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**CHANGES IN THE STRUCTURAL DISTRIBUTION OF LAND OWNERSHIP
AND USE: A FEW COMMENTS***

The increase in the value of concentration coefficient for the ownership holdings over the period 1953-54 to 1970-71, compared to the decrease for the operational holdings, is attributed by Harpal Singh¹ to "the impact of swelling number of landless households" which is 'excluded' in the latter while 'included' in the former. This explanation cannot be accepted because (i) the landless both in absolute number and as a proportion have gone down over time and (ii) the concept of operational holding should not be mixed up with 'landless households'. In fact, the landless households leasing in land for agricultural purposes figure in the distribution of operational holdings among the size-classes determined by the quantum of land leased in. In Table II of Singh's paper, therefore, the expression "operational holdings excluding the landless households" should be corrected as "operational holdings only".

The real reason for an increase in the concentration ratio of ownership holdings may lie perhaps in the increase in the number of very small owners, whereas the reason for the decrease in the concentration ratio of operational holdings lies in a larger interplay of leasing out and leasing in, which helps to bring about an equalisation in the distribution of land operated.

If the author means by 'landless' the 'households not operating land', the distributions of 'household operational holding' may have been used instead of the 'operational holdings' and in that case, the National Sample Survey (NSS) 8th Round distribution which includes purely non-agricultural holdings too is not comparable with the distributions of the later Rounds. This will over-estimate the concentration ratio for the 8th Round because of the clustering of the non-agricultural holdings in the lower size classes and a proper adjustment is called for.² Apart from this, the author should have used the phrase 'household operational holdings excluding those not operating' in the place of 'operational holdings excluding the landless'. Moreover, throughout the paper, the operational holding would mean the 'household operational holding.'

A. S. Sirohi, G. S. Ram and C. B. Singh in their paper³ have used the NSS data of 8th, 16th and 26th Rounds to examine the changes in the distri-

* In the context of recent controversy raised in economic journals on the methodology and concepts used for measuring the changes in the structural distribution of land ownership and use, it was considered that a critical examination of the papers on this subject published in the Conference Number (July-September 1976) of this journal would be useful to researchers. Accordingly, S. K. Sanyal was requested to prepare a comprehensive note on the subject. His note indicates some of the conceptual problems involved in the analysis of the NSS and other data on distribution of land holdings. It was thought that the utility of this discussion would be enhanced if the concerned authors were given an opportunity to reply to the points raised in Sanyal's note. The replies received were referred back to Sanyal. The original note embodying his comments, together with the replies received from the concerned authors, with suitable editing in the light of Sanyal's further comments are published in the following pages for the benefit of our readers. [Editor]

1. "Structural Changes in the Size Distribution of Holdings—A Macro View", *Indian Journal of Agricultural Economics*, Vol. XXXI, No. 3, July-September 1976, pp. 10-14.

2. Please see my comments on K. N. Raj's "Trends in Rural Unemployment in India" *Economic and Political Weekly*, Vol. XII, No. 5, January 29, 1977, pp. 145-148.

3. "Inter-State Disparities in the Structural Distribution of Land Holdings in Rural India" *Indian Journal of Agricultural Economics*, July-September 1976, pp. 14-23.

bution of ownership and operational holdings by aggregating the data into five size classes from 12 classes (that were available for all the Rounds). The Gini ratios obtained from a fewer number of size classes are therefore subject to a higher approximation error compared to those which could have been obtained with 12 size classes.

The analysis of net leasers-in and net leasers-out in the size classes of ownership holdings was done only for 1971-72 (26th Round), it was observed by the authors, "because the data in other NSS Rounds lacked the conceptual uniformities." The data on leasing in of land by owners were collected for the first time in the 26th Round. Information on leasing out was collected in each of the Rounds along with ownership particulars. With respect to the operational holdings, the data on leasing in were obtained for each of the Rounds. So in regard to the analysis of net leasers-in by size of ownership holdings, it was not a handicap arising out of lack of conceptual uniformities but one of non-availability of data for the earlier Rounds. Moreover, the reference to 'owners' as 'farmers' or 'cultivators'⁴ is not correct obviously because the owners might lease out their land or own purely non-agricultural land.

Trends in Size Distribution of Ownership and Operational Holdings

Comparing the trends of ownership holdings and operational holdings from Tables I and II, the authors have come to the conclusion that as regards the marginal holdings, the relatively larger increase in the proportion of operational holdings and area operated compared to ownership holdings and area owned can be attributed to relatively higher leasing-in of area in the marginal holdings. The logic is apparently all right but the conceptual framework of the land holdings surveys hardly permits such an explanation. Strictly speaking, a comparison between size distribution of ownership holdings and that of operational holdings is not valid because of the two different reference periods (a fixed date for the ownership holdings and the 'last' agricultural year for the operational holdings) and the independent way of arriving at the size distributions representing two different concepts (ownership comprises all land including purely non-agricultural areas, whereas 'operational holdings' relate to agricultural production either purely or in combination with non-agricultural uses). Let p_1 represent the rate of increase of the ownership holdings in the marginal ownership holding group and p_2 the rate of increase of the operational holdings in the marginal operational holding group. The factors governing p_1 are: (i) fragmentation of ownership holdings in different size classes and (ii) the landless given small pieces of land and erstwhile tenants getting ownership rights. Both (i) and (ii) are concerned with the totality of agricultural and non-agricultural land in the household sector.

The factors governing p_2 are: (i) parcellisation of operated area, (ii) 'landless' or 'small cultivators' leasing in land, (iii) leasing out of land

4. *op. cit.*, p. 15, last ten lines.

by owners (small, medium or large)—all the three concerned with all land except those put to purely non-agricultural uses in the household sector. Even if we assume transactions of land from the non-household sector to the household sector to be negligible and the difference arising out of two different reference periods to be nominal, a straight explanation of the inequality $p_2 > p_1$ as due to higher leasing in of area is not permissible because the coverage of the two distributions is different. It may further be noticed that compared to other holdings, the proportion of land put to purely non-agricultural uses is more in the marginal holdings, and hence with respect to the marginal holdings the difference between the coverage of ownership and operational holdings is most pronounced.

In calculating the Gini-Lorenz ratios of ownership holdings and area owned, it has to be indicated whether the 'landless' which figure as 'zero' class in the distribution of ownership holdings have been excluded or not. Similarly for the computation of the ratios for operational holdings for the 8th Round distribution, the agricultural holdings distribution should be used and not the distribution of operational holdings including the purely non-agricultural ones. The ratios having been used on only five size classes are quite different from those obtained on 12 size classes; sometimes even the direction of the ratios over time get changed, for example in respect of Punjab, the concentration ratio for Punjab (and Haryana) comes to 0.44 for 1971-72 based on 12 size classes but the figure given in Table III of the authors' paper is 0.73. Besides, for some States the figures for the 8th Round are not comparable because after the reorganization of States in 1956, the formation of States had been changed considerably as in Andhra Pradesh, Tamil Nadu, Karnataka. Even for Punjab comparison can be done only by merging Punjab and P.E.P.S.U. in the 8th Round and Punjab and Haryana in the 26th Round.

Net Leasing-in/out of Area

The methodology adopted by the authors for aggregating the households leasing in and households leasing out land for five size classes from the results for 14 sizes given in Tables (3) and (4) of NSS Report No. 215 and finding out the percentages of net leasers-in and net leasers-out is subject to the assumption that the number of households leasing in as well as leasing out is very few.

The basis on which Table IV has been constructed by the authors in their paper is the household ownership holding and not the operational holding. Identification of net leasers-in and net leasers-out has therefore been made with respect to the area owned by the household. Since every owner need not be a farmer, the observations like "...the number of net leasers-in was about one-fourth of the total number of marginal farmers in the country" are not correct. Nor can the study be taken as one reflecting "the effect of leasing-in/out of land on the distribution of operated area". While going through the analysis dealing with ownership holdings, it will be observed that the authors have deliberated upon the distribution of farmers (operational holdings). In the text, therefore, wherever 'cultivators' or 'farmers'

have been used, the technically correct terms would be respectively 'owners' or 'owned area'. Even if we assume that by and large, every owner is a farmer, the fallacy will particularly arise in the following situations: (i) An 'owner' leasing out completely his land will be wrongly dubbed as either a 'marginal', 'small', 'semi-medium', 'medium' or 'large' farmer depending upon the area owned. (ii) The counterpart, *i.e.*, pure tenants do not come under the purview of this analysis.

Distribution of Operational Holdings: 1960-61 and 1970-71

M. V. George and P. T. Joseph in their paper⁵ have made a comparison of the distribution of operational holdings, obtained from the 16th Round of NSS and Agricultural Census, 1970 to find out the changes in it. It was not clear why the 26th Round results were not used. For, apart from the methodological differences in arriving at the list of operational holdings in the Agricultural Census, there were limitations of coverage as the Agricultural Census included the non-household sector too. Strict comparability between the NSS and Agricultural Census data is not permissible. No wonder, therefore, the authors came across a "disquieting feature" of a "phenomenal increase in the average size of operational holdings in the size-group of ten hectares and above from 25 hectares to 47 hectares". The 26th Round results revealed that the average holding size was only 14.7 hectares for the above-said size-group and hence between the 16th and the 26th Rounds, the average size has actually decreased. The increase in the average size of operational holdings for this size-group is attributed by the authors to coverage of co-operative or State farms related to plantations (rubber, coffee, tea, etc.) in the Agricultural Census while they were not included in the 16th Round (or for that matter in any Round of NSS).

Relationship between Ownership and Tenancy

The authors have observed that the ownership holdings in the higher strata (perhaps meaning higher size classes of ownership holdings) have proportionately larger share of leased-in land (p. 31). This statement is not corroborated by the results thrown up by the 26th Round of NSS for the State of Kerala, as will be evident from Table I.

It will be seen that it is rather the lower size-groups which accounted for the larger share of leased-in area. In terms of proportion to owned area too, leased-in area in the lower size-groups constituted a relatively larger share compared to that in the higher size-groups.

It has further been observed that a close relationship existed between the structure of land ownership and accessibility to factor markets, but the factors like irrigation, capital assets, etc., have been shown to be related to operational holdings.

5. "Changes in the Structure of Land Ownership and Use in Kerala and Their Economic Implications", *Indian Journal of Agricultural Economics*, July-September 1976, pp. 27-31.

TABLE I—PERCENTAGE DISTRIBUTION OF AREA LEASED IN BY DIFFERENT SIZE CLASSES OF OWNERSHIP HOLDINGS AND PERCENTAGE OF AREA LEASED IN TO TOTAL AREA OWNED FOR EACH SIZE CLASS: KERALA, RURAL SECTOR, 26TH ROUND NSS

Size of ownership holding (acres)	Percentage of leased-in area	Percentage of leased-in area to owned area
Landless	26.7	—
0.01-0.49`	16.1	18.3
0.50-0.99	10.7	11.0
1.00-2.49	23.1	8.7
2.50-4.99	13.3	5.0
5.00-7.49	3.5	2.8
7.50-9.99	3.3	3.4
10.00-14.99	2.2	2.6
15.0 and above	1.1	1.4
All sizes	100.0	9.1

Source: Computed from Table (4) of NSS Report No. 215, State Kerala, Vol. I, p. 68.

The objective of Ratan Ghosh's paper⁶ was to explain the changes in the distribution of land in West Bengal in terms of 'surplus land' distributed by the Government after acquiring it through the ceilings on ownership of land. The source of information on surplus land is mainly the newspapers. It is surprising, however, that the author has started with some reservations about the NSS methodology of data collection without specifying them. The 'discrepancies' in 'area owned' obtained by the NSS have not been spelt out except that the estimates of area owned have been compared with net area sown supplied by the official sources. The nearest comparison (leaving aside the limitations of coverage) could have been made out with the 'area operated' and not with the 'area owned'.

Shift of Area Owned from the Uppermost to the Lower Size-group

The author has observed an increase in the proportion of area owned by the lowest size-group, *i.e.*, households owning less than 2.50 acres but accompanied by a decrease in the proportion of households in this class and that there has been a perceptible decline in the proportion of area owned by the topmost class (owning land 25 acres or more). He attributed this phenomenon of a "shift of area owned from the uppermost size class to the lower size-group" in the late fifties to the creation of *benami* transfers and other actions by owners of surplus land to 'frustrate' the Estates Acquisition Act. Our immediate objective would be not to speculate but to see whether the data have been properly analysed.

6. "Effect of Agricultural Legislations on Land Distribution in West Bengal", *Indian Journal of Agricultural Economics*, July-September 1976, pp. 40-46.

If properly analysed, the NSS data do not display any evidence of a decrease in the proportion of the number of households owning land less than 2.50 acres. Table I presented by the author includes the 'landless' households (who are not owners) and the landless have declined over time. Excluding the 'landless' and breaking up the size class below 2.50 acres, we get the following picture (Table II).

TABLE II—PERCENTAGE OF HOUSEHOLDS OWNING LAND BELOW 2.50 ACRES AND PERCENTAGE OF AREA OWNED BY THEM TO TOTAL AREA OWNED, WEST BENGAL, RURAL SECTOR, 8TH, 17TH AND 26TH ROUNDS OF NSS

Size of land owned (acres)	Percentage of households			Percentage of area owned		
	8th Round	17th Round	26th Round	8th Round	17th Round	26th Round
0	20.54	12.56	9.78	—	—	—
0.01-0.99	36.29	38.58	46.74	4.29	4.11	6.83
1.00-2.49	16.64	18.11	21.10	11.61	13.43	20.45
0.01-2.49	52.93	56.69	67.84	15.90	17.54	27.28

It will be observed from the above table that whereas the landless had decreased in proportion, there had been an increase in the proportion of households in the lower size-groups, showing some evidence of 'landless' acquiring land. It may be pointed out that the landless being constituted as it is by the sub-sets of households with non-agricultural occupations without any land and agricultural labourers without any land, it is not possible to draw any inference as to which sub-set has been able to acquire some land.

Secondly, while in all probability measures were adopted by the big landlords to resort to 'malafide' transfers, one important factor which might have been instrumental in the break up of large ownership holdings is the fragmentation of ownership rights and it is difficult to assess, in the absence of any data, its impact on the structure of land ownership—the shift from the 'uppermost' might not have been directly to the 'lowermost', the swelling of which might have been from the inflow from the different size-groups. This kind of analysis is not permissible with the type of data collected in the NSS.

Thirdly, in the context of the various methods enumerated by the author to evade the land ceiling law vis-a-vis the ownership data collected by the NSS, it may be noted that the evasion of ceilings may be possible by "retaining agricultural and non-agricultural land under the garb of tank-fisheries", but the NSS ownership data included ownership of every type of land including fisheries. The NSS methodology being collection of data through households, the *de facto* position is portrayed and in the "triangular transfers" mentioned by the author, it all depends whether X's son and X are in the same household or not. If they are in the same household, all particulars of land will be collected and if not, two ownership holdings would be formed. "Creation

land". This class was defined to cover holdings below 0.002 hectare in size, but for this class the total area operated was not given. Such a class was, however, not shown in the earlier 8th, 16th and 17th Rounds of the NSS results. To enable comparability between the results of the various Rounds, the size class "operating no land" was excluded, and therefore the expression "operational holdings excluding the landless households" was used in the paper.

HARPAL SINGH*

CHANGES IN THE STRUCTURAL DISTRIBUTION OF LAND OWNERSHIP AND USE: A REPLY

In general, we endorse the comments made on our paper relating to the distribution of operational holdings in Kerala between 1960-61 and 1970-71. From the point of view of uniformity in methodology, the same source should have been used for comparison. However, it may be noted that as far as Kerala is concerned the concepts and definitions used are the same as between the NSS and Agricultural Census data. In both the cases, the holdings were identified through enquiry method and an operational holding comprised all plots irrespective of their location anywhere in the country. They were not identified on the basis of retabulation of village records as was done in some other States. Hence, the results of both the surveys are comparable as far as households are concerned. Further, it has been recognized that the 26th Round of the NSS has under-estimated the number of holdings and area. On the other hand, the Census data are more comprehensive as it covered 25 per cent of all villages and complete enumeration of all holdings above ten acres. Even for holdings below ten acres the coverage is 10 per cent as against a very small percentage in the NSS sample. This was the reason why we decided to use the Census data although it is not strictly comparable with the NSS data.

As mentioned above, the Census covered all holdings above ten acres and as such, the average size of holdings above ten hectares presented in the Census data (47 hectares) could be more realistic than the figure derived from the NSS data (14.7 hectares). We might have been wrong in making a comparison with the 16th Round. However, the Census presented a more realistic picture. The inclusion of the non-household sector also in the Census data for operational holdings might be one of the reasons for the operational holdings being larger on the average as compared to the NSS data.

It may also be noted that the main thrust of our analysis has been the phenomenal increase in the number of small holdings consequent to the implementation of land reforms and that there has been a redistribution of the operational area in favour of the lower size-groups. This position remains correct even on the basis of the 26th Round results.

* Director (Co-operation), Planning Commission, Government of India, New Delhi.

As regards the relationship between ownership and tenancy, we have two observations to make.

(i) According to the NSS (26th Round) data, the proportion of leased-in land is inversely related to the size of operational holding. But this is not so as per the Census data on which we have based our conclusion. This is evident from Table III(a) of the Census Report, Vol. II, p. 25 and also Table 81 of Vol. I, p. 217 (see Table A).

TABLE A—NUMBER AND AREA OF HOLDINGS BY TENURE AND SIZE OF HOLDINGS: KERALA

Size class (hectares)								Percentage of area rented in to area owned
0.04-0.25	..	..	..	..	..	..	..	0.81
0.25-0.50	..	..	..	..	..	..	..	3.75
0.50-1.00	..	..	..	..	..	..	..	12.50
1.00-2.00	..	..	..	..	..	..	..	26.24
2.00-3.00	..	..	..	..	..	..	..	18.62
3.00-4.00	..	..	..	..	..	..	..	13.63
4.00-5.00	..	..	..	..	..	..	..	4.56
5.00-10.00	..	..	..	..	..	..	..	10.00
10.00-20.00	..	..	..	..	..	..	..	4.19
20.00-30.00	..	..	..	..	..	..	..	1.57
30.00-40.00	..	..	..	..	..	..	..	0.23
40.00-50.00	..	..	..	..	..	..	..	0.43
50.00 and above	..	..	..	..	..	..	..	3.48

Source: Agricultural Census 1970-71, Report for Kerala State, Bureau of Economics and Statistics, Government of Kerala, Trivandrum, Vol. II, Table III(a), p. 25.

(ii) Further, it is also noted that even in the 26th Round of the NSS the number of operational holdings leasing in land was proportionately more in the middle strata and that too for fixed money payment. This is obviously due to their better resource position, whereby they can lend money in return for land leased in or mortgaged. Their number is relatively less among the largest operational holding group as they are mostly estates and may not care to lease in any more land.

M. V. GEORGE AND P. T. JOSEPH*

* Chief (Evaluation), State Planning Board and Assistant Director, Bureau of Economics and Statistics, Government of Kerala, Trivandrum, respectively.

CHANGES IN THE STRUCTURAL DISTRIBUTION OF LAND OWNERSHIP AND USE: A REPLY

The comments of Sanyal on my paper are highly stimulating. My reply to these comments are as follows:

Data Base

Upto 1972, we have information on surplus land from the Government of West Bengal publications. But after 1972, we do not have any official report on surplus land distribution. So we had to rely on the information as given by Government officials in different newspapers.¹ And the limitations of these reports have been admitted in my paper (section I, para 2).²

As the scope of the paper and the restriction on space did not permit me to explain the 'discrepancies' of the NSS land holding data in detail, I had to satisfy myself by just mentioning the articles where all these were discussed thoroughly. Though I have said very little about the inconsistency in the NSS data on ownership holding (section I, end of para 1)³, I now find that I should have explained further in this regard. Some of these 'conspicuous differences' have also been pointed out in the NSS Report No. 215.⁴

Area Operated and Area Owned

For the purpose of comparison with the official figures of 'net area sown' one should be inclined to use the figure of 'area operated' rather than that of 'area owned'. But as land put to non-agricultural uses (even partially) is included in the NSS estimate of 'area operated' which eventually overestimates the figure of 'area operated', it is simpler operationally to use the figures of area owned than that of area operated. In fact, for either criteria the gravity of the situation remains unchanged.

Landless Households

In the NSS sample design, households with no land formed one substratum and along with these landless, the households owing land less than 0.002 hectare are included in the size class 0. Conceptually, all the households with non-agricultural occupations and without any land are also included in the size class 0. As the proportion stated in the size class 0 does not give any indication of the quantum of agricultural labourers, the decrease in the proportion of landless (0) class does not necessarily imply that the landless acquired land.

Though it is not proper to compare the Census figures between the years due to changes in definitions, I give below some of the figures for the years 1961 and 1971 for West Bengal.

1. In a latest report of the Government of West Bengal (July 7, 1977), this was confirmed.

2. *Indian Journal of Agricultural Economics*, July-September 1976, p. 41.

3. *ibid.*

4. National Sample Survey: Number 215—Twenty-sixth Round: July 1971-September 1972—Tables on Land Holdings—All-India, National Sample Survey Organisation (Department of Statistics), Ministry of Planning, Government of India, New Delhi, 1976, pp. ii and iv.

	1961	1971
Percentage of agricultural labourers and non-agricultural workers with reference to total rural population ..	15.88	10.11
Percentage of agricultural labourers with reference to total rural population	6.61	9.51
Percentage of non-agricultural workers with reference to total rural population	9.26	5.96
Percentage of cultivators with reference to total rural population	16.79	11.71

From the above, it is evident that the proportion of agricultural labourers and non-agricultural workers (this is somewhat comparable to the percentage of landless (0) class of the NSS) in the total rural population has decreased by about 6 percentage points from 1961 to 1971. But during this period the quantum of agricultural labourers has increased by about 3 percentage points while the proportion of non-agricultural workers has also decreased by about 3 percentage points. Actually persons from the non-agricultural occupations (artisans, etc.) and a section of the poor peasantry are joining the ranks of the agricultural labourers gradually due to poverty. In fact, for these reasons I have included the 'landless' households in the size class upto 2.50 acres. But now, after going through the comments of the critic, I realise that I should have elaborated my points to prevent the scope for further confusion.

Fragmentation of Land'

It is quite true that with the help of NSS data it is not possible to measure the impact of fragmentation of ownership rights on the pattern of land distribution. But after going through the reports of the Farm Management Studies in West Bengal for various years (1956-57 to 1972-73), my impression is that the fragmentation of land has very little effect on the structure of ownership distribution. In fact, I have just mentioned this in a line at the end of p. 44 of my paper. I purposely excluded this point as it was outside the scope of my paper.

Evasion of Ceiling

In the paper, I just wanted to mention some of the ways through which the *jotedars* wanted to evade the land ceiling laws. And from the NSS figures it is very difficult to estimate the quantity of *benami* land held by the *jotedars*. But my sole intention was to mention some of the reasons that enabled the *jotedars* to suppress the information on land from the NSS investigators.

RATAN GHOSH*

* Indian Institute of Management, Calcutta-27.