According to neoclassical economics, under competitive conditions, factor prices are determined by the marginal productivity theory. This implies that in a free market wage rates equal marginal productivity of labour. In a real world situation, many of the competitive conditions are not fully satisfied and many assumptions underlying the marginal productivity theory do not hold good.

Many studies in India have been undertaken since the 1960s to gauge the impact of new technology on the growth performance of Indian agriculture and consequently agricultural workers. At the very outset it is necessary to mention that the new agricultural technology had two components – bio-chemical and mechanical. The bio-chemical component comprises irrigation, seeds, fertilizer, pesticides, etc. and is considered land augmenting and labour using in nature. The mechanical component consists of mechanized tilling, sowing, harvesting/threshing and transportation of farm produce. Assured irrigation, use of HYV seeds, increased cropping intensity followed by significant shifts in cropping pattern enhance agricultural productivity and require greater numbers of agricultural workers in order to accomplish the more intensive agricultural operations and other indirectly related activities. Besides these, the timeliness attached to some of the operations during sowing season also enhances the demand for agricultural workers, for example using pesticides and timely provision of irrigation.

Another significant development during the 1960s was public investment directed towards rural infrastructure including irrigation and employment guarantee schemes, easy availability of cheap institutional credit, through cooperative societies and land mortgage banks, in order to facilitate the utilization of opportunities created by the technological revolution. These boosted agricultural production and created increased demand for agricultural workers. Many empirical studies have analysed the trends, patterns and...
regional variations in agricultural wages since the 1960s in response to the agricultural growth registered during this period. Further, many studies have tried to investigate the relationship between various factors enhancing agricultural growth and the wages of agricultural labour in India. However, no clear relationship has been established. There are two distinct stands of thought relating to wages of agricultural workers in India post the Green Revolution:

(1) An increase in agricultural production with the help of new technology resulted in increased demand for agricultural labourers, higher productivity and thereby higher wages for agricultural labourers (Herdt and Baker 1972; Lal 1976).

(2) Agricultural growth did not result in any improvement in the standard of living of the rural poor and has instead been accompanied by their immiserization. This new “orthodoxy” hypothesis is shared by various writers (Bardhan 1970, 1973, Krishnaji 1971, Jose 1974).

According to the classical political economists, notably Malthus, Ricardo and Mills, real wages in the less developed countries are set at the “subsistence level” and the rate of population growth is deemed to be an increasing function of real wages. The work of Lewis (1954), Hardt and Baker (1972) and Ranis and Fei (1961) led it to be generally believed that the supply of labour in underdeveloped thickly populated countries is almost perfectly elastic and real wage rates in such countries are institutionally determined roughly corresponding to the subsistence needs of workers. The “subsistence” theory is simply the notion of a general stability of the real wage rate at some culturally and/or historically determined level (Datt and Gaurav 1997). Subsistence wage theory refers to a fixed real wage rate which, in Hicksian sense, is independent of supply and demand situations (strong version). It posits a perfectly elastic labour supply curve where the vertical height of the curve is determined exogenously. A weak version of the subsistence theory postulates long-term fixity of the real wage at a level governed by some non-market force, while accepting short-run influence of market forces of demand and supply. The non-market force may take the
form of physiological and / or sociological norms. The strong version was seriously questioned by the findings of some early studies in India. Bardhan (1970, 1973), Krishnaji (1971) and Jose (1974) observed variations in the wage rate over time with the direction and rate of movement varying across regions. Positive (even high) wages and unemployment coexisted. It has been pointed out that in the Indian agricultural labour market the evidence of the time pattern in real wage rates generally points against the subsistence or institutional wage theory (Datta1997).

A significant trend has been observed in the wage rate in most regions since the mid-1970s. Even in regions where unidirectional movements in the real wage rate are not sustained enough to be interpreted as a “trend”, the observed variations are not compatible with the notion of a fixed real wage rate. Second, several attempts have also been made to examine the conditions of agricultural labourers in terms of real wages since the advent of the Green Revolution. These studies provide substantial evidence of significant (though diverse) trends in real agricultural wages at state level.

Numerous studies have attempted to investigate different aspects of trends in agricultural wages in India. Some have tried to link the increase in real wages with the increase in agricultural production, which is an inevitable outcome of the adoption of improved agricultural technology, via the demand effect. These studies have tried to analyse the reasons for variations in terms of a supply and demand framework. Second, some have attempted to relate it to the trade union movement and, third, some have sought a link with cereal prices. A review of the past literature is thus important for a clear-cut view of trends in wages of agricultural workers. It would give us an idea about factors affecting wages directly and subsequent changes in and its determinants over the years. Third, it may bring out factors other than economic ones causing variations in wages of agricultural workers.

Thus an attempt is made here to review studies related to trends in real wages of agricultural workers since the 1960s across Indian states along with factors determining the same. A detailed and more compact review of wage-determinant models, existing
hypothesis and factors determining wages is provided in the chapter (chapter- 4) dealing with wage determinants.

The new technology and its implications for wages have attracted the attention of a fairly large numbers of scholars and an interesting debate developed around whether the conditions of agricultural workers in terms of real wages had improved or deteriorated over the years. Though it started with the advent of the Green Revolution, recent studies have attempted to analyse the impact of policy reforms on the wages of agricultural workers.

Bardhan (1970) was a pioneer in this regard. He used National Sample Survey (NSS) Rounds 11th and 12th Agricultural Labour Enquiry (ALE) data for 1956-57 and NSS 19th Round data for 1964-65; later he used data from the NSS 25th Round (Bardhan 1973). He revealed that there was a significant fall in the real wage rates for male agricultural workers in Punjab whereas there was a considerable rise in the same in Kerala between 1956-57 and 1964-65. He further stressed that in Kerala, in spite of landless people flooding the labour market and with an appreciably smaller rate growth in agricultural production; agricultural real wage rates seem to have gone up much faster than in north-west India. He attributes this to peasant organization and avers that the so-called Green Revolution may not have helped in raising agricultural wage rates in real terms in north-west India. In fact there seem to be some indications of a fall in the real wage rates in many areas in this region. Moreover, the average wage rates increased at a faster rate in Kerala during the 1956-57 to 1970-71 periods, implying that the bargaining strength of agricultural labourers is as important a determinant of real wage rates as the spread of technological progress in agriculture. As early as 1971 Krishnaji also observed significant differences in the wage rate for male agricultural labourers across states in India. He used Agricultural Wages in India (AWI) data for the period 1956-57 to 1964-65. An inter-state comparison of wage rates of agricultural labourers for thirteen important states for the period 1956-57 to 1971-72 showed that real wages had registered significant growth in Punjab, Haryana, Kerala, Uttar Pradesh, Gujarat and Tamil Nadu during the reference period. However, these states account only for 30 per cent of the
total agricultural workforce in India. The study also highlighted the fact that agricultural wages adjusted poorly to and lagged behind the rise in the cost of living. There were considerable regional disparities which were further accentuated in the Green Revolution period. Similar findings were made by Herdt and Baker (1972). For male field labour using AWI data for nine regions covering the period from 1954-55 to 1968-69, their analysis shows that neither real wages and production nor real wages and lagged production were significantly correlated in seven of nine regions taken up for the study. Though there was significant correlation between wheat production and real wages in some states and in some states between real wages and lagged foodgrain production supporting the hypothesis of delayed response to wage demand, in most parts of India, increases in demand for labour were not accompanied by increases in agricultural wages. No trends in wages were observed. Whatever increase in real wages was observed in Punjab occurred only in the last two years, i.e. during 1967-68 and 1968-69. Further, the increase in real wages in Kerala and Madras was significantly higher during these two years than that in Punjab. All these studies reveal that agricultural wages rates declined in real terms during 1964-65 to 1968-69 except in Punjab/Haryana and Kerala. Wheat yield has a high correlation with wages and apparently increased the real wages in Punjab. Apart from Punjab, Kerala and Madras, which were second and third in adoption of high yielding varieties (HYV) of seed, observed significantly higher real wages in 1967-68 and 1968-69. All the other regions showed lower real wages in the last two years compared to earlier period.

Jose (1973) also observed wide disparities in daily wages rates which further accentuated after the mid-1960s. A comparative study of wage rates in the Intensive Agricultural District Program (IADP) districts in various states like Punjab, Tamil Nadu, Kerala and Gujarat between 1962-63 and 1967-68 showed a surge in growth of agricultural production with the Green Revolution but an increase in the daily wage rates for agricultural labour only in Punjab and Kerala. However, maximum percentage increase was observed in the Alleppey and Palghat districts of Kerala. The rise in the real wage rate for the period from 1960-61 to 1967-68 as per his findings was much larger in magnitude than indicated by the study of Bardhan. In another study Jose (1974) makes a
comparative study of wage rates of agricultural labourers in different states over the period 1956-57 to 1971-72 with 1964-65 as the base year. One of the main reasons for choosing 1964-65 as base was to see if the introduction of new technology in agriculture in the form of large-scale use of HYV seeds had an impact on the movement of wage rates. The declining trend which was observed in most of states from 1961-62 onwards seems to have been arrested in the latter half of the 1960s. Real wage rates improved except in Orissa. They improved not only in states like Punjab (including Haryana) and Kerala but also in Tamil Nadu, Uttar Pradesh and Gujarat. However, these states account for less than 30 per cent of the agricultural labour force in the country. The study, however, noted an increase in inter-state disparity in wage rates since 1964-65.

However, Lal (1976) has tried to check the validity of the conclusion arrived at by various authors that the Green Revolution, despite its marked output-increasing effects, did not benefits agricultural workers during the period 1951-52 to 1970-71. The study found that the real agricultural wages rose in all the states of India except West Bengal, for which data were not available. Dividing the entire period into two--1956-57 to 1964-65 and 1964-65 to 1970-71--the study found that during 1956-57 to 1964-65 the real wage rate increased in only seven states and was constant or fell in the remaining eight states whereas during 1964-65 to 1970-71 real wages rose in all the states. He attributes the decline in wages during the first sub-period to the consumer price surge due to increased defence spending after the Chinese invasion in 1962. This continued till about 1967-68 mainly because of harvest failures in 1965 and 1966. He argues that most of the studies which concluded that real agricultural wages declined or remained constant used unreliable AWI data and, second, used some year data in the 1960s as terminal data when there was a tremendous upsurge in prices causing real wage to decline at a time when agricultural output was growing. Hence most studies have erroneously concluded that agricultural growth was unlikely to raise the real wages of agricultural labourers. Besides, till the late 1960s, the Green Revolution had not gained the momentum to warrant such conclusion.
He opines that the paradoxical situation of constant or falling real wages rate may be explained by either the presence of a perfectly elastic supply of labour or of institutional imperfections in the labour market (true in the case of constant real wages rates). These have been propounded by Herdt and Baker and by Griffin respectively. However, Lal has observed a rise in real wage rates and hence disproves both hypotheses.

While using a cross-section regression analysis within the demand and supply framework, the study has found that both a percentage increase in cereal output, representing a demand variable, and a percentage increase in the male agricultural labour force between 1961 and 1971, representing a supply variable, influenced the change in real wages. Hence the study concluded that wages do operate within the demand and supply framework and agricultural growth does lead to rise in agricultural real wages in India.

Similar views were shared by Laxminarayan (1977). He did not support the view that the wages of agricultural workers had not increased. He emphasized the need to consider wage income of agricultural workers along with the income from other sources. He pointed out that agricultural labourers supplement their wage income with other sources to protect their real income.

In his defence of the ‘new orthodoxy’ hypothesis, Jose (1978) has used AWI data for wages for the period 1963-64 to 1970-71. He stresses that as far as the unreliability of AWI is concerned, the data has been motivated by a different set of considerations. It allows one to examine yearly changes in the wage rates with reference to fixed points in each state for a longer span of time. This is not the case with the NSS data. AWI data enables the researcher to focus more on trends and thereby to avoid being tied down to mere discussion on the magnitude of increase between terminal years.

Second, a perusal of the state-wise AWI and NSS estimates of wage rates for male agricultural labourer for 1956-57 and 1970-71 show former over states while later understates the wages in 1956-57 in all states. But the differences in the two sources have declined over the years in all the states. Third, real wages alone does not give the
whole picture of the real wage earnings of agricultural labourers, which depend on (1) agricultural wage rates, (2) quantum of employment per year available per worker and (3) the prices of wage goods consumed by members of the household. Fourth, given the fact that the period after the mid-1960s was marked by stagnation in per capita output in several states, the rates of growth of output achieved in states for the period 1963-64 and 1971-72 were of a lower order, as compared to those for the 1957-58 to 1963-64 periods. Only Punjab, Haryana, Rajasthan, Uttar Pradesh, Assam and Kerala experienced acceleration in the rates of growth. Consequently, he points out that one cannot be unduly optimistic about an increase in agricultural wage income. Comparing real wage income of the rural non-cultivating labour household for the period 1957-58 to 1963-64 with 1963-64 to 1971-72, he found a decline in most of the states. He stresses that though increase in grain output represents the change in demand for labour, several other crucial factor on the demand side may be used to analyse determination of wage rates. These factors include cropping intensity, coverage of irrigation and cropping pattern.

State-specific studies

Substantial work has also been carried out on regional trends and variations in agricultural wages across states. Nayyar (1976) analysed wages of agricultural labourers in Uttar Pradesh between 1959-60 and 1973-74 by using the Quarterly Bulletin of Statistics published by the Directorate of Economics and Statistics, Government of Uttar Pradesh. In spite of the fact that western Uttar Pradesh has been the heartland of Green Revolution apart from Punjab and Haryana, the compound growth rate of real wages was not significant either in western or central Uttar Pradesh. On the other hand, eastern Uttar Pradesh showed significant growth before 1970-71. She further points out that real wages of agricultural labourer have declined steadily in all regions of Uttar Pradesh, including the Green Revolution area, after 1970-71. Her argument refutes Deepak Lal’s thesis that real wages of agricultural labour rose in all states for the period from 1964-65 to 1970-71 (Nayyar 1976).
She points out that although money wages increased by 8.5 per cent per annum, real wages increased by only 1.2 per cent. However, from this trend, one should not conclude that the Green Revolution had a favourable impact on real wages via the demand effect. In fact she points out that real wages in western Uttar Pradesh, which is one of the main regions of the Green Revolution, do not show any tendency to rise over the period 1959-60 to 1973-74. Her study further shows that there is no simple causal relationship between the introduction of new HYV technology, which leads to increased agricultural output, and increasing trends in real wages. A complex of factors in the realm of political economy also influences the real wages.

Working within the supply and demand framework Bhalla (1979) has tried to analyse the trend of real wage rates in Punjab for the state as a whole and for each district for the period 1961-77. His study shows that between 1965 and 1977, for the majority of years, rise in money wages lagged behind price rise for most of the agricultural operations. The real wages for male workers for every operation did increase during 1976-77 from 1961 levels.

The effect on real wages for two trienniums 1962-65 and 1970-73 is examined by using cross-section data from farm productivity and inflows of workers into the agricultural labour force for each of the two periods. The study found that productivity per male agricultural labour explains a greater degree of variation in real wages in the early 1970s than in the early 1960s. Nevertheless, a large part of the variation remains unexplained. The slow response of money wage rates to changes in the consumer price index suggests that there are factors affecting bargaining power other than the labour demand and supply variables. These factors may include labour organizations of agricultural labourers, seasonal in migration of agricultural labour, permanent labour contract, availability of non-agricultural jobs. Variables such as alternative employment opportunity, yield, cropping pattern, cropping intensity, irrigation and land distribution have been used to explain inter-district variations in Uttar Pradesh by using cross-section data for the year 1971 (Papola and Misra 1980). A positive and significant relation has been found between land concentration ratio, non-agricultural workers in the rural labour
force, per hectare yield, cropping pattern and wage rate. The regression coefficient of irrigation turned out to be a non-significant variable in explaining variation in wage rate.

Parthasarathy and Adiseshu (1982) have tried to study the trend in real wages for the period 1958-59 to 1978-79 across the districts of Andhra Pradesh. They found that there was stagnation in real wages for the two decades of their study. No significant association existed between the trends in real wages and trends in net per capita (rural) agricultural production even in a relatively well-developed district such as West Godavari.

Bardhan (1984) uses Rural Labour Enquiry (RLE) data to check the “trickle down” effect of growth on poverty of agricultural labour. He finds a decline in real daily wage earnings and annual real wage earnings of agricultural labourers in all states except Uttar Pradesh during the period 1964-65 to 1974-75. However, it has been pointed by Parthasarthy (1987) that 1974-75 was a drought year and not an agriculturally sound year, hence it may give a different picture. Using AWI data, Jose (1988) extended his earlier work up to 1984-85 and examined trends in money and real wages of agricultural labourers across sixteen major Indian states. The study shows that the two north-western states of Punjab and Haryana and also Kerala from the south consistently maintained a high average level of money wages throughout the period. The first half of the 1970s was marked by declining real wage trends in all the states with the lowest level being reached in 1974-75, which was the worst year in terms of agricultural output. From the mid-1970s to 1983-84 wages increased in almost all the states only to revert to the 1970-71 level in the next year for most of states. Assam and Andhra Pradesh displayed a resemblance through a somewhat consistent rise in real wages during this period. Kerala also saw a secular increase in real wages up to 1982-83, after which it showed some decline. Considerable fluctuation in real wages was observed through the years 1974-75 to 1984-85. However, there was increase in real wages from 1974-75 onwards, though a consistent increase was rare. Taking money wage rates across states as dependent variables and product per worker as independent, the relationship between the two variables was found to be positive and significant. Similarly, on comparing the growth
rate between agricultural output and real wage rates during the reference period, a positive relationship was found in nine states out of thirteen. There are some factors other than net domestic product, which affect the real wage rate. These include persistence of government programmes such as the Rural Employment Guarantee Scheme, higher literacy rate, increased politicization of the rural poor, presence of trade unions as operated in the case of Kerala, circular migration and mechanization leading to decline in labour absorption which operated in agriculturally advanced states. However, while analysing agricultural wages in various Indian states for the agricultural years 1970-71 to 1984-85, he arrived at the conclusion that “the single most important variable influencing the movement of real wage rate in any state has been the level of agricultural output in the respective states”.

The close association between agricultural output and real wages has also been validated by Unni (1988). Using data from different rounds of the NSS for the period 1956-57, 1964-65, 1974-75 and 1977-78, Unni observed a sharp increase in average daily money earnings between 1956-57 and 1977-78 which was a purely inflationary phenomenon. Average daily real wage earnings of male agricultural labourers deflated by the CPIAL did not show a sharp rise. There was a decline in real wage earnings of adult males between 1964-65 and 1974-75 at all-India level and in all states except Karnataka, Punjab and Uttar Pradesh. Sharp increase in prices and fall in days of agricultural employment per worker between 1964-65 and 1974-75 led to deterioration in the annual real wage earnings in 1974-75. Annual real wage rose in 1977-78 at all-India level and in most states. This was due to rise in output and fall in prices in 1977-78 together with increased availability of employment.

Covering a period from 1970 to 1985, Acharya (1989) has studied agricultural wages in India for both males and females at disaggregated level for fifty-eight agro-climatically homogenous regions in the country as defined by the NSS. AWI data have been used for over 320 districts in the country. Three-year averages of wages for the periods 1970-71 to 1972-73 and 1982-83 to 1984-85 have been worked out. The period 1982-83 to 1984-85 shows a rise in wages for almost all areas. Acharya analysed the
sources of variation within the demand and supply framework by examining demand for
labour and supply variables. For the variations at state level (male) labour productivity,
which is measured as a ratio of the money value of eleven crops averaged over the 1982-
83 to 1984-85 period to total agricultural workers obtained from the 1981 population
census, was found to be positively influencing male wages (1982-85). At regional level,
variables considered to study the variation in real wages were land productivity, the
proportion of agricultural workers to total workers, land-labour ratio, and proportion of
labourers to total workers in agriculture. The study found that land productivity,
proportion of agricultural workers to total workers and land-labour ratio have expected
signs and significance. Only the proportion of labourers to total workers in agriculture is
significant at 15 per cent confidence level.

During the 1980s an important factor having a distinct influence on the variation
in the real wages was occupational diversification. Bhalla (1991), while trying to analyse
factors that speed up agricultural growth, has tried to drawn upon the factors leading to
rise in the real wages. She has taken data from NSS and from the Cost of Cultivation of
Principal Crops in India (NSS person days for persons aged 15-59 and CSS data without
regard to age). Her study found that the rising trend in real wage rates in agriculture was
mainly explained by the emergence of increasing numbers of non-farm work
opportunities. The prime mover of real wages since the mid-1970s was occupational
diversification. The reason for such a marked increase in the real wages was observed
by Bhalla (1993) while dealing with dynamics of changes in rural workforce structure.
She points out that fundamental changes in Indian agriculture took place during 1961,
1971 and 1981. During 1961 to 1971, there was substantial workforce shift in favour of
Indian agriculture. From 1971 to 1981, the trend was the other way round. The rural
workforce tilted in favour of non-farm occupations. This conclusion was also drawn by a
study by Alagh-Bhalla-Bhaduri (1978) which shows higher labour absorption as a result
of increased land productivity in high and medium growth regions than in low growth
regions. This was characterized by a “suction mechanism”. This, however, weakened
during the 1980s. Non-farm occupations which began in the early 1970s both in rural and urban areas accelerated thereafter, leading to increased diversity of the rural workforce in the majority of districts. She further points out that agricultural wage rates in India are systematically below the marginal product of labour and the gap between the wage rate and productivity tends to widen whenever labour productivity increases. Introduction of improved crop varieties and practices tends to increase labour productivity more than wage rates for a number of years together. Moreover the link between the upward movement in labour productivity growth and growth in real wage rates takes years in India for wages to converge which is achieved by growth rates of wages in excess of productivity and it appears that there is no causal link at all. The same has also been noted in the case of western UP where real wage rates remained stagnant despite an increase in labour productivity during the first decade of the Green Revolution (Nayyar 1977).

While analysing the factors that may determine the real wages state-wise, Bhalla (1993) observed that for a cross-sectional study for the period 1982-83 in thirteen states, inter-state variations in labour productivity constitute the most significant factor in explaining differences in real wage rates. The proportion of poor people belonging to mainly self-employed farm households also has a significant impact. However, the magnitude of the employment structure variable played no significant role in explaining inter-state variations in wage levels during 1982-83. The availability of non-farm work turns out to be significant factor for time series analysis for the period 1971-72 to 1983-84. Another important factor is the change in cost of living. It has been found by the study that over time rising labour productivity did not make a decisive contribution to the observed rise in real wage rates. Instead, its role was that of an enabling factor. The prime mover in all the states of the long-term rise in real wage rates, beginning in the 1970s, seems to have been workforce diversification rather than growing labour productivity. Similar results were obtained by Parthasarathy (1996) for the period 1982-83. He drew upon many variables have been drawn upon and found that demand factors
such as labour productivity and diversification appear to be much more important than supply factors in explaining variations in wage rate of male labourers. As far as the trend in real wages is concerned, the study reveals that the increasing tendency of wages in the early 1980s was reversed during the 1990s. There was a decline in the growth rate of real wages during the period 1985-86 to 1993-94 as compared to the preceding period. The changes in movement of real wages from year to year have not been smooth. Second, growth of real wages is perceptible only in irrigated areas. This is in contrast to the findings of Papola and Mishra (1980).

An important observation was made by Bhalla (1997) with respect to the upward trend in wages since the mid-1970s and the employment structure. She showed that in the late 1960s and early 1970s, when agricultural labour productivity went up, real wages stagnated. During the mid-1970s real wages went up even in states where agricultural labour productivity was in long-term decline. A positive relation between real wages and the share of the workforce in non-agricultural employment was found in each state during the 1970s. Wages in non-agricultural employment were consistently above the wages in agriculture. In the 1990s, however, such opportunities in the non-agriculture sector collapsed. In the manufacturing sector segments like capital goods and consumer goods grew faster whereas industries like textile where the labour intensity is high actually contracted. In rural areas also, as per the 1991 census, there was absolute decline in the household industry workforce. After 1991, not only the rural secondary sector, but the entire non-agricultural sector, suffered a decline. This diminished share of workforce engaged in rural non-farm activities, among other things, affected real wages in agriculture negatively. That the increasing tendency in real wages from the mid-1970s to mid-1980s was not sustained in the 1990s was also confirmed by the findings of Unni (1997). The real wage rates in agriculture tended to stagnate during the 1990s. Further, while real wage rates in agricultural remained stagnant in the non-agricultural sector they showed a tendency to decline during the 1990s, thereby narrowing the wage gap between the two sectors.
Sharma (2001), however, does not find a declining trend in agriculture wages. Using RLE data he has shown that agriculture wages did not decline during the 1990s contrary to the findings of studies based on AWI data. He further rejects the view regarding a slowdown in the rate of growth of daily wages of adult labourers during the 1990s.

Sarmah (2002) has taken up a trend analysis of real wages both at state level and at NSS region level from 1970-71 onwards and found a gradual decline in all over the states in the first half of the 1970s; the latter half of the decade recorded a recovery, which was short-lived. There was a decline in majority of states until the early 1980s. Though there was no clear pattern of rise or fall, a broad tendency towards improvement in the levels of real wages can be observed in most parts of the decade in many states during the 1980s as compared to the 1970s. However, this could not be sustained in 1990s in most states. A discernible pattern of deceleration in the growth rate of real wages was observed during the 1990s. Apart from conventional factors, the study has also taken up non-economic variables like urbanization, male literacy and child mortality to explain variations in real wages for 1970-71, 1980-81 and 1990-91 both at aggregated all India level and NSS region level. Non-agricultural labour force and agricultural infrastructure in the form of irrigation rate were found to be significant, while urbanization did not adequately explain the variation in real wages. Variables of human development indicators, which were male literacy and child mortality, did not show any significant result.

However, an analysis of average daily real earnings of both male and female labourers for the period 1993-94 to 1993-94 taken up by Narayanaamoorthy and Despande (2003) shows that average daily real earnings of both male and female labourers in agricultural operations have increased in all the states from 1974-75 to 1993-94. Though all states experienced growth in real wages between 1974-75 and 1993-94, the same was very low in Punjab and Haryana especially for labourers. This was due to a
huge increase of CPIAL in these states which counter-balanced an increase in money wages. Further, considerable disparities were observed in the rate of increase of real earnings of labourers across states. By and large the states that experienced high growth of real earnings for male labourers also experienced high growth of real earnings for female labourers. Moreover the impact of irrigation on agricultural wages, by increasing demand for labour though cropping intensity and shift in cropping pattern from low value crops to high value crops for both male and female labourers, was found to be significant.

In recent studies, Srivastava and Singh (2005, 2006) using AWI data have found that real wages decelerated sharply during 1992-2002 as compared to 1981-91. This decline occurred in each and every major Indian state. During the post reform period, out of fifteen states, ten showed a declining trend in real wages as compared to the pre-reform period. Regression analysis shows that the key agricultural variables agricultural productivity per labour or per hectare was found to have a significantly smaller impact on agricultural wages in the post-reform period whereas diversification of workforce significantly influenced wages. Another exercise using NSS data (Srivastava and Singh 2006) also confirms deceleration in growth rate of agricultural wages during 1993-94 to 1999-00 compared to the 1983 to 1993-94 period with nine out of fifteen major states experiencing deceleration and two showing a negative growth rate during 1993-94 to 1999-2000.

An aggregate analysis of trends in agricultural wages from 1964-65 to 1999-2000 has been taken up by Chavan and Bedamatta (2006) using AWI and RLE data for seventeen states. A rising trend in both male and female real wages was found in the 1980s for the majority of districts in the case of AWI data which continued in the 1990s. Similarly, in the case of RLE data, a rise in the nominal earnings of male and female’s labourers, across the seven rounds of the RLE in all states, was observed. However, a slow growth in the in real daily wages of male and female agricultural labourers across the majority of states was observed in the case of both district-wise analysis using AWI
data as well as state-wise analysis using RLE data during the 1990s.

Jha (2007) on the contrary has observed a consistent increase in real wages in the most of the states during the 1990s. This, however, for some of the states like Tamil Nadu and Kerala is accompanied by negative employment elasticity. He found that the effect of labour productivity on the levels of real wages in the states was decreasing while the effects of labour supply and concentration of non-farm workers on wages had increased over time. Nevertheless, he concluded labour productivity in agriculture is the most important determinant of real wages followed by labour-land ratio.

Summary

The survey of the literature on trends in wages of agricultural workers reveals that technological breakthrough in the Indian agricultural sector in the form of the Green Revolution during the mid-1960s resulted in significant changes in agricultural growth across states consequently leading to increase in the demand for labour via intensification of agricultural operations. This in turn led to enhanced wages. The high growth phase in the agricultural sector continued till the mid-1980s. However, the subsequent decades, as pointed out by many, witnessed sluggish growth in agricultural production, impacting the wages of agricultural workers. Though the diversification of agricultural workers into sectors other than agriculture played an important role in enhancing real wages since the mid-1970s, it was not sufficient to counterbalance the sluggishness/deceleration caused by the slowdown in agricultural production. Consequently, a deceleration was observed in real wages during the 1990s. The main factors adversely affecting the growth of real wages include gradual weakening of the productivity-real wage link, the agricultural sector reverting to its traditional role as residual sector for the workforce, a steep rise in food prices in the early years of the 1990s, deceleration in agricultural output and non-farm activities losing the momentum gained during the preceding decade.