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THE CHANGING LAND HOLDINGS STRUCTURE IN PUNJAB

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The structure of land holdings has long been recognised as an important determinant of equity and efficiency in the agricultural sector. In fact, the existing structure sets a pre-condition to the way in which the resources would be used in a region or the sector as a whole. It affects the choice of technology as well as the rate of adoption of technological innovations. In turn, the structure itself gets modified under the effect of technology.

In a limited sense, the structure involves the relative position of different categories of farmers with respect to ownership and operation of land. The basic features of structure, therefore, include ownership holdings, operational holdings and tenancy which explain the transformation of ownership holdings into operational holdings. The present study attempts to examine the changes in the three aspects of the structure of land holdings in Punjab over the last three decades.

Ownership Holdings

The ownership holding is the most fundamental aspect of agrarian structure in a developing economy. Welfare in traditional agriculture was known to be a function of land holding. With larger benefit of improved technology going to the bigger land holders, the relationship could only have become stronger later on. Yet, recent surveys have ignored this aspect of structure and concentrated on operational holdings only.

The data on ownership holdings were obtained from the 8th, 17th and 26th Rounds of the National Sample Survey (NSS) and pertained to the years 1953-54, 1961-62 and 1971-72 respectively. Comparable data for later time period were not available either from the NSS or some other source. During the period under study, the State was reorganised twice, first in the year 1956 when the erstwhile States of Punjab and PEPSU were merged and later in 1966 when the State was partitioned on linguistic basis. The absolute number of holdings and area owned by them were, therefore, not comparable over time. However, the number of holdings per thousand hectares, average farm size and growth rate of holdings worked out for different time periods represented the gross effect of all the forces affecting the size class distribution of holdings including the reorganisation of the State.

The number of household ownership holdings per thousand hectares, average size of holdings and rate of growth of holdings for different time periods are presented in Table I.

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TABLE I. NUMBER OF OWNERSHIP HOLDINGS PER THOUSAND HECTARES, AVERAGE SIZE AND RATE OF GROWTH OF HOLDINGS, PUNJAB, 1953-54, 1961-62 AND 1971-72

Particulars	1953-54	1961-62	1971-72
Ownership holdings per thousand hectares	454	510	698
Average size (hectare)	2.21	1.96	1.43
Compound growth rate	—	1.50	3.19

The number of ownership holdings per thousand hectares (ha.) in the State increased from 454 in 1953-54 to 510 in 1961-62 and to 698 in 1971-72. The number of holdings increased at the compound growth rate of 1.50 and 3.19 per cent over the two time spans. Consequently, the average size of ownership holdings decreased from 2.21 ha. in 1953-54 to 1.96 ha. in 1961-62 and 1.43 ha. in 1971-72.

The percentage distribution of ownership holdings and area owned by the selected size classes revealed important changes towards the extreme ends of the distribution (Table II). There was a general decline in the percentage of households as well as area owned by them in the upper size classes. The

TABLE II. PERCENTAGE DISTRIBUTION OF ESTIMATED NUMBER OF HOUSEHOLDS AND AREA OWNED BY SIZE CLASS OF OWNERSHIP HOLDINGS, PUNJAB, 1953-54, 1961-62 AND 1971-72

Size class of ownership holdings (ha.)	1953-54		1961-62		1971-72	
	Number	Area	Number	Area	Number	Area
0	35.51	0.00	12.33	0.00	7.14	0.00
0.002—0.20	15.29	0.65	36.86	0.41	50.78	0.60
0.20—0.40	—	—	3.97	0.61	1.94	0.39
0.40—1.00	9.54	3.03	8.26	2.86	7.64	3.48
1.01—2.02	10.21	7.12	9.22	6.99	8.37	8.87
2.03—3.03	8.34	9.41	8.06	10.40	8.02	13.60
3.04—4.04	5.03	8.18	5.61	9.92	4.69	11.46
4.05—6.07	6.14	13.54	5.78	14.56	5.84	19.84
6.08—8.09	3.60	11.47	4.09	14.42	1.76	8.44
8.10—10.12	2.11	8.61	2.10	9.55	1.59	9.68
10.13—12.14	1.49	7.39	1.28	7.30	1.10	8.35
12.15—20.24	1.73	11.83	2.04	15.88	0.88	9.69
Above 20.25	1.01	18.77	0.40	7.10	0.25	5.60

percentage of households in size classes above 8.10 ha. declined from 6.34 in 1953-54 to 5.82 in 1961-62 and to 3.82 in 1971-72 while the percentage of area owned by them declined from 46.60 to 39.83 and to 33.32 respectively during these periods.

At the other end of the distribution, there was a sharp decline in the percentage of landless households from 35.51 in 1953-54 to 12.33 in 1961-62 and to 7.14 in 1971-72. This was probably due to the fact that most of them acquired ownership rights on small pieces of land for agricultural or residential purpose and got entry to the smallest land owning class of 0.002 to 0.4 ha. A small contribution of holdings in this class could well have been due to sub-division of larger holdings as the combined percentage of landless households and those falling in the smallest size class of holdings increased from 49.19 in 1961-62 to 57.92 in 1971-72. In the 17th and 26th Rounds, this

class was sub-divided into two classes of 0.002 to 0.20 ha. and 0.20 to 0.40 ha. This showed that a very large percentage of households (36.86) actually belonged to the smallest sub-class (0.002-0.20 ha.) in 1961-62 and owned merely 0.41 per cent of the area. The percentage of holdings in this sub-class further increased to 50.78 in 1971-72 and owned only 0.60 per cent of the area.

The ownership structure in the State in 1971-72 revealed that less than four per cent of the total households owned one-third of the area and another one-fifth of the households owned slightly more than half the area, thereby leaving one-seventh of the area for the remaining three-fourths of the households. Again, only seven per cent of the households in the State were landless, while 51.0 per cent belonged to the lowest size class (0.002 to 0.20 ha.). On an average, these holdings owned only 169 square metres of land. This shows that most of these holdings are concentrated towards the lower limit of this size class and could easily be grouped in still a smaller size class. Such holdings promise very small income and are impossible to operate independently. Agriculture cannot be the major source of income of the households owning such small pieces of land. Apart from this, the holdings in this size class together occupy a mere 0.60 per cent of the total area. As such, these holdings have practically no importance as agricultural holdings from the point of view of social welfare and total agricultural production in the State. These holdings unnecessarily inflate the number of marginal holdings and to that extent, misdirect policy.

A much better picture of agricultural ownership holdings could be obtained by excluding the holding in the size-group of 0.002 to 0.20 hectare and the area owned by them from the analysis. The remaining size classes included only 42 per cent of the rural households. This percentage coincided closely with the percentage of cultivators (42.56) in rural working population of the State in 1971. These households owned 99.40 per cent of the total area. The distribution of the owner households having more than 0.20 ha. of land is presented in Table III.

TABLE III. PERCENTAGE DISTRIBUTION OF NUMBER OF HOUSEHOLDS AND AREA OWNED BY SIZE CLASS OF OWNERSHIP HOLDINGS ABOVE 0.20 HECTARES IN RURAL PUNJAB, 1961-62 AND 1971-72

Size class of ownership holdings (ha.)	1961-62		1971-72	
	Number	Area	Number	Area
0.20—0.40	7.81	0.61	4.61	0.39
0.40—1.00	16.26	2.87	18.15	3.50
1.01—2.02	18.15	7.02	19.88	8.92
2.03—3.03	15.86	10.44	19.05	13.68
3.04—4.04	11.05	9.96	11.14	11.53
5.05—6.07	11.37	14.62	13.87	19.97
6.08—8.09	8.05	14.48	4.23	8.49
8.10—10.12	4.10	9.59	3.78	9.74
10.13—12.14	2.53	7.33	2.61	8.40
12.15—20.24	4.03	15.95	2.09	9.75
Above 20.25	6.79	7.13	0.59	5.63

A comparison of distribution for 1961-62 and 1971-72 showed a decline in the percentage of households in size classes below one hectare and a slight

increase in the percentage area owned by them. There was a decline in the number of households and area owned in the size classes above 10.12 ha. This suggested a more equitable distribution of land in ownership holdings during this period. The result was confirmed by a decline in Gini ratio from 0.514 to 0.482.

Operational Holdings

The data on operational holdings were obtained from the Agricultural Censuses and pertained to the years 1970-71 and 1980-81. These sources were preferred due to higher degree of comparability of data emanating from a larger extent of coverage and uniformity of definitions and concepts adopted in the censuses. The size class distribution of the number of operational holdings and area owned by them is presented in Table IV. This showed

TABLE IV. DISTRIBUTION OF NUMBER OF OPERATIONAL HOLDINGS AND AREA OPERATED BY THEM IN PUNJAB, 1970-71 AND 1980-81

Size class of operational holdings (ha.)	Area (thousand hectares)			Number of holdings (thousands)		
	1970-71	1980-81	Difference	1970-71	1980-81	Difference
Less than 1.0	225	118	-107	517	198	-319
1.0—2.0	372	281	-91	260	199	-61
2.0—4.0	795	791	-4	281	288	7
4.0—10.0	1,515	1,565	50	248	261	13
10.0—20.0	770	791	21	58	62	4
20.0—30.0	181	205	24	8	9	1
More than 30.0	116	141	25	3	3	0
Total	3,974	3,892	-82	1,375	1,020	-355

that the total number of holdings in the State declined from 1,375 thousand in 1970-71 to 1,020 in 1980-81, while the area operated by them declined from 3,974 thousand ha. to 3,892 thousand ha. during this period. The decline in the number of holdings was to the extent of 25.65 per cent and that of area was only by 2.07 per cent. As such, the decline in area was much less than the decline in the number of holdings. In view of the 17.4 per cent increase in population and 3.4 per cent increase in net cultivated area in the State during this decade, this result is contrary to common expectation.

The observed decline in the holdings and area operated by them could partly be attributed to the difference in the methodology of the two censuses. While in 1970-71 complete enumeration of the operational holdings and operated area was made through retabulation of revenue records of 12,736 villages in the State, in 1980-81, ten per cent of the villages from each block were selected and the data were collected for all the operational holdings in a village through enquiry method. There were chances of estimation error in the number of holdings in both the censuses. There was the possibility of over-enumeration of operational holdings in the revenue records because the owners insisted on getting their holdings recorded as self-cultivated holdings, while a number of them actually leased out or made some other informal arrangement to cultivate their land. The survey method, on the other hand, had higher chances of missing some holdings, particularly small tenanted holdings.

The size class distribution of holdings revealed an actual increase in the number of holdings (18 thousand) and operated area (120 thousand ha.) in the size classes above 4.0 ha. The real decline in the number of holdings as well as operated area was recorded in the size classes below 2.0 ha.

The decline in the number of holdings and operated area in small size classes and increase in the number of holdings and operated area in large size classes could be regarded as an effect of technological change in Punjab agriculture. With the introduction of large capital units like tractor and tractor equipment, the size of optimum holding increased and the structure tended to adjust itself to it. In this process, the larger operational holdings increased in number and very small holdings were thrown out of business. An important mechanism of adjustment was revealed in a change in the lease market, discussed in the next section. It was found that the number of pure tenant holdings in the State declined from 179 thousand to 16 thousand between 1970-71 and 1980-81. The decline of 163 thousand pure tenant holdings could thus explain 45.9 per cent of the total decline of 355 operational holdings during this period.

The percentage distribution of operational holdings and operated area by the size class holdings showed a decline in the number of holdings as well as area operated in size classes of less than one hectare between 1970-71 and 1980-81 (Table V). In the size classes above 5.0 ha., the percentage of holdings increased from 18.20 to 22.57 while the area operated by them increased only from 56.15 to 57.61 per cent. This indicated some movement towards equitable distribution of land in operational holdings. The result was confirmed by the Gini ratio which declined from 0.5723 to 0.4927 between 1970-71 and 1980-81.

TABLE V. PERCENTAGE DISTRIBUTION OF OPERATIONAL HOLDINGS AND OPERATED AREA BY SIZE CLASS OF OPERATIONAL HOLDINGS, PUNJAB, 1970-71 AND 1980-81

Size class of operational holdings (ha.)	1970-71		1980-81	
	Number	Area	Number	Area
Less than 0.5	22.54	1.94	8.00	0.80
0.5-1.0	15.09	3.73	11.42	2.24
1.0-2.0	18.91	9.36	19.54	7.22
2.0-3.0	12.35	10.37	17.30	10.78
3.0-4.0	8.09	9.63	10.88	9.53
4.0-5.0	5.74	8.82	10.29	11.82
5.0-7.5	12.27	29.28	10.04	16.62
7.5-10.0	—	—	5.28	11.78
10.0-20.0	4.25	19.39	6.05	20.32
20.0-30.0	0.56	4.55	0.89	5.26
30.0-40.0	0.13	1.54	0.18	1.52
40.0-50.0	0.05	0.73	0.07	0.83
More than 50.0	0.02	0.66	0.06	1.28

Tenancy

The data on the extent and kinds of tenancy for 1970-71 and 1980-81 were obtained from the Agricultural Censuses in terms of operational holdings, which were classified as wholly owned and self-operated; partly owned and partly leased-in; and wholly leased-in holdings. The percentages of opera-

tional holdings as well as owned and leased-in area for each tenorial category for the State are presented in Table VI.

TABLE VI. PERCENTAGE OF HOLDINGS AND OPERATED AREA CONTROLLED BY DIFFERENT TENORIAL CATEGORIES, 1970-71 AND 1980-81

Category	Percentage of holdings		Percentage of operated area	
	1970-71	1980-81	1970-71	1980-81
Wholly owned and self-operated ..	80.81	82.03	82.40	78.77
Partly owned and partly leased-in	6.15	16.39	10.20	20.40
Owned area	—	—	7.12	12.88
Leased-in area	—	—	3.08	7.52
Wholly leased-in	13.04	1.58	7.40	0.83
Total	100.00	100.00	100.00	100.00

It was found that in 1970-71, 80.81, 6.15 and 13.4 per cent of the operational holdings in the State were owned, partly leased-in and wholly leased-in respectively. These holdings respectively operated 82.40, 10.20 and 7.40 per cent of the area. Only 10.48 per cent of 3,974 thousand hectares of area in the State entered the lease market. The pure tenants leased in 7.40 per cent and partly owned holdings leased in 3.08 per cent of the area. In 1980-81, the percentage of wholly owned holdings increased slightly to 82.03 while the area operated by them declined slightly to 78.77 per cent. The percentage of partly leased-in holdings increased to 16.39, while that of area operated by them increased to 20.40. Out of this area, 12.88 per cent was self-owned and 7.52 per cent leased-in. The percentage of wholly leased-in holdings declined severely from 13.04 to 1.58 and that of the area operated by them declined from 7.40 to 0.83.

The relative importance of pure tenants and owner-cum-tenants as participants in the lease market changed drastically between 1970-71 and 1980-81. While the pure tenants occupied 70.61 per cent of the leased area in 1970-71, the owner-cum-tenants controlled 90.06 per cent of the leased area in 1980-81.

Terms of Lease

As regards the terms of lease, crop sharing was the most important kind of tenancy in 1970-71 covering 50.8 per cent of the leased area (Table VII). Cash rent was the next important kind covering 22.5 per cent of the area. Certain 'other' terms of lease, treated as miscellaneous group, also covered 23.9 per cent of the area. During 1980-81, crop sharing and cash rent tenancy attained almost equal importance by covering 46.6 and 47.6 per cent of the area respectively. The area in 'other kinds' of arrangements, however, declined to 5.8 per cent only. Kind rent was not an important contractual arrangement in 1970-71 and covered only 2.8 per cent of the leased area. This arrangement almost ceased to exist in 1980-81.

TABLE VII. PERCENTAGE OF AREA LEASED-IN UNDER DIFFERENT TERMS BY TENURIAL CLASSES IN THE PUNJAB, 1970-71 AND 1980-81

Tenurial class	Leased-in area (ha.)	Percentage area leased-in under different terms			
		Cash rent	Crop share	Kind rent	Others
1970-71					
Partly leased holdings	.. 1,22,374 (29.4)	25.0	53.3	3.3	18.4
Wholly leased holdings	.. 2,93,873 (70.6)	21.5	49.8	2.5	26.2
Total .. .. .	.. 4,16,252 (100.00)	22.5	50.8	2.8	23.9
1980-81					
Partly leased holdings ..	.. 2,92,673 (90.1)	48.5	45.8	—	5.7
Wholly leased holdings	.. 32,216 (9.9)	40.3	53.3	0.1	6.3
Total .. .. .	.. 3,24,889 (100.00)	47.6	46.6	—	5.8

Crop sharing was slightly more important with partly leased-in holdings in comparison with the pure tenants in 1970-71 while 'other kinds' of arrangements were slightly more popular with the pure tenants. In 1980-81 cash rent was more important with partly leased-in holdings while the pure tenants contracted a slightly larger percentage of area on crop share basis.

Conclusions

The study revealed that the distribution of ownership holdings in the State was extremely skewed in 1971-72. While the upper four per cent of the households owned one-third of the land, the lowest three-fourths of the households were left with one-seventh area only. The predominance of very small holdings was evident from the fact that half of the ownership holdings were concentrated in the smallest size class of 0.002 to 0.20 hectare and shared a mere 0.60 per cent of the area. Apart from acquisition of ownership rights on small residential and commercial holdings by the landless people, this could be considered as a cumulative effect of sub-division of holdings. As such, the number of ownership holdings per thousand hectares increased and the size of average ownership holding declined throughout 1953-54 to 1971-72.

Contrary to this, the average size of operational holdings increased between 1970-71 and 1980-81, primarily due to the introduction of tractor technology and a sharp decline in the number of pure tenant holdings. During this period there was a decline in the percentage of land entering the lease market. The increase in the average size of operational holdings when the average size of ownership holdings was declining and the lease market was contracting was probably due to leasing out small holdings and informal pooling of small holdings by akin families to make them operationally viable units.