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Trends and Inequality in the Ownership Land Holdings in Himachal Pradesh

[1] DR. K.C. SHARMA [2] SHILU
[1] Professor of Economics, [2] Research Scholar,
[1, 2] Department of Economics, Himachal Pradesh University, Shimla
Email: kc25sharma@gmail.com Email: Kaushal.shilu@gmail.com

Abstract: *Agriculture is the main occupation of the people of Himachal Pradesh and has an important place of the State. Himachal Pradesh is the only state in the country whose 89.96 per cent population (2011) lives in the rural areas. Over 93 per cent of the population in Himachal depend directly upon agriculture which provides direct employment to 71 per cent of its people. The agricultural sector of Himachal Pradesh has more than 45 per cent contribution in the economy in term of the state domestic product. The agriculture and allied sector generate a revenue of nearly 22.5 per cent of the gross state domestic product. The farming community of the state holds an area of 9.99 lakh hectares which is run by 8.63 lakh farmers out of the total geographical area of 55.673 lakh hectares. Around 84.5 per cent of the total land held by the farming community of Himachal Pradesh are owned by the marginal and small farmers. There are lot of studies going on land related issues, but the present would be based on trends and inequality in the ownership land holding in Himachal Pradesh. The paper tries to look at various aspects of ownership land holdings (growth rate in terms of both total number and area under different size class) in Himachal Pradesh, for the period spanning 1970-71 to 2010-11. Further, it is concluded that the number of ownership holdings increased significantly, and the area operated has also increased marginally at the aggregate level. The Gini values has declined from 0.71 in 1970-71 to 0.60 in 2010-11 which indicated a reduction of inequalities in the distribution of ownership holdings in the State. This paper is based on the secondary data available in Agricultural Census of Himachal Pradesh, different reports of Statistical Abstract and Annul Season and Crop Report etc. Various statistical and graphical techniques have been used to analyse the data.*

Key Words: *Ownership Land Holdings, Inequality, Distribution pattern, Gini Co-efficient, Lorenz curve.*

1. INTRODUCTION:

The increase in the population has put enormous pressure on production resources. The land is one of the fundamental factors of production, and the effect of increase in population has been most severely felt on this resource. This has led to the fragmentation of holdings in the rural areas on two accounts. One, it is primarily due to the operation of the law of succession resulting into the diversion and fragmentation of operation holdings and secondly due to wilful attempt of people to circumvent certain provisions of ceiling laws. This has resulted in an increase in the number of marginal and small farms and a reduction in the size of operated holdings of the farmers. The extent of profitability of agricultural operation and its efficiency will ultimately depend upon the size of the unit of cultivation. Although new agricultural technology is neutral to the size of farmers, still depending upon nature of the soil and other factors, there is a minimum size of the farm below which farming becomes unprofitable, whatever the technology be. Hence, the policies must be designed according to the existing distribution of operation holdings, or the structure of the distribution must be altered to the requirements of the strategies to activate to the agriculture sectors[1].

2. OBJECTIVES:

Given the fact that the majority of the population in Himachal Pradesh are depending on the agricultural sector, the following objectives were framed to analyse the persisting inequality in the ownership land holdings:

- To analyse the changes in the distribution of number and area of ownership holding across the various farm size groups in Himachal Pradesh.
- To analyse district wise changes in the ownership land holding for the period from 1970-71 to 2010-11.

3. REVIEW OF LITERATURE:

Bhalla and Chadha[2] (1982), conducted a study on "Green Revolution and the Small Peasant". They analysed the impact of green revolution on income distribution among cultivating household in Punjab and concluded that the advent of the green revolution in Punjab had brought overall prosperity to its peasantry which was the result of the creation of an assured irrigation base and its reasonably equitable distribution. Sandhu and Grewal[3] (1987) emphasized the study on the changing land holding structure in Punjab. They concluded that the ownership of holding was an essential part of the agrarian structure and revealed that the distribution of ownership holdings was extremely skewed. Paul[4] (1989) conducted a study on green revolution and income distribution among farm families in Haryana. He concluded that the new agriculture technology had increased farm productivity although the real per capita income of farm families did not have any significant improvement. Ramseyer[5] (2012) studied "The Fable of Land Reform: Expropriation and Retribution in occupied Japan." He examined the reduction in rural poverty due to the land reforms in Japan and was of the opinion that land reforms needed not just reduction in rural poverty, but productivity could be raised, and civic engagement could also be promoted. Basu[6] (2014), conducted a study on land reform and agriculture productivity in India. He further evaluated the impact of land reforms in India on agricultural modernization in twelve states and concluded that there were significant effects of tenancy reform and land ceiling legislation on agricultural modernization. Tenancy reforms had a positive impact with some measure of modernization, and it contributed to both agricultural productivity and economic equity. Rahimzadeh[7] (2018) focused on political ecology of land reforms in Kinnaur. He used primary data which was collected from 35 villages of Kinnaur by eleven months of fieldwork from 2010 to 2014. He examined that a series of land reforms were implemented in the Kinnaur district of Himachal Pradesh in the Indian Himalayas throughout the 20th century.

4. METHODOLOGY AND TECHNIQUES OF ANALYSIS:

To achieve objective of the paper, secondary data derived from the various issues of Agriculture Census of India & Himachal Pradesh, Economic Survey of India., Annual Season & Crop Report, Five Year Plan Document and various reports of the research institute related to the agriculture. The analysis was carried out for the five classes of farmers, viz. marginal (having operational holding below 1 hectare), small (1-2 hectare), semi-medium (2-4hectares), medium (4-10 hectares), and large farmers (having operational holding above ten hectares) respectively. In general, to make the analysis simple and more understandable, tabular analysis have been used. However, in some places where the need arose, sophisticated statistical tools have also been used. For example, Gini coefficient is used to examine the behaviour of operational holdings. The Gini coefficient is used to measure the concentration of operational holdings over the period. To achieve the above objectives, relevant statistical techniques are as follows:

4.1 GINI COEFFICIENT

Gini coefficient is most widely used measure of inequality as it is straight forward, easy to understand and less complicated to calculate. Its value ranges from 0 to 1, being 0 the value of perfect equality and 1 of maximum inequality. Another advantage of Gini coefficient is that it can be easily represented in Lorenz graph. The following formulation is used to obtain the Gini coefficient:

Gini Coefficient = $1/10000\ [\sum X_i Y_{i+1} - \sum Y_i X_{i+1}]$

where Xi and Yi are the cumulative percentages of variable[8].

4.2 LORENZ CURVE

It is a graphical method of measuring dispersion. It is widely used in the study of income distribution, land distribution, wages distribution and distribution of profits amongst different groups of business, etc. Dr Lorenz devised it for measuring the inequalities in the distribution of income, land and wages. The technique of drawing Lorenz curve is very simple. In it the size of items and the frequencies are both cumulated and taking the total as 100, percentages are calculated for the various cumulated values. These percentages are plotted on a graph paper as shown in figure 1. If there is the proportionately equal distribution of the frequencies over Various values of a variate, the points will lie in a straight line. This is called the "Line of Equal Distribution." If, however, the distribution of items is not proportionately equal, it indicates variability, and the curve would be away from the line of distribution. The farther the curve is from the line, the greater is the variability in the series[9].

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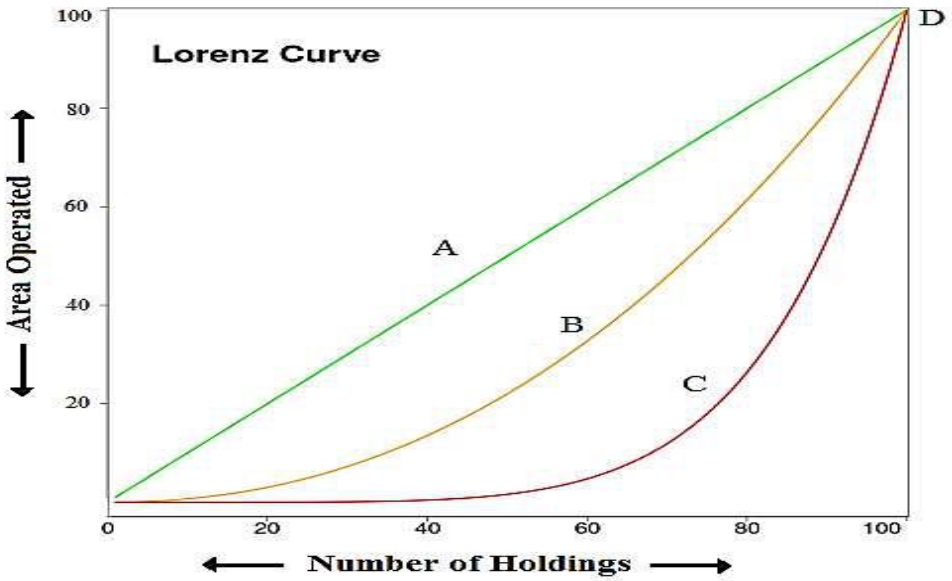
Figure 1



5. DISTRIBUTION PATTERN OF OWNERSHIP HOLDINGS BY SIZE CLASSES IN HIMACHAL PRADESH

Land, with permanent heritable possession with or without the right to transfer the title, was considered as owned land. The land held in owner-like possession under a long-term lease or assignment (e.g. village land possessed by a tribal household as per traditional tribal rights or community land customarily operated by the tenant for a long period) was also treated as owned land. A household ownership holding includes all plots or parts of the plot of land owned by a member of the household, whether the land is cultivable or not. Besides cultivable land, household ownership holdings may also include, cultivable land, the area under forest, barren and uncultivable land, cultivable waste land, land put to non-agricultural uses (viz, house sites, roads etc.), and land growing miscellaneous tree crops, etc[10].

The following table 1.1 gives the percentage distribution of number and area of ownership holdings as per the data collected by the agricultural census in 1970-71, 1980-81, 1990-91, 2000-01 and 2010-11. It is seen from the table that there has been the sharpest increase in the number of marginal holdings, followed by a small size, the latter three size groups (semi-medium, medium and large) shows a declining trend. The percentage of the number of ownership holdings in marginal size group has increased from 57.8 per cent in 1970-71 to 70.1 per cent in 2010-11. The total number of small holdings has slightly decreased from19.6 per cent to 18.2 per cent during this period. The percentage distribution of number of semi-medium holdings has also decreased considerably from 13.6 per cent in 1970-71 to 8.8 per cent to 2010-11, while the share of large holdings has been declined from 2.1 per cent in 1970-71 to 0.3 per cent in 2010-11.

On the other hand, in case of area of ownership holdings during 1970-71 to 2010-11, which is also presented in table 1.1, shows that the total area of ownership holding has increased from 14.6 per cent to 28.9 per cent from 1970-71 to 2010-11. The total area of small holdings has increased from 18.2 per cent to 25.6 per cent during this period. The share of area operated by semi-medium holding has decreased from 24.4 per cent to 24.0 per cent from 1970-71 to 2010-11, while the share of medium and large holdings has been declined from 22.8 per cent to 16.2 per cent and 20.0 per cent to 5.3 per cent during 1970-71 to 2010-11.

Table 1.1

Percentage Distribution of Number and Area of Households of Ownership Holdings in Himachal Pradesh

S. No.	Size of Class	1970-71		1980-81		1990-91		2000-01		2010-11	
		Number	Area	Number	Area	Number	Area	Number	Area	Number	Area
1.	Marginal (Below 1 hec)	57.8	14.6	57.8	14.9	64.8	22.1	68.0	26.4	70.1	28.9
2.	Small (1-2 hec)	19.6	18.2	20.4	19.2	19.7	23.9	18.8	25.1	18.2	25.6
3.	Semi – Medium	13.6	24.4	13.5	24.1	10.9	25.4	9.5	24.6	8.8	24.0

	(2-4 hec)										
4.	Medium (4-10 hec)	6.9	22.8	6.9	26.1	4.0	19.5	3.2	17.6	2.6	16.2
5.	Large (10 hec & above)	2.1	20.0	1.4	15.7	0.6	9.1	0.5	6.3	0.3	5.3
6	Total	100	100	100	100	100	100	100	100	100	100

Source: Government of Himachal Pradesh, Report on Agriculture Census, Directorate of Land Record, Shimla (various issues)

Table 1.2

Cumulative Percentage Distribution of Number and Area of Ownership Holdings in Himachal Pradesh

S. No.	Size of Class	1970-71		1980-81		1990-91		2000-01		2010-11	
		Number	Area	Number	Area	Number	Area	Number	Area	Number	Area
1.	Marginal (Below 1 hec)	57.8	14.6	57.8	14.9	64.8	22.1	68.0	26.4	70.1	28.9
2.	Small (1-2 hec)	77.4	32.8	78.2	34.1	84.5	46.0	86.8	51.5	88.3	54.5
3.	Semi – Medium (2-4 hec)	91.0	57.2	91.7	58.2	95.4	71.4	96.3	76.1	97.1	78.5
4.	Medium (4-10 hec)	97.9	80.0	98.6	84.3	99.4	90.9	99.5	93.7	99.7	94.7
5.	Large (10 hec & above)	100	100	100	100	100	100	100	100	100	100

Source: Government of Himachal Pradesh, Report on Agriculture Census, Directorate of Land Record, Shimla (various issues)

On the other hand, the Lorenz curve on the distribution of ownership holding shows that increasing marginalization leads to an equitable distribution of ownership holdings. The Lorenz curve has been drawn by using cumulative percentage distribution of number and area of ownership holdings which is presented in table 1.2. The Lorenz curve for the successive agriculture censuses shows that the curve is approaching the line of equality. In 1970-71 the curve is very far from the line of equality which can see through the orange colour curve but in 2010-11 the curve is approaching near which can be seen through the green colour curve. Hence, it proves that the inequality in the distribution of ownership holding has been brought down during the period of 40 years.

Figure 2

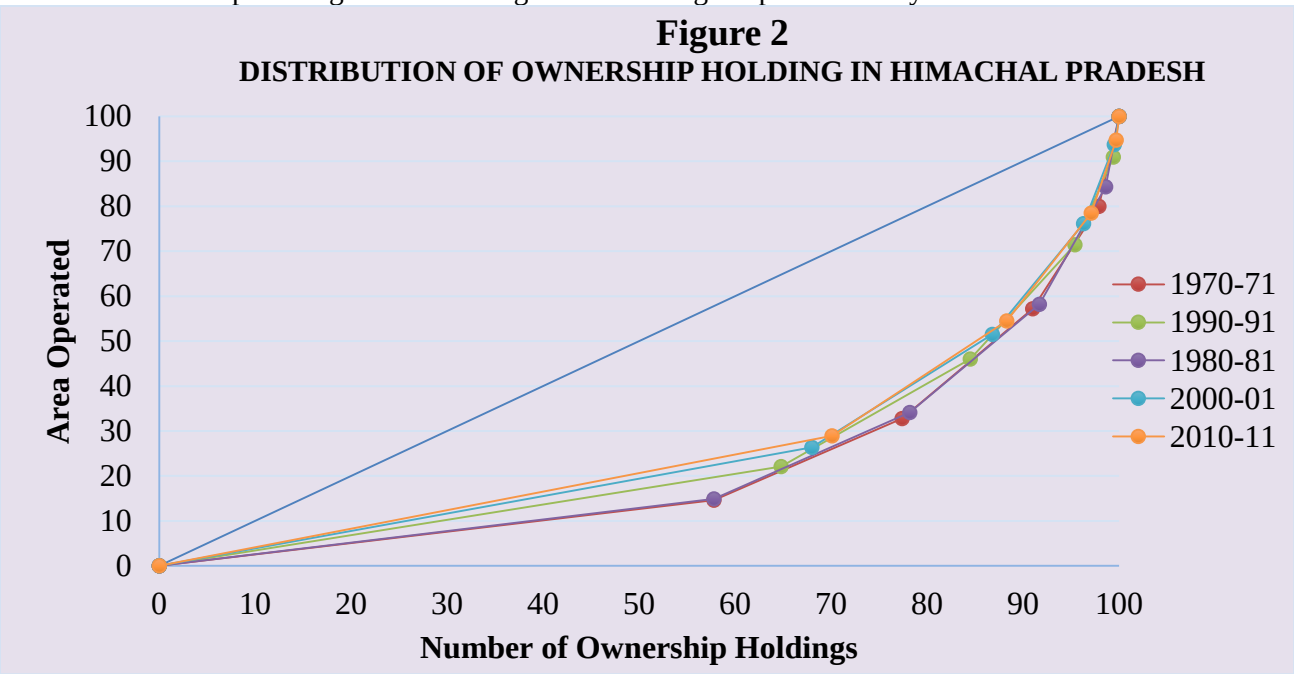


Table 1.3 Gini Coefficient of Ownership Holdings by Districts

Districts	1970-71	1980-81	1990-91	2000-01	2010-11
Bilaspur	0.57	0.56	0.51	0.51	0.49
Chamba	0.53	0.51	0.49	0.46	0.43
Hamirpur	0.65	0.65	0.60	0.57	0.56
Kangra	0.85	0.79	0.70	0.64	0.64
Kinnaur	0.63	0.62	0.66	0.66	0.66
Kullu	0.61	0.56	0.53	0.47	0.47
Lahaul & Spiti	0.57	0.54	0.53	0.52	0.51
Mandi	0.61	0.67	0.52	0.49	0.52
Shimla	0.68	0.64	0.63	0.59	0.58
Sirmaur	0.72	0.72	0.73	0.70	0.69
Solan	0.44	0.61	0.60	0.58	0.57
Una	0.85	0.74	0.77	0.68	0.65
H.P.	0.71	0.71	0.65	0.61	0.60

Source: Government of Himachal Pradesh, Report on Agriculture Census, Directorate of Land Record, Shimla (various issues).

Further the gini coefficient is used to measure the inequality. It may be seen from the above table that the concentration of holdings, declined markedly across the districts during 1970-71 and 2010-11. In 1970-71, the concentration ratio was highest in Kangra and Una (0.85), followed by Sirmaur (0.72), Shimla (0.68), Hamirpur (0.65), Kinnaur (0.63), Kullu (0.61), Mandi (0.61), Bilaspur (0.57), Lahaul & Spiti (0.57), Chamba (0.53) and Solan (0.44). As regards, 1990-91, the concentration of ownership holding in term of Gini coefficient was declined in nine districts while in Sirmaur (0.73), Kinnaur (0.66), and Solan (0.60) districts the inequalities rather increased. But in the 2010-11 census, inequalities in distribution of ownership holdings in almost all the districts have decreased but in Kinnaur (0.66) and Mandi (0.52) it was constant. If we see the overall scenario of Himachal Pradesh, the value of Gini coefficient has been showing the decreasing trend during the study period. In 1970-71 the concentration ratio was 0.71 which decreased to 0.60 in 2010-11. This analysis of Gini coefficient clearly brings out the reduction in inequalities in the distribution of ownership holdings in the successive agriculture census.

6. CONCLUSION:

It is found that there has been a sharp increasing trend in the total number of ownership holdings, with the accelerated speed with each passing decade. The sharpest increase in the number of ownership holdings is seen in marginal category, followed by small size group, though in terms of percentage of holding, the latter three size group (semi-medium, medium and large) show a secular declining trend. Similarly, the area owned by the total ownership holdings shows a declining trend over the period, but the area owned by the marginal size group increased very sharply over the years, while that by small size group increased moderately and by the semi-medium, medium and large size group decreased. This has largely happened due to the sub-division of holdings and in the case of marginal holdings, partly due to the distribution of government land. Further, the values of Gini coefficient have decreased during the study period in almost all the districts of the state except Solan and Kinnaur district due to land acquisition for industrialization, the establishment of hydroelectricity projects and creation of infrastructural facilities.

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