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## SPATIO-TEMPORAL ANALYSIS OF ECONOMIC CHARACTERISTICS OF POPULATION IN RURAL HARYANA: (1991-2001)

### Doctoral Dissertation Abstract (2020)

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The attribute of workforce and its distribution into various industrial categories, despite its vast significance to planning, has received less attention of geographers in comparison to other attributes of population such as growth, sex ratio, literacy etc. The occupational structure reveals the level of development of economy as well as type and nature of economic activities in which people are engaged. The change in workforce structure is one of the most important indicators of the economic development of a region. The main working force has special significance as they are engaged in economic activities during the major part of the year. Hence, the study of main working force has a great significance. Likewise, women also constitute a significant part in the workforce structure. Female work participation in economic activities is one of the important indicators of their empowerment. The present study is focused on rural areas because about 68 per cent of population in India lives in villages. The rural society of India has faced both social and economic problems since the ages.

#### Objectives of the Study

Major objectives of the study are:

- to study the changes in characteristics

- of rural population;
- to find out the changing pattern of rural main workers;
- to highlight the changing pattern of relationship between male and female of rural main workers and
- to identify the changing pattern of dominant and deficient functions of rural main workers.

#### Database and Methodology

The village-wise census data for 1991 and 2001 have been obtained for this study. The number of blocks changed from 108 in 1991 to 114 in 2001. Thus, the direct comparison of 1991 and 2001 census data has been difficult by the numerous and extensive block-wise boundary changes that took place during the period under consideration. Therefore, the block boundaries of 1991 have been re-arranged according to the block boundaries of 2001. By this exercise, 7067 villages of 1991 have been rearranged as per the 6955 villages of 2001. Due to lack of data about marginal workers in 1991, the present research work is based only on main workers. Further, on the basis of generalized socio-economic characteristics of rural population of 2001, the study area has been divided into



two sub-zones i.e. (i) eastern sector and (ii) western sector. Further, for micro level study, these two sub-zones have been divided into nine micro-zones. There are five micro-zones in the eastern sector and four micro zones in the western sector.

Further, the nine categories data of main workers of 1991 have been condensed into four categories, viz; (1) cultivators, (2) agricultural labourers, (3) household industry workers and (4) other workers as per the data available in 2001. The spatio-temporal variations of rural main as well as male and female workers have been calculated in percentages for each category of rural main workers. The change in main workforce structure has also been calculated for the above said two sectors and nine micro-zones. Further, to find out the strength of relationship between male and female main workers at block level, Karl Pearson's coefficient of correlation ( $r$ ) method has been used. Likewise, z score technique has been adopted to compare the dominant and deficient functions of rural main workers with above said four categories of workers in a block.

### Major Findings

It has been observed that the eastern sector of the study area has better infrastructure, good transport and irrigation facilities. It is also agriculturally and industrially developed sector. While, western sector is manifested with less fertile sandy soils, lack of irrigation facilities, transport and basic infrastructural facilities resulting underdeveloped agrarian economy.

The eastern sector of the study area is densely populated as compared to the western sector. There have been positive changes in concentration of rural population confined to extreme north-eastern, south-eastern and

western parts, while negative changes have been found in central parts of the study area. The density of rural population has increased by 70 persons/km<sup>2</sup> during 1991 to 2001. The highest increase of 333 persons/km<sup>2</sup> has been recorded in Gurgaon block against the lowest increase of three persons/km<sup>2</sup> found in Rania block. The average decadal growth rate of rural population is 21 per cent. Gurgaon block has witnessed highest growth rate of 61 per cent, due to nearness of national capital (New Delhi) and developed industrial centers. The average change in rural sex ratio is negligible that is only two points. The highest positive change in sex ratio has been observed by Punhana block (48 points), while the highest decline has been recorded by Pinjore block (57 points). The total rural literacy rate of the study area has improved by 13 per cent during the study period. Likewise, male and female literacy rate has also increased by 11 and 17 per cent, respectively. The rural work participation rate has significantly increased by 11 per cent while male and female work participation rate has enhanced by two and 21 per cent, respectively. Thus, the south-south eastern zone is one of the most backward regions of Haryana in terms of literacy and working force. The region is dominated by Muslim population, which has large family size and low literacy rate along with lack of awareness towards female education and contraceptives. Due to good connectivity to industrial centers and nearness of national capital (New Delhi), the south-western zone has recorded highest positive change in rural work participation rate (16 per cent) along with male (6 per cent) and female (26 per cent) workers.

It has been found that the eastern sector of the study area is economically more developed as compared to the western sector. The eastern sector of the study area has high

concentration of workers engaged in household industry and other workers. On the other hand, western sector has high concentration of cultivators and agricultural labourers due to economic backwardness. During the study period (1991-2001), the rural main workers have decreased by about 20 per cent in the study area. Cultivators and agricultural labourers have also decreased by 1.48 and 10.57 per cent. On the other hand, workers engaged in household industries and other workers have increased by 0.79 and 11 per cent, respectively. Due to better educational and transport facilities and availability of employment opportunities, the urban areas have attracted rural population which have led to decrease in main working force, during the period of 1991-2001, in rural Haryana. It has been observed that during the study period, the large proportion of agricultural labourers of the north-eastern zone has shifted to non-agricultural activities. Due to declining opportunities of employment in agricultural sector, the rural people are shifting to other works rather than agriculture.

The relationship between male and female of rural main workers has been very weak ( $r = 0.17$ ) in 1991 but it has become moderate ( $r = 0.44$ ) in 2001. Likewise, the relationship between male and female cultivators has been weak ( $r = 0.31$ ) in 1991 but in 2001 it became moderately positive ( $r = 0.50$ ). The relationship between male and female agricultural labourers has been positively weak ( $r = 0.34$ ) in 1991 but it has become moderately positive ( $r = 0.60$ ) in 2001. Further, the relationship between male and female workers engaged in household industries has been positively low ( $r = 0.32$ ) in 1991, while in 2001 it has become moderately positive ( $r = 0.42$ ). The relationship between

male and female other workers has been positively weak ( $r = 0.34$ ) in 1991, but it has become moderately positive ( $r = 0.40$ ) in 2001. It has been observed that due to increased education and awareness in rural areas during the period of 1991 to 2001, about 61 blocks have recorded positive change in the relationship between male and female other workers. Further, during the study period, both the sectors (eastern and western) recorded positive changes in relationship in rural main workers, cultivators, agricultural labourers and household industry workers. In case of other workers, no change has been noticed in relationship between male and female workers.

The dominant and deficient functions of all 114 blocks have been classified into 25 and 28 sub-categories including the category of normal functions in 1991 and 2001, respectively. In 2001, the eastern sector has been found to be highly dominant in household industry workers and other workers, while western sector emerged to be highly dominant in cultivators and agricultural labourers. During the study period, the deficient functions of eastern sector have recorded highest positive change in agricultural labourers. On the other hand, dominant functions of western sector have recorded highest positive change in cultivators. In this study, higher working force with subsistence economy has been noticed in the western sector, while lower rural working force with more productive economy has been found in agriculture in eastern sector. Variations in topographical, soil fertility, irrigation potentials, social and economic conditions are responsible for such contrasts in working force of eastern and western sectors of the study area.

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