CHAPTER - I

INTRODUCTION

The economic composition clarifies the miscellaneous economic, demographic and cultural attributes of an area, which form the basis for region’s social and economic development. Among all the social attributes of population, work structure is of paramount importance, since it provides an index to many personal, social and demographic characteristics. The study of economic composition holds the significance of workers. Work and its role in society has always been the subject of considerable public commentary and debate. However the way unemployment rate is increasing, the question of work has become more important in recent years. A distinction has often been made between total population and manpower, while total population refers to the entire populace inhabiting the area, the manpower consist of only those persons who could participate in economically gainful activities in the event of need.

There was a time when strength of human being depends on their number alone. In the traditional agrarian society, manual labour was required for most of the work. Therefore, more people meant more production and thereby more prosperity. But this perspective changed with industrial revolution and the consequent development in science and technology.

Entire working population can be divide in to three parts i.e. employed, unemployed and under employed active population. The employed active population consist of all those persons who are at work during the reference period of the census including those who are temporarily absent from work due to illness, industrial dispute, etc. The unemployed economically active population consists of those who were not at work during the reference period of the census but are seeking some work. Under employment refers to the difference between the amount of work performed by persons in employment and the amount of work they would normally be able to and willing to perform. The conventional life tables can be converted in to tables of working life by incorporating mortality and labour force participating rates and by describing the
variations by age in the probability of entering or leaving the labour force (Shryock, 1976).

Labour is a primary factor of production. It is considered to be important not only because it is productive but also because it activates other factors and makes them useful for production purposes. Therefore, the size of labour force in a country is of crucial importance for the level of economic activity (Misra and Puri, 1998).

Occupational structure in a country depends on a number of economic, technological and geographical among various factors determining it, development of productive forces, specialization, level of per capita income and availability of natural resources are somewhat more important. The occupational distribution of population is often mentioned as an objective criterion to divide countries between developed and underdeveloped. No doubt it is a useful criterion at the same time from the point of view of analytical rigour, it is not completely reliable. It is wildly held that the countries, in which the primary sector provides employment to a larger proportion of labour force, are underdeveloped. This notion has certainly an objective basis. Most of the poor countries are essentially agricultural and even if some industries have been established in these countries, their impact is yet to be felt on the socio-economic life of the people. India, China, Pakistan, Nepal etc. fall in this category (Mishra and Puri, 1998).

The size of working force depends upon a variety of demographic, social and economic factors. Generally it is the product of the total population base, but the age structure and the demographic regime are also equally important determinants. Demographically, the birth rate, the age structure, the longevity of life, the migration behavior and average size of the family are important. Numerous other social and economic factors also influence the magnitude of working force. Socially, levels of literacy and education, status of women in the society, age at marriage and general health slandered are significant. Economically, the type of economy, availability of employment opportunities and levels of income are vital (Chandna, 2002).

Contrary to the popular conception, rural population that is living mostly in places of less than 5000 population in India is not synonymous with agricultural population. A small proportion of these rural but non-farm people can scarcely be separated from the
agricultural population. Their subsistence is directly connected with the local farmers as for instance the carpenters and blacksmiths who make and repair farm implements, weavers, who make cloths for the local farming communities, potters who supply kitchen equipment, cobblers and water carriers. In addition to serving the farmers in these capacities, they also provide temporary labour at different stages of the crop seasons. Since their work at the farms is confined to only a small part of the year, the census does not include them among agricultural labourers. Instead they are listed by their primary occupations.

**Definition of Worker**

The study on work force holds immense significance in the economy of an area irrespective of its being agricultural, industrial or semi industrial. The work participation rate determines the level of economic development and entire process of its development. The concept of “worker” was first introduced in India in 1961. The Indian Census has adopted industrial classification and made it synonymous as followed by the United Nations and also classified the economic activity of a person into nine categories. During 1971, the census has refined its industrial classification considerably. The definition of worker in India has been changing from census to census.

According to Census of India 2001, “any person whose main activity was participation in any economically productive activity with or without compensation of wages or profit by his physical or by his mental activity was classified as worker [Census of India, 2001, p12]. Thus, work involves not only actual physical work but also includes effective supervision and direction of work. It even includes part time help or unpaid work on farm, family enterprise or in any other economic activity”. For the first time in 1981 Census, however, a distinction was made between main and marginal workers. The main workers are those “who worked in some economic activity over a period of six months or more in both the agricultural seasons”, as per Census 2001 and rest of all workers are marginal workers. In other words, the main workers are those who have worked for major part of the year preceding the enumeration.

Social Scientists have become increasingly interested in questions relating to the sexual division of workforce in different societies. Generally low level of participation
by woman in the Indian labour force and the highly uneven geographic pattern of this participation has been the object of considerable recent discussion (Saraswati, 1982).

**Significance of Rural Workforce Studies**

The segment of working force in a society is the lifeline to the total health and development of a region. This segment is mainly responsible to earn bread to the family and provide for the basic amenities of sustenance. Larger the segment of working force more earning per capita in a population is expected. However, in the region of intensive agriculture with subsistence level of economy, larger section of population is engaged in agriculture with minimum return. Therefore, even if there is a large share of working force the economy still remains poor. Hence, the studies of rural workforce have vital significance.

The noticeable characteristic of total rural working force is its 73.2 per cent (Scheduled Castes-18.83 %, Scheduled Tribe-14.65 %, Non Scheduled- 39.72 %) engagement in agricultural sector. While scheduled castes and scheduled tribe rural workers are 75.7 percent and 85.44 percent respectively engaged in agricultural sector. Enormous spatial variations may found in the percentage of the patterns of agricultural and non-agricultural work participation at the district level. This can also be revealed from the fact that some states are having majority of their population in the agricultural sector where as some states are having domination in the non-agricultural population.

As already discussed, the female work participation rate in rural India is much lower as compared to the rural male work participation rate. Such type of study that deals with the relationship between male and female workers will be helpful for the policy makers to frame policy for women empowerment and the attainment of gender equity.

The mapping of areas on the bases of specialized/dominant functions can be helpful in the formulation of proper developmental programs for rural India. The patterns of work participation rate, agricultural and non-agricultural workers, relationship between rural male and female workers and specialization/domination of functions will make the present study an important contribution. Before embarking on the major theme it becomes necessary to be familiar with the study area.
STUDY AREA

The present research problem has been analysed for the entire rural India. India extends between 8º4’ and 37º6’ North latitude and 68º7’ and 97º25’ East longitude while the southern most tip of the Nicobars touches the parallel of 6º45’ North. It is bounded by China, Nepal and Bhutan in the north and Myanmar in the East by Pakistan in the west and Indian Ocean in the south. India is a union comprising of 28 States and 7 Union Territories. It has 593 districts as per 2001 census. The location code numbers and district boundaries are represented in the map (Fig. 1.1).

The republic of India, with a land border line of 15200 kilometer and a coastline of 5700 kilometer is a geographical unit. Its north-south and east west extent is 3200 kilometer and 3000 kilometer respectively. The areal coverage is about 3267500 square kilometer in which rural area covered 31.18 lakh square kilometer; it ranks seventh amongst the countries of the world. It may, however, be noted that none among the larger nations is comparable to India in terms of the percentage of arable land (about 42 %) to the total area.

Physiography and Cultural Aspects

The physiography of the country is as complex as its formation. The Himalaya presents the snow-clad peaks, large valley glaciers, deep gorges, roaring water falls along with dense forest-cover standing in utter contrast to the monotonous alluvial expense of the Great Plains or the subdued multi cyclic features of the age-long chiseled Peninsula where flat-topped peaks, residual ranges and broad valleys almost reaching their base levels. The physical landscape of the Great Plains is characterised by the wide and open valleys of the Indus and the Ganga-Brahmaputra systems. The rivers flow sluggishly through out the year except in the rainy season when they present vast stretches of water. The meanders, changing river courses and oxbow-lacks mark the landscape of the alluvial plains. The Rajasthan Plain including the Marusthali presents a picture of contrast with vast sandy expenses and ephemeral streams failing to reach the sea. The Peninsular India is rimmed by ranges on the sides which, except the Sahyadri, are often cut through by the streams giving them access to the Great Plain in the north and the Bay of Bengal in the East. The narrow coastal strip in the west and wider coastal plain in the
east are marked features on the respective margins of the Peninsular Upland. The two groups of islands i.e. the Laccadive, Amindivi, Minicoy etc., and the Andaman-Nicobar groups have different origins and consequently distinctive physical landscapes.

**Physiographic Divisions**

An analytical approach may, however, guide us to distinguish four macro regions based on stratigraphic and tectonic history and relief along with the erosional processes as follows:

1. The Northern Mountains.
2. The Great Plains.
3. The Peninsular Uplands.
4. The Indian Coasts and Islands.

**The Northern Mountains**

The region extends all along the northern border of the country, from the eastern border of Bangladesh to the frontiers of Myanmar, for about 2500 kilometer with an average width of 240 kilometers; occupied by the Himalayan ranges and its offshoots, it covers an area of about 500000 square kilometer.

**The Great Plains**

This aggradational plain covers about 700000 square kilometer of surface area with the Ganga and the Brahmaputra forming the main drainage axes in the major portion. The thickness in the alluvial sediments varies considerably with its maximum in the Ganga Plain. The physiographic scenery varies from extremely arid and semi arid landscape of the Rajasthan Plain to the humid and per-humid landscape of the delta and the Assam valley in the east.

**The Peninsular Uplands**

This morphologically polygenetic and complex, relatively stable landmass extends from the southern margin of the great plains upon the coastal margins of the country and cover an area of 1.6 million kilometer.
The Vindhya-Satpura alignment, owing its steep scarp and range-like character, to the Narmada trough extends East-West from the Sahyadri in the west, with to the Maikal in the east. Most of the Satpura-Vindhyas region is overlain by the Deccan Trap in the west, with a general horizontal disposition; the Vindhyas show a somewhat folded structure, particularly in the western section.

The Sahyadri was probably a central water-divide of an older extensive landmass. With its North-South trend it serves even today as a divide between the Bay and the Arabian Sea drainage. The Thalghat, bhorghat and the Palghat are three major gaps in the alignment which since early times have served as a negotiating link between the coastal lands and the rugged plateau country.

**Indian Coasts and Islands**

The Indian coasts vary widely in their structural and surface characteristics. The West Coast is much narrower except around the Gulf of Cambay and the Gulf of Kutch where partly due to sedimentation and partly on account of the isostatic adjustments the plains are wider enough. The tilting left no scope for depositional action of the rivers on the west coasts and it still remain narrower extent through out its length south of Gujarat to Cape Comorin. The back waters are the characteristics features of this coast. The East Coast Plains, in contrast broader, associated with depositional activities of the rivers partly owing to the change in their base level. Extensive deltas of the Mahanadi, the Godavari, Krishna and Kaveri etc. are characteristics features of this coast.

The two group of islands i.e. Arabian Sea Islands and the Bay of Bengal Islands differ significantly in origin and physical characteristics. The Arabian Sea Islands are 25 and foundered remnants of the old land mass and subsequent coral formation. The Bay Islands accounts 222 and represent surfaces of the Tertiary fold axis, rising as high as 750 meters (Saddle Peak) above the sea level.

**Rural Population**

The total rural area of India is 31.18 lakh sq km and rural population of India is 7424.91 lakh, out of which male constitutes 3816.03 lakh (51.39 %) and the females population share is 3608.88 (48.61 %) as per 2001 census. The total rural working
population is 3099.56 lakh (41.75 %) in which male workers are 1988.39 lakh (64.15%) and female workers are 1111.17 lakh (35.85 %) persons. The main rural workers are about 2291.86 lakh (73.95 %) while marginal rural workers constitute 807.70 lakh (26.05 %) of the total rural workers.

Similarly total scheduled castes population is 1330.1 lakh of which males are 51.58 per cent and females are 48.42 per cent while working population constitutes 42.50 per cent of the total scheduled castes population in rural India, of which 62.56 per cent is male in proportion to total scheduled castes males and 37.44 is females. The main and marginal workers are 70.60 per cent and 29.40 per cent respectively scheduled tribe total population is 77.34 million of which 50.58 percent are males and 49.51 per cent are females while working population constitute 50.37 per cent of the total scheduled tribe population in rural India, of which 53.91 per cent is male and 46.09 per cent is females in proportion to total scheduled tribe workers. While the main and marginal workers are 68.05 per cent and 31.95 per cent respectively.

On the other hand the share of female main and marginal rural workers is 600.85 lakh (26.22 %) and 510.32 lakh (63.18 %) out of total main and marginal rural workers respectively as per 2001 census.

Economy

India is one of the leading agricultural countries of the world and one of the biggest sources of its wealth is its produce from land. Nearly 70 per cent of the workers engaged in agricultural sector which, accounts for nearly 25 per cent of the gross domestic production. Nearly 60 per cent agricultural land depends upon rainwater. A favourable factor of climate is that temperatures throughout the year permit growth of crops.

The mineral and power resources in India are considerable though not so abundant when we consider the area and the size of population. There are plentiful reserves of high grade iron ore, manganese, chromite, limestone and refractory materials. The reserves of all types of coal occurring in seem of one foot or more within depth of 2000 feet. India has adequate mineral, power, agricultural and human resources for industrial development. Yet India is industrially under-developed and is miles behind the advanced countries (Singh, 1971)
REVIEW OF LITERATURE

The study of working force is not a new field but each and every scholar has a different way of study. Working force as a broad theme has been studied by various scholars, such as educationists, economists, demographers and geographers etc. Geographers and other scholars have carried out many studies about work force from time to time.

Fisher (1939) studied production into three categories that are primary secondary and tertiary in Newzealand and Australia. Although he focused on the terminology of production, yet he categorized the occupation into broad three categories that is primary producer, secondary producer and tertiary producer.

Ahmad (1950) studied the distribution of population in Uttar Pradesh. He described the position of the U.P. in comparison with other areas in India in respect of some broad facts about population.

Chellaswami (1958) the main object of this study is to provide estimates of the future labour force in five year intervals up to the year 1966 by the component method. He observed that the estimation of future labour force of the country has been confined to a relatively short period 1956-66 so that the results may be realistic and useful for purposes of policy formulation. In the same year Gosal G. S. (1958) studied the occupational structure of India's rural population at district level. He found that the proportion of rural non farm population varies widely from region to region. Likely A. Lall (1958) also studies some characteristics of Indian cities of over 100000 inhabitants in India with special reference to their occupational structure and functional specialisation.

Ghanasekaran (1960) observed that labour force is one of the most important determinants of economic and social progress of a country in his study entitled as labour force projections for India, 1951-76. In this study a set of labour force projections for India has been prepared up to 1976 under alternative assumptions about demographic and non demographic factors affecting it. Implied changes in the labour force over the period 1951-76 are also examined at the end.
Likely Gill (1960) studied the unemployment and underemployment of permanent farm workers in Punjab. This study formed a part of the larger scheme of farm management research conducted in six different agricultural regions of the country.

In the same year another scholar Kayastha (1960) has given a detail account of occupational structure in the Himalayan Beas Basin. He categorized occupation into five broad categories and found that agriculture is the most important occupation that employs nearly 89% of the total population.

Kuriyan (1962) analysed the spatial distribution of industry in India with special reference to population. He observed that the economy of India is heavily unbalanced, partly as a result of its excessive dependence on agriculture and partly because of uneven distribution of industry. He found 75% of factory workers agglomerated in four states that are: West Bengal, Bihar, Maharashtra and Gujarat.

Schwartzberg (1963) examined the agricultural labour in India. Author says that in the year 1951, there were conducted in India two large-scale investigations. He considered ALE (Agricultural Labour Enquiry) and decadal census both the explained with their disparities. He found that no one can predict as to the change in the size of the agricultural labour force.

Geogre (1968) described a comparative analysis on the urban economic base with the help of the study by Morrissett in America. The primary purpose of the present effort was to test the notions of basic-no basic employment structure in the context of United States. He found that the political unit of the Indian city may be at least as good a model for minimum service considerations as its American counterpart.

Nath (1968) examined female work participation and economic development. He found that the hypothesis of falling female work participation rate with economic development is not corroborated by state level data but supported by district level data. The author calculating the co-efficient of correlated between female work participation rates. He considered the following six indicators of development: i) per capita income, ii) proportion of urban population to total population, iii) proportion to non agricultural workers to total workers; iv) proportion of workers in manufacturing industry to total workers (other than household) (v) Proportion of literate females to all females (except 0-
In the next year Singh (1969) discussed the population growth and occupational structure of the 'GADIS' towns of north-east India. The term GADIS has been coined for the purpose of studying the five big towns. Each letter of the term stands for a town: G for Gauhati, A for Agartla, D for Dibrugarh, I for Imphal, and S for Shilong. In this study the author found the four functions (other services, transport and communication, trade and commerce and household industry) were important, having together 87 percent of the working force.

Tiwari (1969) investigated the rough pasture and pastoral activities of Jaisalmer. In this study he considers cultivators, agricultural labourers, pastoral nomads, household activity trade and commerce. He found scarcity of fodder due to failure of monsoon in western Rajasthan. He says that this scarcity can be overcome by increasing one fifths of the present area of the cultivated grass lands.

Devi (1971) studied a distributive study of the changes in the industrial composition of Indian working force: 1951-1961. In this study the author was tested the five hypotheses concerning changes in the industrial composition. He found that most of the observed shift seemed to stem from the difference in the concepts and definitions used in 1951 and 1961.

Nijhawan (1971) discussed occupational mobility and political development. He classified occupation into eight categories and observed social correlates of occupational mobility and orientation to politics.

Prakash (1971) studied the occupational educational structure of manpower and projection of labour force by occupational educational groups for two public sector industries, namely Machine Tools and Heavy Electrical equipment. The purpose of this study is to determine the relative efficiency and efficacy of two different techniques of projecting occupational structure of man-power.

Bagchi (1975) described the occupational pattern of displaced migrants with the help of mean and standard deviation. The author found on the basis of specialization of
different functions of the displaced persons, the districts of West Bengal grouped in two regions, one distinctive in agriculture the other in secondary and tertiary activities. Another scholar Devi (1975) obsessed working force participation and economic development with the help of analysis of variance. In this study an attempt was made to test the validity of this premise, that participation rate tends to diminish with economic development and he found it valid.

Gulati (1975) investigated a less aggregative level of inter-state comparison within India and to see some relationship between economic and demographic factors such as per capita income, cropping pattern, literacy levels, male work participation rates, proportion of scheduled castes and tribes in the population and the sex ratio and female work participation. He finds that inter-state differences in female participation rates not possible to explain in terms above referred list.

In the same year Siddiqui (1975) studied occupational structure of population in Haryana with special reference to occupational groups and their distribution; analysis of male/female participation rates and their special distribution; and rank difference correlation coefficients of male participation and their regional variations. In the census occupations have been classified into nine categories. The author classified occupation into three broad categories that is primary, secondary and tertiary activities. He also studied the male-female participation rates and participation ranking. He finds the high proportion of workers in primary occupation and low female participation rate in occupational structure.

Likely Vishwanath (1975) studied the occupational structure of women in India, their regional variations and causes. He considered ten categories of industries recognized by the census of India are divided into primary, secondary and tertiary activities. He finds that in rural areas the primary sector employs more women while in urban areas more than 50% of the women are employed in the tertiary sector.

In the same year Bhardwaj and Harvey (1975) attempted, by legislation and job quotas, to emancipate the world's largest socially depressed minority group. The scheduled castes, previously called the 'Untouchables". This study attempted to determine the extent of occupational convergence between the scheduled castes and the general
population in the state of Punjab. Besides multivariate analysis of variance and applied to the SC. and G P. data collected from the 1961 census of India. He found that in both rural and urban areas, occupational convergence was most evident in non-household industries.

Swaminathan (1977) analysed the occupational structure of small towns in Coimbatore district. In the present study an attempt was made to understand and to bring out the existing relationships between the different occupations as exhibited by small towns and pertains to the nine categories of occupation. The 'Principal Component' technique employed in the present investigation and finds 19 variables relating to the participation of male and female in primary, secondary and tertiary activities. Likely in this year Siddiqi (1977) also studied occupational structure of rural of Uttar Pradesh on the basis of 1971 census.

Singh (1981) discussed the nature, role and importance of activities related to trade and commerce in the urban centers of eastern Uttar Pradesh with the help of coefficient of correlation and regression equation. He found 38 out of 69 towns of the region to be specialized in trade and commerce. He further grouped into various classes on the basis of functional specialization intensity. An attempt has also been made by Singh (1981) to analyse the nature and pattern of absorption of the growing population of the five cities of West Bengal by computing the various census data on occupational categories. In the similar year Kumar studied the changes in the occupational structure of urban population of Rohtak and Gurgaon districts where he observed increased proportion of non-agricultural workers from 1961 to 1971 year.

Kant (1982) studied a spatial analysis of structure of rural economy through a quantitatively constructed model. The author found that the rural economy of Uttar Pradesh in 1951 was overwhelmingly agricultural but also its rural non-agricultural sector was predominantly locally oriented.

In the same year Raju Sarawati (1982) focused on the regional patterns of female participation in the labour force of urban India with the help of correlation. He classified female workers into scheduled and non-scheduled. He found that most districts of Andhra Pradesh privileged – class women have a much higher level of participation than most depressed – class women in Uttar Pradesh.
In the similar study area Singh and Deen (1982) made an attempt to present an occupational analysis of population engaged in the urban centers. They observed transport and communication centers in this region are less numerous than those of any other functional category.

Likely Raju (1982) looks at variations in the level of female participation in the urban labour force in four states of India and observed that depressed class female workers are enjoying a higher degree of lateral occupational mobility.

Kaur and Chandna (1983) noted the changes in the industrial structure of India's male working force by calculating an index of change. He found low degree of change by the male working force establishes the weakness of India's industrial infrastructure and 80 per cent of the districts dominated by agricultural occupation.

In the next year Nayak and Ahmad (1984) attempts to analyse the spatial variations in female participation in economic activity in rural areas of the states of Punjab, Haryana, West Bengal, Andhra Pradesh and Maharashtra. They found that the southern states in general show a higher rate of female participation than the states in the northern region.

Weigend (1985) studied the economic activity patterns in White Namibia and to demonstrate that they remain characteristically exploitative, as they were previously in other colonies.

Singh (1987) perceived the occupational structure and the regional variations in the urban centers of the eastern Uttar Pradesh region. In this study he found that the urban centers of the eastern Uttar Pradesh region are dominated by the workers in the other services and rest of the workers like agricultural and house hold industry employ nearly 11.47 per cent and 22.9 per cent of the urban working, population, it indicates that the developmental process (or urbanization) is in progress in the region.

Nayyar (1987) discussed some of the issues related to female participation rates in rural India. He found that female participation rates were highly correlated to poverty and landlessness in rural India. It was observed that, in areas where incomes had gone up, consequent on the green revolution, women tended to withdraw from the labour market.

Ramotra (1989) studied the female work participation in economic activity in India in general and in Marathwada region of Maharashtra in particular. This study discusses some of the issues and constraints related to the female participation and try to identify the plausible casual factors responsible at macro and micro regional levels variations.

Kailash (1990) studied the nature of child labour from the census. According, primary sector shares almost the whole child work force of the district. On male –female pattern, female children play an important role in the whole child work force. He finds the back ward economic condition of the district.

Sen and Pigozzi (1993) examine the changing association between industrial and occupational diversification and the association of industrial and occupational diversification with indicators of the business environment. The results indicate a weakening association between the industrial and occupational employment structures over time.

Sen (1995) also examines the effects of structural transformation on occupational shifts for socio-demographic groups in different regional settings.

Khalil Kalantari (1996) studied the structural transformation of working force in Iran. The study was carried out at province level. It is found that the diversification of the Iranian economy since 1976 has resulted in structural change in working force over time. On the whole the pattern of change in the economy and that of working force is towards tertiarisation rather than the secondarisation of the economy.

Shafiqullal, Siddiqui and Azhar (1996) studied occupational structure and economic development with the help of Z score and composite index. He considers three broad categories of occupation that are primary, secondary, tertiary and six economic development indicators that are urbanization, percentage of net area sown to total reported area, intensity of cropping, percentage of area under commercial crops to gross cropped area, no. of persons engaged in registered factories/lakh population and per
capita income. He observed decline in primary occupations and increase in secondary and tertiary ones.

Siddiqui and Shafiqullah (1999) studied regional dimensions of workforce and levels of social development in Uttar Pradesh by districts are made fewer than four main sections. He tries to find out social development with the help of nine indicators and ‘z’ score for each indicator is calculated and the values so obtained for all the indicators are added district-wise and the average is taken out for these indicators which may be known as composite score for each district. Again both the scholar examined work force and level of socio-economic development in Uttar Pradesh in 2001 with the help of two types of variables i.e. work force and socio-economic variables.

Bhattacharya (2002), studied work pattern of migrants along with their work status in India. He finds that migrant work force shows that males are engaged mainly in tertiary sector whereas majority of female migrants enter the work force as cultivars and agricultural labourers.

Siddiqui (2003) studied structure of employment and levels of economic development under two points, first employment under major occupation groups and second, the employment region. In his study primary secondary and tertiary occupations are combined together in terms of scores and average is together in terms of scores and average is calculated to present the performance of employment region with the help of score method. The level of development and its regional distribution is attempted by combining six different variables of economic development. He gives some suggestions also for the less developed area. In the same year Raikhy and Mehra scrutinize the disparities in female work participation rate in rural areas.

Singh (2003) analyses the changes in the structure of workforce by four major categories viz, cultivators, agricultural labourers, household industry workers and other workers. He uses the term agricultural workers for cultivators and agricultural labourers jointly and rests are non-agricultural workers

Unni and Rani (2004), studied empirically explores two questions: has there been skill-biased growth of the workforce in India in the later part of 1990s? And if so was this shift due to skill-biased technical change? He found that male workers and urban
workers were more likely to have had a skill-biased technical change and an increase in the demand for skilled workers. Overall, the influence of technical change on the growth of skill based workforce was clearly found. In this year Dubey, Pala and Thomas delves into the changes in the participation of women in the labour force in the rural sector in India. Specifically, it examines the changes in the women work participation rates and educational attainment affects their participation rates in the labour force.

Chadha and Sahu (2004) examined recent changes in agricultural employment in rural India with the help of agricultural and non-agricultural workers separately for male and female rural workers.

Bagchi, Das and Chattopadhyay (2005), studied the growth and structural change in the economy of Gujarat from 1970 to 2000 with the help of T test and F test. He finds no increase in organized sector employment during the 1990s. The Primary sector, particularly agriculture, has been stagnant or even declining. By contrast, the secondary and tertiary sectors have shown statistically significant and high rates of growth over the whole period.

Panda (2006) studied rural non-farm employment in India and Thailand with the help of multiple linear regression models. He tries to derive policy implications in the light of study that policy makers should work on the link between rural farm and non-farm sectors.

In this year Kapoor (2006) also studied female participation with the help of time used method. He analysed as a whole that work participation in both domestic and marketed work combined of urban females was very high. Some more valuable works on work force have been done in India and abroad at national, regional and local level.

While reviewing literature it is observed that studies on main workers in rural India were a crucial part which is overlooked or shadowed by scholars. While a few works has carried out the relationship between male and female in different categories of working force at district level. Similarly the same situation also arises in the study of specialized/dominant functions at district level in rural India. The present study has been conducted to fill these academic gaps by taking following objectives.
OBJECTIVES OF THE STUDY

The objectives of study have been confined to the spatial distribution of main workers, especially with regards to the four fold classification of workers in total and reserved categories. Furthermore one stress has been given to the female participation. Finally it presents a mosaic of research work related to rural work participation rate as follows;

I. To identify the demographic characteristics of rural population in India i.e. distribution, concentration, literacy rate, sex ratio and workers;

II. To identify the levels of main work participation rate in respect of total workers, scheduled castes and scheduled tribes workers in rural India;

III. To study the patterns of main workers classification in respect of total workers, scheduled castes and scheduled tribes workers in rural India;

IV. To study the patterns of agricultural and non-agricultural rural main workers;

V. To measure the patterns of relationship between male and female rural main worker in selected categories of working force i.e. cultivators, agricultural labourers, household industry workers and other workers;

VI. To identify the specialized/dominant functions within the rural main workers of India.

SOURCES OF DATA AND RESEARCH METHODOLOGY

The district wise Census 2001 data in different classification of main workers has been used for present research work. The systematic approach has been followed. The demographic development has been calculated by the composite score of demographic characteristics by using the method of ‘z’ score. The study region has been regionalized into five zones on the bases of demographic characteristics like distribution of rural population, levels of demographic development, literacy rate, sex ratio and workforce. The main workers have been categorized in four categories, viz; (1) Cultivators (2) Agricultural Labourers (3) Household Industries and (4) Other workers. The spatial patterns of district wise rural main work force has been calculated in percentage in the entire four fold industrial classification within each category of total rural workers, scheduled castes rural
workers and scheduled tribes rural workers. Further five zones have been categorised into 22 sub-zones.

The spatial patterns of agricultural and non-agricultural workers find out by clubbing the cultivators and agricultural labourers for **agricultural workers** and household industry and other workers for **non-agricultural workers**, however, it is well known that a small proportion of agricultural workers i.e. less then five per cent also include in other workers that ignored in this chapter. It may also be noted that these workers does not affected the categories of agricultural and non-agricultural workers.

Karl Pearson’s Correlation of co-efficient method has been used for calculating the relationship between various males and females percentages of classification of main workers at district level by using the village level data (Total villages – 638588, in which inhabited villages - 593732) in the categories of the four fold classification of rural main workers. Further the relationship has also been analysed of all the 5 macro zones and 22 micro/sub-zones of the study area.

Further to find out a parameter of balance working force as compared to dominant and deficient working force of above said four categories in a district, the ‘**z score**’ (**data-mean/standard deviation**) formula has been used. The ‘**z score**’ so obtained was classified into three categories. It is assumed that the value falling in between **-1 to +1** represent the average working force of a district. The value higher and lower the average is considered as dominant and deficient functions respectively. Maps, Graphs and tables have been prepared with the help of suitable cartographic techniques.

**ORGANISATIONAL STRUCTURE OF THE STUDY**

The present study has been divided into seven chapters including summary and conclusion. The **chapter first** deals with significance of rural workforce studies, study area, review of literature, objectives, and sources of data, research methodology and organizational structure of the study.

**Chapter two** includes distribution and concentration of rural population and demographic characteristics like literacy rate, sex ratio, and workforce. On the basis of demographic characteristics the study region has been categorised into five zones.
Chapter three highlights the patterns of rural main workers in respect of total rural main workers, scheduled castes and scheduled tribe rural main workers with their four fold classifications and further the study region has been divided into 22 sub-zones.

Chapter four presents the patterns of agricultural and non-agricultural rural main workers in the categories of total, scheduled castes and scheduled tribes.

Chapter five devoted to the spatial patterns of relationship between male and female rural main workers in four fold classifications. The relationship with literacy rate has also been calculated.

Chapter six represents the patterns of specialized/dominant and deficient functions among the total rural main workers, scheduled castes and scheduled tribe workers.

Finally, chapter seven includes summary and conclusion. Some suggestions have also been incorporate for policy makers and researchers.

Chapter Scheme

1. Introduction.
2. Demographic Characteristics of Rural Population.
3. Patterns of Rural Main Workers.
4. Patterns of Agricultural and Non-Agricultural Rural Main Workers.
5. Patterns of Relationship between Male and Female Main Workers.
6. Patterns of Dominant and Deficient Functions.
7. Summary and Conclusions.

Bibliography

Appendix-I
Appendix-II
Appendix-III
REFERENCES


..........................