

AN ANALYSIS OF WAGES OF AGRICULTURAL LABOURERS
IN MAHARASHTRA - 1961 TO 1994

A THESIS SUBMITTED TO THE
UNIVERSITY OF PUNE
FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY
(ECONOMICS)

BY
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AND ECONOMICS PUNE 4*

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**By
Jayanti Ghanekar-Kajale**

**Under the Supervision of
Dr. R.S. Deshpande
Gokhale Institute of Politics and Economics, Pune**

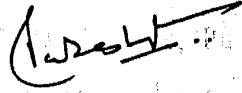
May 1998.

CERTIFICATE

(Form 'A')

CERTIFIED that the work incorporated in the thesis entitled "An Analysis of Wages of Agricultural Labourers in Maharashtra : 1961 to 1994" submitted by Mrs. Jayanti Ghanekar-Kajale was carried out by the candidate under my supervision. Such material as has been obtained from other sources has been duly acknowledged in the thesis.

Date : 14/5/98
Pune


(Dr. R.S. Deshpande)
Supervisor

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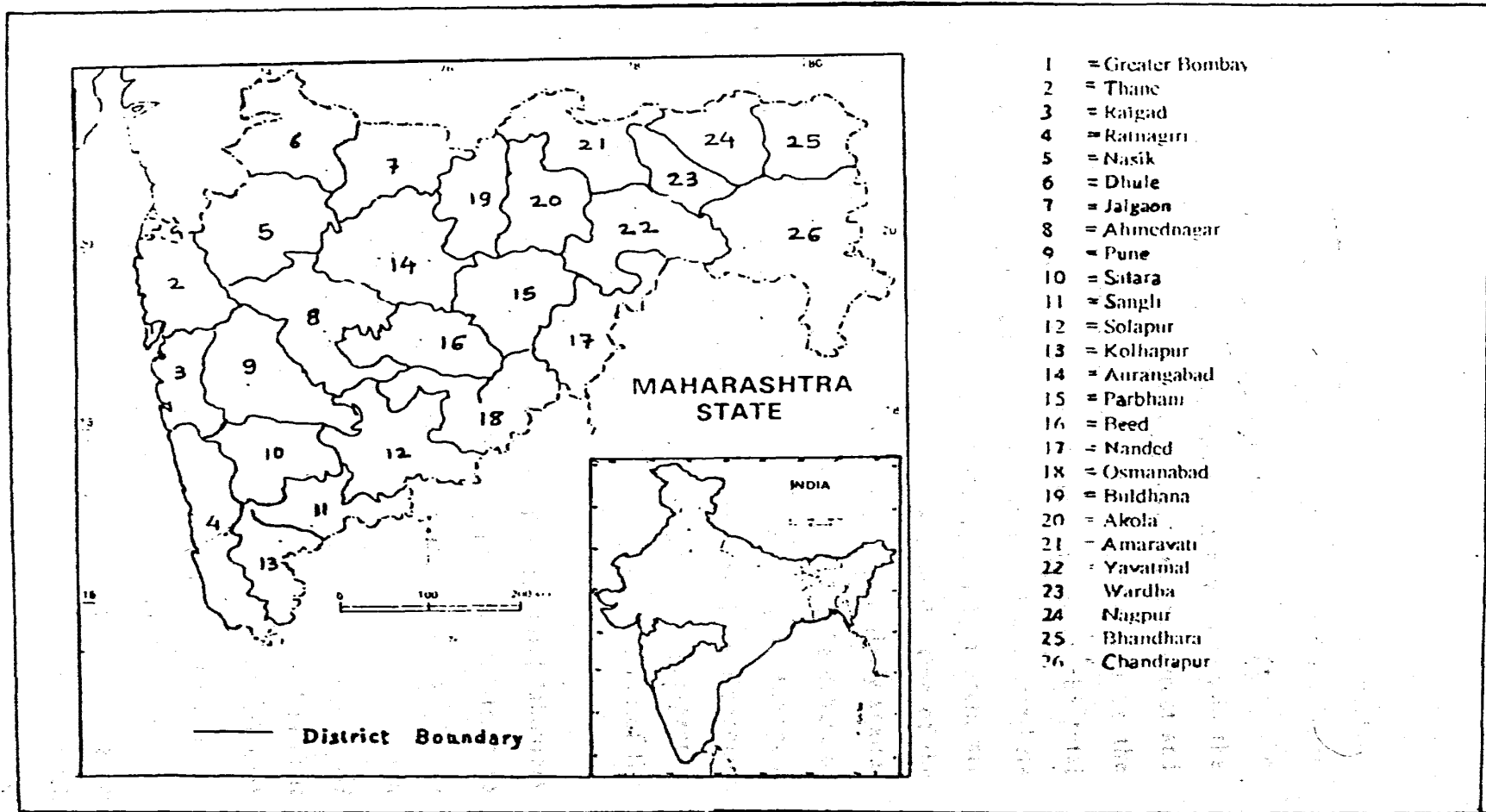
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Map 1 : Geographical Map of Maharashtra State.



Note : New districts clubbed with the old districts.

CHAPTER I

INTRODUCTION :

1.1 Introduction:

Agricultural labourers constitute an important and large segment of the economy. Considering the magnitude of the labour force, it is imperative to accord relatively high priority to the sector in the overall development policy. It is very clear that any change in the development policy thrust in the economy is likely to have direct and indirect impact on the agricultural labour market as well as the agricultural labourers which constitute 26.15 percent of the total main workers. Similarly, various characteristics of labour markets and the income-employment situation of the labourers therein are likely to have implications for the economy as a whole. One of the important issues often discussed in the literature, particularly against the background of various government policies and also the debate on poverty eradication programmes since independence, is the poor economic status of the agricultural labourers. The New Economic Policy (NEP) has again brought the question under new perspective and the possibility of adverse effects of NEP on this section of the society is a cause for concern.

Alternate theories attribute the emergence of agricultural labourers either to their lower social status in the traditional caste structure (Dharmakumar (1965), Joshi (1958)) or to the economic forces released during the British period and the consequent immiserisation of the rural population (Patel (1962), Malaviya (1955)). Early literature on agricultural labourers shows a worsening trend in their economic position due to various government initiated policies such as land reform measures (Rao (1962)) and the implementation of new agricultural technology during mid-1960s (Bardhan (1970), Krishnaji (1971)). Thus, across time and space, the agricultural labourers seem to have remained as a marginalised section, in the overall development process.

One of the important factors behind the poor economic status of agricultural labourers has been the long term stagnation in their real wages. According to the earlier studies, real wage rates declined during the period prior to 1970 in almost all the states with a few exceptions like Punjab, Haryana and Kerala (Jose (1974), Krishnaji (1971), Bardhan (1970)). But in the states with slow rates of growth in agricultural sector, the real wages either remained stagnant or declined prior to 1970s. It is only after mid-1970s that the real wages have registered a rising trend in some of the states with depressed agricultural sector. Moreover, government intervention in labour markets through minimum wage legislation, social security legislations and rural works programmes seem to have recorded only a partial success. Similarly, only a few regions can be marked across the country, where bargaining strength of the labourers has acted as a contributing factor to push up the wage trends. Further, the reliability of the wage trends is basically constrained by the procedure of data collection and quality of the very data on wages of agricultural labourers (Giri (1965), Rao (1971), Ghanekar (1997)). As a sum total, the issue of wage rates seems to have received relatively less attention on all the fronts - be it the data quality or the policies incorporating welfare of the labourers.

It should however be clarified that wage rate is not the sole indicator of total income and standard of living (poverty) of the agricultural labourers. In fact, the combination of factors like wage rate, number of days of employment and non-farm job opportunities, determine their economic status. Nevertheless, wages received by agricultural labourers constitute one of the important sources of income as well as a major part of the cost of cultivation. Therefore, an analysis of the existing wage rates and wage trends would reveal their role in the aggregate production process and the effect of changes in them on the demand for and supply of labour. Secondly, the study of wages can aptly provide us with the information regarding the actual process of wage determination in various agricultural labour

markets and the factors leading to changes in it. Stagnancy or slow growth in real wage rates of the agricultural labourers for a long period of time clearly reflects upon their deteriorating economic status. It also has serious implications for the economy as a whole due to the resultant widening inequality, poverty and underdevelopment of the demand side of the markets. Therefore, a study of this particular aspect and outcome agricultural labour market viz. wages, assumes significance from the policy of point view.

1.2 A Review of Literature :

Among all the components of agricultural sector, agricultural labour and their wages have remained, relatively a neglected area. Not many studies are available on this aspect possibly due to the nature of data available as also the elusive behaviour of the variables that matter. Most of the times, in the studies undertaken, there is no attempt to look into the specificities. Rather, the behaviour of wages or response of agricultural labourers is taken for granted.

The existing literature on wages of agricultural labourers can be broadly categorised into two groups -

1. Studies on theories of wage determination and their applicability to the Indian rural scene and
2. Empirical studies analysing various issues which can be further subdivided into smaller groups like : i. trends in money and real wages, fluctuations in them ii. inter-regional variations as well as gender disparities iii. demand and supply functions of agricultural labourers iv. analysis of various factors affecting wages including impact of new technology, mechanisation and government policies like the NEP v. poverty among agricultural labourers etc.

It is essential to note here that most of the theories of wage determination were developed more in isolation. As a result, there are not many studies in the empirical domain which keep track of the theoretical studies especially endeavouring to test the theories

empirically. This can be seen in the following discussion on the theories as well as the empirical issues.

1.2.1 Theories of Wage Determination :

Among the various theories of wage determination, the Constant Wage Hypothesis and the Lewisian type of dual economy models assuming institutionally fixed wage and perfectly elastic supply of labour have lost their empirical relevance. Similarly, the theory of marginal productivity, which basically considers demand side of the labour market is also inadequate to deal with the rural labour market specificities. Particularly, it fails to explain the observed downward rigidity of wages inspite of the existence of involuntary unemployment and also the complex nature of the rural labour markets. In the forthcoming paragraphs, we have attempted a brief discussion about the available theories and their empirical validity.

i. Efficiency Wage Theory, put forth by Leibenstein (1958) and later on explained by Mazumdar (1959), Rodgers (1975) is one of the most cited theories. The hypothesis under this framework assumes a technical relationship between the levels of wages and efforts per unit of time at lower levels of income. According to one version of the hypothesis, which discusses 'nutrition - effort' nexus in the context of agricultural labour markets of labour surplus LDCs, there is a unique efficiency wage. This level of unique efficiency wage minimises the per unit cost of efforts so that for the farmer, it is not profitable to give a wage lower than that level as the lower level of wage might affect labour productivity and increase labour cost in aggregate. As a result, wage rate which is set by the employer is higher than the competitive wage and fails to clear the market and absorb the available supply of labourers. As a consequence, unemployment prevails in the labour market.

ii. Insider-Outsider Theory, put forth by Lindbeck and Snower (1988), classified unemployed labourers as 'outsiders' and employed labourers as 'insiders'. It is postulated that the 'insiders' exercise

upward pressure individually or collectively on wages through their rent-seeking activities and generate unemployment. According to this theory, it is the 'insiders' who take initiative in preventing underbidding of the wage rate as it goes against their interests. Therefore, there is a possibility that the wages will depict either no trend or trend which is almost equivalent to the prices level in the economy in this theoretical perspective. Behaviour of wage trends however, can not be taken as a validity proof for this theory.

iii. According to the Implicit Co-operation Theory, advanced by Osmani (1988), wage rate is an outcome of the strategic behaviour of workers. Given the information on demand and supply conditions in the market, each worker sets his own wage rate to maximise his own pay-off. In the process, equilibrium wage is established through implicit co-operation among labourers at a point where it does not pay to revise the bid. The outcome of this repeated non co-operative game is the wage rate higher than the competitive wage rate.

There are not many micro-level studies involving testing of the empirical validity of these theories. The evidence seems to have remained inadequate and inextensive. Empirical evidence presented by Bliss and Stern (1978), Rodgers (1975), of the nutrition-wage version of the efficiency wage theory reconciles with some of the implications of the theory like a positive association between wage rate and earner-dependents ratio, landlessness and also practice of provision of meals by the employers. But certain empirical facts need to be highlighted. The intra-village uniformity of wage rate for a given operation and for labourers of the same gender despite the differences in productive abilities question the differential wage payment based on nutrition level. Similarly, high incidence of poverty among labourers, sluggishness of money wage rates in relation to increase in food grain prices, very low level of daily calorie intake are contrary to the postulates covered under the hypothesis. Bardhan (1984a) provided alternative explanations for some of the phenomena (like a positive association between factors like number of

dependents, landlessness and the farm wage rate, emergence of long term contracts etc.) which the efficiency wage theory also tries to explain. Therefore, though the hypothesis assumes a relationship between consumption and effort, the relation appears to be very weak and no conclusive evidence has been found in support of this hypothesis. Studies based on ICRISAT panel data from the village studies incorporated the testing of efficiency wage hypothesis by explaining the wage rate in terms of calorie intake and physical attribute of workers like weight for height measure (Behrman and Deolalikar (1989), Ryan and Wallace (1987), Deolalikar(1988)). Deolalikar arrived at the conclusion that weight for height is the better indication of nutrition as the elasticity of farm output as well as of the market wages with respect to the same was found to be higher than with respect to daily energy intake. However, the overall results of these studies can not be said to be indicating that wages differ according to efficiency of workers in terms of nutrition status or the nexus between nutrition and effort (Dutt(1996)).

The other two hypotheses i.e., the 'Insider-outsider Theory' and the 'Implicit Co-operation Theory' are of relatively recent origin and no comprehensive attempts seem to have been undertaken to test their empirical applicability in the context of Indian rural labour markets. All these theories operate more precisely within a demand-supply framework. But the institutional aspects of the rural labour market are incorporated in the 'Theory of Interlinked Markets'. This involves mainly the institutional aspects of the rural labour market behaviour like existence of monopsonistic or oligopsonistic power in the labour market, interlinking of the factor markets, over-dependence of labour on landlord-creditor- employer and the consequent lowering of the wage rate. (Bardhan (1980), Bhaduri (1983), Hayami and Kichuki (1981)). The interlinked arrangements are considered to be manifestations of the semi-feudal mode of production, in which usury is the dominant form of exploitation that gets translated into exploitation of labourers in the labour market

(Bhaduri(1983)). Though it rightly brings out the significance of various institutional aspects of the labour market affecting wages, it is said to have not provided an alternative hypothesis relating to wage determination. In this framework, wage rate might get determined by any of the above mentioned theories of wage determination (Dutt (1996)).

In a recent study, Dutt (1996) has developed a collective bargaining model of wage determination in the agricultural sector. The author uses game theoretic approach to explain the process of wage determination which is looked at as a bargaining game between the groups of village employers on one hand and labourers on the other. The postulation is applicable especially on two counts. Firstly, it is claimed that the model is consistent with a number of stylized features of Indian labour market i.e. prevalence of casual daily rated contractual form of wage labour as the dominant form of labour market, village as the spatial domain of the labour market, uniformity of wage rate for a particular operation and a particular gender, prevalence of unemployment along with the absence of undercutting of wages etc. Secondly, the outcome of the bargaining process is realized within an asymmetric Nash bargaining frame with Nash bargaining solution as the unique and generally applicable solution for arriving at wage levels or explaining wage levels. The model jointly determines employers' profits, employment and the bargained wage rate. This wage rate is sustained and not undercut. The downward rigidity of wages is attributed to the fear of social sanctions in the village society and to the incentive of getting a surplus over and above the alternate pay off realizable due to the existence of bargaining power among labourers though the bargaining power itself is distributed unequally among labourers and employers. However, an important point can be noted here. As Dutt accepts, existence of bargaining power among agricultural labourers, and the asymmetry in it as far as the two groups are concerned, is assumed and not explained. Therefore, in this light, it may be said

that the theory is not applicable to all labour markets which are at different stages of development and generally the labourers may not be in a position to bargain in the absence of formal labour organisations.

Apart from the above, there are a number of competitive demand - supply models. The studies relating to these models indicate that wage rate is responsive to changing demand and supply conditions. The studies include joint estimation of the demand and supply functions in a simultaneous equation framework bringing out the positive wage-supply relationship (eg. Rosenzweig (1980)). Another group uses various exogenous demand and supply variables as regressors on wage rates (Pande (1973), Papola-Misra (1980)) bringing out the significance of demand enhancing factors. One of the major drawbacks of these models is their inability to explain the most elusive problem of the existing unemployment in the labour market. Whereas the former models impose competitive market clearance rather than test it, the latter type of models tell us nothing about whether the market clears or not and whether the level of wages is determined through the market clearance condition. (Dutt (1996)). Therefore, application of competitive models of wage determination to the agricultural sector in India poses difficulties.

Above discussion on the theories of wage determination clearly shows the complex characteristics of the agricultural labour markets that are at different stages of development and a single hypothesis or theory can not lead to empirical explanations. Similarly, the emergence of different hypotheses implies increased significance of some causal relationship during a particular period of time. Earlier theories of wage determination did not consider labourers as participating agents in the wage determination process (eg. efficiency wage theory). On the other hand, recent theories recognise labour participation in the wage determination due to their improved economic status and capacity to bargain acquired, as a result of agricultural development or unionisation. But as different labour

markets are at different stages of development, it may not be possible to apply any one blanket theory to all the labour markets e.g. sustenance and downward rigidity of the bargained wage (in the model by Dutt (1996)) explained in terms of social sanctions and bargaining power amongst the group of labourers may be challenged on the grounds of changing nature of village societies and likelihood of absence of bargaining capacity in situations like in tribal economies or other backward regions. Therefore, it is essential to analyse wages across labour markets, not under the rigid framework of a single hypothesis but in a dynamic setting incorporating a variety of postulates. Further, a more general point to be noted is that a labour market is composed of various segments, each characterised by its own specificities. Therefore, the overall picture suggests diversity of determinants, behaviour patterns and techniques relating to the labour market processes including the process of wage determination. The analysis of this process of wage determination therefore has to be carried out on the background of these factors.

1.2.2 Empirical Evidence:

As against the theories of wage determination, there are a number of studies dealing with various empirical issues relating to agricultural labourers as mentioned earlier.

Trends in money and real wage rates is one of the major empirical issues. Earlier studies on the trends conclude that real wages have fallen in all the states except in Punjab, Haryana, and Kerala (Jose (1974), Krishnaji (1971), Bardhan (1970)) in the pre-1975 period. According to these studies, green revolution failed to improve the economic status of the agricultural labourers. However, there are contrary evidences available in the literature. Lal (1976), used alternate source of data as well as time period to show that real wages in fact improved during this period. This controversy throws light on the initial debate between the advocates of the institutional approach and those of the neo-classical framework with respect to

assessment of the impact of modernisation on the agricultural sector. Recent studies however, reveal that real wages have started rising in the mid-1970s even in the agriculturally backward states (Jose (1988), Bhalla (1993)) though not in the same proportion as prices. But it is also argued that despite the trends, there are wide fluctuations in the wage rates (Parthasarathy (1996)). The observed rise has been attributed to increasing adoption of new technology especially in the Gangetic plains and in the rain-fed uplands. These areas are also characterised by marked out-migration (C.H.H. Rao (1994)). Similarly, as pointed out by Bhalla (1993), occupational diversification, creation of non-farm jobs have been the dominant factors even though external to the agricultural sector explaining the rise in real wages especially after mid-1970s. This phenomenon was observed specifically in the states with low productivity. This further implies a fall in interstate variations in wage rate. But only a weak indication towards a fall in the wage disparities is observed by Acharya between 1970-71 to 1984-85 (Acharya (1989)). Recent studies have been concentrating on the effects of economic reforms under NEP on wages of agricultural labourers. The study by Parthasarathy (1996) reveals that after mid-1980 and particularly during the initial phase of economic reforms, there was worsening of growth rates of real wages. This was mainly because prices of the wage goods rose faster than the earlier period for the concerned states. Thus, the overall picture suggests broadly, three phases in the trends in real wages- firstly, the period of stagnancy upto mid-1970s, secondly, the phase of increasing real wages upto mid- 1985 or upto 1990 and thirdly, the phase of worsening of real wages during the phase of economic reforms under the NEP, in the early 1990s.

Observation of trends and variations in real wages provides the starting point for analysis of factors leading to changes in them. These are the observable demand and supply factors and the existing institutional factors. Various models explaining the levels of wage rates using regression analysis have considered a number of demand

and supply factors as independent variables. Such studies show that wage rate is positively associated with demand and productivity enhancing factors eg. irrigation, age, primary education, soil-index etc. Many of these are carried out specifically with the help of micro-level data (K.Bardhan (1970,1973,1977), P. Bardhan (1973,1984), Pande (1973), Lal (1976, 1988), Papola and Misra (1980), Sidhu (1988), Bardhan and Rudra (1978,1981)). But it is emphasised by researchers like Bardhan that the wages are not necessarily governed by the theory of marginal productivity (Bardhan (1984a)) or that they do not validate the competitive model of wage determination (Dutt(1996)). Even though wages are responsive to productivity enhancing factors, they have always failed to keep pace with the labour productivity due to weaker bargaining strength of the agricultural labourers vis-a -vis the employers (Nayyar (1977)). A study by Bhalla (1993) suggests that over a period of time, rising labour productivity (defined as net value added per person day) has not really made any decisive contribution to the observed rise in real wage rates which is attributed to the 'Schumpeterian impact' of productivity enhancing innovations.

A study carried out by Jose (1988), showed that the indices of wage and agricultural output pertaining to many states exhibit a remarkable association in their year to year movements. He concluded that the major variable influencing the movement of real wages has been the level of agricultural output in respective states. But he did not explain the exact mechanism through which the wage rate gets affected due to changes in agricultural output.

Many of the explanations of the movements in wage rates with the help of various demand and supply factors tend to bypass the existing institutional set-up. The institutions governing wages and their influence on agricultural sector are evolved over a period of time. Understanding of the labour market would remain inadequate without the consideration of the institutional factors. Among these, are the factors concentrating on agrarian labour institutions such as tenancy,

share-cropping, labour tying etc. Similarly, the role of traditional institutional factors like social group identity eg. caste, gender in influencing the wage level is also discussed (Bardhan (1984a, 1989)). Among the various institutional factors, traditional institution of caste has stratified and segmented the Indian rural labour market. The institution is justified on the ground of occupational diversification. However, it is observed that traditional labour institutions like caste and the attendant features of discrimination and stratification are incompatible with the objectives of growth and distribution (Kannan (1994)). The author points out the significance of development of markets in terms of the demand side or the purchasing power of the low income group in the process of economic growth and the obstructive one of the traditional institutions in the process of economic growth and development. Empirically too, caste and social status of labourers were found to affect their wage levels adversely (Krishnamurthy (1988), Bardhan (1984a)).

Apart from caste, the other major institutional factor leading to wage discrimination is 'gender'. Wage rates of female labourers are always found to be lower than that of male labourers. The higher average level of male wages can partly be explained in terms of higher rates paid to them for the gender-specific labourious operations like ploughing and partly in terms of traditional gender specific bias against the female labourers. Similarly, there seems to be no attempt at measuring the efforts involved in the gender specific operations performed by male and female labourers providing a basis for their relative wage levels. The secondary data on wage rates thus shows a gap between wage rates of male and female labourers so that female wage rate is lower than the male wage even when the work is comparable (Bardhan (1984), Parthasarathy (1996)). In most of the states, there has been a tendency for the wage gap to narrow down due to faster rate of growth of female wage rates but the absolute level of female wages still remains below the levels of male wages.

It is interesting to note that the micro-level observations reveal instances of equality of male-female wage levels in the presence of labour organisations working amongst the labourers. Thus, in such circumstances, presence of a modern institution like labour organisation leads to intervention in the labour market to correct the obstructive role played by the traditional institution like gender. It has been argued that presence of modern labour institutions like labour organisations and protective labour legislations need not be incompatible with the objective of growth. However, due to the restrictive role played by such organisations in the labour market, a limited number of analytical studies can be cited in this regard (Brahme and Nene (1979), Aziz (1979,1990), Kannan (1992, 1995), Gill (1995)).

Apart from the trends in and factors affecting wages, analysis of heterogeneity in rural labour market in terms of classification and segmentation of labourers, various contractual arrangements and rationale for their emergence as well as interlinkages in factor markets assumes importance in the literature. However, these seem to have featured in the analysis only recently (i.e. in the post-1975 period) (Bardhan and Rudra (1978, 1981), Rudra and Bardhan (1983), Rudra (1982, 1987), Eswaran and Kotwal (1985), Sarap (1991a, 1991b)). The studies on segmentation and classification have taken up issues like classification of labour market into hired and family labour or into attached and casual labour as well as substitutability between them. Such studies have discussed the significance of these from the policy point of view. Generally, the wages of attached labourers are expected to be lower (though their annual income might be higher) than those of casual labourers because- (i) Casual labourers are employed mostly in peak seasons, (ii) It is likely, that the economic exploitation of the attached labourers, if they come from socially weaker sections, may lead to lowering of the wage rate received by them (Basant (1984)) and (iii) Wage rate of casual labourers includes uncertainty premium over

and above the wage rate received by them (Basant (1984)). In his model, Bardhan (1984a) provides rationale for attached labour contracts in terms of recruitment cost and peak season wage uncertainty. Empirical evidence shows that proportional importance of attached labour is positively associated with the index of productivity and with the indicators of inequality. This is in conformity with the hypothesis that tighter labour markets lead to more tied labour contracts (Bardhan and Rudra (1981), Bhalla (1976), Bardhan(1984a)). Proportional importance of attached labour seems to be declining with the introduction of labour-saving technology to economise on the wage bills and as a result, there has been an increase in the share of casual labour days after 1970 (Bhalla (1993)). Presently, the dominant form of wage contract is daily wage contract.

One of the important characteristic of rural labour markets is their interlocking between different factor markets, especially credit market. On one side, interlocking helps the landowner-employers in diffusing the market risks and weather risks (Binswanger and Rosenzweig (1981)) and in gaining control over markets (Bardhan 1984a)). On the other hand, the implicit exorbitant interest rates might keep wages of the labourer cum borrower at a lower level and force him into long term and generally exploitative bondage with the employer. Further, tying of labour due to credit transactions can lead to segmentation of labour markets and reduce the bargaining strength of labourers for wage negotiations with the employer and can act as barrier to insuring statutorily fixed minimum wages for them (Sarap (1991b)).

1.3 Emerging Issues

Following important issues emerge out of the discussion of the existing literature on wages.

1. Firstly, a review of literature on the theories of wage determination showed that there is no single hypothesis which

adequately explains the process of wage determination in the agricultural labour market. Attempts have been made to test the prevalent hypotheses for the Indian conditions. But either the evidence obtained does not lead to any stable results or the theories have not been tested with comprehensive empirical evidence thus limiting the applicability of these to labour markets due to location specific socio-economic, physical and institutional factors. Therefore, it is essential to have a variety of alternative hypotheses or combination of them, relating to specific situations especially at different stages of development of the labour markets.

2. Secondly, due to the differences in the labour market situations, wide regional disparities can be noted in this regard. Broadly, states can be classified as agriculturally developed states and agriculturally backward states. The states seem to have a distinct pattern of their own with respect to the behaviour of wage rates. On one hand, the states of Punjab and Haryana are experiencing a stagnancy in growth rate of real wages after the initial period of boom whereas on the other hand, agriculturally backward states with low productivity seem to be in the second phase of increasing real wages (at least till 1990). This particular empirical observation i.e. differential labour market behaviour, again brings out the need for various hypotheses relating to various labour market regions.
3. Another important issue is regarding the productivity of agricultural labourers and their remuneration. There has always been a gap between these two, though wage rate is regarded as sensitive to productivity as well as productivity enhancing factors. But, increase in productivity of labour may not necessarily show itself in the increase in the wage rate. Here, organisations among labourers and their bargaining strength attains significance. However, there seems to be absence of collective bargaining on the part of the agricultural labourers except in some states like

Kerala. This accounts for lower level of wages which probably would have been made to move up. Similarly, the issue of wages of labourers and their exploitation has been neglected by various popular farmers' movements, which concentrate primarily on demanding remunerative prices for crops. Higher prices and consequently, higher profit margin may not necessarily lead to an increasing wage rate of labour as per their argument. Absence of unionisation among labourers and consequent segmentation in the labour market seems to have helped the farmers in exercising their monopsonistic power in the market. Therefore, the analysis of labour organisations and their potential to intervene in the labour market with respect to wage rates assumes significance.

4. Along with the bargaining strength of the labourers, intervention by the government in labour markets in the form of determination of minimum level of wages as well as rural public works also assume importance. It is widely recognised that these state interventions have played limited role in the labour markets. It has been noted that the actual wages are many times lower than the prescribed minimum wages except during the peak season (NCRL, GOI (1991)) and the minimum wage itself can be an underestimate eg. as in the case of Maharashtra (Brahme and Nene (1983)). In spite of all types of problems involved in actual implementation of these measures, it is felt that these provide a legal backing and a norm for the prevailing wages to vary around. Hence, it is essential to look into the wage impact aspects of these interventions.

5. Apart from the direct intervention of the government in the rural labour market, other government policies also seem to be affecting the wages of labourers indirectly eg. land reform measures, introduction of bio-chemical technology and various measures under the NEP of 1990s, have provided stimuli to the rural labour markets to affect the structure and composition of rural labour force, various contractual arrangements during different time

periods in different ways. On the background of recent programme of liberalisation of the economy, labourers might get affected adversely in terms of their real wages on account of a general rise in prices in the short run. Similarly, there is a possibility of displacement of inefficient enterprises and rise in the capital intensity in the industrial sector which might lead to entry of new labourers in the agricultural sector. This might have an adverse impact on the wage and employment scenario in the agricultural sector (C.H.H. Rao (1994)). Such analysis will require data both from agricultural labour side as well as from the industrial sector. Such data is not readily available for empirical testing.

The discussion above reveals that, contrary to the hypothesis of institutionally fixed wage rate of agricultural labourers, wage rates do respond to the modern stimuli provided to them and there is evidence against a rigid labour market. Similarly, the institutional set-up within which the process of wage-determination operates is also important and might explain the differences in the wage rates in different labour markets.

1.4 A Case for Maharashtra :

The review reveals that there is sizable literature on labour markets in agriculturally well-developed states like Punjab, Haryana and also in states like Kerala and West Bengal. Comparatively, there are only a few comprehensive studies dealing with the issue of agricultural labour in an agriculturally backward but industrially prosperous state like Maharashtra. The major states of India can be classified on the basis of prevailing wage rates. Taking a clue from Parthasarathy (1991a), the states are classified as follows :

1. In the first category, we include states of Kerala and West Bengal. Whereas Kerala enjoys position of being one of the states with highest levels of money and real wage rates, West Bengal, though a state characterised by higher incidence of labour and higher level of unemployment like other backward states, exhibits relatively

higher wage rates than the other backward states. Maintenance of relatively higher levels of wages in these two states is attributed to the political will of the leftist ruling parties reflected in implementation of various government programmes and social security measures, inflation adjustment in wage rate (in West Bengal) as well as to unionisation and bargaining strength among the labourers (in Kerala).

2. Second category includes higher wage level states like Punjab, Haryana, Uttar Pradesh, Himachal Pradesh, Rajasthan, Gujarat and Assam. The higher level of wages in these states is attributed mainly to various factors like demand enhancing effect of Green Revolution (Punjab, Haryana, U.P.), lower incidence of agricultural labour (Assam, Himachal Pradesh, Gujarat, Rajasthan), prevalence of large scale plantations which require skilled labour (Assam, Himachal Pradesh), higher degree commercialisation in various sectors of the state economy (Gujarat) and availability of better infrastructural facilities. Explanation of higher wages in these states is in terms of provision of modern stimuli to the labour market.

3. Third category includes states like Orissa, Bihar, Madhya Pradesh, Andhra Pradesh, Karnataka, Tamil Nadu and Maharashtra. These states are characterised by higher incidence of agricultural labourers and relatively lower levels of wage rates.

Among these, Maharashtra presents an interesting case characterised by an economy operating at a comparatively higher level of socio-economic development. This is reflected in several economic, structural and institutional indicators, including those with a potential to affect various aspects of agricultural labour markets especially, the wage behaviour. The intersectoral distribution of labour force is one of the important factors among these. Though a state with higher incidence of agricultural labourers among all the other states, their share in the main workers within the state has been around 20% (for male labourers). Thus, the labour market can not be

said to be characterised by a perfectly elastic supply curve of labourers. Secondly, the industrial development of the state has provided the labour force, with opportunities of employment in the secondary as well as tertiary sector especially in the urban areas creating a conduit for labour transfer from the primary sector to satisfy the manpower needs in the secondary sector. The wages of the workers (who are organised to a large extent) in these sectors are also likely to have a positive effect on the opportunity cost of agricultural labourers, thus raising their reservation price.

Apart from these factors, the characteristics of the institutional factors/aspects of labour market also seem to be favourable enough in influencing wages of agricultural labourers. Among these, the state interventions in the labour market such as the Employment Guarantee Scheme (EGS) started by the government of Maharashtra in rural areas during mid-1970s and the Minimum Wages Act of 1974 can be considered. Whereas the former provides alternate employment opportunity to the rural poor, the latter is supposed to guarantee a floor wage level to the prevailing agricultural wages. The existing land relations characterising agrarian structure is another institutional factor affecting /shaping the labour market and thereby the bargaining power of labourers. The dominant form of the land ownership pattern is peasant proprietorship in the state and does not reveal any glaring inequalities in the land distribution (except in some parts of Maharashtra) unlike in the case of other states such as Bihar and Orissa. Apart from these, the intervention of labour organisations the agricultural labour markets can also be considered. According to one study, Maharashtra is one of the states with high degree of unionisation among the agricultural labourers (Gill (1995)). As far as the agricultural sector in Maharashtra is concerned, it experienced a breakthrough in terms of moderate increase in production after 1970s. However, the money and real wage rates of agricultural labourers are among the lowest in the country. Thus, wage rates of agricultural labourers in Maharashtra increased

relatively at a slower pace even on the background of seemingly favourable factors such as high degree of industrial development and availability of non-farm job-opportunities, favourable institutional set up incorporating state and union interventions in the labour market, moderate rate of growth of output which can create a possibility of tight labour market and increase the bargaining capacity/ reservation price of the labourers.

On this background, it is felt that an analysis of wages of agricultural labourers including an analysis of regional and genderwise variations therein would be helpful in understanding the problems of agricultural labourers in Maharashtra.

1.5 Objectives of the Study :

The major focus of the study is to understand the intricacies in working of the agricultural labour markets in Maharashtra and to analyse the factors causing gradual increase in the money and real wages in the state. Keeping in view the focus on analysis of the labour markets and wage trends, specific objectives are set forth -

- 1) To identify the emergence and operations of various agricultural labour markets and to document their specific nature.
- 2) To analyse districtwise and state level trends in and levels of money and real wage rates of male and female agricultural labourers since 1961 upto 1994 and to demarcate phases, if any, in it.
- 3) To identify various economic, technological, demographic and institutional determinants of the levels and trends in wage rates and to analyse these in the various agricultural labour market situations prevailing in the state.
- 4) To account for and explain the regional variations and gender disparities in wage rates based on the theoretical grounds proposed in the literature.

1.6 Methodology of the Study :

The study utilises data both at the secondary as well as primary levels. The secondary data sources were utilised to analyse the district level trends in wage rates of male and female labourers, regional variations therein and for understanding and identifying the location - specific factors affecting wage rates. The purpose behind collection of primary data through field survey was to understand micro-level realities of the functioning of village labour markets, specifically with respect to the process of wage determination.

1.6.1 Selection of the Secondary Sources of Data :

Data on wage rates seems to have low dependability. Therefore, before taking up secondary data analysis, it is important to select a proper data source for the purpose analysis. The wage data sources available for the analysis are i. Season and Crop Report (SCR) (Department of Agriculture, Government of Maharashtra) ii. Agricultural Wages in India (AWI) (Directorate of Economics and Statistics, Government of India) and iii. Rural Labour Enquiry (RLE) Reports (Labour Bureau, Government of India). As our analysis primarily relates to the study of districtwise wage trends, utilisation of the RLE data is ruled out, as it reports only the cross-section state level data. Therefore, we concentrated on the remaining two data sources.

It is found that the reliability of sources and methods of data collection in the case of these two data sources has not received much attention, from the researchers as well as government agencies collecting and publishing such data. As a result, a few problems can be pointed out in this regard viz. absence of proper sampling design, inadequate representation of the districts for calculation of district or state averages, absence of proper scrutiny, concept to of 'wage' used etc. As a result, doubts can be raised about the reliability of wage data. Nevertheless, the data source has to be selected from the existing ones as there is no other source, absolutely free of flaws. A

detailed comparative analysis of the alternate sources of data and methodologies involved is discussed in Ghanekar (1997). It has been noted in the study that for any district level, time - series analysis, SCR is more convenient source, as it provides us with continuous data representative of all the districts of the state. Therefore, we considered here SCR as main data source (for agricultural wages as well as other variables) for our analysis.

A few points can be noted here, regarding the SCR data. Firstly, districtwise money wage rates of male labourers have been collected for the period from 1960-61 to 1993-94. In the case of female labourers, the data is collected for the years 1968-69 to 1993-94 due to the non-availability of data for the earlier years. The data pertaining to the years after 1993-94 was not ready at the time of analysis, in both the cases.

Secondly, Sindhudurg, Latur, Jalna and Gadchiroli are the newly created districts of the state. These were formed after 1980 from the districts of Ratnagiri, Osmanabad, Aurangabad and Chandrapur respectively. The talukwise wage rates of the newly created districts were clubbed with those of the original districts, 1981 onwards and hence the average wage levels arrived at in this way (of the old districts) are considered throughout the analysis. Similarly, due to the non-availability of data for district Jalgaon, 1989 onwards, the analysis was restricted upto 1988 for that district. Further, district Mumbai (Greater Bombay) has also been excluded from the analysis.

The other major data source used is the Population Census of India (1961,1971,1981,1991). One major point to be noted in the case of this source is the definitional changes in the concepts used and changes in the population data collected accordingly. Particularly to the note, is the data for the year 1971, which is considered as gross underestimate as far as the marginal workers are concerned. In the case of agricultural labourers (male and female) however, the results of the resurvey conducted by the Government of India (GOI (1974)) after the 1971 census showed that even after the necessary

adjustments, the data shows increase in the number of agricultural labourers. Therefore, the reported data is used in the analysis, assuming that it indicates the proper trend.

The other major data sources used are District Socio-Economic Abstracts (Directorate of Economics and Statistics, Government of Maharashtra), Rural Labour Enquiry Reports (Labour Bureau, Government of India), Agricultural Census (Department of Agriculture, Government of Maharashtra) and AWI.

The methodology of the data analysis involved time-series as well as cross-section regression analysis of the secondary data.

1.6.2 Collection of the Primary Data :

As far as the primary data is concerned, a structured schedule was prepared for agricultural labour households and information relating to wage rates, wage contracts, income-expenditure, landholding, awareness regarding minimum wages, participation of activities in labour organisations, if any, etc. was collected. Two districts were to be selected for the purpose of primary survey, one an agriculturally well developed and commercialised district and the other from among the underdeveloped districts. Kolhapur and Thane districts were chosen as they satisfied the norms of selection. After this, three stage sampling procedure was followed with the first stage as choice of taluks, second stage as choice of villages and third stage of selection of the households. The total number of selected households was eighty (i.e. forty, in each village). The field investigation was conducted during the period of December 1996 to March 1997 and the data was collected by personal interviews on the basis of the schedule. The methodology of analysis involved use of simple statistical techniques and tables based on the collected data.

1.6.3 Schedule for the Labour Organisations in Maharashtra :

For understanding the spread of and extent of activities of labour organisations working for agricultural labourers in various parts of Maharashtra, a structured schedule was prepared and sent to forty activists/ leaders of such organisations. Information relating to the membership of the organisation, area of its activities, major components of its activities, changes brought about especially in wage trends due to the presence of the organisation, perspective of the activists on the role of state government especially through labour market interventions like minimum wage legislation and EGS etc. was gathered. Information was also collected from personal meetings with some of the activists.

1.7 Design of the Study :

The study consists of six chapters. The present introductory chapter incorporating the nature and the importance of the problem, methodology and objectives of the study and a brief review of literature is followed by the second chapter. This is a background chapter discussing important aspects like the political-institutional factors and the forces of economic growth of agricultural labour markets in Maharashtra having implications for wage rates. On the background of this, we formulated the hypotheses relating to the behaviour of wage rates and have described various agricultural labour markets as well as the structure of and movement in wage rates in various districts of Maharashtra. The third chapter contains a discussion on specific institutional factors (state interventions) in order to analyse their effect on the wages of labourers. Similarly, it also includes the role played by various labour organisations and their effect, specifically on wages, in different parts of Maharashtra. The fourth chapter attempts to test the hypothesis put forth regarding determinants of wage trends and wage levels in the earlier chapter and presents the results of the regression analysis. The fifth chapter deals with the data obtained from the primary survey of labour

households to substantiate the hypotheses raised earlier. The last chapter brings together the broad conclusions emerging out of the analysis.

CHAPTER II

LABOUR MARKETS IN MAHARASHTRA - TOWARDS AN EXPLANATION :

2.1 Introduction :

It has been noted earlier that there are various hypotheses explaining the process of wage determination in the agricultural sector. The process of wage determination operates within the domain of a specific labour market and is influenced by certain location specific characteristics of labour market considered as extraneous to the analysis. The analysis of wage determination however, can not be attempted in isolation without referring to the formation and structure of rural labour markets. Such analysis includes the participants in the labour market, their magnitude and changing share over a period of time. Hence, before moving towards an analysis of wages of agricultural labourers, it becomes necessary to understand it in the context of labour market. In this chapter, we shall concentrate on the structural aspects of labour markets which provide the necessary background for further analysis and also help us in understanding the linkages with wage rates.

Two important factors which are closely linked with the structural aspect of the labour markets are firstly, the political and institutional aspects which tend to affect various processes. These can be visualised from the perspective of policy decisions at the government level as well as the relations between various economic classes in the society. Their link with the structural aspects of labour market can be understood in terms of political will as well as the hierarchical position (in terms of class, caste and resource endowment) and composition of the ruling people in the society. More precisely, we can talk of political economy of wages of agricultural labourers. In Marxian terminology, such a discussion relates to the relations of production in the agricultural sector. The second important factor contributing to the changes taking place in the structural aspects of

labour market is the development of agricultural sector itself over a period of time. Therefore, such analysis would imply identifying relative importance of the forces of production in the agricultural sector. Two things can be observed in this regard. Firstly, whether a particular level of wage rate can be explained as a function of agricultural development and secondly, whether regional variations in wage rate can be explained in terms of differences in the degrees of economic development of the agricultural sector. Analysis of these two important factors which have shaped the development of agricultural labour markets would involve analysis of their separate influences on the labour markets as well as the nature of interaction between these factors and their combined effect on the labour markets. In the first two sections, we look into the political, institutional and economic factors affecting the development of labour markets and their outcomes, with particular reference to Maharashtra. The analysis of structure of wages in Maharashtra against the background of the former is attempted in the next section, in order to come closer to the hypothesis regarding labour market-wage nexus.

2.2 Agrarian Structure and Political Economy of Wage :

The structure of labour market is usually analysed more in a static frame and as given at particular point of time. But this structure evolves over a period of time and the rationale behind its emergence has to be understood more in a historical perspective. The need for having such a perspective arises while understanding the changing nature of and causes behind the changing production relations as well as other changes in the labour market at different stages of development. These changes in turn have implications for the outcomes as also the structural formation of labour markets which vary across the region.

In Marxian historical approach, the agrarian class structure is endogenously determined. In the hierarchy of five classes, viz.

landlords, rich peasants, middle peasants, poor peasants and landless labourers (Patnaik (1976, 1980)), the labourers occupy the lowest position and wage labour is considered as a tool for surplus extraction in the stage of capitalist agriculture. Resource endowment and the extent of exploitation are taken as two distinct criteria for determining the class status. The landless labourers are employed at miserably low wages and thus exploited by the landowning classes. In other words, the classes with higher control of assets use the others in optimising their returns from the production process.

In the Indian context, not only the asset position but also the caste position (representing social hierarchy) contributes in determining the class position. High caste employers with less amount of land can be net employers and exploiters of the labourers as they do not engage themselves in manual labour (Bardhan(1984a)). The agricultural wage rate in Marxian perspective is considered to be determined politically by the interclass balance of forces (Bardhan(1984a)). On the other hand, we have various theories of wage determination which seem to have not involved themselves in class analysis and the underlying structure of labour market is considered given eg. the classical subsistence wage theory considers the wage rate as determined culturally and traditionally at the subsistence level, the neo-classical theory envisages relationship between marginal productivity and the wage rate. Theories such as 'efficiency wage theory', 'implicit co-operation theory', 'insider - outsider theory' and the 'bargaining theory' simultaneously explain unemployment equilibrium and non-competitive level of wage rate in a given setup.

On this account, the Marxian approach can be considered as having an edge over the rest of the wage determination theories. But the application of the concept of endogenously determined class formation is found a little inadequate, as agrarian class formation in India is yet in its infancy and rural labour markets are not sufficiently developed (Bardhan (1984a)). The market for agricultural labourers

is fully formed when the labour is fully free to sell his labour power as a commodity and does not have any other commodity or asset to offer for sale. Thus, the process of labour market formation implies increasing proletarianisation of labourers.

It is claimed that in most parts of India, feudal or semi feudal mode of production still exists, wherein, the landless labourers (proletariat) are not absolutely free to sell their labour power (Prasad (1989)). Moreover, money lending and usurious capital act as tools of surplus extraction for the moneylender cum landlord. Capitalist transformation can be said to have taken place in the states like Punjab, Haryana, western parts of Uttar Pradesh and in some of the irrigated tracts in the country. Thus, labour markets in India exist at various levels of development (Bhalla (1993)). Further, it is difficult to find a homogeneous class of agricultural labourers due to their differing resource ownership as well as access to community resources (i.e. basically land) and distress diversification of employment strategies due to inadequate level of income generated from hiring out labour. Therefore, the Marxian approach towards wage determination in agriculture also seems to have some limitations and it becomes necessary to consider some of the existing theories of wage determination which need to be understood within the context of a particular structural setting which has evolved over a period of time. Nevertheless, the Marxian historical approach helps us understand the process of wage determination as well as empirical issues related to the movement and direction of wage rates. It may be noted that the historical process itself has implications for these phenomena and provides reasons for understanding them.

In this respect, one can take note of the political factors which might affect the level of wage rates and which are difficult to comprehend in the usual demand - supply frame. These factors are closely linked with the structure of economic classes in the society, the composition of dominant classes and the interrelationship between these dominant classes which are in a position to influence the political decision

making process directly or indirectly. The political processes / factors / activities tend to affect the economic phenomenon or specific decisions regarding that phenomenon. In this sense, we can speak of political economy of wage determination in the agricultural sector. Factors like concentration of land and other assets, access of various agrarian classes to the community resources as well as the extent of control over them, composition of the ruling / decision making class and its alliance with other classes confer power on the ruling class to decide (or not to decide) and implement (or not to implement) particular set of policies affecting wages of agricultural labourers. The nature of the effect i.e. positive or adverse would depend upon the political will and the vested interests of the ruling class concerned. Empirically, we can locate various situations where the nature and interaction among various political factors differ leading to different levels of wage rates.

An important example which can be cited in this regard is that of the state of Kerala, where the money and real wage rates of agricultural labourers are among the highest in the country, due to the bargaining strength of labour organisations and the political will of the ruling class in the form of effective implementation of various measures like minimum wage legislation, social security measures. In the same category, we can also identify the state of West Bengal. At the same time, there are states where lack of political will gets reflected in the absence of any policies and proper implementation of the existing ones. Especially, the case of Maharashtra can be analysed under this group. National Commission on Rural Labour (NCRL) (GOI (1991a)) in its report had stated, "The employer lobby in Maharashtra is too powerful compared to agricultural workers. As a result, the Advisory Committee¹ sees to it that wages (minimum wages) are kept low" (p.H-13). This clearly indicates the dominant position of a particular class in the labour market in Maharashtra and how it is used to influence the decision making process at the government level and adversely affects the minimum wage rate in its interest. Thus, the

state level analysis of agricultural labour markets provides evidence about the fact that there are various labour markets characterised by differing structures and relations between the agrarian classes having implications for levels of agricultural wage rates. With this background, we can now observe the existing structure of labour force in the agricultural labour market which we are trying to observe in the light of historical changes and which has implications for levels of agricultural wage rates.

As for India, a change in the nature of agrarian structure can be traced back to the British period. During this period, a new class of rent collecting landlords was created in the existing agrarian structure. Similarly, under the new laws, land became a commodity-freely alienable thus enabling the moneylenders to acquire a new power over the assets of the indebted peasants including their land (Kamat (1980)). Landlords, money lenders and traders constituted the new class of exploiters (wherein many times, all the three activities were constituted in one person) exploiting poor cultivators, the class which gradually turned into the class of tenants (at will) or landless labour.

The literature on land reforms shows only partial success of land reform measures in terms of its major objective i.e. land to the tiller. Nevertheless, its implementation resulted in a distinct change in terms of magnitude of absentee landlordism and tenancy. The empirical evidence shows a substantial fall in the number of recorded tenants and absentee landlords. But actually, land did not transfer from the landlords to the landless labourers, but to the rich peasants and hence an increase in the number of agricultural labourers can also be noted over the years. Among the agricultural labourers, it was pointed out that initially, i.e. in the early 1970s, permanent labour contracts were favoured by employers for ensuring timely labour supply and for economising on the costs by avoiding casual labour at high wage rates during peak seasons. This phenomenon led to a fall in the number of days of work of casual labour despite a general rise in

the labour intensity of production (Bhalla (1993)), Sidhu (1991)). This trend was reversed in the late 1970s and the share of casual labour days increased on the background of mechanisation of agricultural operations, leading to replacement of permanent labour contracts. Empirical evidence too shows a decline in permanent labour contracts and increasing casualisation of labour contracts. According to Bhalla (1993), this was a deliberate move towards segmentation of farm workers into casual and permanent workers though the political economy behind the phenomenon is not clearly brought out by the author. The trend towards increasing casualisation of labourers in India as well as in the individual states can partly be attributed to the increasing forced participation of small and marginal farmers in agricultural wage labour market as well as fragmentation of landholdings (decreasing average size of landholding).

Table 2.1 : Proportion of Casual Labour to Total Wage Labour.
(In percentage)

State	Rural Labour Enquiries			
	1972-73	1977-78	1983	1987-88
Andhra Pradesh	68.6	73.0	74.2	79.1
Assam	40.0	49.7	49.0	60.9
Bihar	60.9	80.8	82.2	79.6
Gujarat	64.6	79.8	81.5	76.4
Haryana	40.3	52.3	52.3	67.8
Jammu & Kashmir	20.9	39.5	69.7	54.2
Karnataka	72.1	81.2	87.3	81.3
Kerala	72.1	70.3	76.7	78.0
Madhya Pradesh	56.8	71.8	72.0	72.4
Maharashtra	70.3	63.8	71.5	71.1
Orissa	68.3	74.7	76.3	80.4
Punjab	52.3	54.0	61.7	55.0
Rajasthan	53.5	65.8	63.1	77.6
Uttar Pradesh	60.0	68.7	73.6	78.4
West Bengal	66.7	71.3	75.4	79.2
All India	64.8	71.4	78.9	75.8

Source : Report of National Commission on Rural Labour, GOI (1991).

It can be seen from the table 2.1 that wage labour as percentage of rural labour (which largely includes agricultural labour) has increased in almost all the states from 1972-73 to 1987-88. It can

also be noted that the percentage of casual labour is directly proportional to the degree of agricultural development of the state concerned during 1987-88 eg. percentage of casual labour is lower in Punjab, Haryana and is higher in the states like Karnataka, Orissa, Bihar. Similarly, the rate of change is lower in the former case than the latter. Therefore, it can be said that agricultural growth leaves less space for the forces leading to casualisation of labour to operate as against in the areas which are agriculturally backward. The probable explanation for higher and unchanging share of casual labour in Maharashtra can be in terms of alternate employment opportunities in urban and rural areas and consequent absorption of surplus rural labour.

One of the effects of casualisation of agricultural labourers is reflected in the structural shift in the Indian agricultural sector employment, and diversification into other areas leading to the falling percentage of agricultural labour households to rural labour households. Apart from this, the percentage of agricultural labour households to total rural households though increasing, over the years, the change is only marginal over the last twenty years. These changes are reflected in the data given in table 2.2.

It can be seen from the table that there is a sudden increase in the percentage of agricultural labour households with land during 1974-75 and 1987-88. This could also be attributed partly to the failure of monsoons in these two years and the consequent forced participation of small and marginal farmers into the labour force (Kumar (1994), Unni (1997)). It is observed that such an overall increasing trend is the result of distress factors i.e., decreasing demand for labour in the agricultural sector and consequent diversification of economic activities in the rural areas as well as increase in the proportion of non-agricultural households in rural areas particularly after 1980s. It can also be noted that the average size of landholding is increasing till 1983. One possible reason for this might be the uneconomic size

of landholding leading to increased leasing out activity. But it is again difficult to explain a sudden fall in the value in 1987-88.

It is observed earlier that the post-land reform period was characterised by increased landlessness and an increase in the number of agricultural labourers. It seems that there has been again a structural shift in favour of non-agricultural activities in the rural areas after 1970 and though the absolute number of agricultural labourers is increasing, their proportion to total working population (according to the Census data) and the proportion of agricultural labour households to all rural households (according to Rural Labour Enquiry (RLE) Reports) is increasing only marginally especially after 1970s.

Table 2.2 : Selected Indicators Reflecting Change in the Structure of Agricultural Labour Force at All India Level.

Indicators	Rural Labour Enquires				
	I 1963-65	II 1974-75	III 1977-78	IV 1983	V 1987-88
1) Proportion of wage labour households with land to all wage labour households(%).	43.9	49.2	48.63	44.5	79.40
2) Proportion of wage labour households to all rural labour households(%).	85.69	83.51	81.28	82.26	77.45
3) Proportion of wage labour households to rural households(%).	21.8	25.3	29.9	30.7	30.7
4) Average size of landholding cultivated by wage labour households (in ha.)	---	0.45	0.54	0.70	0.31

Source : Rural Labour Enquiry Reports (1963-65, 1974-75, 1977-78, 1983, 1987-88), GOI.

For the agricultural labour market as such, this means that there has been a very slow growth in the proportion of agricultural labourers and thus their supply to the agricultural sector is at least not increasing progressively. This is clear from the Census data relating to the share of agricultural labourers in total main workers. The

Census data shows that there has been only a marginal rise in the rate of increase of the share of agricultural labourers at all India level as is clear from the following figures -

Share of agricultural labour in total work force (%)	1961	1971	1981	1991
	17.2	26.9	25.2	26.0

(Source : Census of India (1961, 1971, 1981, 1991), Economic tables, GOI).

But the more important and serious issue is the reversal of such trend (observed after 1970s) and the structural retrogression observed as an aftereffect of implementation of various measures after 1990, under the New Economic Policy (NEP). According to the NSS estimates, non-agricultural rural workforce showed a decline after 1989-90 as shown in table 2.3.

Table 2.3 : Sectoral Distribution of the Rural Workforce during 1980s and 1990s.

Sector	1983	1987-88	1989-90	1990-91	1992	1993-94
Agriculture	81.2	78.2	75.1	75.5	79.4	78.4
Non-agriculture	18.2	21.8	24.9	24.5	20.6	21.6

Note : The data relates to NSS usual principle and subsidiary status workers

Source : Bhalla (1997).

The major cause of decline in the non-farm rural employment seems to be a reduction in public expenditure during structural adjustment process (Sen (1994, 1996), Bhalla (1997)). The obvious results of these changes would be firstly, shrinkage in employment opportunities available to agricultural labourers in rural areas (table 2.3) and secondly, a depressing effect on wages of agricultural labourers.

As far as the real wages are concerned, overall picture suggests a reversal in the trend of rising real wages from mid - 1970s onwards as shown in the table 2.4. It can be seen from the table that in as many as 10 out of 14 states the real wages have fallen in the initial year of 1991-92. The states where wages have not fallen are the

states of Punjab, Kerala, Uttar Pradesh and Rajasthan, the traditional high wage states. The magnitude of decline is highest in case of Maharashtra. The wages have again improved in latter years in a few states but have fallen further in six to eight states between the years 1994 to 1996.

Table 2.4 : Annual Percentage Change in Real Wages of Unskilled Agricultural Labourers for Selected States.

State	1991-92	1992-93	1993-94	1994-95	1995-96
Andhra Pradesh	<u>-11.40</u>	+1.57	+8.60	+2.71	<u>-1.35</u>
Assam	<u>-8.73</u>	+0.58	<u>-6.58</u>	<u>-1.73</u>	+2.26
Bihar	<u>-3.36</u>	<u>-4.39</u>	<u>-5.00</u>	+5.98	+2.71
Gujarat	<u>-4.31</u>	+7.92	+2.86	+0.31	<u>-7.15</u>
Karnataka	<u>-13.25</u>	<u>-14.39</u>	+41.31	<u>-11.61</u>	<u>-12.67</u>
Kerala	+13.25	<u>-14.39</u>	+41.31	<u>-11.61</u>	<u>-12.67</u>
Madhya Pradesh	<u>-3.89</u>	+12.57	<u>-3.53</u>	+1.49	+4.81
Maharashtra	<u>-14.79</u>	+0.66	+25.58	<u>-1.16</u>	<u>-10.08</u>
Orissa	<u>-3.69</u>	+11.03	<u>-0.14</u>	<u>-3.52</u>	<u>-0.39</u>
Punjab	+3.65	+4.25	+1.51	<u>-1.85</u>	<u>-4.46</u>
Rajasthan	+6.12	<u>-3.56</u>	<u>-7.66</u>	+1.05	+16.36
Tamil Nadu	<u>-4.85</u>	+13.29	+11.60	+1.03	+3.73
Uttar Pradesh	+1.02	+13.29	+11.60	+1.03	+3.73
West Bengal	<u>-6.25</u>	+24.39	<u>-6.50</u>	<u>-5.24</u>	<u>-8.29</u>
All India	<u>-6.19</u>	+5.21	+5.61	<u>-0.50</u>	<u>-0.69</u>

Note : 1. Percentage change is for agricultural year (July to June) over previous year. 2. The underlined figures are those showing a negative change.

Source : Economic Survey, 1996-97 (GOI, 1997), Page 186.

Thus broadly, the evidence suggests a correspondence between structural changes and levels of wage rates. The process of structural shift in agricultural sector thus appears to have three stages - firstly, the post - land reforms period characterised by increasing number of agricultural labourers, secondly, the period approximately from 1975 to 1990, characterised by a shift towards non-agricultural rural employment and thirdly, the post-NEP period characterised by

reversal in these trends and worsening situation of agricultural labourers in terms of employment and wages.

Thus, it can be inferred that the way a particular labour market develops through history has implications for the present processes and outcomes (i.e., wage and employment) of the labour markets. Historical approach unlike other theories of wage determination enables us to understand the development of labour markets in a better way, highlighting the importance of these factors as observed for the country as a whole. The importance of these factors will become more clear only at the disaggregated level i.e., at the state level as different states may have experienced different development paths with respect to agricultural labour markets over a period of time. At present, the degree of structural shift under the NEP would depend upon the level of industrialisation, participatory role of the state in various economic activities, willingness at the policy formation level for expanding the role of private sector etc. We look into the specific case of Maharashtra in this regard.

2.2.1 Agrarian Structure in Maharashtra -

A Historical Perspective :

The study of agrarian structure in Maharashtra would involve a look into the changing magnitude of the agricultural labour force and changing proportions of its categories along with that of the landowning classes. Changes in the former can be meaningfully explained only in the context of the latter as it would clearly bring out the changing pattern of the labour force in the agricultural sector. In this section, we look into the historically evolved landowning pattern in brief and consequent changes in the agricultural labour force over the last four decades in different regions of Maharashtra.

A historical analysis of labour force structure in Maharashtra can be viewed by taking the information relating to the three broad divisions of the state viz. western Maharashtra (including

erstwhile Bombay region and coastal Maharashtra), Marathwada and Vidarbha². These divisions represent three distinct agro-climatic regions and historically were parts of three different states viz. Bombay, Hyderabad and Central Provinces-Berrar respectively, during the British Indian period. The existing agrarian structure in these regions can be partially explained in terms of landholding pattern since the British Rule and changes brought in it by policies relating to land reform measures before and after independence. There are a few studies which have looked into the politico-socio-economic development of Maharashtra through the period of time (Brahme and Upadhyaya (1979), Lele (1982), Kamat (1980)). The agrarian structure and the landholding pattern in Maharashtra sketched out in these studies is summarised in table 2.5.

It can be seen from the table that the government interference in terms of land settlement policies, land reform measures and the emerging land owing pattern have had their effect on the agrarian structure in Maharashtra. The agrarian structure which emerged as a consequence of these policies/measures had regional variations with western Maharashtra showing the signs of agrarian capitalism (Brahme and Upadhyaya (1979)), but its characteristic feature as the region of peasant proprietors did not change significantly even after the tenancy reforms.

The emergence of agrarian capitalism in western Maharashtra had its roots in the history and can be traced back to the Deccan riots of the nineteenth century - which represented the outbreak of rebellion of the middle caste Maratha peasantry against money lenders. This rebellion in the economic sphere encompassed the socio-cultural aspects too and was reflected in the anti-brahminical movement in the state. In the course of time, this particular class (the landed Maratha) established itself firmly in the rural areas. The post-Independence period witnessed an establishment of hegemonic power of this class in

Table 2.5 : Historical Development of Agrarian Structure in western Maharashtra, Marathwada and Vidarbha.

Region	Development of productive forces (1)	Relations of production (forms of exploitation) (2)	Landholding pattern (3)	Effect of land reform measures (4)	Structural change (5)	Combined effect of (1), (2), (3) & (4)
Western Maharashtra	Productive forces better developed historically	1. Usuary Capital 2. Rents, tenancy relations	Traditionally peasant proprietorship, small, marginal holdings	Failure of tenancy reforms, of the cases decided, only in 24% cases, land passed to tenants, but it was passed to middle castes, owning land & not to the landless.	No significant change in the organisation of production as the existing structure still dominated by peasant proprietors.	1. Development of relatively intense degree of capitalism 2. Generation of surplus value has raised general economic viability of all peasant strata including agricultural labour.
Marathwada	Traditionally a backward, underdeveloped region of erstwhile Hyderabad State	Acute problem of tenancy	More no. of large and middle peasants, average size of land-holding higher.	Land reforms worked in favour of landlords against tenants due to the concentration of political power & economic wealth into the hands of the former	Increase in landlessness, increased number of agl. labourers belonging mainly to SCs, wage relation became dominant	Growth of new relations of production remained distorted and stunned due to failure of land reform measures and absence of growth of productive forces.
Vidarbha	High economic inequality, traditionally agrarian, cotton cultivation and export.	Highest impact of tenancy, un-recorded tenancy	Existence of large and middle land-owners, absentee landlordism	Tenants were given rights to cultivate	No substantial increase in landlessness except in some districts	Emergence of capital intensive production richer sections of peasantry benefited

Source : Brahme-Upadhyaya (1979), Kamat (1980), Bokare (1973), GOM (1970).

the state politics and through the co-operative movement in the state. These political developments affected the course of economic development leading to development of agricultural infrastructure and commercial cropping pattern. The pre as well as post- 1960 (the year of establishment of separate state of Maharashtra) period was characterised by diversion of financial resources towards the western regions of the state, leaving behind the other regions like Marathwada and Vidarbha. As far as Marathwada region is concerned, it remained underdeveloped due to the slower growth of forces of production and experienced a significant rise in the number of landless and agricultural labourers who largely came from the Scheduled Castes. In the case of Vidarbha, the important point which can be noted is that, cotton crop being the dominant crop of the region, requiring significant labour during the picking season, the proportion of labourers is highest in this region (Brahme and Upadhyaya (1979). It has also been noted that the process of commercialisation of this area initiated due to the cotton boom during the 19th century as well as the land reform measures in the latter period benefited the richer sections of the peasantry. However, it is ironical that this region even being rich in the natural resources like minerals, fertile land (for the production of paddy as well as commercial crops like cotton, groundnut, oranges) and having tremendous potential for agricultural prosperity, took a backseat in the process of agricultural development. The 'Nag Vidarbha' movement started by the people of Vidarbha could not succeed in acquiring separate identity for Vidarbha during the period of re-organisation of Indian states, way back in 1950s and ultimately the underdeveloped nature of the economy was maintained. With whatever progress in the agricultural sector, the class of agricultural labourers could not participate in it. The real wages

of the agricultural labourers remained fluctuating and at a lower level due to the process of casualisation and immigration as well as due to absence of collective strength on the part of the labourers (Reddy (1985)).

On the whole, it can be said that the post -land reform period in Maharashtra was characterised by a change in the agrarian structure prevalent since the British period. In its new form, the structure showed more number of landless agricultural labourers and wage relation replaced the tenancy relation. Secondly, the differences in the degree and nature of relations of production and forces of production across the state were maintained with western Maharashtra at the leading position; eg. as mentioned above, the early development of agrarian capitalism in western Maharashtra benefited even the agricultural labourers along with the rich farmers. Therefore, three broad labour market regions emerged- western Maharashtra, Vidarbha and Marthwada. Within these labour markets, variations existed especially in western Maharashtra which includes coastal districts of the state as well as the tribal regions like Thane and Dhule with their own specific characteristics. The whole process had implications for existing structure of labour force in agriculture. Hence, it is essential to look into the existing agrarian structure in Maharashtra.

2.2.2 Agricultural Labour Force in Maharashtra:

As the time period considered for our analysis is from 1961-62 to 1993-94, we analysed the existing structure of labour force in the agricultural sector and the changes that have taken place during this period. As in the case of India, the existing structure in Maharashtra too can be seen as having its roots in the historical developments since the pre-Independence period. However, during the last thirty years, distinctive changes seem to have taken place in the numbers, shares and proportions of

the agricultural workforce. Similarly, differences in the regional patterns of the labour force structure can be distinctly noted. Two things therefore assume importance - firstly, the basic structure of the labour force determined traditionally and the changes that have taken place in it and secondly, the regional variations in the labour force.

Before going into the analysis of district level data, we look into the state level trends. It is seen that Maharashtra is one of the states with a large number of agricultural labourers and there has been an increase in the number of agricultural labourers as well as agricultural labour households (according to the NSS data) from 1960 onwards. Further, the pattern of structural change in Maharashtra is similar to that observed at all India level as is shown in table 2.6.

As in the case of India as a whole, the data pertaining to Maharashtra also shows a decline in the proportion of agricultural labour households to total rural labour households and increasing proportion of agricultural labour households with land to total agricultural labour households. Therefore, similar causes viz : distress diversification and forced participation of small and marginal farmers into wage labour market (as a result of reduced number of days of work on their own farms due to scarcity of capital respectively) can be forwarded for the observed phenomena at the state level also. Increasing share of agricultural labourers in total agricultural workers (i.e. labourers + cultivators) as is clear from the Census data also possibly explains increasing participation of small and marginal farmers into agricultural labour markets due to two important factors namely, failure of monsoons and government sponsored relief works (Unni(1997)). The decadewise share of agricultural labourers in total agricultural workers can be seen to be increasing at the state level.

Table 2.6: Selected Indicators Reflecting Change in the Structure of Agricultural Labour Force in Maharashtra.

Indicators	Households	Rural Labour Enquiries				
		I 1963-65	II 1974-75	III 1977-78	IV 1983	V 1987-88
1) Proportion of agl. labour households with land to all agl. labour households (%)	All	31.6	47	42.39	41.9	67.1
	SC*	27.4	47.3	37.79	30.12	64.91
	ST*	24.8	32.6	33.87	33.14	61.38
2) Proportion of agl. labour households to all rural labour households (%)	All	91.3	87.1	83.49	84.28	83.21
3) Average size of landholding cultivated by agl. labour households (in ha)	All	-	0.93	1.11	1.19	0.56
	SC	-	0.74	1.16	0.88	0.44
	ST	-	0.89	1.02	1.19	0.58
4) Proportion of SC and ST agl. labour households to total agl. labour households (%)	SC	19.73	23.08	14.6	14.75	22.79
	ST	13.65	17.07	22.9	20.36	18.89
	Total	33.38	40.15	37.4	35.11	41.68

Note : * Indicates % distribution of SC and ST agricultural labour households to all SC and ST agricultural labour households respectively.

Source : Rural Labour Enquiry Reports (1963-65, 1974-75, 1977-78, 1983, 1987-88), GOI.

Table 2.6, also shows average size of landholdings which is seen as increasing till 1983. Again, one possible reason for this is the increasing participation of small and marginal farmers in the labour market and increased leasing-out activity.

Agricultural Labourers	1961	1971	1981	1991
Male	30.81	37.29	35.46	40.42
Female	37.52	60.41	54.24	52.86

Source : Census of India (1961, 1971, 1981, 1991), Economic tables, GOI.

But it is difficult to explain the sudden decline in the average size of holdings in 1987-88. Another important aspect of composition of agricultural labour force is the composition of social groups. From the Population Census data, it is quite clear

that about forty percent of agricultural labourers are from the Scheduled Castes and Scheduled Tribes. The Rural Labour Enquiry Reports present the relevant data specifically for these categories too, but the data (table 2.6) does not show any specific and distinct trend, particularly with respect to their proportion to total agricultural labour households and proportion of landless labourers in the total. The direction of change in these variables is seen to be similar to that in case of all agricultural labour households. On the whole, the data in the table shows signs of changing structure of rural labour market in terms of declining share of agricultural labour households implying diversification of employment into non-agricultural area from mid-1970s onwards. Therefore, at the state level too, we can mark two phases in the development of the sector.

2.2.3 Agricultural Labour Force in Maharashtra - Variations across Regions :

In section 2.2.2, western Maharashtra, Marathwada and Vidarbha were the three broad divisions of the state considered for the analysis. It is observed in the case of Maharashtra after 1960, that the changes related to the structure of labour force during the last thirty years are generally similar for the districts falling in the administrative zones, viz. Konkan, western Maharashtra, Khandesh, Marathwada and Vidarbha. The objective of the regional level analysis with such divisions is twofold: firstly, to understand the regional variations and secondly, to understand the changes and phases in the structure, if any, over a period of time. The districtwise analysis has to be carried out mainly with the help of the Census data as the RLE reports do not contain any district level information. The major structural indicators considered for the purpose are : (i) the proportion and number of agricultural workers including labourers and cultivators (male, female and total), (ii) supply

indicators like proportion of agricultural labourers in total working population, (iii) density of labourers. Tables 2.7 and 2.8 give details regarding these components.

On the basis of the tables, we can analyse the structure in five broad regions within Maharashtra indicating regional variations in the structure and composition of agrarian labour force. Firstly, it can be noted that though the absolute values of male and female labour force differ, both the groups exhibit similar pattern as far as regional variations are concerned. Secondly, though generally, the districts comprising same region exhibit similar features, the exceptions can not to be ruled out. A few examples can be noted in this regard. Districts in Marathwada region generally have higher population and proportion of agricultural labourers, than the other regions of the state. Exception to this is the district of Beed, possibly because of the out-migration of labourers to the districts of western Maharashtra for sugarcane harvesting during the harvest season. Similarly, within western Maharashtra, Solapur exhibits slightly higher magnitudes of number and density of agricultural labourers. As far as Konkan region is concerned, Thane being a tribal area shows different characteristics. The other district of the region viz. Raigad, being more backward than Ratnagiri, shows similarities with Thane in certain respects and with Ratnagiri in other respects. Lastly, in Vidarbha region, Nagpur shows different features than the rest of the districts eg., the proportion of agricultural labourers to total workers in Nagpur is much lower than other districts of the region and is comparable with the districts in western Maharashtra. Same can be said about the two eastern most districts of Bhandara and Chandrapur. These three districts were the core of Malguzari system of land settlement in Vidarbha and also have mixed social characteristics due to proximity to neighbouring states. Thus, certain areas seem to have still maintained their original

Table 2.7 : Structure of Agrarian Labour Force in Maharashtra.

Indicator	Observation	Relation with obvious indicators of progress in the region	Possible reasons for
1. No. of labourers (1961 to 1991) Male and Female	<p>1. There has been an increase in the number of labourers in all the districts from 1961 to 1991. The absolute number is less in WM followed by Konkan, Khandesh, Vidarbha and Marathwada in an ascending order.</p> <p>2. Rate of increase is higher for WM followed by Konkan, Khandesh, Marathwada and Vidarbha in a decreasing order.</p>	<p>Number of labourers is inversely related to the progress indicators.</p> <p>Rate of change in the number is directly related to the degree of progress indicators.</p>	<p>Lower number of labourers -</p> <ol style="list-style-type: none"> 1. Alternate employment opportunities 2. Better distribution of landholding eg : WM is an area of peasant proprietorship <p>Higher rate of change -</p> <ol style="list-style-type: none"> 1. Immigration from agriculturally backward areas eg: from Beed, other regions of Marathwada
2. No. of cultivators (1961-1991) Male and Female	No. of cultivators as well as decadewise percent change in it is more for WM followed by Konkan, Marathwada, Vidarbha in a decreasing order.	Rate of change in the number of cultivators is directly related to progress indicators.	Higher number of cultivators -
3. Proportion of agl labourers in total workers (1991) Male and Female	Proportion of labourers is higher in Thane followed by Vidarbha, Marathwada, Khandesh, WM and Konkan in a decreasing order, proportion has increased over the years in almost all the districts, proportion is higher for female labour than male labour due to lesser no. of females as owner cultivators	Proportion is inversely related to the degree of progress indicators.	Higher proportion of labourers -

Indicator	Observation	Relation with obvious indicators of progress in the region	Possible reasons for
4. Number and share of female labourers in total agricultural labourers	Absolute number of female labourers is higher than that of males for most of the districts. Therefore, share is 50percent or more. But shares have not changed significantly over the years.		Higher share of female labourers in almost all the districts indicates fewer employment opportunities in other sectors as compared to their male counterparts
5. Density of agricultural labourers (1961-1991) Male and Female	Density increased during the period. Highest in the districts Thane, Solapur and districts in Vidarbha, Khandesh, Marathwada and WM in a decreasing order	Density is inversely proportional to the degree of progress indicators.	Higher density - 1. Labour intensive crop pattern eg: Vidarbha 2. Unequal land distribution eg : Marathwada 3. Tribal area - Thane
6. Proportion of total agricultural labourers to total workers (1991)	Proportion is higher for districts in Vidarbha Marathwada followed by Khandesh, WM and Konkan in a decreasing order.	Proportion is inversely related to the degree of development	Higher value - 1. Unequal land distribution eg : Marathwada 2. Tribal area - Thane

Note : WM indicates western Maharashtra.

Source : Population variables calculates from Census of India (1961,1971,1981,1991),Economic Tables, GOI .

Table 2.8 : Proportion of Agricultural Labourers to Total Main Workers
(In percentage)

District	Male Labourers				Female Labourers			
	1961	1971	1981	1991	1961	1971	1981	1991
Thane	12.56	15.95	9.18	6.64	19.67	37.73	25.03	21.19
Raigad	9.59	15.52	11.60	13.87	12.50	25.21	18.82	24.23
Ratnagiri	5.10	8.69	6.88	9.23	7.00	13.96	9.86	12.04
Nasik	15.56	20.86	17.71	16.40	25.75	49.85	43.50	37.21
Dhule	27.80	33.70	29.32	28.16	49.12	71.32	68.75	60.44
Jalgaon	28.74	35.23	31.54	33.84	47.56	72.06	62.14	62.84
Ahmednagar	19.11	23.91	21.43	19.74	25.96	48.79	40.71	37.36
Pune	7.04	9.57	8.56	9.03	13.22	29.39	27.65	26.32
Satara	7.53	12.82	12.56	14.31	11.99	33.24	30.85	34.54
Sangli	11.63	16.81	16.58	18.00	16.97	42.20	41.82	41.39
Solapur	19.98	25.01	21.00	23.21	37.14	62.10	50.99	49.40
Kolhapur	13.04	12.98	11.48	12.47	16.64	26.32	25.45	28.09
Aurangabad	24.24	26.78	22.03	22.00	37.56	57.97	49.64	45.79
Parbhani	29.66	34.86	29.61	31.59	52.36	70.69	58.94	57.19
Beed	23.25	28.01	21.29	22.08	38.39	64.54	49.91	43.66
Nanded	26.74	30.61	26.47	30.97	49.43	71.83	59.86	58.72
Osmanabad	28.07	32.02	27.86	29.78	49.65	75.13	62.70	61.85
Buldhana	35.16	41.62	34.53	34.51	51.26	69.70	57.92	56.29
Akola	38.11	44.90	39.05	39.41	61.28	80.96	71.97	70.14
Amaravati	40.86	45.67	40.31	40.90	69.22	84.85	78.21	75.15
Yavatmal	41.68	44.95	41.09	41.77	48.88	81.68	72.83	70.90
Wardha	32.37	37.42	34.79	34.42	59.34	80.54	71.46	66.46
Nagpur	14.78	17.93	16.22	15.20	33.39	56.40	51.68	46.14
Bhandara	13.33	20.26	22.01	26.42	19.05	32.20	33.91	40.91
Chandrapur	19.35	24.54	21.50	22.89	31.68	58.91	44.50	50.61
Maharashtra	18.11	21.51	20.71	18.75	32.90	51.55	47.75	43.59

Note : New districts clubbed with the old districts.

Source : Census of India (1961, 1971, 1981, 1991), Economic tables, GOI.

character more or less eg., tribal areas like Thane or drought-prone areas like Solapur.

The phases in the structural changes observed at all India as well as at the state level can also be noted at the district level. The analysis here is carried out with the help of the Census data. We have compared the rates of change of the major variables in the initial decade i.e. 1961 - 1971 with the latter decade i.e. 1981 - 1991. It is observed that the number of agricultural labourers and their share in total agricultural workers has increased over the years which probably indicates increasing participation of marginal and small farmers in agricultural labour market. But at the same time, there has been a slow down in the decadewise rates of change. This points towards the increasing importance of non - farm activities in the rural areas during this period. The share of agricultural labourers in total main workers also seems to have increased marginally particularly during the last decade in almost all the districts as far as the male labourers are concerned. The share of female labourers in the work force does not conform to any trend (table 2.8). It is difficult to confirm the phenomenon of structural retrogression after 1990 at district level due to lack of relevant annual data. Nevertheless, such structural retrogression under NEP and consequent increase in the agricultural labour population on agricultural land might have affected the increasing trend in the real wages of agricultural labourers observed in almost all the districts since late 1970s and worsened the employment situation in the non - farm (particularly rural) sector.

The discussion on the agrarian structure in Maharashtra clearly reveals the existence of various agricultural labour markets, each comprising of districts generally falling in similar agro-climatic/administrative zones. Development of these labour markets in a particular manner was a direct consequence of not

only economic but also of political-institutional factors through the historical period. The agrarian structure today can be traced back to the historical factors. Further, the changes have been taking place in the structural aspects of the labour markets (as is clear from tables 2.7 and 2.8) after 1970 and we can make at least two phases in the same. The basic quantitative characteristics of the labour market (in terms of hierarchy of the absolute values of the structural indicators) have remained the same across the state over the years. However, changes have taken place particularly in terms of growth rates of the indicators eg. though the number of agricultural labourers and their density is lower in better developed districts of the state, the rate of increase is more for these districts as compared to the other regions.

In the absence of disaggregate level data for the present decade, it can be said that the political factors and the economic compulsions would ultimately determine adoption and initiation of various policy measures such as contraction of the role of government in economic activities at the state level and would have implications for the structure of agricultural labour force.

2.3 Wage - Growth Nexus :

Besides the underlying institutional setup, the other factor that moulds the structure of labour market is the economic growth or the forces of production as noted earlier. Growth of the agricultural sector in a particular region would have an impact on wages of labourers indirectly (through changes in the structure of labour market) as well as directly. The structural changes brought about by the agricultural growth might take form of changes in the supply and demand side of the labour market (through higher labour absorption or displacement (mechanisation), immigration or outmigration) and its composition (eg. changing share of male and female labourers

due to gender specific operations, casual and attached labour etc.) ultimately affecting the movement of wages. But the direct impact of agricultural growth on wages can be perceived more easily as well as immediately.

Wage rate paid to the agricultural labourers is one of the factor prices which gets determined in the economy or in the agricultural sector in particular. Therefore, the movement and behaviour of wages of agricultural labourers overtime has to be analysed in the context of performance of agricultural sector which is likely to affect the former. This relationship needs to be studied not only from the point of view of identifying the cause and effect relationship (i.e. in terms of factors affecting wages) but also from the normative approach. The need for studying such a relationship arises so as to understand whether growth percolates down to the level of agricultural labourers and improves their standard of living. In other words, growth in the agricultural sector should ultimately impinge upon the problem of poverty through its impact upon wages of agricultural labourers.

An increase in output causes upward increase in wages through the demand enhancing effect. The growth of the output through bio-chemical innovations would not only increase the demand for labourers but also the importance of timeliness of each operation and the demand for their timely availability and hence their bargaining power (Bardhan (1984a)). On the other hand, possibility of increase in the output through mechanisation and labour saving devices can not be denied. Thus, the net effect on wages, through demand for labour would depend upon the relative strengths of the two opposing forces.

There are only a few studies which have tested the relationship between growth rate of output and wage rates (Jose (1988), Acharya - Papanek (1989)). Acharya concluded that there is a one to one correspondence between real wages and per capita

income in agriculture and that higher rates of growth are accompanied by rising real wages. In his model, the regression equations indicated that land productivity (proxy for labour demand) has major effect on wages. Jose (1988) too observed a close association between wages and agricultural output though the strength of the relation was not ascertained. He concluded that the singlemost variable influencing wages is agricultural output and as many as nine states (Gujarat, Orissa, Rajasthan, Uttar Pradesh, Assam, Karnataka, Haryana, Himachal Pradesh and West Bengal) have followed a particular pattern suggesting positive relationship between wages and productivity. But at the same time, it is observed that six states including Maharashtra do not fit into the pattern. These states not only include the states wherein increase in output was negatively co-related with that in wages but also those wherein wage increase was proportionately higher than output increase. This implies that the movement and behaviour of wages can be explained in terms of additional factors and several such factors have been pointed out. Thus, output growth may not necessarily lead to higher growth rates in wages in a particular situation due to several other factors such as immigration of labourers into a particular area (eg. in Punjab, Haryana, Rajasthan). Other situations observed empirically are those where wages have increased inspite of growth of agricultural sector due to factors like, demand for labour from non-agricultural activities, minimum wage legislation (Kerala) (Acharya and Papanek (1989)). Thus, wages seem to be affected by several factors other than the movement of agricultural output and demand for labour in agriculture. It is observed that non-agricultural employment opportunities in the rural areas have acted as boosting factors in the movement of agricultural wages during 1970-1985. According to this hypothesis, poverty in the rural areas reduced

significantly during this particular period due to rise in real wages of agricultural labourers. (Sen (1994,1996)). The rise in real wages in this case was more a consequence of rise in the government expenditure in rural areas in non-agricultural sector during the period from mid- 1970s upto 1990 in most of the parts in India. It is also observed that incidence of poverty reduced in most of the regions of rural India in the context of not only stagnant agricultural output per head but also where agricultural employment has grown much slower than growth of rural labour force. Hence, a disassociation between growth of agricultural sector and poverty (real wages) is also observed (Sen(1996)). However, it has to be kept in mind that the factors which have affected wages positively in the absence of agricultural growth, are those which are external to the agricultural sector eg. Government expenditure in rural areas, other non-farm job opportunities in rural as well as urban areas and their sustainability is doubtful particularly in the changed economic scenario after 1990 i.e. under the NEP measures. Therefore, theoretically as well as empirically significance of the wage- growth relationship can not be denied.

Apart from the output-wage link through demand, wage rates also get affected due to prices of the commodities consumed by the labourers. Foodgrains and food articles constitute important proportion of their total budget. The relative prices of foodgrains concerned, have greater impact on purchasing power or the real wages of the labourers. Decline in the relative prices of foodgrains was sighted as one of the reasons behind declining inter-state disparities in real wages after mid - 1970s. (Jose (1988), Rao (1989)). In eastern states too, the phenomenon of recent rise in real wages due to increase in foodgrains output was observed (Rao and Gulati (1994)).

Apart from the relation of wage rates with increased agricultural output, wage-productivity linkage can also be understood.

Unlike output, productivity per worker provides a norm for the wage rates. Any increase in productivity is expected to get reflected in the magnitude of share of wages. But it is well known that wages of agricultural labourers have always lagged behind their marginal product. This particular phenomenon has been explained in terms of 'Schumpeterian impact' of productivity enhancing innovations wherein during the period of application of new technology, productivity increases at a faster rate and the gap between wages and productivity increases. It is only in the latter period that wages catch up with the productivity (Bhalla (1993), Reddy (1993)). The initial period is marked by productivity boom, whereas the latter period is characterised by higher growth rates of wages. Evidence of this phenomenon have been noted by Nayyar (1977), Reddy (1993). Thus, capital accumulation and depressed wages in agriculture are sought to be explained in the context of technological innovations just as they were explained for the European countries especially England, in the early stages of industrial development.

The mechanisms through which agricultural growth operates upon wages of labourers, their pace and direction of movement are varied. There are factors other than those internal to the agricultural sector which also influence wages favourably. Indian evidence shows that they are more in the nature of distress diversification factors. As mentioned earlier, their sustainability is doubtful (eg. government expenditure especially under NEP and also the lower employment elasticity of the industrial sector) and they are more of a supplementary nature. Therefore, growth of the agricultural sector itself would provide a sound basis and a particular direction to wages. Here, the bargaining power of the labourers attains importance especially in the situation of 'Schumpeterian impact' of innovations. Under this phenomenon, output growth may not necessarily push up

wage rates. This might also be true for regions with unequal land distribution where adoption of new technology and consequent capital accumulation by the large farmers may not necessarily translate into wage increases. In such cases, the bargaining strength of workers would help narrow down the gap between increasing productivity per worker and the wages.

In the study by Jose (1988), it was observed that in Maharashtra the agricultural output did not lead to significant increase in wages during mid - 1970s. As is clear from the 'Agricultural Wages in India' (AWI) data, Maharashtra is a state wherein wages of labourers are amongst the lowest in the country. This is a cause of concern. It is essential to look into the agricultural development of the state in brief, over the period of time, so as to know whether the wage-growth link can be observed. This would help us further in the analysis of wage rates of agricultural labourers.

2.3.1 Agricultural Development in Maharashtra :

Evaluation of the performance of the agricultural sector in Maharashtra can be considered over a period of time and across the state i.e. in different agro-climatic zones of the state. We consider here, the major indicator of growth of the agricultural i.e. the foodgrains production. The agricultural sector in Maharashtra experienced growth during the 1970s and the foodgrains production index rose rapidly. Higher growth rate of output during this period was on the background of the steep fall in the output between 1970-71 and 1973-74. The growth rate of state domestic product (SDP) in agriculture during the period from 1968-69 and 1981-82 was 4.48 percent per annum and that of foodgrain production was 5.66 percent per annum (Sawant and Achuthan (1995)). On the other hand, it was found that during the 1980s, the performance of western India (including Maharashtra) was very unsatisfactory (Sawant and

Achuthan (1995)). As against the higher growth rate of SDP during 1970s, the growth rate was 2.24 percent per annum during 1980s, and the same in foodgrains production was 2.10 percent per annum.

In another study too, growth rates of foodgrains production during 1970s were found out to be much higher than 1960s and 1980s, in all the regions of Maharashtra (Khare (1993)). This is clear from table 2.9.

It can be seen from the table that growth rates are either negative or very low during the 1960s. However in 1970s, in all the regions including Marathwada and Vidarbha (Aurangabad, Amaravati and Nagpur regions), growth rates were high and positive. Khandesh, Kolhapur and Amaravati regions recorded highest growth rates, Nagpur and Pune were at moderate level and the Konkan region

Table 2.9 : Regionwise Compound Growth Rates of Foodgrains Production in Maharashtra. (Percent per annum)

Phase	Regions ³							
	Mah	Konkan	Nasik	Pune	Kolhapur	Aurangabad	Amaravati	Nagpur
1960s	0.07	0.28	-0.19	-0.83	-3.81	0.27	3.17	1.15
1970s	4.40	2.32	4.56	3.39	4.68	4.66	5.30	3.28
1980s	0.27	2.31	0.71	0.98	2.94	0.50	0.84	-4.13

Note : 1. Mah= Maharashtra. 2. Classification of Maharashtra in various regions is on the basis of revenue divisions.

Source : Khare (1993).

recorded lowest growth rate among all the regions. Again, in the third phase i.e. during 1980s, all the regions exhibited a deceleration in the growth rates. It was pointed out that the poor performance during the last phase was probably the reflection of weather induced instability. The crops which experienced higher growth rates during the second period were Rice, Wheat, kharif Jowar and Sugarcane and the increase in the production of these crops was region specific. This can be seen from table 2.10. It is clear that all the regions have experienced growth of production of at least one major crop during the 1970s. As mentioned earlier, growth of the agricultural sector

would influence wages of agricultural labourers through different mechanisms. It would be interesting to study the wage rate structure in Maharashtra against the background of agricultural development across the state.

Table 2.10 : Regionwise Compound Growth Rates of Production of Selected Crops during the 1970s.(Percent per annum)

Region	Crops			
	Rice	Wheat	Kharif Jowar	Sugarcane
Konkan	2.89	-	-	-
Nasik	-	5.57	8.94	10.19
Pune	-	12.74	-	5.11
Kolhapur	7.99	12.04	5.30	5.51
Aurangabad	-	11.21	8.80	5.35
Amaravati	-	11.11	4.91	-
Nagpur	3.30	8.02	3.97	-
Maharashtra	4.55	9.64	6.88	5.87

Source : Khare (1993)

2.4 Structure of Wage Rates in Maharashtra :

A review of the studies on wages of agricultural labourers in Maharashtra reveals that among the micro-level studies - especially notable are those based on the data collected at ICRISAT. These studies mainly attempted towards obtaining a clear understanding of the working of agricultural labour markets in its different aspects like tenurial relations, labour market arrangements, interlinkages between the factor markets, changes in labour relations, employment and supply behaviour of the wage rates in the SAT regions (eg.: Solapur and Akola in Maharashtra)(Jodha (1984), Binswanger et al (1984), Ryan and Ghodke (1984)). Another study attempting an analysis of the process of commercialisation in Vidarbha region (Varhad*- especially Amaravati district) and the changes like casualisation of labour, fluctuating and low real wages etc. (Reddy (1985)) is worth noting here. Apart from these studies, a few studies have dealt with the analysis of interstate variations (including Maharashtra) in the agricultural wage rates (Jose (1988), Acharya (1989)). The latter two studies dealing with time series data for the period from 1970 upto mid - 1980s (1970-71 to 1984-85), noted a

* Varhad is traditional name for a region within Vidarbha comprising of districts Buldhana, Akola, Amaravati and Yavatmal.

sharp fall in the real wages of agricultural labourers in Maharashtra in 1974-75 and an overall period of stagnancy till mid - 1980s. The conservative rise till mid-1980s, in wages inspite of a moderate rise in growth rate of agricultural output was explained in terms of uneven adoption of HYV technology and hence investment in agriculture. (Acharya and Panwalkar (1989)). It was pointed out by the authors that this resulted in concentration of labour demand in regions with higher percentage of area under HYV seeds and specifically in the sugarcane growing regions (viz. in south west Maharashtra and Konkan). Therefore, overall wage rate for the entire state registered a slow rise (Acharya and Panwalkar (1989)). It has been already noted that there were differences in the nature of development of the agricultural sector in different regions of Maharashtra both in terms of agrarian relations and forces of production. In the historical development process, western Maharashtra emerged as the most developed region of the state due to the favourable nature of factors as well as relations of production. Later, new varieties of seeds were introduced during the phase of new technology in this region. Especially due to ready availability of infrastructural facilities like irrigation, electricity, roads, credit etc., the adoption was much quicker as compared to the other regions. The new high yielding varieties of Jowar, Wheat and Cotton benefited the farmers in these areas with higher proportion of irrigated land. As a result, plan investments accelerated in some measure the process of differentiation among peasantry across the size classes and regions. While the agricultural labour force also benefited to some extent in this region, the labourers in Marathwada and Vidarbha could not find adequate wage employment due to the slower pace of development of this region (Brahme and Upadhyaya (1979)). With these historical developments in mind, we attempt here, district level analysis of the wage structure and look for the possible determinants of the same. This would indicate the role

played by the institutional as well as economic factors in shaping the wage behaviour in different regions of the state.

The studies so far relating to the issues on wages of agricultural labourers have mainly dealt with the AWI data for state level analysis. As mentioned earlier, use of 'Season and Crop Report' (SCR) data for studying the inter-district variations is considered appropriate. With the help of this data, analysis of wage structure in Maharashtra would throw light on the trends in money and real wages of male and female labourers, the regional variations and the gender differences therein. The time period considered for the analysis is from 1961 (i.e. from the formation of the state of Maharashtra) to 1994 for males and from 1968 to 1994 for females due to the non-availability of the data for agricultural wages of female labourers in the earlier period.

2.4.1 Structure of Wage Rates in Maharashtra - State Level

Analysis :

Average money wage rates of male and female labourers and the graphical representation thereof (figures 1a and 2a) show that at the state level, money wage rates have been rising continuously between 1961 to 1994 and 1969 to 1994 respectively. Differences in the slope of the general trend line over the period can be used to broadly demarcate three distinct phases of rise in money wage rates.

These are :

1. First phase (1960-61 to 1978-79 for males and 1968-69 to 1978-79 for females): This period appears to be a period of stagnancy in money wage rates.
2. Second phase (1979-80 to 1987-88) : It is clear from the graphical representation that the rate of growth of wage levels is higher in this period than the earlier one. The beginning of this phase marks the end of the phase of stagnation.

3. Third phase (1988-89 to 1993-94) : The rate of growth of money wages is seen to be higher during this period than in the second phase. The slopes of the two series in this period are higher.

Stagnancy in the wage rates during the first phase can perhaps be explained in terms of absence of factors (economic, technological, institutional) providing stimulus for the upward movement of wage rates. An increasing trend in wage rates during the second and third phase can be attributed to a combination of such factors.

It can also be noted that there is a similarity in the pattern of movement of wages in the case of male and female labourers. This implies that both the series seem to have a tendency to move together and appear to get affected by similar factors.

As against the trends in average money wage rates, real wage rates of both male and female labourers show wide variations (figures 3a and 4a). These are due to the fluctuations in the consumer price index of agricultural labourers (CPIAL). Broadly, two phases can be marked in the case of real wages, firstly, from 1961-62 to 1974-75 (1968-69 to 1974-75 for females) and secondly, from 1975-76 to 1993-94. A gradual decline in real wages is observed from 1970-71 onwards upto 1975, due to the general price rise in the economy caused due to the war of 1971 and the severe drought during 1972-73. After 1975, there is an increase in the average wage level but this is marked with wide fluctuations.

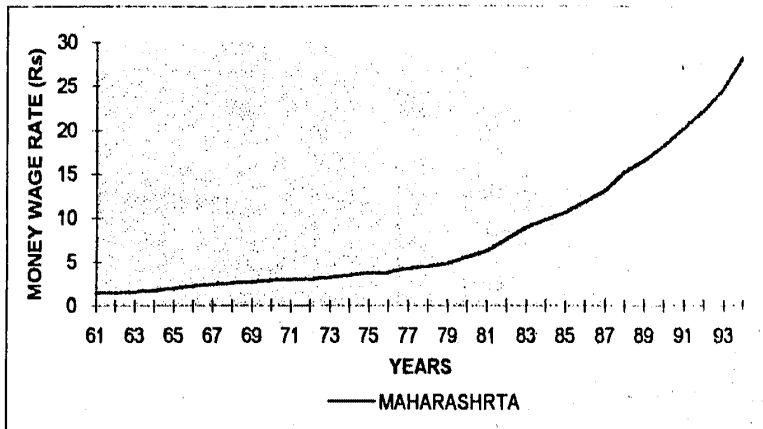
Differences in the slopes of trend lines of money wage rates in the case of all the districts calls for a phasewise analysis of wages, which seem to have got affected by particular factors during the second and third phase. Analysis of wages at disaggregated level i.e., at district level would be helpful in analysing these issues further.

2.4.2 Regional Variations in the Wage Structure :

Trends in money and real wages of different districts show no different picture than that at the state level (figures 1b to 1i and 2b to 2i). Thus, money wages have risen in all the districts both for

State Level Trend in Money Wage Rates of Male Agricultural Labourers

FIGURE 1a



Districtwise Trends in Money Wage Rates of Male Agricultural Labourers

FIGURE 1b

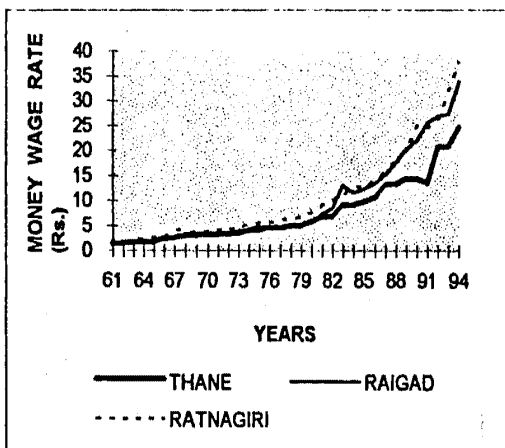


FIGURE 1c

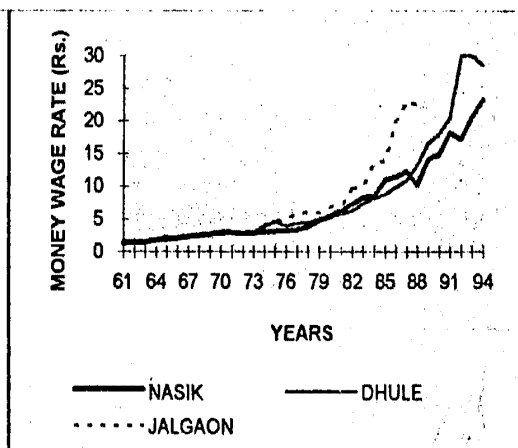


FIGURE 1d

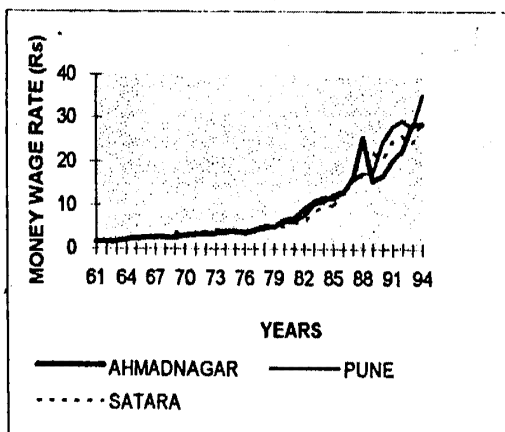
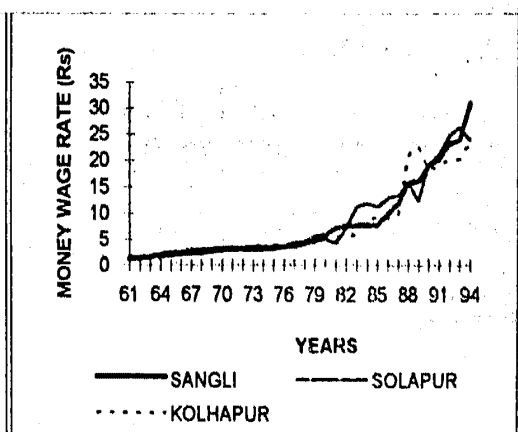


FIGURE 1e



Districtwise Trends in Money Wage Rates of Male Agricultural Labourers

FIGURE 1f

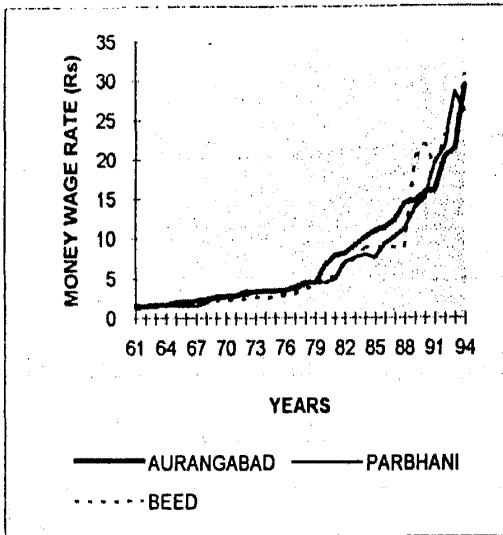


FIGURE 1g

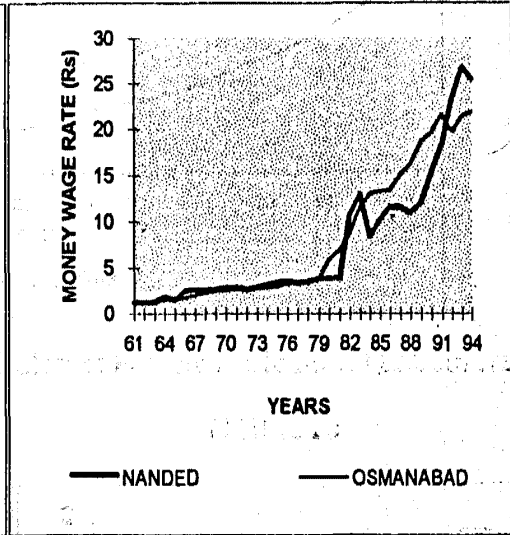


FIGURE 1h

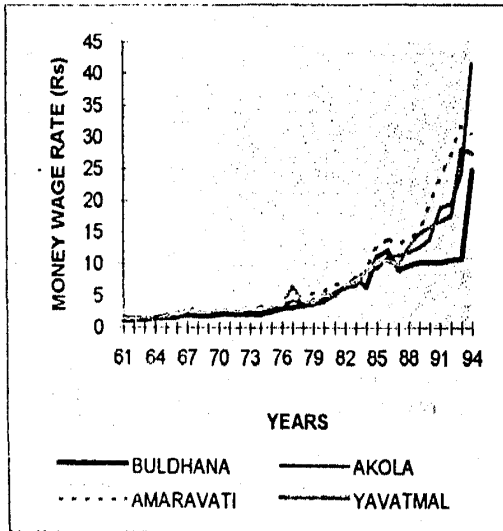
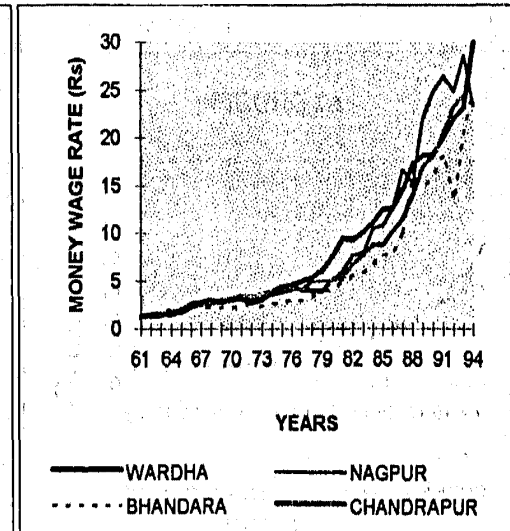
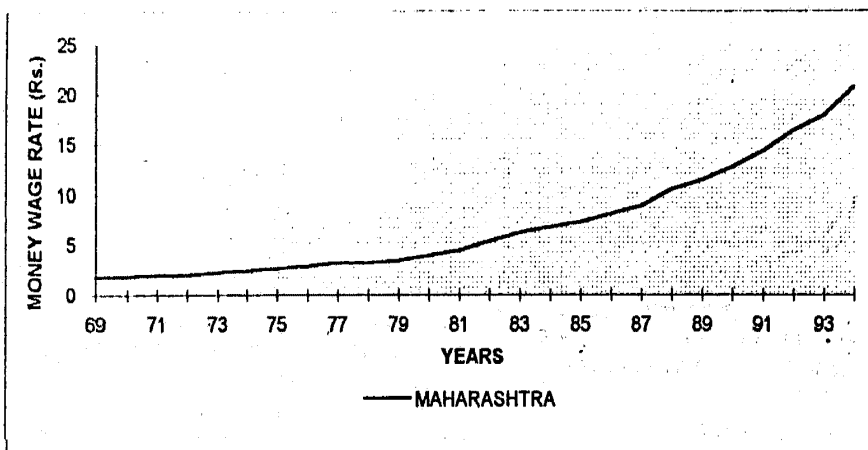


FIGURE 1i



State Level Trend in Money Wage Rates of Female Agricultural Labourers

FIGURE 2a



Districtwise Trends in Money Wage Rates of Female Agricultural Labourers

FIGURE 2b

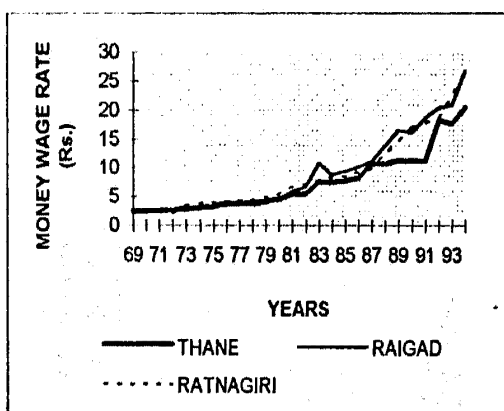


FIGURE 2d

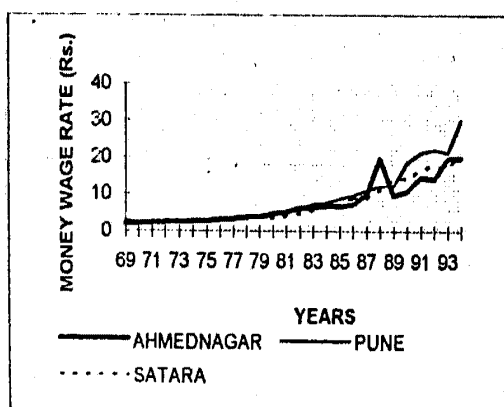


FIGURE 2c

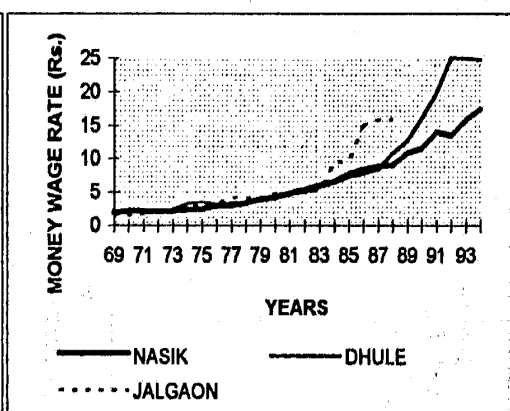
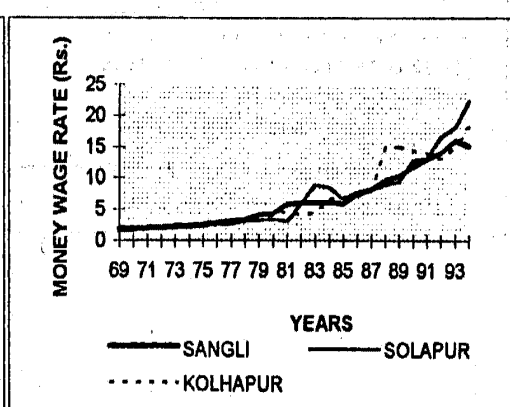


FIGURE 2e



Districtwise Trends in Money Wage Rates of Female Agricultural Labourers

FIGURE 2f

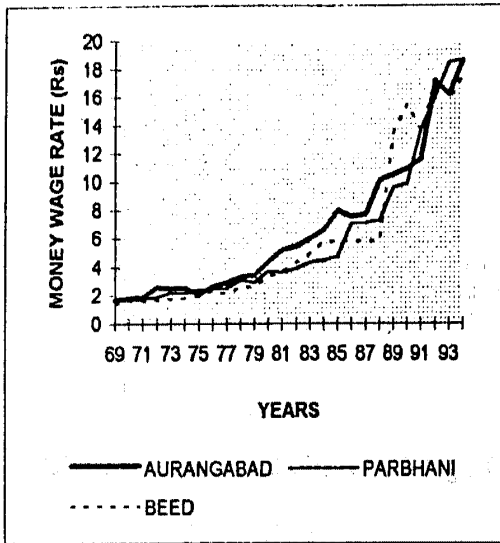


FIGURE 2g

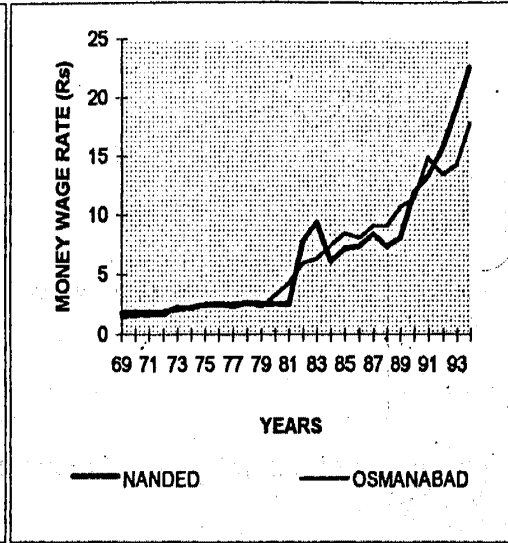


FIGURE 2h

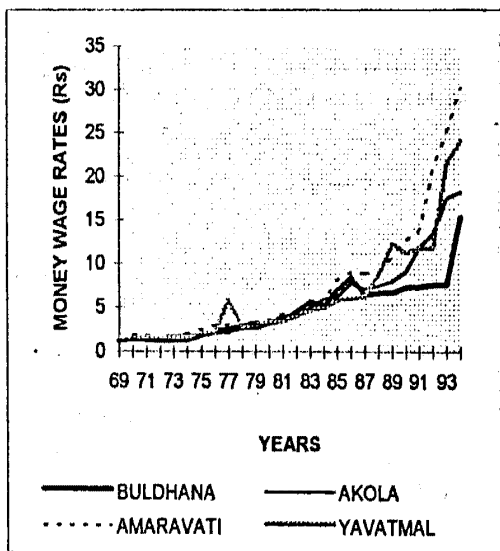
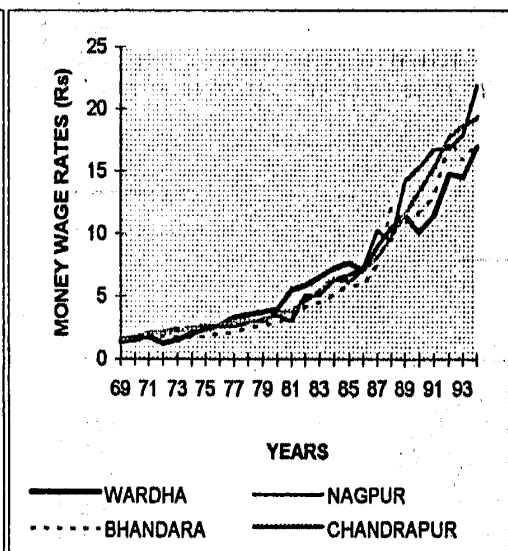
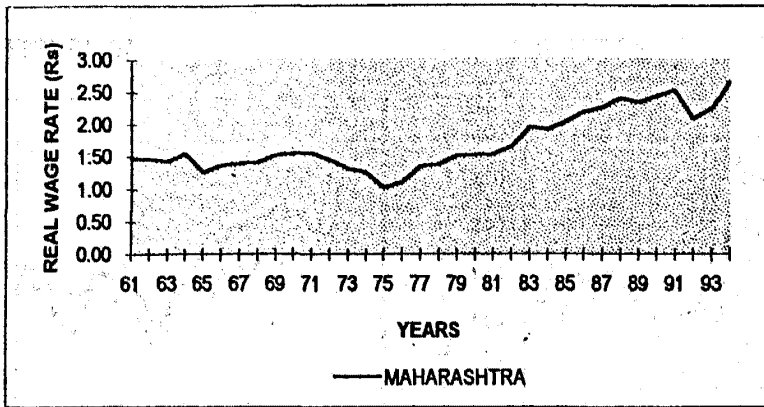


FIGURE 2i



State Level Trend in Real Wage Rates of Male Agricultural Labourers

FIGURE 3a



Districtwise Trends in Real Wage Rates of Male Agricultural Labourers

FIGURE 3b

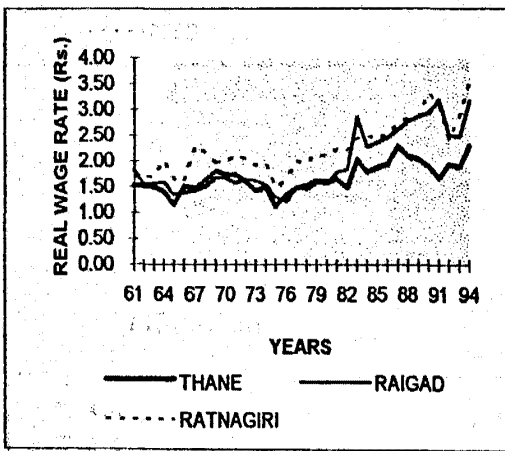


FIGURE 3c

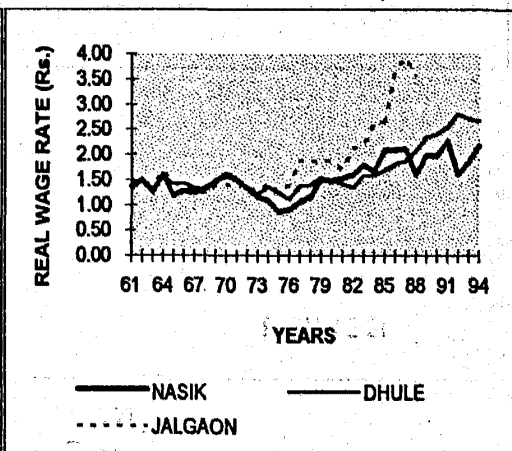


FIGURE 3d

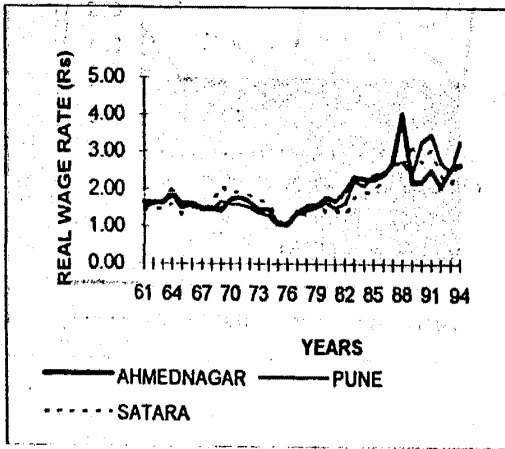
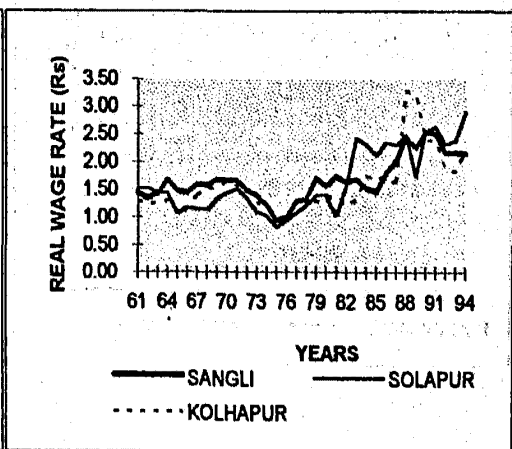


FIGURE 3e



Districtwise Trends in Real Wage Rates of Male Agricultural Labourers

FIGURE 3f

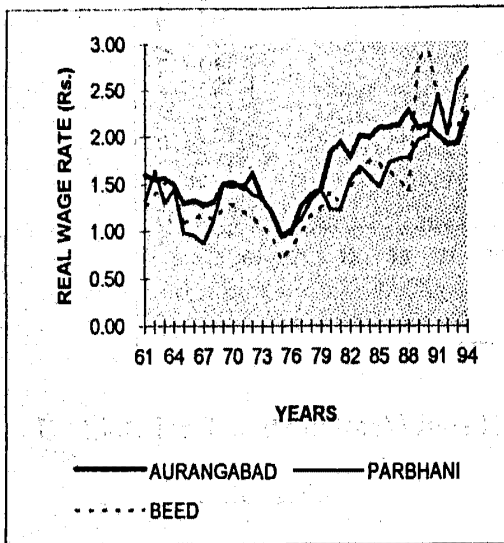


FIGURE 3g

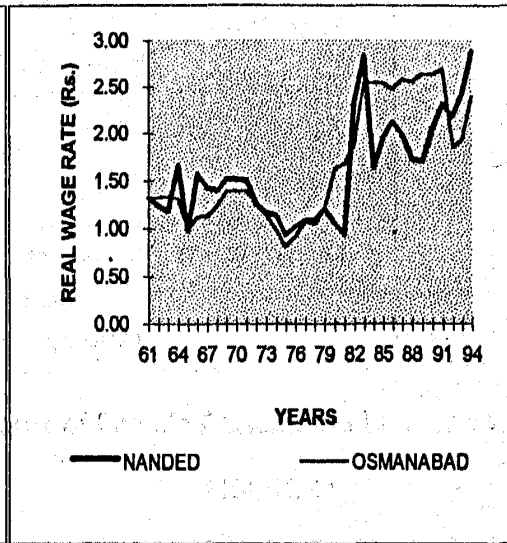


FIGURE 3h

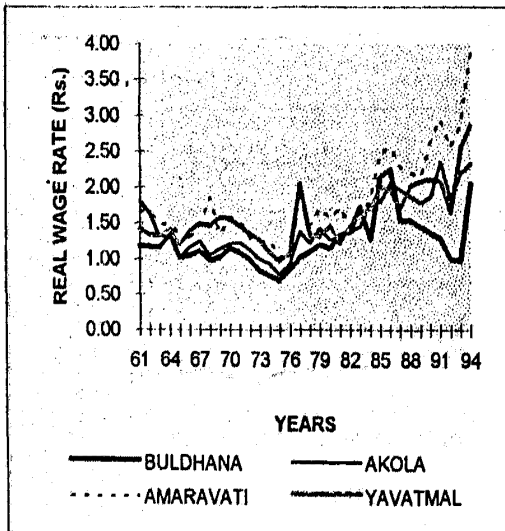
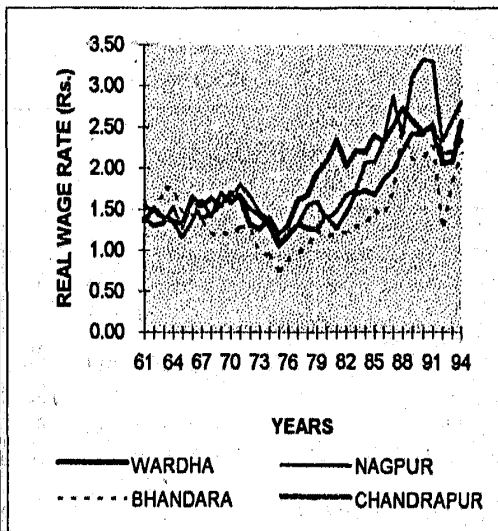
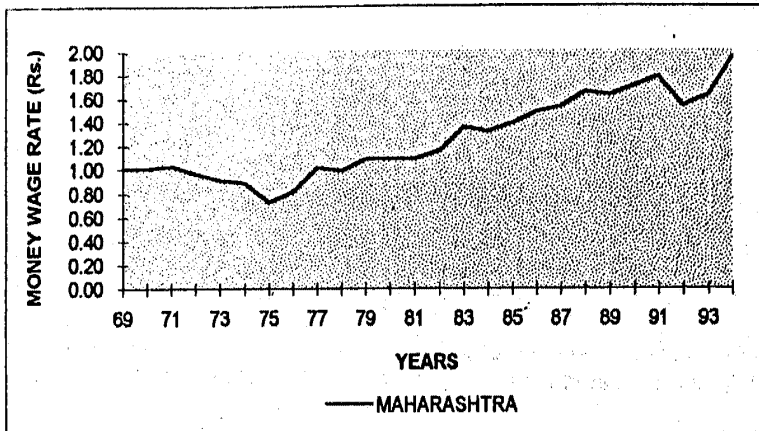


FIGURE 3i



State Level Trend in Real Wage Rates of Female Agricultural Labourers

FIGURE 4a



Districtwise Trends in Real Wage Rates of Female Agricultural Labourers

FIGURE 4b

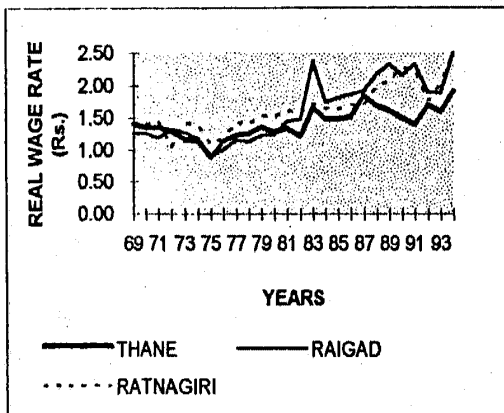


FIGURE 4c

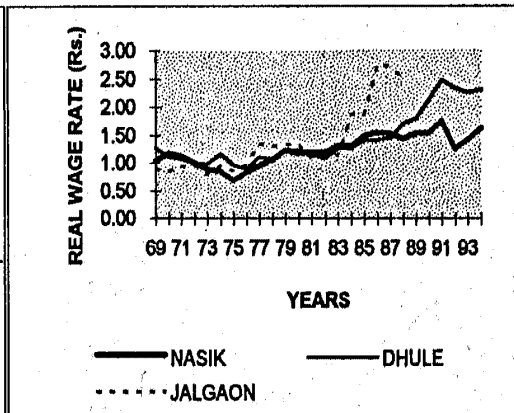


FIGURE 4d

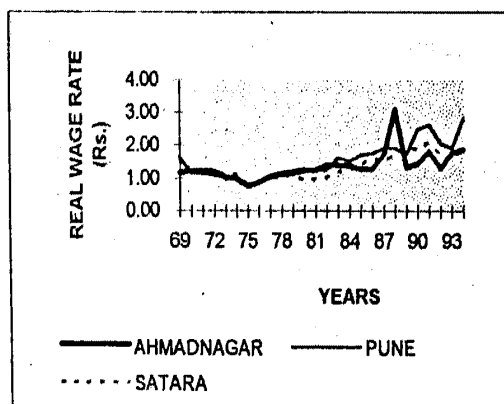
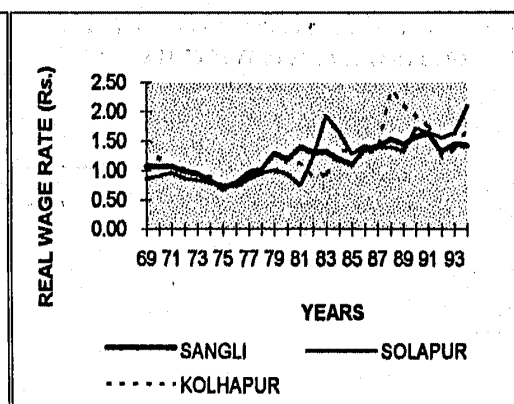


FIGURE 4e



Districtwise Trends in Real Wage Rates of Female Agricultural Labourers

FIGURE 4f

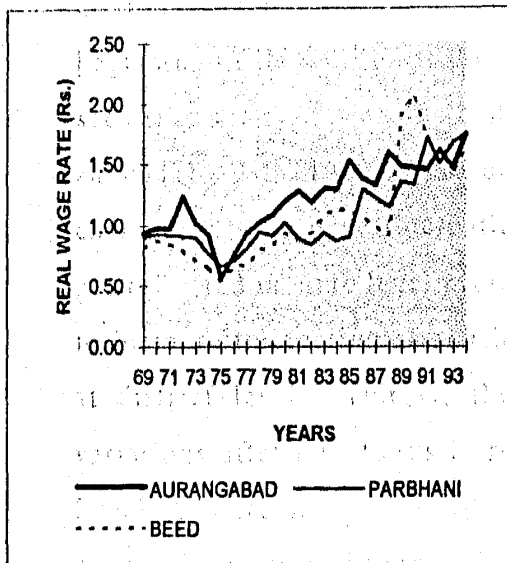


FIGURE 4g

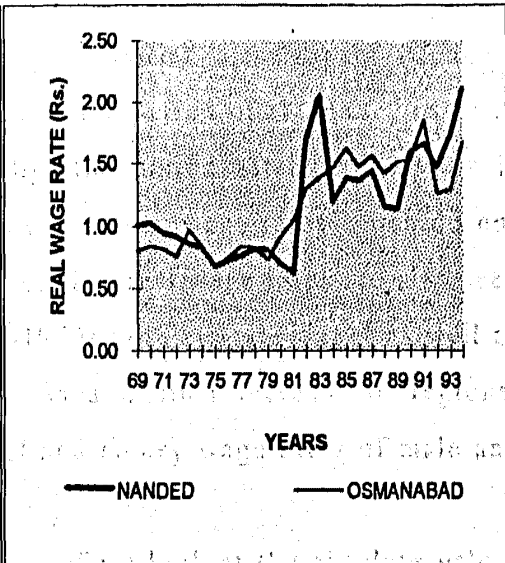


FIGURE 4h

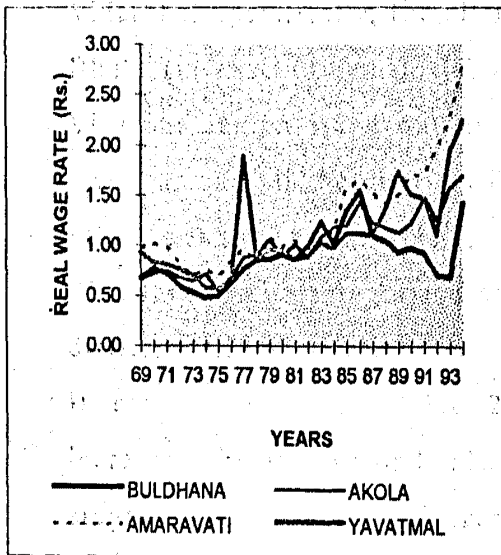
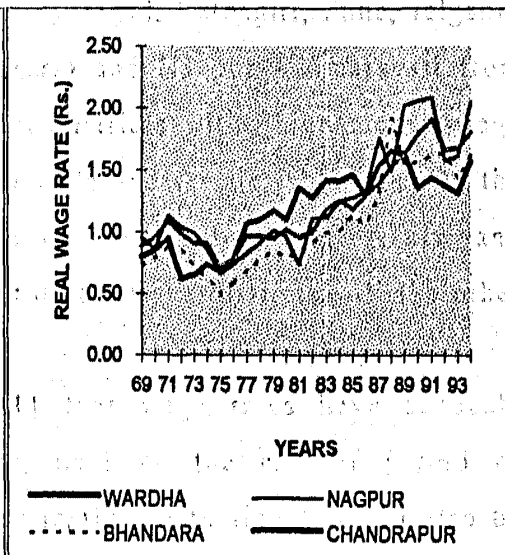


FIGURE 4i



male and female labourers with a sharp fall in 1992-93 followed by an increase in 1994. Three distinct phases can be noted, for all the districts, though the exact years of end of one phase and the beginning of the other differ from one district to the other. It can be seen that firstly, for all the districts, the period of stagnancy came to an end by late 1970s. Secondly, the period after mid-1980s is characterised by wide fluctuations in money wage rates which do not get reflected in state level average. The real wage rates are also seen to be more fluctuating after mid-1970s both at state level as well as at district level. Thirdly, there is a distinct increase in regional variations after late 1970s in real and money wage rates of male and female labourers.

These observations become obvious if we look at the absolute values of money wages in the three phases as presented in table 2.11. It can be seen that on an average, the values are higher for districts in western Maharashtra, Konkan and Khandesh than in Marathwada and Vidarbha. Specifically, the districts Raigad, Ratnagiri, Pune, Jalgaon, Dhule (in case of female labourers) and Nagpur - Amaravati from Vidarbha region stand out as the districts with high money wage level among all the districts for male and female labourers. On the other hand, Thane, Nasik, Aurangabad, Buldhana, Akola and Bhandara can be categorised as the low wage districts. All the other districts fall in between.

It can be seen from table 2.11 that wage rates have suddenly increased in the second phase, implying the end of period of stagnancy along with an increase in the fluctuations. It can also be noted that as compared to the first phase, the differences in the wage levels are higher reflecting an increase in the regional variations.

The values of coefficients of variation at the state level for all the years concerned are presented in table 2.12. These can be effectively used to mark the period of variability in wages at the state level and also indicate some tentative factors causing such destabilisation even at a point of time. It can be seen from the table that there is an

**Table 2.11 : Districtwise, Phasewise Average Money Wage Rates
(In Rs. per day)**

District	Male			Female		
	1961-79	1980-88	1989-94	1961-79	1980-88	1989-94
Thane	3.15	9.41	18.08	3.24	7.57	15.02
Raigad	3.17	11.61	25.97	3.08	9.02	19.83
Ratnagiri	4.01	12.34	27.54	3.57	8.43	19.52
Nasik	2.61	8.92	18.00	2.58	6.82	13.86
Dhule	2.89	8.36	23.90	2.85	6.74	20.55
Jalgaon	3.15	14.01	-*	2.78	9.53	-*
Ahmednagar	3.15	12.32	21.99	2.82	8.07	14.67
Pune	3.02	11.04	26.92	2.77	7.96	20.81
Satara	3.26	10.16	24.50	2.81	6.67	16.78
Sangli	2.94	8.89	20.75	2.56	6.52	13.34
Solapur	2.52	10.18	22.30	2.29	6.69	15.37
Kolhapur	2.71	8.80	20.53	2.54	6.74	14.96
Aurangabad	2.78	10.08	18.66	2.48	6.75	14.15
Parbhani	2.59	7.82	21.24	2.23	5.10	14.35
Beed	2.30	7.62	22.09	1.95	5.00	15.51
Nanded	2.59	9.31	21.12	2.21	6.51	15.12
Osmanabad	2.39	11.53	21.10	2.12	6.86	13.72
Buldhana	2.11	8.05	12.35	1.79	5.64	8.67
Akola	2.43	8.39	19.01	2.01	5.66	13.01
Amaravati	2.92	9.99	26.47	2.32	6.46	18.94
Yavatmal	2.84	8.51	20.55	2.32	5.30	15.46
Wardha	3.17	11.65	21.55	2.30	7.02	13.23
Nagpur	2.97	10.28	26.13	2.36	2.69	17.17
Bhandara	2.44	7.67	17.73	1.90	5.74	14.38
Chandrapur	2.92	8.65	21.37	2.40	6.09	15.99
Maharashtra	2.84	9.84	21.66	2.48	6.77	15.58

Note : 1. *Average money wage rates could not be calculated due to non-availability of data, 1989 onwards. 2. New districts clubbed with the old districts.

Source : Computed from SCR, various issues.

Table 2.12 : Yearwise Coefficients of Variation of Average Money Wage Rates at the State Level. (In percentage)

Year	Male	Female
1960-61	11.31	NA
1961-62	09.85	"
1962-63	11.14	"
1963-64	12.53	"
1964-65	16.06	"
1965-66	14.25	"
1966-67	17.97	"
1967-68	18.74	"
1968-69	15.71	23.41
1969-70	13.14	18.65
1970-71	14.20	17.33
1971-72	15.83	20.43
1972-73	18.15	22.42
1973-74	<u>20.24</u>	<u>23.48</u>
1974-75	19.74	20.19
1975-76	17.11	17.88
1976-77	<u>21.43</u>	<u>25.44</u>
1977-78	16.85	15.98
1978-79	16.01	17.87
1979-80	17.43	17.25
1980-81	21.64	22.57
1981-82	18.36	19.19
1982-83	<u>22.40</u>	<u>26.34</u>
1983-84	19.10	18.22
1984-85	16.87	16.67
1985-86	20.27	22.29
1986-87	23.93	22.79
1987-88	<u>25.56</u>	<u>29.11</u>
1988-89	20.40	20.46
1989-90	18.14	20.81
1990-91	19.43	20.89
1991-92	20.21	21.88
1992-93	18.48	20.35
1993-94	17.31	20.05

Note : 1. Underlined years are those characterised by higher values.
2. New districts clubbed with the old districts.

Source : Computed from SCR, various issues.

increase in the interdistrict variation in wages of male labourers especially after mid-1970s though the increase is not very smooth. However, for wages of female labourers, such a clear increase is not noticed. But it can be noted that the values of coefficients are higher for female labourers than male labourers in the initial years i.e., upto mid-1970 as well as during the underlined years in table 2.12. This may be due to vast differences in absolute levels of money wages of female labourers across the state, in the initial years.

This phenomenon of increase in regional variations can be explained to some extent in terms of the uneven adoption of new technology in various regions of Maharashtra in the early years and also the differential impact of various other factors (eg: migration, increase in non-farm job opportunities, activities of the labour organisations etc.).

It can also be seen that the values of the coefficient of variation show a distinct rise in these particular years : 1974, 1977, 1983 and 1988 for both male and female labourers. Interestingly, these are the years of introduction of minimum wage legislation (1974) and revisions in it (1977,1983,1988). Higher values of coefficients of variation in these years can be explained in terms of quicker implementation of the revised minimum wages in certain areas before the other areas, thus temporarily causing wide regional gaps. A fall in the values of coefficients in the subsequent years might be indicative of gradual implementation of the law and adjustment of prevailing wages accordingly in the other areas.

The values of coefficient of variation for each district for the concerned period would give us an idea about the magnitude of wage fluctuations in various districts and their relative instability in the wage levels in the state as a whole. Table 2.13 presents these values. The coefficients of variations are seen to be higher for male labourers in all the districts as compared to female labourers. The trends as well as levels of male agricultural labourers thus appear to be more susceptible to economic stimuli. The tendency of wages to fluctuate

Table 2.13 Districtwise Coefficients of Variation.**(Percent per annum)**

District	Male (1961-94)	Female (1969-94)
Thane	81.69	68.03
Raigad	94.34	76.54
Ratnagiri	89.09	73.65
Nasik	86.56	69.52
Dhule	101.98	89.48
Jalgaon *	93.84	79.89
Ahmednagar	90.38	75.89
Pune	99.74	86.91
Satara	93.33	77.74
Sangli	89.69	68.24
Solapur	99.70	81.85
Kolhapur	94.70	76.22
Aurangabad	84.23	73.42
Parbhani	101.84	85.21
Beed	102.32	87.91
Nanded	99.32	84.55
Osmanabad	91.81	74.23
Buldhana	84.83	69.12
Akola	95.35	81.62
Amaravati	106.70	98.21
Yavatmal	96.45	91.75
Wardha	84.44	70.48
Nagpur	98.36	84.48
Bhandara	93.41	85.77
Chandrapur	92.06	81.70
Maharashtra	92.07	77.74

Note : 1.* Coefficients of variations calculated for the year 1961-88 and 1969-88 for male and female labourers respectively due to non-availability of data, 1989 onwards.
2. New districts clubbed with old districts.

Source : Computed from SCR, various issues.

seems to be lower in Thane, Ratnagiri, Nasik, Sangli, Buldhana and Wardha. Higher values of coefficients in particular districts (like Dhule, Parbhani, Beed, Amaravati etc.) imply either higher rates of growth in wages or higher fluctuations. As far as the latter aspect is concerned, it indicates greater sensitivity of wages to the influencing factors. The case of Beed district can be noted in this regard. Beed which is a backward district shows one of the highest values of coefficients possibly because of higher as well as fluctuating wages received by the local labourers who migrate out of the districts to western Maharashtra for sugarcane harvesting leading to increase in the local wages due to the scarcity of labour. Similar pattern (like in the case of male labourers) is also observed in the case of female labourers, though not so prominent. Lower values of the coefficients for wages of female than the male labourers imply that in absolute terms, female wages have lesser range of variation. It can also be noticed that for female labourers, district level variations in wages over the years is lesser than the annual variations at the state level with respect to the corresponding variations in male wages. This shows a tendency of wages of female labourers to stick around the mean wage levels prevailing in the district.

It can also be noted further that the districts with higher variation (than the state average) are the districts with higher growth rates (than the state average) with a few exceptions (see table 2.13). The graphical representation of money wages show that apart from growth rates, the fluctuations are also higher in the case of districts like Jalgaon, Solapur, Beed, Nanded, Osmanabad, Buldhana and Bhandara for both male and female labourers. In these cases, the fluctuations are of a higher magnitude in the second phase. Thus, we can say that higher growth rates during this period are accompanied by higher fluctuations in wages implying possibly the greater effect of and sensitivity to temporary factors affecting wage rates.

A look at the graphical representation (figures 3b to 3i and 4b to 4i) of real wage rates of the districts shows that wages have touched the

lowest level in the year 1975. After 1975, a rise is noted in the real wage rates with wide fluctuations in case of both male and female labourers. In both the cases, three peaks are noted, located at 1983, 1988 and 1994 in most of the districts. The initial two years among these happen to be the years of revisions in the minimum wage legislation in the state. After this period, real wages seem to have declined in early 1990s possibly as a consequence of general price rise after the financial crisis of 1990-91 and the policy changes undertaken after that. But again, the real wages have registered an increase in almost all the districts upto 1994. Again incidentally, 1994 is the year of fourth revision in minimum wages in the state. Thus apparently, there seems to be a positive relationship between minimum wages and the movement in real wages as the rise in money wages (due to the rise in minimum wage) is relatively higher than the price rise in these particular years.

2.4.3 Growth Rates of Money and Real Wages :

Graphical representation of money and real wage rates clearly brings out their movement through all the years, peaks and troughs in the trend line and various phases in it which seem to be guided by the revisions in minimum wages as well as other factors. Analysis of growth rates in a particular period would also help us in understanding the structure of wage rates as well as the regional variations across the state. It is difficult to comment on the growth behaviour as such of different districts at a glance, on the basis of levels of money wages and real wages. Therefore, it is necessary to classify districts by their growth performance. Growth rates of money and real wages for male and female labourers are presented in table 2.14. A classification of the districts based on the table 2.14 is presented in table 2.15, with the growth rate of the state taken as threshold for classification purpose.

Table 2.14 : Districtwise Compound Growth Rates of Money and Real Wages.
(Percent per annum)

District	Male		Female	
	MW (1961-1994)	RW	MW (1969-94)	RW
Thane	8.55	1.14	8.94	1.55
Raigad	9.85	2.35	10.85	3.32
Ratnagiri	9.27	1.81	9.87	2.41
Nasik	8.96	1.53	9.90	2.44
Dhule	9.44	1.98	11.10	3.55
Jalgaon*	10.73	3.38	13.15	6.00
Ahmednagar	9.26	1.80	9.80	2.35
Pune	9.84	2.35	11.37	3.81
Satara	9.35	1.89	10.18	2.69
Sangli	8.89	1.46	9.67	2.21
Solapur	9.96	2.46	11.17	3.61
Kolhapur	9.38	1.91	10.15	2.69
Aurangabad	9.03	1.59	10.18	2.70
Parbhani	9.51	2.04	10.40	2.90
Beed	9.65	2.16	11.39	3.83
Nanded	9.47	2.00	10.85	3.83
Osmanabad	10.36	2.83	11.14	3.59
Buldhana	8.65	1.24	9.97	2.48
Akola	9.34	1.88	11.38	3.81
Amaravati	9.81	2.32	11.97	4.37
Yavatmal	9.12	1.68	11.23	3.68
Wardha	9.62	2.14	11.04	3.48
Nagpur	10.01	2.50	11.32	3.76
Bhandara	8.49	1.09	11.79	4.19
Chandrapur	9.09	1.65	10.85	3.32
Maharashtra	9.45	1.98	10.74	3.21

Note : 1. RW = Real Wages, MW = Money wages. 2. * Growth rates calculated for the period 1961-1988 and 1969-1988 for male and female labourers respectively due to non-availability of data, 1989 onwards. 3. New districts clubbed with the old districts.

Source : Computed from SCR, various issues.

Table 2.15 : Classification of Districts According to the Compound Growth Rates of Money Wages Compared to the State Average Growth Rate

Male (9.45% = state average.)	Female (10.74% = state average)
Above Average	
Raigad, Dhule, Jalgaon, Pune Solapur, <u>Parbhani</u> , Beed Nanded, Osmanabad, Yavatmal, Amaravati, Wardha, Nagpur	Raigad, Dhule, Jalgaon, Pune, Solapur, Beed, Nanded, Osmanabad, <u>Akola</u> , Yavatmal, Amaravati, Wardha, Nagpur, <u>Bhandara</u> , <u>Chandrapur</u>
Below Average	
Thane, Ratnagiri, Nasik, Satara Ahmednagar, Sangli, Kolhapur, Aurangabad, Buldhana, <u>Akola</u> , <u>Bhandara</u> , <u>Chandrapur</u>	Thane, Ratnagiri, Nasik, Satara, Ahmednagar, Sangli, Kolhapur, Aurangabad, <u>Buldhana</u> , <u>Parbhani</u> , <u>Bhandara</u> , <u>Chandrapur</u>

Note : 1. The underlined districts are those which are not common for both the groups of labourers (male, female) for the concerned category. 2. New districts clubbed with the old districts.

Source : table 2.14

Firstly, it is observed that though the absolute values of money and real wages of female labourers are always lower than that for the male labourers, the growth rates of money and real wages of female labourers are higher for all the districts over the year as is clear from table 2.14. Secondly, it can be noted from table 2.15 that districts falling in the category of below average or above average districts, are common for both the groups (i.e., male and female labourers) with a few exceptions. Most of the districts in western Maharashtra except Pune and Solapur fall in the category of low growth districts in the case of male as well as female labourers. The agriculturally backward and drought-prone districts of Solapur, Beed along with Raigad instead figure in category of high growth districts. This is against the expectation of finding a one to one correspondence between wage levels and degree of agricultural development of that region.

One possible reason for the emergence of such a kind of configuration can be the differences in the values of growth rates in various phases as marked earlier for all the districts of Maharashtra. Table 2.16 shows the values of such phasewise growth rates of money wages of male and female labourers. It can be observed that after the first phase of stagnancy, growth rates have suddenly increased in all the districts, particularly in the districts of western Maharashtra which have registered higher growth rates than the other districts. On the other hand, districts noticeably from Marathwada have registered very high growth rates in the third phase.

The districts formerly exhibiting high wage growth have registered very low growth rates in the third phase (eg. Ahmednagar, Kolhapur, Satara etc.) for male and female labourers. Therefore, their overall growth rate has come down and they have to be categorised as the below average districts in table 2.15. The other districts falling in the same category (relatively backward districts) have maintained their moderate rates of growth in the second as well as third period and hence probably fall in that category. As against this, the above average category in table 2.15 includes some of the districts which have registered very high growth rates in the third phase than in the earlier phases (eg: Parbhani, Nanded, Amaravati, Solapur) in case of male and female labourers. Consequently, the overall growth rate of these districts has risen. Other districts in the same category like Dhule, Pune, Amaravati have maintained their high growth rate of second period in the third phase too.

For a phasewise analysis of real wage structure, if we look at the growth rate of CPIAL, it can be seen to be highest in the third phase*. Considering the pattern of trend in real wages and considering two phases in it (1961 to 1975 and 1976 to 1994), we find that there does not exist much difference between growth rates of two periods (8.67% and 7.58% respectively). This implies that though the growth rates are not very different, post-1975 period is

* Growth rate of CPIAL was 7.32%, 7.75%, 6.52%, 10.61% during the entire, Ist, IInd and IIIrd period respectively.

Table 2.16 : Districtwise, Phasewise Growth Rates of Money Wages.
(Percent per annum)

District	Male			Female		
	1961-79	1980-88	1989-94	1968-79	1980-88	1989-94
Thane	7.70	11.11	12.97	6.31	10.82	14.63
Raigad	7.18	13.60	9.82	6.04	12.47	9.82
Ratnagiri	8.26	10.25	11.77	7.91	8.89	11.72
Nasik	6.21	10.12	10.30	6.77	10.43	9.76
Dhule	7.41	11.64	14.25	7.09	11.29	14.99
Jalgaon	8.70	18.00	-*	13.09	19.79	-*
Ahmednagar	6.30	15.78	14.64	5.94	14.40	16.92
Pune	6.29	15.03	12.04	4.38	13.47	15.28
Satara	7.38	16.97	5.87	5.62	15.32	7.98
Sangli	6.64	10.68	7.90	7.19	8.11	8.81
Solapur	6.14	16.52	17.82	7.68	12.49	17.57
Kolhapur	7.40	15.61	1.88	5.19	14.61	3.04
Aurangabad	6.38	9.28	10.67	6.75	9.54	13.47
Parbhani	7.44	11.34	17.91	6.54	10.51	16.6
Beed	5.64	7.86	4.69	6.06	7.49	4.73
Nanded	6.29	13.23	20.78	4.32	13.17	21.19
Osmanabad	6.29	13.17	5.06	6.72	12.72	9.41
Buldhana	6.27	11.63	12.17	9.44	10.65	13.11
Akola	6.13	13.53	15.78	11.20	11.41	19.38
Amaravati	6.65	13.55	20.96	7.25	14.01	24.6
Yavatmal	7.35	12.18	16.90	9.74	11.49	16.46
Wardha	8.28	9.43	8.48	11.37	10.30	9.80
Nagpur	7.43	15.81	5.60	6.10	15.45	7.75
Bhandara	4.42	15.07	7.93	6.51	16.38	10.66
Chandrapur	7.12	13.12	8.78	6.86	12.56	11.2
Maharashtra	6.90	13.10	11.21	7.09	12.44	12.69

Note : 1.* Growth rates could not be calculated as data not available, 1989 onwards. 2. New districts clubbed with the old districts.

Source : Computed from SCR, various issues.

marked by more fluctuations in real wages which in turn indicates highly fluctuating incomes of agricultural labourers. A comparison of phasewise growth rates of money wages and CPIAL (or real wages) is present in table 2.17.

Table 2.17 : Comparison of Growth Rates in Money Wages and CPIAL across Phases

Phase	Growth Rate of >Growth Rate Money Wage of CPIAL	Growth Rate of <Growth Rate Money Wage of CPIAL
1. 1961-1994	All districts (Real wage growth rate) positive	-
2. 1961-1979	Ratnigiri, Jalgaon, Wardha, and Buldhana, Akola for female labourers (Real wage growth rate) positive	Remaining districts (Real wage growth rate) negative
3. 1980-1988	All districts (Real wage growth rate) positive	-
4. 1989-1994	Remaining districts	Raigad, Nasik, Satara, Sangli, Beed Kolhapur, Osmanabad, Wardha, Nagpur, Bhandara, Chandrapur, (Real wage growth rate) negative

Note : Based on table 2.15 and 2.16 and growth rates of CPIAL.

It can be seen that the real wages have grown at a positive rate throughout the period between 1961 and 1994. Secondly, out of the three phases, the second phase is seen to be the better phase as all the districts have recorded a positive growth rate of real wages during this period. Thirdly, out of all the districts, agricultural labourers in Jalgaon and Ratnagiri seem to be having better standard of living due to the higher levels of money wage rates.

Among the most probable explanations for the emerging district composition, a few are noted below. A rise in growth rate of money as well as real wages in all the districts in the second phase can be attributed largely to the widespread Employment Guarantee Scheme work in the state after 1972, resulting into an increased bargaining power of the labour unions during this period. Further, implementation of minimum wage legislation and revisions therein have also contributed significantly*. Similarly, the observations

* We have dealt with these issues more in detail, in chapter 3.

regarding districts of western Maharashtra which were beneficiaries of the seed-water-fertiliser technology introduced during this period, show that the money wages reached fairly high levels in the second phase and hence exhibited lower growth rates in the third period which stagnated during that period. Another reason might be the labour immigration in these districts (eg: sugarcane harvest labour) from the other areas of the state like Marathwada leading to an increase in the supply of labourers and higher rates of growth in the wage levels in latter areas characterised by outmigration. As far as the above average category (table 2.15) is concerned, districts like Raigad and Dhule fall in this category possibly due to the presence of active labour organisations in these districts. Other districts like Jalgaon, Pune, Amaravati, Wardha, Nagpur in the same category are the areas with commercial cropping pattern and hence have registered relatively higher growth rates throughout the period. Beed appears to be an exceptional case as it falls in the above average category inspite of lower growth rates in the latter two phases.

2.5 Gender Wage Gap :

Graphical representation of the wage rates and the earlier analysis presented in table 2.15 and 2.16 indicated that wages of male and female labourers tend to get affected by similar factors and have more or less a similar direction of change. Nevertheless, one major difference between the wages of the two groups is that the wages of male labourers have always stayed at a higher level than that of female labourers for all the districts and the magnitude of the gap has differed across regions and time. Though the growth rates of female labourers (table 2.14) are higher than those of the male labourers, they are not so high as to narrow down the gap between wages of the two groups in absolute terms. On the contrary, values of wage gap (calculated as the difference between male and female absolute money wage rates) presented in table 2.18, clearly show that the gap is increasing over the years. This is also noticed from the figures 5a to

51 . Secondly, the gap in absolute terms is seen to be higher in the developed districts of western Maharashtra and lower for districts of Marathwada along with Thane, Nasik, Dhule, Buldhana and Bhandara throughout the period. The higher gap might be due to the factors like lower work participation rates of female labourers (especially the higher caste labourers), lower demand for female labourers due to their replacement by skilled male labourers (consequent upon the use of better and modern inputs), participation of male labourers in non-agricultural activities and relatively higher supply of female labourers etc. The lower values of the wage gap in other districts might be related to high demand for female labourers for specific crops and operations eg: transplanting (rice), harvesting, picking (groundnut, cotton). Therefore, the gap is seen to be lower in areas with such crops (Thane, Dhule, Bhandara) requiring female labour input on a larger scale. As far as the districts like Dhule and Thane are concerned, it can also be said that the wide spread activities of labour organisations have led to a substantial reduction in exploitative practices by the employers in these tribal areas and better implementation of minimum wage rate (which is equal for male and female labourers) are the factors responsible for the wage gap in these areas to be very low. The same factor viz. (the absence of) activities of labour organisations can provide an extra-economic reason for the higher magnitude of wage gap in the better off districts of the state. Thus, the traditional discrimination against female labourers leading to payment of lower wage rates (for same efforts as male labourers) reinforces the economic factors to maintain or widen the wage gap.

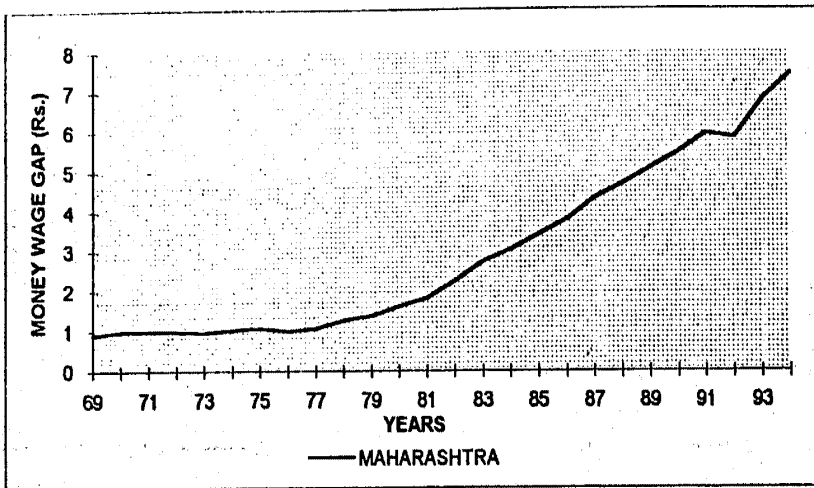
It can also be seen from table 2.18 that the value of wage gap has started increasing from the second phase and has further widened in the third phase. Thus, in all the districts, the rate growth of wage gap has increased suddenly in the second phase, as is clear from table 2.19.

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It can also be seen from table 2.18 that the value of wage gap has started increasing from the second phase and has further widened in the third phase. Thus, in all the districts, the rate growth of wage gap has increased suddenly in the second phase, as is clear from table 2.19.

STATE LEVEL TREND IN MONEY WAGE GAP

FIGURE 5a



DISTRICTWISE TRENDS IN MONEY WAGE GAP

FIGURE 5b

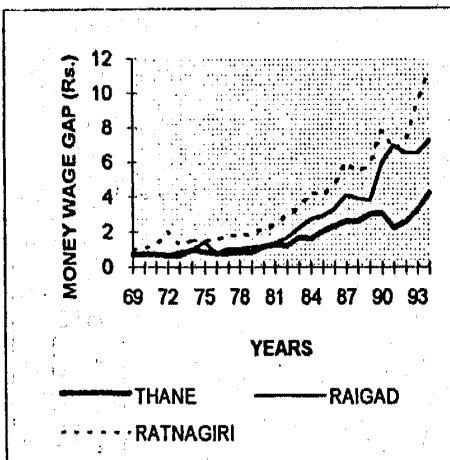


FIGURE 5c

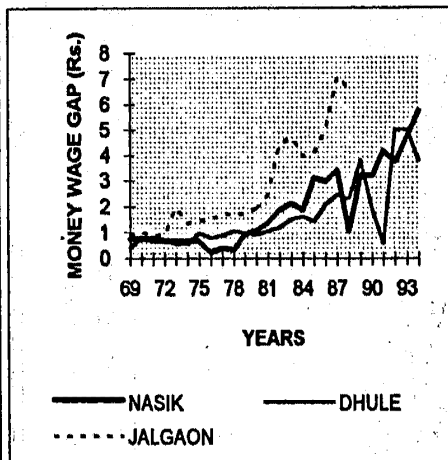


FIGURE 5d

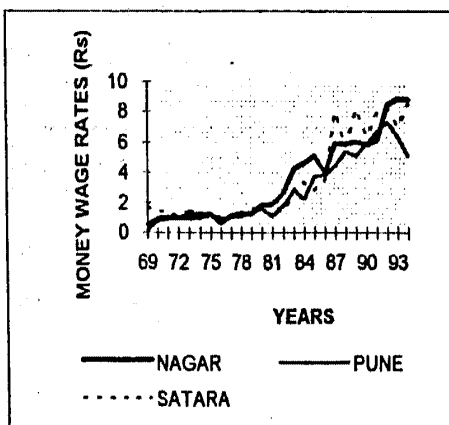
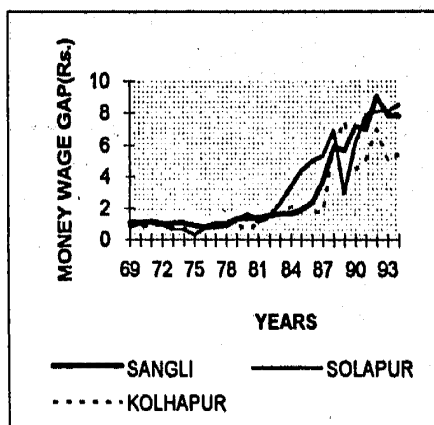


FIGURE 5e



DISTRICTWISE TRENDS IN MONEY WAGE GAP

FIGURE 5f

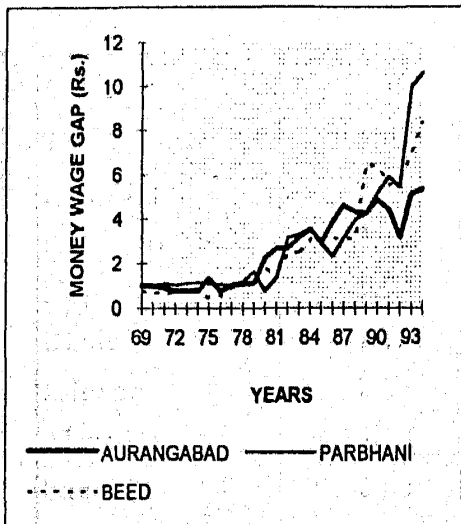


FIGURE 5g

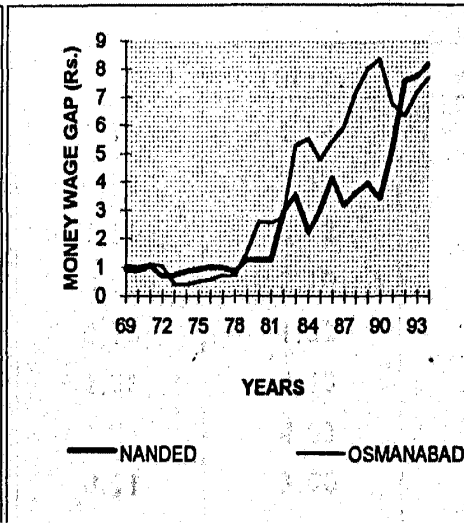


FIGURE 5h

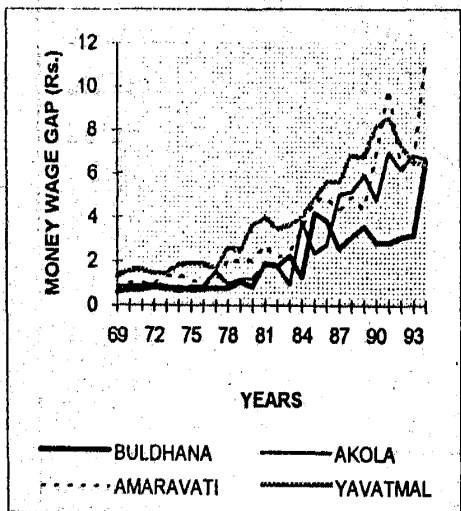


FIGURE 5i

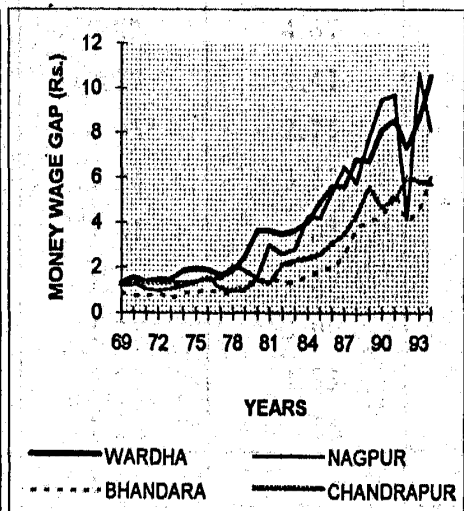


Table 2.18 : Districtwise, Phasewise Average Money Wage Gap

(In Rs.)

District	1969 to 1994	1969 to 1979	1980 to 1988	1989 to 1994
Thane	1.67	0.76	1.84	3.06
Raigad	2.70	0.92	2.59	6.15
Ratnagiri	3.85	1.51	3.92	8.03
Nasik	1.94	0.62	2.10	4.14
Dhule	1.66	0.78	1.62	3.35
Jalgaon	2.78	1.38	4.48	-*
Ahmednagar	3.53	1.03	4.03	7.37
Pune	2.83	0.91	3.00	6.10
Satara	3.54	1.31	3.49	7.72
Sangli	2.97	1.04	2.37	7.40
Solapur	3.15	0.81	3.49	6.93
Kolhapur	2.41	0.87	2.06	5.74
Aurangabad	2.60	0.96	3.34	4.51
Parbhani	3.00	1.12	2.71	6.88
Beed	2.77	0.81	2.62	6.57
Nanded	2.74	0.92	2.80	6.01
Osmanabad	3.67	0.82	4.67	7.38
Buldhana	2.01	0.77	2.41	3.68
Akola	2.79	0.95	2.75	6.22
Amaravati	3.48	1.24	3.53	7.53
Yavatmal	4.05	1.81	4.63	7.29
Wardha	4.23	1.71	4.59	8.32
Nagpur	3.89	1.38	3.99	8.31
Bhandara	2.13	0.88	1.93	4.71
Chandrapur	2.68	1.26	2.56	5.46
Maharashtra	2.90	1.05	3.06	6.07

Note : 1. Wage gap is defined as money wage of male labourers minus that of female labourers. 2. * Wage gap could not be calculated due to non-availability of data, 1989 onwards. 3. New districts clubbed with the old districts.

Source : Computed from SCR, various issues.

Table 2.19 : Districtwise, Phasewise Compound Growth Rates of Money Wage Gap (Percent per annum)

District	1969-94	1969-1979	1980-1988	1988-1994
Thane	7.96	2.11	12.31	5.79
Raigad	11.02	4.82	17.70	10.36
Ratnagiri	9.80	5.58	13.42	11.93
Nasik	10.32	-5.56	6.94	12.11
Dhule	7.82	6.26	13.01	15.48
Jalgaon	11.64	7.78	14.74	-*
Ahmednagar	11.98	5.12	16.28	10.30
Pune	12.48	13.36	19.84	0.94
Satara	9.66	-1.98	19.81	1.59
Sangli	10.33	-0.59	17.66	6.23
Solapur	12.62	-1.16	25.06	18.92
Kolhapur	10.10	1.88	19.97	-2.74
Aurangabad	9.19	1.84	8.58	2.70
Parbhani	9.90	2.56	15.16	20.42
Beed	11.87	4.14	8.66	4.54
Nanded	10.50	2.05	13.33	20.32
Osmnabad	13.24	-1.66	14.04	-1.99
Buldhana	9.15	2.99	14.56	10.33
Akola	10.75	3.17	19.21	4.52
Amaravati	10.78	7.95	12.74	12.31
Yavatmal	8.26	5.73	8.26	-2.97
Wardha	9.19	4.89	8.88	6.59
Nagpur	10.37	5.34	17.12	-0.77
Bhandara	9.22	3.44	11.73	5.65
Chandrapur	7.77	-1.92	14.55	2.82
Maharashtra	10.13	3.15	14.62	7.58

Note : 1.* Growth rate could not be computed due to non-availability of data, 1989 onwards. 2. New districts clubbed with the old districts.

Source : Computed from SCR, various issues.

The growth rates seem to have increased further i.e. in the third phase in a few districts (Nasik, Dhule, Parbhani, Nanded) and fallen in all other districts. It is interesting to note here that broadly, similar pattern as in the case of growth rates of wages is observed in this case too. Thus, the districts (particularly from western Maharashtra, Konkan and Khandesh) which exhibit higher rates of growth in wages of both male and female labourers (table 2.14) in the second phase show higher growth rates in wage gap too (table 2.19). Same can be observed for the third phase which is characterised by higher growth rates of wages (particularly for the districts from Marathwada) as well as higher growth rates of wage gap. Again, it must be noted that the rates of growth of wages of female labourers are not always lower than that of male labourers in the concerned period. The overall increase in the second and third phase on this background clearly indicates the inability of wages of female labourers to catch up with that of male labourers inspite of higher growth rates.

2.6 Emerging Structure of Wage Rates :

The foregoing analysis shows a few distinct and interesting cases, that have to be specifically taken note of. Table 2.20 presents a summary of such important observations across districts. Considering the absolute money wage level (especially of the third phase) of male and female labourers, we have divided the districts as high wage districts (male-above Rs. 25, female - above Rs. 16) low wage districts(male-below Rs.20, female -below Rs. 14) and the remaining medium wage districts. It is clear from the table that the high wage or low wage districts not only exhibit correspondingly higher or lower magnitudes of growth rates of wages, but also that of the coefficient of variation and wage gap over the entire period thus establishing growth - instability (variation) nexus as well as growth - wage gap nexus in these districts.

Table 2.20 : Emerging Structure of Wage Rates in Maharashtra.

A. High Wage Level Districts												
Districts	CV	Growth Rate of MW			Growth Rate of WG			Districts	CV	Growth Rate of MW		
Male		Entire Period	II	III	Entire Period	II	III	Female		Entire Period	II	III
1 Raigad(Kon)	H	H	H	L ↓	H	H	H ↓	1 Raigad	L	H	H	L ↓
2 Ratnagiri (Kon)	L	L	L	H ↑	L	H	H ↓	2 Ratnagiri	L	L	L	L ↑
3 Jalgaon (Kha)	H	H	H	*	H	H	*	3 Jalgaon	H	H	H	*
4 Pune (WM)	H	H	H	H ↓	H	H	L ↓	4 Pune	H	H	H	H ↑
5 Amaravati (V)	H	H	H	H ↑	H	L	H ↓	5 Amaravati	H	H	H	H ↑
6 Nagpur (V)	H	H	H	L ↓	H	H	L ↓	6 Nagpur	H	H	H	L ↓
								7 Dhule (kha)	H	H	L	H ↑
B. (Male) Low Wage Level Districts (Female)												
1 Thane (Kon)	L	L	L	H ↑	L	L	L ↓	Nasik (Kha)	L	L	L	L ↓
2 Nasik (Kha)	L	L	L	L ↑	H	L	H ↑	Sangli (WM)	L	L	L	L ↑
3 Aurangabad(M)	L	L	L	L ↑	L	L	L ↓	Osmanabad (M)	L	H	H	L ↓
4 Buldahna (V)	L	L	H	H ↑	L	L	H ↓	Buldahna(V)	L	L	L	H ↑
5 Akola (V)	H	L	H	H ↑	H	H	L ↓	Akola (V)	H	H	L	H ↑
6 Bhandara (V)	L	L	H	L ↓	L	L	L ↓	Wardha (V)	L	L	L	L ↓

C. Moderate Wage Level Districts												
Districts	CV	Growth Rate of MW			Growth Rate of WG			Districts	CV	Growth Rate of MW		
Male		Entire Period	II	III	Entire Period	II	III	Female		Entire Period	II	III
Ca. All districts other than in category A and C Except	Slightly H/L	Slightly H/L	Mostly H	Mostly L	Slightly H/L	Mostly H	Mostly L	All districts other than in category A & C Except	Slightly H/L	Slightly H/L	Mostly H	Mostly L
Cb. Solapur(WM)	H	H	H	H ↑	H	H	H ↑	Parbhani	H	L	L	H ↑
Parbhani (M)	H	L	H	H ↑	L	H	H ↑	Beed	H	L	L	L ↓
Beed (M)	H	L	L	L ↓	L	L	L ↓	Nanded	H	H	H	H ↑
Nanded (M)	H	H	H	H ↑	L	H	H ↑	Yavatmal	H	L	L	H ↑
Yavatmal (V)	H	L	H	H ↑	L	L	L ↓					

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Note : 1. H and L = higher and lower than the state average respectively. 2. ↑ and ↓ = higher and lower than the values in previous phase. 3. II = 2nd phase, III = 3rd phase. 4. CV = coefficient of variation. MW = money wage, WG = wage gap. 5. Kon = Konkan, Kha = Khandesh, WM = Western Maharashtra, M = Marathwada, V = Vidarbha. 6. Slightly = for most of the districts, the parameter values are only slightly higher / lower than and are concentrated around the state average, Mostly = for most of the districts, the parameter values are higher / lower than the state average. 7. * Groth rates could not be calculated due to non-availability of data, 1989 onwards.

Source : Tables 2.14 to 2.18.

In the case of male labourers, except for the district Ratnagiri, all the other districts have recorded higher (than the state average) variations as well as higher growth rates of money wages during the entire period in the high wage level category. The growth rates of money wages in these districts are higher in the second phase too but have fallen in the third phase (as compared to their corresponding growth rates in the second phase) except in case of Ratnagiri and Amaravati. Similar pattern is observed for wage gap too. The low wage level category districts record a similar behaviour i.e., lower values of growth rates and variations during the entire period along with higher growth rates of wages in the third phase (as compared to their corresponding values in the second phase). Values of growth rates of wage gap are lower for the entire period and second phase and have fallen during the third phase.

In the case of female labourers, though the districts constituting the two groups are slightly different than in case of male labourers, the group behaviour is observed showing similar kind of pattern as in the case of male labourers as far as magnitudes of coefficient of variation and growth rate for the entire period are concerned. However, no specific trend is observed as far as the phasewise growth rates are concerned.

The remaining districts of the state fall in the category wherein the absolute levels and growth rates of wages are comparatively moderate. However, a few districts stand out due to their peculiar behaviour as far as the magnitudes of variation and phasewise growth rates are concerned. Districts of Solapur, Parbhani, Beed, Nanded and Yavatmal show higher variation in their wage rates like the high wage districts. While in the case of the former group (mostly the backward - drought prone districts of Marathwada), higher variation is possibly a result of higher fluctuations (especially in Solapur, Beed, (table 2.14)) coupled with high growth in wages, in the case of the latter group (mostly, agriculturally better off regions of Maharashtra), higher variation is possibly a consequence of higher

growth rates of wages. Higher growth rate in the wage gap (particularly in the second phase) seems to be a characteristic of the high wage districts which are mostly the districts from western regions of the state. On the other hand, lower rate of growth of the wage gap is observed in generally backward districts of the state. A fall in the growth of wage gap in most of the districts of the state and an increase in the growth rate of wages in the low and moderate (i.e. districts under the category Ca) level districts is a welcome feature that is revealed out of the analysis.

The classification of districts on the basis of the prevailing wage structure cuts across the regional boundaries. However, a careful observation of the groups in table 2.20 shows that the districts of the same labour market regions of the state get congregated in one group, implying the tendency of the wage rates in a particular region to get affected by similar factors and behave in a particular manner. This is clear from the table 2.21 presenting regionwise absolute money wage levels of male and female labourers. It can be seen that the average money wage levels in Marathwada and Vidarbha have consistently remained below the state average as well as average levels of other regions for both male and female labourers.

Table 2.21: Phasewise Absolute Average Money Rates in Different Regions of Maharashtra. (In Rs.)

Phase	Konkan	Khandesh	Western Maharashtra	Marathwada	Vidarbha	Maharashtra
1. 1961-94 M	9.08	8.07	8.38	7.55	7.59	8.01
1969-94 F	8.46	7.79	7.26	6.39	6.38	6.99
2. 1961-79 M	3.44	2.88	2.93	2.53	2.73	2.84
1961-79 F	3.29	2.74	2.63	2.2	2.18	2.48
3. 1980-88 M	11.12	10.43	10.23	9.27	9.15	9.82
F	8.34	7.69	7.11	6.04	6.03	6.77
4. 1989-94 M	23.87	20.95	22.83	20.84	20.64	21.66
F	18.12	17.20	15.99	14.57	14.61	15.58

Note : M = Males, F = Females

Source : Computed from SCR, various issues.

As observed at the district level, the growth rates of wages in western Maharashtra are highest and above the state average in the second phase. On the other hand, wages in the other regions exhibit growth rates higher than the state average as well as other four regions of the state. Here, the exceptions are not to be ruled out in every region. However, the point which needs to be emphasised still remains i.e. wage rates within a particular labour market broadly have similar tendencies at the aggregate level.

2.7 Emerging Nature of Labour Markets in Maharashtra :

The structure of wage rates that emerges out of the discussion, presents a heterogeneous picture in terms of regional and gender differences in the labour markets within the state. The structure of wage rates can be said to be broadly conforming with the agrarian structure as sketched out in the earlier sections, as within a particular region also, differences in the wage structure can be noted due to the characteristics of the concerned districts. This not only reveals the existence of various labour market regions within the state and their tendency to behave in a dissimilar manner, but also operation of a variety of factors leading to extreme cases within a particular labour market region.

Beginning with the agrarian structure in Maharashtra, we noted that historically, three broad labour market regions viz. western Maharashtra, Marathwada and Vidarbha can be marked which show peculiar characteristics as far as their corresponding agrarian structure is concerned. Western Maharashtra is noted to be the most developed region of the state than the other regions. An analysis of the existing structure of labour force shows that the basic agrarian structure has been still maintained in all the regions. Thus, the regions like western Maharashtra, Konkan and Khandesh are still characterised by relatively lower number and density of male and female labourers, than Marathwada and Vidarbha. But the Census data also shows that the rate at which these magnitudes are moving is

highest for the former three regions. These supply side changes are perhaps reflected in the pattern of changes in wage rates in the districts of various regions. At the state level, structural changes are observed in terms of falling percentages of agricultural labour households to all rural labour households and their share in total main workers till 1990. This indicates favourable implications for wages. End of the period of stagnancy and generally increasing trend in wages might partly be attributed to this particular aspect. Similarly, the regional variations in the growth rates of the structural variables may be one of the reasons for the observed regional variations in the growth rates of wages eg: higher growth rates of increase in agricultural labour population in the districts of western Maharashtra might be a direct consequence of outmigration from other regions and might have led to lower growth rates of wages in the former than the latter. It is difficult to comment on the structural retrogression, if any, at the district level due to the lack of data relating to the intersectoral changes in the worker population. The wage data (real as well as money) nevertheless shows a fall in the growth rates after 1991 in many districts.

In short, the structural aspects of labour markets seem to be affecting wages quite significantly. This implies that the factors which play important role in shaping the structural aspects such as political, institutional and economic factors of the labour market can explain the behaviour of wage rates. The forces of production or the forces of economic growth in the agricultural sector can potentially affect the wage behaviour favourable through various channels thereby contributing to the reduction in the magnitude of poverty of the labour force in agriculture. However, Maharashtra appears to be one of the states exhibiting a weak relationship between the two during the concerned period of time as reflected in the difference in the phasewise movement in wage rates and of the foodgrains production. Within the state, such a weak relation is observed for Marathwada and Vidarbha regions. Agricultural development does not seem to

have affected the wage behaviour in these regions. The other important factor affecting the labour market structure - the political institutional set - up and class relations in the economy seem to have played an important role in affecting the wage behaviour over a period of time as well as at a particular point of time. It is difficult to measure the impact of totality of the historically evolved institutional set up and its exact influence on the wage rates. It is felt that identification of specific factors in terms of labour market intervention representing the underlying institutional set up would clearly bring out its role.

Notes :

1. Advisory Committee, representing the interests of employers and labourers is constituted by the State Government, for making recommendations regarding minimum wages to be prescribed.
2. These three broad regions of the state can again be divided into subregions as follows :
 - a. western Maharashtra consists of Konkan (coastal districts of Thane, Raigad, Ratnagiri and Bombay) , Khandesh (Nasik, Dhule and Jalgaon) and central and south Maharashtra (Ahmednagar, Pune, Satara, Sangli, Solapur, Kolhapur).
 - b. Marathwada region consists of districts Aurangabad, Parbhani, Beed, Nanded and Osmanabad.
 - c. Vidarbha region includes districts Buldhana, Akola, Amaravati, Yavatmal, Wardha, Nagpur, Bhandara and Chandrapur.
3. Each region comprises of a few districts with Konkan comprising of districts as mentioned above in note 2. Regions Nasik and Aurangabad are known by their traditional names (Khandesh and Marathwada respectively). Out of the remaining regions, Pune and Kolhapur include districts Pune-Ahmednagar-Solapur and Kolhapur-Satara-Sangli respectively. Regions Amaravati and Nagpur are comprised of former four and the latter four districts respectively of Vidarbha (as in note 2).

CHAPTER III

INTERVENTIONS IN THE LABOUR MARKET :

3.1 Introduction :

In a developing country like India, labour market interventions are looked upon as measures for correcting prevailing distortions in the labour market and their impact on wages. In the context of rural agricultural sector, lower absorptive capacity, unequal distribution of assets, wide gap between productivity of labour and wage rates, higher percentage of agricultural labourers below poverty line, tend to have a bias against agricultural labourers and necessitate the need for governmental intervention. Left to itself, labour markets fail to correct these distortions prevailing due to the existence of various structural-institutional rigidities. Interventions can take various forms. Broadly, these can be categorized as legislations and public works. Through legislations, the government tries to change the existing economic relations or phenomena exogenously and instantaneously (at least formally). Important legislations which can be sighted in this regard are land reform legislations which are aimed at changing the structural aspect of labour market with a view to correct the existing pattern of resource endowments and secondly, minimum wage legislation wherein a particular level of wage is fixed artificially so as to ensure at least a minimum subsistence, particularly for daily rated casual labourers and to provide for a floor wage level for the prevailing agricultural wages. As far as public works programmes are concerned, they are aimed at poverty alleviation in rural areas. These programmes take form of employment generating, asset creating public activities. Such activities, besides having a direct impact upon rural unemployment by providing alternate source of employment to the rural poor, compete with the agricultural sector for labourers and affect wage rates prevailing therein. Similarly, these works might add to the existing

rural infrastructure and have labour demand enhancing effect in the agricultural sector.

As the focus of our study is on wages of agricultural labourers in Maharashtra, only those interventions which directly or indirectly have perceptible influence on wages of agricultural labourers are studied. Minimum Wage Legislation and Employment Guarantee Scheme of the Government of Maharashtra are specifically considered here. We have also analysed in this chapter, the role played by labour organisations working for agricultural labourers in Maharashtra. The activities of these organisations can not be considered as interventions in a strictly formal sense. However, their role in the nature of mobilizing labourers for increasing bargaining power or collective strength and creating environment for initiating actions at the government level has intervening effect in the labour markets. Hence, along with other types of interventions, a discussion on labour organisation in Maharashtra, working for agricultural labourers is also included.

3.2 Minimum Wages in Maharashtra :

The effect of minimum wage as an instrument of intervention in the labour market can be studied from two aspects - firstly, the concept of minimum wage itself, its relation with the actual subsistence needs and secondly, its effect on the prevailing agricultural wages. In this chapter, we concentrate on these two issues. In the former case, the concern of the study is to analyse the concept of 'minimum wage' as determined by the government and to find out whether this minimum wage level represents the minimum subsistence needs of an agricultural labour household¹. As far as the relation between the minimum and the actual wages is concerned, we concentrate on the comparison of movements in the two cases and search for positive intervening effects of the former on the latter.

The Minimum Wages Act, 1948, of the Government of India provided guidelines for determination of minimum wages in different

employments across the country. In mid - 1940s, the attention of the Government of India was focused on the extent of exploitation that took place in certain employment sectors in the country. As a result, Labour Investigation Committee was appointed, due to the efforts of which, the Minimum Wages Act of 1948 was passed. This Act emphasised the necessity of protection to unorganised labour in terms of statutory minimum wage as their bargaining capacity and hence the wage rates are low. However, it did not provide for detailed guidelines for quantification of the minimum wage rate (National Commission on Rural Labour (NCRL), GOI (1991a)). The NCRL further recorded that there seemed to be absence of clear understanding of the concept of minimum wage and the procedure of its quantification for the rural unskilled labourers at the government level. As a consequence, we find a wide range of minimum wage levels for unskilled rural labourers, especially the agricultural labourers in different states across the country (appendix 3.1). The lack of clear comprehension of this concept coupled with infrequent revisions in the prescribed minimum wage rates seems to make the existing minimum wage level itself redundant over a period of time as the 'minimum' is assumed to satisfy at least the subsistence needs which necessarily change as time passes. While a clear and satisfactory procedure for fixation of minimum wages for agricultural labourers is absent in most of the states (under study), inflation adjustment procedure is applied only in the states of Punjab, Haryana, West Bengal and Kerala (NCRL, GOI (1991a), Chaitanya (1991)).

As far as agricultural sector in Maharashtra is concerned, Minimum Wages Act was first implemented in 1953 in certain regions of Thane district viz. Umbergaon, Dahanu taluka and Mokhada Petha by the erstwhile Bombay Government due to the pressure of strong and prolonged adivasi movement under the leadership of Communist Party of India. Later, the Act came to be implemented in Parbhani and

Amaravati-Yavatmal districts of the erstwhile Hyderabad and Central Provinces - Berrar regions respectively in 1954 (Brahme and Nene 1983)). Minimum wages act covering all labourers in the state came into being after almost 20 years i.e. in 1974. Subsequent revisions were made in 1978, 1983, 1988 and finally in 1994. These revisions (except that of 1994) were made after every five years in accordance with the provision of the Act of 1948. The background for the discussion on necessity of minimum wage legislation for agricultural labourers was provided by the severe droughts of 1965-66 and 1972-73. The pressure of agricultural labourers' movement concentrated particularly in the districts of Dhule and Thane, made it imperative for the government to take note of deteriorating food, employment and also wage level situation during this particular period. Guarantee of employment and minimum wage were the major demands put forth by the labour unions. Government of Maharashtra therefore, appointed a committee (Page Committee) in 1971 to study the employment conditions of agricultural labourers in Maharashtra and make recommendations regarding minimum wage rate to be prescribed

Table 3.1 : Zonewise Prescribed Minimum Wage Rates according to Various Government Legislations.

Year of Passing of the Act/Revision	Zonewise Prescribed Minimum Wage Rate (in Rs.)			
	I	II	III	IV
1) Minimum Wages Act, 1974	3.50	3.00	2.50	-
2) Revision of 1978	5.25	4.75	4.25	3.75
3) Revision of 1983	12.00	10.00	8.00	6.00
4) Revision of 1988	20.00	16.00	14.00	12.00
5) Revision of 1994	29.00	26.00	23.00	20.00

Note : Entire Maharashtra was divided into 3 zones for fixation of minimum wages in 1974. With the revision of minimum wages in 1978, 4 zones were demarcated³.

Source : Government notifications on revision of minimum wages, reports of various committees set up for determination /revision of minimum wages.

and its computations. The Committee submitted its report in 1973 (Report of the Study Committee, GOM (1973)) based on which the

minimum wage legislation came into being in 1974. It can be seen from table 3.1 that during the period of twenty years (i.e. 1974 to 1994), the provisions of the Act were revised four times, based on the recommendations of the Committees set up for the same purpose eg. Revisions of 1978, 1983 and 1988 were based on recommendations of Page Committees (1977 and 1979 respectively) and Vikhe - Patil Committee (1988) respectively. No committee was appointed before the declaration of revised minimum wage rates in 1994 and the criteria for revising the existing minimum wage levels were not made clear. The table also presents zonewise provisions regarding minimum wage rate for daily casual labourers².

3.2.1 Minimum Wages Act, 1974 - Approach and Quantification :

Before examining the provisions of the Act, which were based on the recommendations of Page Committee, 1973, if we look into the approach of various bodies which took up the issue of minimum wages for unskilled labourers, it suggests that following factors were considered for fixation of minimum wage level (NCRL, GOI (1991a)). These are -

- 1) Minimum wage level can be called as minimum subsistence level.
- 2) Minimum wage rate should be calculated on the basis of intake of minimum necessary calories required and should provide for some basic amenities like health and education of children.
- 3) It should be related to the cost of living.

It is interesting to examine the approach of Page Committee, 1973, in the light of above principles. Firstly, though the Committee considered consumption expenditure apart from that on food, it observed, "Another strong feeling is that at least to some extent, wages should have relation to basic needs such as food, clothing, shelter, minimum medical facilities, education etc. It is very difficult to evolve a formula for a need based wage which though desirable, is not reliable in existing circumstances" (Report of the Study Committee, GOM (1973) , p.106). Thus, the Committee clearly

expressed the difficulty in fixing a wage level based on needs, contrary to what the evolved discussion suggests as mentioned above in (2).

Secondly, the Committee thought it unnecessary to link minimum wage with consumer price index as the state had not evolved such a pattern for rural areas. It hoped that the level of wage rates would be revised as the procurement and issue prices of Jowar move up. Thus, absence of any procedure at government level for inflation adjustment for maintaining minimum cost of living, infrequent revisions in the prescribed minimum wage rates and difficulty in considering the items of expenditure other than food, reflects lack of complete adherence to the principles/ approach regarding the concept of minimum wage evolved over a period of time.

As far as the major question of whether the minimum wage rates were in conformity with the minimum subsistence level or cost of living was concerned, the Committee observed, "According to the evidence of trade union leaders, economists and individual experts, these rates are on lower side. They have proposed Rs. 4 or Rs.5 looking to the practical side of the question" (p. 107) and "paying capacity can not altogether be ruled out as a factor in this case" (p.106).

The Committee thus seems to be arguing for a minimum wage level which the employers can pay instead of that which strictly represents minimum cost of living of agricultural labourers. Indeed, the general economic condition of the economy would put restrictions on the factor payments. Similarly, the small and marginal farmers who themselves hire out labour, often find it difficult to pay the prescribed minimum wage rate on their farms. But this does not justify policy declaration of an inadequate minimum wage rate, since the minimum wage represents minimum cost of living. Hence, in this regard, labour is like other factors of production which are paid their respective remuneration irrespective of capacity to pay of employers/buyers of those factors.

The Committee arrived at zonewise figures of minimum wage rates based on criteria which are described in table 3.2. The figures of minimum wage per person per day was arrived at by considering two earning members per family.

It can be seen from the table that the minimum wage recommended was 3 kgs. of Jowar or its cash equivalent covering actual Jowar consumption and other consumption needs, which seems inadequate. The recommendations of the Committee as mentioned in table 3.2 received strong criticism (Bang (1982), Brahme and Nene(1983)). It was pointed out that there was gross underestimation of calorie requirements of the family, size of the family and the required consumption basket of labour was not taken note of.

3.2.2 Alternate Methods of Fixation/Revision of Minimum Wage Rates :

Bang (1982), taking the calorie norms given by the Indian Council of Medical Research (ICMR) (1977), evolved an alternative method of wage fixation as given in table 3.3. Taking into account not only staple food but also pulses (protein) requirements, a larger family size and calorie requirements (as given by ICMR, (1977)), Bang improved upon the method of fixation of minimum wage rate as given by Page Committee in 1973 and arrived at the figure of Rs. 21.35 as the minimum daily cash requirement of a labour household and hence Rs.10.70 as the minimum wage rate per person per day for 8 hours of work for the last zone. Brahme and Nene (1983) too arrived at a figure of Rs 11.70 as the minimum wage rate per person per day⁴. A comparison of these figures (i.e. Rs. 10.70 and 11.70) with the minimum wage rate of the last zone fixed by the government (according to the Wage Revision, 1983 i.e.Rs.6), clearly brings out wide gap between the concerned figures.

Another point to note is that even if it is assumed that minimum wage rates were determined after taking into account all the possible economic considerations, it can be said that the revisions therein,

Table 3.2 : Criteria for Zonewise Fixation of Daily Minimum Wage Rates.

Criteria	Provision			
1. Basis for fixation	1) Wage should be fixed in quantity of one staple grain i.e. Jowar. 2) All labourers should be paid at least 1 Kg of Jowar or paid in cash at a price higher (by 25%) than first quality Jowar in fair price/ration shop. 3) The rest should be calculated first in kind and converted into cash at a price on par with selling price of first quality of Jowar in ration/ fair price shop.			
2. Family size	Adult units 3 1/2 per labour household. 1 male, 1 female, 3 children (1 1/2 adult units)			
3. Calorie intake required	2200 calories/person/day i.e. 7700 calories/family/day.			
4. Total food requirement per family per day	1. Actual staple food requirement (40 percent of the budget)		2187.5 gms	
	2. Other food / consumption requirements (60 percent of the total budget)		3280.5gms	
	3. Allowance for a weakly holiday		532.0 gms	
5. Zonewise prescribed minimum wage per person per day	Zones---	I	II	III
	In kind	4 kgs	3.5 kg	3 kg
	In cash	3.5 Rs.	3 Rs.	2.5 Rs.

Source : Report of the Study Committee (Page Committee), GOM, 1973.

Table 3.3 : Alternative Method of Fixation of Minimum Wage Rates.

Criteria	Provision
1. Basis for fixation	1) Wage should be fixed in quantity of cereals and pulses. 2) Actual Jowar requirements should be converted into cash, using existing issue prices. 3) Pulses which are not provided at fair price shops, should be converted into cash at current prices. 4) Remaining Jowar meant to cover other expenses of life should be converted into cash by using dearness index or open market price.
2. Family size	5.6 persons (Ref : table no. 107 in Dandekar-Rath (1971)).
3. Calorie intake required	1 adult male + 1 adult female + 3 children = 12,700 cal ⁵ . Average calorie intake = 2540 cal / day. For a family of 5.6 persons = 14224 cal/day/family.
4. Total food requirement	9.8 Kg Jowar + 0.4 Kg pulses (per family) ⁶ .
5. Total budget of the family	Rs. 21.35 (at existing prices at that time).
6. Minimum wage rate	Rs. 11.70/person/day (1981).

Source: Bang (1982)

which were needed for adjustments for price changes, remains a controversial issue. The earlier revisions (1978, 1983) seem to be in conformity with the recommendations of the corresponding committees that the revision should take place within a period of not exceeding 5 years.

Vikhe - Patil Committee, 1988, prescribed two years maximum period or an increase of 50 points in the consumer price index for agricultural labourers (CPIAL), whichever is earlier. But this was not complied with. Even the prescribed five years period as per the act of 1948, was not taken note of. The NCRL (GOI (1991a)), also had recommended a period of not more than two years for making revisions. The revision which should have taken place in 1990 or earlier (if 50 points increase in CPIAL is considered), took place in 1994. Table 3.4 presents a comparison of percent increase in minimum wage rates during different revisions and increase in CPIAL. The table clearly shows the discrepancy between increase in

Table 3.4 : Percent Increase in Prescribed Minimum Wage Rates and Point Increase in CPIAL.

Act/Revision	Minimum Wage Rate (last zone) (Rs)	% Increase in Minimum Wage Rate	CPIAL	Point Increase In CPIAL	Real Minimum Wage Rate (Rs.)
1974	2.50		223		1.12
1978	3.75	50.00	316	93	1.11
1983	6.00	60.00	449	133	1.34
1988	12.00	100.00	611	162	1.96
1994	20.00	66.67	1025	414	1.95

Note : Average CPIAL of the respective calendar year are taken.
Source : Reports of various committees appointed for making recommendations, Government notifications, Consumer Price Index Numbers for Agricultural Labourers, GOI, (1996).

minimum wage and the CPIAL and lower purchasing power of agricultural labourers in terms of real minimum wage rates. The gap between increase in CPIAL and minimum wage rate is particularly

noticeable for the period between 1988 and 1994 when CPIAL increased by 434 points and wage rate increased only by 66.67 percent. It was argued that the process of revision in 1994 was hastily completed (without considering the recommendations of Minimum Wage Advisory Committee) due to the pressure from labour unions working for the cause and hence was not based on any scientific criteria (Agricultural Workers and EGS Workers (AWEW) Co-ordination Committee, (1995, p.13)).

Government constituted a committee - in 1996 consisting of persons representing agricultural labourers for again revising the wage rates revised in 1994. The committee has not submitted any report as yet and the demand of the unions for wage rate based on scientific criteria and yearly revision in the minimum wage rate still remains. If the minimum wage rates are to be revised according to the existing alternate formulae, the revision can be realised by either linking wage rates to (1) CPIAL and dearness allowance (DA) or (2) current food prices. Government of Maharashtra pays 0.05 paise as dearness allowance per point increase in the consumer price index numbers for industrial workers to construction workers (AWEW Co-ordination Committee, (1995)). If the same is applied to agricultural labourers, minimum wage figures can be obtained as shown in table 3.5.

The wage rate can be revised by using the current prices also. Using the minimum wage rate prescribed by Bang (1982) which is an improvement over that of Page Committee, 1973 and applying the prices prevailing in 1994, we can arrive at the wage rate as in table 3.6.

Thus, the alternative procedures to arrive at minimum wages in 1994 give us figures higher than Rs 20, which is the minimum wage declared by the government in 1994. It has to be noted that the use of CPIAL and DA for making revisions in minimum wage rates is more helpful as they consider rate of change of prices of all the commodities in the consumption basket whereas usage of only current

Table 3.5 : Revision of Minimum Wage Rates on the Basis of CPIAL and Dearness Allowance (DA)

Revision Based on	Minimum Wage in 1974 (Rs)	Initial CPIAL (Average for the calendar year)	Latter CPIAL	Increase In CPIAL	DA (Rs)	Revised Wage in 1994 (Rs)
Page Committee Provision	2.50 (1974)	262 (1974)	1025 (1994)	763	38.15	40.65
Bang's Method	10.70 (1981)	373 (1981)	1025 (1994)	652	32.6	43.30

Note : The figures under the column of 'DA' and 'Revised Wage Rate' are arrived at as follows : $763 \times 0.05 = \text{Rs. } 38.15$, $652 \times 0.05 = \text{Rs. } 32.6$ (DA) and $2.5 + 38.15 = \text{Rs. } 40.65$, $10.70 + 32.6 = \text{Rs. } 43.3$ (Revised Wage)

Source : 1. Report of the Page Committee (1973). 2. Bang (1982). 3. Report of the Co-ordination Committee (1995). 4. Consumer Price Index Numbers, GOI (1996).

Table 3.6 : Revision of Minimum Wage Rates on the Basis of the Current Prices

Total Food requirements.	Issue Price (Rs)	Open market Price (Rs)	Total Cost (Rs)	Minimum Wage Rate (Rs)
1. 3.35 Kg Jowar (Food requirement)	2.20 (1994)	--	7.37	
2. 0.4 Kg Pulses (1994)	--	15.00	6.00	
3. 6.4 Kg Jowar (for other expenses)	--	3.16 (1994)	20.22	33.59

Note : Open market prices of pulses and Jowar are average figures for the state as a whole, calculated from data presented in District Socio-Economic Abstracts (GOM).

Source : 1. District Socio-Economic Abstracts of various districts (GOM, 1994) for open market prices. 2. Supply Department, of District Collectorate, Pune, for issue price of Jowar.

food prices would underestimate the minimum subsistence needs especially because issue prices of Jowar have moved up very slowly over a period of time.

3.2.3 Relation between Minimum Wages and the Prevailing

Agricultural Wages :

The discussion on the concept of minimum wage as determined by the state government shows that the minimum wages fixed and revised by the state government from time to time have underestimated the minimum subsistence needs of the agricultural labour households. Therefore, even a proper implementation of minimum wages may not be helpful in providing daily financial security to the labourers. Another aspect of the minimum wage level - as exogenously fixed by the government is its ability to influence the actual agricultural wage levels. A given minimum wage level (irrespective of its ability to satisfy the daily minimum needs of the labourers) can affect the movement in agricultural wages by providing a norm to fluctuate around and hence can influence the extent of variation in agricultural wages, if implemented properly. Here, the implementation aspect of minimum wages adds an important dimension to the issue. This is because without any provision of alternate employment security, minimum wage level can become irrelevant in all its effects if there is no proper agency for its implementation. In the following pages, we look into the data and attempt at locating the relationship between the minimum and prevailing agricultural wages in terms of effectiveness of the minimum wages as an instrument of intervention. The instances of prevailing wages of female as well as male labourers being lower than the prescribed minimum level are found at the micro-levels. It is difficult to compare minimum wages and prevailing agricultural wages at the district level as the average minimum wage rate for the district is not available (as each district is divided into different minimum wage zones). Therefore, it can just be noted that the average wage rates at the district level (of male labourers) are

higher than the minimum of minimum wage rates. The observations below the minimum (as are reported by the activists) may not be getting reflected at the district level due to the process of averaging to arrive at the aggregate figures. Therefore, for comparing the movements in minimum and prevailing wages, minimum level of the former will have to be considered. In chapter two, it was observed that there are a few years wherein increases in money wages, interestingly coincide with the particular years- 1974, 1977, 1983, 1988 and 1994. These are the years of implementation / revision in minimum wages. Thus, apparently the two seem to be related with a strong influence of the declaration of minimum wages on prevailing wages.

The exercise carried out for finding out the effect of minimum wages on agricultural wages in terms of wage hikes consequent upon increases in minimum wages revealed regional variations as well as gender disparities. Appendix 3.3 reveals the extent of variation of average agricultural wages from the corresponding minimum wage level. It can be clearly noted that the ratio of minimum wage level to average agricultural wage is below one for male labourers for most of the districts (barring the low wage districts like Nasik and Buldhana) over the years. However, for female labourers mostly, it is greater than one indicating the extent of exploitation. This clearly brings out the failure of minimum wage legislation to act as a floor level in the case of female labourers. As far as the percentage change in average prevailing wages as compared to percentage change in minimum wages (appendix 3.4) is concerned, the former is generally higher (i.e. more than 60 percent) for the period between 1975-79 to 1981-85, otherwise, the extent of increase in average prevailing wages of male and female labourers is lower than that of minimum wages across the state. This implies that though the minimum wage hikes have favourably affected agricultural wages, the extent of influence is limited. Apart from this, the average wage level before the minimum

wage hike was compared with wage level prevailing in the year of minimum wage hike (appendix 3.5). This exercise revealed regional variations as well as gender differences though no particular pattern is observed in this respect. However, the positive temporal effect is obvious after the revision of 1979.

Over all, the minimum wage legislation seems to have failed in providing a floor level to wage rates of female labourers especially in the districts of Marathwada and Vidarbha region. But it has a demonstratively positive effect on wage levels though the percentage change is less than in minimum wages. This possibly implies that the higher levels of and greater change in the minimum wage rates would have increased the extent of agricultural wage hikes. It has been further found that the minimum wage rates have been more effective in affecting agricultural wages after the revision of 1979. The empirical support to this phenomenon is found in the widespread EGS works started across the state, linkage of EGS wages with minimum wages and the rural mobilisation backed by labour organisations active in various regions of the state (This issue is discussed in detail in the next two section).

It is quite clear from the available data that the prescription of minimum wage rate as a tool for intervening in the labour market has the potential to affect the existing levels of agricultural wages (even after considering the conceptual problems and the difficulties in implementation). Though the lower levels of minimum wages fixed prove to be irrelevant in the high wage districts, they nevertheless act as norms for existing wages, where the latter are very low. Labour organisations have a role to play in this respect and their achievements can be measured in terms of narrowing down the gap between the two in the low wage regions.

3.2.4 The Emerging Issues:

The above discussion comes up with several important points to be noted inspite of the favourable effect of the minimum wage

legislations. Firstly, the concept of minimum wage for agricultural labourers, its proper implementation and its socio-economic significance has not been seriously taken note of in the literature concerning agricultural labourers. A proper understanding of the concept is important for determination of minimum wage rate based on sound knowledge. Such a wage level is expected to provide for minimum subsistence to the daily agricultural labourers thereby ensuring a minimum standard of living where the prevailing wages fail to do so. But, this ensures only daily subsistence whereas agricultural labourers get employment for only 6 to 8 months in a year. Therefore, guarantee of minimum wage is necessary but not sufficient. The concept of fair wage, which would make allowance for future needs of the labourer becomes important in this regard. Secondly, minimum wage is one of the policy instruments of the state government for protecting the interests of weaker sections like agricultural labourers. But the apathy at the government level in this regard is reflected in the manner in which minimum wage fixation, implementation and revision is carried out. As mentioned above, Minimum Wages Act, has failed in its function of providing a floor wage level especially to the female labourers. Lastly, it can be said that it is the labour organisations in Maharashtra which have played an important role with their limited strength and spread in building pressure against the government for revising minimum wages from time to time, initiating discussions and organising labourers on this issue but they do not seem to have become successful in their attempts at getting a proper minimum wage determined.

3.3 Employment Guarantee Scheme in Maharashtra :

3.3.1 Introduction :

The second type of labour market intervention is the actual participation of the state government in the labour market through its employment generating activities in rural areas. Besides providing alternative employment opportunities to the agricultural labourers,

such schemes tends to set a norm for prevailing wage rate in agriculture. Employment Guarantee Scheme (EGS) of the Government of Maharashtra is such a programme, unique in its character for guaranteeing employment at a pre-determined wage rate. In this section we focus our attention on the relationship between the EGS wages and actual wages in the agricultural labour market and the intervening effect of the former on agricultural wages.

EGS was started in early 1970s in Maharashtra as a relief measure during the severe drought of 1972-73. The public works started under EGS across the state averted the danger of starvation deaths especially in severely affected regions of the state (Dreze-Sen (1989)). Later, EGS was continued as an anti-poverty measure, the major objective being alleviation of poverty through provision of gainful productive employment opportunities to unskilled persons in rural areas.

A review of literature in this regard shows that a large number of studies have focused their attention on EGS (Bagchee (1984), Dandekar and Sathe (1980), Godbole (1990), Acharya (1990), Dev (1995, 1996), Hirway and Terhal (1994) etc) These studies have basically concentrated on evaluation of economic effects of EGS and its administrative set up over a period of time. Among the economic variables which are supposed to have a positive effect on rural labourers are their income, mandays of employment generated and their distribution among various groups, total expenditure incurred and its components, asset building etc. The indirect effects of EGS on food security, nutrition, prevailing agricultural wages and similarly the effectiveness of EGS as against other public works are also considered.

In table 3. 7 we reproduce the results of various micro-studies on composition, employment and wages of EGS workers as given in Dev (1996). It can be seen from the table that various micro-studies have indicated fairly good results of the extent of employment generated

Table 3.7 : Results of Some Micro-studies on Composition, Employment and Wages of EGS Workers

Studies	Survey Period	Percent Belonging to Landless Households	Percent of Small and Marginal Farmers	Percent of SC and ST* in Population	Annual Person-Days of Employment	Wage Rate (Rs.)	EGS Contribution to Total Income
PEO (1980)	1976-78	24	40	n.a.	25	2.93	n.a.
ISST (1979)	1979	51	30	n.a.	157	2.75	n.a.
Dandekar (1983)	1979-80	45	42	42	160	3.60	65
Deshpande V. (1982)	1976-77	31	31	31	50	2.00	n.a.
Maharashtra Planning							
Department (1992)	1981	52	41	41	n.a.	n.a.	n.a.
RDC and Kirloskar							
Consultants (1985)	1983-84	38	40	40	170	n.a.	n.a.
Deshpande S. K.(1988)	1983-84	n.a.	n.a.	n.a.	23	5.50	21
Acharya and Panwalkar							
(1988)	1985-86	34	46	46	54	5.30	31
Datar (1987)	1985-86	35	47	47	105	7.80	36
Sathe (1991)	1987-88	21	58	50	n.a.	n.a.	n.a.

Note : 1.n.a. is not available. 2.* SC is Scheduled Castes and ST is Scheduled Tribes, including other backward castes.

Source : Dev (1996), table no.5.4, p.121.

and the composition of the beneficiaries under EGS. It is an additional / supplementary source of employment particularly during lack seasons of an agricultural year. In this capacity, it has contributed in easing underemployment in absolute terms, though it has not affected the basic structure of labour force (Acharya (1990)). It is observed that between 1972 to 1987, decline of poverty in Maharashtra was greater than in the second period i.e. between 1983 to 1987-88. Similarly the decline was greater for Maharashtra than for all India particularly in the first period i.e. between 1972 to 1983 (Dev (1996)). Thus, in the initial period, the scheme proved to be more effective in achieving targets in terms of poverty and employment .

3.3.2 EGS Wages and Agricultural Wages :

Among all the effects of EGS on rural labour market, important for us is its effect on wages of agricultural labourers. Theoretically, the relationship between EGS wages and agricultural wages or the mechanisms through which the former operates upon the latter can be perceived in different ways. It has been argued that the availability of alternate employment to rural poor through EGS provides a floor wage level for the agricultural wages (Acharya (1990), Acharya and Panwalkar (1989)). Initially, EGS activities were designed so as not to divert the labour from normal agricultural operations and allied activities in rural areas or from plan / non-plan work. The initial debates on the issue i.e. whether EGS wages should be lower or higher than the prevailing agricultural wages also reflects the same concern (Godbole (1990)). The schedule of wage rates on EGS was designed in such a way that on an average, an EGS worker received wages at least equal to the minimum wage for agricultural labourers in the lowest zone (i.e. Rs.3) in 1976. Later on, in 1985, EGS wages came to be fixed at par with the minimum wage rate of that particular zone by the ruling of Bombay High Court (Dev (1996)). Due to its

linkage with the minimum agricultural wage, it is clear that the EGS wages are expected to provide a floor to the agricultural wage.

Secondly, the EGS wages not only provide a floor level to the agricultural wages, below which the latter can not fall, but also have the potential to raise the reservation price of the agricultural labourers. This is because at the disaggregate level, the actual wage rate received by the EGS workers would depend upon the budgetary constraint and piece rate determined for a particular type of work (on a particular scheme), which may be higher than the prevailing agricultural wage. The higher level of EGS wage would favourably influence the agricultural wages by raising the reservation price of agricultural labourers in the peak as well as slack agricultural season. A higher EGS wage than the prevailing agricultural wage of the region can thus confer bargaining capacity on the agricultural labourers and affect their supply to the agricultural sector, thereby raising the cost to the agricultural employer.

As against these short term mechanisms affecting agricultural wages, the channel through which EGS activities (and not wages per say) might affect agricultural wages is the asset generating / productive nature of such activities like irrigation, soil conservation and land development. In the long term, there is a possibility that such infrastructural facilities would lead to an increase in the land productivity, and the extent of agricultural operations positively affecting the agricultural wage levels. Another point which has to be noted for studying the relation between EGS wages and agricultural wages is the composition of workers participating in the scheme. The EGS wages would more effectively influence agricultural wages if the composition of the EGS workers is inclined towards landless agricultural labourers.

3.3.3 Empirical Evidence:

The type of EGS wage - agricultural wage nexus thus realized would depend upon the type of EGS activity started and conditions in the

agricultural labour market. At the state level, the available data reveals that the average EGS wages have remained below the average agricultural wages. This is clear from table 3.8 as well as figure 6. In comparison with the SCR data, EGS wages have consistently lagged behind from 1977 to 1993. As far as AWI data is concerned, only a few years can be marked (1981 to 1984 and 1989) during which EGS wages are above the agricultural wages, in rest of the years, EGS wages are below the agricultural wages. There is a sudden rise in the EGS wages during 1989, which is explained by doubling of the prevailing minimum wage rates in 1988. However, for all the latter years (except 1989, in the case of AWI source), agricultural wages have maintained their higher level. The hypothesis that EGS wages have affected prevailing agricultural wages was tested in a study (Ravallion et al (1991)) wherein it was concluded that the long-run as well as short run response of agricultural wages to changes in EGS is small. However, the results regarding the long run response of agricultural wages to EGS wages in this study are based on the data for the period between 1987 and 1989 and hence can not be applied for a longer period i.e. 1977 to 1990, which is under consideration here. It can be noticed from figure 6 that the movements in the SCR series do not seem to be related to EGS wages over a period of time. As far as AWI data is concerned, the wages seem to be getting affected by changes in EGS wages with a lag. The graphical representation as well as the statistical tests thus do not seem to be supporting the hypothesis⁷. It is felt that the differences in the types of EGS activities and labour market conditions at the disaggregate (district) level can provide a different picture than at the aggregate (state) level. Table 3.9 presents a comparison of districtwise average EGS wages and average agricultural wages based on the available EGS data for the period between 1981-82 to 1987-88.⁸ Here, EGS wage rates are compared with agricultural wage rates as reported in

Table 3. 8 : Comparison of Daily Average Agricultural Wage Rates and the Daily Earnings on EGS (In Rs.)

Year	Agricultural Wages		EGS Wages
	AWI	SCR	
1977	3.25	4.17	2.81
1978	3.99	4.38	3.25
1979	4.52	4.76	3.61
1980	5.10	5.49	4.36
1981	5.22	6.18	5.40
1982	5.79	7.53	6.28
1983	6.52	8.87	7.80
1984	7.81	9.71	8.41
1985	10.66	10.60	8.30
1986	11.36	11.79	9.60
1987	10.79	13.11	8.23
1988	11.96	15.14	9.11
1989	13.43	16.46	15.02
1990	17.58	18.16	15.53
1991	20.12	20.17	15.02
1992	22.86	20.19	16.91
1993	23.83	24.71	18.45

Notes : 1. EGS wage figures are average figures obtained by using total expenditure on wage and total mandays. 2. Agricultural wages of male labourers considered.

Source : Various issues of AWI and SCR for Agricultural wages and Planning Department, Government of Maharashtra for EGS Wages.

COMPARISON BETWEEN TRENDS IN AVERAGE AGRICULTURAL WAGES AND EGS WAGES

FIGURE 6

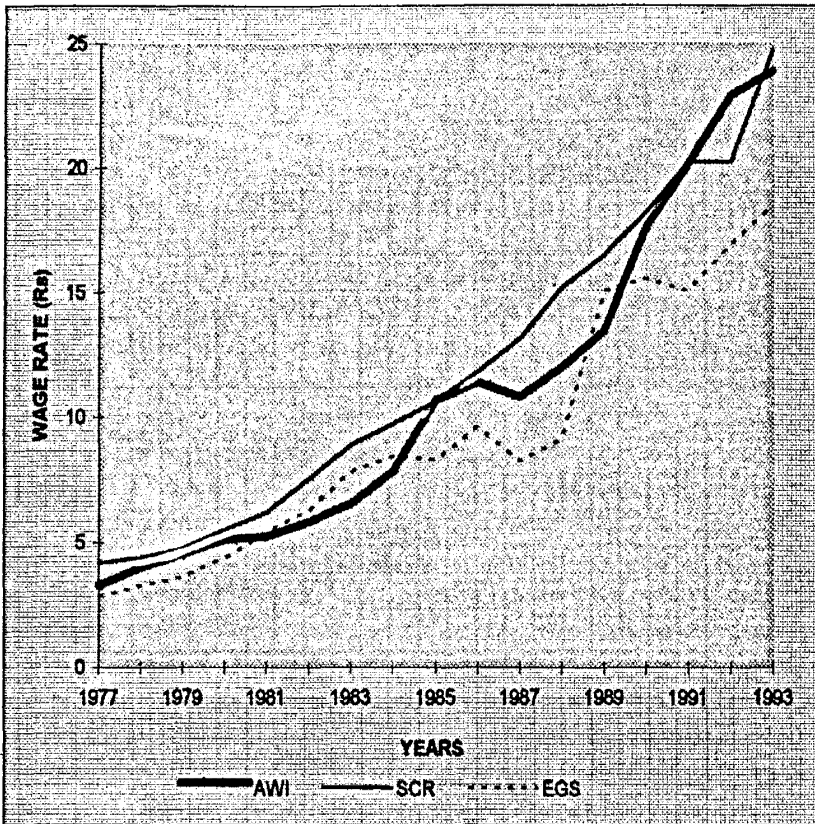


Table 3.9 : Average Wages Paid on EGS and Average Agricultural Wage Rates

(In Rs.)

District	1981-82		1982-83		1983-84		1984-85		1985-86		1986-87	
	EGS	SCR	EGS	SCR	EGS	SCR	EGS	SCR	EGS	SCR	EGS	SCR
Thane	5.31	6.82	7.82	9.28	7.11	9.12	8.62	9.78	9.57	10.58	7.67	13.31
Raigad	10.45	8.45	4.78	13.02	4.53	11.58	10.75	12.33	4.99	13.40	3.69	15.23
Ratnagiri	7.91	10.13	8.25	11.17	9.42	12.70	10.40	12.67	11.07	13.89	12.11	15.93
Nasik	8.81	7.32	10.49	8.14	9.54	8.50	10.61	10.89	12.02	11.37	8.12	12.28
Dhule	6.51	6.20	8.99	7.25	12.85	8.08	10.23	8.77	13.57	9.82	7.48	10.90
Jalgaon	8.14	9.72	9.80	9.92	13.11	13.53	10.05	13.78	9.68	20.00	8.86	22.92
Ahmednagar	5.97	9.04	6.03	10.64	7.35	11.64	8.57	11.80	9.74	13.11	7.99	15.85
Pune	6.86	7.61	6.40	10.14	8.11	10.68	8.64	12.49	7.62	13.31	8.13	15.61
Satara	5.10	6.08	7.40	8.34	7.94	9.82	8.67	10.14	9.81	12.38	8.97	16.81
Sangli	6.12	7.50	5.54	7.64	8.10	7.69	8.94	7.60	12.28	9.70	9.48	11.77
Solapur	5.09	7.16	5.04	11.03	6.78	11.72	7.90	11.00	8.23	12.64	7.71	13.29
Kolhapur	7.73	5.62	7.24	5.98	5.92	8.77	10.62	9.13	11.18	8.88	6.26	9.47
Aurangabad	7.21	8.15	7.81	9.12	8.11	10.09	7.57	10.87	8.79	11.39	7.93	12.31
Parbhani	6.54	7.01	8.47	7.60	10.16	8.00	9.68	7.60	13.05	9.33	12.37	10.21
Beed	5.22	6.73	6.28	7.39	7.16	8.84	6.42	8.84	7.98	8.84	8.84	8.84
Nanded	4.97	10.70	6.50	12.91	8.03	8.03	7.83	10.20	8.42	11.52	10.30	11.57
Osmanabad	6.17	8.68	8.84	11.62	7.11	12.95	8.30	13.23	9.57	13.42	7.18	15.01
Buldhana	6.81	6.35	8.41	7.88	9.26	6.49	9.51	11.20	11.18	12.25	9.75	9.00
Akola	6.12	6.34	7.39	6.00	9.18	8.06	9.18	9.36	11.94	11.16	10.01	11.43
Amaravati	6.82	6.59	5.74	7.12	9.80	9.40	8.24	12.98	10.39	13.96	12.44	13.22
Yavatmal	5.04	6.69	8.02	7.33	10.60	8.60	9.26	10.45	9.26	10.57	10.07	9.92
Wardha	7.07	9.33	5.56	10.12	8.94	11.21	9.12	12.51	13.61	12.66	13.68	14.59
Nagpur	7.51	7.69	6.67	7.92	9.64	10.53	6.74	10.88	8.54	12.58	10.90	16.68
Bhandara	6.26	5.58	4.75	5.89	4.78	6.77	4.07	7.81	4.30	7.77	6.12	10.09
Chandrapur	4.74	6.68	8.60	7.68	8.91	8.79	5.76	8.72	9.21	10.13	7.97	11.54

Note : 1. Figures of wage rates (EGS and SCR) of districts Ratnagiri, Aurangabad, Osmanabd and Chandrapur are the average figures of these districts and corresponding newly created districts (i.e. Sindhudurg, Jalna, Latur and Gadchiroli respectively). 2. For the sake of comparasion, wages of only male agricultural labourers as reported in SCR considered.3. Underlined figures indicate higher levels of EGS wage than corresponding Agricultural wage

Source : 1. Government of Maharashtra , Planning Departmental . 2. Various issues of SCR.

SCR as it is the only source providing data for all the taluks of all the districts in the state unlike AWI.

For most of the districts, the average EGS wages are seen to be lower than the agricultural wage rates. In these districts therefore, EGS wages can be said to be providing a floor level to the agricultural wages. In districts like Nasik, Dhule, Sangli, Solapur, Beed, Buldhana, Akola, Amaravati and Yavatmal however, EGS wages are mostly noticed to be higher than the agricultural wages. Out of these districts Dhule, Solapur, Beed, Amaravati and Yavatmal are the high wage districts as is observed in the earlier chapter. Incidentally, among these districts Dhule, Solapur and Beed happen to be the districts wherein the total mandays of employment generated as well as their percentage to the total mandays of the state is very high (appendix 3.6). It is possible that the EGS activities in all these districts have provided an incentive for agricultural wages to rise by raising the reservation price of labourers in the latter years. The remaining districts viz. Nasik, Sangli and Buldhana which are the low wage districts do not seem to have benefited from higher EGS wages.

As far as the long-run effects of EGS activities on agricultural wages are concerned, a micro-level study reveals the positive effects of EGS activities on agricultural development and labour absorption (Sathe(1991)). It also notes that the increase in the labour absorption has reduced the need for EGS employment. The available secondary data and the results of various studies indicate that EGS wages have helped agricultural labourers by providing not only a minimum floor wage level (realized due to the guarantee aspect of the activities) but also by raising the reservation price of labourers in some situations. The type of the mechanism in operation and the outcomes would depend upon not only the technical characteristics of the projects started but also on the structural aspects and other conditions of the labour markets.

Firstly, the favourable impact of EGS on agricultural wages would depend upon the composition of workers participating in EGS. A higher share of landless agricultural labourers (than the marginal farmers) without the security of any asset would be more effective in raising the agricultural wages. By this logic, districts in the regions of Marathwada and Vidarbha, where share of agricultural labourers is higher than in the rest of the districts, should be characterised by higher levels of agricultural wages. Table 3.9 shows that most of the districts from these regions where EGS wages are higher than agricultural wages for the concerned period are the high wage districts. It is possible that higher EGS wages have had a leverage effect on levels of agricultural wages due to higher share of landless agricultural labourers. As against this, a higher share of small and marginal farmer working on EGS activities for the purpose of meeting the seasonal financial demands of the household may not effectively influence agricultural wages through EGS wages.

A more indirect effect of higher EGS wages and a guarantee of employment is the increase in bargaining strength of agricultural labourers vis-a-vis their agricultural employers. Apart from this, increased bargaining capacity of the employer is also a consequence of mobilisation of rural poor backed by various labour organisations. Activists of these organisations attribute the agricultural wage hikes during the post- 1975 period all over the state, to this particular phenomenon. In their opinion, the positive effects of EGS activities viz. scarcity of labour to the employer and their higher reservation price has prompted the employers to oppose these activities. It is also noted by the activists that there are instances of cases where EGS works are not allowed to start in the concerned regions due to bureaucrat-employer nexus in the rural areas, so that the danger of scarcity as well as mobilisation among rural labourers is averted. It is also felt that there has been a deliberate contraction of EGS activities at the government level thus defeating the concept of guarantee of

employment itself. Though the officials attribute this decline in EGS employment over the years to factors such as good monsoon, increased labour absorption in various regions due to earlier EGS activities etc. (Dev (1996)), it is felt that given the increase in the EGS schedule particularly in 1988, there is rationing of employment provided by EGS activities (Ravallion et al (1991)). A decrease in the absolute level of expenditure on wages and its proportion to total expenditure particularly after 1988 also possibly explains the same phenomenon (appendix 3.6).

To sum up the discussion on the influence of EGS on agricultural wages, a few important points can be noted. Firstly, though the aggregate level data and statistical tests performed on it do not clearly bring out the favourable impact of the EGS, it is clearly indicated from various micro-level studies and meetings with activities of various labour organisations. Secondly, the guarantee aspect of EGS and its linkage with the minimum wage applicable to the region has generated leverage effect of EGS wages on agricultural wages. Thirdly, increased bargaining strength of labourers due to the widespread EGS activities and mobilisation of rural poor has been one of the important outcomes of this government intervention. This represents a classic case of combined positive impact of the governmental interventions (EGS and minimum wage legislation) implemented due to the pressure of labour organisations working amongst the rural poor, threatening the political base of the government itself leading to contraction of and opposition to the scheme at the government level.

3.4 Labour Organisations in Maharashtra :

3.4.1 Agricultural Labour Organisations-in Theory and in

Practice :

In view of the institutionalist approach, a labour organisation can be looked at as one of the institutions shaping the economic behaviour and the nature of economic development. Such an approach provides

important insights into the interaction between institutions and labour market transactions (Papola and Rodgers (1992)). As such, the organisations working for agricultural labourers can be looked at as institutions intervening in labour market processes such as wage determination, labour-employer relation etc. The Indian experience shows that organisations / movements of agricultural labourers was dominated by certain leftist groups due to ideological as well as empirical reasons. The intervention of these earliest organisations was thus in the form of creation of class consciousness among the exploited labour thereby bringing about a change in the feudal nature of the production relations and disturbing the labour market stability. A review of literature revealed that relatively only a small number of studies have undertaken any detailed analysis (theoretical as well as empirical) of labour organisations as intervening institutions and the rationale for their emergence (Aziz (1978, 1979, 1990), Kannan (1992, 1993, 1995) , Brahme and Upadhyaya (1979) , Gill (1995) etc.). This can possibly be attributed to the typical features of Indian agricultural labour market posing organisational difficulties. It is a well known fact and noted by several studies that the socio-economic heterogeneity within the labour market, disadvantage of small numbers (of labourers) at a small workplace, their spread on a large area have been such major factors obstructing the process of rural mobilisation and organisation (Aziz (1978, 1979), Gill (1995), Kannan (1995)). Therefore, the extent of agricultural labourers organised, their bargaining strength and ability to affect the labour processes is limited in comparison with the industrial workers. On this background, the emergence of labour organisations is explained mainly as an institution to stop economic exploitation of this class. Labour organisations can be viewed as institutions attempting to break the vicious circle of weak economic status of labourers, leading to weak bargaining capacity which again leads to weaker economic position of the labourers.

The earliest attempts of unionising agricultural labourers were made in 1934 in Nellore district of Andhra Pradesh, followed by Kerala, Punjab and Tamil Nadu (Gill (1995)). As noted earlier, the earliest organisations which were dominated by the leftist groups, took up the issues of agricultural labourers - the most economically exploited class within the rural social hierarchy. Their major demands centered mainly around the wage issue and achieved success in this regard through long drawn struggles (Gill (1995), Kannan (1995), Reddy (1995)). Thus, the historical experience establishes an association between the bargaining strength of the labourers and the wage behaviour in the concerned regions.

3.4.2 Labour Organisations in Maharashtra

The analysis in the earlier sections clearly revealed limited but a positive role of the minimum wage legislation and EGS as tools of government intervention in case of Maharashtra. Payment of minimum wage rates and direct as well as indirect benefits accruing from EGS activities have depended mainly on the collective strength of the labourers. Hence, the activities of the organisations working for agricultural labourers attain utmost importance as independent interventions and as interventions initiating intervening actions on the part of the government. The focus of this section is on the evidence from the literature, theoretical as well as empirical, bringing out the role of labour organisations as an important institution and empirical need for organising the labourers. Firstly, we briefly discuss the emergence of labour organisations in Maharashtra, their spread across the state and the hypothesis of stark economic exploitation leading to the emergence of these organisations in some regions and existence of politically dominant classes prohibiting their emergence in some other regions, forwarded in this regard. Next, we attempt an analysis of the structured schedules that were sent to the activists of various labour organisations in the state with a view to bring out the information relating to their achievements, specifically

with respect to the wage question, and the regional variations / patterns in it as well as the perception of the organisations regarding the state as an intervening force in the labour market.

It has been noted that Maharashtra falls in the category of states where the degree of unionization amongst agricultural labourers is comparatively higher than in the other states (Gill (1995)). In Maharashtra too, the earliest struggles of the organisations revolved around the question of wage and were dominated by the leftist organisations such as 'Kisan Sabha' in districts Thane, Parbhani, 'Shramik Sanghatana' in district Dhule and 'Kashtakari Sanghatana' in Nanded. A striking feature of these organisations is their regional spread. A general observation shows that throughout the period of time, the tribal areas of the state viz. Thane and Dhule have been the areas of sustained activities of several organisations. The other i.e. the non-tribal regions of Maharashtra are generally characterised only by sporadic outbreaks of the grievances of the labourers pertaining to specific issues.

3.4.3 Intervention by Labour Organisations-An Empirical

Evidence :

With the intention of understanding the role played by activities of labour organisations, in the recent past, especially on the question of wage, structured schedules were sent to forty activists of labour organisations working in various parts of Maharashtra⁹. The information required related to the role of the organisations as an intervening force and the achievements of these organisations. Secondly, the schedule also incorporated questions relating to the state intervention in labour market in terms of minimum wage legislation and the perception of the organisations in that respect. Information was also collected from personal meetings with several activists / senior leaders who had participated in the movement at one point of time or the other.

A few points regarding the response received by the activists can be noted here. Firstly, out of the forty schedules sent, only eight were received back from the organisations despite several reminders, personal persuasions and contacts. Secondly, a general scanning of the schedules sent back not only revealed general lack of knowledge / information regarding some of the questions raised (eg: prevailing wages / prescribed minimum wages in the areas of activity) but also absence of deeper insights into the problems of agricultural labourers. This leads us to conclude that agricultural labour organisations in Maharashtra are largely in a state of inactivity / disinterest as of today and reflects upon the present state of agricultural labour movement in the state. On the background of the poor response received, we have relied mainly upon the discussions with the activists / senior leaders and the available literature for the purpose of our analysis.

Table 3.10 presents general information relating to the schedules received. It can be noted that the labour organisations are mostly concentrated in three districts of Konkan as well as those of Marathwada. The number of existing labour organisations is very less in Vidarbha and the response to the schedules sent is zero. The available information also shows that barring Vidarbha, the membership of organisations is larger in the districts of Marathwada (which can probably be attributed to the higher share and number of agricultural labourers in that region). The organisations are seen to be generally of recent origin with their establishment year in the post - 1980 period. However, the year reported is the year of registration of the organisation. This possibly implies beginning of their activities a few years before that i.e. in the post - 1975 period.

As the focus of this study is on the wage question, the related information that was obtained through the schedules is reported here in table 3.1

Table 3.10 : General Information Relating to Various Labour Organisation in Maharashtra.

Region District	Total No. of Schedules Sent	No. of filled Schedules received back	Year of Establishment	No. of Branches		No. of Members (Agricultural Labourers)
				Districts	Taluks	
1. Konkan	11	1	1970	Raigad	4	700
2. Khandesh	5	3	1964	Jalgaon	7	---
Jalgaon			1980	All over Maharashtra		---
Nasik						
Dhule			1882	Dhule	5	1424
3. Western Maharashtra	8	1	1983	Satara	8	---
				Sangli	8	
				Solapur	4	
				Kolhapur	5	
4. Marathwada	14	3	1983	Beed	5	5728
Beed			1991	Nanded	8	699
Nanded			1982	Latur		4300
Latur				Osmanabad		
				Parbhani		
				Nanded		

Note : Vidarbha not included, as no schedule was sent back (out of the two sent)

Table 3.11 : Wage Related Information Obtained from the Schedules

Region (district)	Average Wage Rate in the Area of Activity (In Rs.)				Minimum Wage Zones and Minimum Wage Rate Applicable Zone(s) Rates(s) (In Rs.)		Level of Minimum Wage that should be Paid (In Rs.)	Range of Increase in Agricultural Wages in the Last 3/5 Years (In Rs.)	
	Male		Female					M	F
	Min	Max	Min	Max					
1. Kokan Raigad	30	60	8	40	-		50 to 60	10	10
2. Khandesh Jalgaon	25	35	10	25	-		-	-	-
Nasik	50	70	15	40	3/4	20/23	4 th class worker in military	10/20	5/15
Dhule	18	30	15	25	-		35 to 40	5/10	5/7
3. Western Maharashtra Satara	35	50	20	30	-		50		-
4. Marathwada Beed	15	30	12	20	1/2	26/29	40	5/10	2/5
Nanded	20	30	15	25	2/3	23/26	-	10/15	5/10
Latur	25	45	12	25	3	23	75	5/15	2/5

Note : 1. The data not reported above represents either absence of response to the particular question or erroneous and casual reporting of the data. 2. Min = minimum, representing wage rates in unirrigated area or in slack season, Max. = maximum, representing wage rates in irrigated areas or in peak seasons.

It can be seen that the information provided follows a particular pattern i.e the responses (relating the wage issue) of the activists / organisation of the same region can be grouped together. Thus firstly, the wage rates pertaining to the western regions (Konkan, Khandesh and western Maharashtra) are higher than the Marathwada region. Similarly, from the available data it can be seen that there is a possibility of the wages of female labourers (even those prevailing in the peak season) being lower than the prescribed minimum wage pertaining to that particular region. For the remaining districts, the information relating to minimum wage rates applicable, was not reported. Secondly, the extent of wage gap is generally higher in the western regions and lower in the districts of Marathwada, supporting the hypothesis of high wage (high development) high wage gap nexus. In Dhule, the wage gap is seen to be quite low due to the proper implementation of minimum wages act by the intervening activities of the organisations. Thirdly, the table also includes the data relating to the extent of wage increase during the last 3 to 5 years. However, there dose not seem to be any sign of a clear pattern emerging out of the same. The information reveals the differences in the wage behaviour in different regions i.e., western regions of Maharashtra and Marathawada, as has been noted in the earlier chapter. However, with this information, it is difficult to provide any insights into the issue of the relationship between the wage question and the labour organisations. Therefore, on the basis of the overall descriptive information obtained through the schedules and through the discussions, a few inferences, supported by the existing literature were drawn. The striking pattern that was revealed was again the regional pattern in this respect, bringing out the significance of wage- labour market nexus.

On the basis of the available information, three broad groups of the regions within Maharashtra can be perceived. The first category includes the districts with a large tribal population viz. Dhule and

Thane. These districts are characterised by existence of a larger number of labour organisations which have dealt with the typical problems of the tribal population. The demands and the struggles of these organisations have revolved around the very basic question of subsistence of the tribal labourers - wages and land. The emergence of the organisations, the mobilisation and unionisation among the labourers in these regions is attributed to the stark exploitation by the upper caste money lenders as well as landlords. The existence and achievements of the organisations has definitely brought about a change in the standard of living of the labourers, who are now in a position to receive at least minimum wages (or even higher than that in some regions) and fall back upon the pieces of land recovered by moneylenders / government etc. Similarly, the presence of the organisations has enabled the labourers to acquire a sense of identity and confidence in themselves. The achievements are not only reflected in gains in terms of payment of minimum wages and recovery of the alienated / forest land, but also a distinct reduction in the exploitation of the labourers . Thus, the organisations seem to have gained control over the wage determination process. The labourers are now in a position to refuse to work for the landowners due to upward movement of their reservation price.

In the second category, fall the districts of western Maharashtra with the exception of Thane, Dhule and Raigad too. In these districts, it is noticed that the number and spread of labour organisations is comparatively very limited. As is noted earlier, these are districts, where the gains of agrarian capitalism have been distributed among the agricultural labourers also, to some extent. Secondly, the development of the tertiary and secondary sector in these regions which has provided the labourers with employment opportunities outside the agricultural sector also influence the wage determination process. Discussions with senior leaders revealed that the agricultural wages have generally remained above the minimum wage level.

Therefore, the major demands of the organisations have revolved around provision of EGS works in rural areas and implementation of various governmental schemes (Pension, Sanjay Gandhi Niradhar Yojana) and have not posed any real threat to the hegemonic rule of the Maratha peasantry in the rural areas (Brahma and Upadhyaya (1979)). In the light of this, it is difficult for the organisations to survive and work on a sustained basis. In short, the association between the wage behaviour and collective bargaining strength is weak and the determinants of wage rates are diverse.

The third category is constituted by the districts of Marathwada. The number of labour organisations is higher in this case as compared to the districts in western Maharashtra. The issues undertaken by these include payment of minimum wages as well as payment of proper wages on the EGS works. However, the organisations in this region do not generally show sustained movement / activities through the period. The organisations can be said to have achieved success in the post -1975 period when the government started public works on a large scale through EGS activities. As noted earlier, the gains of the organisations can be counted in terms of mobilisation of rural poor and their collective bargaining strength. The secondary data too conforms to this hypothesis as it shows an increasing trend in money wages after 1975 in various districts. However, it is possible that after the contraction of the extent of EGS works at the state level, the activities of the organisations have cooled down. On the whole, there seems to be only a partial association between the process of wage determination and the activities of the organisations .

The level of exploitation in terms of the difference between the actual prevailing wage rate and the hypothetical entitlement wage rate (which is at least equal to the minimum wage rate) thus seems to be one of the major factors explaining the regional spread of the labour organisations. In the first category i.e in the tribal regions, very low level of wage rate and high level of exploitation has been

the conducive factor for the emergence of labour organisations. On the other hand, generally higher levels of prevailing wages than the minimum (entitlement wage) is one of the reasons behind limited number and restricted activities of labour organisation in the second category. The third category falls in between as far as the level of exploitation and the activities of the organisations are concerned. A nexus between the levels of wages and institutionalised interventions (by labour organisations) in the labour market is thus clearly established.

Implicit in the difference (in wage levels and spread and activities of labour organisation) in various labour markets are the underlying structural factors. These include the composition of the labourers (landed and landless), class relations and social hierarchy in the society. The activists attribute absence of strong agricultural labour movement in Maharashtra to these factors. As is noted earlier, the degree of unionisation is comparatively higher in Maharashtra along with some other states like Kerala, Tamil Nadu, West Bengal (Gill(1995)). However, the empirical evidence emerging out of our study does not seem to be supporting the fact of higher unionisation among labourers (within Maharashtra). Dominance of the Maratha peasantry on the agricultural sector as well as the state politics is the important explanatory factor in this regard. It is observed that agricultural labourers in general have been mobilised and harnessed by the rich farmers in large scale movements which primarily serve the latter's interest in agitations for lower taxes, higher prices and better subsidies (Bardhan (1984b)). The force of the political factors interfering in the labour market is also clear from the apathy / indifference at the government level towards proper implementation of the measures (interventions) such as minimum wage legislation. The activists and the senior leaders unanimously pointed out the persistence of loopholes (such as those relating to the concept, basis and implementation of minimum wages, revisions in it and the

deliberate contraction of EGS activities in the state) in these interventions.

3.5 Summary:

The analysis of the interventions in the labour market (both in terms of state and labour organisations) is based on the descriptive information mainly gathered through discussion and the availability of comparable data (as in case of data relating to EGS wages and zonewise minimum wages applicable in each district) for the analysis of regional variations. However, the available data and information throw enough light on the role of these interventions as well as broad regional variations.

The major point that comes out of the analysis is the combined positive role of all the interventions in the labour market. On one hand, state intervention alone is observed to be inadequate in providing relief to the rural poor. On the other hand, the tools of state interventions viz. minimum wage legislation and EGS activities provide the organisations a norm or a specific objective to bargain for higher wages. Empirical observations clearly show a rise in the bargaining strength of the labourers in the post-1975 period.

Secondly, the available information also reveals regional variations in terms of various labour markets and the political economy behind the labour market processes. The positive impact of state as well as union interventions which have potential to destabilise the political base (at least temporarily) has prompted the state government to take actions. These actions range from indifference towards timely revision of in the minimum wage rates, contraction of EGS works to supporting the rich peasant lobby during the struggles against the labourers / organisations through the bureaucratic set up. Persistence of lacunae in the tools of state intervention can be attributed to this particular attitude of the government.

The operation of two opposing forces have been thus characterising the labour markets in Maharashtra. On one hand, the combined effect

of all the three interventions has been positively affecting bargaining power of labourers and wage rates. On the other hand, the political forces seem to be opposing it. The nature of these forces and of the interaction between them is seen to be differing across the labour market regions. The distinctive nature of labour markets due to the operation of these forces is revealed from the analysis of village labour markets.

Notes :

1. Machinery for implementation of various provisions of the Act not being the focus of the study, various aspects such as administrative set up for settlement of disputes, punishment for evasion of the provisions and other issues like zonewise comparison of minimum wage rates and corresponding prevailing wage rates, demarcation of zones are not considered under the present study.
2. The committee did not clearly mention the logic behind fixing minimum wage earnings for monthly and annual labourers and the number of days of employment for arriving at their respective wage rate. For details, see appendix 3.2:
3. Zone I comprises of areas within local limits of all Municipal Corporation. Pune and Kirkee Cantonements, command areas receiving perinial water supply from irrigation schemes. Zone II includes the Municipal Councils, Cantonement areas other than those in zone I, areas receiving sesonal water supply from government constructed dams. Zone IV consists of the drought prone regions in districts Jalgaon, Dhule, Nasik, Pune, Solapur, Ahmednagar, Sangli, Satara, Aurangabad, Beed, Osmanabad and Buldhana. Lastly, zone III includes all other areas, not included under zone I, II, IV.
4. Brahme and Nene arrived at the figures of 3.85 kgs. of Jowar and 334 gms. of cereals per day for an agricultural labour household. Considering prices prevailing at that time, they calculated daily consumption expenditure of the labour household as Rs. 23.40 and required minimum wage as Rs. 11.7 per person per day.

5. Calorie intake required by 1 adult male, 1 adult female and 3 children (3 years, 7 years and 14 years) are 3900, 3000, 2500, 1800, + 1050 = 12700 calories (Ref. ICMR, 1977).

6. The break-up of the total food requirement of the family is as follows - 1. Pulses = 0.4 Kg. 2. Actual Jowar reqt = 3.35 Kgs + Jowar required for making allowance for other foods + a weekly holiday = 9.8 Kg.

7. The value of rank co-relation coefficient between the yearly changes in the two data sets was found to be insignificantly small (0.17). Results of regression (of the form $y=a+bx_1$) with average EGS wage in time period 't' as well as in 't-1', 't-2' and 't-3' as independent variables explaining average agricultural wage rate shows that the response of the latter is significant in time period 't-1' ($B=1.29$, $R^2=0.95$, $t=15.69$). This means that any change in EGS wage rate in a particular year would affect agricultural wage rate with a lag of one year.

8. One major point to be noted in this regard is that unlike the data on agricultural wages, that for EGS is available only where EGS activities exist. Therefore, EGS wage data are not available for every taluk. Hence, a comparison of EGS wages and agricultural wages district and state level would imply a comparison between two different samples. However, in absence of relevant and comparable EGS and agricultural wage data, we have to use the available data for the state level as well as district level analysis.

9. The names and addresses of activists / organisations were collected from the office of Hind Mazdoor Sabha, Pune, which provided a comprehensive list of names of activists of various organisations in Maharashtra. Out of these, the schedules were sent to those known to be comparatively more active. For the sake of maintaining the anonymity, the names of the organisations are not mentioned here.

CHAPTER IV

DETERMINANTS OF WAGE RATES - AN EMPIRICAL ANALYSIS

4.1 Empirical Testing of the Theories of Wage Determination :

Theories of wage determination provide us a basis to verify the relationship between wage rate and the factors that tend to influence their variation. But, many a times, absence of appropriate data at the aggregate level does not permit a rigorous testing of these theories eg: the actual process of wage determination underlying the 'efficiency wage theory' requires data relating to the profit function of employers, productive abilities of labourers, unemployment among them etc. Non-availability of such data at the aggregate level (here, at the district / state level) poses difficulties in testing the empirical relevance of these theories at these levels. Alternatively, one can test the relationships postulated in these theories by relating the wage rates to the available best proxies. In the case of 'efficiency wage theory', one can look at the data on wage-labour productivity (product per worker) and search for higher productivity in high wage districts or vice versa. As far as the other theoretical constructs (i.e. bargaining theory, implicit co-operation theory, insider-outsider theory) are concerned, the required data primarily relates to the bargaining capacity of the labourers or their reservation price, which is attributed to different factors in each of these. Again, in the absence of readily available data regarding these factors, bargaining capacity / reservation price of the labourers can be approximated by the economic factors, which indicate relative scarcity (or abundance) of labourers and confer bargaining power upon them at least to some extent eg: share of agricultural workers in total main workers (an indicator of extent of non-farm job opportunities) and share of agricultural labourers in total main workers. The institutionalised activities of labour organisations, their spread and membership across the state also indicate the role of bargaining power as a result of

collective strength of the labourers and the consequent regional variations.

In the case of Maharashtra, regional variations in these factors can be taken to be a rough measure of those in the bargaining strength of the labourers.

Firstly, for searching the wage-productivity link in various districts of Maharashtra, average money wage levels are compared with average product per worker. However, these comparisons do not offer any indicative or conclusive evidence supporting or contradicting the prevalent theory of wage-productivity linkage.

It was noted earlier that the districts of the state depict a positive relationship between the share of labourers and the level of wage rates. Districts like Raigad, Ratnagiri, Pune, Satara, Sangli, Solapur, Kolhapur, Osmanabad, Wardha and Nagpur conform to this pattern. However, a few exceptions also can be noted eg. despite a relatively lower (higher) share of labourers, levels as well as growth rates of wages are found to have consistently stayed at relatively lower level in Thane, Nasik, Aurangabad (Amaravati, Yavatmal). Similar groups can be noted from table 4.1 indicating the share of main workers other than agricultural labourers. Most of the districts as mentioned above, depict similar behaviour excluding Thane, Nasik and Yavatmal.

It can be said therefore, that the validity of hypothesis relating to the cause and effect relationships under various theories of wage determination can be tested only broadly (at the macro-level) to the extent of indicating the determinants of wage determination process. This creates a necessity of focusing on the factors that tend to affect wages.

This chapter deals with four important issues while attempting an empirical testing of determinants of wage behaviour. An attempt is made here to identify the explanatory variables which influence the movement in wages in terms of their absolute level. Various economic, demographic and structural parameters get incorporated in

Table 4.1 : Proportion of Main Workers other than Agricultural Workers to Total Main Workers (In percentage)

District	Male				Female			
	1961	1971	1981	1991	1961	1971	1981	1991
Thane	46.94	54.70	68.56	78.21	16.29	18.72	27.59	40.80
Raigad	31.78	32.29	44.63	50.35	11.43	9.84	14.64	14.83
Ratnagiri	29.87	30.10	38.60	39.42	8.57	6.42	10.34	11.10
Nasik	35.68	34.99	41.25	44.55	13.41	11.91	12.12	12.29
Dhule	24.09	23.69	27.83	30.49	7.83	7.71	8.55	8.19
Jalgaon	30.29	29.54	33.21	36.07	7.59	6.37	6.43	7.33
Ahmednagar	26.76	27.48	31.76	35.38	8.70	11.01	10.75	11.24
Pune	50.00	54.34	61.51	65.18	16.33	23.94	26.68	29.32
Satara	31.16	31.31	36.33	37.70	8.42	9.52	12.42	11.86
Sangli	26.16	29.76	34.48	38.16	9.49	14.38	13.93	14.70
Solapur	37.40	34.67	41.20	41.46	17.53	20.17	23.24	19.97
Kolhapur	29.56	33.04	40.90	47.58	8.77	8.72	10.73	13.90
Aurangabad	24.95	25.46	30.60	35.58	7.10	8.18	7.78	8.72
Parbhani	27.55	21.50	27.98	28.08	8.55	5.65	7.21	5.66
Beed	25.03	19.31	27.96	29.17	6.60	5.47	7.97	6.31
Nanded	27.73	24.23	29.87	30.50	8.70	8.07	7.73	7.12
Osmanabad	23.77	19.96	25.41	24.85	5.87	5.84	6.01	6.01
Buldhana	23.26	21.11	24.42	26.79	4.96	3.24	3.94	4.22
Akola	27.14	25.19	29.01	32.84	5.34	4.51	5.11	6.31
Amaravati	28.83	27.83	30.62	34.82	7.13	6.54	7.06	9.10
Yavatmal	22.30	21.13	23.61	28.10	4.88	4.29	4.77	6.60
Wardha	32.90	31.28	32.18	36.16	8.10	7.08	6.85	8.91
Nagpur	58.33	58.61	63.29	68.33	26.05	25.94	26.72	30.65
Chandrapur	26.39	24.36	30.65	36.55	8.11	13.50	8.97	9.92
Bhandara	34.70	32.60	32.98	34.59	20.95	24.87	20.34	17.71
Maharashtra	41.20	42.32	47.81	51.40	12.30	14.67	15.91	17.54

Note : New districts clubbed with the old districts

Source : Census of India (1961, 1971, 1981, 1991), Economic Tables, GOI.

this. This is followed by a comparative analysis of elasticities of wage determining factors. An analysis of male-female wage gap and the gender bias in the process of wage determination is also attempted. Finally, the issue of product price- wage nexus and the role of the former as a possible determinant of the latter is considered at the end of the chapter.

4.2 Factors Affecting Wage Rates:

The difficulty in testing the process of wage determination at the macro-level creates a necessity of focusing on the factors that tend to affect wages. Theoretically, identification of such factors is necessitated by the existence of different labour markets and correspondingly differential behaviour of wage rates, as is noted earlier.

Earlier studies which have adopted a demand and supply frame have either directly attempted estimation of the wage function or derived it from a simultaneous equation system (Pande (1973), Papola-Misra(1980), Bardhan,K. (1973), Lal (1976), Sidhu (1988), Jose (1978), Acharya (1989), Bhalla (1993). Most of these studies carried out with the underlying objective of bringing out significance of demand enhancing factors (positively affecting wage rates) and the supply factors (obstructing the upward movement of the same). These studies basically concentrate upon the demographic and economic factors. A few among these bring out the significance of factors like land distribution (Papola and Misra (1980)), index of segmentation, class consciousness (Sidhu (1988)), access to resources (Acharya (1989)) as revealed at a particular point of time. However, the dynamic aspects of these factors need to be incorporated in the analysis as the very process of wage determination is dynamic. The identification and inclusion of these factors in the analysis at a particular point of time in a conventional demand and supply frame may not be able to clearly capture the ground realities and several other aspects of labour market which need to be taken into account.

It is felt here that instead of resorting to mathematical modeling a descriptive analysis of underlying institutional - structural - political set up through time would provide necessary insights for understanding the labour market behaviour in a better way and provide a background for identifying factors affecting wages in a demand and supply framework. Hence, we attempted here identification of the factors that have affected wage levels in districts of Maharashtra with the background of political - institutional set up of various labour markets (as sketched out earlier). The pattern of agricultural growth in the case of Maharashtra reveals, satisfactory growth of this sector in terms of foodgrains production in almost all the regions during the 1970s. But this has not reflected into a corresponding growth of wages uniformly in all the regions of the state. Further, the phases in growth rates do not coincide with those in the output growth and a weak relation between growth performance of the sector and wages is observed (lack of agricultural growth is found to be accompanied by increasing trends in wage rates). On this basis, it can be said that given the institutional set up of a particular region, growth of agricultural sector percolates down to the labourers depending upon the nature of the institutions. This implies that the wage-growth nexus appears to hold ground only in the conditions of favourable institutional set up.

Among the recent studies relating to the wage analysis incorporating Maharashtra as one of the states, include those undertaking cross-section as well as time-series analysis for the post-1970 period. Whereas Jose (1988), comparing growth rates of real wages and the net domestic product in agriculture found a strong association between the two (for the period between 1970-71 to 1984-85), Acharya and Papanek (1989) found the state domestic product in agriculture of Maharashtra not significantly related with the wage rates during the same period. In the cross-section analysis carried out by Acharya (1989) as well as Bhalla (1993), labour productivity turned out to be an important variable explaining wage behaviour.

However, limited significance of labour productivity was evident in the time - series analysis (Bhalla(1993)). The available literature thus provides us with limited evidence of wage-growth nexus in the case of Maharashtra at the state level.

It is felt that a district level analysis would clearly bring out the nature of the relationship between agricultural performance and wage behaviour in different regions of Maharashtra. We observe initially, whether the wage levels at certain given points of time (and the change in them between these periods) as well as over a period of time can be explained with the help of the determinants¹. The variables incorporated in the models to test the relative importance of different factors in determining levels of wage rates included land, demographic and economic variables. The land variables and the demographic variables were chosen for finding the importance of structural variables in terms of distribution of landholdings and supply factors. The economic variables were incorporated so as to reflect the performance of agricultural sector. These are as follows :

OPHL10: Proportion of the operational holdings above 10 hectares- The effect of OPHL10 on the wage level would be indeterminate ex-ante depending upon whether an increase in proportion of the holdings leads to increase in demand for labour or increase in the monopsonistic/oligopsonistic tendencies depressing the wage levels.

OPHL2: Operational holdings below 2 hectares- In the case of this variable, the relationship envisaged with wage level can be inverse or positive depending upon whether an increase in the number of holdings leads to an increase in demand for labour (better distribution of landholdings, scarcity of labour) or an increase in their supply (uneconomic landholdings, increased hiring out of labour by small farmers.)

AVSZHL : Average size of landholdings - An increase in AVSZHL can either affect the wage level positively (in the case of greater demand for hired labour) or negatively (in the case of increased

mechanisation of farm operations or inequality in the size of landholdings).

SHAGW: Share of agricultural labourers in total agricultural workers- Composition of agricultural workers with a higher share of labourers in relation to the employers has implications for supply side of the labour market.

SHOTW : Share of main workers other than agricultural workers in total main workers - A higher share of SHOTW would indicate greater magnitude of demand pull factors in the non-agricultural sector leading to labour transfer from the agricultural sector.

DENSITY : This supply variable is included in addition to SHAGW to observe the impact of supply of agricultural labourers in relation to agricultural land.

The economic variables included for the analysis are expected to be positively related to the wage rate. These are :

AGOUT: The Foodgrains production.

TIA/GCA : Total irrigated area/Gross cropped area.

ARCMCP : Total area under commercial crops.

FERUSE : Fertiliser usage per hectare.

The first set for the analysis involved cross- section data for the time periods 1961, 1971, 1981 and 1991 for male labourers and 1971, 1981, and 1991 for female labourers due to the non-availability of wage data for female labourers for the year 1961. The choice of the years was guided by availability of the Census data on land and demographic parameters and the intention of finding whether the structural changes observed have affected the wage rates. The results of this static cross-section multiple regression analysis (appendix 4.1) show that most variables have failed to make any impact on the wage levels. Similarly, the signs of the coefficients do not exhibit consistency at different periods of time except that of AGOUT.

The variables except OPHL2 (for 1961) and TIA/GCA (for 1971) have found to have significantly affected the wage levels in case of male and female laborers respectively.

To test the effect of individual variables on the wage levels, single variable equations were tried with the economic and demographic variables. Table 4.2 shows the results pertaining to the variables which emerged with significant coefficients.

Table 4.2 : Results of Single Variable Cross-Section Regression Analysis with Money Wage Rate as the Dependent Variable.

Explanatory Variables	Regression Coefficients Pertaining to			
	1971		1981	1991
	Male	Female	Female	Female
SHAGW	-0.02	-0.01	-0.03	-0.07
SHOTW	0.01	0.02	-	-
AGOUT	-	0.00016	-	-
ARCMCP	-0.00017	-	-0.00019	0.00094

Note : 1. SHAGW, SHOTW, AGOUT, ARCMCP as mentioned earlier. 2. All the values of regression coefficients reported above are statistically significant at 10 percent level or better. 3. Regression equation of the form $y = a + bx$ is used here.

It can be observed that the regression coefficients have expected signs except for ARCMCP which shows a negative relationship with wage rates in the case of male and female labourers for the year 1971 and 1981 respectively. Similarly, among all the concerned years, significant values of the coefficients are seen to have concentrated in the year 1971. Secondly, SHAGW is found to be the dominant variable explaining level of wages for female labourers. In other words, non-farm job opportunities (SHAGW) along with the share of agricultural labourers seem to be better explaining the levels of wages in the cross-section analysis.

With the intention of relating change in the explanatory variables to change in wage rates, cross-section equations were tried for the time periods 1961-71 (only for males), 1971-81 and 1981-91 (appendix 4.2). In this case, DENSITY with regression coefficient -0.33 for 1971-81 period and 0.37 for 1981-91 period was found significant at 10 percent level in case of female labourers. Similarly, SHAGW also emerged statistically significant for female labourers.

It is interesting to note that again, supply side parameters are found to be dominant in influencing wage levels. However, sign of the variable DENSITY has not remained consistent for the two sets of equations. Further, only the female wage levels are seen to be more sensitive to these parameters.

The cross-section analysis thus brings out the importance of demographic variables viz. Density and share of agricultural labourers negatively affecting wage level, and share of other main workers (indicating the extent of non-farm job opportunities) boosting up the wage levels. Wage levels hardly seem to have influenced by the demand enhancing parameters in the exercise.

For explaining the dynamic behaviour of wage levels in different districts of Maharashtra, time series analysis was undertaken for the period from 1980 to 1994, which is the period of increasing trends in money wage rates. This entire period can be sub-divided into two segments viz. 1980 -1988 and 1989 -1994 on the basis of the slope of the trend lines as observed earlier. However, regression analysis for these two sub-periods would involve significant reduction in the degrees of freedom. Hence, the entire period is chosen for the purpose of the analysis².

Again, the variables chosen for the purpose included land and economic variables. The demographic variables were purposively excluded from the analysis due to the limitations on the availability of yearly data. Results of the analysis are presented in appendix 4.3.

The values of the coefficient of determination are above 0.9 for many districts, but only in a few cases, the explanatory variables are seen

to have significantly affected wage levels with respect to male and female labourers. Similarly, the signs of the coefficients do not show consistency across equations. All economic parameters are seen to be exhibiting negative association with wage levels across the districts.

Values of the coefficients that indicate a significant relationship with the wage rate, are presented in table 4.3.

Among the districts excluded from the table indicating non-significant values of all the concerned variables for both male and female labourers, Thane, Aurangabad, Buldhana and Bhandara are the districts that fall in low wage category (table 2.15, chap. 2). Nasik and Osmanabad however, exhibit significant values only in the case of the variable FERUSE. All these districts can be clubbed together for their common characteristic namely, absence of significant relationship between wage rate and the explanatory variables.

Among the other districts not included in the table, are the high wage districts of Kolhapur, Beed and Yavatmal. It is interesting to find Kolhapur in this category as performance of the agricultural sector in this district has failed to influence the wage rates in a significant manner. However, absence of statistically significant casual relationship can be explained in terms of non-(agricultural) growth factors in the case of Beed and Yavatmal. In the case of land parameters, Dhule and Sangli are the two districts where OPHLIO as well as AVSZHL show significant and strong relation with the wage rate indicating the importance of land based strategies. In other words, a reduction in the number of larger landholdings along with an increase in the average size of holdings seem to be causing a favourable change in money wage rates. Apart from these districts, in Akola and Amaravati also, wage rate is seen to be sensitive to OPHLIO indicating importance of better distribution of landholdings by way of reduction in OPHLIO. Amongst the other variables, the most important economic indicator and proxy for the performance of the agricultural sector-AGOUT is found to be significantly and positively affecting wage rates in districts like Ahmednagar, Solapur

Table 4.3 : Selected Results of Districtwise Time- Series Multiple Regression Analysis with Money Wage Rate as the Dependent Variable.

District(M) (F)	Regression Coefficients of Explanatory Variables.						
	OPHL10	OPHL2	AVSZHL	AGOUT	TIA/GCA	ARCMCP	FERUSE
Raigad	-	-	-	-	-	-	-
	-5.58	-	-	0.0058	-	-	-
Ratnagiri	-	-	-	-	-	0.5	-
	-	-	-	-	-	0.34	-
Nasik	-	-	-	-	-	-	0.16
	-	-	-	-	-	-	-
Dhule	-44.01	-	74.17	-	-	-	-
	-43.02	-	73.66	-	-	-	-
Ahmednagar	-	-	-	0.0016	0.0042	-	-
	-	-	-	0.00014	-	-	-
Pune	-	-	-	-	-	-	-
	-	-	-	-0.0042	-0.0042	-	-
Satara	-	2.82	-	-	-	-	-
	14.11	2.48	-	-	0.40	-0.03	0.14
Sangli	-2.21	-	240.89	-	-	-	-
	-44.98	-	116.62	0.0014	-0.93	-0.05	0.08
Solapur	-	-	-	0.0019	-	2.23	-
	-	-	-	-	-	-	-
Parbhani	-	-	-14.17	-	-	-	-
	-	-	-	-	-	-	-
Nanded	-	1.41	-	0.0019	-	-	-
	-	1.03	-	0.0016	-	-	-
Osmanabad	-	-	-	-	-	-	-
	-	-	-	-	-	-	-0.18
Akola	-5.77	-	-	-	-	0.0079	-
	-1.89	-	-	-	-	-0.008	-
Amaravati	-	-	-	-	-	-0.02	-
	-1.71	-	-	-	-	-0.02	-
Wardha	-0.01	-	-	-	-	-	-
	-	-	-	-	-	-0.009	-
Nagpur	-	-	-	-	-	-	-
	-	-	-	0.0038	-	-	-
Chandrapur	-	0.68	-	-	-	0.03	-
	-	0.62	-	-	-	-	-
Maharashtra	-	-	-	-	2.3	-0.002	-
	-	-	-	-	1.89	-0.002	-

Notes : 1. OPHL10, OPHL2, AVSZHL, AGOUT, TIA/GCA, ARCMCP, FERUSE as explained earlier, M = Male, F = Female. 2. All the values of regression coefficients reported are significant at 10% level or better. 3. Regression equation of the form $y = a + b_1x_1 + b_2x_2 + \dots + b_7x_7$ is used.

and Nanded in case of male laborers and Raigad, Pune, Sangli, Nagpur along with Ahmednagar and Nanded in case of female labourers. The wage rates of female labourers are more sensitive to AGOUT in particular and other variables in general, than that of the male labourers. The other important observation pertains to the variable ARCMCP which exhibits a negative relation with the wage rate (particularly to note in Akola and Amaravati) for both male and female labourers as against the expectation of finding a positive relation. This implies that higher degree of commercialisation of agriculture as judged from the area under the commercial crops leads to depressing effect on wage level possibly due to the mechanisation and the labour market imperfections.

The wage level is better explained by the variables in the case of female labourers for districts of Satara and Sangli which exhibit higher values of R^2 as well as mostly significant values of regression coefficients.

As an alternative additional exercise, regression equations were estimated excluding the three explanatory variables related to the size of landholding. This was done as the data relating to these variables are available on a five yearly interval at distinct points of time and therefore, the estimates are likely to be biased. Hence, only the effect of four economic explanatory variables was observed.

The results of the multiple regression analysis excluding the land variables give more conclusive results. Significant amongst these are presented in table 4.4. A few important observations can be noted in this regard. Firstly, among all the districts, Aurangabad stands out as the district wherein no variable is significant enough to affect the wage rate. Secondly, wage rates of female labourers are observed to be more sensitive to the demand enhancing economic parameters as the relationships are seen to be significant in more number of districts compared to the male labourers. Thirdly, as against the expectation of finding a one to one correspondence between wage rate and the economic parameters, a negative relationship is observed

Table 4.4 : Selected Results of Districtwise Time Series Multiple Regression Analysis Excluding Land Variables with Money Wage Rate as the Dependent Variable.

District	Regression Coefficients for the Explanatory Variables											
	AGOUT		TIA/GCA		ARCMCP		FERUSE		R ²		R̄ ²	
	M	F	M	F	M	F	M	F	M	F	M	F
Thane	-	-	-	4.65	-	-	-	-	0.52	0.51	0.32	0.31
Raigad	-	-	-	-	-	-	-	-	0.47	0.48	0.26	0.27
Ratnagiri	-	-	-	-	0.47	0.35	-	-	0.96	0.98	0.95	0.97
Nasik	-	-	0.85	0.69	-0.01	-0.009	0.19	0.14	0.92	0.93	0.88	0.90
Dhule	-0.0041	-	-	-	-	-	1.03	0.87	0.76	0.77	0.67	0.68
Ahmednagar	0.0027	0.0022	-	-	-0.03	-0.02	0.16	-	0.74	0.71	0.63	0.60
Pune	-20.95	-	0.0035	1.57	-	0.04	-	-	0.94	0.87	0.91	0.82
Satara	-	-	-	0.59	0.03	0.02	-	-	0.88	0.90	0.84	0.86
Sangli	-	-	-	-1.31	-	0.02	0.20	0.20	0.64	0.84	0.50	0.78
Solapur	-	-	-	-	-0.03	-0.02	0.65	0.36	0.82	0.78	0.75	0.69
Kolhapur	-	-	-	-	0.04	0.03	-	-	0.81	0.78	0.73	0.69
Aurangabad	-	-	-	-	-	-	-	-	0.61	0.62	0.45	0.47
Parbhani	-	-	-	-	-	-	0.65	0.42	0.92	0.92	0.89	0.88
Beed	-	-	-	0.65	-	-	-	0.2	0.83	0.85	0.77	0.80

District	Regression Coefficients for the Explanatory Variables											
	AGOUT		TIA/GCA		ARCMCP		FERUSE		R ²		R̄ ²	
	M	F	M	F	M	F	M	F	M	F	M	F
Nanded	0.0018	0.0015	-1.92	-	-	-	0.21	0.14	0.79	0.76	0.70	0.67
Osmanabad	-	-	-	-	-0.03	-	0.52	0.37	0.75	0.79	0.66	0.71
Buldhana	-	-	-	-	-0.01	-0.009	0.40	0.28	0.47	0.46	0.25	0.25
Akola	-0.0008	-0.0007	-	-	-0.006	-0.007	0.49	0.34	0.95	0.96	0.94	0.94
Amaravati	-	-0.004	2.97	-	-0.03	-0.03	0.76	0.58	0.88	0.84	0.83	0.78
Yavatmal	-12.98	-	0.003	-	-	-	-	-	0.81	0.74	0.74	0.64
Wardha	-13.79	-0.003	-	-	-	-0.01	-	0.08	0.88	0.91	0.83	0.87
Nagpur	0.007	0.005	2.03	1.37	-	-	-	0.15	0.77	0.78	0.68	0.69
Bhandara	-	-	-	-	-	0.20	0.36	0.34	0.75	0.87	0.64	0.82
Chandrapur	-	-	2.56	2.18	0.04	0.03	-	-	0.90	0.88	0.86	0.83
Maharashtra	-	-	-	-	-0.002	-0.002	0.60	0.44	0.90	0.92	0.86	0.88

Note : 1. AGOUT, TIA/GCA, ARCMCP, FERUSE, M, F as explained earlier 2. Only the values significant at 10% level or better are reported.

3. Regression equation of the form $y = a + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4$ is used.

in some of the districts, particularly with respect to AGOUT and ARCMCP. This clearly indicates differential impact of the variables on the wage behaviour in different districts. In this respect, Pune shows strikingly high values of coefficient AGOUT with a negative association with the wage rate. The specification seems to capture main factors in operation better in Nasik, Pune, Solapur, Akola, Amaravati and Chandrapur.

For the purpose of comparison, across variables elasticities are computed. A comparison of elasticities of wage rates with the growth rate of real wage rates as well as that of the parameters involved is presented in appendix 4.4. Agricultural output being the major indicator of the performance of the agricultural sector, a classification of the districts based on the elasticities of wage rates with respect to AGOUT is presented in tables 4.5 and 4.6.

A comparison of real wage growth rates with growth rates of and elasticities with respect to AGOUT enables us to locate the impact of agricultural performance in terms of foodgrains production on wage rates in different districts. Thus, the objective is to observe whether higher growth rate of AGOUT has translated into higher growth rates of wages and higher elasticity with respect to AGOUT. The configuration that emerges out of the two tables includes districts wherein higher (or lower) growth rates of wages can be explained in terms of higher (or lower/non-significant) growth rates of AGOUT due to stronger (weaker) relationship reflected in higher (lower/non-significant) elasticities. However, there are a quite few districts, which exhibit higher growth rates of wages despite the insignificant growth rates of and elasticities with respect to AGOUT, thus indicating operation of other stronger forces affecting wage rates. The last category incorporates districts wherein growth rate of agricultural output is higher nevertheless has failed to boost up the growth rate in wages. In short, the above tables bring out characteristics of the districts in terms of wage-growth nexus. Re-

Table 4.5 : Classification of Districts with Significant AGOUT Growth Rates and Wage Elasticities with respect to AGOUT.

Growth in Real Wages		Growth Rates in AGOUT		Elasticity with respect to AGOUT	
		High*	Low*	High*	Low*
High Growth*	Male	Pune Yavatmal Akola	Raigad Satara Kolhapur	Raigad Kolhapur Yavatmal	Satara Akola Amaravati
	Female	Pune Yavatmal	Satara Kolhapur Dhule	Pune Kolhapur Yavatmal	Dhule, Satara Parbhani Nanded
Low Growth*	Male	Ratnagiri Sangli Aurangabad	-	Ratnagiri Sangli	Raigad Ahmednagar Aurangabad
	Female	Ratnagiri Sangli Akola	Raigad	Ratnagiri	Ahmednagar Sangli, Akola Aurangabad

Note : 1. AGOUT as earlier. 2. * indicates higher or lower than the state average.

Table 4.6 : Classification Districts with Non-significant AGOUT Growth Rates and Wage Elasticities with respect to AGOUT

Growth in Real Wages		Growth Rates in AGOUT	Elasticities with respect to AGOUT
High Growth*	Male	Dhule, Ahmednagar, Solapur Parbhani, Beed, Nanded, Amaravati, Nagpur, Bhandara Chandrapur,	Dhule, Solapur, Beed, Nanded Nagpur, Bhandara, Chandrapur,
	Female	Dhule, Solapur, Parbhani, Beed, Nanded, Amaravati, Nagpur, Bhandara, Chandrapur	Solapur, Beed, Amaravati, Nagpur, bhandara, Chandrapur
Low Growth*	Male	Thane, Nasik, Osmanabad, Buldhana, Wardha	Thane, Nasik, Osmanabad, Buldhana, Wardha
	Female	Thane, Nasik, Ahmednagar, Osmanabad, Buldhana, Wardha	Thane, Nasik, Osmanabad, Buldhana, Wardha

Note : 1. As note 1 and 2, in table 4.5. 2. As the regression coefficients are not statically significant with respect to AGOUT, districts are not categorized as in table 4.5.

arranging groups in these tables, we get a more clear picture in this regard :

Table 4.7: Classification of Districts on the Basis of Wage-Growth Nexus

Male	Female
I. Low Growth-Low Wage Districts	
Thane, Nasik, Ahmednagar, Osmanabad, Buldhana, Wardha	Thane, Nasik, Ahmednagar, Osmanabad, Buldhana, Akola, Wardha
II. Low Growth-High Wage Districts	
Dhule, Solapur, Beed, Nanded, Parbhani, Nagpur, Bhandara, Chandrapur	Dhule, Solapur, Beed, Nanded, Parbhani, Amaravati, Nagpur, Bhandara, Chandrapur
III. High Growth-High Wage District	
Raigad, Ratnagiri, Pune, Satara, Sangli, Kolhapur, Akola, Yavatmal, Amaravati	Pune, Satara, Kolhapur, Yavatmal
IV. High Growth -Low Wage Districts	
Aurangabad	Raigad, Ratnagiri, Sangli, Aurangabad, Akola

Clubbing all the economic variables viz TIA/GCA, ARCMCP and FERUSE along with AGOUT together provides us broadly with a similar picture. Again, grouping the districts on the basis of magnitude of the wage growth as well as various elasticities produces two broad categories of the districts. These are -

I. Firstly, High Wage category districts which can be again subdivided into two groups in case of male labourers. The districts in the first group-Ratnagiri*, Raigad, Pune, Sangli*, Satara, Kolhapur,

* These are included here as growth rates are only slightly lower than the state average & elasticities are mostly significant.

Yavatmal, Parbhani - not only exhibit higher growth rates of AGOUT, TIA/GCA, ARCMCP and FERUSE but also high or medium elasticities of wage rates with respect to these parameters. Contribution of the growth factors with respect to wage rates is thus clear in these districts. It can be noted that most of the districts with the exception of Yavatmal and Parbhani belong to the western regions of Maharashtra.

As far as female labourers are concerned, the districts that get incorporated in the similar type of grouping slightly differ in those from male labour category. Raigad and Sangli which fall in the low wage category get excluded here. Thus, both for male as well as female labourers, similar factors are seen to affect the wage levels in these districts. However, in most of the cases, the elasticities of wage levels for female labourers are higher than that of the male labourers. Thus, female wage levels are more sensitive to marginal changes in the magnitudes of the parameters.

The second group includes Dhule, Solapur, Beed, Nanded, Akola, Amaravati, Nagpur, Bhandara and Chandrapur as far as male labourers are concerned. Growth rates of and elasticities with respect to AGOUT in these districts exhibit insignificant values. However, wages are seen to be somewhat responsive to other economic parameters. This not only indicates a weaker role of factors like irrigation, commercial cropping and fertiliser usage in enhancing agricultural output, but also partial contribution of the demand enhancing factors in influencing the wage behaviour. Therefore, the growth in wage rates in these districts has to be attributed to factors external to the agricultural sector. Whereas in Dhule, active participation of labour organisations the labour market seems to be the dominant factor, in Solapur, the non-farm job opportunities in the textile industry and the EGS works (Binswanger et al (1984)) possibly explain higher growth rates of wages. This is evident from relatively higher share of other main workers and lower share of agricultural labourers respectively in Solapur as seen from tables 4.1

and 2.8. Similarly, Beed gets classified as a high wage district due to the higher magnitude of out-migration of labourers towards western regions of the state and the dependability on external factors. In case of Akola and Amaravati, mostly, the growth rates as well as the elasticities are non-significant or very low except with respect to fertilizer usage. In Akola, though the growth rate of AGOUT is very high, elasticity is not so high, therefore the high wage rate here has to be explained in terms of other factors. It has been noted that the non-agricultural demand for the unskilled labour in Akola comes from government operated land improvement/irrigation projects as well as EGS works (Binswanger et al (1984)). District Amaravati presents a puzzling case in the group as it is known for its commercialisation of the agricultural sector and its interlinkages with the international cotton market. Negative growth rate of and elasticity with respect to ARCMCP in this district exhibits a weak positive association of wage rate with the commercial cropping pattern.

Table 4.8: Compound Growth Rates of Per Unit Input Prices during 1980-1994. (In percent per annum)

Crop	Inputs				
	Seed	Fertiliser	Manure	Animal Labour	Human Labour
Cotton	12.67	-	6.51	8.95	9.56
Jowar	2.99	2.05	3.27	1.80	-
Sugarcane	10.36	-	10.33	8.08	10.85

Note : Only the growth rates significant at 10% level or better reported.

Source : Cost of Cultivation of Principal Crops in India, GOI (1991b), Mahatma Phule Agricultural University, Rahuri.

Based on cost of cultivation data, compound growth rates of per unit input prices^{were} worked out. Table 4.8 includes the results³. The striking point brought out of the table is the difference in the growth rate of per unit price of labour in the case of Jowar on one hand and Cotton and Sugarcane on the other hand. The latter two being commercial crops requiring labour input to a larger extent than the former, the

growth rate of wages is higher and significant for these two cases. This evidence from the cost of cultivation data does not seem to hold ground in case of Amaravati in particular in Vidarbha region.

The female labour category does not present any different picture with the slight difference of significant but lower elasticities of AGOUT in case of Dhule and Nanded.

II. Secondly, the Low Wage category districts include Thane, Nasik, Ahmednagar, Aurangabad, Osmanabad, Buldhana and Wardha for male labourers. Firstly, these districts stand out as the districts exhibiting poor agricultural performance in terms of insignificant growth rates of and elasticities with respect to AGOUT. Secondly, though the growth rates of other parameters are significant in the case of some districts (eg. TIA/GCA in Thane, Nasik, Osmanabad), the elasticities are, not which indicates that growth in labour demand enhancing factors has not contributed in enhancing the output as well as wage growth. Aurangabad which is the better off district in this category in terms of the agricultural performance (significant growth rates as well as elasticities in AGOUT), presents a unique case wherein despite the moderate performance of the agricultural sector, performance of wages is absolutely poor. Apart from the agricultural sector development, the progressive development of the industrial sector in the recent past seems to have failed in boosting up the wage rates in this district. A similar situation can be observed in case of Thane where almost 78% and 41% of the male and female main workers respectively are engaged outside agriculture.

For female labourers too a similar classification emerges. In addition to the above districts, Ahmednagar and Sangli fall in this category.

4.3 Gender Wage Gap Analysis :

The above analysis brought to the notice an important point pertaining to the relative values of the coefficients and elasticities in case of male and female labourers. It is observed for the cross section as well as time-series analysis that the wage rates of female

labourers are responsive to the explanatory variable in more number of cases. Similarly, the elasticities with respect to the explanatory variables are also higher in most of the districts for female labourers. This indicates greater significance of the variables in providing a stimulus to female wage rates. As has been noted in chapter two, growth rates of wages of female labourers have been higher for many districts especially during the third phase i.e. during 1988 to 1994. However, the gap between the wages of the two groups is seen to be widening particularly after 1988 onwards. It was also noticed that the districts exhibiting high wage gap are generally the districts with high wage levels and growth rates. The factors responsible for the prevailing wage gap structure were tentatively pointed out to be in terms of economic variables such as cropping pattern, intensity of cropping, requirement of skilled male labourers, collective strength of labour organisations besides the practice of payment of higher wages for gender-specific operations and traditional gender bias.

An analysis of wage gap in an earlier study (Jose (1988)) indicated that Maharashtra is one of the states which showed high order of gender disparity throughout the period of analysis i.e. between 1970 to 1985. However, the factors responsible for high magnitude of wage gap were not identified by Jose. But in another study, by K. Bardhan (1984), pertaining to West Bengal, the gaps in wages were observed to be negatively co-related with the level of agricultural development and the intensity of cultivation. Such analysis is not available in the case of Maharashtra.

Our objective here is to observe the main factors responsible for creating wage gaps and whether agricultural growth narrows down the gap. We undertook time - series analysis of wage gaps for the period between 1980 to 1994 with AGOUT and ARCMCP as the explanatory variables. The results of the analysis are presented in appendix 4.5 in detail. A summary table (table 4.9) reporting only the significant results is presented here. In addition to this, intensity of cropping (IC) was introduced as the third variable and its effect was

Table 4.9 : Selected Results of Time-Series Regression Analysis with Money Wage Gap as the Dependent Variable.

District	Regression Coefficients of the Explanatory Variables	
	ARCMCP	AGOUT
Ahmednagar	-0.0071	0.001
Pune	-	-5.56
Satara	0.01	-
Sangli	-	0.0028
Kolhapur	0.011	-
Aurangabad	-	0.00025
Parbhani	0.0022	0.0012
Beed	0.009	-
Nanded	0.0078	0.00059
Amaravati	-	0.0021
Yavatmal	-	-3.29
Wardha	-	-7.53
Bhandara	0.14	-
Maharashtra	0.00046	0.000046

Note : 1. ARCMCP and AGOUT as explained earlier. 2. Only the values of coefficients significant at 10% level or better are reported. 3. Regression equation of the form $y = a + b_1x_1 + b_2x_2$ is used.

Table 4.10 : Selected Results of Time-Series Regression Analysis with Money Wage Gap as the Dependent Variable.

District	Coefficients of the Explanatory Variables		
	ARCMCP	AGOUT	IC
Ratnagiri	0.000013	-	-
Dhule	0.00055	-	-0.67
Ahmednagar	-	-	0.29
Pune	-	-1.85	0.21
Sangli	0.02	0.0025	0.27
Kolhapur	0.011	-	-
Aurangabad	-	-	0.05
Parbhani	-	0.00085	0.17
Beed	0.0091	-	-
Nanded	0.0076	0.00061	-
Akola	-	0.00073	-
Amaravati	-	-	0.36
Yavatmal	-	-3.66	-
Wardha	-	-7.41	-0.39
Bhandara	0.14	-	-
Chandrapur	-	-	-
Maharashtra	-	-	0.37

Note : 1. As in table 4.9. 2. IC= intensity of cropping. 3. Regression equation of the form $y = a + b_1x_1 + b_2x_2 + b_3x_3$ is used.

observed. Again, only the significant are incorporated and reported in table 4.10.

From tables 4.9 and 4.10 it can be inferred that the male-female wage gap can be explained by ARCMCP, AGOUT and IC. The explanatory power of the equations range between 0.06 in Solapur to 0.88 in Ratnagiri. Even though there is no clear agglomeration of districts explaining the wage gap, it can be said that generally, the relationship is weaker in agriculturally backward districts where female work force dominates the aggregate agricultural labour force.

It is also noticed that in most of the cases, where the values of the coefficients are significant, the results show a positive relationship between wage gap and the explanatory variables implying an increase in wage gap with higher levels of these variables.

The overall picture of the results does not indicate any direct obvious pattern. The only probable reason for such behavior can be the labour market imperfections at various levels existing within various districts.

4.4 Products Price- Wage Nexus :

The exercise carried out for bringing out the nature of relationship between the wage behaviour and the performance of the agricultural sector revealed diverse situations incorporating those wherein agricultural development has positively affected wage behaviour and those wherein it has not. In the former case, the channel through which money wages are expected to get positively affected is through increased agricultural activities and increase in the demand for labour i.e. through the operation of market forces. Another channel through which money wages might get affected is through their relationship with the output price. According to this hypothesis, an increase in the price of the agricultural output and the resultant generation of surplus in the hands of farmers can lead to an increase in the factor

price i.e., wages. This is the argument, typical of the popular farmers' movements demanding remunerative prices for agricultural output. It mainly focuses on the role of formal institutional agencies like market infrastructure and farmers' organisations in the whole process. Going by the logic of institutionalised wage hikes, we expect to find higher growth rate of wages in the regions which are characterised by high growth in agricultural output and commercialisation of agricultural sector along with those regions which are centres of activity of the farmers' movements. The popular farmers' movements and their agitations at the regional level have been revolving around the major issue of remunerative prices for the agricultural produce. However, it has been observed that the important issue of wage levels in agriculture has been neglected and that the agitations by farmers had a class bias, not in favour of rural labour (Nadkarni (1987)). Based on the data pertaining to terms of trade in agriculture, the study also observed that during the period when terms of trade moved in favour of agriculture, the real daily earnings of rural labourers actually declined and hence concluded that mere increase in agricultural prices hardly led to an improvement in wages. In fact, depending upon the commodities involved in price hike, there is a possibility of fall in real wages as an aftereffect of the output price rise.

In Maharashtra too, remunerative prices for the agricultural produce have remained the single most important issue for 'Shetkari Sanghatana' which believes that the surplus generated by the receipt of remunerative prices in the hands of farmers would automatically lead to an increase in wages of labourers (Joshi(1982)). Therefore, in this context, we expect to find higher growth rates of wages in the regions which are centres of activity of 'Shetkari Sanghatana'. Alternatively, in a broader sense, this hypothesis of increase in factor price i.e. wage, can be tested with the help of the data relating to district level agricultural prices (prevailing in market / administered). However, lack of such data at the district level poses difficulties in

Table 4.11 : Districtwise Comparison of Growth Rates of Real Wages and Farm Harvest Prices during 1980 to 1993. (Percent per annum)

Districts	Growth Rates		
	Real Wage (male)	Farm Harvest Price	Real Wage (female)
Thane	1.57	7.01	1.85
Raigad	3.69	7.36	3.25
Ratnagiri	2.83	7.46	2.86
Nasik	1.79	7.01	1.89
Dhule	5.73	7.00	6.33
Ahmednagar	2.27	6.55	2.36
Pune	4.98	6.67	5.31
Satara	5.22	7.36	5.24
Sangli	3.35	9.85	1.38
Solapur	4.53	7.76	4.01
Kolhapur	4.57	7.99	3.82
Aurangabad	0.72	7.27	2.09
Parbhani	5.24	7.50	5.41
Beed	4.59	7.13	5.18
Nanded	4.30	7.65	4.58
Osmanabad	1.41	7.24	2.32
Buldhana	-0.57	6.91	-0.80
Akola	3.95	7.20	3.61
Amaravati	5.66	7.53	6.84
Yavatmal	4.19	6.22	5.80
Wardha	0.69	6.19	1.13
Nagpur	5.39	6.62	6.19
Bhandara	4.39	7.24	5.73
Chandrapur	4.52	7.11	5.05
Maharashtra	3.44	7.07	3.75

Note : 1. Average of Wheat, Rice, Jowar, Tur and Gram prices considered for calculating growth rates. 2. Values for district Jalgaon not reported due to non-availability of wage data, from 1989 onwards. 3. New districts clubbed with the old districts.

Source : Computed from SCR, various issues.

testing the hypothesis. The closest proxy for the agricultural prices in various districts is provided by the farm harvest prices (FHP). A comparison of growth rates of real wages and farm harvest prices and the regional variations therein would provide us a clue in this regard. It is clear from table 4.11 that the growth rate of prices received by male and female labourers are not comparable with those received by farmers. For all the districts, growth rate of the former is lower than the latter. The data does not reveal any regional pattern as far as the wage-FHA correlation is concerned except that the growth rate of FHP as well as real wages are lower in case of the districts exhibiting poor agricultural performance eg : Thane, Nasik, Buldhana and Wardha.*

An increase in the administered prices of agricultural commodities may not bring about any increase in wages if the collective strength of labourers does not exert any pressure on the wage trends. If the agricultural prices rise as a result of market forces in period t , increased profitability/income might lead to an increase in the demand for labour for the particular commodity in the period $t+2$. Thus, this is an indirect channel for product price-wage link to operate and indicates possibility of a lag for wage increase. This phenomenon is similar to the wage-labour productivity lag which is observed commonly in the agricultural sector and brings out importance of collective strength of and class consciousness among the agricultural labourers.

4.5 Summary:

The districtwise analysis of wage structure provides us insights into the working of agricultural labour markets in the state. In a sense, each region/labour market has its own peculiar socio-economic, demographic and institutional structure that distinguishes it from the other districts (Appendix 4.6). Nevertheless on the basis of traditionally evolved institutional -economic structures, the districts

* Value of Spearman's Correlation Coefficient was also found to be very low, though +ve for male, female labourers.

can be classified broadly as constituting various labour markets within Maharashtra.

The differences in the underlying set up in each district get reflected in the behaviour of the wage rates over a period of time. The literature on the wage behaviour reveals an increasing trend in money and real wages and positive impact of application of new technology in terms of availability of better agricultural infrastructural facilities in various states including those that get categorised as agriculturally underdeveloped states. However, our results of the cross-section and time-series analysis of wages of male and female labourers in Maharashtra does not provide us with a clear evidence of such a nexus. The results not only convey that the nature of relationship (i.e. positive or negative) between wage rates and the explanatory variables is different but also that the strength of the relationships differs across regions/districts.

There are districts wherein economic variables have been the prime movers behind the higher wages. These are the districts mostly from western Maharashtra and have been benefited from the favourable institutional set up underlying the labour market in terms of agrarian structure and land distribution. Simultaneously, there are districts which have exhibited moderate as well as low growth of agricultural sector however fall in the high wage category. These are mostly from Marathwada and Vidarbha regions. In these districts, operation of forces other than those relating to the development/growth of agricultural sector seem to explain the high wage behaviour better. These factors include interventions in the labour market due to the activities of labour unions, availability of non-farm job opportunities, outmigration as well as specificities of the labour market in this region.

Lastly, the districts where attention needs to be focused are low wage districts like Thane, Nasik, Aurangabad, Osmanabad, Buldhana and Wardha. Among these, there is no clear evidence of presence of any favourable factors pertaining to agricultural performance or

otherwise and hence there seems to be no incentive for wages to rise in the districts like Osmanabad, Buldhana and Wardha. A slightly different picture is presented by Thane, Nasik and Aurangabad. In these districts lack of / moderate agricultural development coupled with insignificant influence of other favourable factors have contributed towards stagnant behaviour in wage rates. Thane has remained the centre of activity of the movements of tribal people since many years. Also, the possibility of availability of non-farm job opportunities is much higher in case of this district. Similarly, Aurangabad has been the seat of activities and mobilisation of rural poor particularly since the beginning of EGS works in post - 1975 period. In the recent past, the industrial development which has taken place in the district (also in Nasik) can also be counted as a favourable factor for the wages to rise. The depressed levels as well as growth rates of wages on this background in these districts is perhaps an indication of control of labour process by the landholding classes and absence or ineffective collective strength of labourers (as against in Dhule) in these districts.

All these observations provide a support to the hypothesis that the trickle down effect of agricultural growth is not uniform across regions and depends upon the prevailing institutional structure and the labour market specificities. The gender wage gap analysis also does not present a clear indication favourable role of agricultural growth in narrowing down the gender gap.

Apart from the wage-growth nexus via labour demand enhancing factor, wages are supposed to get affected through the institutionalised activities of farmers organisations hypothesising product price-factor price (wage) nexus. However, the available literature denies the evidence of such an automatic increase in wages due to increase in product prices (Nadkarni (1988)). A comparison of growth rate of farm harvest prices, (though not a perfect measure of administered/actual market price) with the growth rate of real wages indicates disparity in the same. Again, it can be said that the

institutional structure favourable for the agricultural labourers as a separate class can only affect the movement of wages favourably.

Notes :

1. The cross-section and the time-series analysis is carried out using money wage rate as the dependent variable rather than the real wage rate. This is done because the explanatory variables have direct and perceptible influence on the money wage.
2. Results of regression pertaining to these two sub-periods with the intercept dummy and time as the explanatory variables show that the 't' values are non-significant for most of the district for male as well as female labourers, thus providing justification for the choice of the aggregation of the entire period-1980 to 1994 for the purpose of analysis.
3. Growth rates are calculated excluding the years for which data is not available eg: in case of Cotton, 1980, 81, 85, 86 and 1991-94 are excluded. For Jowar years 1981, 82, 88, 93 and for Sugarcane 1982, 85, 86, and 1992-94 excluded.

CHAPTER V

AGRICULTURAL LABOUR MARKETS - AN EVIDENCE AT MICRO LEVEL :

5.1 Introduction :

Our earlier analysis of the secondary data has revealed distinct behaviour of wage rates and their determinants in different labour markets in various districts. Similarly, at a broader level, some specific characteristics of various labour markets (at times cutting across district boundaries) were also noted. However, such analysis does not necessarily bring out the ground realities and might conceal the micro-level characteristics of the basic unit of analysis - the village. Analysis of the village level labour market can provide insights into these micro-level realities and various labour market processes like the actual process of wage-determination, various types of contractual arrangements, labour-employer relation and the implicit segmentation of the labour market, living conditions of the agricultural labour force etc. Further, the results obtained out of such an analysis might explain certain tendencies that remain unexplained and also might be at times, differing with those obtained at the district or taluk level. We have attempted here an analysis of the micro-level data collected from two villages in Maharashtra with the specific objective of analysing the issues which could not be dealt with, at the district level. These are :

1. The process of determination of wage rate in the village.
2. Movement of wage rates in the post-1990 period and the wage structure in the village.
3. Heterogeneity within the labour market region due to the differences in the contractual arrangements and resource ownership of the sample households.
4. The living conditions of the households and the emerging wage-poverty nexus.
5. Inter-village labour market differences with respect to the above aspects created due to the distinct nature of the

concerned markets.

5.2 The Survey Method - Selection of Villages and the Schedule :

The selection of districts for the purpose of collection of primary data hinged upon the purpose of understanding the diversity of labour market situations and correspondingly different determinants of labour market outcomes. One of the major determinants of the wage rates of agricultural labourers that emerged out of the earlier analysis was agricultural development of the labour market region on one hand and the 'pull factors' outside the agricultural sector leading to labour transfer as well as the institutionalised interventions in the labour market in favour of the rural poor, on the other. The districts of Kolhapur and Thane satisfied the norms of selection in this regard, the former being agriculturally well developed and commercialised district and the latter being agriculturally underdeveloped district with highly industrialised region and known for the activities of several labour organisations working amongst the tribal poor. Thus, Kolhapur represents a region which has agricultural development and intensive commercialisation of the sector as important factors exerting pressure on wage trends. On the other hand, Thane represents a labour market characterised by underdevelopment, presence of pull factors due to urban hinterland and institutional intervention in terms of labour organisations.

Within each district, a taluk and a village therein were selected that best represented the respective characteristics of the districts chosen¹. Accordingly, in Kolhapur district, Shirol taluk was identified, which is one of the better off taluks of the district in terms of development and commercialisation of the agricultural sector. On the same lines, village Nimshirgaon in Shirol taluk was selected for the purpose of the survey. In case of Thane, village Medhe in Vasai taluk was selected, as it is not only a centre of activity of the organisations active in the region since 1970s, but also a region with proximity to the industrial belt. Thus, in the former

case incentive for the upward movement of wages seems to be provided from within the agricultural sector supporting the wage-development nexus hypothesis. In the latter case, i.e. in Medhe, wage increase appears to be an outcome more of labour market intervention by the labour organisation and not of agricultural development.

Table 5.1 provides a general profile of the two districts as well as the corresponding taluks in the districts. The cropping pattern as well as other economic indicators reveal the nature of agricultural economy i.e. commercial and subsistence, in Kolhapur and Thane respectively. Even though the selected taluks do not replicate the exact point to point situation prevailing in the district, the taluks represent broadly the required characteristics.

The survey was conducted in the two villages during the period between December 1996 and April 1997. Forty agricultural labour households in each village were selected randomly for the purpose. On the basis of land ownership and contractual arrangement with the employers, four groups of agricultural labourers (households) were made :

1. Cultivator and Agricultural Labourer (CAL)
2. Casual Agricultural Labourer - non cultivator (NCL)
3. Land Owner Agricultural Labourer (LAL)²
4. Attached Agricultural Labourer (AL)

Whereas CAL represents landed cultivating agricultural labourer, LAL represents landed but non-cultivating agricultural labourer. The second and the fourth categories stand for landless and attached labourers respectively. The data collected was analysed on the basis of these basic categories. The questions in the schedule were divided into eight major blocks giving information on* - (i) household information, land possessed and other economic indicators (ii) Casual agricultural labourers (CAL, NCL and LAL) (iii) Attached labourers (AL) (iv) Wage rates (v) Migration in and out of the village (vi) Development works under Employment Guarantee Scheme, if any,

* For details, see appendix 5.3

Table 5.1: General Profile of Districts Kolhapur and Thane with the Corresponding Sample Taluks Selected.

	District : Kolhapur		Taluk : Shirol		District : Thane		Taluk : Vasai	
1. Location	Situating in the southern region of the state, bounded by Sahyadri hill and Warna river from western and northern side respectively, by district Belgam (Karnataka) on the eastern and southern side.		Situating in the eastern side of the district, bounded by rivers like Panchaganga, Warna, Krishna, Dudhganga etc.		Situating in the north west region of Konkan strip of the state, bounded by Sahyadri range on west, Gujarat on north, Mumbai city on south		Situating in the south-west side of the district, showing proximity to industrially well developed areas.	
2. % of Cultivators & Agl.Labourers	46% (cultivators)	17% (agl.labourers)	34% (cultivators)	33% (agl.labourers)	20% (cultivators)	10% (agl.labourers)	13% (cultivators)	14% (agl. labourers)
3. AVSZHL (ha)	1.11	(1991)	NA		1.79	(1991)	NA	
4. OPHL2 (ha)	0.45	(1991)	NA		1.97	(1991)	NA	
5. Major crops	Paddy, Wheat, Jowar Sugarcane, Groundnut		Paddy, Jowar, Groundnut, Sugarcane, Tobacco		Paddy, Ragi		Paddy, Ragi	
6. TIA/GCA (%)	16.7	(1993-94)	NA		2.7	(1993-94)	NA	
7. ARCMCP (ha)	1234	(1993-94)	NA		4.0	(1993-94)	NA	
8. Foodgrains output (M.T.)	4092	(1993-94)	NA		3469	(1993-94)	NA	
9. No. of registered working factories	1210	(Dec.1994)	NA		3367	(Dec.1994)	NA	
10. No. of sugar factories	12	(1994-95)	NA		—		—	
11. Literacy rate (total)	62.94	(1991)	70.72	(1991)	50.19	(1991)	70.11	(1991)
12. % of ST population in total population	0.49	(1991)	1.6	(1991)	18.00		14.00	(1991)

Note : AVSZHL, OPHL2, TIA/GCA, ARCMCP as mentioned on pages 140, 141, chapter 4, S.T. = Scheduled Tribe.

Sources : 1. Socio-Economic Abstracts : Thane and Kolhapur (GOM, 1993-94 and 1994-95) 2. Statistical Abstract of Maharashtra (GOM, 1996).

started by the government in the neighbouring areas (vii) Awareness regarding Minimum Wage Legislation and (viii) Labour organisations. The information required to be reported by the labourers under these heads was in conformity with the objectives of the study. Information on the last three issues was specifically asked so as to understand the nature and effect of various labour market interventions.

Before turning to the analysis of labour markets in the two villages chosen, we look into the basic characteristics of villages Medhe and Nimshirgaon as are reported in table 5.2. It can be seen from the table that the villages can be categorised as underdeveloped (Medhe) and developed (Nimshirgaon) on the basis of the type of economy, the economic development, infrastructural facilities and quality of life of the poor households, thus bringing out their distinctive nature having implications for the labour market processes.

5.3 Labour Markets in the Sample Regions and the Wage Determination :

Understanding the process of wage determination and the wage structure in the sample villages required understanding of the prevailing agrarian structure so as to clarify the nature of labour market operations in the villages. Such an information was collected from the official records (available at the offices of Talathi and Gramsevak), secondary data sources (like District Census Handbook) and from the informal discussions with the village people.

The focus of the study was daily-casual labour market, which is the generally dominant part of the labour market of a typical Indian village and which was also the case with the sample villages. In village Medhe, all the forty sample households were casual labour households, out of which 57.5 percent were landed (CAL) households and 42.5 percent were landless (NCL) ones. In Nimshirgaon, out of total forty households interviewed, only two or 5 percent of the total happened to be the attached labour households (AL). Out of the remaining households, 32.5 percent and 52.5 percent of the

Table 5.2 : Basic Characteristics of Village Medhe and Village Nimshirgaon

Indicator	Medhe	Nimshirgaon
Type of Economy	Relatively closed with lesser migration in and out of the village. Subsistence economy with cultivation for self-consumption, limited agricultural as well as non agricultural opportunities inspite of proximity to the industrial belt.	Agriculturally well developed , closer to industrial centres, characterised by in and out migration, relatively an open economy influenced by the outside factors, comparatively better avaiability of agricultural as well as non agricultural work.
Location	Unfavourable topographic conditions due to hilly uplands and heavy rainfall	Situated near the district place, and industrial centres near Kolhapur, Sangli-Miraj, well connected with the outside work.
Economic Development & Infrastructural Facilities	Has remained neglected in terms of developmental programmes of government Tribal population of the village located at a distance from school, health centre and transport facility, Electricity available only to the population situated on the plains of the village.	Avaliability of facilities like school, health centre, transport, electricity. Developemnt of the village due to emergence of political leadership from the village having control over various co-operative societies (Sugar factories, Banks and power looms.).
Quality of Life	Most of the tribal households leading a poor quality life reflected from lesser extent of education, medical help, tranport etc. as well as from the composition of consumption basket reflecting subsistence level of the house holds.	On an average, poor households in a comparatively better condition due to availability of facilities mentioned above, also reflected from greater proportion of non-consumption expenditure and variety in it

households were CAL and NCL households. Four or 10 percent of the total households were the non-cultivating land owner labour households (LAL).

In the following pages, we describe the characteristics of labour markets in the villages. We classify them as the 'Underdeveloped Village' (Medhe in district Thane) and the 'Developed Village' (Nimshirgaon in district Kolhapur) and use the same terminology hereafter.

5.3.1 The Developed Village :

The agricultural development of this village can be traced back especially to the emergence the sugar factory in the region and powerful political leadership leading ultimately to the development of agricultural infrastructure facilities like irrigation. The basic information relating to this village is presented in table 5.3.

Informal meetings with the village people revealed that there are 3 to 4 landowners possessing nearly 25 to 30 ha. of land each (i.e. 12 percent of the total cultivated land). It was revealed that the incidence of absolute landlessness is less in the village and majority of households posses land. According to the 1981 Census*, total number of cultivators and agricultural labourers in the village was 471 and 277 or 44 percent and 26 percent of total main workers respectively (GOM, 1981). The agrarian structure in the village is dominated by a handful of landowners belonging to the uppercaste (Jain community) with large tracts of land, followed by a few middle farmers and a large number of marginal farmers.

Out of the total area under irrigation (191 ha) in the village, approximately 50 percent (i.e. 100 ha) is possessed by the big landowners. At the bottom of the agrarian structure is the landless agricultural labour. It can be said that the village represents the

* Data for year 1991 could not be obtained due to non-availability of District Census Abstract for that year.

Table 5.3 : Basic Information - the Developed Village

Indicator	Value	Indicator	Value
Total area :	1064 ha.	Area under cultivation :	801 ha
Area under irrigation :	191 ha.	TIA/GCA :	23.85%
Staple food :	Jowar	Major crop :	Sugarcane
Tot. population: (households)	3953(869)	No.of landowners :	806

No. of households below the poverty line (BPL) (i.e.Rs.11000 p.a.):

SC +ST : 136, Other : 293, Total : 429

Marginal farmers (landholdings below 2 1/2 ha) : 258

Agricultural labourers : 300

Note : 1. The data pertains to the year 1995-96 except the BPL information which was collected during the year 1992-93.
2. No separate information relating to BPL landless and landed agricultural labourers available. Hence the total (i.e. 258 + 300) does not add upto 429 (total number of BPL households).

Source : Office of the Talathi and Gramsevak, Nimshirgaon.

landholding pattern, prevailing specifically in district Kolhapur and western Maharashtra in general - the dominance of peasant proprietorship. Table 5.1 shows a large number of landholdings below two hectares in Kolhapur. However, It is difficult to categorise such a labour market into any particular non-competitive labour market structure. On the face of it, the process of wage determination can be assumed to be similar to that taking place in an oligopsonistic market wherein price determination is an outcome of the decision making of a few buyers of factor inputs. for understanding the process and the technique of wage determination in the labour market of the village, a direct question was put forth to all the casual labour households (CAL, NCL, LAL) with the alternatives : (i) Prevailing / last years wage rate taken (ii) Individual or collective negotiations with the employer (iii) Decided collectively by employers in the village (iv)

Labourers cooperate to decide the reservation price.

A large majority of the households felt that the wage rate gets determined at a particular level (higher than the earlier) by the initiative of the labourers through the techniques of mild complaints or absentiong from the work when the prevailing wage level fails to maintain pace with the rising inflationary pressure.

This can be seen from the number and percentage of sample households opting for various alternatives as shown in table 5.4.

Table 5.4: Percentage of Casual Labour Sample Households by Various Alternatives Indicating Wage Determination Process in the Developed Village.

Process of Wage Determination	Proportion of households (%)
1. Individual initiative by the labourers followed by negotiations with the employers.	65.79
2. Prevailing wage taken.	21.05
3. Initiative by the employers for completion of time bound operations.	10.53
4. Collectively decided by the employers	2.63
	100.00

The answers given by the households (more than 76 percent) bring out the role of market forces as well as the initiative of the labourers themselves. However, the answering households unanimously denied any collective action on the part of labourers. The process of wage determination according to these households is a result of individual initiative by the labourers followed by negotiations with their respective employers. Once the wage is determined between particular labourer(s) and employer(s) at a particular level, the village wage rate revolves around that level, differing only with the demand conditions on the individual farms. This can be taken as an evidence of implicit co-operation among labourers for determining

wage rate.

5.3.2 The Underdeveloped Village :

This village in Vasai taluk, situated at a distance of nearly 60 km from the taluk place is spread over a large region incorporating hilly tracts as well as plains. The tribal population of the region is mainly concentrated in the hilly hinterlands of the region whereas, the non-tribal population is situated at the periphery i.e. on the plains. The village along with the other three villages (Watghar, Amboda and Kalbhon) constitutes Medhe 'group grampanchayat'.

As far as the landholding pattern is concerned, most of the land is possessed by the households of dominant 'Patil' community on the plains. The pieces of land possessed by the tribal households are mainly the encroached forest lands and those which belonged to them since the beginning. In absence of proper official records regarding the landholding structure with the office of Talathi, it was difficult to fully comprehend the agrarian structure in the labour market region. The Census data revealed that in 1981, the total number of cultivators in Medhe was 109, whereas that of agricultural labourers was 161 which constitutes 39 percent and 58 percent³ of total main workers (GOM, 1981). The significant number of agricultural labourers in the agrarian structure indicates obstacle for the wages to rise from the supply side, given the demand for labour.

The village presents a case where wages get determined solely through the institutionalised channel of the labour organisation active in the region. Meetings with the people revealed that in the recent past, there have been three major strikes for increase in the prevailing wage levels. Besides, in between these periods, there have been instances of wage determination at the village level through negotiations with the landowner employers. Creating barriers to the entry of the outside labour in the village labour market also constituted an instrument along with negotiations / strikes. The economic factors conferring bargaining capacity on the labourers are

the alternate employment opportunities opened up due to the construction works undertaken by the labour organisation active in the region. As observed from the secondary data, Thane occupies the lowest position (along with a few other districts) in the hierarchy of the districts according to the wage levels as well as growth rates over a period of thirty years. But the relative levels of wage rates within this village at different points of time constitute significant wage hikes considering their abysmally low level previously.

Thus, lack of any development in the prevailing subsistence agricultural sector in the region coupled with its topographic situation fails to provide any incentive for wage hikes in terms of demand enhancing factors from within the agricultural sector. Therefore, emergence of the labour organisation as a consequence of atrocities upon and exploitation (economic as well as non-economic) of the tribal poor and its activities has been providing an intervening force in the labour market. This thus becomes the major factor determining and affecting the wage level.

All the sample households in this village reported that the process of wage determination involves initiative by the labourers, backed by the organisation in terms of strikes, absenteeism etc. followed by bargaining with the employers as is seen from table 5.5.

It is claimed that in many villages (apart from the underdeveloped village), the organisation has been able to procure not just minimum (and equal) wages (upto Rs. 40) but fair wages for labourers (Goswami (1996)).

Table 5.5 : Percentage of Casual Labour Sample Households by Various Alternatives Indicating Wage Determination Process in the Underdeveloped Village.

Process of Wage Determination	Proportion of Households (%)
1. Collective initiative by the labourers followed by negotiations with the employers.	100
2. Other alternatives	-

5.4 Theories of Wage Determination - Empirical Evidence :

Our analysis of the primary data revealed a few interesting points regarding the process of wage determination. Firstly, it was observed that the actual process of wage determination (incorporating the influencing factors-the economic, natural, technological, demographic, institutional etc. and the actual techniques used by the participating groups in the process) is an outcome of several factors acting together to determine the new wage level. Therefore, relating the wage determination process to a particular theoretical hypothesis poses difficulties. Any one hypothesis may be applicable to a particular situation in some respects and to a limited extent only. Similarly, wage determination process in two different labour markets can differ in techniques used only whereas, some of the factors which tend to influence the process might be the same, only differing in degree.

5.4.1 The Developed Village :

The major factor that was observed to be affecting the wage rates in the casual labour market in the developed village was the bargaining strength of the labourers. It was revealed from the individual initiative of the labourers in absence of any formal organisation of and co-operation amongst them. The major factors determining bargaining capacity of the labourers were the economic conditions in the village labour market - the labour intensive and commercial cropping pattern incorporating high value crops like sugarcane, groundnut and the availability of non-farm job opportunities in the tobacco and textile factories in the neighbouring areas. The landholding pattern in the village shows a higher percentage of cultivators than the agricultural labourers . The consequent scarcity of labourers faced during the peak season also partially explains the prevalence of bargaining strength among the labourers.

On the theoretical front, the 'implicit co-operation' hypothesis and the 'bargaining power' hypothesis attribute major role to the implicit

co-operation among the labourers and bargaining between employers and labourers in the wage determination process respectively and explain the resultant unemployment and downward rigidity of wages. In the sample village under consideration, it was revealed from the discussions that during the busy agricultural season, the agricultural operations carried out can absorb the available supply of labourers in the village. Thus, during the peak seasons, the village does not suffer from the problem of surplus labour or unemployment among the agricultural labourers. Hence, the theories of implicit co-operation and bargaining can be applied only to the extent of explaining the causal relations and factors determining the process of wage determination. However, during the slack seasons, instances of unemployment / underemployment were reported in the village. The wage rate paid during this period was for the operations like soil preparation and was lower (indicated by the lesser number of hours of work available) than that paid in the busy seasons for operations like sowing, harvesting etc. During this period, it was revealed that given the lower demand for labourers, the wage rate does not fall below the particular prevailing level to absorb the unemployed / underemployed agricultural labour force⁴. The instances of undercutting of wages by the labourers are rarely observed in the village. Apparently, this can be attributed to the implicit co-operation among the village labourers. However, it was also noted that during the lean season, there is a partial withdrawal of the marginal labourers - the female labourers from the labour market due to the difficulty in obtaining on farm work. The male members nevertheless were found to be busy, diversifying their area of activity (in the non - agricultural sector) for maintaining the household. In a few absolutely poor households, both the members- male as well as female, were found engaged in farm or non-farm activities for fulfilling the subsistence needs during the lean seasons. Therefore, withdrawal of the marginal labourers, distress diversification of the households during the lean seasons and distribution of the available

on farm work amongst relatively lesser number of labourers possibly prohibits instances of undercutting and maintains the rigidity of wages in addition to the implicit co-operation among the labourers.

To understand the determination of wage rates in the case of attached labourers, the two attached labour households were interviewed during the field visits. In both the cases, it was reported that the annual income (in cash) of the attached labourer increases by about Rs. 500 (i.e. Rs. 1.39 per day). The determination of wages or wage hikes every year seems to be partly set by the trend and partly as a result of negotiations with the employer. However, the negotiating capacity of the labourer is quite weak (as compared to a casual labourer) due to his attachment with the labourer for his livelihood. Another point, interesting to note, is that the attached labour households belong to 'Savarna' (non-Scheduled Caste and Scheduled Tribe) family as they (attached labourers) are required to perform on farm as well as domestic chores for the employer (Jain landlords). The two sample households in the developed village belonged to 'Lingayat' community and were immigrants from the neighbouring Karnataka state since many years. It seems that it is in the interest of the employers, who are big landowners, to maintain such a household belonging to a 'Savarna' community. The wage determination in such a case is partly an outcome of negotiations with the employers as well as the institutionally determined behaviour of these high caste employers.

The long-term contractual arrangements implicit in the attached labour system, however did not provide any evidence of the nutrition-efficiency link in the wage determination process in the case of attached labourers (even in the absence of data on productive capabilities of the labourers). Firstly, the technique of wage-determination was not solely based on the initiative by the employer in setting wage level. Instead, it was observed that it involves employers as well as employees. Secondly, the implicit daily wage rate (considering the payment in kind as well as labour effort/hours

of work per day) was found to be equal to or less than that received by casual male agricultural labourers.

5.4.2 The Underdeveloped Village :

Determination of wage rate in the case of the underdeveloped village represents purely a case of formal co-operation among the labourers backed by the organisation and bargaining between the groups of village labourers and employers. Here again, like in the developed village, in the absence of certain type of data required for formal modeling for testing the validity of the theories of wage-determination, it is difficult to comment on the extent of unemployment caused and extraction of rent by the labourers due to fixation of wage rate through the process of bargaining (on the assumption that the level of wage determined is higher than the market-determined wages). Similarly, during the slack season, the phenomenon of survival strategies is observed in case of the labourers who find work mainly on the brick kilns or on the other works like construction of wells, bunds etc. started by the organisation active in the region. Selling of forest products also constitutes one of such activities especially dominated by female labourers. Therefore, though the number of days of employment for agricultural labourers gets reduced, the labourers try to maintain the household by engaging in other activities where the wage rate paid is slightly higher than that paid for the agricultural works instead of remaining fully unemployed. This, coupled with the presence of the organisation prevents any downwards sliding of wage rates.

It is felt that apart from providing an instance of institutionally fixed wage rates through the process of bargaining, wage determination (or determinants of wage level) also incorporates the elements of nutrition - efficiency relationship. Practically the nutrition (wage) - efficiency link is supposed to be observed in long term permanent wage contracts. Absence of practice of attached labour in this village prohibits this. However, in the case of daily rated casual labourers

also, maintaining such a nexus for a short period of time might be in the interest of the employer⁵. Provision of meals by the employer at the workplace possibly implies the intention of ensuring that the wages (i.e. meals) are spent on the working members of the household, avoiding loss of time and efficiency of labourers in going home for lunch.

5.5 Wage Rates - Movements and the Structure :

As mentioned earlier, the situations under which the wage determination takes place are entirely different in the two cases. One reveals the significance of institutionalised wage hikes and the other that of the forces of demand and supply. We now focus on the behaviour of wage rates after taking into account the structure and working of labour markets in terms of landholding pattern and wage determination process in the two sample villages. This includes the movement of money and real wages of sample households, the modes of payment and the emerging economic implications.

Table 5.6 presents the average level of money wage rates prevalent in the villages, percentage change in them over period of five years (1991-92 to 1995-96) and their comparison with the CPIAL as well as the prescribed minimum wage levels in the villages (table 5.6).

Firstly, it can be seen that the absolute level of wage rates is higher in case of the developed village than in the underdeveloped one. The percentage change between the period of 1991 and 1995 too is higher in the former one. In both the villages, it is seen to be higher in the case of landless sample household (NCL) than the landed ones possibly owing to higher demand for the landless labour during the peak season to complete the time bound agricultural operations. It can be noted here that cross - section differences in the wage rates received by the households are less than those reported for over a period of time. Therefore, categorywise differences in wages are reported which are not observed distinctly at a point of time.

Table 5.6 : Categorywise Average Levels of Wage Rates, CPIAL and Minimum Wage Rates During 1991-92 to 1994-95.

Village and Type of Labour Household	Average Wage Level (Rs.)		% Change between 1991-1996		Change in CPIAL	Minimum Wage Level Applicable (Rs)
	M	F	M	F		
Underdeveloped Village					382 points	1994 ⁶
NCL	25 to 30	Same	40	Same		23
CAL	"	"	38	Same		
Developed Village						
NCL	35 to 40	30 to 35	50	46		26
CAL	"	"	45	41		
LAL	"	"	46	50		
AL	27.5*	25				

Note : 1. * Represents implicit daily wage of attached labourers (AL) . 2. CPIAL = Consumer price index for agricultural labourers in Maharashtra.

In comparison with the changes in CPIAL, the percentage change in wage rates during the period of five years is seen to be quite low, clearly indicating the inability of money wage rates in catching up with the prices. The increase in CPIAL by 382 points during the period of 1991-1992 to 1995-1996 is even greater than that during the entire earlier decade (i.e. during 1981-1982 to 1990-1991 which is 342) reflecting upon the falling standard of living of the labourers in the post - 1990 period. However, in both the cases, the prevailing wages are seen to be higher than the prescribed minimum wages (as revised in 1994).

One interesting point noticed regarding the wage rates, related to the wage levels particularly in the developed village, compared with that relating to taluk and district level. The wage rates reported in table 5.6 are those paid for eight hours of daily work. However, in the slack season, the working time is reduced to four to six hours of work from usual eight hours and wage rate is paid accordingly for the slack season operations like soil preparation. It has been observed that the secondary data collected by the government agencies also

reports this wage rate - paid for four to six hours of daily work particularly during the slack periods. e.g. The wage rates reported of the Shirol taluk (to which the developed village belongs) for the year 1994-95 in SCR are Rs. 20 and Rs. 15 for male and female labourers respectively (which are equal to the wage rates reported at the village level by majority of the sample households for the same year). Thus here, we find a case of underreporting of wage rates. It is quite possible that this practice of reporting wages paid for four to six hours of work is prevalent in other taluks of Kolhapur district also, and therefore, the wage rates in the taluks of Kolhapur district are found to be slightly lower than those in the other districts in western Maharashtra and can be compared with lower wage districts like Aurangabad, Thane etc. Reporting the wages pertaining to slack season of the agricultural year/ to simple agricultural operations excluding that prevailing in the busy seasons also reveals another problem - absence of seasonal fluctuations in the secondary data. Thus, on the basis of secondary data at taluk level, one is likely to conclude that there is absence of seasonal fluctuations in the male and female wage rates, when the actual situation is not so. This phenomenon was observed from the secondary data reported in SCR for both the taluks under consideration-Shirol of district Kolhapur and Vasai of district Thane. However, the primary data collected from the sample households in the developed village in Shirol taluk and the underdeveloped village in Vasai taluk provides the evidence of seasonal variations in the operationwise variations in the wage rates. Appendix 5.1 presents operationwise wage rates in both the villages.

The other observation pertains to the kind component (payments in terms of grains of food) of wage rate. It can be seen from appendix 5.1 that payment in kind (in the form of meals) forms an integral part of wages paid during peak season operations like sowing, transplanting and post-harvest operations in the underdeveloped village. This partly represents subsistence nature of agriculture and

importance of food for the labourers in this village vis-a-vis in the developed one. However, payment of wages in kind along with lumpsum cash amount for major agricultural operations besides harvesting were reported in both the villages. Appendix 5.2a and 5.2b report the data relating to the same. It is clear from appendix 5.2a that in underdeveloped village, the daily wage rate implicit for transplanting operation is lower than that paid in cash along with one meal. It was revealed that the labourers often put premium for accepting paddy/rice as part of wage rate (rather than accepting wage rate fully in cash) for the purpose of storage during the monsoons.

In the developed village however, most of the sample households reported that the practice of payment of wage rates in terms of harvest share had significantly declined particularly due to the dominance of commercial crops in the cropping pattern prevailing in the village. Similarly, higher value of the crops grown (wheat, groundnut) also inhibits the payment of share of harvest. Out of the forty sample households, only eight households reported payment of share of harvest (appendix 5.2b). It can be noted that the monetary value of the harvest share is equal to or greater than the wage rate fully paid in cash, for the same operation. However, no specific bias in favour of receipt of harvest share was noted among various categories of labourers implying increasing monetisation of the economy and necessity of cash to satisfy consumption demands other than those relating to food.

5.6 Wage Determination and Social Parameters - Gender and Caste :

The wage structure defined by variations in wage rates across time and space, modes of payment can be thus explained by the economic factors. However, there are two important aspects of wage structure viz. gender gap in wages and the discrimination among labourers on the basis of the social hierarchy in terms of caste, which have to be explained in terms of extra-economic factors relating to the age-old

traditional institutions of 'caste' and 'gender'. The literature incorporates micro-level studies dealing with castewise and genderwise wage discriminations and evidence to that effect. (Bardhan(1984a), Krishnamurthy (1988)).

An attempt is made here to analyse these issues with reference to the sample households.

5.6.1 Gender and Wage Discrimination :

In the case of the underdeveloped village, the struggles of the labourers backed by the organisation for implementation of minimum and equal (for male and female labourers) wages have ensured equality of wages for similar agricultural operations and this has wiped out the wage gap. The wages paid to the labourers are higher only in the case of gender oriented operations like ploughing and threshing which are not performed by female labourers. As is mentioned earlier (chapter 2, section 2.5), the lower wage gap can also be explained in terms of other economic factors. The analysis of the secondary data shows that in Thane district (to which the underdeveloped village belongs), wage gap as well as its growth rate is lower. The micro-level data thus support the observation at the macro-level in this regard.

In the case of the developed village however, wage rates paid for the similar operations to the male and female labourers were found to be different. The level of the wage gap ranged between Rs. 5 to Rs. 10 (for all the daily rated casual labourers - NCL, CAL and LAL) and differed with the demand conditions on individual farms. As far as the movement of level of wage gap across the time period is concerned, it was observed to be increasing with time. On an average, the wage rates and the wage gap was found to be different in different time periods. This can be seen from table 5.7.

The percentage change in female wages being lower than that in male wages, the level of wage gap has been increasing which is in conformity with the observations relating to the district level data

(chapter two, section 2.5). The agricultural development of the region seems to have widened the wage gap between male and female labourers.

Table 5.7 : Male-Female Wage Gap from 1991-1995.

Years	Wage Rate (Rs.)		Wage Gap (Rs.)
	Male	Female	
1991 to 1993	12	10	2
1993 to 1995	15	12	3
1995 onwards	20/25	15/20	5

5.6.2 Caste and Wage Discrimination :

In order to find out the role played by caste in determining the wage rate paid to the labourers, caste composition of the sample households in the two villages was analysed. As is clear from table 5.8, in the case of the underdeveloped village, most of the households (90 percent) came from the Scheduled Tribes. In the other village, 45 percent of the households came from the Scheduled Castes (Mahar and Mang). However, in both the villages, discrimination on the basis of caste (i.e. higher wage rate for upper caste households) was found to be absent. Nevertheless, both the villages have their own peculiarities in this respect.

In the underdeveloped village, the higher caste Kunbi households (staying at the peripheral region of the village) were found to be receiving slightly lower wages as they were not the members of the labour organisation active in the region. Hence, the wage hikes materialised due to the strikes etc. were not necessarily implemented immediately in their case. These households, due to the caste affiliations with their employers did not have the capacity to bargain with the latter. Thus here, an interesting case was observed, where caste affinity led to discrimination (as against favouritism which is usually expected in case same caste labourers) affecting wage levels and bargaining capacity adversely. In other words, economic

considerations seem to override the social discrimination.

Table 5.8 : Caste Composition of the Labour Households in the Sample Villages (In Percentage)

The Underdeveloped Village		The Developed Village	
Caste	No. of Households	Caste	No. of Households
1. Scheduled Tribe (Varli, Koli, Katkari)	90.0	1. Mahar	27.5
		2. Mang	17.5
		3. Dhangar	22.5
2. Kunbi	7.5	4. Muslims	12.5
		5. Maratha	7.5
3. OBC	2.5	6. Lingayat	7.5
		7. OBC	5.0

In the developed village, the discriminating treatment with respect to payment of wages was not observed. However, as mentioned earlier, the households attached to the employers belonged not to any of the Scheduled Castes but to the 'Savarna' 'Lingayat' community. The daily wage, implicit in the salary paid to them was not higher than that paid to the casual labourers. In fact, the daily hours of work in their case were more than the usual eight hours. Thus, the discrimination observed here is not on the basis of wage rate paid but the type of work allotted to them.

5.7 The Emerging Structure of Wage Rates in the Sample Villages:

The structure of wage rates as observed from the data reveals typical characteristics of the rural labour markets as observed in the earlier studies-uniformity of wage rate for a particular operation and gender, temporal variations in the wages paid etc. (Dutt (1996)). The spatial variability in wages due to differential impact of various factors can also be observed. The major points brought out of the present study of wage structure in the sample villages are:

1. An increasing trend in money wages has not kept pace with the

trend in CPIAL which indicates a deteriorating real economic status of the agricultural labour households.

2. Irrelevance of the minimum wage rate prescribed by the government even in the underdeveloped village (which belongs to district Thane and which is a low growth - low wage level district as is clear from the secondary data) and underestimation of the wage data in the secondary sources (SCR).

3. It was noted that there are differences in the two labour markets in terms of change in the wage rates over the concerned years and the modes of payment indicating the subsistence and commercial nature of the underdeveloped and developed village respectively. Similarly, responsiveness of wages in the latter village was also noticed. The growth factors in this village have not only invested the labourers with the negotiating capacity during the process of wage determination, but also have led to the increasing wage gap over the years.

4. The institution of caste seems to be playing an important role in the developed village in the context of wage determination. In the underdeveloped village, caste affiliation between labourer and employer is used to discriminate against the same caste labourer by paying them lower wages.

5.8 Wage-Poverty Nexus:

An observation of the wage structure in sample villages indicates falling real wages of the labourers in the post-1990 period and fluctuations in the incomes received due to seasonal variations in wages as well as employment days. Given the wage rates, an attempt here is made to observe the living conditions of the labourers. It is felt here that the differences in the nature of the contractual arrangements entered into along with the resource ownership (i.e. possession of land) and the consequent differences in wage and employment situation lead to differences in major economic parameters reflecting upon the standard of living of the labourers.

Hence, we focus here on the relative economic status of the sample households, based on the above two criteria.

It has been accepted widely that agricultural labourers constitute the lowest strata of the economy and that the incidence of poverty is higher among the agricultural labour households. At all India level, almost 58 percent of the agricultural labour households were below the poverty line according to the 1987-88 NSS reports (Kumar (1994)). The discussions on the determinants of poverty among agricultural labourers have been revolving round the trickle down effect of agricultural growth process leading to immiserisation of agricultural labourers through several mechanisms such as stagnancy in the wages due to the influx of labourers in the second phase of green revolution and increased bargaining power of the rich farmers leading to higher administered prices of foodgrains (adversely affecting real wages) (Bardhan (1984a)). The evidence of the former phenomenon can be sighted in Punjab, wherein the percentage of agricultural labour households as well as incidence of poverty among them increased during the period of 1983 to 1987-88 (Kumar (1994)). The decline in the incidence of poverty in some other states and at all India level and the rising trend observed in the real wage rates appear to be connected. However, the wages in this case are observed to be influenced more by the non-farm job opportunities in the rural areas (Sen (1994), Bhalla (1993)). The discussion of the determinants of poverty have gained new dimensions after 1990 on the background of the NEP and the structural adjustment programme and their likely effects on wage and employment situations in the labour market. Here again, the wages are expected to get affected adversely due to the contracting job opportunities in the capital-intensive industries and the general price rise in the economy. The studies carried out to locate the factors determining poverty at the macro as well as micro-level, bring out the significance of wage rate as one of the important factors affecting poverty (Bardhan (1984a), Kumar (1994)). We intend to focus here on this particular link between wages of

agricultural labourers and poverty or between variations in wages and the economic status of the corresponding household. However, uniformity in the wage rates (for particular type of labourers / operations) prohibits such an analysis. Hence, given the wage rate, we consider here the income from hiring out labour in agricultural labour market. This incorporates availability of on farm work (in terms of supply response of the labour household) as an additional variable to be linked with the poverty status. The analysis carried out here relating to the wage-poverty nexus involves -

1. Classification of various categories of the households on the basis of the prime economic indicators (income / expenditure) and observing the tendencies relating to their participation in the agricultural labour market and other indicators, thereby establishing a hierarchy amongst themselves. This would provide insights into the differing average tendencies of households that have to be categorised on the basis of land ownership / types of contractual arrangements entered into.
2. Analysis of poverty among the labour households based on the data on consumption expenditure of the households and the officially estimated poverty line.

5.8.1 Classification of Sample Households Based on Important Economic Indicators :

As far as the classification of the sample households on the basis of major economic indicators is concerned, the total yearly income from hiring out labour, its percentage to total income, income-expenditure ratio etc. are considered. Table 5.9 brings out the differences in the average earning capacities of various labour households within the village as well as between the villages and the hierarchy based on the same amongst themselves.

The lowest potential of the landless labour households (NCL) with highest share of agricultural labour days in both the villages is also clearly brought out.

In table 5.10, we consider only the income from hiring out labour and observe the average tendencies of the households.

Table 5.9 : Categorywise Average Levels of Major Economic Indicators of Agricultural Labour Households

Indicators	Underdeveloped Village		Developed Village			
	NCL	CAL	NCL	CAL	AL	LAL
1. TYRY (Rs)	15626	18127	14682	24996	16300	15133
2. % YAGL	47	17	63	38	100	57
3. Y/E (%)	79	78	63	77	96	69
4. TAGLD —— (%)	50	21	81	69	100	79
TWDH						

Note : TYRY = total yearly income, % YAGL = % income from hiring out labour, Y/E = total income / total expenditure, TAGLD / TWDH = total agricultural labour, days / total working days of the household.

Table 5.10 : Categorywise Major Economic Indicators Relating to Income from Hiring out Labour of Agricultural Labour Households

Indicators	Underdeveloped Village		Developed Village			
	NCL	CAL	NCL	CAL	AL	LAL
1. YAGL (Rs)	6072	2983	8933	8833	16300	8463
2. YAGL —— (%) E	31	13	24	27	95	34

Note : YAGL = Yearly income from hiring out labour, YAGL/E = YAGL/ total yearly expenditure.

It is observed from the above table that the income from hiring out labour is grossly inadequate to satisfy the needs of the households except in case of attached labourers. It can also be noted that for all the categories, the ratio of income to expenditure is very low and the labourers have to depend on and devise survival strategies diversifying their area of activity. An important fallout of this is the weak bargaining power and therefore, lack of interest in collective action specifically in case of the developed village. The extent of diversification observed at the village level is shown in table 5.11 below. In the case of the underdeveloped village, agricultural

labourers of the sample households (NCL) are found to be seeking work other than as agricultural labourers on 44 percent of their total days of work. For the household as such, this percentage is 50 percent. In case of the landed labourers (CAL), the corresponding percentages are lower due to the availability of on form work. In the developed village, the specificity of the cropping pattern and abundance of on form work reduces the extent of diversification and therefore the absolute figures are higher than those for the underdeveloped village. It is interesting to note that the percentage number of days hired out as agricultural labourers to total work days is highest in the case of CAL reflecting upon the adequacy of work obtained on others' farm as well as on ones own farm. The figures obtained for LAL is are closer to those obtained for NCL

Table 5.11 : Categorywise Average Share of Number of Working Days as Agricultural Labourers

Indicators	Underdeveloped Village		Developed Village			
	NCL	CAL	NCL	CAL	AL	LAL
1. $\frac{AWD}{TWDL}$ (%)	56	36	95	100	100	93
2. $\frac{AWD}{TWDH}$ (%)	50	22	81	69	100	79

Note : $AWD/TWDL$ = No. of days hired out as agricultural labourers/Total working days of these labourers, $AWD/TWDH$ = No. of days hired out as agricultural labourers/total working days of the household.

households . This is a consequence of mere possession of land and not cultivating it, and similarity with the NCL households as far as the pattern of working days is concerned. A comparison of the pattern of working days of NCL and CAL households brings out the significance of labour absorbing and income generating land ownership and its role in restricting the distress diversification activities of the agricultural labourers/households.

5.8.2 Poverty among the Agricultural Labour Households :

For estimating the extent of poverty among the agricultural labour households, per capita expenditure of each sample household was estimated in order to compare it with the poverty line in terms of per capita consumption expenditure (PCE). From table 5.12 it can be seen that the level of PCE at the state level indicating poverty line is seen to be much lower than that calculated for the sample households in the two villages.

Table 5.12 : Comparison of Poverty Line PCE and PCE of the Sample Households. (In Rs.)

Maharashtra Poverty Line (Per Capita/Month)	Per Capita Consumption Expenditure	
	Undeveloped Village	Developed Village
(1993-94)	NCL : 495	442
194.94	CAL : 469	603
	LAL : -	542
	AL : -	574

Note : 1. Poverty line PCE considered here is that given by the Expert Group constituted by the Planning Commission in 1993 2. PCE of sample households pertain to the year 1996-97.

Source : Poverty line PCE taken from Malhotra (1997).

The difference between the poverty line PCE and PCE of the sample households can partly be explained by the differences in the years for which the data is considered. The other reason for higher value of PCE of sample households is related to the methodology used for calculating the PCE. All the female and child units have been converted into adult units for the purpose of the present study⁷. Hence, there is a possibility of overestimation in the latter case. However, the difference persists even after making adjustments for the two factors⁸. Therefore, the attention was focused on the more important issue of over/underestimation of PCE in either case.

Firstly, the itemwise level of expenditure required to satisfy the consumption needs of households as implicit in the poverty line were

calculated by applying the weighing norm used by the Labour Bureau for constructing CPIAL and updating the poverty line PCE (GOM, 1996, p. 28) (Table 5.13).

Table 5.13 : Itemwise Break up of Consumption Expenditure at Poverty Line (Per Capita)

Item	Weight Assigned (%)	Break up of Poverty Line PCE(Rs.)
1. Food	76.87	148.66
2. Clothing	7.88	15.24
3. Fuel/Light	8.22	15.90
4. Services/ Miscellaneous	7.83	15.14
	<hr/> 100.80	<hr/> 194.94

Source : 1. GOM (1996) for weighing scheme. 2. Malhotra (1997) for poverty line.

Thus, Rs. 148.66 is the cut-off level of monthly PCE on the major item in the consumption basket i.e. food. In contrast with this, the PCE incurred by the sample households on food was observed to be much higher in both the villages. Given the prevailing prices, consumption basket and the food habits of the population in the regions, it was observed that the expenditure required to satisfy the absolutely necessary minimum food requirements (i.e. food poverty) (out of total expenditure of food) irrespective of the calorie requirements was higher than the total expenditure on food implicit in poverty line PCE, as well as higher than poverty line PCE itself. This can be clearly observed from the tables 5.14 and 5.15. The tables bring to the notice the gross underestimation of the needs by the concerned authority and also the differences between the two sample villages in this regard.

We have excluded expenditure of the sample households on other cereals, Kerosene (assuming that the fuel needs of all the households are satisfied by the firewood collected) from the items listed in the tables. The expenditure incurred on milk is also excluded because it

The Underdeveloped Village

Table 5.14 : Expenditure on Food Incurred by the Sample Households

Item	Weight (Kg)	Price/ Amount Spent (Rs)	Total Weekly Expenditure (Rs)	Monthly Expenditure of Households (Rs)	Monthly PCE (Rs)
1. Rice	10	5.5	55	940	313
2. Wheat	10	3	30		
3. Fish/ Vegetables	-	50	50		
4. Sugar/Tea	-	40	40		
5. Flourmill	20	1	20		
6. Travelling	-	40	40		
Total			235		

Note : 1. Rs. 940 represents the monthly expenditure of the household comprising of on an average three adult units. 2. Travelling expences incorporated as the labourers are required to spend on travelling for the weekly bazar.

The Developed Village

Table 5.15 : Expenditure on Food Incurred by the Sample Households.

Item	Weight (Kg)	Price/ Amount Spent (Rs)	Total Weekly Expenditure (Rs)	Monthly Expenditure of Households (Rs)	Monthly PCE (Rs)
1. Jowar	10	6	60	1300	433
2. Rice	10	9	90		
3. Vegetables	-	10 daily	70		
4. Meat	-	25 weekly	25		
5. Oil (litre)	1/2	20	20		
6. Tea/Sugar		40	40		
7. Flourmill	20	1	20		
Total			325		

Note : 1. Rs. 1300 represents the monthly expenditure of the household comprising of on an average three adult units.

does not form a part of the consumption basket (in the case of underdeveloped village) and it is too expensive to be an integral part of the consumption basket of many households (in case of the developed village). Apart from milk, expenditure on cooking oil is also excluded from table 5.14 as many households were observed to be cooking without the usage of oil. The minimum monthly PCE required for survival - Rs. 308 and Rs. 435 in the underdeveloped and the developed village respectively is higher than the total poverty line PCE on food (Rs. 148.66) as well as the total poverty line PCE (Rs.194.94).

Between the two villages, the monthly PCE is seen to be higher in case of the developed village due to the two factors viz. firstly, higher prices of the consumed articles and secondly, the varied consumption pattern of the households than those participating in the subsistence economy of the underdeveloped village. It also reveals the differences in earning and spending capacities of the households of the sample villages.

In the absence of a proper officially provided norm for measuring the extent and incidence of poverty, we considered here the minimum expenditure on food required (Rs. 313 and Rs. 433, tables 5.7 and 5.8 respectively) as the norm and compared the per capita total expenditure on food (inclusive of the minimum expenditure on food) of the households with it. The classification of the households falling above and below this norm is presented table 5.16.

It can be noticed that in both the villages, a significant proportion of the total number sample households (38 percent in the underdeveloped village and 55 percent in the other) is unable even to satisfy the minimum food needs. Further, the distribution of households based on the basic minimum expenditure norm indicates quite a few interesting points. Firstly, contrary to the usual expectations, the developed region shows larger number of agricultural labourers not acquiring adequate income to satisfy basic

survival needs. One of the reasons for this observed fact might be the higher cost of living in the developed village and inability of the labour households to keep pace with it, with the given income. Secondly, the diversification of labour market in a commercialised domain like Kolhapur has not helped in improving the bargaining power. It can be expected that such segmented labour market in itself is an indication of weak bargaining power.

Table 5.16 : Categorywise Number and Percentage of Households Falling Below and Above the Minimum Survival Expenditure on Food.

Category	Underdeveloped Village Norm - Rs.313			Developed Village Norm - Rs. 433		
	Above	Below	Total	Above	Below	Total
NCL	69%	31%	100%	33%	67%	100%
CAL	57%	43%	100%	54%	46%	100%
LAL	-	-	-	75%	50%	100%
AL	-	-	-	50%	50%	100%
TOTAL	63%	38%	100%	45%	55%	100%

5.8.3 Emerging Issues from the Wage-Poverty Nexus :

The exercise carried out to get an approximate measure of incidence of poverty among the sample agricultural labour households on the basis of minimum food requirements brings out a few important issues:

1. All the agricultural labour households in the two villages under consideration fall above the officially estimated poverty line as the PCE for these two villages is significantly higher than the latter. Hence, it can be concluded that there are no households below poverty line. However, considering the prevailing prices of the consumption articles, in the two regions, the minimum expenditure on food (out of the total consumption expenditure) required is greater than the poverty line PCE. Thus, in the case of the two villages, official estimate of poverty line becomes quite redundant for the purpose of using it as a cut off point to classify households as poor

and non-poor. Therefore, it can be concluded that the officially given poverty line is a gross underestimate of the actual consumption needs of the poor households .

3. All the above observations and the issues brought out support the arguments that the methodology used for estimating the poverty line by the Government has its own limitations (Malhotra (1997)). One of the major criticism relates to the constancy of the consumption basket used for calculating PCE which excludes many types of expenditures particularly on the non-food items/services. It has been argued that the consumption basket implicit in poverty-line neither reflects appropriately the minimum needs of the body nor does it meet adequately the non-food requirements consistent with healthy and productive living (Malhotra (1997)). As far as non-food consumption expenditure ensuring a minimum level of healthy and productive living is concerned, it can be noted that the consumption basket implicit in the poverty line does not consider expenditure on services such as health and education. Accounting for minimum expenditure on those services implies capturing poverty in terms of productive human resources and a decent quality of life.

In the case of our sample households, it was noted that the total consumption expenditure incurred was distributed between expenditure on food, clothing, health and education, house rent / maintenance, fuel / light and other services / miscellaneous. Application of the weighing scheme given by the Labour Bureau (GOM (1996)) to sample households poses difficulties as the items of expenditure are different in both the cases. Thus, it seems that for measuring poverty in terms of cut-off level of expenditure as well as consumption basket, a proper norm is not available. Applying the weighing scheme to the consumption expenditure of the household is therefore a rough indicator poverty levels. For bringing comparability between the two consumption baskets, all the expenditures under heads 'house rent', 'health' and 'education' were clubbed together under 'miscellaneous / services'. The number of households failing to

reach the percentages implicit in the poverty line PCE were noted. These are reported in table 5.17.

Table 5.17 : Number of Households Above and Below the Prescribed Itemwise PCE.

Item	Underdeveloped Village		Developed Village	
	Above	Below	Above	Below
1. Food	20	20	15	25
2. Clothing	35	5	27	13
3. Fuel/Light	1	39	2	38
4. Services/ Miscellaneous	28	12	25	15

The striking point noticed from the table is that 50 percent or more households have failed to reach the minimum expenditure on food, which constitutes the major item in the consumption basket. The higher number of labour households suffering from food poverty in the developed region is observed from table 5.17 also. Table 5.16 and 5.17 thus clearly bring out the poor economic status of sample households.

5.9 Labour Market Interventions :

The labour markets in the two sample villages present two distinct cases due to the differences in natural, economic and demographic factors leading to differences in various characteristics such as wage and employment situation, standard of living, wage contracts (i.e. casual and attached contracts) etc. Apart from differences in the economic characteristics, the data collected from the field survey was also intended to reflect the influence of labour market interventions, if any. Therefore, information relating to government intervention in the form of EGS activities and minimum wage legislation along with the role of labour organisation active in the region was collected. Following is a brief account of the responses received from the households in this regard.

5.9.1 EGS and the Minimum Wage Legislation :

As far as the government intervention is concerned, all the sample households in the two villages reported that no EGS activity was started by the government in the recent past. Questions relating to the other government intervention - in the form of minimum wage legislation were asked to observe their awareness in that respect. It was found that in the developed village, the agricultural labourers were absolutely unaware of the existence of such legislation possibly because the prescribed minimum wage level has become irrelevant due to the higher wages received by male and female labourers even without any intervention. Similarly, strong political leadership from among the landed uppercastes and absence of any active labour organisation has also acted against the labourers' acquiring any knowledge regarding minimum wages payable to them. In the underdeveloped village too, most of the labourers were unaware of the legislation, the prescribed minimum wages and the fact that they receive higher wage than the minimum wage rate. However, most of the tribal sample households being members of the labour organisation active in the region - 'Shramajeevi Sanghatana' were unanimous in reporting that the wage hikes take place solely due to the force of the Sanghatana. The Sanghatana has been acting as an intervening force to reckon with, amongst the tribal population. Thus, the labour market in the underdeveloped village has acquired its distinct characteristic due to the activities of this institutionalised force. The organisation has helped to change the character of the labour market in the following manner.

5.9.2 Labour Organisation as an Intervening Force - the Sanghatana :

The determination of and the hikes in wage rates paid to the agricultural labourers is solely the result of the organisational activities. In 1982, the Sanghatana demanded payment of minimum and equal (for male and female labourers) wages and succeeded in

implementing it through the Minimum Wage Inspector and the Tehsildar. The construction works undertaken by the Sanghatana have provided labourers an alternate source of employment and income thus competing with the agricultural sector for labour supply. Construction of bunds, wells, tanks has facilitated availability water for drinking and for irrigation purposes.

With the complete abolition of the exploitative practice of bonded labour in the village and their settlement, the labour -employer relation has changed its feudal character. The terrorist activities by the upper caste landowner employers have declined significantly. The labourers are now in a position to refuse to work with the upper caste Patil landlords without any fear.

The Sanghatana's struggle for retrieval of alienated land (grabbed by local gangsters and builders) and regularisation of tribal encroachments on forest lands has provided many households pieces of land as an asset to fall back upon.

Other activities of the Sanghatana such as schools for children of the brick kiln workers, campaign for obtaining caste certificates, arranging various types of camps for the tribal poor and other such mobilising activities have made the labourers more independent and conscious of their own identity.

5.9 Summary :

The chapter brings together the evidence collected during the field survey of two distinct regions of the state of Maharashtra. One region is characterised by commercially oriented agriculture. The gains from the growth of agricultural sector are not distributed equally among the landholding employer class and the landless labourers. Similarly, the labour market is segmented and there is no incentive for collective bargaining on the part of the labourers. The second region is a tribal underdeveloped region, but with the presence of labour organisation has demonstrated better bargaining power of the labourers. The labour market in this region is segmented

but to a lesser extent and is closer to homogeneity. The differences in the nature of labour markets in the two villages are reflected in the process of wage determination as well as various factors influencing behaviour of wage rates in the two villages. Wage determination in the former case can be attributed to a variety of economic and politico-institutional factors and causal links as postulated in the wage determination theories. The wage determination process in the tribal village dominated by the Sanghatana is relatively less complicated due to the homogeneity of the labour market. Similarly, the labour-employer relationship can be said to be more advanced in the latter case (though an underdeveloped region) than the former due to the presence of the Sanghatana.

Empirically, the results of the study indicate deteriorating position of the labour households in the post-1990, supporting the wage-poverty in nexus. Another point relates to the methodology used at the government level and the lacunae in the wage data reported as well as the concept of poverty line itself. The use of such data as well as the concept is likely to lead to faulty conclusions.

The analysis of the distinct labour markets thus revealed, interesting points from theoretical as well as empirical view point, throwing light on the ground realities which were concealed in the district level analysis.

Notes :

1. The selection of taluks and villages was purposive but it was on the background of discussions with and suggestions received from some of the grass-root level workers in these regions and academicians who have worked in these areas, keeping in view the criteria of the selection of districts.
2. LAL indicates those landowner households, which have not cultivated their land during the period of survey for various reasons.
3. It is possible that the percentage of agricultural labourers is somewhat less as of today in reality as many of the labour households

now cultivate encroached upon pieces of forest land, which they do not necessarily own by their names.

4. As the study did not intend to collect information on labour demand as well as profit function of the employers, validity of the prevailing models / hypothesis explaining coexistence of unemployment and downwards rigidity of wages could not be tested formally.

5. It is difficult to ascertain here whether the wage paid partly in cash and partly in kind is the 'efficiency' wage as compared with the competitive wage with the available data.

6. As per the notification issued by the Industries Energy and Labour Department, Government of Maharashtra, relating to the revision in the Minimum Wages Act, 1948 on 29th June 1994, the minimum wage rate applicable to the developed village is that applicable in the local limits of Municipal Council of Ichalkaranji (district Kolhapur). As far as the underdeveloped village is concerned, the minimum wage rate applicable is that prescribed for zone III.

7. The conversion scale is based on Lusk's Coefficient which considers -

Adult male above 14 years	=	1 adult unit
Adult female above 14 years	=	.83 adult unit
Child between 10 to 14 years	=	.83 adult unit
Child between 6 to 10 years	=	.73 adult unit
Child below 6 years	=	.5 adult unit

8. The annual PCE figures of the sample households were adjusted with the help of the average family size of 4.68 as reported for the year 1987-88 (GOM, 1993). Similarly, the poverty-line PCE was updated by 35.77 percent (which is the percentage change in CPIAL during 1993-94 to 1994-95 i.e. from 1068 to 1450).

CHAPTER VI

SUMMARY AND CONCLUSIONS :

Agricultural labourers feature in the academic literature as a class or a segment of the economy that has been deprived of the gains arising out of the process of development, through space and time. An analysis of the issues pertaining to this particular class attains significance not only from the economic but also from the normative welfare perspective. Understanding of the agricultural labour markets and the wages of agricultural labourers that get determined in it, is therefore essential for the study of temporal and spatial stagnation or deterioration in the trends of indicators relating to the socio-economic status of the labourers.

There are several studies, dealing with the specific issues pertaining to agricultural labourers. Two major points come out very clearly through the review of literature. Firstly, majority of the studies seem to have concentrated on various empirical issues isolating them from the existing theoretical literature, particularly with respect to the theories of wage determination. On the other hand, the theoretical literature seems to have developed leaving aside the ground realities. Secondly, the available studies have mainly concentrated upon specific labour market regions such as Punjab, Haryana, Uttar Pradesh, Kerala, West Bengal etc. Agricultural labour markets in a state like Maharashtra with a high growth profile of the industrial sector and moderate growth agricultural sector has remained a relatively neglected area. In the light of this, the present study is an attempt to understand the structure of and trends in wages of agricultural labourers with particular reference to Maharashtra on the backdrop of the empirical as well as theoretical literature. In this chapter major issues that have emerged out of this study are brought together.

Among the states in India, Maharashtra presents a case, characterised by moderate rate of growth of agricultural output along with large

availability of non-farm job opportunities in the urban areas and public works started by the government, especially in the rural areas as specific labour market interventions. These together should have a favourable impact on wages of agricultural labourers. However, wage rates in Maharashtra have increased at a relatively slower pace as compared to the other states and the wage levels are among the lowest in the country. The present study has sought to analyse this particular issue by undertaking a state level as well as district level analysis of wages of male and female agricultural labourers during the period from 1961 to 1994 by utilising secondary as well as primary data collected from the field survey in two selected villages.

The study has concentrated on five major aspects - firstly, we have dealt with the districtwise, phasewise trends in money and real wages of male and female labourers as well as in the gender wage gap. The emerging structure of wage rates in various labour markets in Maharashtra characterised by historically evolved varying politico-institutional setup is also discussed. For understanding the impact of the politico-institutional setup, specific institutions (such as state and union interventions) in the labour market are analysed. On this background, the analysis of secondary data is carried out for assessing the impact of various economic, demographic, and land variables. Similarly, the data collected from the field work for understanding the working of agricultural labour markets in terms of process of wage determination and the factors affecting wages, structure and movement in wage rates as well as the standard of living of labourers is analysed.

The focus of the study was on some of the major issues relating to the wages of labourers viz. i. trends in money and real wages over a period of time, ii. regional and temporal variations in it, iii. gender wage gap and iv. the determinants of wage rate as well as the process of wage determination. The study intended to analyse the behaviour of wage rates across districts in Maharashtra incorporating various

hypotheses such as 'efficiency wage theory', 'implicit co-operation theory', 'bargaining theory' etc. postulating a causal link between wage rates and the determining factors as well as the mechanisms of operation. Thus, an attempt was made to test the validity of these theories at the state/district level as well as at the micro-level. Further, several other determinants of wage rates were considered, taking into account the specificity of each district of the state.

As the major point of analysis was behaviour of wage rates (the price that gets determined in the agricultural labour market), understanding of the agricultural labour market was considered essential for the sake of analysis as wage behaviour is bound to get affected by the structural specificities of the labour market under consideration. However, as seen in the light of any particular hypothesis (like 'efficiency wage hypothesis', 'implicit co-operation hypothesis', 'bargaining hypothesis') or perspective (the 'Marxian historical perspective') this view was found to be posing difficulties due to the inherent inadequacies of both. eg. on one hand, the theories of wage determination consider various aspects of labour markets (class relations, relations of production) as given or extraneous to the analysis. On the other hand, the Marxian perspective (which assumes that wage rate is determined by balance of class forces) is found inadequate for its application to understand the wage determination process due to the underdeveloped nature of labour markets. Therefore, the methodology of the present study included a combination of both - i.e. analysis of wage rates concentrating on various theories of wage determination / demand - supply models on the background of historical description of the dynamic factors affecting labour market structure.

The factors influencing the specificities or structural aspects of labour markets can broadly be categorised as the forces of economic growth and the politico-institutional factors. In other words, these represent the forces of production in agricultural sector in the Marxian perspective and relations of production therein. The forces

of economic growth in the agricultural sector are those that are expected to provide incentive for the wages to move upwards from within the agricultural sector. Thus, this postulates wage-agricultural growth nexus. On the other hand, the politico-institutional factors basically include various institutions and the underlying class relations and can be looked at as the institutional interventions in the labour market. It is the nature of interaction between these factors that determines the structure of labour market, ultimately affecting wages.

A study of historical evidence indicates distinctive nature of three broad divisions of the state viz. western Maharashtra, Marathwada and Vidarbha. The emergence of agrarian capitalism in western Maharashtra since the British rule can be attributed to the conducive politico - institutional factors such as dominance of peasant proprietorship, higher proportion of landholdings by the Maratha peasantry, the rise of this particular class and establishment of its hegemonic power in the state politics. Historically, these factors led to the development of agricultural sector in terms of commercialisation and infrastructural facilities. A comparative analysis of the three broad divisions of the state show that in the process, Marathwada and Vidarbha were deprived of the opportunity to take advantage of the available resources unlike in the case of western Maharashtra. Such regional variations were also noted during the Green Revolution period. Thus, the major differentiating factor of the labour markets in these regions was the underlying structure and the caste/class politics.

The analysis of structure of and movement in wage rates in various districts of Maharashtra reveals several important points on this background. Firstly, it is observed that the structure of wage rates that emerges out of the discussion broadly conforms with the labour market regions. This is clear from the fact that the districts of western regions of the state including districts of Konkan, Khandesh and western Maharashtra, which had history of conducive factors for

overall growth, exhibit relatively higher levels of wages during the entire period from 1961 to 1994 and phases therein. A classification of districts based on levels of wage rates reveals that the high wage level (above Rs. 26- males and Rs. 16- females) districts such as Raigad, Ratnagiri, Jalgaon, Pune, Amaravati and Nagpur not only exhibit correspondingly higher magnitudes of growth rates but also that of the coefficient of variation and gender wage gap over the entire period. Similarly, the low wage level (below Rs. 20- males, and Rs.14- females) districts such as Thane, Nasik, Aurangbad, Buldhana, Bhandara and Wardha exhibit lower values of these variables. The districts of the same labour market region get congregated in one group, implying the tendency of wage rates in a particular region to get affected by similar factors and behave in a particular manner eg. most of the high wage level districts are seen to be those from western Maharashtra, Konkan, Khandesh and low wage level districts from Marathwada and Vidarbha. In the case of moderate wage level districts too, the subcategories (firstly from western Maharashtra and secondly from Marathwada) are comprised of the districts from a particular labour market region. Thus, the structural aspects of the labour markets seem to be affecting wages quite significantly, conforming to the fact that the early emergence of agrarian capitalism benefited the labourers in the particular region, as against the remaining ones. The second important emerging point is the lack of complete homogeneity within a particular labour market region due to the operation of a variety of location - specific factors leading to the presence of extreme cases within that particular labour market region eg. Solapur in western Maharashtra and Beed in Marathwada.

These patterns bring out the importance of the institutional and political undercurrents in affecting the wage behaviour. Empirically, the comparative scenario after the Green Revolution period also reveals this particular fact and leads to the conclusion that

agricultural growth percolates down to the agricultural labourers only if the underlying politico - institutional set - up is conducive.

Apart from these broad tendencies, the data also revealed a few empirically interesting points. Firstly, it was observed that the high wage level (or low wage level) districts are generally those exhibiting correspondingly higher (or lower) magnitudes (than the state average) of growth rates, coefficient of variation as well as gender wage gap, over the entire period thus establishing growth - instability nexus as well as growth wage gap nexus. This implies instability of incomes in the high wage districts due to the fluctuating and varying nature of wage rates as compared to the districts in the low wage group. Secondly, apart from variability in wages, high wage districts are characterised by high gender wage gap, which implies limited role of agricultural growth in narrowing down the gender wage gap. Thirdly, the real wages of agricultural labourers are seen to have declined in many districts - including the high wage as well as the low wage districts in the post -1990 period marked by the general price rise in the economy under various measures, incorporated in the New Economic Policy. The growth rate of money wages rate is found to be lesser than that of CPIA in the third phase i.e. after 1988, in many districts. The vulnerable position of the agricultural labourers, particularly female labourers, to the forces of growth as well as government policies is thus brought out.

For assessing the impact of the underlying politico - institutional set-up on the wage rates, specific representative factors were selected. As mentioned earlier, these can also be looked at as the interventions in the labour market. For evaluating their impact on the wage behaviour, three important institutional interventions were chosen viz. Minimum Wage Legislation and the Employment Guarantee Scheme (EGS)(the state interventions)and the activities of Labour Organisations. The purpose behind the inclusion of the former two interventions was not only limited to the observation of impact of these measures on the wage behaviour, but also the operation of

political undercurrents in this regard. The secondary data as well as the discussions with the activists of various labour organisations revealed that the state interventions have played a positive (though limited) role in the labour market. This was also clear from the increasing trend in wage rates in the late 1970s, and the peaks observed, representing impact of the EGS works started by the government as well as of the revisions in the minimum wage. However, the favourable impact of the state interventions was materialised mainly due to the pressure exerted by the Labour Organisations. Enactment of minimum wage legislation, revisions in it, beginning of EGS works and payment of proper wages thereon, have been generally the outcomes of such a kind of pressure.

An analysis of the labour organisations in Maharashtra, keeping in view the responses received through the schedules sent to them as well as the discussions with several senior leaders revealed a few important points. Firstly, the emergence of labour organisations and their sustained activities were found to be characteristics mainly of the tribal regions like Thane and Dhule. The spread, nature and extent of activities of the organisations in non-tribal regions of western Maharashtra and Marathwada could be distinctly noted due to their peculiarities. Differences in the nature of the demands put forth by the organisations active in region, the extent of their activities, again brought out the differential impact of labour markets in determining the labour processes.

Unlike in the non-tribal regions, the organisations in the tribal regions emerged as a considerable force vis-a-vis landowners as well as government machinery and their activities have led to a change in the process of wage determination as well as labour-employer relations. However, in the non-tribal regions, the activities of the existing organisations have never posed any threat to the landowner employers as well as to their political base due to several factors such as dominance of rich Maratha peasantry in the state politics, segmentation of labour markets on the basis of caste and the higher

levels of wages than the minimum wages. Therefore, organising labourers posed difficulties in absence of any major issue except during specific time periods, characterise by some sporadic activities. In general, it can be said that the combined positive effect of all the three interventions (which is dissimilar across labour market) is the characteristic feature of labour markets as well as a necessity.

The structure of wage rates across various labour markets as well as the underlying politico- institutional set-up provided a background for the analysis of secondary data undertaken for assessing the impact of various economic, demographic and land variables as well as the data collected from the field visits. Though the literature on wage behaviour reveals a positive impact of various demand enhancing factors, our results of cross-section and time-series analysis, however do not provide us with a clear evidence of such a nexus. The nature of relationship (positive or negative) between wage rates and its determinants differs across districts confirming the hypothesis that growth of agricultural sector percolates down to the level of agricultural labourers given the nature of the institutional setup of the labour markets and that the trickle down effect of growth is not uniform across regions. The districts wherein agricultural growth has played important role in shaping the wage behaviour are those from western Maharashtra, Konkan and Khandesh. Simultaneously, there are districts which have exhibited moderate as well as low growth of agricultural sector and still fall in the high (than the state average) wage category. These are mostly from Marathwada and Vidarbha regions. In these districts, operation of forces other than those relating to the growth of agricultural sector seem to explain the high wage behaviour better. This again brings forth the specificities of the labour markets apart from the interventions by labour organisations and non - farm job opportunities.

In other words, it can be said that institutional specificities of each region and sub-regions leading to labour market imperfections are the major factors behind the heterogeneous pattern observed in the wage

behaviour across districts. The labour market imperfections (as seen from the neo-classical perspective) incorporating immobility of labourers, segmentation of the labour markets, prevalence of traditional institutions (gender, caste) leading to traditionally determined behavioural patterns etc. contribute to differential nature of wage determination process as well as factors leading to changes in wage levels. Similarly, stagnancy in the average wage rates for the state as a whole and comparatively lower wage levels among the other states can probably be attributed to the heterogeneous character of labour markets reflected in spatial and temporal difference in wage behaviour.

Apart from the analysis of secondary data, the analysis of data collected from the field work also provided us with important insights into the working of the agricultural labour markets in terms of the process of wage determination (which could not be tested at the district level using the secondary data) and the factors affecting wage rates, structure and movement in the wage rates as well as the standard of living of the agricultural labourers. The selection of villages for the of survey was purposive. The intention behind the field investigation was to understand the differential nature of labour markets and the wage behaviour. Hence, the villages selected - Medhe (in district Thane) and Nimshirgaon (district Kolhapur) represented two totally different situations. Whereas the former represents an agriculturally backward and overall underdeveloped region, the latter is a developed village as compared to the former.

The striking point revealed out of the analysis was the distinct nature of the two village labour markets resulting into distinctive behaviour of various processes therein. It was revealed from the analysis that firstly, it is difficult to visualise the process of wage determination as conforming to any particular prevailing hypotheses. It is more an outcome of the combination of several factors / causal links simultaneously operating in the labour market region. Thus, the process of wage determination can be explained in term of various

economic demand - supply factors as well as theories like efficiency wage theory, implicit co-operation theory, bargaining theory within a particular labour market, each operating to a certain extent. Secondly, along with the wage determination process, the differences are noted in the production relations between labourers and land owner employers. Even though an underdeveloped village, Medhe presents a case where the relations are more advanced in the sense that the labourers can exercise more freedom in determining the decisions regarding supply of labour to the land owners. This is attributed solely to the presence of the 'Sanghatana' (the Labour Organisation) working amongst the agricultural labourers and their increased bargaining strength. Thus, the institutional intervention in the labour market has led to a marked change in the labour employer relation as well as wage determination process (from their earlier feudal nature) , even in the absence of any incentive from the economic side.

On the other hand, the labour - employer relations in Nimshirgaon are not as advanced as in the case of Medhe. Economic forces have certainly improved the individual bargaining strength of labourers due to the scarcity of labourers faced during the peak agricultural season as well as availability of job opportunities in urban areas. However, there is no incentive for collective bargaining on the part of labourers, which can be attributed to the segmentation of labour market (on the basis of varying landholding position, gender, social hierarchy - caste and contractual arrangements), absence of labour organisation and dominance of politically dominant uppercaste landowner employers. The attached labour contracts are still prevalent in this village wherein the agricultural labourer works for more than usual eight hours of works at an implicit wage rate lower than that for the casual labourer. The tied as well as casual labourers are not in a position to dictate terms to the landowner employers.

In sum, an analysis of wages of agricultural labourers in Maharashtra brought out the significance of structural (political-institutional-

economic) aspects of the agricultural labour markets having implications for the empirically observed wage behaviour (i.e. the regional variations, gender wage gap and on an average, a lower level of a wage rate) at the state level. This was clear from the secondary as well as primary data analysis. The results of the study point out towards the effectiveness of economic factors only in the presence of conducive institutional aspects of the labour market. The wage determination process as well as various factors affecting wages are found to be getting affected by the nature of interaction between the politico-institutional factors (state and union interventions in the labour market, class relations and the political interventions in the economic decision making) and the economic factors that define the character of labour markets. Therefore, wage behaviour in districts constituting a labour market is found to be similar. Further, it is observed that the analysis of wages can not be carried out in the framework of a particular theory/hypothesis and a variety of determinants or causal links have to be considered. The study also brought out the complex character of labour markets and the need to analyse further the labour market specificities in the case of Maharashtra.

Appendix 3.1

Minimum Wage Rates for Unskilled Agricultural Labourers in Major States of India.

State/Union Territory	Minimum Wages as on	Minimum Wage Rate/Range (Rs. per day)
Andhra Pradesh	8-4-91	16.80 to 23.40
Assam	1-8-89 (1-2-92)	900p.m.+234p.m.(VDA)
Bihar	21-12-95	27.30
Gujarat	4-2-86	15.00
Haryana	18-1-90(1-1-95)	31.75+20.35 p.d.(VDA)
Himachal Pradesh	1-10-94	24.00 to 26.00
Karnataka	September 1994	26.00
Kerala	31-3-92	30.00 to 40.00
Madhya Pradesh	12-9-89	13.70+14.47 p.d.(VDA)
Maharashtra	29-6-94	20.00 to 29.00
Orissa	1-7-90	25.00
Punjab	1-1-96	33.00+22.28 p.d.(VDA)
Rajasthan	1-1-95	32.00
Tamil Nadu	3-4-89	20.00
Uttar Pradesh	22-1-92	23.00 to 25.00
West Bengal	13-8-97(1-10-94)	10.15+26.85 p.d.(VDA)

Note : VDA = Variable dearness allowance.

Source : Subrahmanya and Singh (1996).

Appendix 3.2

Zonewise Monthly and Annual Minimum Wage Rates for Agricultural Labourers (In Rs.)

Type of Labour	Zone	Years of the Passing of the Legislation / Revisions				
		1973	1978	1983	1988	1994
1. Monthly Labourers (Mahinedar)	I	1200	2060	NA	7680	11160
	II	1200	1880	"	6240	10320
	III	1200	1700	"	5520	9132
	IV	*	1500	"	4800	7932
2. Annual Labour (Saldar)	I	100	172	"	640	930
	II	100	157	"	520	860
	III	100	142	"	460	761
	IV	*	125	"	400	661

Note : The figures for the year 1983 are not reported here due to the non-availability of information in that respect. 2.* Figures are not reported here as only three zones were created by the provisions of the Act in 1973.

Source : Government notifications, reports of various committees set-up for making recommendations before the passing of the legislations/revisions

Appendix 3.3

Ratio of Minimum Wage Rate and the Average Agricultural Wage. (In Percent)

District	Minimum Wage ----- * 100 Average Agricultural Wage									
	Male					Female				
	1974	1977	1983	1988	1994	1974	1977	1983	1988	1994
Thane	63	80	72	91	90	79	97	88	115	107
Raigad	61	80	126	68	68	78	105	72	89	89
Ratnagiri	49	62	83	64	66	71	86	78	95	89
Nasik	84	103	126	96	98	104	120	98	123	129
Dhule	70	85	63	88	68	88	108	103	108	80
Jalgaon	64	69	98	-*	-*	95	98	88	-*	-*
Ahmednagar	66	85	128	86	75	92	114	95	106	112
Pune	70	88	120	68	65	96	118	87	95	82
Satara	60	85	83	68	75	86	116	108	106	107
Sangli	75	91	83	84	86	105	121	102	128	133
Solapur	103	104	151	82	74	111	133	93	129	105
Kolhapur	75	97	81	75	94	99	128	113	103	139
Aurangabad	75	95	134	87	92	102	131	96	129	116
Parbhani	76	98	83	101	76	113	141	144	147	113
Beed	96	117	131	88	84	132	161	122	136	119
Nanded	81	107	182	98	74	111	149	91	139	105
Osmanabad	88	113	221	72	90	111	149	93	125	132
Buldhana	107	118	134	117	138	159	158	116	169	196
Akola	93	100	92	99	87	135	141	103	152	122
Amaravati	75	86	98	79	60	114	129	109	119	78
Yavatmal	78	86	74	94	79	137	118	130	134	104
Wardha	67	74	106	74	83	125	119	92	125	130
Nagpur	69	85	96	66	72	105	137	115	106	106
Bhandara	93	116	89	93	105	137	167	129	125	118
Chandrapur	66	92	82	84	83	104	131	114	121	108
Maharashtra	76	93	109	84	83	108	127	103	122	113

Note : 1. For calculating the ratios, minimum wage rates of the last zone (Rs.2.5, Rs. 3.75, Rs.6.00, Rs. 6.00, Rs. 12.00 and Rs. 20.00 for the years 1974, 1977, 1983, 1988 and 1994 respectively) are considered. 2. In the denominator the average agricultural wage of five years (1972 to 76, 1975 to 79, 1981 to 85, 1986 to 90, for the last revision the years 1992 to 94 considered due to non-availability of data for latter years) considered for avoiding any extreme observation. 3. * Ratio could not be calculated due to non-availability of the wage data, 1989 onwards. 4. New districts clubbed with the old districts.

Source: 1. Government notifications for minimum wage rates. 2. Various issues, SCR for agricultural wages.

Appendix 3.4

Percentage Change in Average Agricultural Wages during the Period of Two Consecutive Wage Revisions (In Percent)

District	Percentage Change during the Period of							
	1972-76 to 1975-79		1975-79 to 1981-85		1981-85 to 1986-90		1986-90 to 1992-94	
	M	F	M	F	M	F	M	F
Thane	18	22	78	75	58	54	68	80
Raigad	13	12	126	134	68	62	66	67
Ratnagiri	20	25	83	76	67	64	64	78
Nasik	22	30	126	97	53	59	62	59
Dhule	24	22	63	69	89	91	116	124
Jalgaon	40	45	98	80	*	*	*	*
Ahmednagar	17	21	128	91	40	80	90	57
Pune	20	22	120	118	87	82	75	93
Satara	6	11	83	73	119	103	50	64
Sangli	23	30	83	89	91	60	62	60
Solapur	48	25	151	130	61	44	87	104
Kolhapur	17	16	81	81	127	118	33	24
Aurangabad	18	17	134	117	49	50	59	85
Parbhani	17	20	83	57	67	95	122	117
Beed	23	23	131	110	85	81	75	91
Nanded	14	11	182	163	24	31	120	99
Osmanabad	16	12	221	158	56	48	34	76
Buldhana	36	52	134	118	38	37	41	43
Akola	40	44	92	132	69	36	88	108
Amaravati	30	33	98	89	43	83	121	153
Yavatmal	36	74	74	45	68	94	100	114
Wardha	37	57	106	108	54	47	50	60
Nagpur	22	34	96	92	112	116	52	67
Bhandara	20	22	89	107	109	108	47	76
Chandrapur	7	19	82	84	91	89	71	87
Maharashtra	23	28	110	100	72	72	73	83

Note : 1. As in note 2 in appendix 3.3. 2. The percentage change in minimum wage rates between the two consecutive revision is 50% (1974 to 1978), 60% (1978 to 1983), 100% (1983 to 1988) and 66.67% (1988 to 1994). 3. As in note 3 and 4 in appendix 3.3.

Source : Calculated from SCR, various issues.

Appendix 3.6

Percentage Change in Agricultural Wages after the Minimum Wage Legislation/Revision as Compared to Earlier Years.

District	Percent Change During									
	1971-73 & 1974		1975-76 & 1977		1980-82 & 1983		1985-87 & 1988		1991-93 & 1994	
	M	F	M	F	M	F	M	F	M	F
Thane	26.0	9.0	4.0	5.0	44.0	46.0	19.0	20.0	34.0	28.0
Raigad	22.0	20.0	2.0	4.0	83.0	29.0	29.0	34.0	27.0	34.0
Ratnagiri	24.0	37.0	11.0	9.0	25.0	22.0	27.0	36.0	38.0	35.0
Nasik	7.0	10.0	6.0	9.0	-14.0	24.0	-12.0	9.0	24.0	31.0
Dhule	30.0	47.0	2.0	3.0	26.0	22.0	33.0	38.0	6.0	6.0
Jalgaon	37.0	35.0	24.0	29.0	27.0	7.0	19.0	17.0	-	-
Ahmednagar	15.0	13.0	13.0	12.0	42.0	20.0	87.0	147.0	20.0	24.0
Pune	13.0	13.0	7.0	11.0	54.0	45.0	26.0	23.0	24.0	40.0
Satara	15.0	24.0	5.0	5.0	45.0	35.0	27.0	32.0	20.0	24.0
Sangli	5.0	8.0	14.0	14.0	14.0	13.0	60.0	36.0	3.0	5.0
Solapur	1.0	15.0	7.0	10.0	103.0	118.0	27.0	18.0	29.0	41.0
Kolhapur	5.0	15.0	9.0	2.0	11.0	-1.1	127.0	107.0	21.0	31.0
Aurangabad	5.0	9.0	14.0	22.0	21.0	19.0	25.0	31.0	24.0	24.0
Parbhani	9.0	9.0	-1.1	3.0	39.0	16.0	24.0	16.0	26.0	17.0
Beed	-0.4	7.0	12.0	-2.0	31.0	32.0	0.0	0.0	20.0	13.0
Nanded	13.0	17.0	-3.0	-4.0	111.0	118.0	-2.0	-4.0	34.0	41.0
Osmanabad	74.0	26.0	8.0	3.0	63.0	41.0	16.0	6.0	22.0	26.0
Buldhana	3.0	2.0	16.0	18.0	49.0	49.0	-10.0	-9.0	107.0	103.0
Akola	8.0	34.0	41.0	27.0	19.0	31.0	11.0	6.0	19.0	28.0
Amaravati	21.0	19.0	10.0	11.0	11.0	13.0	4.0	4.0	51.0	51.0
Yavatmal	4.0	-0.3	76.0	-17.0	30.0	28.0	24.0	44.0	47.0	60.0
Wardha	29.0	30.0	12.0	30.0	15.0	27.0	31.0	33.0	26.0	24.0
Nagpur	9.0	6.0	3.0	3.0	27.0	33.0	14.0	17.0	13.0	27.0
Bhandara	5.0	-0.5	3.0	10.0	20.0	30.0	86.0	89.0	35.0	13.0
Chandrapur	10.0	18.0	-0.7	12.0	35.0	34.0	39.0	37.0	10.0	12.0
Maharashtra	16.0	17.0	12.0	11.0	37.0	34.0	29.0	31.0	28.0	31.0

Note : 1. Percentage change calculated over the average of three year's wage level before the legislation / revision year of minimum wages so as to avoid inclusion of any extreme observation if any, in one year before the passing of legislation. 2. As in note 3 and 4 in appendix 3.3.

Source: Calculated from various issues of SCR.

Appendix 3.6

Districtwise Employment Generated and its Share in the State.

District	Total Empl Generated (In Lakh Mandays)	Percent to the State Totl (%)	District	Total Empl Generated (In Lakh Mandays)	Percent to the State (%)
Thane	185.31	1.82	Aurangabad	724.87	7.14
Raigad	9.59	0.09	Parbhani	283.00	2.79
Ratnagiri	86.16	0.84	Beed	621.14	6.13
Nasik	994.77	9.82	Nanded	343.10	3.38
Dhule	800.79	7.90	Osmanabad	730.66	7.10
Jalgaon	158.81	1.56	Buldhana	180.02	1.77
Ahmednagar	1206.35	11.90	Akola	206.22	2.03
Pune	363.51	3.58	Amaravati	192.92	1.90
Satara	452.71	4.46	Yavatmal	455.28	4.49
Sangli	257.06	2.53	Wardha	74.04	0.73
Solapur	711.05	7.01	Nagpur	210.78	2.08
Kolhapur	17.87	0.17	Bhandara	512.50	5.05
			Chandrapur	350.76	3.46

Note : 1. Empt= Employment, tot=total. 2. Employment generated is total for the period 1981-82 to 1986-87.

Source : Planning Department, Government of Maharashtra.

Appendix 3.7

Total Expenditure and Percentage of Wage Expenditure on EGS

Year	Total Expenditure (Rs. Million)	Percent of expenditure on wages paid
1973	18.8	N.A.
1974	18.9	N.A.
1975	137.2	N.A.
1976	346.1	90.95
1977	511.0	75.04
1978	515.4	73.98
1979	741.7	79.58
1980	1092.3	81.89
1981	1221.2	75.90
1982	1261.7	77.74
1983	1309.3	76.20
1984	1849.8	75.34
1985	2320.4	63.68
1986	2722.4	66.85
1987	2434.3	63.47
1988	2883.1	53.19
1989	2542.3	50.00
1990	2392.8	53.30
1991*	2350.0	57.37
1992*	3085.4	65.79
1992*	4260.0	60.30

Note : * indicates provisional data for the respective years.
Source : Planning Department; Government of Maharashtra.

Appendix 3.8

Wages of Agricultural Labourers in Maharashtra Schedule for the Labour Organisations

Date :

Place :

Name of the person
filling the schedule:

1. Name of the organisation and address of the head office.
2. Year of establishment
3. Areas of activity
4. Membership since last five years
a. Agricultural Labourers and b. others
5. Major objectives of the organisation.
6. Major issues/problems of agricultural labourers handled (as mentioned below and other) and the achievements of the organisation - a) low levels of prevailing wages b) Minimum wage rates as decided by the government, their implementation and revisions therein. c) Improvement in the working conditions d) Improvement in the standard of living e) Any other
7. The methods of activity of the organisation -
a) Agitation against the government / landowners
b) Developmental work c) Creating consciousness
d) Any other
8. Operationwise, genderwise wage rates in the areas of (irrigated and non-irrigated) of activity.
9. Change in the wage rates (increase/decrease in Rs.) of male and female labourers in the areas of activity since 3 to 5 years and the reason for such a change.
10. The consequences of the changes (increase/decrease) in the wage rates as mentioned above :-
 - a) Increase in wage rates:
 1. Falling demand for labourers, mechanisation
 2. Decline in the kind component of wage rates
 3. Inmigration of outside labour
 - b) Decrease in wage rates:
 1. Increase in the demand for labourers.
 2. Outmigration of the village labourers.
 3. Labour transfer from agricultural to non-agricultural sector

4. Any other

4. Any other

11. Have you observed instances of discrimination between Dalit labourers and other labourers with respect to the wage rates received and the labour-landowner relationship, if any?
12. Employment situation in the areas of activity
 - a) Prevalence of unemployment and abundant supply of agricultural labourers during the busy season.
 - b) Scarcity of labour during the peak season/during the entire year
 - c) Employment situation in general
 - d) Any other
- 13.1 What are the rates of minimum wages applicable in the areas of activity?
- 13.2 Are there any instances of evasion in the minimum wage legislation, explain with reason, if any
14. What are the loopholes in the minimum wage legislation with respect to the following issues and your suggestions in this regard :
 - a) The principles underlying determination of the minimum wage level
 - b) Implementation
 - c) Revision (basis and the time limit)
 - d) Division of the state into various zones
 - e) Appointment and suggestions of various committees (eg. Page committee, Vikhe-Patil committee)
 - f) Any other
15. What do you think should be the minimum wage level as of today and why?
16. Name various districts in Maharashtra with the existence of active labour organisations and their influence among the labourers
17. Which are the districts in Maharashtra that require involvement of labour organisations in the issues/problems of agricultural labourers and why?
18. What is the present situation of agricultural labourers' movement in Maharashtra with respect to their collective bargaining strength, organisation and sustenance in your opinion? What are the reasons for absence of a strong agricultural labour movement in Maharashtra?

Appendix 4.1

Results of Cross- Section Multiple Regression Analysis with Money Wage Rate as the Dependent Variable.

Explanatory Variable	Years						
	1961	1971		1981		1991	
	M	M	F	M	F	M	F
DENSITY	-0.01	0.005	-0.02	-0.10	0.0081	0.13	9.00
SHAGW	-0.00064	-0.04	-0.0053	0.08	-0.03	0.04	-0.05
SHOTW	0.0042	0.006	0.02	0.0079	-0.05	0.1	-0.07
OPHL 10	0.02	-0.3	-0.25	0.29	0.05	-0.42	-0.1
OPHL 2	0.02 *	0.04	0.03	0.05	0.01	0.37	-0.12
AVSZHL	0.02	1.65	1.26	-2.48	0.02	8.13	-2.6
AGOUT	0.0000004	0.000048	0.00022	0.00019	0.000007	0.000064	0.00025
TIA/GCA	-0.003	-0.02	-0.04*	-0.09	-0.04	-0.07	-0.02
ARCMCP	0.000052	0.00011	-0.000053	-0.00048	-0.0001	-0.00062	-0.00097
R ²	0.41	0.53	0.69	0.19	0.45	0.22	0.33
\bar{R}^2	0.60	0.25	0.51	-0.30	0.12	-0.28	-0.11
F	1.71	1.90	3.80	0.39	1.37	0.45	0.75
Sig F	0.38	0.13	0.01	0.28	0.89	0.89	0.66

Note: 1. Density, SHAGW, SHOTW, OPHL10, OPHL2, AVSZHL, AGOUT, TIA/GCA, ARCMCP as on page 149, 141. M=male, F=female.
 2. Values for female labourers not reported due to non-availability of data for the year 1961. 3. * indicates values of the coefficient significant at 10% level or better. 4. Regression equation of the form $y = a_1 + b_1x_1 + b_2x_2 + \dots + b_9x_9$ is used here.

Appendix 4.2

Results of Cross- Section (Change) Multiple Regression Analysis with Money Wage Rate as the Dependent Variable.

Explanatory Variables	1961-1971	1971-1981		1981-1991	
	M	M	F	M	F
DENSITY	-0.05	-0.42	-0.33*	0.06	0.37*
SHAGW	0.09	0.13	0.12*	0.82	-0.08
SHOTW	0.036	-0.36	-0.16	-0.16	0.5
OPHLIO	0.0007	0.18	-0.11	0.30	0.53
OPHL2	0.03	-0.11	0.0072	0.25	0.17
AVSZHL	0.02	-1.38	-0.0036	-1.66	-0.95
AGOUT	0.00014	-0.000058	0.000059	-0.00022	-0.00025
ARCMCP	0.00061	-0.00069	-0.00016	-0.0061	-0.0011
TIA/GCA	0.002	0.17	-0.03	-0.36	-0.32
R ²	0.30	0.20	0.44	0.33	0.31
\bar{R}^2	-0.13	-0.29	0.10	-0.11	-0.13
F	0.70	0.40	1.29	0.75	0.71
SigF	0.70	0.91	0.32	0.66	0.69

Note : 1. Density, SHAGW, SHOTW, OPHL10, OPHL2, AVSZHL, AGOUT, TIA/GCA, ARCMCP as on pages 140, 141, M=male, F=female. 2. Values for female labourers not reported due to non-availability of wage data for the year 1961. 3. * indicates values of regression coefficients significant at 10% level or better. 4. Regression equation of the form $v = a + b_1x_1 + b_2x_2 + \dots + b_nx_n$ is used.

Appendix 4.3

Results of Time-Series Multiple Regression Analysis with Money Wage Rate as the Dependent Variable.

District	Regression Coefficients of the Explanatory Variables																		
	OPHL10		OPHL 2		AVSZHL		AGOUT		TIA /GCA		ARCMCP		FERUSE		R ²		R ²		
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
THANE	EXD	EXD	---	---	---	---	---	---	---	---	---	---	---	---	---	0.84	0.85	0.72	0.74
RAIGAD	-8.60	-5.58	-*	-*	EXD	EXD	0.0063	0.0058	---	---	---	---	---	---	---	0.92	0.91	0.85	0.85
RATNAGARI	---	---	EXD	EXD	---	---	---	---	---	---	0.5*	0.34*	---	---	---	0.97	0.98	0.94	0.96
NASIK	-*	---	-*	---	EXD	EXD	---	---	---	---	---	---	---	.16*	---	0.92	0.94	0.87	0.89
DHULE	-44.01*	-43.01	EXD	EXD	74.17*	73.66	---	---	---	---	---	---	---	---	---	0.93	0.96	0.88	0.93
AHMEDNAGAR	---	---	"	"	---	---	0.0016	0.0014	---	---	---	---	---	---	---	0.90	0.85	0.82	0.70
PUNE	---	---	---	EXD	EXD	---	---	0.0042	0.0042	---	---	---	---	---	---	0.94	0.93	0.91	0.88
SATARA	---	14.11	2.82	2.48	EXD	EXD	---	---	---	0.4	---	-0.03	---	0.14	---	0.95	0.97	0.90	0.95
SANGLI	-91.38*	-44.98	EXD	EXD	240.89*	116.62	---	0.0014	---	-0.93	---	-0.05	---	0.08	---	0.85	0.96	0.73	0.93
SOLAPUR	---	---	---	---	EXD	EXD	0.0019	---	---	---	---	-0.02	---	---	---	0.92	0.87	0.86	0.76
KOLHAPUR	EXD	EXD	---	---	---	---	---	---	---	---	---	---	---	-0.09	---	0.86	0.84	0.75	0.72
AURANGABAD	---	---	---	---	EXD	EXD	---	---	---	---	---	---	---	---	---	0.89	0.88	0.81	0.79
PARBHANI	---	---	EXD	EXD	---	-14.17	---	---	---	---	---	---	---	---	---	0.95	0.96	0.91	0.93
BEED	---	---	"	"	---	---	---	---	---	---	---	---	---	---	---	0.85	0.86	0.73	0.76
NANDED	---	---	1.41*	1.03	EXD	EXD	0.0019*	0.0016	---	---	---	---	---	---	---	0.68	0.86	0.78	0.75
OSMANABAD	EXD	EXD	---	---	---	---	---	---	---	---	---	---	---	0.29	0.18	0.84	0.91	0.73	0.84
BULDHANA	---	---	---	---	EXD	EXD	---	---	---	---	---	---	---	---	---	0.58	0.58	0.25	0.27
AKOLA	-5.78	-3.73	EXD	EXD	---	---	---	---	---	---	---	-0.0079*	-0.008*	---	---	0.98	0.98	0.96	0.97
AMARAVATI	---	---	---	---	EXD	EXD	---	---	---	---	---	-0.02	-0.02	---	---	0.92	0.92	0.87	0.86
YAVATMAL	---	---	---	---	---	"	EXD	---	---	---	---	---	---	---	---	0.85	0.82	0.73	0.69
WARDHA	-0.1*	---	---	---	---	---	"	EXD	---	---	---	---	-0.009	---	---	0.96	0.92	0.93	0.86
NAGPUR	---	---	---	---	EXD	EXD	---	0.0038*	---	---	---	---	---	---	---	0.92	0.91	0.85	0.84
BHANDARA	---	---	---	---	"	"	---	---	---	---	---	---	---	---	---	0.79	0.91	0.64	0.84
CHANDRAPUR	---	---	.68*	.62*	"	"	---	---	---	---	---	0.031	---	---	---	0.95	0.95	0.91	0.91
MAHARASHTRA	EXD	EXD	---	---	---	---	---	---	2.3*	1.89*	-0.002*	-0.002*	---	---	---	0.97	0.97	0.94	0.95

NOTE : 1. OPHL10, OPHL 2, AVSZHL, AGOUT, TIA /GCA, ARCMCP, FERUSE as on pages 140, 141. M= male, F= female, EXD= excluded. 2. Only the values significant at 10% level reported. 3. * indicates the values the coefficients that remain / become significant after inclusion of time variable in the equation. 4. Regression equation of the form $y = a + b_1x_1 + b_2x_2 + \dots + b_7x_7$ is used here.

Appendix 4.4

Growth Rates of Important Economic Indicators, Elasticities of Money Wage Rates with respect to the Indicators, in Comparison with Real Wage Growth Rates.

District	Growth Rates Real Wage	AGOUT		TIA/GCA		ARCMCP		FERUSE	
		GR	E	GR	E	GR	E	GR	E
	(M) (F)		(M) (F)		(M) (F)		(M) (F)		(M) (F)
Thane	1.57	0.92	0.92	2.24*	1.09*	12.73*	0.15	5.6	0.68
	1.85		0.97		1.21		0.15		0.69
Raigad	3.69	1.56*	2.49*	1.09	1.57	8.04*	0.34*	3.8	0.91
	3.25		2.59		1.81		0.35		0.86
Ratnagiri	2.83	2.64*	2.51*	5.48*	1.79*	18.46*	0.68*	4.9	1.28
	2.86		2.61		1.81		0.70		1.36
Nasik	1.79	1.56	0.64	2.74*	2.13*	0.18	0.28	7.6	1.06
	1.89		0.65		2.17		0.35		1.06
Dhule	5.73	2.32	1.00	1.05	2.41*	0.91*	5.43*	5.09	1.71
	6.33		1.09		2.62		5.84		1.82
Ahmednagar	2.27	2.85	0.83*	0.75	0.28	-0.89	-0.92	9.21	0.58
	2.36		0.98		0.25		-0.97		0.61
Pune	4.98	2.22*	2.05*	1.68*	3.44*	3.34*	2.97*	4.21	1.39
	5.31		2.26		3.87		3.08		1.50
Satara	5.22	1.84*	1.35*	1.76*	2.76*	2.93*	3.14*	9.27	1.07
	5.24		1.45		3.02		3.22		1.10
Sangli	3.35	2.83*	1.70*	2.9*	1.82*	0.40	0.93	10.95	0.72
	1.38		1.40		1.50		0.63		0.61
Solapur	4.53	1.23	0.55	3.2*	1.80*	2.35	0.57	10.30	0.80
	4.01		0.65		1.99		0.61		0.80
Kolhapur	4.57	1.72*	2.69*	1.17*	2.38*	2.86*	3.26*	3.71	1.11
	3.82		2.58		2.13		3.03		1.06
Aurangabad	0.72	3.28*	0.67*	2.31*	1.36*	1.64*	2.2*	10.85	0.31
	2.09		0.74		1.74		2.68		0.35

Parbhani	5.24	1.93	1.09*	2.81*	1.66*	3.02*	2.58*	13.37	0.95
	5.41		1.27		1.76		2.80		0.95
Beed	4.59	1.11	0.63	2.72*	2.41*	3.86*	1.86*	14.44	0.74
	5.18		0.60		2.61		1.96		0.80
Nanded	4.30	1.47	0.63	4.32*	0.94*	1.34*	4.37*	15.82	0.69
	4.58		0.70		0.99		4.33		0.70
Osmanabad	1.41	0.69	0.44	2.85*	0.74	1.21	0.62	12.14	0.67
	2.32		0.27		0.86		1.15		0.60
Buldhana	-0.57	1.37	2.62	-1.18	-0.26	-0.05	-2.63	3.39	1.37
	-0.80		0.12		-0.90		-0.70		0.56
Akola	3.95	6.55*	0.99*	-0.95	-1.94	-0.64	-4.67*	9.82	1.13
	3.61		1.02		-2.01		-5.55		1.16
Amaravati	5.66	1.83	1.45*	0.93	-0.68	-0.57	-4.40	7.26	1.42
	6.84		1.47		0.63		-5.89		1.49
Yavatmal	4.19	2.40*	1.87*	4.38*	1.42*	-0.60	-0.51	10.40	1.07
	5.80		2.15		1.76		-0.59		1.21
Wardha	0.69	-1.81	-0.66	1.09	0.80	-2.01*	-3.01*	9.73	0.77
	1.13		-0.79		0.87		-3.11		0.76
Nagpur	5.39	-0.13	0.36	4.00*	1.78*	-1.00*	-2.06	4.01	1.12
	6.19		0.44		1.91		-2.21		1.21
Bhandara	4.39	1.47	0.11	2.34*	1.54*	4.64*	0.88*	9.28	1.20
	5.73		0.24		1.55		0.89		1.09
Chandrapur	4.52	0.85	0.73	0.82*	4.89*	3.90*	2.42*	11.16	0.51
	5.05		0.74		5.40		2.48		0.54
Maharashtra	3.44	2.03*	1.48*	2.05*	3.38*	0.70*	4.79*	8.01	1.12
	3.75		1.56		3.58		4.90		1.18

Note : 1. AGOUT, TIA/GCA, ARCMCP, FERUSE M, F as on page , GR = Growth rate, E = Elasticity, 2. *indicates values significant at 10% level or better. 3. Values for district Jalgaon not reported due to non-availability of data, 1989 onwards.

Source: Growth rates computed from data in SCR, relevant issues.

Appendix 4.5

Results of Time-Series Regression Analysis with Wage Gap as the Dependent Variable.

District	Regression Coefficients of the Explanatory Variables					
	ARCMCP	AGOUT	R ²	\bar{R}^2	F	sigF
Thane	0.09	neg	0.18	0.04	1.31	0.31
Raigad	0.35	neg	0.25	0.13	2.03	0.17
Ratnagiri	0.13	neg	0.88	0.86	43.80	neg
Nasik	neg	neg	0.07	-0.08	0.45	0.65
Dhule	neg	0.01	0.12	-0.03	0.83	0.46
Ahmednagar	-0.0071*	0.001*	0.38	0.28	3.75	0.05
Pune	-0.18	-5.56*	0.79	0.75	22.04	neg
Satara	0.01*	0.01	0.73	0.68	15.80	neg
Sangli	0.01	0.0028*	0.57	0.50	8.11	0.01
Solapur	neg	neg	0.06	-0.10	0.39	0.68
Kolhapur	0.01*	neg	0.74	0.70	17.00	neg
Aurangbad	neg	0.00025*	0.45	0.36	4.99	0.03
Parbhani	0.0022*	0.0012*	0.58	0.51	8.38	0.01
Beed	0.009*	neg	0.59	0.52	8.48	0.01
Nanded	0.0078*	0.00059*	0.64	0.58	10.52	neg
Osmanabad	0.01	neg	0.21	0.07	1.56	0.25
Buldhana	neg	neg	0.09	-0.06	0.58	0.57
Akola	neg	neg	0.50	0.42	5.97	0.02
Amaravati	neg	0.0021*	0.29	0.17	2.80	0.13
Yavatmal	0.37	-3.29*	0.78	0.74	21.06	neg
Wardha	-0.07	-7.53	0.84	0.81	30.38	neg
Nagpur	-0.01	neg	0.23	0.10	1.80	0.21
Bhandara	0.14*	neg	0.44	0.35	4.80	0.03
Chandrapur	0.02	neg	0.86	0.83	35.46	neg
Maharashtra	0.00046*	0.000046*	0.57	0.50	8.07	0.01

Note : 1. * indicates values of the regression coefficients significant at 10% level or better. 2. ARCMCP, AGOUT as mentioned on page 141, neg = negligible as well as insignificant. 3. Regression equation of the form $y = a + b_1x_1 + b_2x_2$ is used here. 4. Values for district Jalgaon not reported due to non-availability of wage data, 1989 onwards. 5. New districts clubbed with the old districts.

Appendix 4.6

Summary Table Indicating Potentially Favourable and Actual Contributory Factors in Case of Existing Wages.

Districts	Category	Potentially Favourable Factors	Actual Contributing Factors
Thane	Low wage Low development	Non-farm job opportunities, Higher share of other main workers, Union activities	Agriculturally backward, Tribal area, lesser geographical mobility
Raigad	High wage Low development	Non-farm job opportunities, Higher share of other main workers, Union activities	Proximity to Mumbai / industrial area, Union activities
Ratnagiri	High wage Moderate development	Commercial cropping, Proximity to Mumbai/industrial area, prevailing landholding structure.	
Nasik	Low wage Low development	Non-farm job opportunities, Lower share of agricultural labourers	High level of mechanisation in some parts coexisting with backward agriculture in other parts.
Dhule	High wage Morderate development	Moderate agricultural development, Union activities.	

Districts	Category	Potentially Favourable Factors	Actual Contributing Factors
Ahmednagar	Low wage Moderate development	Traditionally better availability of agricultural infrastructure, Commercial cropping, sugar factories, Non-farm job opportunities	Distinct development experience within the district. Highly commercialised along with extreme drought conditions.
Pune Satara Sangli Kolhapur	High wage High development	"	All the favourable factors
Solapur	High wage Low development	Non-farm job opportunities, textile factories, lower share of agricultural labourers.	
Aurangabad	Low wage Moderate development	Moderate agricultural development, Tradition of rural agitations Industrial development Non-farm job opportunities,	Neo-industrialisation existing with backward agriculture

Districts	Category	Potentially Favourable Factors	Actual Contributing Factors
Osmanabad	Low wage Low development	-	Drought-prone, agriculturally backward.
Beed	High wage Low development	Migration of labourers towards western maharashtra for sugarcane operations.	
Parbhani and Nanded	High wage Moderate development	Moderate agricultural developmet	
Buldhana	Low wage Low development		Agriculturally backward.
Akola and Amaravati	High wage Moderate development	Commercial cropping, traditional export market	
Yavatmal	High Wage Low development	Cotton,pulses and oil seeds cultivation, labour intensive activities	
Wardha	Low wage Low development		Higher share of agricultural labourers.

Districts	Category	Potentially Favourable Factors	Actual Contributing Factors
Nagpur	High wage Moderate development	Non-farm job opportunities,	Lower share of agricultural labourers
Bhandara and Chandrapur	High wage Low development	Rice cultivation, Mining activities, Power generation, non-farm activities,	Lower share of agricultural labourers.

Note : The table relates to male as well as female labourers due to their mostly similar regional pattern with respect to wages.

Source : Based on analysis in chapters 2.3 and 4.

Appendix 5.1

Operationwise Wage Rates in the Sample Villages (In Rs.)

Operations	Underdeveloped Village		Developed Village	
	Male	Female	Male	Female
Soil Preparation	25	25	20-25	15-20
Ploughing	25+1meal	-	35-40	-
Sowing	25+1meal	25+1meal	20-25	15-20
Weeding	25	25	35-40	30-35
Harvesting	25	25	35-40	30-35
Post-harvest (threshing)	25+2 meals	-	35-40	-

Note : Wage rates of busy season operation are paid for 8 hours of work and of slack season are paid for 4-6 hours of work in Nimshirgaon. In medhe, for all the operations, wage rate is paid at the rate of Rs/8 hours of work.

Appendix 5.2(a)

Operationwise Modes of Payment in the Underdeveloped Village

Operations	Mode of Payment				
	(1) Cash+Meal (Rs.)	Total Wage (Rs.)	(2) Cash (Rs.)	Fixed Harvest + Share	Total (Rs.)
Transplanting	25+1 meal	30	50-250	+50 to 40 kg rice	20-30
Harvest	25	25	3 to 4 kg rice		21-28

Note : 1. Wage rate paid in kind converted into cash by using prices prevailing in the local market. 2. Wage rate paid for transplanting under (2) represents one point of time payment. For harvesting, wage rate is paid on daily basis 3. Range reported under (2) for incorporating responses from 4 households in the underdeveloped village.

Appendix 5.2(b)

Payment of Harvest Share in the Developed Village

Crop	Mode of Payment		
	(1) Cash (Rs)	(2) Harvest Share (Kg)	Monetary Value (Rs)
Jowar	30-35	5	30
Groundnut	30-35	2	40
Wheat	30-35	5/6	50/60

Note: 1. Wage rate paid in terms of harvest share converted in cash using the prices prevailing in the local market. 2. Wage rate paid under (2) indicates payment to female labourers, as their participation in harvest operation is greater than that of male labourers.

Appendix 5.3

AN ANALYSIS OF WAGES OF AGRICULTURAL LABOURERS IN MAHARASHTRA

AGRICULTURAL LABOUR HOUSEHOLD SCHEDULE

I

1. Name: _____

2.1 Household Information:

Sr. No	Name	Relation with the head	Age	Occupation Main Sub ¹	Earnings Main Sub

2.2 Are you a a. Cultivator and Agricultural Labourer(CAL) b. Casual Agricultural Labourer-Noncultivator(NCL) c. Land Owner and Agricultural Labourer(LAL) d. Attached Agricultural Labourer(AL)

3. Details of the land operated (in ha): Owned / Leased in Irrigated (type), Unirrigated
Uncultivated Waste Land

4. Details of the lease contract : Cash rent/Kind rent/Cost share,
From whom: Employer/ -----

5. Cropping Pattern : - For Kharif, Rabi, Summer Crops :
a. Area (ha) b. Irrigated, Unirrigated c. Produce/ha- mp, bp²
d. Produce marketed - mp, bp e. Value- mp, bp f. Home consumption- mp, bp

6. Cost of cultivation on the land operated (in Rs/ha) : For various crops :
a. Family labour - m, f³ (mandays) b. Hired labour - m, f (mandays)
c. Wages - m, f (Rs.) d. Animal labour e. Machinery f. Fertiliser/manure g. Seeds h. Pesticides i. Other items

7. Do you usually work for one cultivator /many cultivators? :

8. What is the wage rate you get? : For various crops/ operations

9. Have you leased out any of your/your family member's land? :
Yes/No, If yes specify -

a. Land leased out (ha) ----
irrigated _____ Unirrigated _____ Waste _____

b. To whom : Big land owner / Money lender / Small cultivator/
Friend/ Any other - c. Rental contract (Specify)

10. Do you find it difficult to get work for you or your family members if you are a CAL? : Yes/No, If yes -

a. What is the reason b. Months in which this occurs c. With specific cultivator d. How do you adjust the work on your land as well as employer's land especially during the peak season?

11. If you have rented in or rented out land, give reasons for such a decisions -

a. Rented out to a cultivator from whom I have borrowed b. Rented in from land owner for whom I work. d. Rented out to my employer for whom I work. e. Rented in from a person whom I have given loan. f. Rented out as I migrate out. g. Rented out as I am unable to

- cultivate due to old age/my caste/financial position/ any other. h. Any other
12. Do you find difficulty in marketing you produce? Yes /No, If yes - specify -
13. Details of the consumption expenditure of the family.

Sr. No	Items	Frequency of Purchase	Quantity	Value
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II

**CASUAL AGRICULTURAL LABOURER
(FOR NCL AND CAL)**

1. Members of your family working as agricultural labourers -

Sr. No	Name	Since when	Previous work	Alternative work	Same/Dif ⁴ employers	Approx ⁵ No of day Kh Rb Sm ⁶
--------	------	------------	---------------	------------------	---------------------------------	--

2. Operationwise normal working hours of the family members -

Sr.No	Season	Crop	Operation	Working Hours	
				M	F

3. Operationwise wage rates received -

Sr No	Season	Crop	Operation	Wage rate						
				Cash		Kind		Picce		Harvest share
				M	F	Item	Quantity	Rate	Rate	

4. Operationwise-cropwise number of working days of your family members -

Sr. No.	Season	Crop/Operation	No. of Family Members	
			M	F

5. What are other benefits you receive besides wage rate ? -

Sr No	Benifits	Frequency	Price
-------	----------	-----------	-------

6. How many of your children work as casual agricultural labourers?
a. What is the age? b. Give following details

Sr No	Time spent on work	No of days of work			Wages Received	
		Kh	Rb	Sm	Cash	Kind

7. Have you borrowed in cash /kind against your labour ? Yes/No
If yes.

Sr. No	Year	Lender	Amount	Purpose	Repayment terms	Repaid Amount
--------	------	--------	--------	---------	-----------------	---------------

8. Give the wage rate you receive as CAL and the wages and benefits received by annual labour -

Sr. No	Operation	Wages received by you		Wages received by annual labour	
		Cash	Kind (Value)	Cash	Kind (Value)

9. Employers Preference -a. Do your employers prefer a particular type of labourer ? Yes/No b. What is the preference and for what kind of work c. Who was your earlier employer? d. If you have changed, give reasons for such a change

III

ATTACHED/PERMANENT LABOUR

1. a. Are you working on a yearly basis with the present employer?
Yes/No b. Employers Name
2. What were your previous occupations and when did you leave that?
Occupation Year Reasons
3. How many members of your family work with the same employer?
Name Type of work
4. Does your employer have preference for you or particular type of workers? , Yes/No
Preference Reason

5. Whom were you working for, during the last five years?

Sr.No	Year	Name of the employer	Reason for change
-------	------	----------------------	-------------------

6. What are the terms of your work?

Duration		Payment		Type of work
From	To	Cash	Kind (Value)	

7. Are these conditions renewed every year? Yes/No If yes, what were the main renewed items last year?
8. Have you or any other members of your family taken loan from your present employer? Yes/No If yes—

Loan Amount	Purpose	Year when taken	Duration	Amount repaid
-------------	---------	-----------------	----------	---------------

9. Other terms and conditions of the loan -
- 10.1. Any other basis of your wage contract? a. Ancient Debt b. Loan taken some years back c. Loan taken habitually d. Land provided by the employer e. Any other
- 10.2. If d. above, a. How much land is provided (ha)- Irrigated, Unirrigated b. Main crops, area and production - c. Share, if any, cost of cultivation : Seeds, fertilisers and pesticides, manures, bullock labour, hired labour, share- mp, bp
11. Operationwise/cropwise time disposal -(In Hours & Days)

Sr. No	Season	Crop-Opertion	M	F
--------	--------	---------------	---	---

12. Seasonwise total number of days of your work

Type of work	Kharif		Rabi		Summer	
	M	F	M	F	M	F

13. Do you work with others when you have no work with your employer? Yes/No, If yes—

Kind of work	With whom	Season	Time Spent (daily)	No. of days	Wages earned (Rs.)
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14. What are the other major jobs you and your family members perform for your employer?

Job	Season	Time Spent (Hours/Days)
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15. Do you prefer yearly contract work to working as a casual labourer? Yes/No If yes, why?
a. Income is higher b. Security of job c. Higher status
d. Any other If No, specify -

5. Are you aware of any habitual in migrant labourer families in the village
Yes/No, If yes, Specify--

Sr. No	Name of the Household	Migration		Place of Origin	Place of settlement in village
		Temp.	Perm?		

6. What are the systems of employing and paying the immigrant labourers?
7. Do immigrant labourers receive lower payment than those prevailing in the village? Yes / No

8. What are the wages paid to the immigrant labourers?

Operations	No. of hours of work/day	Wages paid
------------	--------------------------	------------

9. Do the employers have preference for particular type of immigrant labourers? Yes / No, If yes, specify-

10. Why do the immigrant labourers come specifically to your village ?

VI

EMPLOYMENT GUARANTEE SCHEME

1. Have you (or any of your family members) ever worked on EGS or any such projects? Yes/No, If yes-

Sr. No	Name	Relation to head	Project	work	Duration & Season	Wage Received	Reason for joining
--------	------	------------------	---------	------	-------------------	---------------	--------------------

2. Does an EGS programme near the village create a possibility of agricultural labour supply Shortage? Yes/No, If yes-

Sr No	Project & Year	Season	Approx. Supply shortage			
			Persons		No. of days	
			M	F	M	F

3. Has there been any instance of employers offering higher wages to attract the labourers away from EGS? Yes/No, If yes-

Sr. No.	Wages offered		EGS Wages	Prevailing wage		Season	Project & Year.
	M	F		M	F		

VII

MINIMUM WAGE LEGISLATION

1. Are you aware of the minimum wage legislation? Yes/No If yes
a. What is the present rate of minimum wage for your village?
b. Actual wage rate prevailing in your village
2. Do you think that the prescribed minimum wage is sufficient for an agricultural labourer's family? Yes/No, If it is insufficient, what is your estimate of minimum wages and why?
3. Are there government inspectors regularly visiting your village to supervise the enforcement of minimum wage legislation? Yes/No, If yes, specify -
4. What do you think should be the criteria for deciding minimum wage ?

IV

WAGE RATES

1. Which system of wage payment do you prefer for various operations?

System

Reason

- i. Daily/ piece rate/ harvest share
- ii. All kind/ all cash/ cash+kind
- iii. Daily contract/ annual contract/ group system

2. Do labourers belonging to a particular caste/group are preferred for particular operations? Yes/No, If yes, specify--

Operations	Group/Caste	Wages	Terms
------------	-------------	-------	-------

3. How is the wage rate determined in your case? a. Prevailing/last years wages taken b. Negotiations with the employer c. Decided individually/collectively by employers in the village d. Labourers co-operate to decide the reservation price e. Any other

4. When is the wage rate decided?

Season	Other Specifications
--------	----------------------

5. Have you or your family members ever received lower wages than prevailing in the village? Yes/No, If yes--

When	Type of Work	Reason
------	--------------	--------

6. Seasonwise, operationwise wages you have received during the last five years -

Operations	Years									
	1995		1994		1993		1992		1991	
	M	F	M	F	M	F	M	F	M	F

7. Are there any changes in wages paid for different works other than agricultural operations?

8. Have you ever participated in collective bargaining? Yes/No If yes, a. When? b. What form did it take? c. Did all the labourers participate in it? Yes/No, If no, why? d. Did your family members also participate? Yes/No

V

MIGRATION

1. Give the approximate number of labourers who have outmigrated from your village during last 5/6 years

Years	Name of Labourers	Place of Migration	Distance
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2. Persons from your family outmigrating temporarily

Sr. No	Name	Season	Place	No. of days	Type of job	Wages Per day / Month
--------	------	--------	-------	-------------	-------------	-----------------------

3. Number of persons permanently outmigrated from your family -

Name	Place of Migration	Type of Job	Wages
------	--------------------	-------------	-------

4. What are the reasons for outmigration?

Temporary	Permanent
-----------	-----------

VIII
LABOUR UNIONS

1. Are you aware of any labour unions working among agricultural labourers in the region?, Yes/No, If yes -
 - a. Name (s) Other details
 - b. Are you a member of any of these unions? Yes/No If yes

Name of the Union	Since When	Details of Membership
-------------------	------------	-----------------------
2. Are you aware of their aims and objectives? Yes/No, If yes list them
3. What are various issues which the unions have taken up for the agricultural labourers so far?
4. How far have you benefitted from it? a. Increased wage rate, increased bargaining over b. Implementation of minimum wage c. Better working conditions d. Other benefits

Notes : 1. Sub.=subsidiary 2. mp=main product, bp=by-product
 3.m=malc, f = female 4. diff = different 5. approx. = approximately
 6. kh = kharif, rb = rabi, sm = summer 7. temp = temporary, perm = permanent

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