Spatial Patterns of Workforce of Scheduled Caste Population in Jammu Province

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Gurleen Kour*[1] and Gaggan Kumar[2]

A B S T R A C T

The spatial patterns of workforce constitute the most important economic aspect of any social group. In this research paper the main objective is to assess the patterns of workforce of the most marginalized community that is scheduled caste in the form of main and marginal workers. This is a census-based study based on District Handbook, 2011 where district constitute a unit of study. The statistical tools of correlation and regression have been used to gauge the interrelation between literacy and workforce as well as to predict workforce on the basis of literacy respectively. The software of ArcGIS 10.5 has been used to prepare choropleth maps to present the spatial pattern of workforce among scheduled caste. It is found that the district that represent high main working population are Samba, Jammu and Kathua that are located in south and south-western part of Jammu province with high urbanization and industrialization because of plain topography. The deprived districts in term of main working population are located in north and north-western region which are highly uneven and have rough topography as well as industrial backwardness.

Key words: Workforce, Spatial Pattern, Literacy, Scheduled Caste, Jammu Province

Work participation is well thought-out as a vital health outcome and on the individual level it contributes to health and welfare while on the societal level demographic pressure due to ageing and shrinking populations make a broad participation more and more imperative [1]. In India nearly 95 per cent of the rural workforce is engaged in unorganized activities whereas barely 5 per cent of rural workers are found in formal economic activities. On the other hand, roughly two-thirds of the labourers in urban areas constituting around 76 per cent of the total are engaged in the unorganized sector and the rest one-third of them are engaged in the organized segment [2]. The study of workforce and occupational organization occupies an important place in the field of population geography. The development whether it is social or economic of any region depends on the number of persons who are economically active and the excellence and reliability of their work and the share of economically active population in various occupations highlights that economic profile of various social groups of society in a region. This workforce or occupation structure in a region depends upon number of factors resource base, agricultural development, industrialization etc. The occupation and economic development are closely related to each other as the occupation depends upon the degree of economic development and sophistication of a country.

So far as diversity in workforce is concerned, the gap between the representation of scheduled caste population that is target population and other castes is so wide that only a state policy can remedy it [3]. The intensity of caste-based discriminatory social practices varied in different parts of the country [4]. Their occupational structure is essential to understand the Scheduled Caste and its distribution into various occupations as well as sex wise participation in different economic activities. But in the recent decades the way unemployment rate is increasing at alarming rate, the question of work and workforce has become more important. The distribution of economically active population is an important indicator to divide the country into developed and developing regions.

It is established fact that the regions where the primary sector provides employment to a larger proportion of labour force are mostly underdeveloped and backward thus most of the poor countries of the world are fundamentally agricultural and even if some industries have been established there, their impact is yet to be felt on the socio-economic existence of the people. According to NSS "the persons who were occupied in any activity which is economic (any activity resulting in production of goods and services and at the same time add value to national product was considered as an economic activity) or who, in spite of their attachment to economic activity, abstained from work for reason of illness injury or other physical disability, bad weather, festivals, social or religious functions or other contingencies necessitating temporary absence from work, constituted the category ful workers. Workers are further of two types: one is main workers who work for the major part of the

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year and other is marginal workers who do not work for major part of the year [5]. The more the number of main workers in a country, the better will be the economic condition of the inhabitants and on the other hand more the marginal workers lesser the economic development. So, in order to gauge the overall economic conditions, the study of workforce has utmost importance.

MATERIALS AND METHODS

This is primarily a census-based study covering the entire Jammu province of the state of Jammu and Kashmir and this study has been conducted at district level. Secondary data pertaining to the workforce in the form of marginal and main workers from District Census Handbook (2011) has been used.

Software used for preparing choropleth maps: The software used for data pre-processing and preparation, data analysis, editing and output generation was ArcGIS 10.5.

Base Map → Geo-referencing of base map → Digitisation of the study area → Shape File Creation → Map Making
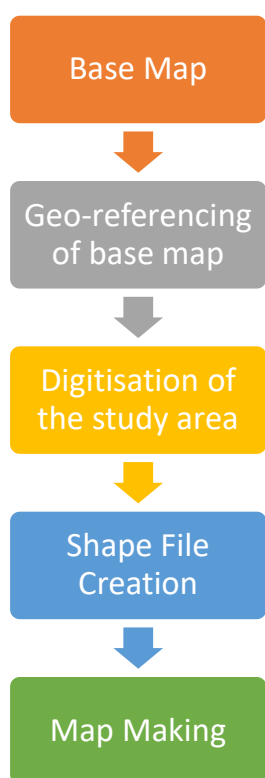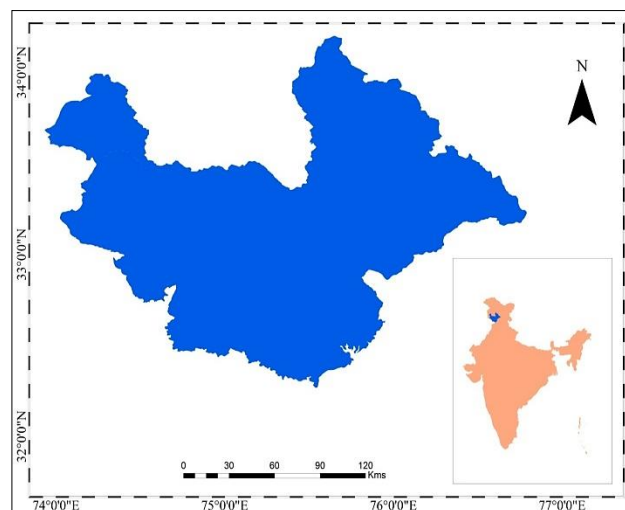
Fig 1 Flow chart, showing steps in map making using ArcGIS 10

In addition to this we have also used Correlation and Regression Analysis with the help of which we have been predicted the unknown percentage of main workers from the variable of literacy that is considered as the detriment of main workers and this regression analysis and prediction of variables has been done automatically using MS-Excel.

Location of the study area: The Jammu province extends between 32° 20' N to 33°10' N latitude and 74° 45' E to 75° 55' E longitude. Nestled against the backdrop of the Pir Panjal Mountains, the region of Jammu constitutes the southernmost unit of the state of Jammu and Kashmir. It forms part of the transition between the Himalayan range in the north and the plains of Punjab state in the south. The study area covers an area of 26,293 sq km, which is 1/8th of the total area of the state. Administratively, within the actual line of control (ALC), Jammu province is divided into ten districts viz. Jammu, Kathua, Udhampur, Reasi, Ramban, Kishtwar, Samba, Doda,

Rajouri and Punch. These districts are further divided into 37 tehsils.
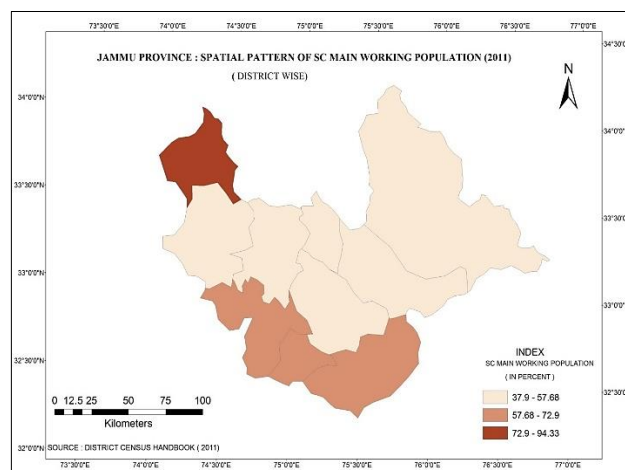

Map 1 Location of the study area (Jammu Province)

RESULTS AND DISCUSSION

Spatial patterns of work force

The spatial pattern of total working population of scheduled caste is highly irregular in Jammu province. The workforce has been assessed and presented in the form of percentage of main workers and marginal workers.

Main workers

According to census of India and NSS, the main workers are the workers who work for more than 183 days of the year. The spatial distribution of main working population of scheduled castes in the study area is very uneven, due to various socio-economic and physical factors. The main working population has been elaborated with the help of choropleth map given below and the entire study area can be divided into three regions of main working population which are as follows:

Source: District Census Handbook (2011)
Map 2 Spatial patterns of main workers

i). *Area with high concentration of main working force*

We find that the district namely Poonch have high rate of main working population i.e., 72.9 to 94.33 percent. This is primarily due to meagre scheduled caste population found there and most of them are main works due high literacy [6].

ii). *Area with medium main working population*

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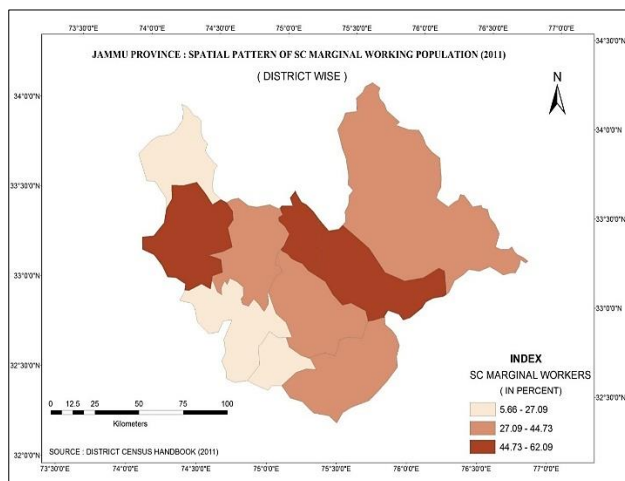*Res. Jr. of Agril. Sci.* (May-Jun) **13**(3): 921–924

It is found in the districts namely Jammu, Samba and Kathua with main working population ranging from 57.66 to 72.9 percent. There is very high proportion of scheduled caste population and have fewer employment opportunities. Most of them are agricultural labourer industrial labourer engaged in industrial complexes located in Jammu and samba district. These are agriculturally advanced districts and agricultural need more working force than secondary and tertiary activities [7].

iii). Area with low main working population

It is found in Rajouri, Reasi, Udhampur, Ramban, Doda and Kishtwar between the ranges of 37.9-57.66 percent. Most of the tehsils of these districts are located in unfavourable geographical location of north-eastern and northern part of Jammu province. In villages hard life and poor economy compel every adult to work as marginal workers not main worker as work is not available year-round in order to maintain himself and his family [8]. In lack of industries in these rural districts the major portion of population belongs to unemployed or non-worker class.

Marginal workers

The census of India defines the marginal works as all those workers who had worked any time in the year prior enumeration but did not work for a major part the year i.e., those who worked less than 183 days or less than 6 months were categorized as marginal workers. They are inversely proportional to main workers.

Source: District Census Handbook (2011)
Map 3 Spatial patterns of marginal workers

The given map tells us about the marginal working population of scheduled castes of Jammu Province in the census year 2011 which is very uneven, due to various socio- economic and physical factors. The entire study area can be divided into three regions of marginal working population which are as follows:

i). Area with high concentration of marginal working force

We find that the district namely Ramban, Rajouri and Doda have high rate of marginal working population i.e., 44.73 to 62.09 percent. Here year-round employment opportunities are not available due to rough topography and absence of productive agriculture. Moreover, these districts are industrially backward.

ii). Area with medium marginal working population

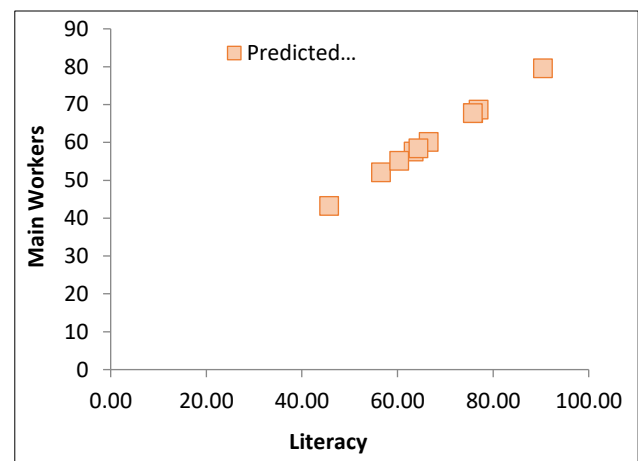It is found in the districts namely Reasi, Udhampur, Kathua and Kishtwar with marginal working population

ranging from 27.09 to 44.73 percent. The reasons are more or less same as that of second category.

iii). Area with low marginal working population

It is found in Jammu, Samba and Poonch. The low marginal working population in these three districts are here because these tehsils are highly urbanized and industrialized and provide year-round employment and in urban areas the students and educated youth find employment in private sector for some part of the year and have been considered as marginal workers this has also enhanced the ratio of marginal workers in towns [8].

Correlation, regression analysis and prediction of workforce (Main workers)

Literacy and percentage of main workers among scheduled caste population have high correlation having correlation coefficient of 0.63. This coefficient is statistically significant at 5% significance level because the p-value is less than 0.05 [10]. The following graph shows the prediction of main workers on the basis literacy using regression tool.

From the slope of the graph it is clear that with the increasing level of district wise literacy there is corresponding increase in the percentage of main workers among scheduled caste population. For example, at 46 percent of the literacy there would be 43 percent main workers and on the other hand at 90 percent of literacy the there would be about 80 percent of the main workers in scheduled population. Therefore, literacy among scheduled caste is the major detriment of the main workers and their economy.

CONCLUSION

Summarizing the above study, it is found that the maximum percentage of main workers is found in the district of Poonch but this district have very meagre scheduled caste population so it do not represent the actual areas of high main working population. On the other hand, the actual district that represent high main working population are samba, Jammu and Kathua which are located in south and south-western part of Jammu province. The deprived districts in term of main working population are located in north and north-western region which are highly uneven and have rough topography as well as industrial backwardness. Since the literacy rate of scheduled caste population decreases from north-eastern to north-western part and therefore there is corresponding decrease in main working population. Thus, there is positive and strong correlation between literacy and workforce. The percentage of low workforce in the form of main workers in

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northern and north-eastern can be improved up to some extent by creating necessary infrastructure and extension services for diversification of agriculture and setting up of new enterprises in manufacturing or services sector. Steps should be taken to set up minimum wage fixing for improving the participation of work force. The educational infrastructure for the scheduled castes and scheduled tribes should be improved to enhance their participation in work force.

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