

PATTERNS OF AGRICULTURAL WORK FORCE IN HIMACHAL PRADESH: A SPATIAL ANALYSIS

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Abstract: *The paper attempts to examine the Spatial patterns of the Agricultural Workforce of Himachal Pradesh at the District Level. The data on the Agricultural Workforce for the census year 2011 is taken from the Statistical Abstract of Himachal Pradesh. Maps are prepared to show the percentage of total workers, cultivators, and agricultural labourers. The number of workers in district Kinnaur is higher than in other districts, while the number in district Una is lower due to urbanization, technology, etc. The research uncovered a distinct trend wherein regions characterized by challenging geo-climatic conditions and constrained economic diversification, notably mountainous areas and northeastern regions, exhibited a noticeable occurrence of agricultural labour. This finding underscores the resilience of agriculture as a primary economic activity in areas where alternative livelihood options are scarce. Conversely, regions boasting expansive landholdings and a spectrum of economic opportunities, such as the central parts, displayed a more moderate concentration of agricultural workers. This suggests a nuanced interplay between land availability, economic diversification, and the composition of the labour force. By identifying regions of concentration of the agricultural workforce, policymakers can develop targeted interventions to support agricultural development and enhance livelihood opportunities. Future research should investigate underlying drivers and their implications for rural communities' socio-economic well-being.*

Key words: Agricultural Workforce, Pattern, Agricultural Labourers, Cultivators, Workers

Introduction

Agriculture stands at the forefront of innovation and adaptation in an era defined by rapid technological advancements, shifting environmental dynamics, and growing global challenges. For thousands of years, agriculture has been an essential part of existence and has been considered to be the foundation of civilization. It is the art and science of cultivating plants and raising animals for food, fibre, fuel, and other purposes. The agriculture sector is the backbone of an economy which provides the basic ingredients to mankind and is now the raw material for industrialisation (Kurli, 2014). The role of agriculture in shaping economies, societies, and cultures has been evident from ancient agrarian societies to modern industrialised nations. On the other hand, many objectives like poverty alleviation, eradication of unemployment and inequality are also interlinked with the development of the agricultural scenario in developed and developing countries (Pujari, 2005).

The backbone of the world food system is the agricultural workforce, which contributes to all phases of agricultural production, from planting and growing crops to harvesting and preparing food. Our global food system is dependent on the agricultural workforce, which is made up of farmers, workers, and agribusiness specialists. It is necessary to guarantee food, fibre, and other agricultural goods that support human existence and promote economic growth are accessible and reasonably priced. Through acknowledging the significance of agricultural labourers and boosting their rights and means of subsistence, one can construct a more equal, more robust, and sustainable future for all. A crucial link in value chains, from sowing seeds to delivering food, is the agricultural labour force. Chaudhary and Singh (2021) attempted to explain the socioeconomic conditions of Agricultural labourers in Punjab. They recommended some suggestions for improving the conditions of Agricultural labourers like employment guarantee schemes and loan waiver plans. Reddy et al. (2014) tried to evaluate the evolving structure of rural production and employment over the last twenty years, examining its repercussions on the rural labour market. They observed a decrease in the labour force recently, particularly in agricultural employment, affecting both male and female workers. Moreover, the decline in female participation in agriculture exceeds that of male workers. In their study, Gade et. al (2109) concluded that inadequate or minimum wage is the major problem for Agricultural labourers in India. The government take various actions to overcome the problems like fixation minimum wage, SP schemes for providing employment, abolition of bonded labour, and agencies for development. Unni (1988) describes the trends in employment, wage earnings and income of agricultural labourers in rural labour households from 1956-57 to 1977-78 at the all-India level and for the 14 major states of the country. Duvvury (1989) examine the various facts about women labourers like their composition, inter-regional variations in participation rate and regional variations in the growth of agricultural labourers.

Agriculture is the cornerstone of Himachal Pradesh's economy, representing its largest and most crucial sector. Serving as both the primary industry and the predominant occupation for its residents, agriculture holds a paramount position in the state's prosperity and progress. It fulfils the demand for food grains, contributes significantly to income growth, and sustains the expanding population. During 2010-11, agriculture and its allied sector contributed 16 percent of the total state domestic product (Spehia,2015). Himachal Pradesh is the only state in the country whose 89.96 percent of the population (census 2011) lives in rural areas and this sector provides direct employment to about 62.85 percent (cultivators and agricultural Labourers) of agricultural workers of the state (Kumar and Lal,2022).

Objectives of the Study

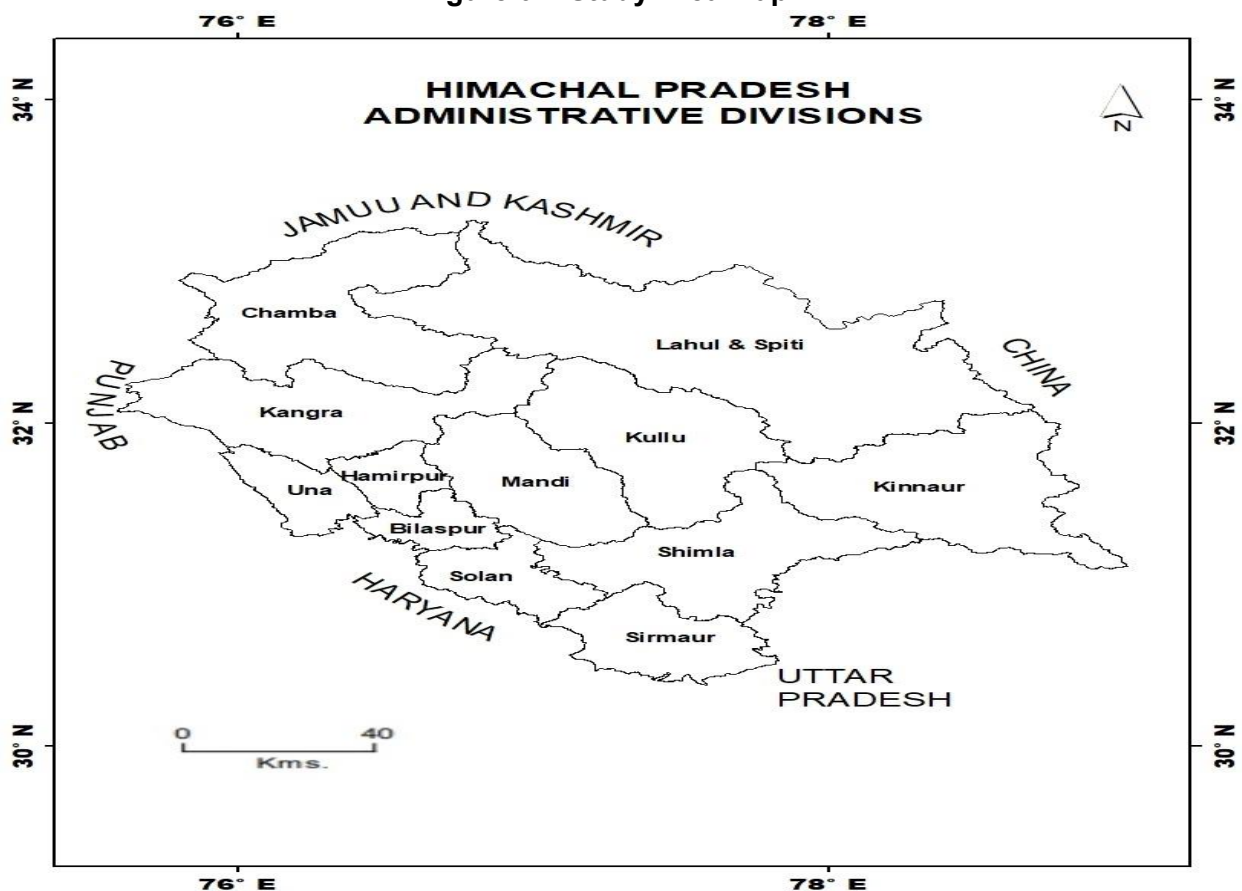
The objectives of the study are as follows:

- i. To know the spatial patterns of the Agricultural workforce as a resource in Himachal Pradesh in 2011.
- ii. To identify the factors responsible for heterogeneous distribution of the agricultural workforce of Himachal Pradesh.

Study Area

Himachal Pradesh has an area of 55,673 sq. km. situated between latitude 30° 22' to 33° 12' N and longitude 75°45' to 79° 04' E. It is bordered by Jammu and Kashmir to the north, Punjab to the west, Haryana to the southwest, Uttarakhand to the southeast, and China to the east. The state is characterised by its diverse terrain, comprising valleys, hills, and mountain ranges. Its elevation ranges from below 600 meters to over 4500 meters above sea level, increasing from west to east and south to north. Himachal Pradesh is endowed with five perennial rivers—Chenab, Ravi, Beas, Sutlej, and Yamuna—fed by snowfall. The average annual rainfall varies from 50 mm in Lahaul and Spiti to over 3400 mm in Dharamshala, with a mean of 1193 mm. As of the 2011 census, Himachal Pradesh had a total population of 6,864,602, with 3,481,873 males and 3,382,729 females. Administrative divisions are organized into 12 districts.

Figure 01: Study Area Map



Source: Statistical Abstract of Himachal Pradesh, Shimla, 2016

Methodology

The study is based on Secondary data which is taken from the Statistical Abstract of Himachal Pradesh, Shimla. For the present study data from the year 2011 is taken because after 2011, no census has taken place and secondly the projected population is also not authentic, because the different sources have different projections. Hence 2011 census data is selected

for their study. The agricultural workforce's percentages and averages have been calculated at the district level. Simple choropleth techniques are applied for preparing the maps to give a clearer picture of the percentage distribution of the patterns of total workers, Cultivators, and agricultural labourers in the study area.

Spatial Distribution of Total Workers In Himachal Pradesh In 2011

In Himachal Pradesh, out of a total population of 68,64,602, in which 35,59,422 people are working, which is about 51.85 percent of the total population. The per cent share of the total workers to the total population is highest at 66.89 per cent in the Kinnaur district and lowest at 41.37 per cent in the Una district. The region's average of 35.13 is not uniformly distributed because some districts have a high percentage of the workforce as compared to other districts. To know the spatial distribution of Total workers, the fig. 2 is grouped into three categories, each is discussed below:

Areas of High Per cent Share of Total Workers (>60 per cent): High category comprises of three districts of Himachal Pradesh namely Kinnaur, Kullu and Lahaul & Spiti. The share of Total workers in the Study region varies between 66.89 per cent in Kinnaur to 61.12 per cent in Lahaul & Spiti. This category covers the Eastern and Northeastern parts of the study region. Due to low population density, a large proportion of the population is engaged in economic activity for their livelihood, strong tourism business, and hard geo-climatic conditions, these districts have a high percentage of employees.

Areas of Moderate Per cent Share of Total Workers (50-60 per cent): This category contains the districts of Mandi, Bilaspur, Chamba, Hamirpur, Shimla, Sirmaur and Solan. The share of total workers is between 57.27 per cent in Mandi district to 51.47 in Solan. It covers more than half of the population of the study region. The proportion of workers rises in areas with difficult terrain and a limited rural population. Compared to Kinnaur, Kullu, and Lahaul & Spiti districts, all of these districts have climatic conditions that are less extreme than eastern districts. Owing to all these factors, the share of workers is recorded as moderate.

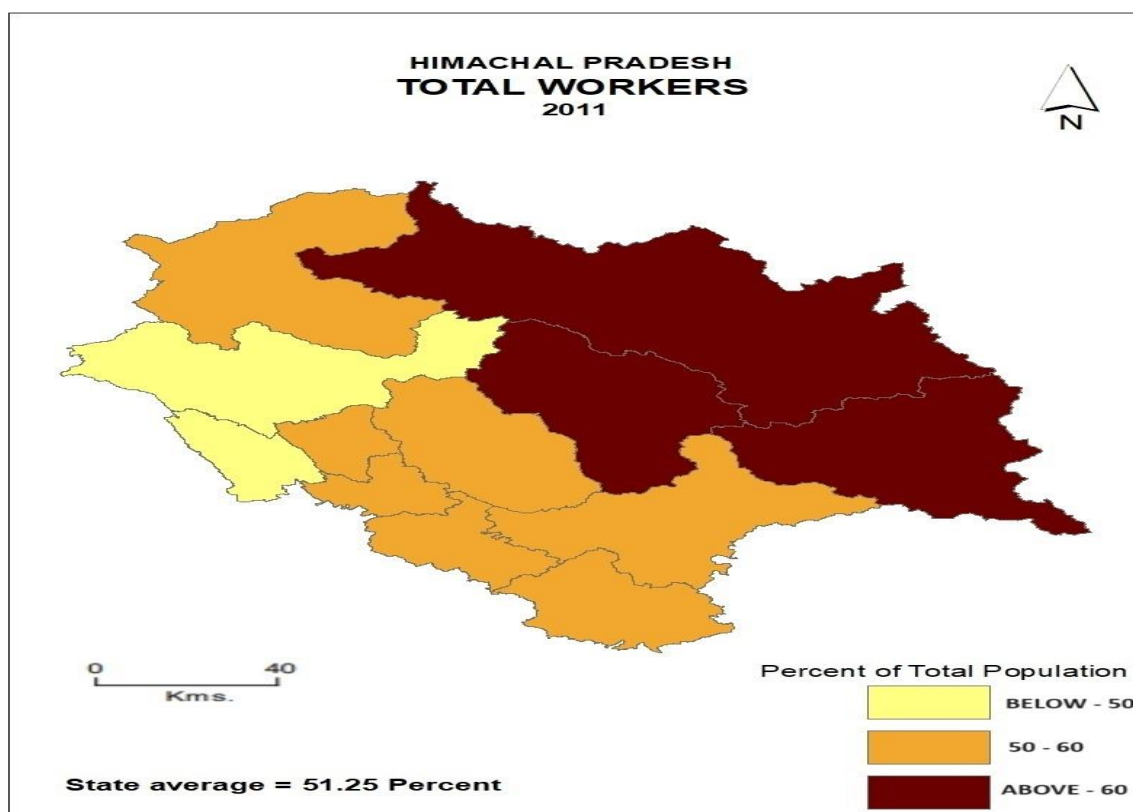
Areas of Low Per cent Share of Total Workers (<50 per cent): In this category, there are only two districts i.e. Kangra and Una. These per cent shares of total workers is 43.38 per cent in Kangra and 41.31 per cent in Una district which is lowest among all districts of the state. In this category, people were largely engaged in agricultural activities due to good terrain for cultivation, and most of the force migrated to neighbouring states for employment which is largely responsible for a low share of total workers.

Thus, study shows that there are more workers in mountainous areas which includes in secondary and tertiary activity and the northern and eastern parts of the study region compared to the Piedmont plains and Shiwalik Hills. However, there proportion is moderate in the Lesser Himalayas. In the central parts of Himachal Pradesh, there is a moderate number of workers.

Spatial Distribution of Cultivators in Himachal Pradesh: 2011

An agricultural worker who cultivates or prepares land for cultivation is called a Cultivator. Cultivators plough the land they either own or taken on rent (Sharma, 2014). According to the 2011 census, the proportion of cultivators to the total agricultural workers is 92.16 per cent in the study region. Their share range between 81.22 per cent in the Una district and 96.84 per cent in the Bilaspur district. Here are the three categories for showing the spatial distribution of Cultivators. Himachal Pradesh is divided into three categories

Figure 02: Total Workers, Himachal Pradesh, 2011



Source: Statistical Abstract of Himachal Pradesh, Shimla, 2016

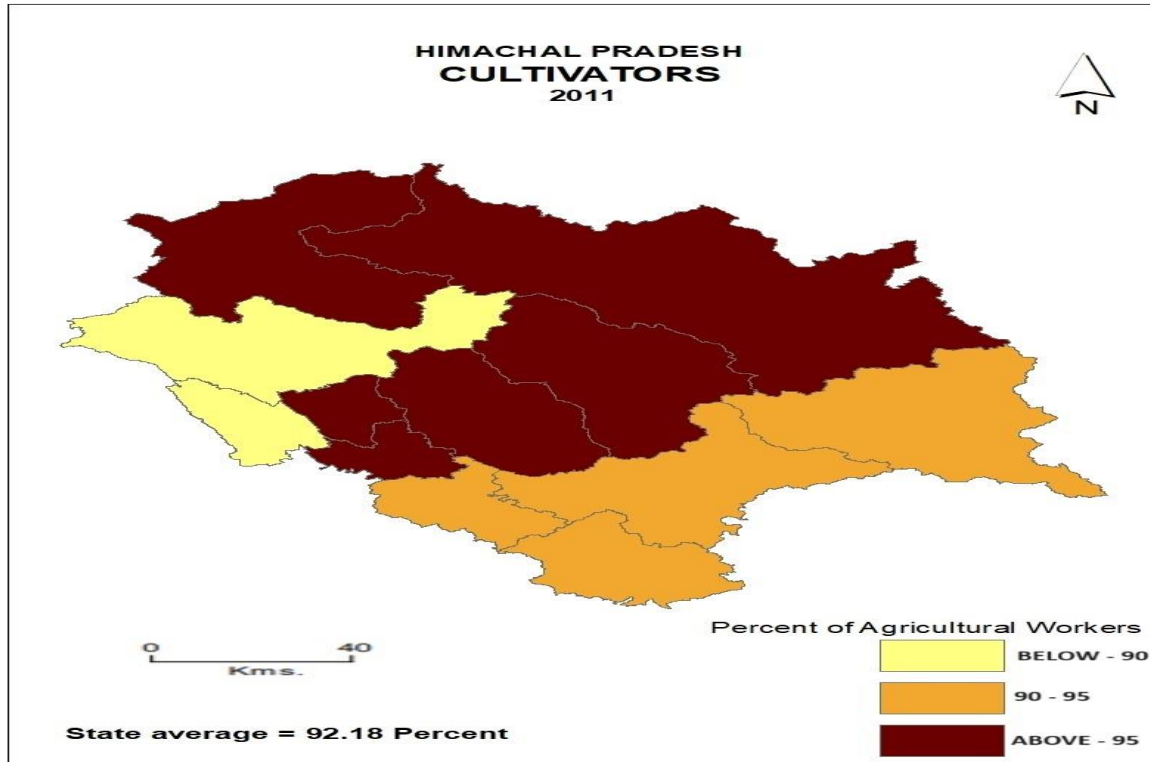
Category of High Concentration of Cultivators (< 95 per cent): This category of high concentration of cultivators includes districts named- Bilaspur, Chamba, Hamirpur, Kullu, Lahaul & Spiti and Mandi. Owing to the small size of land holdings, fewer opportunities in the non-agriculture sector, severe geo-climatic conditions, agriculture as the main occupation of the people, poor economic conditions of the farmers, etc. have compelled the farmers to work in their fields, consequently leading to a high share of cultivators in this category.

Category of Moderate Concentration of Cultivators (90 - 95 per cent): It comprises 5 districts of Himachal Pradesh namely Kullu, Kinnaur, Shimla, Sirmour and Solan. It covers 41.66 per cent of total occurrences. In this category, the percentage concentration of cultivators varies between 90 to 95 per cent. Landowners hire agricultural labourers on their farms because from these districts have horticulture as major component of agriculture which refuse a more hired labour force. Secondly literacy rate is moderate and most of the owners are deny govt jobs etc. which is responsible for the moderate concentration of cultivators.

Category of Low Concentration of Cultivators (> 90 per cent): The districts Kangra and Una fall in this category. These districts have mountains, hills, Piedmont and Shiwalik hills. The size of land holdings is comparatively large. Few workers engage in secondary and tertiary activities. Due to the large size of land holdings, farmers hire agricultural labourers to work on their fields, which resulted in a low share of cultivators

Thus, the above discussion shows that 92.17 per cent of the total agricultural workers are cultivators, with the lowest figure of 81.22 per cent in the Una district and the highest at 96.84 per cent in the Bilaspur district. The number of cultivators is higher in areas of small landholdings, limited opportunities for other economic activities, severe geo-climatic conditions, etc.

Figure 03: Cultivators, Himachal Pradesh, 2011



Source: Statistical Abstract of Himachal Pradesh, Shimla, 2016

Spatial Distribution Of Agricultural Labourers 2011

According to The National Commission on Labour, "an agricultural labourer is unskilled and unorganized and has little for its livelihood". The availability of Agricultural labourers is also a major constraint in the agricultural land use and cropping pattern of a region and the density of rural population also determines the status of agriculture. The concentration of agricultural labourers is highly variable in different districts of the region due to the degree of industrialization, urbanization, and development of infrastructure. Agriculture labourers in Himachal Pradesh are not evenly distributed. The per cent share of Agricultural labourers to the Agricultural workers is highest at 18.78 per cent in the Una district and the lowest at 3.21 per cent in Bilaspur. Fig. 4 shares of spatial distribution of Agricultural labourers in Himachal Pradesh.

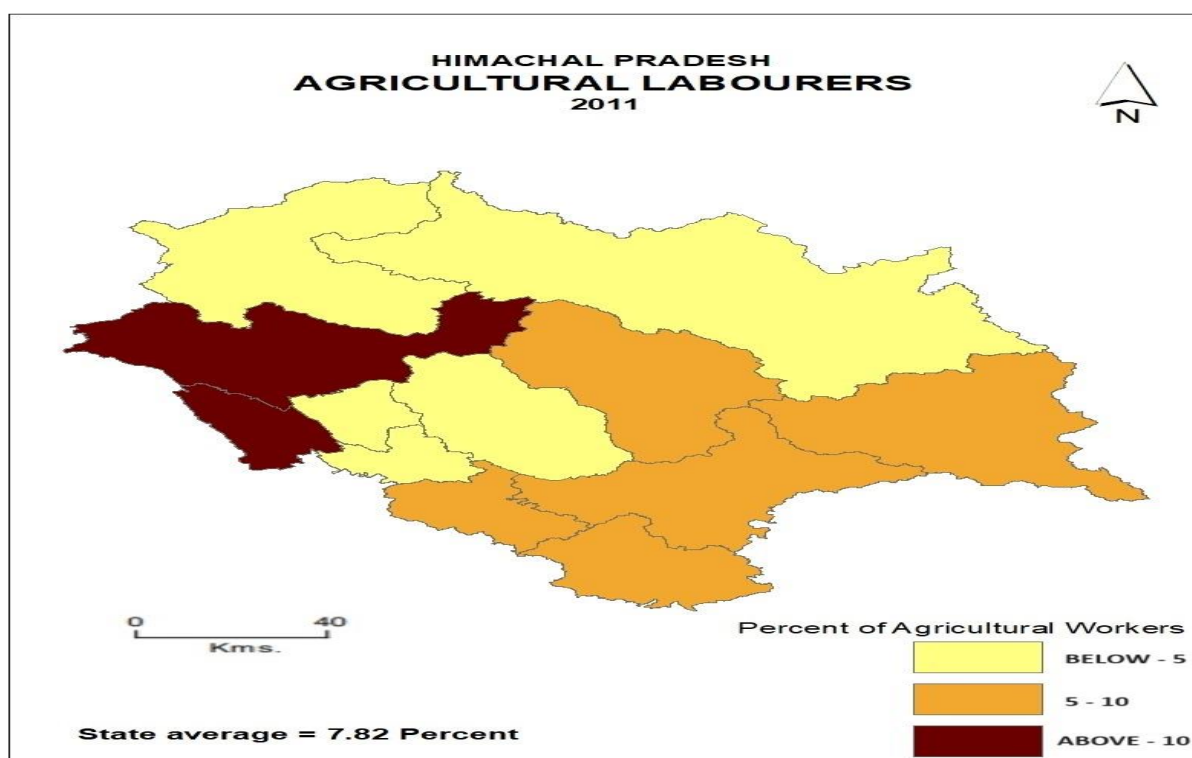
Category of High Concentration of Agricultural Labourers (< 10 percent): It includes two Himachal Pradesh districts of Kangra, and Una. In these districts, the share of agricultural labourers to the total workers is 18.78 per cent in Una and 15.33 per cent in Kangra. This category mainly covers the western parts of the study region. The reason for the High concentration of agricultural labourers is the fertile land for cultivation, geo-climatic conditions, and less industrial development. Due to the lack of development of commercial activities, most of the workforce is engaged in agriculture.

Category of Moderate Concentration of Agricultural Labourers (5-10 percent): This category covers the Southern, Northwestern and Western parts of Himachal Pradesh. It includes 6 districts Hamirpur, Kinnaur, Kullu, Shimla, Sirmaur, and Solan. The percentage of agricultural labourers in this category varies from 9.47 per cent in Shimla to the lowest of 5.54 per cent in Sirmaur. Here the share of cultivators is also moderate and contains.

Category of Low Concentration of Agricultural Labourers (> 5 percent): This category covers the Eastern and Northeastern parts of Himachal Pradesh. In this zone 4 districts namely Lahul-Spiti (4.85 per cent), Chamba (4.47 per cent), Mandi (3.93 per cent) and Bilaspur (3.22 per cent). In Lahul-Spiti, the climate and terrain are not suitable for agricultural activities. In the western zone of this category, industrialization and urbanization factors dominate. Consequently, this zone has a lower share of agricultural workers.

Thus, the above study shows that 7.82 per cent of the total agricultural workers are Agricultural labourers, with the highest figure of 18.78 per cent in the Una district and the lowest at 3.16 per cent in the Bilaspur district.

Figure 04: Agricultural Labourers, Himachal Pradesh, 2011



Source: Statistical Abstract of Himachal Pradesh, Shimla, 2016

Table 01: Percent Share of Agricultural Workforce in Himachal Pradesh: 2011

#	Districts	Percentage of Total Workers to the Total Population	Per cent of Cultivators to Agricultural workers	Per cent of Agricultural Labourers to Agricultural workers
1	Bilaspur	53.89	96.84	3.16
2	Chamba	57.43	95.53	4.47
3	Hamirpur	53.19	95.34	4.66
4	Kangra	43.38	84.67	15.33
5	Kinnaur	66.89	92.85	7.15
6	Kullu	61.44	95.09	5.91
7	Lahaul & Spiti	61.81	95.15	4.85
8	Mandi	57.24	96.08	3.92
9	Shimla	52.93	90.53	9.47
10	Sirmaur	52.86	94.46	5.54
11	Solan	51.47	93.21	6.79
12	Una	41.37	81.22	18.78
Total	H. P	51.85	92.18	7.82

Source: Statistical Abstract of Himachal Pradesh, Shimla, 2016

Conclusion and Suggestions

The study underscores the pivotal role of agriculture in Himachal Pradesh's rural economy and highlights the disparities in the distribution of agricultural workforce across different districts. Employing secondary data from the Statistical Abstract of Himachal Pradesh, the study analyzed the distribution patterns of the agricultural workforce at the district level. Findings revealed a non-uniform distribution of the total workforce, with certain districts exhibiting higher concentrations compared to others.

The study found that areas with challenging geo-climatic conditions and limited alternative economic activities, such as mountainous areas and the northeastern parts, demonstrated higher proportions of agricultural workers. Conversely, areas with larger landholdings and diverse economic opportunities, like the central parts, showed moderate concentrations. Furthermore, the study has elaborated the distribution of cultivators and agricultural labourers across districts, highlighting their crucial roles in agricultural activities. It identifies areas with high, moderate, and low concentrations of these workers, offering an understanding of the agricultural landscape's details.

The research underscores the need for nuanced policy interventions personalized to address each region's specific challenges and opportunities. By understanding where agricultural workforces are and what they need, one can make smart decisions to make farming better, help people earn more, and make sure everyone benefits from a strong farming sector. Also, by empathising with the spatial dynamics of the agricultural workforce and implementing targeted strategies, Himachal Pradesh can enhance its agricultural sector's potential to foster inclusive growth and prosperity for all its residents.

References

1. Chaudhary, A. and Singh, S. (2021) Socio-Economic Conditions of Agricultural Labourers in Punjab. *Indian Journal of Agricultural Economics*, 76(3), Pp. 443-452.
2. Duvvury, N. (1989) Work Participation of Women in India: A Study with Special Reference to Female Agricultural Labourers, 1961 To 1981. *Limited Options: Women Workers in Rural India*, Pp. 63-107.
3. Gade, S. Purohit, M. And Kaktikar, S. (2019) A Study of Problems of Agricultural Labourers in India. 8, Pp. 184-186.
4. Kumar, A. and Lal, M. (2022) The Decline of Cultivators and Rise of Agricultural Labourers in the Rural Areas of Himachal Pradesh. *Journal of Finance and Economics*, 10(3), pp. 62-67.
5. Kurli, V. (2014) Regional Imbalance in Levels of Agricultural Development – A Study. *International Journal of Emerging Technologies and Innovative Research*, 1(6), pp. 1360-1368.
6. Pujari, A. K. (2005) Efficiency and Productivity in Indian Agriculture: *A Stochastic Frontier Approach*. Ministry of Information and Broadcasting, Government of India. (IGIDR), 1-353
7. Sangamithra, A. and Arunkumar, P. (2018). A Study on Socioeconomic Conditions of Agriculture Workers in Theni District. 6, pp. 79-82.
8. Spehia, R. S. (2015) Status and Impact of Protected Cultivation in Himachal Pradesh, India. *Current Science*, pp. 2254-2257.
9. Statistical Abstract of Himachal Pradesh, 2016
10. Unni, J. (1988) Agricultural Labourers in Rural Labour Households, 1956-57 To 1977-78: Changes in Employment, Wages and Incomes. *Economic and Political Weekly*, pp. 59-68.