rest of the states, with the highest concentration in the second group.

Table 5.13: Percent Distribution of Rural Households by MPCE Classes, 1993-94

STATE	Agricultural Labour Households				Rural Labour Households			
	> 165	165-235	235-300	300+	> 165	165-235	235-300	300+
Andhra Pradesh	19	36	22	23	18	36	22	24
Assam	15	43	25	17	16	44	24	16
Bihar	43	37	13	7	42	37	14	7
Gujarat	12	32	26	31	11	29	24	36
Haryana	19	33	18	30	13	32	21	33
Karnataka	28	32	22	19	26	32	22	20
Kerala	9	20	22	49	8	20	23	50
Madhya Pradesh	34	35	15	15	33	35	15	16
Maharashtra	34	33	16	17	31	32	18	19
Orissa	43	36	12	8	42	35	12	10
Punjab	4	22	31	44	3	20	30	47
Rajasthan	16	26	18	40	14	31	20	34
Tamil Nadu	24	35	21	21	21	33	22	25
Uttar Pradesh	35	32	16	17	32	32	17	19
West Bengal	21	39	23	17	19	40	23	18
All India	28	34	19	19	26	34	19	21

Source: Computed from Statement 2.1a) & (b) pp. 35 RLE on Consumption Expenditure, 1993-94

Broadly, the distribution of households across the four MPCE groups in different states during 1999-00 was similar to that of 1993-94 (Table 5.13). A little less than 50% of rural labour households were in the first two groups with MPCE of Rs. 340 or less during 1999-00. This proportion was much less (below 30%) in the states of Punjab, Haryana, Kerala, Gujarat and Rajasthan. However, in the states of Assam, Bihar, Madhya Pradesh and Orissa over 60 % of labour households fall in the bottom two groups. In Kerala, Punjab and Haryana more than half of rural labour population is in the highest group with an MPCE above Rs 470. In other states, the middle two groups have highest concentration of households. Notable among this group are the states of A.P., Assam, Gujarat, Bihar, Karnataka, Tamilnadu, U.P. and West Bengal, where more than half of rural labour households are concentrated in the middle two groups, with MPCE between Rs. 255 to Rs. 470.

Table 5.14: Percent Distribution of Rural Households by MPCE Classes, 1999-00

STATE	Agricultural Labour Households				Rural Labour Households			
	> 255	255-340	340-470	Above 470	> 255	255-340	340-470	Above 470
Andhra Pradesh	14	23	34	28	14	24	34	29
Assam	18	38	33	11	20	34	32	15
Bihar	27	34	28	11	26	34	29	11
Gujarat	11	22	35	31	10	21	34	35
Haryana	7	17	36	39	7	16	34	43
Karnataka	18	27	33	22	17	26	32	25
Kerala	6	9	29	55	4	9	26	60
Madhya Pradesh	35	31	25	9	35	30	24	10
Maharashtra	22	27	30	21	20	25	30	26
Orissa	37	33	24	7	35	32	24	8
Punjab	5	11	33	50	5	10	33	53
Rajasthan	5	21	35	39	7	20	36	38
Tamil Nadu	22	25	29	24	19	23	30	28
Uttar Pradesh	20	31	31	18	20	29	30	21
West Bengal	19	29	38	15	17	28	38	16
All India	21	28	31	20	19	26	31	24

Source: Computed from data extracted from EUE-NSS Survey 1999-00

The concentration ratio (Gini coefficient) of consumption expenditure among rural labour households was calculated in the following manner. We have taken the share of households/persons in different MPCE classes from different RLE/NSS Reports. The share of different MPCE classes in total consumption expenditure was derived in the following manner. First, the number of households in each MPCE class was derived from

the percent distribution of households and total number of estimated households of ALHH and RLHH given in RLE/NSS Reports. Second, total consumption expenditure in each class has been worked out by multiplying the estimated number of households in each category by the mid point of the expenditure class. Finally, we used these figures to work out the share of households in different MPCE classes.

Charts 5.4a and 4b presents Lorenz curve at the all India level for ALHH and RLHH respectively for the years 1993-94 and 1999-00.

Chart 5.4 (a): Lorenz Curve ALHH: All India 1993-94 & 1999-00

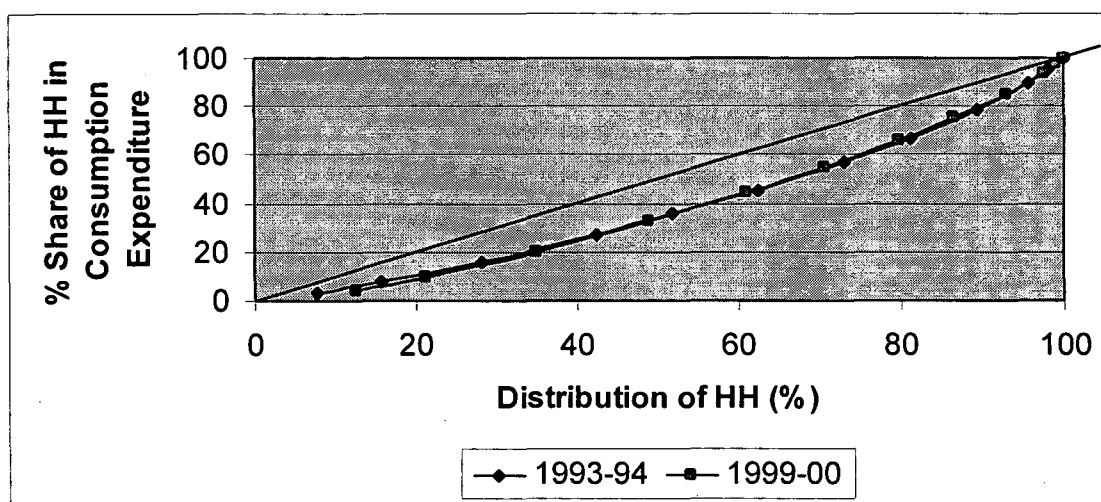
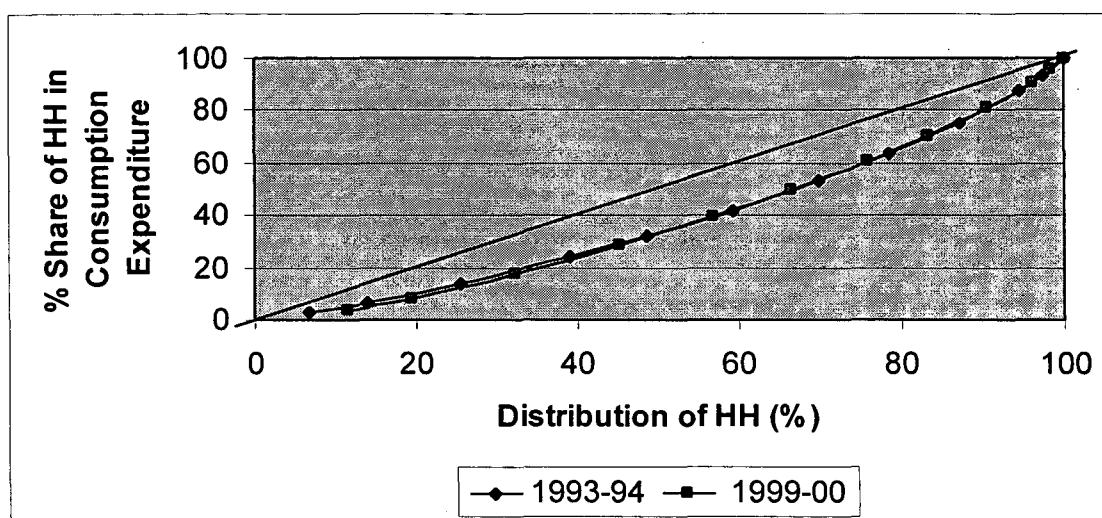


Chart 5.4 (b): Lorenz Curve RLHH: All India 1993-94 & 1999-00



The following formula was used to calculate Gini coefficient:

$$G = \frac{1}{100 \times 100} \left| \sum_{i=1}^n X_i Y_{i+1} \left(\sum X_{i+1} Y_i \right) \right|$$

Table 5.15 shows the computed Gini coefficients of consumption expenditure of rural labour households. The concentration ratios vary from 0.18 to 0.27, indicating a low level of inequality in consumption expenditure of labour households. During 1993-94, concentration ratios for RLHH are marginally lower than that of ALHH, showing relatively higher inequality in case of the latter. However, during 1999-00 the situation was reverse with concentration ratio of RLHH being higher than that of ALHH in eight states.

Table 5.15: Lorenz Concentration Ratio in Consumption Expenditure of ALHH and RLHH: 1993-94 and 1999-00

STATES	Agricultural Labour Households		Rural Labour Households	
	1993-94	1999-00	1993-94	1999-00
Andhra Pradesh	0.24	0.22	0.23	0.22
Assam	0.18	0.19	0.18	0.21
Bihar	0.22	0.23	0.20	0.23
Gujarat	0.21	0.21	0.21	0.22
Haryana	0.26	0.23	0.24	0.23
Karnataka	0.25	0.23	0.24	0.24
Kerala	0.23	0.22	0.22	0.22
Madhya Pradesh	0.26	0.26	0.24	0.26
Maharashtra	0.27	0.25	0.25	0.26
Orissa	0.24	0.25	0.22	0.25
Punjab	0.20	0.20	0.19	0.20
Rajasthan	0.27	0.21	0.25	0.22
Tamil Nadu	0.24	0.25	0.23	0.27
Uttar Pradesh	0.27	0.24	0.25	0.25
West Bengal	0.21	0.20	0.20	0.21
All India	0.25	0.24	0.24	0.25
'R' with average MPCE	-0.21	-0.39	-0.10	-0.41

Source: Calculated from RLE Reports on Consumption Expenditure 1993-94 and data extracted from NSS EUE survey 1999-00

Concentration ratio of consumption expenditure of labour households is relatively higher in the states of Haryana, Maharashtra, Karnataka, Rajasthan, Uttar Pradesh, Madhya Pradesh, Orissa and Tamilnadu. The states of Assam, Punjab, Bihar, Gujarat, Kerala and West Bengal, on the other hand, show relatively lower inequality in consumption expenditure. At the all India level the post reform period witnessed a marginal decline in the concentration ratios for ALHH as against a nominal rise in case of RLHH. Most of the states also witnessed a decline in the concentration ratio during the period 1993-2000 in case of ALHH, which was more marked in Haryana, Rajasthan and Uttar Pradesh. However, in case of RLHH nine states show a rise in concentration ratio, which was more marked in the states of Tamil Nadu, Assam, Bihar and Orissa.

Concentration ratios show a negative correlation with the average MPCE indicating that the states with higher level of MPCE have lower concentration ratio and vice-versa. This relationship was statistically weak during 1993-94 but significant during 1999-00. This relationship looks counter intuitive on the face of it, but may be explained in terms of the labour market situation prevailing in different states. As we have discussed earlier MPCE depends mainly on the wage levels. Wage rates are likely to be higher in the states where demand for labour is more. Hence, differences in wage levels are also likely to be lower. This is reflected in lower inequalities in consumption expenditure in the states where MPCE is higher. However, there are a few exceptions. For instance, in Assam and Bihar where even with low MPCE there is greater level of equality, while Kerala shows high MPCE level along with high concentration ratio.

Section III

Indebtedness of Rural Labour

5.10 Trends in Indebtedness of Rural Labour

Irregular and low income levels of rural labour households pushes them into the net of indebtedness to meet their consumption and social requirements. In this section, we have discussed trends in indebtedness of rural labour households and purpose and sources of debt. The analysis is based on *Rural Labour Enquiry Reports on Indebtedness among*

Rural Labour Households. The analysis covers the period 1983 to 1993-94. RLE report on indebtedness for the year 1999-00 is still unpublished.

Table 5.16 presents the trends in incidence of rural indebtedness during 1983 to 1993-94.

Table 5.16: Proportion of Indebted Households among ALHH and RLHH: 1983-1993-94 (%)

STATES	Agricultural Labour Household			Rural Labour Household		
	1983	1987-88	1993-94	1983	1987-88	1993-94
Andhra Pradesh	66	55	52	65	54	49
Assam	23	14	47	22	13	42
Bihar	55	36	28	53	34	27
Gujarat	32	33	36	33	31	35
Haryana	44	55	58	47	58	50
Karnataka	49	30	36	49	37	37
Kerala	52	46	29	54	46	29
Madhya Pradesh	37	35	23	38	35	24
Maharashtra	48	36	33	47	34	33
Orissa	41	36	26	40	35	26
Punjab	53	56	28	51	55	31
Rajasthan	51	43	26	51	48	40
Tamil Nadu	60	48	34	60	49	33
Uttar Pradesh	48	30	40	47	30	39
West Bengal	49	39	43	49	39	40
All India	51	39	36	50	39	35

Source: RLE Reports on Rural Indebtedness 1983, 1987-88 & 1993-94

At the all India level the proportion of indebted households declined from 51% to 36% in case of ALHH and 50% to 35% in case of RLHH during the decade 1983 to 1993-94. Most of the states show a decline in the proportion of indebted households for both categories of households with the exception of Assam, Haryana and Gujarat. Proportion of indebted labour households is higher in the states of Punjab, Haryana and the southern states of Andhra Pradesh, Kerala and Tamil Nadu. States of Assam, Madhya Pradesh and Orissa show lower proportion of indebted households. It is noteworthy that the states of Gujarat, Haryana and Punjab that have relatively higher levels of prosperity and higher level of consumption expenditure have been showing a rise in indebtedness. It is possible that the labour households in these states have better asset ownership, which increases their creditworthiness to borrow. The labour households in these states may also be taking loans for productive purposes.

Table 5.17 gives the distribution of households across four ranges of amount of total debt per household. The distribution is similar for the two categories of households. Amount of debt per household increased considerably during the decade. While in 1983 all the states concentrated in the two lowest ranges, their number came down considerably in 1993-94. Amount of debt per household is much lower in the poorer states of Assam, Bihar, Orissa, Madhya Pradesh and West Bengal, while Haryana, Kerala Punjab and Rajasthan show higher amount of debt. It appears that there is a linkage between amount of debt and income and asset ownership.

Table 5.17: Distribution of States According To Amount of Debt per Household

Range	Agricultural Labour Household		Rural Labour Household	
	1983	1993-94	1983	1993-94
Above Rs 5000		Kerala (7171) Haryana (5506)		Kerala (7126) Rajasthan (5698) Haryana (5174)
Between Rs 2500 - 5000		Punjab (3904) A.P (3636) M.P(3593) Rajasthan (3482) Maharashtra (3259) U.P(3223) T.N (3097) Karnataka (2844)	Rajasthan (2935)	Punjab (4177) A.P (3644) M.P(3833) Maharashtra (3653) T.N (3496) U.P(3273) Karnataka (2905) Gujarat (2527)
Between Rs 1000-2500	Haryana (2314) Rajasthan (2041) M.P (1845) Punjab (1822) Kerala (1655) U.P (1482) Gujarat (1312) Karnataka (1236) A.P (1208) T.N (1034) Maharashtra (1006)	Gujarat (2478) Orissa (2148) Bihar (1413) W.B (1411)	Haryana (2167) M.P(2060) Punjab (1894) U.P(1789) Kerala (1786) Gujarat (1428) A.P (1258) Maharashtra (1249) Karnataka (1214) T.N (1129)	Orissa (2176) Bihar (1455) W.B (1406)
Below Rs 1000	Orissa (836) Bihar (781) W.B (587) Assam (476)	Assam (654)	Orissa (808) Bihar (767) W.B (600) Assam (447)	Assam (562)

Source: Based on Appendix Table A14

Note: Figures in parentheses give amount of debt per household.

Table 5.18 presents the distribution of total debt taken by ALHH and RLHH by purpose of debt. At the all India level consumption loans accounted for more than 50% of the total debt in 1983. The proportion of consumption loans increased to around 60% in 1987 and 1993-94. This proportion is particularly high in the states of Assam, Punjab

and Bihar. Bihar, Haryana, Madhya Pradesh, Rajasthan and Uttar Pradesh registered a noticeable decline in the proportion of consumption loans and a corresponding rise in the share of investment loans. This may be due to the spread of the institutional credit facilities in these states. On the other hand, share of consumption loans increased in the states of Orissa, Assam, Karnataka and West Bengal.

Table 5.18: Percent Distribution by End Use of Total Debt for ALHH & RLHH

STATES	Agricultural Labour Household						Rural Labour Household					
	Consumption			Investment			Consumption			Investment		
	1983	1988	1994	1983	1988	1994	1983	1988	1994	1983	1988	1994
Andhra Pradesh	67	60	68	33	40	32	69	58	68	31	42	32
Assam	96	98	97	4	2	3	84	96	97	16	4	3
Bihar	92	83	68	8	17	32	91	84	66	9	16	34
Gujarat	72	59	68	28	41	32	66	59	67	34	41	33
Haryana	88	48	51	12	52	49	85	47	52	15	53	48
Karnataka	61	50	68	39	50	32	60	59	64	40	41	36
Kerala	48	38	41	52	62	59	46	38	41	54	62	59
Madhya Pradesh	64	66	51	36	34	49	64	67	55	36	33	45
Maharashtra	51	41	41	49	59	59	40	44	46	60	56	54
Orissa	48	38	61	52	62	39	48	39	47	52	61	53
Punjab	79	73	79	21	27	21	78	75	78	22	25	22
Rajasthan	71	50	50	29	50	50	73	57	50	27	43	50
Tamil Nadu	68	69	66	32	31	34	67	67	63	33	33	37
Uttar Pradesh	81	75	66	19	25	34	83	74	64	17	26	36
West Bengal	65	70	68	35	30	32	64	69	68	36	31	32
All India	52	62	62	48	38	38	54	62	60	46	38	40

Source: computed from RLE Reports on Rural Indebtedness 1983, 1987-88 & 1993-94

Note: Consumption loan includes debt for household consumption, marriage and other ceremonial purposes, repayment of debt and other purposes. Investment loan includes debt taken for purchase of land and construction of buildings and for productive purposes.

We hypothesise that the incidence of indebtedness depends on the creditworthiness of the labour households as reflected in the average size of their holding, proportion of households owning land and the level of wage earnings. Table 5.19 shows the correlation between the selected variables for the year 1983 and 1993-94. In 1983, total amount of debt per indebted labour household shows a high correlation ('R') with average size of holding in rural areas for RLHH while for ALHH the relationship is positive but weaker. However, the 'R' with percentage of labour households with cultivated land has a negative sign though the relationship is statistically insignificant. No significant relationship was established between level of household earnings from wage employment and the amount of debt.

In 1993-94, the relationship between average size of holding per cultivating rural labour household and amount of debt remained positive but statistically weak. However, a significant negative relationship was established with the percentage of labour households with cultivated land.

Table 5.19: Correlation between Amount and Purpose of Debt With Selected Variables

Variables	Total Amt of Debt per Indebted HH				Investment Loan (%)			
	1983		1993-94		1983		1993-94	
	ALHH	RLHH	ALHH	RLHH	ALHH	RLHH	ALHH	RLHH
Average Size Of Holding of cultivating HH	0.20	0.49	0.04	0.19	0.08	0.05	0.45	0.38
Labour Households With Cultivated Land (%)	-0.25	-0.09	-0.52	-0.27	0.48	0.43	-0.04	0.12
Annual Real Wage Earnings	0.09	-0.11	-0.14	0.01	-0.37	-0.23	-0.56	-0.58

Source: Computed from RLE data

Average size of holding per cultivating household does not reveal any association with the percentage of investment loan in 1983. However, the relationship is positive and significant in 1993-94 for both categories of households. Investment loans show a positive relationship percent of labour households with cultivated land in 1983. However, this relationship weakened in 1993-94. Household earnings from wage employment showed a negative relationship with investment loans with this relationship becoming stronger in 1993-94.

Following linear regression model was used to explain variations in the amount of debt per indebted household:

$$Y = a + X_1 + X_2 + X_3 + U$$

Where,

Y = Amount of loan per indebted households

X₁ = Average size of holding of cultivating labour households

X₂ = Percentage of labour households with cultivated land

X₃ = Household real wage earnings

U = Error term

The following results were obtained using SPSS package:

Equation	Dependent Y	Constant a	X ₁	X ₂	X ₃	R ²	F
1983							
(1)	Y (ALHH)	1332.15 (1.9)	0.21 (0.7)	-0.25 (-0.83)	0.05 (0.2)	0.11	0.5
(2)	Y (RLHH)	977.3 (1.1)	0.48 (1.7)	-0.01 (-0.5)	-0.06 (-1.8)	0.24	1.2
1993-94							
(3)	Y (ALHH)	9146 (5.2)	0.31 (1.3)	-0.98 (-3.8)	-0.57 (-2.5)	0.46	4.9
(4)	Y (RLHH)	7036.1 (3.2)	0.78 (2.4)	-0.94 (-2.7)	-0.31 (-1.1)	0.40	2.5

Source: Computed from RLE data.

Note: The regression coefficients are standardized coefficients.

The model had a low explanatory value for 1983. However, the explanatory power of the model improves in 1993-94 with above 40% of variation in the amount of debt per household explained by it for the year. Average size of holding emerges as the most significant variable, though with low significance, in explaining variations in amount of debt per indebted labour households in 1983. In case of the other two variables viz. percentage of households with cultivated land and wage earnings per household, no significant relationship could be established in 1983. However, in 1993-94 both the variables X₂ and X₃ turn out to be significant for both categories of households and show a negative relationship with amount of debt per indebted household. Variable X₁, however, shows a positive relation with size of debt in both the years.

The regression analysis supports the hypothesis that level of indebtedness is related positively with the size of holding of labour households. However, the relationship with the other two variables, viz. percentage of households with cultivated land and wage earnings per household turns out to be negative. As we have argued earlier, this may be explained by the fact that households with higher percentage of land ownership are engaged in wage employment for lesser number of days, which depresses

their income levels leading to a lower level of consumption expenditure. 'R' between real household earnings form wage employment and percentage of households with cultivable land as well as amount of debt per household was found to be negative (Table 5.8).

Table 5.20 presents the distribution of debt by source of debt. Non-institutional sources remain the main source of debt for rural labour households in spite of the spread of institutional credit facilities in the rural areas over the years. Access to institutional sources is particularly high in Kerala. Labour households in the states of Maharashtra, Madhya Pradesh, Orissa, West Bengal and Uttar Pradesh too have relatively greater access to institutional sources. However, Haryana, Punjab, Rajasthan and Assam have very poor dependence on institutional sources for credit.

Table 5.20: Percent Distribution by Source of Debt for ALHH & RLHH

STATES	Agricultural Labour Households						Rural Labour Households					
	Institutional Source*			Non Institutional Source**			Institutional Source*			Non Institutional Source**		
	1983	1988	1994	1983	1988	1994	1983	1988	1994	1983	1988	1994
Andhra Pradesh	17	15	16	83	85	84	13	19	17	87	87	84
Assam	19	2	4	81	98	96	31	3	4	69	89	86
Bihar	7	29	29	93	71	71	8	29	31	92	79	73
Gujarat	19	43	32	81	57	68	11	41	29	89	61	75
Haryana	45	53	19	55	47	81	51	50	21	49	49	73
Karnataka	38	57	23	62	43	77	41	53	28	59	43	76
Kerala	53	72	82	47	28	18	52	73	75	48	29	22
Madhya Pradesh	33	41	57	67	59	43	31	43	58	69	67	50
Maharashtra	44	61	62	56	39	38	45	58	67	55	43	46
Orissa	63	73	50	37	27	50	64	72	62	36	27	48
Punjab	17	21	18	83	79	82	13	25	25	87	93	82
Rajasthan	19	51	4	81	49	96	13	25	11	87	50	153
Tamil Nadu	24	22	27	76	78	73	17	24	31	83	72	82
Uttar Pradesh	16	23	38	84	77	62	6	22	39	94	75	63
West Bengal	31	33	40	69	67	60	28	31	40	72	75	60
All India	43	35	36	57	65	64	41	35	38	59	68	71

Source: computed from RLE Reports on Rural Indebtedness 1983, 1987-88 & 1993-94

Notes: * Includes Government + Cooperatives + Banks

** Includes Employers + Money Lenders + Shopkeepers + Friends & Relatives + Others

Surprisingly, at the all India level dependence on institutional sources for credit has declined from 43% in 1983 to 36% and 41% to 38% for ALHH and RLHH respectively. At the state level, however, a mixed picture emerges with nine out of the fifteen states showing a rise in access to institutional sources. The rise has been particularly sharp in the states of Bihar, Kerala, Madhya Pradesh, Maharashtra and Uttar

Pradesh. While Assam, Haryana, Karnataka, Orissa and Rajasthan register a fall in dependence on institutional sources for credit. Overall, the two categories of households show similar trends however, access of ALHH to institutional sources of credit appears to be slightly lower than that of RLHH.

Table 5.21 presents the proportion of total debt provided by the employer. At the all India level, the proportion of debt provided has come down from 16% in 1983 to 12% in 1993-94. Among the states, labour households in Haryana and Punjab have a high dependence on this source, while Assam, Kerala, Maharashtra and Tamil Nadu show a low dependence. States of Bihar, Madhya Pradesh and West Bengal show a marked decline in dependence on employers as a source of debt, while Haryana and Punjab in case of both categories of households and Rajasthan in case of ALHH show a rise in proportion of debt provided by the employers. It seems that the better off states of Punjab, Gujarat and Haryana have a strong inter-linkage between the labour and credit market as here the employer is the main source of debt for the rural labour. Migrant labour also accounts for a higher proportion of rural labour in these states.

Table 5.21: Percent of Total Debt Provided By Employer

STATES	Agricultural Labour Household			Rural Labour Household		
	1983	1987-88	1993-94	1983	1987-88	1993-94
Andhra Pradesh	28	24	20	27	22	19
Assam	8	2	4	6	19	3
Bihar	46	24	16	45	26	16
Gujarat	15	3	16	14	6	21
Haryana	23	20	45	15	15	32
Karnataka	13	11	15	13	12	16
Kerala	3	2	2	2	2	1
Madhya Pradesh	27	7	7	25	7	8
Maharashtra	5	7	4	5	7	8
Orissa	4	4	3	4	4	3
Punjab	12	12	30	12	11	26
Rajasthan	7	9	26	9	5	12
Tamil Nadu	7	7	2	7	8	4
Uttar Pradesh	12	15	11	12	15	11
West Bengal	22	8	6	21	11	5
All India	16	13	12	13	13	12

Source: Computed from RLE Reports on Rural Indebtedness 1983, 1987-88 & 1993-94

The relation between institutional loans and average size of holding was insignificant (Table 5.22). Percentage of labour households with cultivated land showed a positive but weak relationship with institutional loans. Institutional loans did not reveal any significant relationship with real earnings from wage employment per household in 1983. However, the coefficient of correlation became negative and statistically significant in 1993-94.

Table 5.22: Correlation between Share of Institutional Loans and Selected Variables

Variables	1983		1993-94	
	ALHH	RLHH	ALHH	RLHH
Average Size of Holding/ cultivating lab hh	-0.01	0.12	-0.06	-0.03
Labour Households With Cultivated Land	0.28	0.25	0.07	0.07
Annual Real Wage Earnings per hh	-0.1	0.01	-0.48	-0.46

Source: Computed from RLE data

5.11 Conclusions

The main conclusions of the present chapter have been summarized below.

The poverty estimates at the all India level for rural livelihood classes revealed that poverty levels are much higher for rural labour households as compared to other livelihood classes. Poverty level among agricultural labour was also observed to be higher than that of other rural labour.

In the absence of poverty estimates for livelihood categories at the state level, we attempted a rough approximation of poverty level based on MPCE class wise data. Our analysis revealed that poverty level among ALHH is marginally higher than that of RLHH in most of the states in both the years. Poverty levels among rural labour households are particularly high in the states of Bihar, Orissa, Madhya Pradesh and Uttar Pradesh. On the other hand, states of Kerala and Punjab show low poverty levels for rural labour households.

Poverty levels for both categories of labour households show a decline by only 3 percent points between 1993-94 and 1999-00 at the all India level. At the state level, ten states register a decline with the states of Haryana and Bihar registering the sharpest decline in poverty ratios for both categories. However, poverty levels show a rise in the

states of Assam, Gujarat, Punjab and M.P while it remains unchanged in the states of Orissa, West Bengal and Tamilnadu.

Poverty among rural labour households is markedly higher than that of other livelihood classes at the all India level for both the years in most of the states level for both points of time. The gap is more pronounced in the states of Andhra Pradesh, Haryana, Madhya Pradesh, Rajasthan and Uttar Pradesh. However, states of Assam, Kerala, and West Bengal, have been exceptions, where poverty ratios for rural labour households were lower as compared to total rural poverty ratios for both points of time. The gap has further deepened in 1999-00 in the states of Gujarat, Haryana, Madhya Pradesh, Punjab, Rajasthan and Uttar Pradesh indicating that the post reform period saw a worsening of poverty scenario for rural labour households as compared to other rural economic groups in these states

The analysis of consumption expenditure revealed that consumption expenditure among rural labour households is relatively higher in the agriculturally developed states of Punjab and Haryana and the socially more egalitarian state of Kerala. The states of Assam, Bihar, Madhya Pradesh and Orissa occupy the lowest ranks in all the three years for both types of households as far as the level of consumption expenditure is concerned. The trends in the state of West Bengal have been particularly striking, as it witnessed a very sharp rise in consumption expenditure between 1983-94 but once again slumped down to the lowest levels in the subsequent period. The annual real per capita consumption expenditure levels for ALHH is found to be lower than that of RLHH in all the states throughout the period. A more pronounced gap exists in the states of Haryana, Kerala, Maharashtra and Tamil Nadu.

At the all India level, CAGR of consumption expenditure shows a decline in the post reform period as compared to the pre-reform period. The decline is widespread across the states. CAGR of consumption expenditure shows a decline in as many as eleven states during the post-reform period as compared to only five states in the pre-reform period. None of the states had a growth rate above 3% in the post reform period.

A strong and inverse relationship was observed between poverty ratios and consumption expenditure levels at the state level. States with higher poverty ratios such as those of Assam, Bihar, M.P, Orissa, U.P and West Bengal have shown lower levels of

consumption expenditure while the opposite was true in case of Kerala and Punjab. We also found a strong relationship at the state level between the growth rates of consumption expenditure and that of real wages in both the pre-reform and post-reform period. States of Assam, Gujarat and M.P that have registered a rise in poverty ratios of rural labour during 1993-94 and 1999-00 have also experienced a decline in APCE during the period, while on the other hand states such as Haryana, Kerala, Bihar and U.P where poverty ratios have declined the APCE has increased. Thus, growth in real wages seems to be an important factor in reducing poverty of rural labour through its positive effect on income and consumption levels.

Among the determinants of consumption expenditure, real wages and NSDPAG emerged as the most significant variables. Value of 'R' between consumption expenditure of both ALHH and RLHH and NSDPAG/ha on one hand and real male agricultural wages on the other, was positive and statistically significant. The regression model also established a strong relationship between real wages and consumption expenditure. The slow down in agricultural output and real wages witnessed during the post reform period is reflected in the deceleration in the growth rate of consumption expenditure of rural labour during this period.

The post reform period also witnessed a rise in inter-state variations in real consumption expenditure in contrast to the pre reform period when there was a fall in disparities. In the pre-reform period, a strong tendency towards convergence was also visible. However, during the post reform period this tendency was in the reverse direction.

Analysis of pattern of consumption expenditure revealed that expenditure on food items accounted for over half to three-fourths of the total consumption expenditure in both categories of households. However, this proportion has been slowly declining over time in all the states. Cereals are the most important item of food consumption, though proportion of expenditure on cereals has been declining over time with a corresponding rise in the share of non-cereal items like milk, vegetables, eggs, fruits, meat and fish indicating an improvement in the standard of living. However, considerable differences in the proportion of expenditure on cereals still exist at the state level.

The Gini coefficients indicate low level of inequality in consumption expenditure of labour households in general, though some variations across states exist. The states of Maharashtra, Rajasthan, Uttar Pradesh, Andhra Pradesh, Orissa and Tamilnadu have relatively higher consumption inequality, while states of Assam, Punjab, Bihar, Gujarat, Kerala and West Bengal show relatively low inequality. In case of ALHH, there was some decline in the concentration ratio in most of the states during 1999-00, which was more marked in Haryana, Rajasthan and Uttar Pradesh. In case of RLHH, nine states show a rise in concentration ratios, which was more marked in the states of Tamil Nadu, Assam, Bihar and Orissa. ALHH overall showed a higher level of equality in consumption levels as compared to RLHH.

A decline in rural indebtedness occurred during the pre-reform period in most of the states. The exceptions were the states of Gujarat, Haryana and Punjab, which showed a rise in indebtedness. Consumption loans still account for a large proportion of the total debt, though over time this proportion has declined. The proportion of investment loans witnessed a rise during this period particularly in the states of Madhya Pradesh, Bihar, Rajasthan and Uttar Pradesh. Level of indebtedness was found to be positively associated with the average size of their holding and negatively associated with the proportion of labour households owning land and the level of wage earnings.

Access to institutional sources of credit was highest in Kerala. However, economically more developed states like Haryana and Punjab showed poor dependence on institutional sources for credit in case of labour households possibly because the proportion of migrant labour is high in these states. These two states along with Gujarat show larger dependence on loans from employers. Thus, inter-linkage between the labour and credit market are stronger in these states this issue however requires further probing. Other states, however, show a decline in proportion of loans from employers.

To sum up, our analysis reveals that rural labour households, especially agriculture labour households, are the most impoverished section of the rural poor. The post reform period, i.e., 1993-94 to 1999-00, witnessed a relative worsening of their economic situation as shown by an absolute decline in consumption expenditure levels during the post reform period. The decline is widespread across the states. CAGR of consumption expenditure shows a decline in as many as eleven states during the post-

reform period as compared to only five states in the pre-reform period. Poverty levels have declined at a slow pace with poverty levels actually showing a rise in the states of Assam, Gujarat, Punjab and M.P while it remains unchanged in the states of Orissa, West Bengal and Tamilnadu. The post reform period also witnessed a rise in inter-state variations in real consumption expenditure in contrast to the pre reform period when there was a fall in disparities. Thus, we conclude that the gains of economic reforms have largely bypassed the rural labour in India, as the pace of improvement in the economic conditions of the rural labour slowed down in the post reform period.

CHAPTER 6

RURAL LABOUR IN THE POST REFORM PERIOD: SOME CONCLUSIONS

6.1 Objectives, Scope and Methodology

Rural labour constitutes a significant and increasing segment of the rural population. They belong to the category of the most disadvantageous and the poorest section of the rural population. Hence, improvement in the economic conditions of the rural labour is crucial for reduction of rural poverty in the country. This study was undertaken with a view to presenting a comprehensive picture of changes in the economic well being of rural labour in India during the pre and post reform period. The study has examined the trends in agricultural wages and their determinants as well as employment, total earnings and consumption expenditure of rural labour households. The study is based on analysis of secondary data drawn from *Agricultural Wages in India* and various *Rural Labour Enquiry Reports*.

Apart from analyzing trends in wages, earnings, etc. at the all India level we have also examined the trends in main variables selected for study for major states of India for the period 1981 to 2001. The study presents a comparative picture of the rural labour households (RLHH) and agricultural labour households (ALHH) based on RLE reports. Changes in employment, wage earnings and indebtedness of rural labour households have been examined for the period 1983 to 1993-94. Trends in consumption expenditure and poverty levels are analysed for the period 1983 to 1999-00. Cross section analysis has been used to study the determinants of agricultural wages and consumption expenditure of rural labour households. The study also focused on the gender differences in wages and employment. Variations in wages across regions and states have been analysed by computing coefficient of variation for different years. Inter-state variations in employment days, earnings and consumption expenditure of rural labour were analysed with the help of coefficient of variations and Gini coefficient.

In this final chapter, we present a summary of the main conclusions and findings of the study with special focus on the changes in the condition of the rural labour in the post reform period.

6.2. Trends in General Characteristics of Rural Labour

In most of the states, growth rate of labour households has been higher than that of total rural households indicating a shift of rural workforce towards wage labour as against self-employment. The poorer states such as Orissa, Uttar Pradesh and West Bengal have recorded a rise in the proportion of wage labourers during the post reform period. A reverse trend was noticeable in case of Punjab, Rajasthan, Gujarat and M.P.

ALHH comprise more than 80% of the RLHH. This proportion was particularly high in Bihar and Orissa, but relatively low in Kerala, H.P and Rajasthan where there are limited opportunities for agricultural activities. The proportion registered a declining trend in the period between 1983 and 1993-94 in all states except Karnataka and Assam. Sharpest decline was in Haryana, H.P and Rajasthan. However during the period after that a rise in proportion of ALHH was recorded in six states the sharpest being in Haryana and West Bengal.

Females constitute about one-third of total rural labourers at the all India level. Their proportion is much lower in Haryana, Himachal Pradesh, Punjab and West Bengal. Children constitute a very small segment of rural labourers, hardly around 2.5%.

The number of rural labourers has grown at a high rate of 5% per annum the all India level during the post reform period, i.e. 1994-2000. States of Kerala and Orissa have recorded a very high growth rate of more than 10% per annum. In contrast, rural labourers registered a low growth rate of less than 2% per annum in Assam, Punjab and Haryana.

The average size of rural labour households has remained static around 4.5 at the all India level for both categories of households during the last two decades. Earning strength of rural labour households has also remained unchanged at two members per household for the two categories of households during 1983 and 1999-00 at the all India level. But there has been a marginal decline in the earning strength of labour households in as many as nine states. The number of wage earners per household is very close to the total number of earners per household, which implies that the labour households have

largely remained engaged in wage paid employment and have hardly diversified into other means of livelihood.

The proportion of households with cultivated land has practically remained unchanged at around 40% for both categories of households at the all India level. The average size of holding per cultivating household is also extremely low at 0.18 ha.

Box 6.1
Difference in the Economic Conditions of ALHH and RLHH

- ALHH comprise more than 80% of the RLHH.
- Real wages of RLHH were marginally higher than that of ALHH due to higher wage in non-agricultural operations.
- Wage employment days for ALHH are marginally higher than that for RLHH in most of the states.
- Per capita and household earnings from wage employment of ALHH are marginally higher than that of RLHH.
- The decline in total employment days during the period 1983 to 1993-94 is more widespread in case of ALHH as compared to RLHH.
- Poverty level among ALHH is marginally higher than that of RLHH in most of the states. However, poverty levels in case of RLHH have declined at a slower rate as compared to ALHH.
- Consumption expenditure levels for RLHH are higher as compared to ALHH.
- ALHH show a higher level of equality in consumption levels as compared to RLHH.
- Inter-state disparities in wages, employment and consumption expenditure were lower in case of RLHH as compared to ALHH.

6.3. Trends in Rural Wages

➤ Trends in Agricultural Wages Based On Analysis of AWI Data

The analysis of AWI data for the period 1981 to 2001 was divided into two sub periods, viz. 1981-90 representing the pre reform period and 1991-2001 representing the post reform period. Analysis of AWI data revealed that real agricultural wages increased at a high rate of 4% per annum during the period 1981-90 at the all India level. A positive feature of the trends in real wages during this period was its spread to the low wage states of Orissa, Rajasthan, M.P., U.P, Bihar and Maharashtra. While the conventionally high wage states of Haryana and Kerala registered relatively lower growth rates in real wages during this period. These findings are in agreement with the findings of A.V. Jose (1988), Jeemol Unni (1997) and Sasank Sarmah (2001) for the period.

However, in the post reform period (1991-2001), a general slow down in growth rate of real rural wages occurred with the all India growth rate coming down to 2.8% per annum from 4% per annum in the preceding period. Rigorous statistical analysis based on quadratic function and dummy variable technique on time series data confirmed the trend towards deceleration in real wage rate in the post reform period in most of the states. The downward trend was widespread across states with nine out of the fifteen states experiencing a deceleration in growth rates of real wages. The decline was more marked in the poorer states, e.g. West Bengal, Bihar, Assam, U.P and Orissa. Reverse trend was observed in the case of Haryana and Kerala, which registered higher growth rate in wages during this period as compared to the previous period.

➤ ***Trends in Rural Wages Based On Analysis of RLE Data***

Findings of the analysis based on RLE data was in conformity with the analysis based on AWI data. During the eighties a high growth of around 7% per annum at the all India level was registered in real agricultural daily wage earnings for both males and females, while the corresponding figure for non agricultural daily wages earnings was 9%. However, during the nineties the growth rates slumped down sharply to 2.5% and 3.5% per annum for agricultural and non agricultural wages respectively, at the all India level. The state level picture was also similar to the findings based on AWI data.

➤ ***Trends in inter-state variations in Rural Wages***

Analysis of both AWI and RLE wage data revealed that inter-state disparity in real wages, which had shown a declining trend in the eighties, increased during the nineties. Inter-state variations were greater in case of female labourers. Inter-state variations were, however, lower in case of non-agricultural wages. Inter-state disparities, thus, accentuated during the post reform period in case of both agricultural and non-agricultural wages.

➤ ***Differentials in Daily Wage Earnings in Agricultural and Non-agricultural Operations***

Overall, agricultural daily wage earnings were found to be lower than daily non-agricultural wage earnings. However, in 1983 agricultural wages were found to be higher than non-agricultural wages particularly for ALHH. Thereafter the non-agricultural wages took over agricultural wages and the gap widened continuously between 1983 and

1999-00. The differentials were particularly high in case of RLHH male labourers. On an average the ratio is around 1.3 for both categories of households.

➤ ***Gender Differentials in Rural Wages***

The study also reveals that female labourers are paid lower wages than their male counter parts. Male-female gap was higher in case of non-agricultural daily wage earnings as compared to agricultural daily wage earnings. The gap saw a continuous rise since 1983 in case of agricultural wages. At the all India, level the ratio of female to male wages came down from 75% in 1983 to 70% in 1999-00. The rise in gender differentials in wage rates was steeper between 1994 and 2000 than between 1983 and 1994. In case of non-agricultural wages, however, the male-female gap marginally narrowed down during the period. The ratio rose from 58% in 1983 to 63% in 1999-00.

Gender disparities in wages have declined more sharply in the states of Punjab, Himachal Pradesh, Rajasthan, Haryana, Bihar and Uttar Pradesh. Surprisingly, very high gender disparity in male-female wages exist in Kerala, which is noted as the state with the highest level of human development in the country and better status of women, while states like Bihar and Orissa show much less gender inequality in wages than Kerala.

➤ ***Determinants of Agricultural Wages***

Multiple regression analysis of the determinants of agricultural wages across states revealed that demand side factors represented by NSDPAG/ha had a strong and positive affect on wage rates in the pre reform period. However, in the post reform period rural diversification represented by the proportion of non-agricultural workers emerges as the most significant factor determining agricultural wages. It appears that the expansion of non-agricultural employment opportunities in the rural areas reduces the supply of agricultural labour and increases their wages through tightening of the labour market. The demand side factors also weakened during the post reform period as agricultural growth slumped down. Thus, in the recent years, supply side factors affecting agricultural wages have become more important than the demand side factors. This suggests that the nature of rural labour market is changing with growing diversification of the rural economy and declining labour absorption capacity of agriculture.

6.4. Trends in Employment Levels

➤ Trends in Wage Employment of Rural Labour

Our analysis reveals that wage employment constitutes over three-fourth of total employment of rural labour households. The major exception is that of Himachal Pradesh, where this proportion is around two-thirds for males and around one-third for females.

Wage employment days for ALHH are marginally higher than that for RLHH in most of the states. Wage employment days are higher in the states of Assam, Bihar, Gujarat, Punjab and Karnataka. The southern states of Tamilnadu, Kerala and Andhra Pradesh along with Maharashtra, Orissa, Uttar Pradesh and Haryana show relatively lower wage employment.

Wage employment days for female labourers are considerably lower as compared to their male counterparts in majority of the states.

During the period 1983-94, there was a small rise in number of wage employment days at the all India level. The rise was higher in case of female labourers as compared to male labourers. However, four states in case of ALHH and seven states in case of RLHH showed a decline in wage employment for male labourers. Wage employment for female labourers belonging to RLHH also declined in most of these states. Rest of the states showed a rise in the number of wage employment days. The rise was highest in Punjab, followed by Kerala, Bihar, Karnataka and Tamilnadu.

Changes in the number of wage employment days in agriculture can be explained in terms of changes in the demand and supply factors, which are influenced by weather conditions affecting the level of agricultural output. The fall in number of employment days in agriculture in the several states observed during the drought year of 1987-88 corroborates this. Our analysis also indicated that the female labourers bear the main burden of decline in demand for labour during the bad agricultural years.

➤ Trends in Total Employment Days of Rural Labour

Total employment days were found to be higher in the states of Assam, Bihar, M.P, Rajasthan and Uttar Pradesh. The southern states of Kerala, Tamilnadu and Andhra Pradesh have lower number of total employment days. Total employment at the all India

level, witnessed a sizeable increase during the period 1983 to 1993-94. The rise was greater in case of female labourers in both categories of households. However, some states recorded a decline in employment days, which was more widespread in case of ALHH as compared to RLHH.

Inter-state variations in employment days both for wage and total employment declined in case of male labourers during the period under study, but increased in case of female labourers.

6.5 Trends in Wage Earning of Rural Labour

High growth rates were registered in annual real earnings per labourer in all states during the period 1983 to 1993-94, reflecting the high growth rates of real wages as well as employment days experienced during this period. Total household real earnings also registered a high growth rate of 7% per annum at the all India level.

Per capita earnings as well as household earnings of RLHH were found to be marginally lower than that of ALHH. Uttar Pradesh followed by Orissa, Rajasthan, Haryana, M.P and Maharashtra show lower per capita earnings for rural labour households.

Our analysis also revealed a high level of inter-state variation in case of total earnings from wage employment, particularly so in case of female labourers. However, the coefficient of variation in total earnings showed a consistent decline between 1983 and 1993-94 in case of female labourers. But in case of male labourers a rising trend in inter-state disparities in wage earnings was observed between 1987-88 and 1993-94.

Inter-state disparities in household and per capita real earnings similarly saw a substantial decline between 1983 and 1987-88, but increased moderately between 1987-88 and 1993-94.

6.6 Trends in Poverty Levels

The poverty estimates at the all India level for rural livelihood classes revealed that poverty levels are much higher for rural labour households as compared to other livelihood classes. Poverty level among agricultural labour was also observed to be higher than that of other rural labour. In the absence of poverty estimates for livelihood categories at the state level, we attempted a rough approximation of poverty level based on MPCE class wise data. Our analysis revealed that poverty level among ALHH is

marginally higher than that of RLHH in most of the states in both the years. Poverty levels among rural labour households are particularly high in the states of Bihar, Orissa, Madhya Pradesh and Uttar Pradesh. On the other hand, states of Kerala and Punjab show low poverty levels for rural labour households.

Poverty levels for both categories of labour households show a decline by only 3 percent points between 1993-94 and 1999-00 at the all India level. At the state level, ten states register a decline with the states of Haryana and Bihar registering the sharpest decline in poverty ratios for both categories. However, poverty levels show a rise in the states of Assam, Gujarat, Punjab and M.P while it remains unchanged in the states of Orissa, West Bengal and Tamilnadu.

Poverty among rural labour households is markedly higher than that of other livelihood classes at the all India level for both the years in most of the states level for both points of time. The gap is more pronounced in the states of Andhra Pradesh, Haryana, Madhya Pradesh, Rajasthan and Uttar Pradesh. However, states of Assam, Kerala, and West Bengal, have been exceptions, where poverty ratios for rural labour households were lower as compared to total rural poverty ratios for both points of time. The gap has further deepened in 1999-00 in the states of Gujarat, Haryana, Madhya Pradesh, Punjab, Rajasthan and Uttar Pradesh indicating that the post reform period saw a worsening of poverty scenario for rural labour households as compared to other rural economic groups in these states

6.7 Trends in Consumption Expenditure

The analysis revealed that consumption expenditure among rural labour households is relatively higher in the agriculturally developed states of Punjab and Haryana and the socially more egalitarian state of Kerala. The states of Assam, Bihar, Madhya Pradesh and Orissa occupy the lowest ranks in all the three years as far as the level of consumption expenditure is concerned. The annual real per capita consumption expenditure levels for ALHH is found to be lower than that of RLHH in all the states throughout the period. A more pronounced gap exists in the states of Haryana, Kerala, Maharashtra and Tamil Nadu.

At the all India level, CAGR of consumption expenditure shows a decline in the post reform period as compared to the pre-reform period. The growth rate came down

from 1.6% per annum in the pre-reform period to -0.6% in the post reform period, at the all India level. The decline is widespread across the states. CAGR of consumption expenditure shows a decline in as many as eleven states during the post-reform period as compared to only five states in the pre-reform period. None of the states showed a growth rate above 3% in the post reform period. Only Haryana, Kerala, U.P and Bihar showed an improvement. The deceleration in the growth rate of consumption expenditure of rural labour during this period is due to the slow down in agricultural output and real wages witnessed during the post reform period.

➤ ***Linkage between Poverty Levels and Consumption Expenditure Levels***

A strong and inverse relationship was observed between poverty ratios and consumption expenditure levels at the state level. States with higher poverty ratios such as those of Assam, Bihar, M.P, Orissa, U.P and West Bengal have shown lower levels of consumption expenditure while the opposite was true in case of Kerala and Punjab. We also found a strong relationship at the state level between the growth rates of consumption expenditure and that of real wages in both the pre-reform and post-reform period. States of Assam, Gujarat and M.P that have registered a rise in poverty ratios of rural labour during 1993-94 and 1999-00 have also experienced a decline in APCE during the period, while on the other hand states such as Haryana, Kerala, Bihar and U.P where poverty ratios have declined the APCE has increased. Thus, growth in real wages seems to be an important factor in reducing poverty of rural labour through its positive effect on income and consumption levels.

➤ ***Determinants of Consumption Expenditure Levels***

Among the determinants of consumption expenditure, real wages and NSDPAG/ha emerged as the most significant variables. Value of 'R' between consumption expenditure of both ALHH and RLHH and NSDPAG/ha on one hand and real male agricultural wages on the other, was positive and statistically significant. The regression model also established a strong relationship between real wages and consumption expenditure. Higher wage rate states of Kerala, Punjab and Haryana had higher level of consumption expenditure as compared to the poorer states of Bihar, M.P, U.P and Orissa.

➤ ***Inter-state Variations in Consumption Expenditure Levels***

The post reform period also witnessed a rise in inter-state variations in real consumption expenditure in contrast to the pre reform period when there was a fall in disparities. In the pre-reform period, a strong tendency towards convergence was also visible. However, during the post reform period this tendency was in the reverse direction. Thus, states with higher consumption expenditure registered higher growth rate in the post reform period while in the pre reform period it was the states with lower consumption expenditure level that registered higher growth in consumption expenditure.

➤ ***Pattern of Consumption Expenditure Levels***

Analysis of pattern of consumption expenditure revealed that expenditure on food items accounted for over half to three-fourths of the total consumption expenditure in both categories of households. However, this proportion has been slowly declining over time in all the states. Cereals are the most important item of food consumption, though proportion of expenditure on cereals has been declining over time with a corresponding rise in the share of non-cereal items like milk, vegetables, eggs, fruits, meat and fish indicating an improvement in the standard of living. However, considerable differences in the proportion of expenditure on cereals still exist at the state level.

Regression analysis demonstrated that the proportion of expenditure on cereals and food items declined with a rise in the level of income of labour households and that expenditure on these items was lower in the relatively prosperous states.

➤ ***Inequalities in Consumption Expenditure Levels***

The Gini coefficients indicate low level of inequality in consumption expenditure of labour households in general, though some variations across states exist. The states of Maharashtra, Rajasthan, Uttar Pradesh, Andhra Pradesh, Orissa and Tamilnadu have relatively higher consumption inequality, while states of Assam, Punjab, Bihar, Gujarat, Kerala and West Bengal show relatively low inequality. In case of ALHH, there was some decline in the concentration ratio in most of the states during 1999-00, which was more marked in Haryana, Rajasthan and Uttar Pradesh. In case of RLHH, nine states show a rise in concentration ratios, which was more marked in the states of Tamil Nadu, Assam, Bihar and Orissa. ALHH overall showed a higher level of equality in consumption levels as compared to RLHH.

6.8 Trends in Indebtedness

A decline in rural indebtedness occurred during the pre-reform period in most of the states. The exceptions were the states of Gujarat, Haryana and Punjab, which showed a rise in indebtedness in spite of having relatively higher levels of prosperity and consumption expenditure. Consumption loans still account for a large proportion of the total debt, though over time this proportion has declined. The proportion of investment loans witnessed a rise during this period particularly in the states of Madhya Pradesh, Bihar, Rajasthan and Uttar Pradesh. Level of indebtedness is positively associated with the average size of their holding and negatively associated with the proportion of labour households owning land and the level of wage earnings.

Access to institutional sources of credit was highest in Kerala. However, economically more developed states like Haryana and Punjab showed poor dependence on institutional sources for credit in case of labour households possibly because the proportion of migrant labour is high in these states. These two states along with Gujarat show larger dependence on loans from employers. Thus, inter-linkage between the labour and credit market are stronger in these states. Other states, however, show a decline in proportion of loans from employers.

Box 6.2

Rural Labour in the Post Reform Period

- The proportion of wage labourers has increased during the post reform period particularly in the poorer states of Orissa, U.P and W.B.
- The number of rural labour increased substantially at 5% per annum in the post reform period at the all India level.
- The widespread uptrend in growth rates of real wages in rural areas experienced during the eighties witnessed a slow down during the post reform period.
- Inter-state disparities, gender differentials and agricultural and non-agricultural wage differentials in real rural wages increased in the nineties.
- During the nineties, supply side factors, such as growing diversification of the rural economy, have become more important than demand side factors like nsdpag/ha in determination of agricultural wages.
- Inter state disparities in employment days moderately increased during 1987-94.
- Growth rate of consumption expenditure shows a decline in as many as eleven states during the post-reform period as compared to the pre-reform period.
- Poverty levels in case of rural labour households have declined at a slower rate as compared to other rural economic groups during the post reform period.
- The post reform period witnessed a rise in inter-state variations in real consumption expenditure in contrast to the pre reform period when there was a fall in disparities.
- A strong tendency towards convergence in consumption expenditure during the pre-reform period reversed during the post reform period.

➤ ***Issues For Further Research***

We have discussed various aspects of economic well being of rural labour in our analysis on the basis of available secondary data. However, some issues could not be analysed in depth either due to lack of data or time and space constraints. We have identified the following issues for further research in this area:

1. An in depth analysis of the reasons for the slow down in the growth rates of real rural wages during the post reform period is required in order to identify the factors responsible for the same.
2. One needs to probe the above factors in an inter-state and inter-regional context to identify the differential impact of the economic reforms on different states and the reasons for the growing inter-state disparities in wage, consumption and employment levels of rural labour.
3. Similarly, one needs to look at the reasons for the growing gender differentials in agricultural wages and wage earnings.
4. Another issue worth probing is that of increasing differentials in agricultural and non-agricultural wages and the interlinkages in the labour market for the agricultural and non-agricultural labour.
5. The issue of changes in the pattern of consumption expenditure of rural labour with increase in their income level also needs to be investigated further.
6. The issues related to differential access of rural labour households to institutional credit in different states and the interlinkages between the labour and credit markets need to be more carefully examined.
7. The analysis of employment trends, wage earnings and rural indebtedness need to be explored beyond 1993-94, when data on these aspects for 1999-00 becomes available to understand the full impact of the structural changes on these indicators.
8. The changes in the nature of rural labour market in different regions and states of the country and the various segments of the rural labour market such as agricultural and non-agricultural labour and male and female labour are important matters of further probe by researchers.
9. The impact of government programmes on wage levels and economic well being of rural labour also need careful analysis to make them more effective.

10. Finally, one needs to examine the processes through which the economic reforms have been affecting the economic well being of the rural poor with particular focus on the rural labour and identify the needed safety nets to protect them from the adverse effect of economic reforms.

6.9 Conclusion

To sum up, our study reveals that the number of rural labour has been increasing at a faster rate than rural population reflecting the slower growth and declining labour absorption in agriculture, declining size of land holdings and slow pace of growth of non-farm employment opportunities in rural areas.

Overall, the economic status of rural labour is better off in the states of Haryana, Punjab, Kerala and Rajasthan. One may explain the better conditions of rural labour in Punjab and Haryana in terms of higher agricultural productivity and higher wage levels in the two states. Kerala situation possibly reflects the more diversified nature of its economy and greater political mobilization of the labour class in the state. In Rajasthan higher employment days have contributed to better condition of the rural labour. The worst scenario is in the states of Assam, Bihar, U.P, M.P, Orissa and W.B., which are worst stricken in terms of poverty and population pressure on land.

Analysis of trends in rural wages, consumption expenditure, earnings levels, indebtedness and employment days revealed that while there was an improvement in the overall economic well being of the rural labour households in the pre-reform period, the pace of improvement slackened in the post reform period, i.e. 1993-94 to 1999-00. Thus, economic reforms had an adverse impact on the economic well being of the rural labour, the largest and most vulnerable section of the rural population. The adverse impact was particularly noticeable in the already laggard states of Assam, Bihar, U.P, M.P, Orissa and W.B., further worsening the inter-state disparities in the economic conditions of the rural labour.

Our findings highlight the importance of continued investment in the rural economy to promote productivity and generate more employment opportunities in the agricultural and the non-agricultural sector of the rural economy. Along with the growth in employment opportunities, efforts for improvement in the skills and health of the rural

labour through better schooling and health facilities in the rural areas are needed to improve their productivity and bargaining strength. Social security nets like PDS and employment guarantee scheme for the rural poor need to be put in place for their protection and welfare. Political mobilization of rural labour will also help in improving their bargaining power and ensure payment of minimum wages and better working conditions. This underlines the critical role of the state in ensuring a better deal to the rural poor in an era of liberalization and globalization of the Indian economy.

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2.1 Table: Number of Rural Households (fig in thousands)

STATES	All Rural Households				Rural Labour Households				Agricultural Labour Households			
	1983	1988	1994	2000	1983	1988	1994	2000	1983	1988	1994	2000
A.P	9456	10145	11049	12719	4572	4915	5503	6233	3929	4007	4583	5408
Assam	2381	2781	3551	3661	705	857	1236	1235	463	548	816	632
Bihar	10854	12019	12351	14864	4330	5099	5264	6291	4028	4334	4844	5647
Gujarat	4128	4606	5178	5924	1542	2328	2477	2575	1267	1582	1959	2063
Haryana	2776	2053	2293	2480	884	551	691	681	562	405	364	464
H.P	778	848	913	1049	57	126	139	225	17	41	26	42
Karnataka	4815	5259	5777	7057	2053	2440	2398	3308	1762	2069	2180	2943
Kerala	3622	3912	3905	4437	1785	1872	1866	2066	1148	1179	1102	969
M.P	7636	8634	9560	11195	2568	3057	3809	4625	2302	2714	3332	4110
Maharashtra	7863	8560	9563	11625	3591	3977	4746	5709	3031	3308	3937	4851
Orissa	4738	5184	5955	6277	1941	2218	1734	3009	1725	1826	1516	2719
Punjab	2221	2430	2550	2765	701	869	888	960	561	683	706	680
Rajasthan	4908	5420	5780	6365	847	1851	1525	1494	545	686	576	502
Tamil Nadu	7380	7688	8937	9370	3868	4103	4884	5523	3117	3088	3761	4231
U.P	16881	18098	19992	22419	3737	4630	3849	5563	3140	3636	3061	4266
West Bengal	8154	8329	9984	11261	3796	3623	4276	4928	3139	2989	3252	4305
ALL-INDIA	100531	108359	119530	137079	37473	43053	45766	55132	30867	33305	36262	44184

Source: Rural Labour Enquiry Report on General Characteristics of Rural Labour Households

Table 2.2: Number of Labourers in Rural Labour Households

STATES	1993 - 1994				1999 - 2000			
	Males	Females	Children	Total	Males	Females	Children	Total
Andhra Pradesh	5199	4376	586	10161	6457	5472	716	12645
Assam	1394	437	11	1842	1361	514	13	1888
Bihar	6038	2101	183	8322	7553	2433	179	10165
Gujarat	2781	1355	73	4209	3229	1865	79	5173
Haryana	664	104	10	778	806	63	10	879
Himachal Pradesh	136	12	2	150	214	12	0	226
Karnataka	2372	1800	237	4409	3872	2845	292	7009
Kerala	826	531	5	1362	2207	753	3	2963
Madhya Pradesh	4346	2756	204	7306	5612	3906	243	9761
Maharashtra	4361	3830	226	8417	6101	5060	318	11479
Orissa	1706	755	58	2519	3329	1501	93	4923
Punjab	1085	92	26	1203	1209	61	25	1295
Rajasthan	1299	380	44	1723	1675	375	40	2090
Tamil Nadu	4027	3345	338	7710	5624	4121	133	9878
Uttar Pradesh	4035	1048	103	5186	6079	1772	116	7967
West Bengal	4480	847	149	5476	5490	1123	135	6748
ALL-INDIA	45143	23889	2261	71293	61637	31999	2399	96035

Source: Same as Table 2.1

Table 3.1: Male Agricultural Wage Rate by Region (Rs/ day at 1970-71 Prices)

State	NSS region	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90
A.P	Coastal	3.12	3.43	3.75	4.07	4.30	4.66	5.11	4.99	4.20	4.59
	Inland, northern	2.66	2.60	3.26	3.55	3.76	3.90	3.93	3.96	4.09	5.18
	South Western	2.38	2.35	2.93	2.62	3.49	3.76	4.63	3.44	3.74	5.08
	Inland southern	2.54	3.56	2.86	2.78	3.21	3.33	3.77	3.08	2.95	3.87
Assam	Plains' Eastern	5.70	4.09	4.30	4.59	4.99	5.02	5.19	5.50	5.35	5.98
	plains western	3.22	3.39	3.65	3.48	3.93	4.58	4.83	4.87	4.93	5.06
	Hills	3.49	3.56	3.93	4.22	4.27	6.48	6.44	5.09	5.56	5.23
Bihar	Southern	2.70	2.64	2.83	2.79	3.25	3.83	3.90	3.75	4.09	4.72
	Northern	2.50	2.35	2.58	2.98	3.57	3.96	4.18	4.05	3.78	4.04
	Central	3.17	3.15	3.61	3.49	4.19	4.38	4.54	4.29	4.66	4.76
Gujarat	Eastern	2.65	2.42	2.78	3.08	0.07	3.28	3.41	3.33	3.27	3.68
	Plains Northern	2.76	2.78	2.72	3.34	4.64	3.99	4.33	3.92	3.83	4.05
	Plains Southern	2.64	2.38	2.80	3.14	3.24	3.29	3.59	3.19	3.16	4.08
	Dry areas	2.91	2.70	3.30	3.18	4.32	4.24	4.72	4.67	4.40	4.49
	Saurashtra	4.41	4.88	6.34	5.68	5.55	5.64	5.23	5.03	4.66	5.58
Haryana	Eastern	4.62	4.84	5.63	5.83	5.63	5.82	6.32	6.02	5.59	6.42
	Western	6.05	7.37	7.30	7.84	7.00	6.98	7.41	7.47	6.77	8.10
H.P		4.10	3.24	4.10	4.45	4.22	4.24	4.71	4.60	2.16	4.66
Karnataka	Inland Eastern	4.24	2.75	3.11	2.57	2.20	2.90	2.77	3.26	4.30	3.71
	Inland southern	2.58	2.29	2.59	2.36	2.08	3.11	3.95	3.53	3.39	3.57
	Inland Northern	2.03	2.28	2.36	2.40	2.91	3.21	3.07	2.54	3.40	4.45
Kerela	Northern	5.53	6.16	6.08	5.79	6.91	7.06	7.30	7.77	7.66	7.40
	Southern	6.43	6.63	7.11	6.10	7.44	6.70	6.50	7.66	7.61	7.28
M.P	Chatisgarh	1.86	2.04	2.38	2.63	2.59	2.88	3.25	3.19	3.10	3.25
	Vindhya	2.07	2.12	2.43	2.67	2.98	3.01	3.38	3.23	2.99	3.12
	Central	2.13	2.30	2.84	3.03	3.31	3.07	3.84	3.46	3.58	3.66
	Malwa Plateau	2.16	2.17	2.62	2.99	3.10	3.19	3.29	3.17	3.29	3.56
	South Central	2.48	2.51	3.02	3.31	3.80	2.62	2.76	2.96	2.72	3.18
	South Western	1.87	1.95	2.17	2.36	2.61	2.85	3.17	3.23	3.05	3.13
	Northern	1.80	2.23	2.94	2.83	2.76	3.72	4.50	4.71	4.41	5.14

Source: 1995-96 to 1997-98 calculated from *Agricultural Wages in India*, MoA
 1980-81 to 1984-85 Acharya (1989)
 1985-86 to 1994-95 Sarmah (2001)

Table 3.1 continued.....

State	NSS region	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98
A.P	Coastal	4.79	4.17	4.11	5.08	4.63	5.36	4.95	5.91
	Inland, northern	4.93	4.26	4.07	4.44	4.81	4.86	4.61	4.60
	South Western	4.94	4.77	5.25	5.15	4.34	4.06	4.22	4.07
	Inland southern	5.08	3.22	4.07	4.35	4.03	4.12	4.16	3.71
Assam	Plains' Eastern	6.27	6.43	5.77	5.38	4.91	5.99	5.78	5.51
	plains western	5.20	4.96	4.75	4.69	4.16	4.42	4.70	5.15
	Hills	6.00	6.11	N.A	N.A	N.A	4.42	4.70	4.04
Bihar	Southern	4.27	3.94	4.15	4.04	4.86	4.31	4.50	4.99
	Northern	4.19	3.99	3.87	3.48	3.56	3.86	3.71	4.34
	Central	5.10	4.62	5.72	4.31	4.30	4.75	4.77	4.86
Gujarat	Eastern	3.56	2.83	2.73	2.65	2.37	2.55	2.55	2.52
	Plains Northern	4.21	3.38	3.26	3.92	3.65	3.23	3.70	4.39
	Plains Southern	3.63	3.31	3.17	2.89	2.55	2.55	2.79	3.00
	Dry areas	4.12	3.39	4.81	4.84	4.71	4.70	5.38	6.24
	Saurashtra	4.87	5.24	5.60	5.76	6.40	6.05	7.40	7.80
Haryana	Eastern	6.82	7.27	7.41	7.11	7.82	7.49	7.76	8.24
	Western	8.22	8.32	9.62	8.87	8.97	7.36	9.15	9.34
H.P		5.10	5.29	5.62	5.43	5.32	6.47	6.49	6.56
Karnataka	Inland Eastern	4.01	3.58	3.68	3.34	3.15	3.78	4.48	4.10
	Inland southern	3.65	0.38	3.07	4.54	3.55	6.70	4.26	5.86
	Inland Northern	4.18	3.38	2.89	3.23	4.46	1.94	3.04	3.30
Kerela	Northern	7.46	7.90	8.69	8.83	9.54	9.07	10.45	12.18
	Southern	7.64	8.40	9.26	8.65	8.34	9.59	10.91	11.62
M.P	Chatisgarh	3.64	3.41	3.64	4.02	3.65	3.46	3.39	3.48
	Vindhya	3.73	3.77	3.81	3.87	3.97	4.15	3.77	3.84
	Central	3.46	3.72	3.96	4.15	3.63	4.01	4.52	4.92
	Malwa Plateau	4.23	3.75	4.39	4.52	4.31	4.56	4.52	4.92
	South Central	3.24	2.89	3.03	3.51	2.95	3.18	3.52	3.60
	South Western	3.47	3.29	3.43	3.70	3.99	3.65	4.02	3.60
	Northern	5.40	5.20	5.27	5.44	5.39	4.91	4.90	5.28

Table 3.1 continued.....

State	NSS region	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90
Maharashtra	Coastal	2.40	2.59	3.05	3.24	3.39	3.54	7.44	6.82	6.43	6.66
	Inland Western	2.16	2.10	2.54	2.44	2.62	5.79	5.72	5.25	4.71	4.55
	Inland Northern	2.19	2.14	2.63	2.78	2.99	3.54	3.30	3.03	2.72	2.57
	Inland Central	2.38	2.45	2.92	2.86	3.15	6.38	6.31	5.31	4.71	4.36
	Inland Eastern	2.34	2.27	2.59	2.86	2.70	3.81	4.34	4.16	3.80	3.69
Orissa	Eastern	1.69	1.78	2.14	2.01	2.31	5.02	4.79	4.40	3.92	3.70
	Coastal	2.62	2.43	2.50	2.99	3.35	3.74	3.67	3.15	3.50	4.14
	Southern	2.05	2.08	1.73	2.10	2.67	2.72	2.67	2.20	2.35	3.30
Punjab	Northern	2.06	2.00	1.96	2.38	2.48	2.64	2.84	2.84	3.37	3.35
	southern	4.59	4.46	5.78	5.76	6.38	6.26	7.08	6.38	6.64	7.23
Rajasthan	Western	6.36	5.79	5.80	5.96	6.22	7.08	8.01	7.49	7.59	7.95
	North Eastern	3.94	4.08	5.51	5.75	4.14	3.93	4.30	5.49	4.98	4.83
	Southern	3.10	3.45	5.16	5.01	3.60	3.85	4.76	5.05	4.68	4.48
	South Eastern	2.68	2.68	2.96	2.98	2.70	3.03	3.31	3.03	2.62	3.06
T.N	South Eastern	2.12	2.42	2.65	2.90	3.68	3.53	4.62	3.97	4.03	3.98
	Coastal northern	1.83	1.84	1.84	2.33	2.75	2.80	2.44	2.48	3.35	3.19
	Coastal	2.85	2.95	2.50	2.29	2.81	2.88	2.94	2.51	2.62	3.10
	Inland	3.18	3.22	3.24	3.02	3.30	3.83	3.67	3.52	3.49	3.72
U.P	southern	2.73	3.64	3.03	3.20	3.53	3.96	3.89	3.17	3.92	4.08
	Himalayan	3.70	4.14	5.18	4.18	4.50	7.06	7.06	4.58	4.81	4.71
	western	3.27	2.54	3.88	4.10	3.98	4.74	5.61	6.36	6.24	8.94
	Central;	2.20	2.43	2.50	2.62	2.94	3.40	4.21	3.55	3.80	5.17
	Southern	2.00	2.60	2.43	2.32	2.35	2.85	3.53	3.06	3.30	3.59
W.B	Eastern	2.22	2.24	2.42	2.64	3.44	2.78	3.31	3.06	2.86	3.21
	Himalayan	3.23	3.12	3.14	3.08	3.44	3.55	4.19	4.34	4.90	4.37
	Eastern plains	3.10	2.83	2.85	2.85	3.51	5.14	4.22	4.38	4.98	5.07
	Central Plains	3.86	3.70	3.23	3.13	3.82	4.48	5.07	5.66	6.03	6.33
	Western Plains	3.47	3.15	3.65	4.01	4.21	6.94	4.35	4.97	5.22	5.65

Table 3.1 continued.....

State	NSS region	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98
Maharashtra	Coastal	4.70	2.82	5.02	4.81	4.99	4.90	4.49	6.17
	Inland Western	3.70	3.76	3.61	5.53	4.32	5.56	5.51	4.69
	Inland Northern	2.40	1.80	N.A	N.A	N.A	4.50	1.92	N.A
	Inland Central	4.15	3.60	N.A	N.A	N.A	N.A	N.A	N.A
	Inland Eastern	4.02	3.47	4.16	4.99	3.93	4.90	4.10	7.90
	Eastern	3.45	2.59	3.09	3.60	3.12	2.78	2.95	3.21
Orissa	Coastal	4.57	4.63	4.67	4.53	3.99	3.71	3.72	4.15
	Southern	3.41	3.58	3.78	4.16	3.99	3.56	3.72	3.88
	Northern	3.39	3.13	4.00	3.97	3.76	3.42	3.59	3.61
Punjab	Northern	7.48	7.72	8.38	7.93	7.29	7.24	7.30	7.69
	southern	8.58	7.51	8.32	8.84	8.76	8.38	8.57	8.13
Rajasthan	Western	4.94	5.04	5.28	4.65	3.80	4.14	5.07	4.83
	North Eastern	4.31	4.86	4.71	5.31	4.49	5.79	5.50	5.98
	Southern	2.80	2.73	3.17	3.91	3.22	3.31	3.23	3.25
	South Eastern	3.94	3.80	3.30	3.51	4.04	4.02	4.53	4.41
T.N	Coastal northern	3.32	3.21	3.39	3.85	3.41	3.49	4.47	3.60
	Coastal	3.03	4.03	5.14	4.89	4.23	6.24	5.64	5.81
	Inland	3.95	4.17	3.79	4.38	4.76	3.74	4.70	5.46
	southern	4.22	4.07	4.76	4.72	4.28	4.37	5.41	7.09
U.P	Himalayan	4.74	4.90	5.75	4.19	4.89	4.90	4.73	5.17
	western	6.47	6.60	5.76	4.89	5.01	5.50	5.15	5.38
	Central;	4.04	3.57	3.28	3.17	3.79	2.99	3.36	2.48
	Southern	3.31	3.09	3.64	4.19	3.79	3.70	4.10	N.A
	Eastern	3.83	3.41	4.03	3.55	3.63	4.06	3.36	4.14
W.B	Himalayan	4.46	4.49	4.97	5.07	4.97	3.24	3.88	4.42
	Eastern plains	4.76	4.69	4.67	4.51	4.49	3.24	4.10	4.22
	Central Plains	6.12	5.62	6.92	6.21	5.93	4.40	4.53	4.73
	Western Plains	5.51	5.23	5.34	4.99	4.64	3.24	3.78	4.01

Table 3.2: Female Agricultural Wage Rate by Region (Rs/ day at 1970-71 Prices)

State	NSS region	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90
Andhra Pradesh	Coastal	2.84	2.46	2.69	3.13	3.23	3.45	3.79	3.85	3.19	3.67
	Inland, northern	2.01	1.79	2.08	2.37	2.58	2.78	2.63	2.61	2.70	3.22
	South Western	2.21	1.96	2.05	2.15	2.36	2.61	2.47	2.46	2.72	3.85
	Inland southern	1.98	2.18	2.68	2.62	2.94	2.88	2.72	2.43	2.44	3.11
Assam	Plains' Eastern	3.31	3.58	3.60	3.74	4.05	4.59	4.53	4.43	3.99	5.08
	Plains western	3.94	3.24	3.23	3.13	3.50	3.81	3.95	3.91	4.10	4.46
	Hills	3.94	3.09	2.95	3.18	3.96	4.92	5.02	4.58	4.17	5.23
Bihar	Southern	2.34	2.45	2.79	2.70	3.06	3.28	3.75	3.79	3.90	4.55
	Northern	2.37	2.22	2.58	2.87	3.08	3.69	4.09	3.66	3.60	3.69
	Central	2.64	2.99	3.51	3.56	3.91	4.04	4.45	4.17	3.96	3.88
Gujarat	Eastern	2.60	2.35	2.65	2.98	3.34	3.28	3.44	3.19	3.17	3.59
	Plains Northern	2.70	2.42	2.46	3.02	3.38	3.47	3.89	3.59	3.44	3.77
	Plains Southern	2.64	2.35	2.69	3.07	3.11	3.29	3.59	3.19	3.16	3.50
	Dry areas	2.73	2.61	2.80	2.72	4.19	5.26	5.59	5.11	4.44	4.13
	Saurashtra	3.28	4.05	4.52	4.37	4.60	4.15	4.01	3.46	3.89	4.53
Haryana	Eastern	3.80	4.12	5.21	4.70	5.22	4.38	4.48	4.32	4.35	5.03
	Western	3.96	4.51	6.11	5.92	5.63	6.80	7.03	6.85	6.24	6.87
Himachal Pradesh		3.10	2.88	3.44	3.82	4.00	3.65	4.06	4.14	2.31	4.48
Karnataka	Inland Eastern	3.55	2.38	2.65	2.18	1.96	2.64	2.37	2.17	3.68	3.41
	Inland southern	1.85	1.64	1.71	1.78	1.54	2.83	2.90	2.56	3.08	3.08
	Inland Northern	1.55	1.72	1.83	1.64	2.21	2.79	2.44	2.22	3.25	3.42
Kerala	Northern	3.90	4.35	4.18	3.57	4.65	5.17	4.86	4.68	4.62	4.53
	Southern	4.58	5.44	4.99	4.20	5.42	5.59	5.28	5.20	4.88	4.90
Madhya Pradesh	Chatisgarh	1.70	1.80	2.05	2.25	2.61	2.58	2.69	2.67	2.61	2.88
	Vindhya	1.84	1.87	2.94	2.33	2.49	2.51	2.78	2.70	2.53	2.63
	Central	1.92	2.18	2.56	2.70	3.00	2.97	3.56	3.33	3.47	3.42
	Malwa Plateau	1.83	1.85	2.30	2.47	2.56	2.72	2.77	2.71	2.82	5.35
	South Central	2.11	2.17	2.36	2.56	3.07	2.22	2.30	2.60	2.23	2.73
	South Western	1.72	1.67	1.86	1.96	2.12	2.41	2.78	2.58	2.62	2.82
	Northern	1.82	2.15	2.49	2.72	2.17	3.61	4.04	3.75	3.64	4.41

Source: 1995-96 to 1997-98 calculated from *Agricultural Wages in India*, MoA
1980-81 to 1984-85 Acharya (1989)
1985-86 to 1994-95 Sarmah (2001)

Table 3.2 continued.....

State	NSS region	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98
Andhra Pradesh	Coastal	3.73	3.17	3.29	3.57	3.30	4.19	3.90	4.64
	Inland, northern	3.12	2.84	2.81	3.03	3.29	3.43	3.47	3.35
	South Western	3.42	4.00	4.08	3.72	2.84	2.67	3.15	2.77
	Inland southern	3.48	2.55	3.37	3.57	3.38	3.46	3.36	3.08
Assam	Plains' Eastern	4.74	5.67	4.85	4.56	4.23	4.28	4.16	4.04
	Plains western	4.09	3.83	3.98	3.99	3.74	3.28	3.63	3.68
	Hills	4.75	4.00	N.A	N.A	N.A	5.42	4.03	3.80
Bihar	Southern	4.13	3.59	3.34	3.59	3.78	4.60	4.11	4.34
	Northern	3.72	3.56	3.87	3.10	3.46	4.01	2.78	4.34
	Central	4.29	3.91	2.64	3.37	3.67	3.86	4.37	4.07
Gujarat	Eastern	3.32	2.70	3.00	2.62	2.37	2.41	2.42	2.40
	Plains Northern	3.95	3.14	2.84	3.63	3.44	3.61	4.06	4.16
	Plains Southern	3.04	2.85	4.32	2.62	2.34	2.39	2.60	2.88
	Dry areas	4.33	3.39	4.30	4.78	4.47	4.30	4.72	5.16
	Saurashtra	4.34	4.28	6.65	4.37	5.02	5.17	4.08	4.92
Haryana	Eastern	5.38	5.54	8.94	5.93	7.13	6.98	6.49	6.81
	Western	5.11	4.74	5.08	8.14	7.74	6.35	8.23	8.47
Himachal Pradesh		4.08	4.09	3.08	4.46	4.31	5.59	5.79	6.15
Karnataka	Inland Eastern	3.53	3.00	1.59	2.93	2.85	2.87	4.19	3.87
	Inland southern	2.78	2.41	2.92	1.81	1.64	4.00	2.80	3.52
	Inland Northern	3.30	2.55	5.42	2.48	2.09	1.68	2.43	2.65
Kerala	Northern	4.42	5.15	6.23	5.86	5.97	7.68	6.50	7.04
	Southern	5.03	5.36	3.34	6.09	6.34	6.03	6.97	7.60
Madhya Pradesh	Chatisgarh	3.37	3.17	3.26	3.51	3.04	3.04	2.89	2.88
	Vindhya	3.22	3.01	3.61	3.12	3.25	3.32	3.14	3.24
	Central	3.41	3.35	3.41	3.71	3.19	3.60	3.89	4.68
	Malwa Plateau	3.58	3.06	2.62	3.73	3.63	4.15	3.89	4.32
	South Central	2.77	2.52	2.97	2.78	2.49	2.77	2.76	2.76
	South Western	3.12	2.74	3.81	3.34	3.27	3.18	3.27	3.48
	Northern	4.44	4.01	4.43	3.94	4.12	3.87	3.64	3.24

Table 3.2 continued.....

State	NSS region	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90
Maharashtra	Coastal	2.07	1.18	2.44	2.69	2.57	6.50	6.03	6.35	4.83	4.88
	Inland Western	1.56	1.54	1.80	1.67	1.75	4.51	3.56	4.67	4.25	3.95
	Inland Northern	1.79	1.70	1.98	2.09	2.32	1.77	1.65	1.52	1.36	1.28
	Inland Central	1.62	1.50	1.82	N.A	N.A	N.A	N.A	N.A	N.A	N.A
	Inland Eastern	1.45	1.39	1.48	1.73	1.88	3.69	3.59	3.26	2.96	3.02
	Eastern	1.37	1.21	1.43	3.81	1.56	4.96	4.70	4.43	4.71	4.79
Orissa	Coastal	2.36	1.87	1.72	2.30	2.13	2.39	2.60	2.16	2.33	3.02
	Southern	1.86	1.88	1.51	2.00	2.21	2.33	2.42	2.05	2.17	2.62
	Northern	1.72	1.74	1.71	2.03	2.15	2.37	2.55	2.51	2.95	2.97
Punjab	Northern	4.34	4.16	5.46	5.59	4.02	3.65	5.35	4.62	4.32	4.13
	southern	6.30	5.74	5.61	5.73	5.95	6.14	6.87	7.29	6.21	5.79
Rajasthan	Western	2.22	2.65	3.20	3.28	2.6	2.67	3.41	3.01	3.00	2.94
	North Eastern	2.22	2.41	2.49	2.66	1.88	3.04	3.45	3.09	2.70	2.67
	Southern	2.40	2.46	2.28	2.62	2.52	2.45	3.21	2.96	2.58	2.42
	South Eastern	1.96	1.83	1.86	2.62	2.60	2.61	3.38	2.40	2.82	3.04
Tamil Nadu	Coastal northern	1.42	1.68	1.62	1.75	1.81	2.01	2.00	1.90	2.18	2.59
	Coastal	1.53	1.96	1.84	1.76	1.87	1.42	1.45	1.40	2.00	1.93
	Inland	2.12	1.79	1.76	1.60	1.83	2.14	1.94	1.90	2.68	2.78
	southern	1.56	1.77	1.74	1.67	1.88	1.92	1.61	1.79	2.54	3.01
Uttar Pradesh	Himalayan	3.40	3.52	2.96	3.06	3.23	3.09	3.55	4.17	5.18	5.35
	western	1.53	1.96	1.84	1.76	1.87	3.16	3.49	8.91	8.49	9.08
	Central;	2.00	2.16	2.46	2.55	2.72	3.22	3.22	3.91	3.91	4.36
	Southern	1.24	2.20	2.21	1.78	1.89	3.24	2.47	3.09	4.17	4.40
	Eastern	2.19	2.20	2.39	2.26	3.33	2.51	3.08	3.30	3.61	3.86
West Bengal	Himalayan	2.96	3.01	2.64	2.69	3.08	3.39	3.41	3.66	3.94	3.43
	Eastern plains	2.38	2.32	2.12	2.42	2.32	3.10	3.02	3.29	3.79	4.12
	Central Plains	3.47	3.42	3.08	3.00	3.20	3.27	4.26	4.60	4.75	4.82
	Western Plains	2.92	2.80	3.38	3.82	4.00	3.55	3.75	4.45	4.34	4.91

Table 3.2 continued.....

State	NSS region	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98
Maharashtra	Coastal	4.19	4.38	2.93	4.37	4.42	3.84	3.33	4.69
	Inland Western	2.73	3.33	N.A	3.72	3.20	5.43	3.72	3.45
	Inland Northern	1.20	0.90	2.60	N.A	N.A	3.31	1.92	N.A
	Inland Central	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A
	Inland Eastern	2.76	2.43	2.60	N.A	N.A	2.78	3.33	4.44
	Eastern	4.63	3.54	3.39	3.25	2.80	2.51	2.44	3.08
Orissa	Coastal	3.28	3.14	3.71	3.47	3.29	3.12	3.04	3.48
	Southern	2.47	2.67	2.89	3.43	3.11	2.82	2.90	3.08
	Northern	2.99	2.75	3.45	3.62	3.26	3.12	3.17	3.21
Punjab	Northern	3.91	3.35	N.A	N.A	N.A	N.A	N.A	N.A
	southern	5.52	4.98	N.A	N.A	N.A	N.A	N.A	N.A
Rajasthan	Western	2.66	2.94	3.33	3.40	2.70	4.49	3.45	N.A
	North Eastern	2.71	2.83	3.57	3.82	3.48	3.07	3.56	N.A
	Southern	2.31	2.51	2.93	2.96	2.63	2.95	N.A	N.A
	South Eastern	2.73	2.90	2.54	2.80	2.93	2.84	3.23	N.A
Tamil Nadu	Coastal northern	2.38	1.99	1.99	2.98	2.42	2.49	3.06	2.56
	Coastal	2.39	1.90	2.50	2.50	2.82	3.74	2.35	2.79
	Inland	2.61	2.70	2.97	3.09	3.06	2.62	2.70	2.91
	southern	2.58	2.46	2.66	2.54	2.60	3.24	3.17	3.49
Uttar Pradesh	Himalayan	7.36	9.26	4.58	3.66	4.29	4.06	4.73	N.A
	western	9.82	11.30	5.76	5.12	4.15	4.78	4.73	N.A
	Central;	4.78	5.32	2.90	2.72	2.69	2.51	N.A	N.A
	Southern	4.80	5.19	0.00	4.19	3.80	3.70	4.10	N.A
	Eastern	5.73	5.63	3.61	3.28	3.78	2.99	2.94	N.A
West Bengal	Himalayan	3.41	3.74	3.54	4.45	4.36	3.36	3.67	3.81
	Eastern plains	3.71	3.70	3.88	3.52	3.48	2.55	3.13	3.40
	Central Plains	4.49	4.28	5.31	4.50	4.28	3.24	3.45	3.60
	Western Plains	4.78	4.63	4.56	3.84	3.74	2.66	3.02	2.98

Table 3.3: Male Agricultural Wage Rate by State (Rs/ day at 1970-71 Prices)

	A.P	Assam	Bihar	Gujarat	Haryana	Karnataka	Kerela	M.P	Maharashtra	Orissa	Punjab	Rajasthan	T.N	U.P.	W.B
1980-81	2.85	4.18	2.74	3.07	5.13	2.79	6.05	2.05	2.22	2.31	5.44	3.23	2.59	2.43	3.44
1981-82	3.07	3.66	2.64	3.06	5.75	2.38	6.43	2.17	2.21	2.21	5.10	3.46	2.84	2.36	3.22
1982-83	3.43	3.90	2.94	3.55	6.23	2.64	6.67	2.57	2.60	2.16	5.79	4.68	2.61	2.75	3.13
1983-84	3.63	3.92	3.11	3.71	6.55	2.41	5.97	2.81	2.70	2.60	5.86	4.78	2.71	2.92	3.14
1984-85	3.94	4.34	3.72	4.31	6.12	2.32	7.21	2.98	2.77	2.90	6.30	3.77	3.09	3.53	3.72
1985-86	4.20	4.78	4.08	4.09	6.24	3.09	6.85	2.96	4.54	3.15	6.66	3.77	3.36	3.25	4.99
1986-87	4.57	5.00	4.26	4.23	6.71	3.47	6.84	3.32	5.06	3.18	7.53	4.44	3.20	3.83	4.54
1987-88	4.33	5.11	4.08	3.99	6.54	3.21	7.71	3.27	4.67	2.87	6.91	4.88	2.92	3.66	4.93
1988-89	4.00	5.11	4.10	3.84	6.02	3.58	7.63	3.17	4.24	3.25	7.10	4.53	3.38	3.50	5.39
1989-90	4.75	5.42	4.36	4.32	7.02	3.83	7.33	3.39	4.12	3.70	7.58	4.43	3.52	4.24	5.55
1990-91	4.88	5.63	4.49	4.10	7.32	3.87	7.56	3.73	3.83	3.92	8.01	4.39	3.64	4.28	5.34
1991-92	4.42	5.21	4.37	3.94	7.80	3.72	7.80	3.83	3.60	3.89	7.06	5.71	3.70	3.76	6.11
1992-93	4.40	4.79	4.06	4.35	9.21	2.96	8.81	4.17	3.82	4.19	8.17	5.40	3.90	4.43	7.67
1993-94	4.85	5.05	4.42	4.13	8.18	3.57	8.78	4.39	4.86	4.25	8.32	4.48	4.58	4.19	6.89
1994-95	4.67	4.43	4.53	4.24	8.19	3.08	9.06	4.27	5.05	3.92	8.19	4.77	4.37	4.05	6.58
1995-96	4.94	5.27	4.16	4.17	8.38	3.87	10.08	4.15	4.63	3.71	7.87	4.96	4.24	4.54	4.75
1996-97	4.75	5.51	4.24	4.72	8.57	3.65	11.84	4.40	4.23	3.86	7.76	5.39	4.94	4.10	5.29
1997-98	5.14	5.27	4.86	5.04	9.56	3.87	13.63	4.68	5.18	4.01	8.02	5.14	5.35	4.66	5.45
1998-99	4.83	5.36	4.58	6.24	9.39	4.31	14.36	4.57	5.20	3.91	7.65	5.76	5.41	5.12	5.39
1999-00	5.01	5.23	4.90	7.06	10.03	4.38	13.50	4.75	4.73	3.91	7.55	6.30	6.27	4.70	6.08
2000-01	5.40	5.06	5.37	6.08	11.63	5.72	15.46	4.47	5.06	4.76	7.23	N.A	6.05	5.25	5.71
2001-02	5.24	5.67	5.61	6.41	9.72	4.78	17.06	4.99	5.35	4.81	7.89	6.96	5.49	5.32	5.48

Source: 1990-91 to 2001-02 Computed from Agricultural Wages in India, MoA
1980-81 to 1989-90 Sarmah (2001)

**Table 3.4: Male Agricultural Wage Indices by State
1980-81 to 2001-02 (1980-81=100)**

*I = Base
divided by
1980-81 value
x 100.*

States	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90
Andhra Pradesh	100	108	120	127	138	147	160	152	140	167
Assam	100	88	93	94	104	114	120	122	122	130
Bihar	100	96	107	114	136	149	155	149	150	159
Gujarat	100	100	116	121	140	133	138	130	125	141
Haryana	100	112	121	128	119	122	131	127	117	137
Karnataka	100	85	95	86	83	111	124	115	128	137
Kerala	100	106	110	99	119	113	113	127	126	121
Madhya Pradesh	100	106	125	137	145	144	162	160	155	165
Maharashtra	100	100	117	122	125	205	228	210	191	186
Orissa	100	96	94	113	126	136	138	124	141	160
Punjab	100	94	106	108	116	122	138	127	131	139
Rajasthan	100	107	145	148	117	117	137	151	140	137
Tamil Nadu	100	110	101	105	119	130	124	113	131	136
Uttar Pradesh	100	97	113	120	145	134	158	151	144	174
West Bengal	100	94	91	91	108	145	132	143	157	161
India	100	100	110	112	121	131	139	137	136	146

Table 3.4 continued.....

States	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-0
A. P	171	155	154	170	164	173	167	180	169	176	190	184
Assam	135	125	115	121	106	126	132	126	128	125	121	136
Bihar	164	160	148	161	165	152	155	177	167	179	196	205
Gujarat	134	128	142	135	138	136	154	164	203	230	198	209
Haryana	143	152	180	159	160	163	167	186	183	196	227	190
Karnataka	139	133	106	128	110	139	131	139	154	157	205	171
Kerala	125	129	146	145	150	167	196	225	237	223	256	282
M. P	182	187	204	214	208	202	214	228	223	232	218	243
Maharashtra	173	162	172	219	228	209	191	233	234	213	228	241
Orissa	170	168	181	184	170	161	167	174	169	169	206	208
Punjab	147	130	150	153	150	145	143	147	141	139	133	145
Rajasthan	136	177	167	139	148	154	167	159	178	195	204	216
Tamil Nadu	141	143	150	177	169	164	191	206	209	242	234	212
Uttar Pradesh	176	155	182	172	167	187	169	192	211	194	216	219
West Bengal	155	178	223	200	191	138	154	159	157	177	166	159
India	148	148	159	160	157	158	165	178	182	187	198	199

Source: computed from Table 3.3

Table 3.5: State wise Real Earnings of Agricultural Labour Households (ALHH)

States	Agricultural Operations							
	Male				Female			
	1983	1987-88	1993-94	1999-00	1983	1987-88	1993-94	1999-00
Andhra Pradesh	1.73	2.65	3.41	4.42	1.44	1.84	2.45	2.95
Assam	3.09	3.71	4.38	4.87	3.05	3.42	3.68	4.18
Bihar	1.68	2.68	2.88	3.87	1.43	2.36	2.52	3.42
Gujarat	2.10	2.69	3.31	4.07	1.65	2.65	3.21	3.48
Haryana	2.40	2.91	4.31	5.91	1.93	2.13	3.67	5.47
Himachal	1.51	3.86	4.80	6.25	1.07	3.54	3.92	5.54
Karnataka	1.41	2.54	3.23	4.07	1.18	1.84	2.40	2.74
Kerala	4.03	5.54	7.03	9.97	3.28	4.07	4.88	6.51
Madhya Pradesh	1.34	2.31	2.87	3.12	1.15	2.03	2.40	2.66
Maharashtra	1.59	2.77	3.49	4.05	1.09	1.82	2.18	2.62
Orissa	1.28	2.34	3.01	3.17	1.14	1.79	2.22	2.45
Punjab	3.57	4.55	6.23	6.19	1.76	2.65	5.31	7.67
Rajasthan	1.91	2.51	3.97	4.58	1.11	2.39	3.32	3.59
Tamil Nadu	1.69	2.69	4.10	5.26	1.09	1.69	2.48	3.09
Uttar Pradesh	1.40	2.36	2.99	3.42	1.03	1.83	2.29	2.63
West Bengal	1.90	3.76	4.40	3.81	1.77	3.39	3.81	3.27
All India	1.77	2.88	3.68	4.24	1.34	2.14	2.62	2.99

Table 3.5 continued.....

States	Non- Agricultural Operations							
	Male				Female			
	1983	1987-88	1993-94	1999-00	1983	1987-88	1993-94	1999-00
Andhra Pradesh	1.43	2.92	4.16	4.66	1.06	2.02	2.52	2.83
Assam	2.71	4.21	5.80	5.98	1.73	3.64	2.31	3.20
Bihar	1.21	3.20	3.49	4.95	0.93	2.44	3.41	3.00
Gujarat	2.21	2.77	4.60	5.06	1.52	2.52	3.22	3.93
Haryana	2.25	3.70	5.72	8.47	0.58	2.84	2.30	2.87
Himachal	2.08	4.84	5.67	7.79	0.78	N.A	N.A	4.87
Karnataka	1.86	2.67	4.35	5.42	1.10	2.23	3.14	5.07
Kerala	3.64	4.26	7.56	10.54	1.23	3.09	3.12	4.97
Madhya Pradesh	1.79	2.92	3.90	4.46	1.18	2.64	2.79	2.78
Maharashtra	2.08	3.04	4.19	6.25	1.41	2.33	3.12	2.67
Orissa	0.95	2.74	3.53	3.76	0.67	2.03	2.54	2.96
Punjab	2.81	3.92	6.37	6.86	0.75	2.24	2.59	4.57
Rajasthan	2.39	2.73	4.47	3.98	1.75	2.32	1.66	3.85
Tamil Nadu	2.14	2.52	4.46	6.17	1.20	1.66	2.03	3.42
Uttar Pradesh	1.90	2.81	4.16	4.39	0.79	1.83	2.46	3.21
West Bengal	1.61	3.77	4.77	4.47	0.97	2.38	2.92	2.97
All India	1.92	3.12	4.64	5.71	1.12	2.42	2.79	3.60

*Source: Computed from Rural Labour Enquiry, 1983, 1987-88, 1993-94 & 1999-00:
Report on Wages and Earnings, Labour Bureau, Shimla*

Table 3.6: State wise Real Earnings of Rural Labour Households (RLHH)

States	Agricultural Operations							
	Male				Female			
	1983	1987-88	1993-94	1999-00	1983	1987-88	1993-94	1999-00
Andhra Pradesh	1.83	2.65	3.44	4.42	1.42	1.83	2.45	2.94
Assam	2.87	3.79	4.41	4.62	3.04	3.58	3.91	4.18
Bihar	1.65	2.69	1.86	3.87	1.39	2.39	2.51	3.42
Gujarat	2.01	2.70	3.32	4.06	1.58	2.64	3.17	3.48
Haryana	2.28	2.94	4.54	5.85	1.77	2.13	3.60	5.19
Himachal	1.17	3.91	4.60	6.17	0.37	3.54	4.17	5.53
Karnataka	1.39	2.57	3.27	4.13	1.17	1.84	2.40	2.79
Kerala	3.78	5.54	7.02	9.88	3.07	4.10	4.86	6.51
Madhya Pradesh	1.32	2.33	2.87	3.14	1.12	2.04	2.41	2.66
Maharashtra	1.60	2.78	3.52	4.07	1.08	1.83	2.19	2.63
Orissa	1.23	2.33	3.01	3.18	1.12	1.77	2.23	2.47
Punjab	3.47	4.54	6.24	6.20	1.63	2.65	5.47	7.21
Rajasthan	1.82	2.52	3.87	4.69	0.98	2.38	3.16	3.55
Tamil Nadu	1.61	2.68	4.11	5.32	1.03	1.69	2.47	3.10
Uttar Pradesh	1.35	2.35	3.01	3.46	0.94	1.81	2.31	2.62
West Bengal	1.88	3.76	4.50	3.82	1.74	3.39	3.71	3.26
All India	1.74	2.89	3.71	4.28	1.30	2.15	2.64	3.01

Table 3.6 continued.....

States	Non- Agricultural Operations							
	Male				Female			
	1983	1987-88	1993-94	1999-00	1983	1987-88	1993-94	1999-00
Andhra Pradesh	2.39	3.09	4.53	5.83	1.32	2.09	2.57	3.52
Assam	4.30	4.21	5.78	5.74	1.71	3.08	3.51	3.53
Bihar	2.82	3.26	4.08	5.11	1.39	2.63	3.09	3.21
Gujarat	3.38	2.92	5.84	4.88	2.13	2.60	3.46	3.81
Haryana	2.79	4.59	6.10	7.80	2.00	2.09	2.80	2.51
Himachal	3.19	4.20	5.43	7.47	2.02	N.A	7.72	5.72
Karnataka	2.52	3.16	4.84	6.29	1.24	2.52	2.92	4.39
Kerala	4.60	4.83	8.56	11.27	1.79	2.94	3.64	5.25
Madhya Pradesh	2.13	3.19	3.78	5.26	1.40	2.75	2.28	2.87
Maharashtra	2.82	3.40	5.99	8.02	1.44	2.28	3.20	4.88
Orissa	1.47	2.72	3.83	4.27	1.00	1.96	2.73	2.96
Punjab	3.64	4.39	6.42	7.08	2.10	2.51	3.60	3.99
Rajasthan	2.90	2.67	4.89	5.65	1.95	2.28	2.88	3.67
Tamil Nadu	2.63	2.96	5.02	7.64	1.36	1.72	2.38	N.A
Uttar Pradesh	2.20	2.88	4.22	4.65	1.30	2.17	2.87	3.61
West Bengal	2.46	4.24	5.58	4.96	0.92	2.17	3.35	2.81
All India	2.73	3.36	5.60	6.85	1.39	2.44	3.01	5.92

Source: Same as Table 3.5

Table 3.7: Variables Used in Wage Determination

STATE	Money wage			Real male wages		
	1981	1991	2001	1981	1991	2001
Andhra Pradesh	6	19	45	2.9	4.9	5.1
Assam	8	24	49	4.2	5.6	5.2
Bihar	6	19	44	2.7	4.5	5.0
Gujarat	6	18	68	3.1	4.1	6.5
Haryana	12	35	103	5.1	7.3	10.4
Karnataka	6	17	43	2.8	3.9	4.8
Kerala	11	33	129	6.1	7.6	14.4
Madhya Pradesh	4	16	45	2.1	3.7	4.6
Maharashtra	5	16	44	2.2	3.8	5.0
Orissa	5	15	35	2.3	3.9	4.2
Punjab	12	38	77	5.4	8.0	7.5
Rajasthan	8	22	69	3.2	4.4	6.2
Tamil Nadu	6	16	62	2.6	3.6	5.9
Uttar Pradesh	6	22	52	2.4	4.3	5.0
West Bengal	7	22	69	3.4	5.3	5.7
CORREL	0.97	0.78	0.80	0.96	0.76	0.85

Source: Computed

Table 3.7 continued....

STATE	Irrigation/ GSA			Food grain yield / ha			NSDPAG/ha constant prices		
	1981	1991	2001	1981	1991	2001	1981	1991	2001
1	2			3			4		
Andhra Pradesh	21.61	40.7	43.12	1140	1590	1940	2782	3345	4673
Assam	16.96	14.8	14.37	1070	1270	1380	3069	3467	3908
Bihar	32.58	41.31	45.99	990	1300	1620	2662	3787	2740
Gujarat	21.82	27.5	33.11	1000	1050	1190	2343	2559	2015
Haryana	60.58	76.06	78.78	1520	2350	3040	2952	4403	5010
Karnataka	15.72	20.96	23.36	890	910	1310	2150	2554	4411
Kerala	13.31	12.67	15.43	1540	1870	2090	4483	5858	7701
Madhya Pradesh	11.46	19.19	25.8	700	1000	1190	1407	2063	2463
Maharashtra	12.29	12.36	14.5	690	850	930	1888	2569	3069
Orissa	19.56	25.8	27.54	870	1000	1020	1955	1575	2001
Punjab	85.48	93.84	94.07	2460	3390	4030	3252	4800	5910
Rajasthan	35.35	25.71	32.58	530	860	978	1159	2044	2132
Tamil Nadu	50.92	41.47	51.84	1340	1910	2160	2308	4081	5743
Uttar Pradesh	46.27	58.42	63.59	1220	1740	2180	2879	3771	4490
West Bengal	24.01	22.74	27.5	1360	1740	2190	3352	4615	7244
Correlation	0.94	0.99	0.95	0.97	0.99	0.95	0.90	0.89	0.81

Source: Col 2- Agricultural Statistics of India (Yearly), MoA, Gol

Col 3-RBI Bulletin

Col 4- do-

Table 3.7 continued....

STATE	Proportion of Non Agricultural workers			Proportion of landless		Proportion of ALHH in Total RHH	
	1981	1991	2001	1983	1993	1983	1993
5	6			7		8	
Andhra Pradesh	19.0	18.8	24.9	39.4	41.9	41.6	41.6
Assam	16.0	25.4	41.0	43.2	51.0	19.5	23.0
Bihar	12.8	11.2	18.7	47.9	37.8	37.1	39.2
Gujarat	18.7	21.1	28.1	26.5	39.1	30.7	37.8
Haryana	22.0	23.0	35.0	4.6	15.0	20.2	15.9
Karnataka	18.8	19.0	26.5	45.8	47.6	26.6	37.7
Kerala	50.5	51.9	71.3	82.1	24.3	31.7	28.2
Madhya Pradesh	12.0	10.9	14.1	49.2	56.7	30.2	34.9
Maharashtra	15.8	15.6	19.9	41.9	42.2	38.6	41.2
Orissa	17.0	17.6	27.7	55.8	58.0	36.4	25.5
Punjab	22.1	23.6	46.5	4.8	5.4	25.3	27.7
Rajasthan	16.0	13.9	22.7	53.6	51.9	11.1	10.0
Tamil Nadu	20.7	21.4	30.1	28.4	24.9	42.2	42.1
Uttar Pradesh	13.3	14.6	22.6	53.6	62.1	18.0	15.3
West Bengal	25.9	29.4	41.6	47.0	49.3	38.5	32.6
CORREL	0.96	0.96	0.91	0.58		0.85	

Source: Col 6-Census of India, RGI, New Delhi

Col 7-Rural Labour Enquiry Report, Labour Bureau, Shimla

Col 8 -do-

Table 3.7 continued....

States	Average size of holding			% area under medium and large hold		
	1981	1991	2001	1981	1991	2001
Andhra Pradesh	1.72	1.56	1.36	44	39	31
Assam	1.31	1.31	1.17	29	29	26
Bihar	0.87	0.93	0.75	29	29	21
Gujarat	3.15	2.93	2.62	63	58	51
Haryana	2.75	2.43	2.13	62	54	51
Karnataka	2.41	2.13	1.95	53	47	42
Kerala	0.36	0.33	0.27	17	16	12
Madhya Pradesh	2.92	2.63	2.28	64	59	52
Maharashtra	2.65	2.21	1.87	54	45	37
Orissa	1.47	1.34	1.3	29	24	22
Punjab	3.76	3.61	3.79	69	67	71
Rajasthan	4.34	4.11	3.96	77	75	74
Tamil Nadu	1.01	0.93	0.91	29	25	24
Uttar Pradesh	0.93	0.9	0.86	24	21	19
West Bengal	0.92	0.9	0.85	12	11	9
CORREL	1.00	0.99	0.98	0.99	0.99	0.97

Source: Agricultural Census Division, Ministry of agriculture, New Delhi

Table 3.7 continued....

States	Agricultural labourer / ha			NSA/rural person		
	1981	1991	2001	1981	1991	2001
Andhra Pradesh	0.8	0.9	0.6	0.28	0.22	0.24
Assam	0.1	0.3	0.9	0.13	0.14	0.18
Bihar	0.7	1.0	1.2	0.13	0.1	0.13
Gujarat	0.3	0.4	0.5	0.41	0.35	0.32
Haryana	0.1	0.2	0.5	0.36	0.28	0.4
Karnataka	4.2	5.3	7.1	0.39	0.35	0.35
Kerala	0.2	0.2	0.1	0.1	0.11	0.13
Madhya Pradesh	1.9	2.3	5	0.45	0.38	0.59
Maharashtra	0.3	0.4	0.5	0.44	0.37	0.4
Orissa	0.2	0.2	0.2	0.27	0.23	0.27
Punjab	0.2	0.1	0.2	0.35	0.29	0.51
Rajasthan	0.2	0.3	1.6	0.58	0.5	0.45
Tamil Nadu	0.4	0.4	0.2	0.18	0.16	0.19
Uttar Pradesh	0.7	1.3	3.6	0.19	0.15	0.2
West Bengal	0.2	0.2	0.2	0.14	0.11	0.17
CORREL	0.99	0.91	0.93	0.99	0.85	0.86

Source: Census of India, RGI, New Delhi

Table 3.7 continued....

States	Rural Male Literacy			Rural Life Expectancy		
	1981	1991	2001	1981-85	1991-95	1992-96
Andhra Pradesh	38.7	47.3	66.1	57.1	60.7	61.0
Assam	39.4	58.7	69.0	51.2	55.1	55.6
Bihar	42.4	48.3	57.7	52.1	58.5	58.7
Gujarat	57.8	66.8	70.7	56.2	60.1	60.5
Haryana	53.4	64.8	76.1	58.9	62.6	62.9
Karnataka	51.1	60.3	70.6	58.7	60.9	61.3
Kerala	86.7	92.9	93.5	68.5	73.0	72.8
Madhya Pradesh	40.8	51.0	72.1	50.0	53.2	53.7
Maharashtra	61.7	69.7	82.2	59.0	62.5	62.8
Orissa	53.5	60.4	73.6	52.4	55.7	56.1
Punjab	49.5	60.7	71.7	61.7	66.5	66.7
Rajasthan	37.0	47.6	73.0	52.0	57.0	57.5
Tamil Nadu	60.8	67.2	77.5	54.6	61.7	62.2
Uttar Pradesh	43.4	52.1	68.0	48.7	56.0	56.3
West Bengal	52.8	62.1	73.8	55.1	60.6	60.8
CORREL	0.97	0.84	0.87	0.96	0.96	1.00

Source: NHDR, Planning Commission

Table 4.1: Employment Days in Agricultural Operations of Agricultural Labour in ALHH and RLHH

States	Agricultural Labour Household						Rural Labour Households					
	Male			Female			Male			Female		
	1983	1988	1994	1983	1988	1994	1983	1988	1994	1983	1988	1994
A.P.	218	212	236	187	148	216	217	212	233	186	144	210
Assam	335	309	290	316	327	310	333	307	271	314	315	285
Bihar	258	273	293	215	202	260	256	271	290	213	204	258
Gujarat	251	221	249	202	118	243	247	218	237	198	115	236
Haryana	235	245	223	220	129	203	230	241	198	215	129	201
H.P.	202	272	241	195	259	155	192	274	68	185	200	108
Karnataka	226	259	263	218	172	246	224	257	261	216	170	244
Kerala	197	187	251	179	175	205	187	183	221	169	170	187
M.P.	247	231	245	210	158	208	245	230	239	208	155	203
Maharashtra	211	236	231	167	138	215	209	235	224	165	139	213
Orissa	219	207	216	165	115	176	220	206	213	166	114	171
Punjab	245	245	323	190	150	301	232	246	303	177	158	244
Rajasthan	230	205	255	204	109	233	225	196	258	199	96	171
Tamil Nadu	188	176	221	168	157	205	185	175	216	165	155	201
U.P.	232	223	222	189	107	212	230	221	207	187	102	207
W.B.	216	241	229	197	188	170	218	241	222	199	187	160
All India	227	231	247	190	157	220	226	230	237	189	157	215

Source: Rural Labour Enquiry Report on Employment and Unemployment of Rural Labour Households, Labour Bureau, Shimla

Table 4.2: Total Nominal Earnings per Labourer In Wage Employment

STATES	Agricultural Labour Households						Rural Labour Households					
	Male			Female			Male			Female		
	1983	1988	1994	1983	1988	1994	1983	1988	1994	1983	1988	1994
Andhra Pradesh	973	1988	4621	682	924	2972	1052	1994	4657	674	902	2930
Assam	2640	3768	7709	2433	3662	6767	2461	3834	7681	2415	3689	6898
Bihar	1211	2532	5110	848	1614	3953	1219	2521	3410	823	1656	3941
Gujarat	1334	2462	5321	844	1451	4758	1268	2485	5390	795	1416	4691
Haryana	1469	2759	7117	1080	969	5016	1370	2802	8264	972	969	5283
Himachal	812	3784	9681	534	3230	4089	621	3841	7400	253	2494	10303
Karnataka	900	2294	5102	697	1048	3531	903	2226	5210	688	1035	3516
Kerala	2009	3476	11130	1474	2403	6286	1811	3459	11438	1311	2337	6303
Madhya Pradesh	917	1828	4371	645	1147	3022	910	1943	4364	632	1135	2996
Maharashtra	983	2315	4670	536	865	2686	1023	2287	4810	526	885	2699
Orissa	866	1751	3750	581	786	2240	849	1754	3762	578	765	2289
Punjab	2289	4116	13675	876	2921	10912	2257	4037	13454	876	3122	10463
Rajasthan	1274	2045	7838	653	1238	5524	1213	2217	10520	570	1122	5008
Tamil Nadu	1010	1972	5652	557	1004	3145	970	1827	5700	521	996	3106
Uttar Pradesh	983	2155	5145	556	753	3508	957	2160	5286	510	730	3574
West Bengal	1089	3001	5670	910	2070	3813	1103	3017	5882	900	2058	3764
All India	1128	2299	5487	700	1154	3404	1126	2319	5652	684	1163	3453

Source: Computed from RLE on Employment and Unemployment of Rural Labour Households, Labour Bureau, Shimla

Table 5.1: Per capita Annual Total Consumption Expenditure (Rs)

States	Agricultural Labourer Household				Rural Labourer Household			
	1983	1987-88	1993	1999-00	1983	1987-88	1993	1999-00
Andhra Pradesh	1149	1532	2966	4561	1171	1579	3008	4575
Assam	1190	1486	2673	3853	1164	1575	2635	3929
Bihar	865	1324	2176	3689	880	1364	2189	3697
Gujarat	1239	1573	3074	4714	1225	1598	3182	4924
Haryana	1363	1966	3138	5645	1410	2002	3306	5855
Karnataka	1119	1444	2649	4315	1150	1494	2703	4468
Kerala	1301	1874	3636	6079	1368	1990	3773	6460
Madhya Pradesh	928	1310	2415	3537	947	1333	2461	3535
Maharashtra	1016	1431	2509	4136	1089	1516	2731	4402
Orissa	936	981	2196	3472	949	1235	2236	3543
Punjab	1510	2016	3819	5621	1566	2090	4002	5689
Rajasthan	1254	1796	3273	5041	1313	1615	3321	5088
Tamil Nadu	1037	1393	2751	4392	1097	1525	2974	4677
Uttar Pradesh	967	1381	2493	4085	1021	1419	2546	4231
West Bengal	901	1407	2669	4082	941	1476	2725	4157
All India	1037	1452	2648	4181	1083	1524	2779	4381

Source: 1983, 1987-88 and 1993: Computed from RLE Report on Consumption

Expenditure of Rural labour Households Statement 3.1 a) & b).

1999-00: Computed from data extracted from NSS EUE Survey 1999-00, Scd. 10

Table 5.2: Real Per capita Annual Total Consumption Expenditure at 1970-71 Prices (Rs)

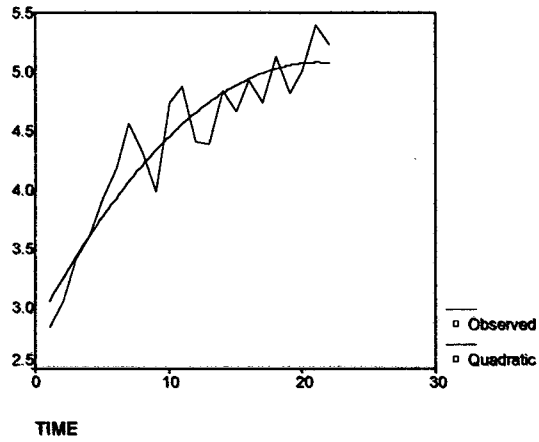
States	Agricultural Labourer Household				Rural Labourer Household			
	1983	1987-88	1993	1999-00	1983	1987-88	1993	1999-00
Andhra Pradesh	464	457	533	507	473	471	541	508
Assam	471	454	450	412	461	482	444	420
Bihar	317	395	370	407	322	407	372	408
Gujarat	495	456	508	493	489	463	526	515
Haryana	535	559	467	550	553	569	491	571
Karnataka	428	439	451	442	440	454	460	458
Kerala	521	568	591	636	548	603	613	675
Madhya Pradesh	359	397	407	370	367	404	415	370
Maharashtra	397	434	452	447	425	460	491	475
Orissa	314	356	406	385	318	365	413	393
Punjab	592	573	568	548	614	594	595	555
Rajasthan	476	468	459	457	499	421	465	462
Tamil Nadu	350	381	450	446	371	416	486	475
Uttar Pradesh	342	359	348	369	361	368	355	382
West Bengal	353	446	497	359	369	468	507	366
All India	390	443	456	441	407	465	479	462

Source: Computed Table 5.1

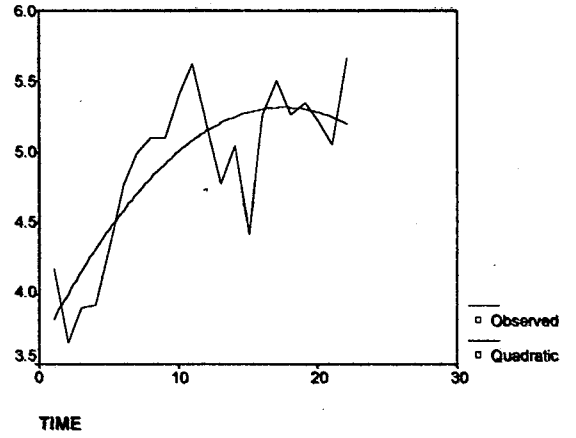
CHARTS

3.1 Quadratic Curve Fit on Real Wages For Different States During the Period 1980-81 to 2000-01

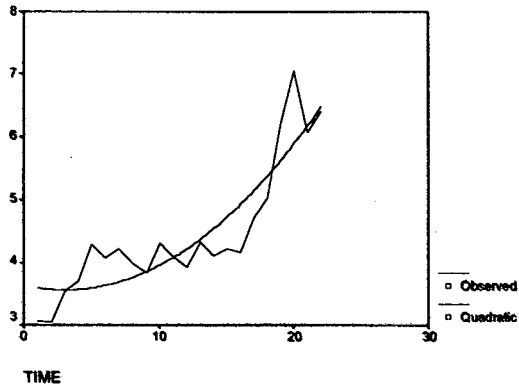
Andhra Pradesh



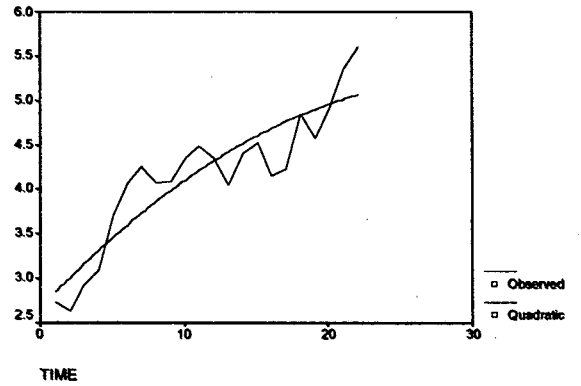
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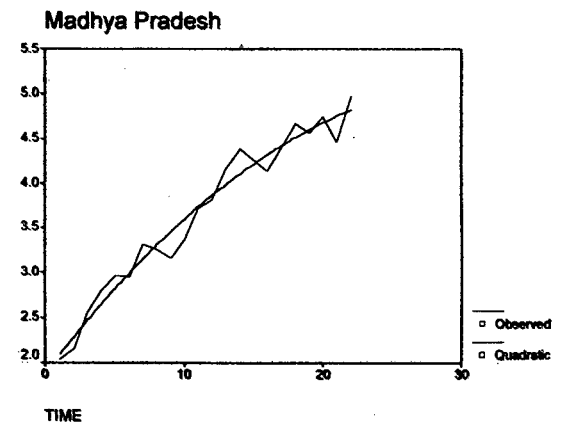
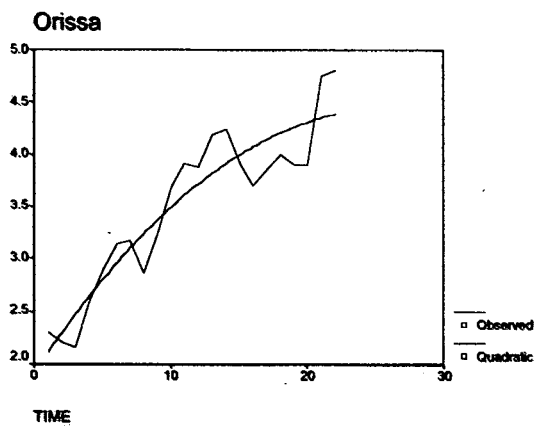
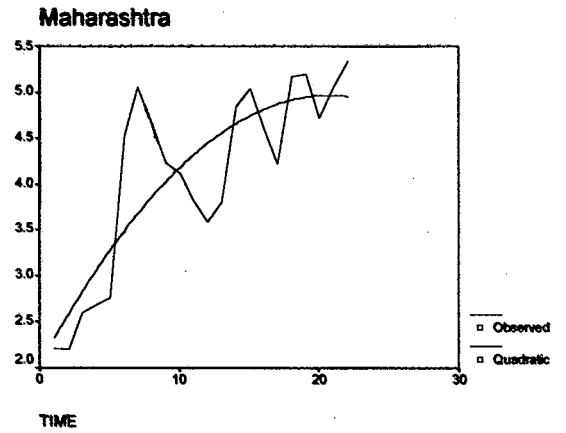
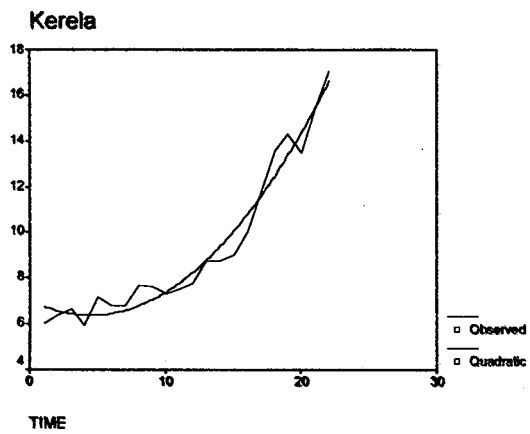
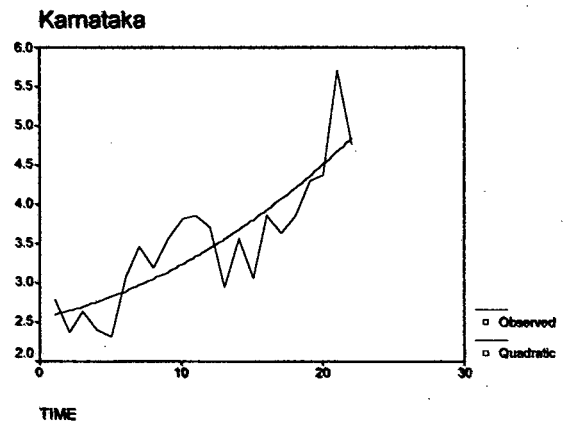
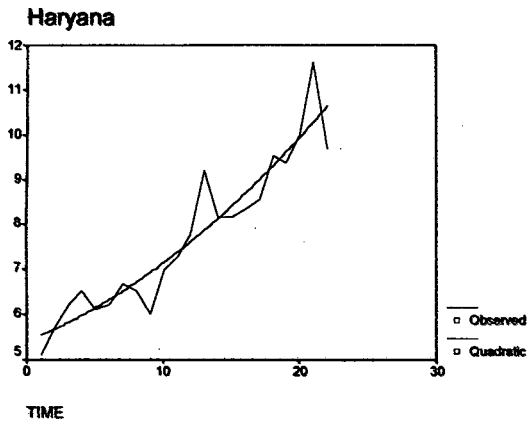


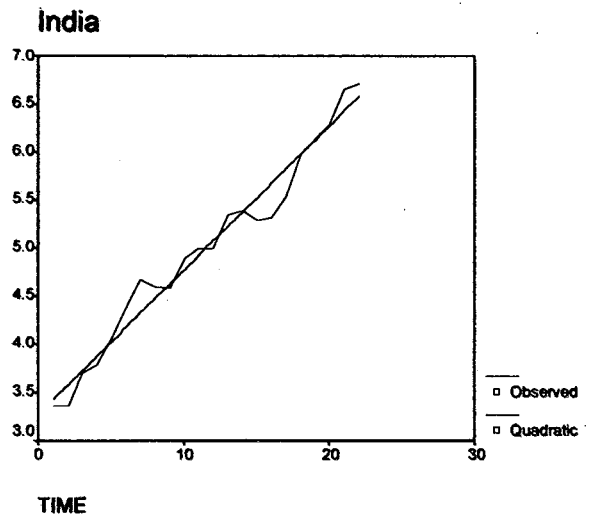
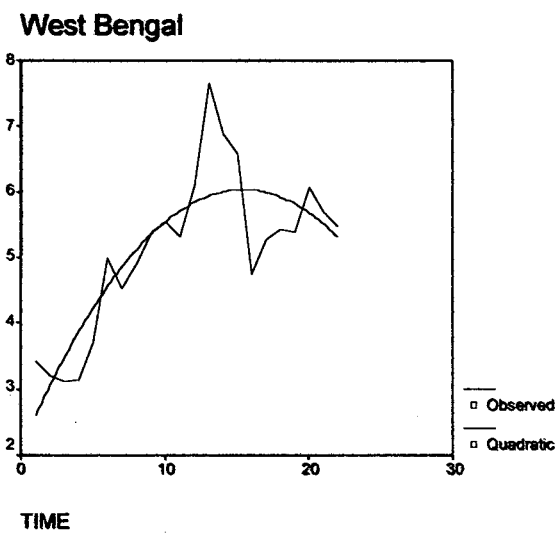
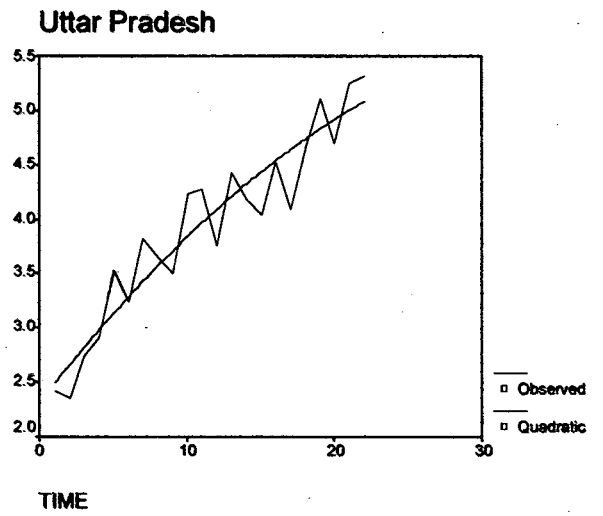
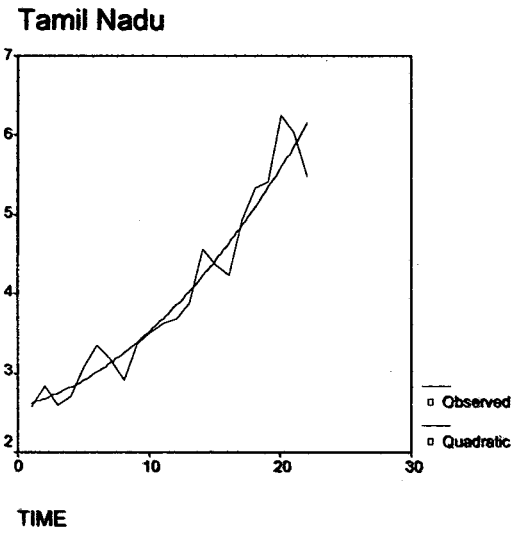
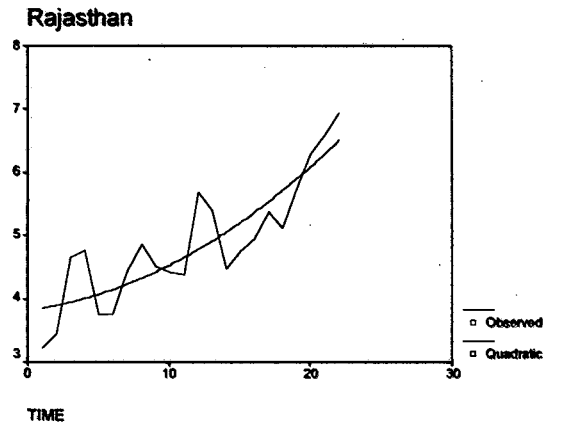
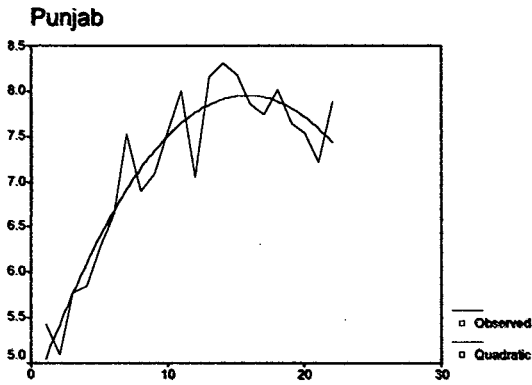
Gujarat



Bihar







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