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A STUDY OF THE STRUCTURAL AND TENURIAL ASPECTS OF RURAL ECONOMY IN THE LIGHT OF 1961 CENSUS*

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One of the new features of 1961 Census was the introduction and canvassing of Household Schedule. In the case of Household Schedule, the unit of enquiry was the household. Elaborate information relating to the cultivated area held by the household by interest in land as also the number of family and hired workers engaged in cultivation and household industry, etc., was collected through the Household Schedule.

In the tabulation plan for 1961 Census regarding Household Schedule, the households engaged in cultivation² only and those engaged both in cultivation and household industry have been classified by 11 size classes of holdings and within each size class, the households have been distributed according as they fall under ownership holdings, pure tenancy holdings and mixed tenancy holdings. It may be clarified that in the case of pure tenancy holdings, the cultivated area is held from private persons or institutions whereas in the case of mixed tenancy holdings, it is partly owned or held from Government and partly from private persons or institutions.

The study of the distribution of cultivating households in rural and urban areas in various States in relation to all-India total cultivating households (=100) given in Table I shows that in rural areas, Uttar Pradesh alone accounts for about one-fifth of the total cultivating households, followed by Bihar which accounts for another 12 per cent. Maharashtra, Andhra Pradesh, Madhya Pradesh each account for about 7 to 9 per cent. States like Jammu & Kashmir and Kerala account for about 1 to 2 per cent.

As regards urban areas, cultivating households are located mostly in Maharashtra, Madras, Mysore and Andhra Pradesh.

Coming to the distribution pattern of cultivated area, it is observed from Table I that about 97 per cent of cultivated area is located in rural areas. As in the case of cultivating households, Uttar Pradesh also ranks high so far as the cultivated area is concerned. However, the relative proportion of area (14 per cent) is less as compared to the proportion of cultivating households (20 per cent). As against this, Maharashtra and Madhya Pradesh with 8 to 9 per cent households account for 12 to 13 per cent of the area indicating that the average size of holding is higher in these States as compared to that in Uttar Pradesh. Also, in Gujarat, Rajasthan and Punjab, relatively smaller proportion of households have a higher

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2. According to 1961 Census, cultivation was defined thus: "Cultivation involves ploughing, sowing and harvesting and does not include fruit growing or keeping orchards or groves or working for plantations like, tea, coffee, rubber, cinchona and other medicinal plantation."

TABLE I—PERCENTAGE DISTRIBUTION OF CULTIVATING HOUSEHOLDS (h) AND CULTIVATED AREA (a) IN RURAL AND URBAN AREAS

All-India (including Union Territories) cultivating households = 100

All-India (15 States) cultivated area = 100

State	Total		Rural		Urban	
	h	a	h	a	h	a
1	2	3	4	5	6	7
Jammu & Kashmir	1.02	0.51	0.99	0.50	0.03	0.01
Punjab	3.46	6.24	3.36	6.03	0.10	0.21
Rajasthan	5.44	11.29	5.28	11.02	0.16	0.27
Uttar Pradesh	19.67	13.63	19.43	13.36	0.24	0.27
Madhya Pradesh	8.86	12.32	8.64	11.96	0.22	0.36
Bihar	11.94	7.53	11.74	7.35	0.20	0.18
Orissa	5.01	3.40	4.95	3.34	0.06	0.06
West Bengal	6.33	3.40	6.22	3.33	0.11	0.07
Assam	3.11	1.93	3.08	1.91	0.03	0.02
Gujarat	3.91	6.41	3.77	6.16	0.14	0.25
Maharashtra	7.75	13.18	7.41	12.44	0.34	0.74
Andhra Pradesh	8.07	8.50	7.78	8.15	0.29	0.35
Mysore	5.19	7.13	4.89	6.69	0.30	0.44
Kerala	2.10	0.50	2.01	0.48	0.09	0.02
Madras	6.74	4.03	6.40	3.83	0.34	0.20
All-India	100.00	100.00	97.32	96.55	2.68	3.45

proportion of area. Reverse tendency has, however, been observed in Bihar and West Bengal. In the rest of the States, more or less equal proportion of households and area is observed.

In the context of land reforms legislation in India, it may be of interest to study the distribution pattern of pure or mixed tenancy households in various States.

At all-India level, in rural areas, the proportions of ownership, pure tenancy and mixed tenancy households are 76.34, 7.70 and 15.46 respectively. In rural areas, the proportion of ownership holdings to total holdings vary within a range of 52 per cent in Punjab to about 90 per cent in Uttar Pradesh as is evident from Table II. The States which fall below the all-India average in the proportion of ownership holdings are West Bengal (65.64), Punjab (51.66), Mysore (70.47), Kerala (54.90), Jammu & Kashmir (58.21), Bihar (67.82) and Assam (62.91). In the States where the proportion of ownership holdings is lower than the all-India average, the proportion of pure and mixed tenancy holdings is generally higher. Thus the pure tenancy holdings proportions work out to 13.34 per cent in West Bengal, 13.76 per cent in Punjab, 32.53 per cent in Kerala, 15.39 per cent in Assam. The mixed tenancy holding proportion at all-India level comes to 15.46 and it has been exceeded in the States of West Bengal (21.02), Punjab (34.58), Orissa (17.28), Mysore (19.42), Jammu & Kashmir (33.89), Bihar (24.83) and Assam (21.70).

Coming to urban areas, it is observed that ownership, pure tenancy and mixed tenancy holdings at all-India level are of the order of 78.16 per cent, 11.54 per cent and 10.30 per cent respectively. Roughly speaking, in the urban areas, the proportions of pure and mixed tenancy holdings are above the all-India average in the States of Punjab (20.49, 22.79) and Mysore (18.75, 16.11). In Madras (18.73) and Kerala (25.64) pure tenancy proportions alone are higher while in Jammu & Kashmir (20.97), Assam (12.51), Andhra Pradesh (11.37), Bihar (14.31), Orissa (13.60) mixed tenancy proportions are higher. Thus, in urban areas, the southern States of Kerala, Madras, Mysore and the northern States of Punjab, Jammu & Kashmir and the entire Eastern Zone with the exception of West Bengal are having higher tenancy holdings. The State-wise details along with district-wise variations will be studied later on, but it might not be much out of the way to say that higher tenancy proportions in Punjab in the north, and Kerala, Madras, Mysore in the south, and Assam in the east might be due to the loop-holes which exist in the existing land reforms legislation or due to the liberalization of the principle 'land to the tiller' and as a result of which, effective implementation of land reforms measures is retarded.

If we look to the distribution pattern of total cultivated area by States and by types of interest in land, it is seen that relatively speaking, in the rural areas, pure tenancy holdings do not account for a significant proportion of cultivated area barring the States like Kerala, West Bengal, Assam and Punjab which account for 34.72 per cent, 10.18 per cent, 9.36 per cent and 9.77 per cent of the total cultivated area respectively. In rural areas, the mixed tenancy holdings, however, account for quite a significant proportion of the total cultivated area in almost all the States except Rajasthan and Uttar Pradesh. In the urban areas also, a similar pattern is observed. From this it is observed that the major proportion

TABLE II—PERCENTAGE DISTRIBUTION OF CULTIVATING HOUSEHOLDS (h) AND CULTIVATED AREA (a) BY INTEREST IN LAND IN RURAL AND URBAN AREAS—(1961 CENSUS—HOUSEHOLD SCHEDULE B-XI)
Total cultivating households for each State = 100; Total cultivated area for each State = 100

State	Rural Areas												Urban Areas							
	Ownership			Pure tenancy			Mixed tenancy			Ownership			Pure tenancy			Mixed tenancy				
	h	a	h	a	h	a	h	a	h	a	h	a	h	a	h	a	h	a		
I	2	3	4	5	6	7	8	9	10	11	12	13								
Jammu & Kashmir
Punjab
Rajasthan
Uttar Pradesh
Madhya Pradesh
Bihar
Orissa
West Bengal
Assam
Gujarat
Maharashtra
Andhra Pradesh
Mysore
Kerala
Madras
All-India*

* All-India is inclusive of Union Territories in respect of households whereas in case of cultivated area it is exclusive of Union Territories.

of the cultivated area is under ownership holdings and therefore one cannot perhaps, very much emphasise the absentee landlordism as a factor affecting agricultural production and productivity. The average size of holding and the number of plots in which this average size of holding is dispersed is, of course, another aspect which has to be studied while dwelling on productivity.

PURE AND MIXED TENANCY BY DISTRICTS

The problem of pure and mixed tenancy holdings when looked at the district level shows that of the total cultivating holdings, the proportion of holdings engaged in pure tenancy cultivation is of the highest order in Kerala. Thus, in the districts of Cannanore, Kozhikode, Palghat and Trichur, the percentages of pure tenancy holdings to total holdings are 77.91, 75.30, 79.62 and 62.82 respectively. It may be noted that all these districts happen to be the coastal districts of Kerala. The high pure tenancy percentage which starts with the coastal districts of Kerala goes on the coastal side right upto Thana district of Maharashtra and brings within its fold, districts like South Kanara with 68.24 per cent, Shimoga 23.56 per cent, North Kanara 47.80 per cent, Ratnagiri 21.26 per cent, Kolaba 36.98 per cent and Thana 32.73 per cent of the total holdings.

In the eastern coast of India, the high proportion of pure tenancy holdings starts with Thanjavur district of Madras with 33.61 per cent. It extends towards north-eastern side rather in a dis-jointed way and has districts like Chingleput with 13.47 per cent, West and East Godavari with 12.79 per cent and 19.37 per cent respectively. Then, there are stray patches of high pure tenancy holdings located in West Bengal, Assam, Punjab, Jammu & Kashmir and Himalayan districts of Uttar Pradesh. These are observed in the districts of Purulia (34.62 per cent); Burdwan (13.14 per cent); Hoogly (14.23 per cent); Darjeeling (49.40 per cent); Jalpaiguri (46.73 per cent); Cooch-Bihar (25.76 per cent). These districts of Himalayan West Bengal extend towards the hilly tract of Assam with Garo Hills having 42.60 per cent pure tenancy holdings, U.K. & Jaintia Hills 21.75 per cent, Cachar 37.28 per cent. Going from north-east to north-west, one comes across with high pure tenancy holdings in Bihar (Saharsa 16.83) and Purnea (14.94) and the Himalayan districts of Uttar Pradesh. The proportion for these districts are as follows: Pithoragarh 29.48, Chamoli 25.37, Almora 18.79, Nainital 15.01.

Again, the State of Punjab shows a relatively high proportion of pure tenancy holdings and these are located in Hissar (22.05), Karnal (22.21), Ambala (16.82), Patiala (16.88), Ferozepur (20.92), Simla (20.34), Gurdaspur (16.53), etc., and in Jammu & Kashmir, the districts like Udhampur (16.05), Jammu (18.92) and Poonch (15.85) are worth mentioning in this connection. In Rajasthan perhaps the district Jaisalmer with 14.87 per cent shows the highest percentage of pure tenancy holdings. In Madhya Pradesh, the important districts in this connection are Bastar (19.71) in the southern-eastern Madhya Pradesh, Jhabua (17.05) in the south-western Madhya Pradesh and Rewa (13.13) in the northern Madhya Pradesh. In Maharashtra, beside the coastal districts already stated, Yeotmal (12.78) also shows the high percentage of pure tenancy holdings. One significant fact to be noticed is that most of the districts associated with high tenancy are fertile districts having high irrigation and/or high rainfall.

Looking at the concentration of mixed tenancy holdings district by district in various States, it is found that the States of Punjab, West Bengal, Assam, Bihar, Maharashtra, Mysore, Madras, Andhra Pradesh are having quite a sizable proportion of mixed tenancy holdings.

In some of the districts, a high proportion of pure tenancy holdings is coupled with a high proportion of mixed tenancy holdings.

The districts having at least 10 per cent pure tenancy holdings along with at least 20 per cent and more mixed tenancy holdings are as follows :

State	District
Jammu & Kashmir	Poonch, Jammu, Udhampur.
Punjab	Hissar, Gurdaspur, Hoshiarpur, Simla, Ambala, Amritsar, Kapurthala, Jullundur, Patiala, Karnal, Ferozepur, Gurgaon.
Uttar Pradesh	Chamoli, Almora.
West Bengal	Cooch-Bihar, West Dinajpur, Howrah.
Assam	Nowgong, Sibsagar, Darrang.
Kerala	Ernakulam.
Mysore	Coorg, North Kanara, Shimoga, Chikmagalur.
Maharashtra	Kolaba, Ratnagiri.
Madhya Pradesh	Rewa.
Bihar	Shahabad, Champaran, Darbhanga, Monghyr, Bhagalpur, Saharsa, Purnea.

There are, however, other districts where the proportion of pure tenancy holdings is low compared to the proportion of mixed tenancy.

The districts having upto 5 per cent pure tenancy holdings along with 15 per cent and above mixed tenancy holdings are as follows :

State	District
Jammu & Kashmir	Baramulla, Srinagar, Anantnag, Doda.
Orissa	Balasore, Cuttack.
Andhra Pradesh	Kurnool, Nellore, Guntur.
Mysore	Kolar, Hassan, Raichur.
Maharashtra	Sangli, Satara.
Rajasthan	Kotah.
Madhya Pradesh	Sagar, Durg, Bilaspur, Shahdol, Panna.
Bihar	Patna, Gaya, Saran, Muzaffarpur.

Average Size of Holdings

On the basis of preliminary results of 1961 Census conducted in cultivating households, the average size of holdings for India as a whole works out to 7.71³

3. If we exclude the area under pure tenancy which might reflect the extent of double counting, then the average size of holding works out to 7.39 acres.

as is evident from Table III. Considerable variation in average size of holding is, however, observed in various States. Thus, the States of Punjab, Rajasthan, Madhya Pradesh, Gujarat, Maharashtra and Mysore which fall more or less in the north-western and south-western regions of India have relatively higher sizes of holdings and the average size is three to four times in relation to the States in the eastern region and 5 to 7 times in relation to Kerala. It is further observed that the average size in the pure tenancy holdings is the lowest and vary from 2 to 3 acres in Kerala, Madras, Assam, West Bengal, Orissa, Bihar, Uttar Pradesh to about 7 to 10 acres in Punjab, Rajasthan, Gujarat and Maharashtra both in rural and urban areas. The average size of mixed tenancy holdings is the highest in each of the various States of India excluding Uttar Pradesh. Further, the average size of holding is generally higher in urban areas as compared to the rural areas in all the types of holdings considered. The average size of holding has also been worked out for selected 82 tehsils located in each of the various States (except Bihar). The results showed that there are many tehsils located in States like Punjab, Rajasthan, Gujarat and Maharashtra where the average size of holding is exceeding the all-India average size.

A study of the relative distribution pattern of cultivating households and cultivated area by States in rural and urban areas shows that at all-India level, there is more even distribution in urban areas as compared to rural areas. At all-India level, the concentration ratio⁴ works out as 0.5886 and 0.6339 in rural and urban areas respectively. The State-wise position with respect to the level of concentration ratios is given in Table IV. The table, broadly speaking, reveals that (a) within each of the various States, the concentration ratio is higher in the urban areas compared to the rural areas and (b) within the rural areas in each State, the concentration ratio is highest in ownership holdings followed by pure tenancy holdings. The mixed tenancy holdings show the least concentration ratio. This is true of the most of the States excepting Gujarat, Maharashtra and Rajasthan where the pure tenancy holdings show higher concentration.

Again, within the various States in the urban areas, concentration ratio is the highest in ownership holdings followed by pure tenancy and mixed tenancy holdings. However, in urban areas in Jammu & Kashmir, West Bengal, Assam, Andhra Pradesh, Mysore and Kerala, the mixed tenancy holdings show higher concentration in relation to pure tenancy holdings. In Gujarat and Maharashtra, the level of concentration is almost of the same order in ownership and pure tenancy holdings.

The range of variations of concentration ratio in between States by interest in land is given in Table V.

It may be remembered that the above concentration ratios have been worked out on the basis of cultivated area excluding plantation, condiments and spices

4. Concentration ratio is a statistical measurement of the relative disparity in the distribution of two related characteristics. It is a statistical measurement of the departure of the given distribution from the line of equality. Here land concentration ratios have been worked out to measure the relative disparity in the distribution of cultivating households and cultivated area. If the distribution of cultivating households and cultivated area over various size classes is identical, the concentration ratio will be zero. If these distributions are infinitely uneven, concentration will be unity. The greater the unevenness in the relative distributions, the higher will be the level of concentration ratio.

TABLE III—AVERAGE SIZE OF HOLDING IN RURAL AND URBAN AREAS BY INTEREST IN LAND
(Based on 1961 Census Household Schedule B-XI)

State	Rural						Urban		
	T	A	B	C	T	A	B	C	
1	2	3	4	5	6	7	8	9	
Jammu & Kashmir	..	3.84	3.50	3.43	4.52	3.02	2.98	3.52	
Punjab	..	13.78	13.71	9.78	15.47	15.46	16.78	17.39	
Rajasthan	..	16.01	16.02	10.60	18.82	13.18	13.13	16.64	
Uttar Pradesh	..	5.27	5.38	2.77	5.03	8.47	8.83	7.74	
Madhya Pradesh	..	10.60	10.59	6.26	12.39	13.14	13.41	14.67	
Bihar	..	4.80	4.83	2.21	5.47	7.19	7.74	6.48	
Orissa	..	5.19	5.21	3.05	5.72	6.85	7.28	6.05	
West Bengal	..	4.10	4.07	3.13	4.83	4.62	4.67	5.45	
Assam	..	4.75	4.93	2.89	5.53	5.46	5.65	5.21	
Gujarat	..	12.53	12.55	8.06	14.30	13.12	13.69	14.60	
Maharashtra	..	12.87	12.68	6.78	17.08	16.37	16.08	23.28	
Andhra Pradesh	..	8.04	7.80	4.71	10.71	8.99	9.18	11.60	
Mysore	..	10.48	10.02	5.02	14.99	11.33	12.47	12.96	
Kerala	..	1.83	1.43	1.96	3.28	2.26	2.23	3.39	
Madras	..	4.58	4.69	2.77	5.46	4.54	4.89	5.81	
All-India (excluding Union Territories)	..	7.71 (7.39)*	7.78 (7.36)*	4.28	9.07	9.97 (9.36)*	10.42 (9.63)*	11.72	

T = Total cultivating holdings. A = Ownership holdings. B = Pure tenancy holdings. C = Mixed tenancy holdings.

* Figures in the brackets are based on total cultivated area exclusive of area under pure tenancy holdings.

TABLE IV—LEVELS OF CONCENTRATION RATIOS IN OWNERSHIP, PURE TENANCY AND MIXED TENANCY HOLDINGS IN RURAL AND URBAN AREAS

State	Rural									Urban									
	T	A	B	C	T	A	B	C	9	T	A	B	C	T	A	B	C	9	
Jammu & Kashmir4358	.4585	.3822	.3980	.5618	.5811	.4040	.5639	..	..	..	..	..	..	..	..
Punjab4650	.5003	.4496	.4005	.4828	.4994	.4432	.4016	..	..	..	..	..	..	..	..
Rajasthan5486	.5509	.5725	.4946	.5485	.5570	.5245	.4806	..	..	..	..	..	..	..	..
Uttar Pradesh5198	.5241	.4967	.4613	.6487	.5615	.6026	.5166	..	..	..	..	..	..	..	..
Madhya Pradesh5101	.5167	.5024	.4541	.5810	.5891	.4664	.4427	..	..	..	..	..	..	..	..
Bihar5739	.5913	.5176	.5081	.7188	.7365	.6563	.5980	..	..	..	..	..	..	..	..
Orissa5004	.5115	.4356	.4432	.5608	.5653	.5253	.5070	..	..	..	..	..	..	..	..
West Bengal4914	.5213	.4291	.3926	.5624	.5659	.5270	.5354	..	..	..	..	..	..	..	..
Assam4326	.4437	.4213	.3564	.5642	.5876	.4574	.5410	..	..	..	..	..	..	..	..
Gujarat5228	.5247	.5615	.4749	.5344	.5320	.5441	.4602	..	..	..	..	..	..	..	..
Maharashtra5450	.5357	.6146	.5238	.5752	.5773	.5902	.5082	..	..	..	..	..	..	..	..
Andhra Pradesh6076	.6201	.5576	.5268	.6662	.6791	.5599	.5808	..	..	..	..	..	..	..	..
Mysore5408	.5375	.5198	.4865	.5976	.5997	.5446	.5593	..	..	..	..	..	..	..	..
Kerala5896	.5859	.5620	.5506	.6436	.6727	.5387	.6296	..	..	..	..	..	..	..	..
Madras5221	.5261	.4898	.4712	.5767	.5890	.4864	.4894	..	..	..	..	..	..	..	..
All-India5806	.5839	.5707	.5386	.6339	.6369	.6000	.5759	..	..	..	..	..	..	..	..

T = Total. A = Owned or held from Government. B = Held from private persons or institutions for payment in money, kind or share.
C = Partly held from Government and partly from private persons for payment in money, kind or share.

TABLE V—RANGE OF VARIATIONS IN CONCENTRATION RATIOS BY INTEREST IN LAND

	T Total cultivating holdings		A Ownership holdings		B Pure tenancy holdings		C Mixed tenancy holdings	
	Level	State	Level	State	Level	State	Level	State
<i>Rural</i>								
Highest	.. 0.6076	Andhra Pradesh	0.6201	Andhra Pradesh	0.6146	Maharashtra	0.5506	Kerala
Lowest	.. 0.4326	Assam	0.4437	Assam	0.3822	Jammu & Kashmir	0.3564	Assam
<i>Urban</i>								
Highest	.. 0.6662	Andhra Pradesh	0.6791	Andhra Pradesh	0.5923	Bihar	0.6296	Kerala
Lowest	.. 0.4828	Punjab	0.4994	Punjab	0.4040	Jammu & Kashmir	0.4016	Punjab

and garden crops, etc. Thus in States like Kerala, Assam, West Bengal, the concentration is exclusive of the concentration introduced by the distribution pattern of holdings and area under plantation crops, etc.

A special tabulation of 82 tehsils spread out in various parts of India regarding the distribution pattern of households and area shows a level of concentration ratio varying between 0.30 in Melghat (Amravati) to 0.65 to 0.70 in Nellore (Nellore) and Kuttanad (Alleppey). These tehsils have been classified by broad size classes of concentration ratios. The tehsils showing a concentration below 0.35 are observed in Maharashtra, Gujarat, Jammu & Kashmir, Orissa and Rajasthan. Higher concentration ratio exceeding the level of 0.55 is observed in some tehsils of Andhra Pradesh, Gujarat, Madras, Uttar Pradesh and Kerala.

For the purpose of studying the distribution pattern of cultivating households and cultivated area, the various size-groups into which these data have been tabulated have been broadly grouped under three broad categories of small sized, medium sized and large sized holdings. The small sized holdings have been considered under two sub-groups (a) up to 1 acre and (b) up to 5 acres. The medium sized group consists of 5-15 acres. The large sized holdings have been studied under (a) 15-50 acres and (b) 50 acres and above. The relevant data have been tabulated under the above categories for total holdings, ownership holdings, pure tenancy holdings and mixed tenancy holdings for various States in rural and urban areas. The results are contained in Table VI.

It may be of interest now to examine the pattern of distribution of holdings and area in various States. It is observed from Table VI that in rural areas, at all-India level as also in various States, the small sized holdings form a significant proportion of the total, though the proportion of cultivated area is significant, so far as ownership and mixed tenancy holdings are concerned. In case of pure

TABLE VI—PERCENTAGE DISTRIBUTION OF CULTIVATING HOUSEHOLDS (h) AND CULTIVATED AREA (a) UNDER SMALL SIZED (UPTO 5 ACRES), MEDIUM SIZED (5-15 ACRES) AND LARGE SIZED (15 ACRES +) HOLDINGS BY INTEREST IN LAND IN RURAL AND URBAN AREAS

State	Rural (R) Urban (U)	T A B C	Small Sized (Upto 5 acres)			Medium Sized (5-15 acres)			Large Sized (15-50 acres)			Average Concen- tration Ratio (acres)			
			h			a			h			a			
			4	5	6	7	8	9	10	11	12	13	14	15	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Jammu & Kashmir	R	T	12.07	1.58	75.26	43.93	23.03	45.79	1.66	9.73	0.03	0.45	3.84	.4358	
		A	16.07	2.27	79.06	47.07	19.32	42.03	1.57	10.19	0.03	0.61	3.50	.4585	
		B	14.51	2.33	75.73	49.62	23.80	48.06	0.42	2.32	0.01	—	3.43	.3822	
	U	C	4.64	0.55	68.61	38.77	29.26	50.41	2.09	10.41	0.03	0.41	4.52	.3980	
		T	29.02	2.22	83.49	46.67	14.70	35.55	1.75	15.56	0.06	2.22	3.02	.5618	
		A	33.20	3.33	85.26	46.67	13.15	36.67	1.54	13.33	0.05	3.33	2.98	.5811	
	Punjab	R	B	29.91	—	85.34	75.00	14.08	25.00	0.58	—	—	—	2.35	.4040
			C	15.04	—	76.80	36.37	20.00	36.36	3.04	27.27	0.16	—	3.52	.5639
			T	2.32	0.09	24.39	4.60	44.65	29.81	28.16	51.50	2.29	13.86	13.78	.4650
Rajasthan	U	A	3.45	0.12	29.82	5.37	39.31	25.99	27.05	50.70	2.87	17.50	13.71	.5003	
		B	2.38	0.14	32.27	8.62	50.94	45.58	15.96	39.61	0.72	6.10	9.78	.4496	
		C	0.60	0.02	13.16	2.55	50.14	30.90	34.66	55.55	2.04	11.00	15.47	.4005	
	R	T	2.64	—	23.37	3.69	41.15	24.31	29.98	49.67	4.78	22.06	15.46	.4828	
		A	3.60	—	24.63	3.22	36.09	19.52	31.54	49.14	6.48	27.69	16.78	.4994	
		B	1.94	—	32.95	9.28	50.35	45.36	15.65	38.15	1.00	7.21	9.67	.4432	
U	C	0.85	—	11.61	2.06	45.45	25.26	39.00	56.70	3.94	15.98	17.39	.4016		
	T	1.70	0.05	31.27	5.00	36.57	20.23	24.73	41.44	6.28	32.87	16.01	.5486		
	A	1.75	0.06	31.70	5.05	36.20	19.97	24.44	41.04	6.39	33.44	16.02	.5509		
U	B	2.82	0.19	45.98	10.55	35.12	28.38	15.45	36.81	3.03	23.97	10.60	.5725		
	C	0.46	—	17.96	2.82	41.94	20.56	33.46	47.14	6.62	29.48	18.82	.4946		
	T	2.96	0.10	37.76	6.93	34.05	22.83	23.64	47.51	4.04	22.44	13.18	.5485		
U	A	3.14	0.11	38.38	6.99	33.63	22.49	23.27	47.05	4.16	23.14	13.13	.5570		
	B	2.03	—	39.40	7.55	35.33	30.19	23.66	52.83	1.50	9.43	11.35	.5245		
	C	0.45	—	22.43	5.36	41.31	21.44	31.21	49.99	5.05	23.21	16.64	.4806		

Uttar Pradesh	..	R	T	13.30	1.26	65.42	26.40	28.18	43.57	5.48	25.02	0.31	4.29	5.27	.5198
			A	13.12	1.22	64.75	25.59	28.46	43.28	5.78	25.86	0.34	4.49	5.38	.5241
			B	28.59	5.14	84.82	51.50	13.95	38.35	1.06	8.72	0.05	1.19	2.77	.4967
		C	8.66	0.88	65.17	30.89	30.79	48.72	3.83	17.99	0.16	2.34	5.03	.4613	
..	U	T	12.86	0.81	60.91	15.03	27.92	27.35	8.54	25.63	1.37	31.08	8.47	.6487	
		A	12.47	0.76	60.05	14.30	28.05	26.33	9.01	26.11	1.48	32.29	8.83	.6515	
		B	25.64	4.35	81.94	39.13	15.94	34.79	1.89	13.04	0.23	13.04	3.49	.6026	
		C	5.33	—	52.62	17.78	39.03	44.44	7.66	22.22	0.60	15.56	7.74	.5166	
Madhya Pradesh	..	R	T	3.90	0.18	37.40	8.75	42.35	35.17	18.46	43.29	1.74	12.76	10.60	.5101
			A	4.11	0.19	38.19	8.85	41.59	34.51	18.35	43.24	1.82	13.37	10.59	.5167
			B	9.00	0.69	56.14	19.66	35.55	47.72	7.89	29.24	0.26	3.24	6.26	.5024
		C	0.73	0.03	25.64	6.09	49.30	35.85	23.19	46.33	1.86	11.73	12.39	.4541	
Bihar	..	R	T	3.24	0.07	39.97	7.60	35.51	23.73	19.83	39.34	4.67	29.33	13.14	.5810
			A	3.29	0.08	40.52	7.50	34.66	21.59	19.74	38.75	5.06	31.16	13.41	.5891
			B	5.07	—	50.52	14.59	47.01	41.67	11.67	35.41	0.80	8.33	7.72	.4654
		C	0.72	—	21.77	5.44	46.09	29.35	29.19	48.91	2.95	16.30	14.67	.4427	
..	U	T	21.49	2.24	71.46	28.19	22.83	38.59	5.22	26.81	0.42	6.33	4.80	.5739	
		A	23.05	2.39	72.20	27.28	21.63	36.60	5.61	28.80	0.48	7.22	4.83	.5913	
		B	41.21	9.33	89.77	60.41	9.64	31.67	0.49	5.42	0.07	2.39	2.21	.5176	
		C	11.42	1.04	64.03	26.54	30.00	44.18	5.58	24.59	0.35	4.65	5.47	.5081	
Orissa	..	R	T	24.90	1.76	72.04	17.45	19.40	22.29	7.08	25.37	1.80	34.60	7.19	.7188
			A	25.99	1.62	71.03	15.27	19.51	21.18	7.83	26.03	1.50	37.34	7.74	.7365
			B	33.46	5.41	86.16	35.15	10.05	18.91	3.05	21.62	0.53	24.32	3.96	.6563
		C	13.32	1.14	67.68	23.97	25.21	30.68	5.89	22.72	0.74	21.59	6.48	.5980	
..	U	T	8.20	0.79	66.33	28.75	27.78	42.46	5.11	23.81	0.35	4.46	5.19	.5004	
		A	9.05	0.87	66.43	27.85	27.29	41.82	5.37	25.00	0.37	4.68	5.21	.5115	
		B	12.36	1.97	84.09	54.78	14.60	34.84	1.13	8.70	0.06	1.40	3.05	.4356	
		C	3.19	0.30	60.92	28.52	33.68	41.27	5.05	21.18	0.34	4.03	5.72	.4432	
..	U	T	6.34	0.48	61.09	20.67	28.88	33.66	3.41	31.25	1.50	14.42	6.85	.5608	
		A	6.86	0.57	59.92	19.43	28.82	32.00	9.42	33.14	1.70	15.43	7.28	.5653	
		B	7.76	—	77.39	37.50	20.32	50.00	2.06	12.50	0.23	—	3.65	.5253	
		C	2.54	—	59.32	24.00	33.78	40.00	5.93	24.00	0.97	12.00	6.05	.5070	

T: Total cultivating households/area = 100

A: Ownership households/area = 100

B: Pure tenancy households/area = 100

C: Mixed tenancy households/area = 100

(Contd.)

TABLE VI—PERCENTAGE DISTRIBUTION OF CULTIVATING HOUSEHOLDS (h) AND CULTIVATED AREA (a) UNDER SMALL SIZED (UPTO 5 ACRES), MEDIUM SIZED (5-15 ACRES) AND LARGE SIZED (15 ACRES +) HOLDINGS BY INTEREST IN LAND IN RURAL AND URBAN AREAS (Contd.)

State	T	Rural (R) Urban (U)	2	Small Sized (Upto 1 acre)			Medium Sized (5-15 acres)			Large Sized (15-50 acres)			Average size of holding (acres)			Con- centra- tion ratio																					
				5			6			7			8				9			10			11			12			13			14			15		
				h	a	h	a	h	a	h	a	h	a	h	a		h	a	h	a	h	a	h	a	h	a	h	a	h	a	h	a	h	a	h	a	
West Bengal	T	..	R	15.93	1.94	72.73	36.50	23.87	45.41	2.86	15.70	0.08	1.68	4.10	.4914																						
	A	..	R	19.43	2.38	73.41	34.16	22.46	44.02	3.38	18.78	0.09	2.02	4.07	.5213																						
	B	..	R	16.87	2.71	82.17	54.39	16.89	38.29	0.75	5.65	0.05	1.43	3.13	.4291																						
	C	..	R	4.41	0.46	64.62	35.27	32.73	52.03	2.55	11.75	0.05	0.88	4.83	.3926																						
	T	..	U	19.34	2.08	72.03	29.05	21.90	38.59	5.01	24.89	0.35	6.64	4.62	.5624																						
	A	..	U	21.02	2.46	72.15	28.57	21.47	38.42	5.19	25.62	0.34	6.40	4.67	.5659																						
	B	..	U	15.60	—	79.34	41.18	16.84	35.29	3.72	23.53	0.10	—	3.51	.5270																						
	C	..	U	5.06	—	61.48	23.81	33.07	42.85	4.67	19.05	0.78	14.29	5.45	.5354																						
	T	..	R	9.69	1.02	67.86	35.53	28.28	46.72	3.10	15.28	0.11	1.59	4.75	.4326																						
Assam	A	..	R	9.82	1.00	66.13	32.81	29.15	46.89	3.63	17.29	0.12	1.75	4.93	.4437																						
	B	..	R	20.98	3.63	87.84	63.75	11.20	28.55	0.66	5.44	0.07	1.66	2.89	.4213																						
	C	..	R	1.31	0.11	58.73	32.14	37.86	53.02	3.30	13.72	0.09	1.12	5.53	.3564																						
	T	..	U	18.26	1.49	68.97	26.86	23.45	34.34	6.40	29.85	0.49	7.46	5.46	.5642																						
	A	..	U	21.23	1.89	68.70	24.53	22.30	30.19	7.57	33.96	0.53	9.43	5.65	.5876																						
	B	..	U	15.13	—	81.54	50.00	15.87	33.34	2.22	16.66	0.37	—	4.43	.4574																						
	C	..	U	2.93	—	50.60	25.00	37.14	62.50	2.93	12.50	0.33	—	5.21	.5410																						
	T	..	R	3.24	0.13	35.18	6.93	38.39	26.11	24.75	52.08	2.29	14.68	12.53	.5228																						
	A	..	R	3.37	0.13	35.59	6.95	36.69	25.54	24.98	52.58	2.30	14.71	12.55	.5247																						
Gujarat	B	..	R	6.29	0.33	54.17	15.23	31.66	32.67	13.01	41.71	1.02	10.22	8.06	.5615																						
	C	..	R	0.69	0.04	23.15	4.71	46.38	29.03	27.63	50.62	2.78	15.60	14.30	.4749																						
	T	..	U	35.71	6.97	35.71	6.97	36.37	25.02	25.29	50.06	2.54	17.95	13.12	.5344																						
	A	..	U	3.73	0.12	34.39	6.41	35.86	23.78	26.89	51.19	2.76	18.62	13.69	.5320																						
	B	..	U	7.89	—	59.15	20.51	31.33	38.47	8.95	33.33	0.57	7.69	6.35	.5441																						
	C	..	U	1.03	—	24.14	5.89	46.83	30.59	26.54	47.05	2.49	16.47	14.60	.4602																						

Maharashtra	..	R	T	4.89	0.19	37.36	6.70	34.56	23.86	24.26	49.20	3.27	19.97	12.87	.5450		
			A	4.35	0.17	36.27	6.71	36.31	25.37	23.65	23.65	48.44	3.09	19.13	12.68	.5357	
			B	15.13	1.13	66.09	18.45	20.23	25.77	17.30	12.98	47.96	0.66	7.76	6.78	.6146	
			C	2.63	0.07	28.65	4.28	32.32	25.77	33.39	52.53	5.63	25.89	17.08	.5238		
Andhra Pradesh	..	U	T	4.03	0.15	34.49	5.03	32.60	17.62	25.68	42.15	6.43	34.91	16.37	.5752		
			A	3.77	0.13	35.32	5.30	32.79	18.00	24.57	41.06	6.39	35.29	16.08	.5773		
			B	9.91	0.76	46.30	5.39	28.45	21.37	22.71	51.16	2.41	19.08	11.49	.5902		
			C	1.89	—	16.50	1.84	34.02	13.49	39.38	10.10	38.65	23.28	.5082			
Andhra Pradesh	..	R	T	11.61	0.72	57.87	14.72	28.61	30.29	11.86	37.52	1.62	17.44	8.04	.6076		
			A	13.04	0.83	59.97	15.25	27.15	29.46	11.15	36.55	1.68	18.70	1.68	18.70	7.80	.6201
			B	14.35	1.53	72.43	29.57	22.11	38.60	5.12	26.15	0.30	5.39	0.30	5.39	4.71	.5576
			C	2.75	0.13	40.39	9.85	39.24	31.97	18.54	43.44	1.82	14.74	10.71	.5268		
Mysore	..	U	T	11.83	0.62	61.27	13.57	25.11	23.71	10.38	31.67	2.71	31.05	8.99	.6662		
			A	12.87	0.68	61.89	13.08	24.21	22.18	10.87	3.96	22.58	0.25	6.45	4.47	.5599	
			B	14.12	1.61	76.88	33.87	18.91	37.10	3.96	16.90	37.24	2.87	25.53	11.60	.5808	
			C	2.59	—	43.52	9.57	36.71	27.66	16.90	2.87	25.53	11.60	.5808			
Mysore	..	R	T	3.23	0.16	43.35	10.71	36.86	30.08	17.54	43.11	2.24	16.10	10.48	.5408		
			A	2.91	0.14	44.39	11.52	37.49	31.82	16.01	40.88	2.10	15.77	2.10	15.77	10.02	.5375
			B	10.12	1.00	72.29	32.80	21.65	34.06	5.85	29.22	0.26	3.92	0.26	3.92	5.02	.5198
			C	0.77	0.03	24.50	4.86	42.51	25.20	29.19	50.92	3.80	19.02	14.99	.4865		
Kerala	..	U	T	4.64	0.18	47.72	10.24	31.57	23.84	17.32	39.76	3.39	26.16	11.33	.5976		
			A	3.71	0.17	45.21	9.02	31.82	22.04	18.75	39.32	4.22	29.62	4.22	29.62	12.47	.5997
			B	8.59	0.61	65.61	24.53	26.21	35.88	7.72	31.91	0.55	7.98	0.55	7.98	6.01	.5446
			C	3.84	—	37.22	7.29	36.81	24.51	22.65	45.68	3.32	22.52	12.96	.5593		
Kerala	..	R	T	48.32	8.46	92.68	59.92	6.37	26.44	0.79	10.32	0.05	2.93	1.83	.5896		
			A	57.76	12.91	95.11	66.79	4.26	22.14	0.42	7.25	0.04	3.03	0.04	3.03	1.43	.5859
			B	42.16	6.98	91.98	60.71	7.08	27.28	0.87	10.23	0.03	1.62	0.03	1.62	1.96	.5620
			C	23.00	2.26	83.88	45.61	13.78	33.34	2.19	16.29	0.15	4.76	3.28	.5506		
Kerala	..	U	T	48.57	7.22	90.34	47.43	7.81	27.84	1.68	18.55	0.14	6.18	2.26	.6436		
			A	53.95	8.06	90.88	45.15	7.09	25.80	1.80	20.97	0.20	8.06	0.20	8.06	2.23	.6726
			B	44.10	9.52	92.47	61.90	6.62	28.57	0.91	9.55	—	—	—	—	1.91	.5387
			C	24.31	—	81.02	35.72	15.96	35.71	2.90	21.43	0.12	7.14	3.39	.6296		

(Contd.)

TABLE VI.—PERCENTAGE DISTRIBUTION OF CULTIVATING HOUSEHOLDS (h) AND CULTIVATED AREA (a) UNDER SMALL SIZED (UPTO 5 ACRES), MEDIUM SIZED (5-15 ACRES) AND LARGE SIZED (15 ACRES +) HOLDINGS BY INTEREST IN LAND IN RURAL AND URBAN AREAS (Concluded)

State	Rural (R) Urban (U)	T A B C	Small Sized (Upto 5 acres)			Medium Sized (5-15 acres)			Large Sized (50 acres+)			Average size of holding (acres)	Con- tra- tion ratio			
			h			a			h					a		
			4	5	6	7	8	9	10	11	12			13	14	15
I	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
Madras	..	T	14.61	1.59	73.23	33.90	21.94	37.93	4.30	22.89	0.32	4.99	4.58	.5221		
		A	14.32	1.52	72.54	32.81	22.28	37.60	4.57	23.85	0.35	5.40	4.69	.5261		
		B	26.10	4.68	87.74	56.17	10.74	29.36	1.33	11.81	0.09	2.45	2.77	.4898		
		C	6.48	0.60	64.91	29.81	29.58	43.40	5.19	22.78	0.30	3.97	5.46	.4712		
All-India	..	T	18.39	2.04	75.37	31.39	19.12	33.69	4.72	26.36	0.61	8.29	4.54	.5767		
		A	17.80	1.76	73.10	27.94	20.46	33.57	5.44	28.47	0.77	9.67	4.89	.5890		
		B	26.99	5.20	89.31	59.74	9.45	28.57	1.15	10.39	0.05	1.30	2.54	.4864		
		C	5.97	1.11	65.16	28.89	28.02	38.89	6.27	26.67	0.52	5.55	5.81	.4894		
All-India	..	T	11.34	0.71	57.03	15.85	29.95	32.71	11.33	37.31	1.33	13.83	7.39	.5806		
		A	11.61	0.72	56.94	15.50	29.78	32.28	11.41	37.33	1.41	14.52	7.36	.5839		
		B	21.20	2.33	76.09	33.04	19.06	35.72	4.46	25.53	0.29	5.55	4.28	.5707		
		C	5.14	0.28	48.08	13.39	36.12	33.84	14.31	39.94	1.46	12.82	9.07	.5386		
All-India	U	T	11.56	0.53	54.57	11.29	27.74	23.84	14.51	38.01	2.82	26.63	9.36	.6339		
		A	11.51	0.52	53.66	10.60	27.75	22.85	15.00	37.80	3.14	28.48	9.63	.6369		
		B	17.71	1.53	71.14	25.07	21.25	33.08	7.02	32.44	0.55	9.41	5.35	.6000		
		C	5.05	0.13	43.01	9.07	34.85	25.82	19.13	42.20	2.96	22.85	11.72	.5759		

Note : The sum total of percentages under broad size classes may not add upto 100, because the percentages for unspecified households have not been given.

tenancy holdings, both the proportions of holdings and area are of a higher order in small sized holdings. This is particularly relevant for Southern India Zone. Thus, in States like Madras, 73 per cent of households along with 33 per cent of the area are located in holdings up to 5 acres in ownership holdings. These proportions rise to 88 per cent of total holdings along with 56 per cent of the area in pure tenancy holdings. These proportions are 65 and 30 for mixed tenancy holdings. In Mysore, these proportions are 43 per cent (households) and 12 per cent (area) for ownership holdings; 72 and 33 for pure tenancy holdings, 24 and 5 for mixed tenancy holdings. In Andhra Pradesh, 60 per cent of total households are associated with 15 per cent of area in ownership holdings in holdings up to 5 acres. These proportions increase to 72 per cent and 30 per cent in pure tenancy holdings and decrease to 40 per cent and 10 per cent in mixed tenancy holdings. In Kerala, 95 per cent of total holdings along with 67 per cent of total area are located in ownership holdings in this size class. These proportions fall to 92 and 61 in pure tenancy holdings and further fall to 84 and 46 in mixed tenancy holdings.

In Eastern India, in Assam, ownership holdings account for 66 per cent of the total households and 33 per cent of the total area in holdings up to 5 acres. These proportions rise to 88 per cent and 64 per cent for pure tenancy and decrease to 59 and 32 for mixed tenancy holdings. In Orissa, West Bengal and Bihar, the broad pattern of Assam is also exhibited. The proportion of holdings and area observed in ownership holdings have increased in pure tenancy holdings and have decreased in mixed tenancy holdings. In Central India in Uttar Pradesh, the picture for ownership holdings is broadly the same as in Eastern India, but the differences in the proportion of households and area get sharpened in pure tenancy and mixed tenancy holdings. Thus, 94 per cent pure tenancy holdings along with 71 per cent of the area are associated with holdings up to 5 acres. These proportions for mixed tenancy holdings are 82 per cent and 51 per cent. In case of Madhya Pradesh, the level of the relative proportions of households and area is rather low. Thus, in holdings up to 5 acres, there are 38 per cent of holdings and 9 per cent of the area under ownership holdings. These percentages are 44 and 15 for mixed tenancy and rise to 73 per cent and 36 per cent for pure tenancy holdings.

In Western India, both in Gujarat and Maharashtra, there is relatively smaller proportion of households and area in ownership and mixed tenancy holdings under small sized group. In pure tenancy, however, the holdings vary from 54 per cent in Gujarat to 66 per cent in Maharashtra with 15 per cent and 18 per cent of the total area respectively in this size class.

In North India, in Jammu & Kashmir, the households and area are having significant proportions in ownership, pure and mixed tenancy holdings under small sized groups. The picture is, however, otherwise in Punjab and Rajasthan.

In medium sized holdings extending between 5 to 15 acres, the relative variations in households and area get considerably reduced but still the proportions of cultivating households are leading the proportion of area in most of the States, and in some States like Madhya Pradesh, Andhra Pradesh, Mysore, the two are in a state of balancing proportions. It is in the large sized holdings that the percentages of area assume the leading role in relation to the percentages of

households. This aspect can better be studied by having a look at the concentration curves presented in Appendix A. Table VII constructed on the basis of concentration curves shows the proportion of area held by top 5 per cent and top 10 per cent of rural cultivating households.

TABLE VII—EXTENT OF AREA (PER CENT) CULTIVATED BY TOP 5 PER CENT AND TOP 10 PER CENT CULTIVATED HOUSEHOLDS UNDER OWNERSHIP (A), PURE TENANCY (B) AND MIXED TENANCY (C) HOLDINGS

	Top 5 per cent Households			Top 10 per cent Households		
	A	B	C	A	B	C
	1	2	3	4	5	6
<i>All-India</i>						
Rural ..	33	32	30	45	44	41
Urban ..	35	32	30	50	47	45
<i>States (Rural)</i>						
Jammu & Kashmir	22	15	18	35	27	30
Punjab ..	26	26	20	37	35	30
Rajasthan ..	24	33	24	41	46	36
Uttar Pradesh	25	22	21	38	37	34
Madhya Pradesh	25	22	22	38	37	34
Bihar ..	30	26	26	46	40	39
Orissa ..	25	22	24	40	35	36
West Bengal ..	25	19	18	37	30	29
Assam ..	21	19	17	33	32	29
Gujarat ..	25	29	23	38	44	36
Maharashtra ..	26	29	24	39	45	37
Andhra Pradesh	35	31	26	49	44	41
Mysore ..	31	28	25	41	40	38
Kerala ..	35	31	30	49	43	42
Madras ..	32	29	27	42	40	38

The following main points emerge from the above discussion :

The distribution pattern of holdings and area is uneven, more so in small sized and large sized holdings. Generally speaking, the proportions of households exceed the proportions of area in small sized holdings. The reverse tendency has been observed in large sized holdings. This implies that in areas where

there is a big margin in the relative proportions of households and area and the proportion of households are quite significant out of total, the economic condition of such households is likely to be worse off whereas in large sized holdings since the disparity in the relative proportions of households and area is caused by higher proportions of area, the economic condition of such households is likely to be much better off. The overall position of an area can be worked out by looking at the relative preponderance of households and area in small sized and large sized holdings.

In the context of economic development, it is sometimes suggested that it is the existence of the relative inequalities in the distribution of income that has been responsible for the generation of savings so necessary for giving momentum to the economy. In this context one naturally wonders whether the relative inequality in the distribution of cultivated area has in any way been really responsible for imparting any additional impetus to the rural economy. In any case, the imposition of ceilings, etc., in various States throw some doubts on the validity of this argument, but this is an aspect which requires detailed examination through local surveys and case studies.

Further, in several States, pure tenancy both in terms of households and area is more or less a problem of small sized holdings. The examples are West Bengal, Uttar Pradesh, Jammu & Kashmir, Kerala, Madras, Bihar, Orissa. There are, however, certain exceptions like Rajasthan, Punjab, Gujarat and Maharashtra where pure tenancy is also prevalent in large sized holdings of 30 to 50 acres and 50 acres and more. Is it because the main occupation of such households fall in the non-agricultural sector or the area in such holdings is beyond the control of one household operational unit due to difficulties of location, etc? This is another aspect which requires study. In this connection, it may be relevant to state one of the findings of a study regarding the package programme in Bihar (Shahabad District) which is that few farmers have so far come forward to participate in the programme with their entire holdings. One of the reasons assigned for this is that "the owners of large holdings who lease their lands on 'batai' (crop sharing) basis do not allow the lessees to participate for fear of creating 'evidence' of 'batai'. The authorities are finding it difficult to devise ways and means of bringing such leased areas under the programme.⁵ This becomes relevant when one observes that in many States, one operational holding is distributed among 8 or 9 parcels of land. Table VIII extracted from National Sample Survey, 16th Round may be relevant.

Another aspect which emerges is that a significant proportion (in many States about 80 per cent and more) of the total cultivated area is found in holdings exceeding 5 acres. If, for the sake of assumption, holdings with an average size exceeding 5 acres, ignoring quality considerations, are considered to be economic holdings, then the problem of agricultural productivity turns out to be the problem of productivity in economic holdings. Thus, in those areas where the major proportion of the cultivated area is located in economic holdings, the argument that agricultural productivity suffers because of small sized holdings naturally does not hold good and if in such cases, it is found that agricultural productivity is low, the reasons for low productivity might have to be sought elsewhere. For the sake of

5. *Hindustan Times*, 15 January, 1964.

TABLE VIII—ESTIMATED NUMBER OF PARCELS AND AVERAGE AREA THEREOF BY SIZE CLASS OF OPERATIONAL HOLDING

(All-India)

Size class of operational holding (acres)	Number of parcels per operational holding	Average area of parcels (0.00 acres)
Less than 0.49	.. 1.61	0.15
0.50 — 0.99	.. 2.82	0.26
1.00 — 2.49	.. 4.41	0.38
2.50 — 4.99	.. 6.30	0.58
5.00 — 7.49	.. 7.60	0.80
7.50 — 9.99	.. 8.30	1.04
10.00 — 12.49	.. 8.47	1.31
12.50 — 14.99	.. 8.13	1.62
15.00 — 19.99	.. 8.87	1.93
20.00 — 24.99	.. 8.66	2.55
25.00 — 29.99	.. 8.50	3.21
30.00 — 49.99	.. 9.06	4.12
50.00 +	.. 9.39	8.06
All Sizes	.. 5.82	1.14

Source : National Sample Survey, 16th Round, Agricultural Holdings in Rural India.

illustration, the relative distribution pattern of holdings and area in 82 selected tehsils is presented in triangular co-ordinates (Appendix B) under the three broad categories of holdings. The holdings and area are depicted broadly in the triangular co-ordinates. These show, that whereas the holdings are concentrated in small sized group, the area seem to be concentrated in medium sized and large sized groups. This again highlights the problem that quite a sizable proportion of the cultivated area is located in economic holdings.

The problem of agricultural productivity has been examined in view of the distribution pattern of cultivating households and area as also the level of concentration as revealed by 1961 Census, along with selected operational factors like irrigation, rainfall, pressure of agricultural workers. The necessary data are contained in Table IX. On the basis of the data given in Table IX, the following points emerge :

(a) Generally speaking, a significant proportion of the total cultivated area in various States is located in economic holdings, though quite a sizable proportion of cultivating households form a part of uneconomic holdings. Since

TABLE IX.—LEVELS OF COMPOSITE PRODUCTIVITY (FOODGRAINS) ALONG WITH SELECTED OPERATIONAL FACTORS IN SELECTED DISTRICTS OF INDIA*

State	District	1961 Census (Rural)		3	4	5	6	7	8	9	10	11
		Upto 5 acres	Average size of holding (acres)									
		H.H.	Area				Average Concentration ratio	% of N.A.I. to N.A.S. 1958-59	Average annual rainfall (inches)	Agricultural workers per 100 acres of N.A.S.	Cropping Pattern 1958-59	Composite site Productivity (food-grains) 1960-61 (Mds. per acre)
Jammu & Kashmir	Baramulla	80.68	52.94	3.21	0.4108	57.4	34.8	91	Rice-Maize	11.72		
	Kathua	46.58	17.72	6.51	0.4261	23.0	49.5	39	Wheat-Rice-Maize	6.67		
	Anantnag	77.60	49.79	3.55	0.3972	67.4	33.8	77	Rice-Maize-Wheat	4.81		
	Poonch	57.07	35.26	4.86	0.2958	12.1	N.A.	81	Maize-Wheat	6.61		
	Srinagar	88.47	61.38	2.29	0.4778	70.6	N.A.	82	Rice-Maize-Wheat	12.55		
Punjab	Hissar	10.24	1.86	19.67	0.3977	42.2	14.6	17	Gram-Bajra	7.40		
	Hoshiarpur	24.40	5.89	10.88	0.4337	13.2	31.9	34	Wheat-Maize-Gram	9.11		
	Gurgaon	20.57	5.12	11.17	0.4013	9.7	21.1	30	Gram-Bajra-Wheat	6.11		
	Karnal	13.02	2.70	14.35	0.4092	39.6	22.3	25	Gram-Wheat-Rice	11.18		
	Ferozepur	12.74	2.49	14.86	0.4112	54.3	14.2	17	Wheat-Gram-Cotton	11.03		
Rajasthan	Ganganagar	1.36	0.13	28.93	0.3245	27.4	7.7	11	Gram-Wheat-Bajra	8.19		
	Bharatpur	27.17	7.41	9.78	0.4009	25.9	24.8	34	Gram-Bajra-Rape and Mustard	6.58		
	Sikar	7.15	1.13	20.07	0.3572	5.2	20.1	23	Bajra	3.64		
	Tonk	15.75	3.07	14.57	0.4073	13.6	22.8	23	Jowar-Wheat-Gram	5.36		
	Jodhpur	5.18	0.35	38.43	0.4183	2.6	14.6	13	Bajra	1.71		
Banswara	62.55	34.64	4.67	0.3758	2.5	34.2	53	Maize-Gram-Rice	7.99			

(Contd.)

TABLE IX --LEVELS OF COMPOSITE PRODUCTIVITY (FOODGRAINS) ALONG WITH SELECTED OPERATIONAL FACTORS IN SELECTED DISTRICTS OF INDIA* (Contd.)

	1	2	3	4	5	6	7	8	9	10	11
Uttar Pradesh											
Bareilly	..	65.04	33.02	4.51	0.4238	11.7	43.9	42	Rice-Wheat-Gram	7.97	
Meerut	..	43.01	15.56	7.26	0.4216	63.6	33.4	39	Wheat-Sugarcane-Maize	11.01	
Saharanpur	..	39.43	12.92	8.05	0.4451	26.3	49.6	27	Wheat-Rice-Sugarcane	12.14	
Allahabad	..	49.42	12.55	9.08	0.5654	22.4	35.7	71	Rice-Gram-Barley	8.43	
Balla	..	67.53	29.25	5.00	0.5064	34.6	37.4	62	Rice-Barley-Gram	7.91	
Gonda	..	74.53	39.49	3.97	0.4737	26.2	45.3	65	Rice-Wheat-Maize	6.26	
Jhansi	..	48.86	18.43	6.95	0.4546	14.0	43.9	29	Wheat-Jowar-Gram	8.98	
Unnao	..	69.09	36.76	4.42	0.4351	24.7	31.4	58	Rice-Barley-Wheat	8.78	
Madhya Pradesh											
Indore	..	28.84	6.58	12.07	0.4543	2.6	35.9	22	Wheat-Jowar-Gram	5.88	
Mandsaur	..	30.52	8.34	9.97	0.4079	9.6	28.4	33	Jowar-G'nut-Wheat	6.00	
Vidisha	..	10.42	1.14	22.41	0.4722	0.2	N.A.	20	Wheat-Gram-Jowar	7.96	
W. Nimar	..	5.12	0.94	16.26	0.3158	3.2	31.8	31	Jowar-Cotton-G'nut	6.61	
Surguja	..	43.69	15.16	7.65	0.4468	0.6	N.A.	46	Rice	8.11	
Bastar	..	28.13	7.00	11.08	0.4483	2.5	N.A.	43	Rice	9.51	
Orissa											
Balasore	..	70.60	38.05	4.08	0.4426	9.3	60.9	37	Rice	9.40	
Cuttack	..	77.85	46.67	3.42	0.4408	22.7	57.8	42	Rice	11.03	
Ganjam	..	74.03	40.35	3.96	0.4533	39.5	55.6	75	Rice-Ragi	11.95	
Keonjhar	..	54.00	30.00	3.89	0.3120	4.3	59.6	42	Rice	11.00	
Sambalpur	..	54.43	19.76	6.72	0.5129	22.4	58.4	45	Rice	10.71	
B. Khondamals	..	90.54	69.98	2.21	0.3820	32.2	N.A.	28	Rice-Ragi	8.46	
Kalahandi	..	35.11	9.03	10.50	0.5007	1.6	56.8	38	Rice-Jowar	8.03	
West Bengal											
W. Dinajpur	..	58.53	31.53	5.29	0.3624	3.5	69.1	50	Rice	10.55	
Malda	..	69.92	36.04	4.10	0.4584	6.3	55.6	40	Rice	8.84	
24 Parganas	..	74.78	36.93	3.92	0.5116	8.8	64.0	56	Rice	12.73	
Midnapur	..	88.19	64.77	2.56	0.4268	31.7	69.3	49	Rice	12.73	
Nadia	..	56.19	26.77	5.27	0.4063	2.7	54.4	39	Rice-Gram-Jute	10.58	
Cooch-Behar	..	61.05	32.94	5.44	0.3751	5.0	126.3	42	Rice-Jute	8.83	
Bankura	..	65.55	33.32	4.31	0.4281	37.2	51.1	58	Rice	13.87	
Assam											
Lakhimpur	..	74.94	39.88	3.84	0.4812	80.9	114.3	76	Rice	11.65	
Nowgong	..	76.86	48.69	3.83	0.4024	28.1	68.8	59	Rice	11.61	
Sibsagar	..	70.75	41.76	4.12	0.3853	8.0	87.1	72	Rice	10.87	
Kamrup	..	70.29	37.77	4.33	0.4452	35.7	83.4	53	Rice	7.91	
Goalpara	..	58.43	29.91	5.65	0.3936	32.3	109.6	78	Rice	9.99	

(Contd.)

TABLE IX—LEVELS OF COMPOSITE PRODUCTIVITY (FOODGRAINS) ALONG WITH SELECTED OPERATIONAL FACTORS IN SELECTED DISTRICTS OF INDIA* (Concluded)

1	2	3	4	5	6	7	8	9	10	11
Gujarat	Rajkot	10.77	2.34	16.15	0.3189	6.3	24.8	14	G'nut-Jowar-Bajra	2.67
	Bhavnagar	9.81	1.74	18.58	0.3675	6.5	22.5	15	Bajra-Jowar	3.22
	Banaskantha	35.88	10.66	9.01	0.4415	7.0	25.3	20	Bajra-Jowar	2.97
	Kaira	65.51	32.19	4.63	0.4577	7.5	31.3	38	Bajra-Rice-Cotton	7.44
	Surat	76.63	33.33	3.81	0.5707	2.4	56.7	46	Cotton-Rice-Jowar	7.61
Maharashtra	Ratnagiri	89.33	50.85	2.41	0.5762	3.5	119.8	76	Rice-Ragi	9.84
	Buldana	22.24	3.48	17.70	0.4910	1.2	30.9	27	Cotton-Jowar	13.52
	Amravati	4.13	0.77	17.63	0.2924	1.0	35.5	28	Cotton-Jowar	6.74
	Ahmednagar	18.64	3.21	17.29	0.4728	9.4	22.6	23	Jowar-Bajra	4.87
	Sholapur	20.96	3.42	16.92	0.4868	9.1	23.4	20	Jowar	4.61
	Wardha	18.46	3.49	16.50	0.4696	1.1	43.4	23	Cotton-Jowar-Wheat	5.42
Andhra Pradesh	Bhandara	63.31	27.21	5.44	0.4885	31.3	57.7	58	Rice-Linearseed	9.14
	East Godavari	70.79	24.36	5.68	0.6079	58.9	41.7	70	Rice	15.89
	Guntur	61.44	19.89	6.02	0.5570	26.0	32.6	45	Rice-Jowar	11.30
	Nellore	78.99	27.10	4.72	0.6690	37.1	36.2	47	Rice-Jowar	9.37
	Kurnool	32.86	7.64	11.73	0.5115	6.5	23.4	24	Jowar-G'nut-Cotton	6.49
	Warangal	58.31	20.51	6.49	0.5402	27.2	39.9	58	Jowar-Rice	5.55
Mysore	Bijapur	27.16	5.40	14.67	0.4801	1.9	22.7	16	Jowar-Bajra-Cotton	7.79
	Mysore	37.95	13.19	8.26	0.4244	12.8	29.5	48	Ragi-Jowar-Rice	9.24
	Chitradurga	14.96	3.10	14.29	0.3692	7.1	22.3	32	Jowar-Ragi-G'nut	9.34
	Gulbarga	15.11	2.07	22.16	0.4398	1.3	29.4	16	Jowar-Bajra	3.33
	Shimoga	38.76	13.86	8.22	0.4264	43.2	58.1	42	Rice-Jowar	10.92
	S. Kanara	86.02	61.73	2.71	0.4123	24.9	107.1	98	Rice	12.62
Kerala	Dharwar	24.49	4.01	17.41	0.5202	5.0	27.3	22	Jowar-Cotton-G'nut	7.77
	Kozhikode	75.06	37.83	4.25	0.4950	1.9	121.0	32	Rice	11.59
	Alleppey	64.28	14.34	7.35	0.6677	25.8	101.8	58	Rice-Coconut-Tapioca	15.05
	Trivandrum	96.12	22.76	11.81	0.5321	39.8	57.4	54	Rice-Tapioca-Coconut	17.92
	Cannanore	92.84	70.14	1.78	0.4635	0.2	121.0	48	Rice-Coconut	11.75
	Salem	51.22	23.07	7.52	0.4098	17.1	32.3	68	Jowar-Ragi-Rice	11.02
Madras	Madurai	69.41	31.23	6.56	0.5059	32.9	31.9	62	Rice-Jowar-G'nut	14.71
	Thanjavur	70.68	26.37	5.36	0.5829	84.3	44.4	63	Rice	17.02
	Ramanathapuram	71.97	38.95	4.25	0.4421	36.8	31.7	55	Rice-Cotton-Bajra	10.43
	Tirunelveli	86.88	51.17	2.76	0.5266	30.7	29.8	57	Rice-Cotton-Bajra	14.55

* Figures in Col. 3 to Col. 6 relate to a particular tehsil in each of the selected districts.

H.H. = Cultivating household. N.A.I. = Net area irrigated. N.A.S. = Net area sown. N.A. = Not available.

ultimately agricultural productivity is reflected by the level of cultivated area and since a major portion of cultivated area lies in economic holdings, agricultural productivity should not be affected due to the prevalence of uneconomic holdings, accounting as these households do for an insignificant percentage of the total cultivated area. These observations generally hold good, though States like Kerala and Madras are exceptions, where quite a significant proportion of households and area fall in holdings less than 5 acres. How far the fall in productivity due to prevalence of uneconomic holdings is more than counter-balanced by the higher levels of productivity in economic holdings is a matter which needs further examination.

(b) The size of holding is generally smaller in areas with high irrigation and rainfall facilities and these areas are associated with higher pressure of agricultural workers as also higher levels of productivity. Since the sustaining capacity of such areas is relatively high, the density of population is relatively higher which further reduces the average size of holding.

(c) Again the size of holding is the lowest in rice growing areas, followed by wheat growing areas. Millet growing areas are having relatively higher sized holdings. Thus in southern and eastern rice growing States, the average size of holding is lower as compared to Punjab, Rajasthan, Gujarat, Maharashtra and Mysore.

It may be clarified that the above observations are to be taken as the reflections of the broad tendencies only.

TRENDS IN THE STRUCTURAL AND TENURIAL ASPECTS OF RURAL ECONOMY

As in no previous population census, the data relating to cultivating households and area were collected, 1961 Census data cannot be compared with any previous census data. However, for working out the trends in the distribution pattern of holdings and area, some comparable information is available in the 8th and 16th Rounds of National Sample Survey. These variations have been worked out for agricultural holdings of 8th Round and operational holdings of 16th Round, which according to NSS Report No. 122 "Tables with notes on agricultural holdings in rural India" seem to be comparable. To quote NSS Report No. 122: "It may be noted that since lands coming under an operational holding were put wholly or partly to some agricultural uses, an operational holding may be considered as an agricultural holding."

A study of the percentage distribution of agricultural holdings and area operated by size class of operational holdings for 8th and 16th Rounds for rural sector has shown that at all-India level in large sized holdings (15 acres and above), the relative percentage of holdings and area have decreased in 1959-60 over 1953-54 the decrease being of a higher order in holdings with 50 acres and more. Some fall in relative percentage of households and area is also observed in medium sized holdings. There has been some gains in relative percentage holdings and area in small sized holdings. This implies that if the aim of land reforms was to decrease the proportion of holdings and area in large sized holdings, this seems to have been realised on the basis of NSS data.

This aspect of the relative variations in the pattern of distribution of holdings and area has been further studied by looking at the level of concentration ratios observed in the first Agricultural Labour Enquiry (1950-51), 8th and 16th Rounds of NSS. These data are presented in Table X.

It is observed that the concentration ratio showed an increasing trend between 1950-51 and 1953-54 in Hyderabad, Saurashtra, Madhya Bharat, Vindhya Pradesh, Mysore, Punjab, Rajasthan and West Bengal. In other States, there was either a decline or the same level was more or less maintained.

Between 1953-54 and 1959-60, some decrease is observed in concentration ratio in the States of Assam, Orissa, Punjab, Rajasthan and West Bengal as also at all-India level. The rest of the States do not show any decline. Strictly speaking, Census concentration ratios for 1960-61 are not comparable with the NSS concentration ratio for 1959-60. But, generally speaking, by looking at the levels of NSS and Census concentration ratios for 1959-60 and 1960-61, one observes that the Census concentration ratios are generally lower than the NSS concentration ratios. One does not know how far the relative lower concentration ratios in States like Kerala and higher concentration ratio in Assam as reflected by 1961 Census data are due to the exclusion of area under plantations, condiments and spices, etc., in 1961 Census or due to inclusion of livestock and poultry farm in NSS (1959-60). It is, however, felt that since plantations generally come under the large sized holdings and under few operational units, the concentration ratios are likely to be higher after inclusion of plantation crops. This, however, is not the whole explanation. The inclusion of livestock and poultry farm are also likely to increase the level of concentration ratio as these farms account for a small proportion of area and higher proportion of households.

The net effect of the changes in the distribution pattern of holdings and area is ultimately reflected in average size of holding. The relevant data for ALE-I, NSS and 1961 Census are given in Table XI.

Table XI shows that between 1950-51 and 1953-54, the average size of holding has increased in Hyderabad, Assam, Bihar, Bombay, Jammu & Kashmir, Mysore and Rajasthan. In rest of the States, there was some decline. At all-India level, it remained at 7.53 acres. In 1959-60, the average size of holding has decreased in all the States other than Bombay, Kerala, Mysore and West Bengal and was reflected also at all-India level (6.65 acres). In the 1961 Census, the average size of holdings for various States broadly tallies with 1959-60 NSS results. The decline in the average size of holding observed in many States since 1953-54 could be explained by (a) the increase in the pressure of population and workers leading to greater sub-division and fragmentation of holdings. This is clearly reflected in Table XIII where higher pressure of workers is associated with lower average size of holding; (b) decrease in the joint ownership and joint operational holdings; and (c) implementation of the ceiling aspects of land reforms.

Use of NSS data for finding out the trend in the proportion of leased in area by size class of holding given in Table XII shows that the percentage leased in area at all-India level has decreased from 20.34 in 1953-54 to 12.53 in 1959-60. The reduction in leased in area is of a higher order in size classes 10 acres and above.

TABLE X—LEVELS OF CONCENTRATION RATIOS : ALE-I (1950-51),
NSS (1953-54, 1959-60) AND CENSUS (1960-61)

State	Concentration Ratio			
	ALE-I 1950-51	NSS		Census 1961
		8th Round 1953-54	16th Round 1959-60	
1	2	3	4	5
Jammu & Kashmir	0.4209	0.4236	0.4255	0.4358
Punjab	0.3838	0.5369	0.5100	0.4650
Rajasthan	0.5112	0.5729	0.5544	0.5486
Uttar Pradesh	0.5284	0.5220	0.5344	0.5198
Madhya Pradesh	0.5625	0.5660	0.5584	0.5101
Madhya Bharat	0.4702	0.5031		
Vindhya Pradesh	0.5294	0.6042		
Bihar	0.6012	0.5705	0.5842	0.5739
Orissa	0.6133	0.5785	0.5429	0.5004
West Bengal	0.4770	0.5614	0.4606	0.4914
Assam	0.3929	0.4586	0.4254	0.4326
Bombay	0.5656	0.5655 M	0.5583 M	0.5450
	0.3482	0.3833 G			0.5081 G	0.5228
Andhra	—	0.6273	0.6215	0.6076
Hyderabad	0.5576	0.6113		
Mysore	0.4985	0.5210	0.5575	0.5408
Kerala	0.6480	0.6228	0.7239	0.5896
Madras	0.5790	0.5076	0.5241	0.5221
All-India	0.5945	0.6194	0.6014	0.5806

M=Maharashtra. G=Gujarat.

TABLE XI—AVERAGE SIZE OF HOLDING FOR ALE-I (1950-51), NSS (1953-54, 1959-60) AND CENSUS (1960-61)

(Rural areas only)

State	Agricultural Labour Enquiry I (Cultivator's holding) 1950-51	NSS		Census 1961 (household operational holding)
		8th Round (agricultural holding) 1953-54	16th Round (operational holding) 1959-60	
1	2	3	4	5
Jammu & Kashmir	3.77	3.98	3.87	3.84 (3.57)
Punjab including Pepsu	15.40	11.68	11.17	13.78 (12.43)
Rajasthan	16.90	16.94	13.79	16.01 (15.60)
Uttar Pradesh	5.31	4.83	4.60	5.27 (5.18)
Madhya Pradesh	12.30*	12.27	10.01	10.60 (10.26)
Madhya Bharat		14.23		
Vindhya Pradesh		8.72		
Bihar	4.06	4.14	3.99	4.80 (4.63)
Orissa	5.56	5.08	4.61	5.19 (5.04)
West Bengal	4.67	3.57	3.88	4.10 (3.68)
Assam	5.31	5.42	4.13	4.75 (4.30)
Bombay & Saurashtra	11.53	12.62	M 13.06 G 11.98	M 12.87 G 12.53 (12.38)
Andhra	—	6.51	6.64	8.04 (7.74)
Hyderabad	14.09	15.51		
Mysore	7.22	7.98	9.65	10.48 (9.98)
Kerala	2.41†	1.83†	1.96	1.83 (1.20)
Madras	4.46	4.15	3.89	4.58 (4.28)
All-India	7.53	7.53	6.65	7.71 (7.39)

* Reorganised Madhya Pradesh

† erstwhile Travancore & Cochin State

Note : Figures in the brackets under column 5 are based on the cultivated area exclusive of the area under pure tenancy holdings.

TABLE XII—PERCENTAGE OF OPERATED AREA OWNED AND LEASED IN BY SIZE CLASS OF OPERATIONAL HOLDING

(Rural Sector only)

Size class of operational holding (acres)	Owned Area		Leased in Area	
	16th Round 1959-60	8th Round 1953-54	16th Round 1959-60	8th Round 1953-54
1. Less than 1	75.07	71.55	24.93	28.45
2. 1 — 2.49	81.18	73.36	18.82	26.64
3. 2.50 — 4.99	83.48	74.95	16.52	25.05
4. 5.00 — 7.49	85.36	78.01	14.64	21.99
5. 7.50 — 9.99	86.42	79.71	13.58	20.29
6. 10.00 — 14.99	88.06	81.53	11.94	18.47
7. 15.00 — 29.99	88.92	81.11	11.08	18.89
8. 30.00 — 49.99	89.87	79.78	10.13	20.22
9. 50 +	92.33	82.16	7.67	17.84
All Sizes	87.47	79.66	12.53	20.34

Source : N.S.S. Reports on Land Holdings for 8th and 16th Rounds.

TABLE XIII—FAMILY WORKERS (F) AND FAMILY WORKERS AND HIRED WORKERS TOGETHER (F & H) PER 100 ACRES OF CULTIVATED AREA BY SIZE CLASS OF HOUSEHOLD OPERATIONAL HOLDING

State/Union Territory	Percentage of rural population (1961 Census)		Proportion of agricultural workers to population in rural areas	Size Class of Household Operational Holding (acres)													
	All Sizes			Less than 1				1.00-2.49				2.50-4.99				5.00-7.49	
	F	F&H		F&H	F	F&H	F	F&H	F	F&H	F	F&H	F	F&H	F	F&H	
1	2	3	4	5	6	7	8	9	10	11	12	13					
Jammu & Kashmir	83.3	38.6	67	69	372	380	146	149	75	77	47	49					
Punjab	79.9	27.3	18	19	359	361	128	129	58	58	35	36					
Rajasthan	83.7	43.2	18	19	402	410	145	148	74	75	46	47					
Uttar Pradesh	87.1	33.5	40	42	373	378	124	127	59	61	35	38					
Madhya Pradesh	85.7	47.8	26	29	366	369	138	140	70	72	44	46					
Bihar	91.5	34.4	47	61	322	338	134	149	69	84	44	59					
Orissa	93.7	34.2	41	46	310	320	117	123	60	64	39	43					
West Bengal	75.5	23.4	42	51	247	262	97	107	50	59	33	42					
Assam	92.3	31.9	54	56	322	327	118	120	69	71	49	51					
Gujarat	74.2	36.7	21	21	353	354	129	129	67	67	42	42					
Maharashtra	71.8	45.2	21	22	400	405	141	144	70	72	43	44					
Andhra Pradesh	82.6	41.9	31	34	372	374	136	138	70	72	43	45					
Mysore	77.7	39.5	25	31	375	416	122	139	69	82	44	53					
Kerala	84.9	14.6	88	121	433	482	108	139	55	86	33	67					
Madras	73.3	36.1	49	88	343	430	116	175	67	120	43	85					
All-India (including NEFA and Goa, Daman and Diu)	82.0	35.7	31	36	343	364	125	138	65	74	41	48					

TABLE XIII (Concluded)

State/Union Territory	7.50-9.99		10.00-12.49		12.50-14.99		15.00-29.99		30.00-49.99		50 +		Unspecified	
	F	F&H	F	F&H	F	F&H	F	F&H	F	F&H	F	F&H	F	F&H
Jammu & Kashmir ..	14	15	16	17	18	19	20	21	22	23	24	25	26	27
Punjab ..	38	39	31	32	27	31	16	17	10	10	5	6	20	20
Rajasthan ..	27	27	22	22	19	20	14	14	8	9	4	5	33	31
Uttar Pradesh ..	33	35	27	29	23	24	15	16	9	9	5	5	36	37
Madhya Pradesh ..	26	29	21	24	18	21	12	15	7	10	4	7	32	32
Uttarakhand ..	33	35	27	29	23	26	16	19	9	13	5	9	40	42
Madhya Pradesh ..	32	47	25	41	21	36	13	27	7	19	4	13	41	46
Orissa ..	30	35	24	30	21	21	14	20	8	13	4	11	32	34
West Bengal ..	26	35	21	31	18	28	11	30	6	12	3	4	25	27
Assam ..	39	41	33	35	29	31	20	23	12	15	6	8	36	37
Gujarat ..	31	31	25	25	21	22	14	15	9	9	4	5	30	31
Maharashtra ..	32	33	25	26	21	23	14	16	9	10	5	7	33	34
Andhra Pradesh ..	32	35	25	28	22	24	14	17	8	12	4	7	33	36
Karnataka ..	32	39	26	31	23	28	15	18	9	11	5	7	32	35
Kerala ..	24	62	19	56	15	47	10	38	5	44	2	13	20	22
Madras ..	32	70	26	57	22	53	14	37	8	25	4	16	33	61
All-India (excluding NEFA and Goa, Daman and Diu) ..	31	36	25	30	21	26	14	18	9	11	4	7	33	34

This implies that though the main aim of land reforms legislation regarding the restoration of ownership and occupancy rights to the tiller of the soil is being realised in higher sized holdings, much remains to be done in the case of small sized holdings which happen to be uneconomic holdings.

In Table XIII are given the strength of family and hired workers per 100 acres of cultivated area in major States. The workers per unit of cultivated area are relatively highest in Kerala and Madras. The proportion of workers is also high in Uttar Pradesh and eastern regions (West Bengal, Assam and Orissa). As already pointed out, the average size of holding in various States is having an inverse relationship with the strength of family and hired workers. The strength of agricultural workers can to some extent be explained by (a) percentage of rural population to total population; (b) density of population per 100 acres of cultivated area; and (c) proportion of rural agricultural workers to total rural population. Further, it may be observed that within a State the strength of agricultural workers is getting reduced with the increase in the size class of holding. In 1 acre holdings there are 3 to 4 workers per acre. This level reduces to about 2 workers per acre in 1—2.5 acre holdings. In the rest of size classes starting with 2.5 acre holdings to holdings of 50 acres and above, the operational area per worker increases from about 1 acre in 2.5 acre holdings to 4 to 5 acres in 30-50 acre holdings. The increase in the operated area per agricultural worker might be because of higher level of technology in the holdings of larger sizes. Supporting data on this aspect is rather scanty, but National Sample Survey data from the 16th Round on this aspect given in Table XIV seem to be supporting a higher level of technology in higher sized holdings.

TABLE XIV—PERCENTAGE DISTRIBUTION OF TRACTORS BY SIZE CLASS OF HOUSEHOLD OPERATIONAL HOLDING

(All-India)

Size of household operational holding (acres)	Tractors
Less than 0.49	.. 0.39
0.50 — 0.99	.. 0.75
1.00 — 2.49	.. —
2.50 — 4.99	.. 9.20
5.00 — 7.49	.. 8.21
7.50 — 9.99	.. 10.43
10.00 — 12.49	.. 6.81
12.50 — 14.99	.. 3.51
15.00 — 19.99	.. 6.64
20.00 — 24.99	.. 9.56
25.00 — 29.99	.. 2.96
30.00 — 49.99	.. 15.04
50.00 +	.. 26.50
All Sizes	.. 100.00

Source : N. S. S. 16th Round, Agricultural Holdings in Rural India.

In this context, one might also be interested in ascertaining the extent of participation by the hired workers in the various size classes of holdings. This aspect can be studied by looking at (a) the percentage distribution of hired workers within the various size classes of holding and (b) percentage of hired to total workers in various size classes of holdings. Both these percentages are given in Table XV. It may be observed that the percentage of hired to total workers is higher in the southern and eastern regions where the proportion of agricultural labourer to total rural population is high. Further, generally speaking, the percentage of hired workers to total workers is relatively higher in 15 acre holdings and above. The percentage distribution of hired workers alone, by size classes also seem to be confirming these conclusions. Kerala and Madras, however, stand in a class by itself exhibiting as these States do the relatively higher percentage of hired workers in various size classes. One wonders how far higher percentage of hired workers among total workers in these States is associated with a higher level of tenancy prevalent in these States. In the States like Punjab, Rajasthan, Maharashtra and Gujarat where pure tenancy is prevalent in higher size class of holding (30—50 acres), relatively higher concentration of hired workers in higher size classes might indicate some association among them. The higher level of participation of hired workers in these States may also be due to “resumption of personal estates for self-cultivation by the erstwhile intermediaries like Zamindars, Jagirdars and Talukdars, etc., with the help of agents and permanent farm hands, the latter constituting attached labourers. The enactment of tenancy laws which provided for conferment of occupancy rights and prohibited arbitrary evictions of tenants also led, in different States to resumption by big landlords of land previously leased out by them to share-croppers . . . for personal cultivation with the help of permanent farm hands who could be deemed only as wage paid labour and not as tenants.” But these aspects require further detailed probe to find out the validity of these arguments.

A study on the structural and tenurial aspect of rural economy may not be complete without presenting certain statistics of participation rates of male and female agricultural workers in the context of total workers by broad age-groups 0-14, 15-34, 35-59 and 60 + as also all ages taken together. It may be emphasised that the extent of participation rates in rural sector may not correctly reflect the level in areas where plantation crops are important. Such areas are located in Kerala, Coastal Mysore, Coastal and Inland Madras, Assam and Himalayan districts of West Bengal. This is because on'y first two industrial categories, viz., cultivators and agricultural labourers of 1961 Census which are associated with crop production of foodgrains, sugarcane, fibres and oilseeds have been considered here. The relative importance of non-crop production in the agricultural sector as also of non-agricultural sector is reflected in the relative differentials in the percentage of total rural workers to total rural population and total rural agricultural workers to total rural population. These differences in total participation rates and participation rates in agriculture are clearly evident in the States of Andhra Pradesh, Kerala, Madras, Assam and West Bengal.

Another aspect to be noted is that when these participation rates are considered in various broad ages, it is found that in 0-14 age-group, there is little difference between the total participation rates and the participation rates of agricultural workers. It is because most of the workers in this age group (0-14) are more or

TABLE XV—(a) PERCENTAGE DISTRIBUTION OF HIRED WORKERS AND (b) RATIOS OF HIRED WORKERS TO TOTAL WORKERS ENGAGED IN CULTIVATION BY SIZE OF HOUSEHOLD OPERATIONAL HOLDING : 1961 CENSUS HOUSEHOLD SCHEDULE B-XII AND B-XV (RURAL AREAS ONLY)

State	Proportion of agricultural labourers to total rural population	Size Class of Household Operational Holding (acres)													
		Less than 1													
		All Sizes		1.00—2.49		2.50—4.99		5.00—7.49		7.50—9.99					
		a	b	a	b	a	b	a	b	a	b	a	b		
I	2	3	4	5	6	7	8	9	10	11	12	13	14		
Jammu & Kashmir	..	0.58	100.00	2.91	6.85	2.28	20.48	2.17	27.75	2.43	18.16	3.28	9.90	4.41	
Punjab	..	3.23	100.00	3.61	0.34	0.74	1.75	0.83	2.56	0.87	4.81	1.32	4.56	1.77	
Rajasthan	..	2.25	100.00	4.23	0.54	1.96	4.36	1.84	7.28	2.11	10.43	3.17	7.69	3.89	
Uttar Pradesh	..	5.02	100.00	6.51	2.51	1.45	8.41	2.32	15.40	4.03	15.62	6.73	10.58	8.83	
Madhya Pradesh	..	10.01	100.00	9.57	0.21	0.87	1.66	1.57	4.68	2.78	7.43	4.45	6.42	6.06	
Bihar	..	10.27	100.00	23.05	2.51	4.71	9.23	9.97	18.15	17.78	16.38	25.44	9.77	31.87	
Orissa	..	7.87	100.00	11.51	1.51	3.20	9.15	4.26	16.13	7.22	17.10	11.26	9.05	14.67	
West Bengal	..	6.62	100.00	18.25	3.22	5.90	13.13	9.83	21.35	14.75	20.39	21.40	10.31	27.41	
Assam	..	1.70	100.00	3.74	2.47	1.55	8.58	1.75	19.65	2.22	19.50	3.89	12.31	4.91	
Gujarat	..	7.95	100.00	2.72	0.33	0.43	1.79	0.45	3.73	0.64	6.59	1.21	5.93	1.78	
Maharashtra	..	15.17	100.00	6.73	0.70	1.38	3.02	1.64	4.60	2.11	5.07	2.67	3.68	3.29	
Andhra Pradesh	..	17.30	100.00	8.19	0.59	0.60	3.41	1.33	6.92	2.98	8.42	5.06	5.77	7.12	
Mysore	..	9.04	100.00	16.62	1.24	9.80	10.06	12.61	19.36	15.67	17.15	17.17	9.81	17.65	
Kerala	..	6.61	100.00	27.68	12.32	10.14	25.97	22.65	23.21	37.18	13.71	50.68	6.54	62.32	
Madras	..	10.82	100.00	44.17	3.55	20.20	19.25	33.98	26.75	44.34	18.35	49.91	7.86	54.31	
All-India (excluding NEFA and Goa, Daman and Diu)	..	8.50*	100.00	14.15	2.87	5.77	12.18	9.13	18.69	12.20	15.49	14.42	8.38	15.32	

* Includes Goa, Daman and Diu.

TABLE XV—(a) PERCENTAGE DISTRIBUTION OF HIRED WORKERS AND (b) RATIOS OF HIRED WORKERS TO TOTAL WORKERS ENGAGED IN CULTIVATION BY SIZE OF HOUSEHOLD OPERATIONAL HOLDING : 1961 CENSUS HOUSEHOLD SCHEDULE B XII AND B-XV (RURAL AREAS ONLY)

State	10.00—12.49 acres		12.50—14.99 acres		15.00—29.99 acres		30.00—49.99 acres		50 acres +		Unspecified			
	a	b	a	b	a	b	a	b	a	b	a	b		
	15	16	17	18	19	20	21	22	23	24	25	26		
Jammu & Kashmir	5.47	4.45	7.42	11.89	3.31	4.65	0.29	4.18	0.37	23.27	—	—
Punjab	8.11	2.33	5.67	3.18	36.36	5.09	21.37	8.70	14.30	14.55	0.17	1.62
Rajasthan	10.26	4.49	4.39	4.15	25.34	5.71	15.12	6.72	14.23	7.10	0.36	1.74
Uttar Pradesh	9.28	11.80	6.23	13.78	19.16	19.30	7.42	31.20	5.22	47.56	0.17	2.05
Madhya Pradesh	8.84	7.98	5.76	9.65	27.93	14.27	17.24	26.45	19.80	48.11	0.03	5.64
Bihar	9.23	37.26	5.53	42.26	18.02	50.49	7.09	63.90	4.06	71.22	0.03	11.05
Orissa	10.81	19.23	4.57	5.87	19.16	30.23	6.98	43.14	5.36	59.67	0.18	5.41
West Bengal	11.08	33.60	4.99	37.32	13.86	31.57	1.20	46.09	0.33	42.12	0.14	6.71
Assam	10.69	7.53	5.86	7.89	14.75	11.36	4.42	20.15	1.42	23.50	0.35	2.27
Gujarat	8.91	2.45	4.96	3.29	32.50	4.36	21.80	6.16	13.22	10.51	0.24	2.24
Maharashtra	5.61	4.06	3.02	5.94	23.07	7.76	21.79	15.52	29.24	32.40	0.20	3.39
Andhra Pradesh	8.74	8.80	3.70	10.87	23.83	15.97	16.12	27.95	22.45	49.52	0.05	10.32
Mysore	9.72	16.46	3.83	18.66	15.24	16.45	7.00	19.26	6.59	30.11	—	10.00
Kerala	5.73	65.67	1.95	68.46	6.52	74.34	3.10	88.65	0.93	84.21	0.02	9.35
Madras	7.73	54.92	2.68	58.97	9.30	60.68	2.91	68.03	1.58	76.10	0.04	14.04
All-India (excluding NEFA and Goa, Daman and Diu)	8.64	16.46	4.18	17.63	15.94	19.42	7.20	24.16	6.35	35.07	0.08	3.61

less concentrated in the agricultural activities. These differences get widened in age-group 15-34, 35-59 and 60 +. These differences again are wider in male participation rates as compared to female participation rates.

Further, there is a greater range of variations in the female participation rates in various States as compared to male participation rates. This introduces variability in the total participation rates.

The participation rates for males attain the highest level in the age-group 35-59 whereas the females attain this level in 35-59 age-group in some States and 15-34 age-group in other States.

Since the age-group 0-14 should not really form part of the group of persons who are engaged in economic activities belonging as this age does to school age, the total participation rates for males and females excluding the workers and population for 0-14 age-group really represent the effective participation rates.

APPENDIX A

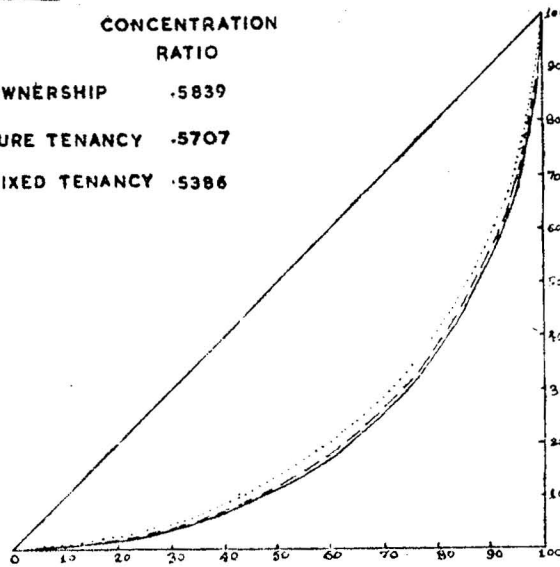
CONCENTRATION CURVES

INDIA

RURAL

CONCENTRATION
RATIO

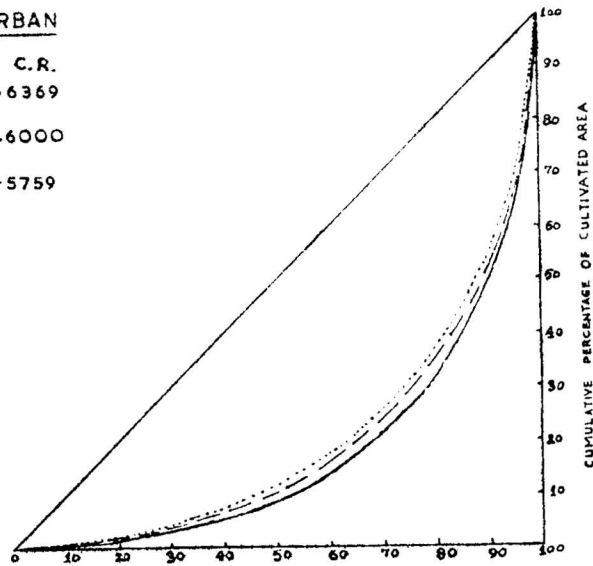
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- B - - - PURE TENANCY .5707
- C MIXED TENANCY .5386



URBAN

C.R.

- A ——— .6369
- B - - - .6000
- C5759



CUMULATIVE PERCENTAGE OF CULTIVATING HOUSEHOLDS.

APPENDIX B

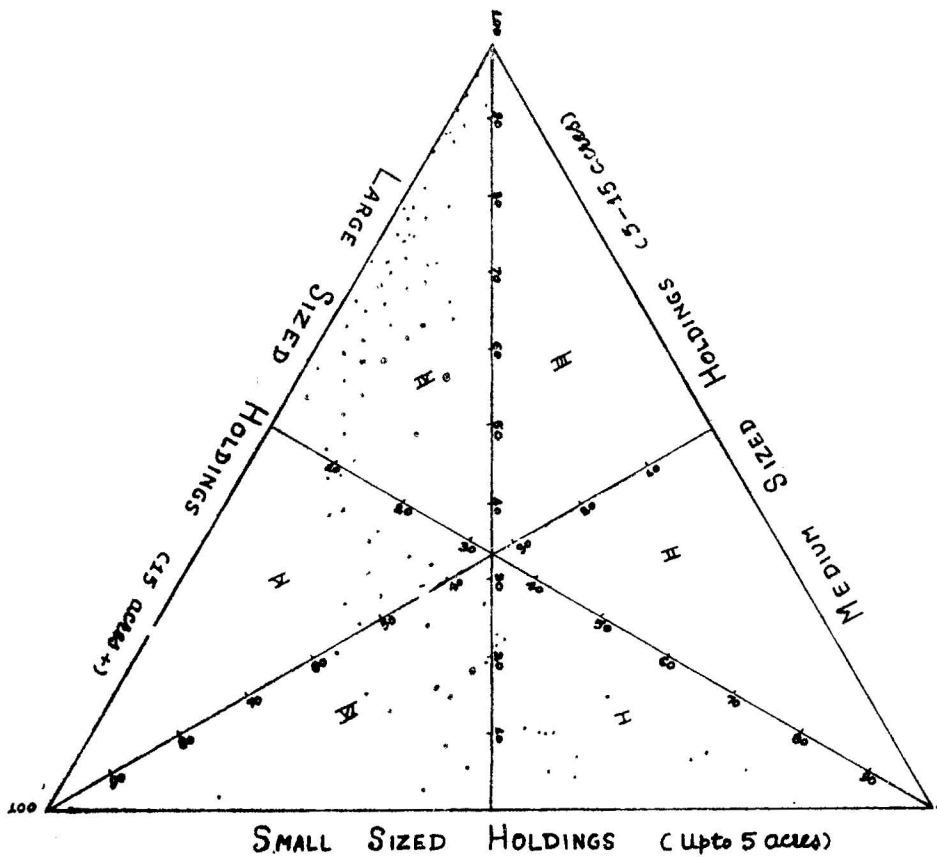
TRIANGULAR CO-ORDINATES

(1961 CENSUS)

- (i) Distribution of cultivating Households under small sized, medium sized and large sized holdings (B-XI).

(Selected tehsils only)

(Each dot represents one tehsil spread in various regions of 14 major States excluding Bihar.)



APPENDIX B

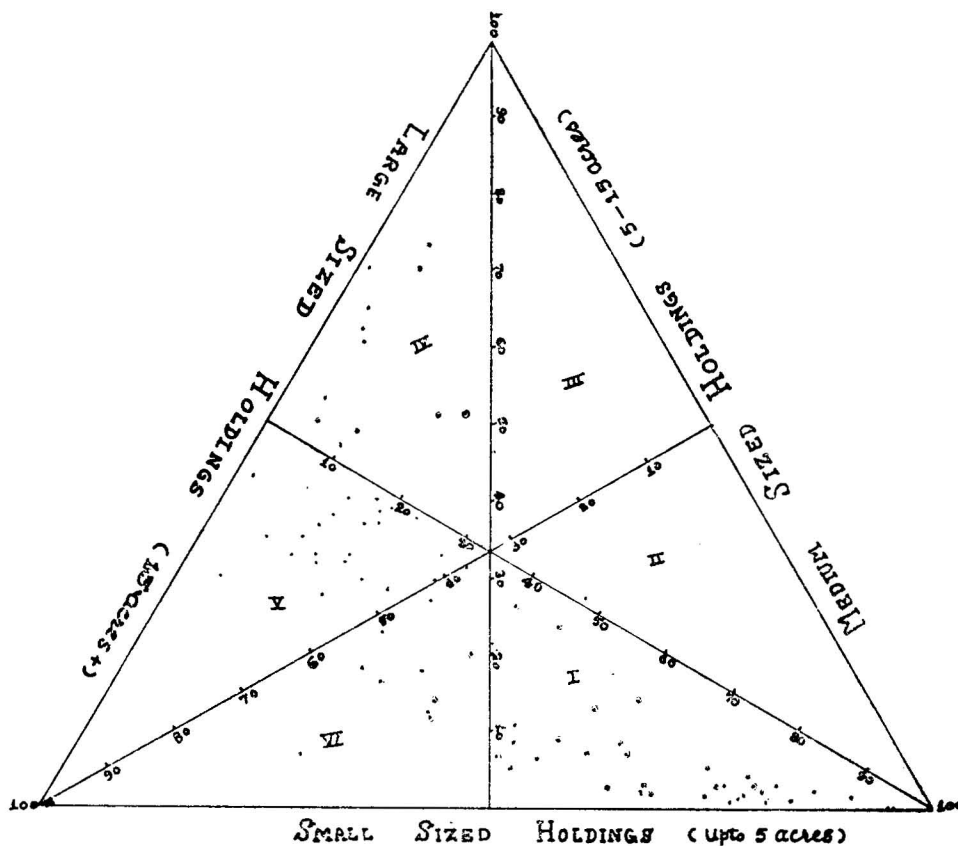
TRIANGULAR CO-ORDINATES

(1961 CENSUS)

- (ii) Distribution of cultivated area under small sized, medium sized and large sized holdings (B-XI).

(Selected tehsils only)

(Each dot represents one tehsil spread out in various regions of 14 major States excluding Bihar.)



EXPLANATORY NOTE TO APPENDIX B

Triangular (trilinear) co-ordinates have been drawn in Appendix B. Three co-ordinates have been drawn bisecting each of the three sides of the triangles into half. Each of the co-ordinates serves as the measuring rod, with their origin lying in the respective mid points of the sides. An evident feature of this triangle is that the sum of the three characteristics at any point in the area of this triangle will be 100. The intersecting point of the three co-ordinates will divide them at one-third of their length. Moreover, the three co-ordinates divide this triangle into six sub-triangles.

Triangular co-ordinates have been utilised here for studying the distribution pattern of cultivating households and cultivated area under small sized, medium sized and large sized holdings. The predominance of small sized, medium sized and large sized holdings in the six sub-triangles in the order of their importance is as given below :

<i>Sub-triangle I.</i>	(i) Large sized holdings :	LSH			
	(ii) Medium sized holdings :	MSH			
	(iii) Small sized holdings :	SSH			
<i>Sub-triangle II.</i>	(i)	LSH	<i>Sub-triangle V.</i>	(i)	MSH
	(ii)	SSH		(ii)	SSH
	(iii)	MSH		(iii)	LSH
<i>Sub-triangle III.</i>	(i)	SSH	<i>Sub-triangle VI.</i>	(i)	MSH
	(ii)	LSH		(ii)	LSH
	(iii)	MSH		(iii)	SSH
<i>Sub-triangle IV.</i>	(i)	SSH			
	(ii)	MSH			
	(iii)	LSH			

From a perusal of the triangular co-ordinates given in Appendix B, it will be observed that cultivating households are mostly located in Sub-triangle IV which shows the predominance of small sized holdings. As against this, most of the cultivated areas are spread out in Sub-triangles V and I which show the predominance of medium sized and large sized holdings respectively. This again highlights the assertion given in the text that the cultivating households are mostly concentrated in small sized holdings whereas the cultivated area is concentrated in medium sized and large sized holdings.