CHAPTER 6

SUMMARY OF RESEARCH FINDINGS AND RECOMMENDATIONS

Summary of the research finds of the study

The State of Andhra Pradesh has been divided into three distinct regions on the basis of the geographical features, economic development, agro-climatic and ecological conditions. They are: Coastal Andhra, Rayalaseema and Telengana regions. Among them, Rayalaseema region is the study area for the present research work. It is the most sparsely populated and economically the most backward part of Andhra Pradesh. It comprises of four districts: Anantapur, Chittoor, Cuddapah and Kurnool. This region is tropically a dry tract of Andhra Pradesh and it has been declared a part of famine zone in South India. The conditions of drought and famines have frequently occurred in this region for the past ten decades. Owing to these conditions the Rayalaseema region has long been known as "Stalking ground of Famines." The study of the backward regions is urgently called for to enable the Policy making Body to design strategies for the development of backward regions like the Rayalaseema of Andhra Pradesh. As viewed from this angle the present study acquires contemporary relevance.
The present study takes the following as its objectives:

1. To study the structural changes in the rural labour force in Rayalaseema region;

2. To analyse the trends in the rural labour market in the region;

3. To analyse the differences in work participation rates and wage rates between male and female labourers and between remote and adjacent villages to the district headquarters;

4. To identify the major determinants of work-participation rates and wage rates in rural labour market; and

5. To assess the socio-economic conditions of rural labour households.

The study tested the following hypotheses:

1. There are no significant structural changes in the rural labour in Rayalaseema Region;

2. There is no significant difference in the work participation rates and wage rates between male and female labourers and between remote and adjacent villages to the respective district headquarters;

3. Economic and demographic factors do not exercise significant influence on the determination of work participation rates and wage rates; and

4. There is no significant difference in the socio-economic conditions of rural labour households between remote and adjacent village to the respective district headquarters.
Who are rural labourers?

Rural labour comprises of persons living and working in rural areas subsisting partly or wholly from wage income. Besides, there are self-employed workers forming part of the petty production system who neither hire labour nor offer their services for a wage. They should also be classified as rural labour, since their living conditions are no better. Rural labour so defined would comprise of wage-paid manual workers engaged in agricultural and non-agricultural activities, small and marginal farmers, tenants and sharecroppers; and artisans.

Characteristics of Rural Labour

Rural labour constitutes the most marginalised section of our society. Agricultural labourers contributed immensely to the development of agriculture, but their share in the gains from development has been the lowest. Rural labour engaged in household enterprises, especially, female labour, has been the biggest victim of modernisation as the new industrial products displaced their traditional activities. Being unorganised and engaged in low productivity occupations, the rise in their wages and levels of consumption has been meagre. The wages for female labour continue to be lower than those for male labour. Also, technological change has affected female labour more adversely. Dependence of rural labour on big landowners and moneylenders for consumption credit quite often results in bondage. Migration of labour has been on the increase on account of the extreme unevenness of development between different regions of the country. In rural areas, social discrimination and oppression persists extensively against the disadvantaged groups.
like Scheduled Castes, Scheduled Tribes and other weaker sections, a large majority of them are in the ranks of rural labour.

National Commission on Rural Labour (2001) further observed the following characteristics.

1. Agricultural workers get employment for less than six months in a year and they have to often migrate to the other avenues of employment like construction and similar other occupations during the off-season.

2. Agricultural workers are badly exploited and oppressed class of the rural society. Most of them are from lower castes and tribes.

3. Circumstances force most agricultural workers to borrow money from time to time from private sources. There was acute indebtedness amongst the rural and agricultural workers.

4. Though the employment in agriculture is covered under Minimum Wages Act, the minimum wages fixed by the different States ranged from Rs. 20 per day to Rs. 60 per day.

Chapter outline

The thesis is presented in six chapters. The opening chapter provides an introduction to rural labour market, review of literature, statement of the problem, objectives and hypotheses of the study, sample framework, methodology adopted and the limitations of the study. The second chapter presents a detailed economic profile of the Rayalaseema region. The structural changes in the labour force, which have resulted in a transformation of rural labour from agricultural activities to non-
agricultural activities in India and Andhra Pradesh have been analysed in the third chapter. Growth of workers and their occupational distribution in the Rayalaseema Region of Andhra Pradesh is discussed in fourth chapter. Socio-economic conditions of rural labour households and work participation rates, wage rates and their determination including contractual arrangements in rural labour market in Rayalaseema region have been analysed and evaluated in the fifth chapter. A summary of the research findings and recommendations for the improvement of rural labour households in the Rayalaseema region is presented in the sixth and last chapter.

**Limitations of the Study**

The study is based on secondary data collected from the Census Reports of 1981, 1991 and 2001. The provisional results of 2001 Population Census have limited to four-fold classification of workers viz., cultivators, agricultural labourer, workers in household industry and other workers. However, the provisional population figures provide some major characteristics of working population. Further, the classification process of population census in the case of workers is different from one Census Report to another Census Report. The data therefore, have not been strictly comparable from one Census to another Census. This is the major limitation of the present study. The data on cropping intensity, irrigation intensity and wage rate are collected for the year 2000-01 only from the Records of Offices of Village Panchayat of the selected villages for this study due to financial and other constraints. The limited data drawn have been put to statistical treatment using the tools explained here above.
Occupational structure of working population

Occupational structure of the economy represents the distribution of workers into different occupations of the economy. The economic occupations are generally classified into primary, secondary and tertiary sectors. Primary sector consists of agriculture and other occupations allied to agriculture such as animal husbandry, fishery and forestry. The secondary sector consists of large and small manufacturing firms, mining and quarrying and construction. The goods produced by this sectors are called manufacturing goods, which include investment goods and consumer durables. The tertiary sector consists of trade, transport, communication, banking, finance, insurance etc. This sector of the economy provides services to the people, but not goods. Hence, tertiary sector is called as services sector of the economy.

The process of economic growth is accompanied by profound changes in the structure of the economy, which is reflected in the corresponding structure of the working population. With economic development, there is a shift in the work force from agriculture sector (at least, in relative terms) to the secondary and the tertiary sectors. It is generally considered that once a certain stage of development has been reached, the share of work force in the secondary sector may stabilise or possibly even decline while that of tertiary sector will continue to expand. Hence, it is important to note that with economic development, the occupational structure of the economy undergoes significant changes. An increasing number of new job opportunities are created in the non-agricultural sector. Development largely increases the productivity in agricultural sector through the introduction of
agricultural technology and releases the unwanted additional agricultural workers. As a result, work force shifts from agriculture sector to industrial and service sectors.

The above trends are found in the thesis of Colin Clark, which is explained in the following words: "A high average level of real income per head is always associated with a high proportion of the working population engaged in tertiary industries; low income per head is always associated with a low proportion of working population engaged in tertiary production and a high percentage in primary production." The present study, in order to observe the thesis of Colin Clark, found that Coastal Andhra region has higher per capita income and higher percentage of workers engaged in Services (tertiary) sector than the other two regions of the State. On the other hand, Rayalaseema region has lower per capita income and lower percentage of working population engaged in Services (tertiary) sector than in the other two regions of the State. Telangana region lies in between Rayalaseema and Coastal Andhra regions of the State. It is, therefore, concluded that Rayalaseema region is relatively a backward region of the State and the data relating to the occupational structure has confirmed the validity of Colin Clark's thesis.

The following are the common conclusions that represent the characteristics of workers in India, Andhra Pradesh and also in Rayalaseema:

1. The contribution of rural workers to the total workers is more than 73 percent in India and more than 80 percent in Andhra Pradesh and more than 82 percent in Rayalaseema. Hence, rural labour force is predominant in Indian labour market.
2. The growth rate of Marginal workers is higher during the decade of 1990’s than during the decade of 1980’s and the reverse is true in the case of main workers.

3. The contribution of main workers has declined and the contribution of marginal workers has increased continuously during the period of study.

4. The growth rate of marginal workers is high compared to that of main workers both in rural and in urban areas.

5. Most of the marginal workers are females in rural areas as against males in urban areas.

6. Work-participation rates are recorded as higher in rural areas than in urban areas.

7. Work-participation rates are higher among males than among females.

8. The number of cultivators has increased continuously during the period of study, but their percentage contribution to total workers declined continuously.

9. The number of agricultural labourers has increased continuously, but their share in total workers increased between 1981 and 1991 and declined between 1991 and 2001 in rural areas.

10. The number of workers in household industry declined between 1981 and 1991, but increased between 1991 and 2001 both in absolute and relative terms in both rural and urban areas.
The number of other workers increased continuously in both absolute and relative terms in both rural and urban areas.

The share of rural workers in total workers has declined continuously during period of study. On the other hand, the share of urban workers in total workers increased continuously during the period of study.

Social Conditions of Rural Labour Households

1. Average size of the household is six persons in remote villages, and five persons in adjacent villages. The higher size of the household in the remote villages is due to the existence of joint families. Similarly, more number of children are found in the households of remote villages than in adjacent villages.

2. The average sex ratio in the remote villages is 972 and it is lower at 938 for the adjacent villages. This indicates the number of female population is relatively higher in remote villages than in adjacent villages.

3. The average literacy rates of male and female population in the adjacent villages are 58.37 per cent and 33.31 percent respectively and in the case of remote villages, they are: 49.17 per cent and 21.62 per cent respectively, implying the fact that there exists “Male-bias” in the literacy levels of population in selected villages. Further remote villages have registered a lower literacy rates compared to adjacent villages. As such the educated labour like to work in urban areas. This trend has been clearly established in
the study areas. Similarly, the educated rural labour tries to move from agricultural activities to non-agricultural activities.

4. The proportion of scheduled caste and tribe population is higher in the adjacent villages than in the remote villages, which rendered more possibility for supply of labour in the rural labour market. 63 percent of the responding households in the remote villages and 71 percent of the responding households in adjacent villages belongs to scheduled castes and scheduled tribes, who occupy the major share in the rural labour market. 29 percent of the responding households in the remote villages 18 percent of the responding households in the adjacent villages belonged to backward communities. Therefore, it is clear that the share of SC, ST respondents is relatively more in the case of both adjacent villages and remote villages in the study area of the region.

**Economic Conditions of Rural Labour Households**

1. The share of main workers in the population of adjacent villages is 48.79 percent as against 44.47 percent in the remote villages. The share of marginal workers accounted for 2.72 percent of total population in remote villages while it was only 0.8 per cent in adjacent villages.

2. The cultivators accounted for around 40.12 percent in remote villages and around 22.21 percent in the adjacent villages. The agricultural labourers accounted for 45.26 percent in the remote villages and 60.73 per cent in the adjacent villages. Cultivators and agricultural labourers together termed as agricultural workers. The share of agricultural workers is more than 80
222 percent of the total workers in selected villages. That means the economy of selected villages is very backward and there is less scope for creation of employment opportunities in the non-agricultural sectors-industry and services sector as well.

3. The share of daily wage agricultural labourers to the total workers is 74.23 percent in the remote villages and 58.85 percent in the adjacent villages. The share of attached labourers to the total workers is 9.28 percent in the case of remote villages and it is 11.06 percent in the case of adjacent villages. The ratio of semi-attached labourers to the total workers is 8.25 percent in the remote villages and 10.62 percent in the adjacent villages. Daily wage agricultural labourer, attached and semi-attached agricultural labourers together constitute 91.76 percent in remote villages and 80.53 percent in adjacent villages. Therefore, the share of agricultural labourers in the total workers is higher in remote villages than in adjacent villages.

4. **Structure of wage rates:** It is a known fact that there is gender disparity in the wages rates of rural labour market. Rural labour market provides employment opportunities to the labourers in the fields of both agricultural and non-agricultural activities. Most of the rural labourers have sufficient skills in the field of agricultural processes, but majority of them do not have sufficient skills in the non-agricultural activities. Hence, the employers would like to pay more wages for the non-agricultural activity and lower wage for agricultural activity. On average the male agricultural labour will get Rs. 43 per day in remote villages and Rs. 50 per day in adjacent villages and female
agricultural labourer will get Rs. 27 in remote villages and Rs. 36 in adjacent villages per day. It is, therefore, clear that there is a specific difference among the wage rates between male and female agricultural labourers and also remote villages between and adjacent villages. Further, it can be inferred that there is a specific gender disparity in the wage rates of agricultural labourers both in adjacent and remote villages. The average non-agricultural wage rate for male workers is Rs. 53 in remote villages and Rs. 57 in adjacent villages. Similarly, the average non-agricultural wage rate of female worker is Rs. 36 in remote villages and Rs. 41 in adjacent villages. It is, therefore, clear that there is specific gender disparities both in remote and adjacent villages even in non-agricultural wage rates.

5. **Distribution of income among rural labour households:** The rural labour households do not possess any worth mentioning income-generating assets and they have only their physical labour to exchange for wages the only source of income. The percentage distribution of income among successive subgroups of households is continuously increased from bottom 20 percent to top 20 percent in all the villages. On average, the first 20 percent of households earned 11.13 percent of income; the second 20 percent of households earned 14.86 percent of income; the third 20 percent of households earned 19.27 percent of income; fourth 20 percent of households earned 24.44 percent of income; and finally the top 20 percent of households earned 30.30 percent of income in remote villages. The corresponding figures for adjacent villages are 12.04 percent, 16.19 percent, 19.69 percent, 23.69 percent and
28.39 percent respectively for the successive subgroups of households. These figures indicate that the income inequalities are relatively more in remote villages than in adjacent villages.

Gini coefficient is a popular method to measure the inequalities in the distribution of income. It ranges between zero and one. The higher the value of Gini coefficient, the larger will be the inequality in the distribution of income and vice versa. The average value of a Gini coefficient is 0.17 for the adjacent villages and 0.20 for remote villages. The above values indicate a lower income inequality among the rural labour households in all the selected villages. This may be due to the homogeneous nature of the prevailing conditions in the region as a whole. The per capita income of the rural labour households ranges between Rs. 1958 and Rs. 3504 among the selected villages. From the above facts it can be said that the rural labour households are a homogenous group and receives lower per capita income than the national average with lower income inequalities.

6. Distribution of consumption expenditure and poverty among rural labour households: Expenditure on consumption is the basis for the calculation of poverty line. The Planning Commission of India estimated the poverty line for rural areas in terms of calorie in take of 2400 calories of food in rural areas. According to NSSO, the poverty line for rural areas is Rs. 328 per capita per month. A majority of the rural labour households in remote villages comes under first group of consumption expenditure (Rs. 0 to Rs. 220), which is called as the consumption level of destitute. Destitute is a term used to
represent the lowest category of the poor people, who are not able to get at least two square meals in a day. The second group of persons with per capita consumption level ranging between Rs. 221 and Rs. 250 are called “very very poor”. 13 percent of households both in the remote villages and adjacent villages are found very very poor. Another group of labour households with per capita consumption expenditure ranging between Rs. 251 and Rs. 290 are called ‘very poor’. 10 percent of the rural labour households in remote villages and 14 percent of the rural labour households in the adjacent villages are very poor. The other group of consumers with per capita consumption expenditure between Rs. 291 and Rs. 330 is called poor consumers. Seven percent of the labour households in remote villages and fifteen percent of the labour households in the adjacent villages belonged to poor labour households. It is, therefore, inferred that among the rural labour households most of them are declared poor households and their percentage in the total households is called as “poverty ratio” or “head count ratio”. 99 percent of the rural labour households are below the poverty line in the remote villages and 79 percent of the rural labour households in the study area are below the poverty line in the adjacent villages. The average per capita consumption expenditure per month for rural labour households is Rs. 185 in the remote villages and Rs. 255 in the adjacent villages. It is, therefore, inferred that the rural labour households in remote villages are living in more miserable conditions than rural labour households in adjacent villages. The main reasons for the low per capita consumption expenditure and lower level
of per capita income of rural labour households are low employment opportunities, lower number of days of employment in a year and lower wage rates in the rural labour market of remote villages compared to rural labour market of adjacent villages. Further, the continuous drought situation for the last five years widened the gap between the income levels, wage levels and consumption levels of the rural labour households between remote villages and adjacent villages in the study area during the period under reference.

7. **Determinants of work participation rates and wages rates:** The identification of the major determinants of work participation rates and wage rates in rural labour market is one of the objectives of the present study and it hypothesised that economic and demographic factors do not exercise significant influence on the determination of work participation rates and wage rates. Six explanatory variables have been identified for establishing the influence of these variables on the work participation rates and wage rates. Out of these explanatory variables, three variables are economic variables and the other three variables are demographic variables. The economic variables are cropping intensity, irrigation intensity and the ratio of agricultural workers to non-agricultural workers. The demographic variables are literacy rate, sex ratio and proposition of SC and ST population to the total population.

The regression equations have been estimated with help of the Software Package for Social Sciences (SPSS). The value of the coefficient of determination ($R^2$) indicate that the six explanatory variables together influence more than 90 percent variations in female work participation rate, female agricultural wage rate and
male agricultural wage rate; about 85 percent variations in female non-agricultural wage rate and about 66 percent variations in male non-agricultural wage rate and male work participation rate. It is, therefore, obvious that these six explanatory variables can be considered as major determinants of the wage rates and work participation rates in rural labour market.

It is found from the regression analysis that only irrigation intensity has the positive coefficient for all the regression equations. Irrigation intensity is the ratio of gross irrigated area to net irrigated area. Hence, it is inferred that an increase in irrigation intensity will raise the work participation rates and wage rates of both male and female labourers both in agricultural and non-agricultural sectors of the economy.

Cropping intensity is the ratio of Gross cropped area to net cropped area and it has a strong positive influence on wage rates of both males and females in both agricultural and non-agricultural sectors of the economy, but it has negative influence on work participation rates of both males and females.

The ratio of agricultural labourers to non-agricultural labourers is hypothesised that to have a positive influence on work participation rates and have a negative influence on wage rates. It has negative influence on the agricultural wage rates of both males and females; on the non-agricultural wage rate of females; and work participation rate of males. However, it has established a positive influence on female work participation rate and non-agricultural wage rate of males.

The ratio of SC and ST population to the total population is hypothesised to have negative influence on wage rates and positive influence on work participation
rates. It has negative influence on wage rates of all categories and positive influence on the work participation rates of both males and females.

Literacy rate is the ratio of literates to total population. It is assumed that an increase in literacy rate will reduce the work participation rate and increase the wage rate in the labour market. Literacy rate has a positive influence on agricultural and non-agricultural wage rates of males and agricultural wage rate of females, but a negative influence on non-agricultural wage rate of females. However, it established a negative influence on work participation rates of both males and females.

**Recommendations**

1. Drought is a recurring feature in the Rayalaseema region of Andhra Pradesh. The drought conditions have been too severe to have caused an acute scarcity for food and fodder. The immediate concern of the Governments both at Union and the State levels is to see that drought conditions are mitigated by way of linking up the region with the perennial rivers such as the Ganga and the Godavari; and thus, avert the danger of desertification of the region as warned by Environmentalists.

2. Based on the findings of the study that the region's development depends on the improvement in irrigational facilities, hence it should be the top priority of the Governments concerned has to explore all possible means to create additional irrigational facilities in the region. All pending irrigation project works, such as Handri-Niva Sujala Sravanthi, Galeru-Nagari Sujala Sravanthi, Pennar River Canal System, Guru Raghavendra Lift Irrigation Scheme, KC Canal modernisation, Veligallu Project, Meddileru Project, Buggavanka
Project, Cheyyeru Project, Thungabadra Parallel High Level Canal - Stage I and Stage II and Srisailam Right Branch Canal may be accomplished soon so as to provide additional irrigational facilities in the Rayalaseema region.

3. In the existing condition, water is the scarcest resource in the region and one of the chief inputs of development; all efforts must be made to devise to evolve efficient water use methods. For this, the Government may take immediate steps to extensively provide facilities such as drip-irrigation and sprinkler-irrigation to the farming community for efficient use of the available water for agricultural purpose to boost up agricultural productivity.

4. The Government organisations and NGO’s may periodically conduct skill-development programmes in the field of sprinkler-irrigation and drip-irrigation methods to rural labour so as to enable them to earn more by way of engaging themselves in skill-oriented works.

5. All breached irrigational tanks and other water bodies may be repaired soon in the ensuing summer so as to improve their storage capacities in the rainy season.

6. The ground water levels may be improved adopting the latest expert know-how techniques from other countries.

7. De-silting works of the remaining irrigation tanks may be taken up on a war-footing in the coming Janma Boomi works of the State Government.
8. The recently introduced and implemented Mid-day Meal Scheme may be carried on as it helps to check dropouts and thus promote literacy in the rural areas.

9. Since the findings of the study reveal that a majority of rural labour are leading a miserable life with low income levels, the Governments may direct the banks to lend liberally to this targetted group, without insisting on security, to acquire income-yielding-assets, such as, milch animals, sheep, goats, bullocks, carts, bicycles, auto-rickshaws etc.

10. Agriculture scientists and irrigation authorities may educate the farming community to follow such cropping pattern that ensures maximum returns with the available water resources in the region. They should see to it that high water intensity crops like paddy are not taken up on massive scale instead, less water intensity crops like ragi, jowar, mulberry, floriculture, vegetables and growing of horticultural crops in the region.

All the above recommendations are made keeping in view of generating adequate employment opportunities to the rural labour in the region. It may be mentioned here that there is an emphasis on the irrigation facilities for the simple reason that the region is subjected to frequent visitations of severe droughts, which do not ensure at least three to four months gainful employment to rural labour on the dry land farming carried on under rain fed conditions. The study concludes that the development of this backward track of Rayalaseema region depends on improvement in the provision of irrigation facilities as in the case of the most developed countries in their early stages of development. It goes without saying that the rural labour
conditions vastly improve once the region attains agricultural prosperity through extensive irrigational facilities, which trigger automatic generation of gainful employment opportunities to the rural labourers and gainful employment of all resources, including human resource, is that holds key to development of the region.