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Chakravarty, S. 1987; *Development Planning: The Indian Experience*, Clarendon Press, Oxford, 1987.

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AGRARIAN RELATIONS IN INDIA SINCE INDEPENDENCE

H. R. Sharma

Broadly speaking, three types of legislation, namely, Abolition of Intermediaries, Tenancy Reform, and Ceiling on Land Holdings have been enacted since Independence. In a previous paper, published in Jan-March 1992 issue of this Journal, we reviewed the legislation on Abolition of Intermediaries and some what briefly Tenancy reform and Ceiling on Land Holdings. In this paper we shall pursue the latter two in greater detail. In particular, we shall examine changes in the distribution of ownership and operational holdings, changes in tenancy relations, and conditions of agricultural labour.

REVIEW OF THE DATA

Major sources of data on landholdings and tenancy are the National Sample Survey (NSS) Reports on landholdings and the Agricultural Census and Farm Management Studies of the Ministry of Agriculture. Data on agricultural labour are available from various Agricultural/Rural Labour Enquiry Reports of Labour Bureau, Ministry of Labour. Publications such as Agricultural Wages in India and the Farm Management Studies of the Directorate of Economics and Statistics, Ministry of Agriculture and the decennial Population Census of the Government of India are other sources of data.

Data on Landholdings and Tenancy

Of the three major sources of data on landholdings and tenancy, the National Sample Survey (NSS) data are the only source of information which extend from as early as 1953-54 (the 8th round) to as late as 1982 (the 37th round). The Agricultural Census was done in 1970-71 and thereafter quinquennially. For most states Agricultural Census data are largely a carry-forward of land revenue records at the grass-root level. In Kerala, Meghalaya, Manipur, Nagaland, Orissa, Tripura, Sikkim, Arunachal Pradesh, Goa-Daman-Diu, Lakshwadeep, and Mizoram, where comprehensive land records are not available, sample survey was conducted to collect data for the year 1980-81 [Ministry of Agriculture, 1989, p. 13]. The reports of these sample surveys are available only for some states. The latest 1985-86 Agricultural Census are not yet available for researchers.

The data from the Agricultural Census is not quite satisfactory because the revenue records are often not updated. It is particularly unsatisfactory in respect of tenancy because tenancy contracts are mostly oral and are hardly entered in the revenue records. In the states where comprehensive land records are not available and Agricultural Census is conducted by means of a sample survey, the survey staff is not as well trained for the purpose as are the field staff of the NSS.

The third source of data, namely, the Farm Management Studies, though they began in the mid-fifties, covered only a few selected districts and did not go beyond the late sixties.

Thus, among the different sources of data on landholdings and tenancy, the NSS is the most satisfactory. The data are collected by trained investigators and on the basis of a properly drawn sample. Moreover, the data are available over a period of almost 30 years: 1953-54 (8th round), 1960-61 (16th round), 1961-62 (17th round), 1971-72 (26th round) and 1982 (37th round) Of course, to make the data comparable over such a long period, two things are necessary. First, to take notice of certain territorial adjustments. Second, concepts and definitions unavoidably change and these must be reviewed critically.

Territorial Adjustments

In the 8th round (1953-54), the NSS Rounds included the whole of India except Andaman and Nicobar Islands and Sikkim. In the 16th (1960-61) and 17th (1961-62) rounds, Andaman and Nicobar Islands, Laccadive and Minicoy and

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H.R. Sharma is Assistant Professor, Department of Agricultural Economics, Himachal Pradesh Krishi Vishvavidyalaya.
An earlier paper published in January-March issue of this Journal was based on chapters 2 and 3 of the author's Ph.D. thesis (Unpublished) entitled "The Changing Agrarian Relations in India: A Statewise Analysis" submitted to the School of Social Sciences, Jawaharlal Nehru University, New Delhi in April, 1991. The present paper is based on chapters 5 to 9 of the thesis. The author is extremely grateful to his teacher Prof. G.K. Chadha for constant guidance and encouragement, to Mr. S.K. Sanyal and Mr. M.G. Bhattacharya of NSSO for clarifying various conceptual issues related to data and to Mr. V. Murlidhar for processing huge mass of data. He is also grateful to Professor V.M.Dandekar for making a compact paper out of a rather voluminous material by competent editing. Needless to say, the responsibility of errors and omissions stays with the author.

Amindive Islands, Ladakh District of Jammu & Kashmir, North East Frontier Agency and some inaccessible areas of Manipur were not included. In the 26th round (1971-72), Andaman and Nicobar Islands, Arunachal Pradesh, Dadra and Nagar Haveli, Laccadive and Minicoy and Amindivi Islands, Ladakh district of Jammu & Kashmir, Mizoram, a few districts in Madhya Pradesh, Maharashtra and Tripura, rural areas of Nagaland and the Union Territory of Chandigarh were not included. Finally, in the 37th round (1982), rural areas of Chattarpur District and urban areas of Jhabua District of Madhya Pradesh were not included. Though this is a long and somewhat varying list of omissions, the agricultural areas in the omitted regions constitute a negligible fraction of the total in each round of the NSS surveys and therefore should not materially affect our analysis.

However, because of the reorganisation of the states in 1956, statewise comparability of the 8th round data with those of the later rounds is seriously affected. Seven major states, namely, Kerala, Karnataka, Tamil Nadu, Madhya Pradesh, Andhra Pradesh, Gujarat, and Maharashtra were involved in the reorganisation. In the circumstance, we had two options. One, to leave out the 8th round data for these seven states. Second, to make some adjustments, even if imperfect, in the data on landholdings in respect of the above states, taking cognizance of the geographical area transferred/included in these states. We have chosen the second course. The procedure followed is as under:

The landholding estimates could either be adjusted on the basis of net sown area or geographical area transferred from one state to the other. The unit of area transferred, in most cases, was a village and village wise data on net sown area is not readily available. Moreover, an adjustment done on the basis of net sown area under-estimate holdings, both owned and operated, because net sown area almost invariably excludes area put to non-agricultural uses, current fallows, pastures, etc. Hence, we used geographical area transferred from one state to another for carrying out the necessary adjustments.

The total geographical area of the states existing prior to 1956 was obtained from the 1951 Population Census. The details of the geographical area transferred from one state to the other were obtained/estimated from the 1961 Population Census. On the basis of percentage of area transferred, estimates of landholdings for affected states before 1956 were apportioned uniformly over all farm size groups to arrive at estimates after reorganisation. Figures for Gujarat and Madhya Pradesh may be slightly under-estimated because estimates for Kutch and Bhopal which now form parts of these states were not available. Finally, minor area transfers from Bihar to West Bengal, from Rajasthan to Gujarat in 1956 and from Punjab to Himachal Pradesh in 1966 could not be taken care of. We suppose that neglect of these minor transfers would not effect the analysis of state-level changes over time.

Changes in Concepts and Definitions

Ownership Holdings: In the 8th round (1953-54), ownership holdings were defined to include land owned by a person if he had the right of permanent, heritable possession, with or without the right to transfer the title. In the 16th (1960-61) and 17th (1961-62) rounds, this was broadened to include land held in ownership-like possession, namely, (a) land held directly from the government under a grant or lease or assignment with right of permanent, heritable, but with or without transferable, possession; (b) land held from a person other than government with permanent heritable and transferable possession but not necessarily with right to transfer the title. There was no change in the 26th round (1971-72). However, in the 37th round (1982), it was further broadened to include land possessed by a tenant who had not paid full compensation, land held by tribals with traditional tribal rights from the local chief or village or district council, and land held by a tenant though ownership vested in the community.

Thus, the definition of an ownership holding has been gradually broadened. However, *de facto* position differed from the *de jure*. Hence, a more liberal but legally less enforceable definition would probably overestimate the share of the lowest 25-30 per cent of landholdings and underestimate the proportion of landless households.

Operational Holding: In the 8th round (1953-54), operational holdings were defined to include all land whether cultivable or not, whether put to agricultural or non-agricultural uses, directed or managed by one or more persons by themselves or with the assistance of others, without regard to title, location and size, provided these holdings came under the management of a distinct technical and economic unit. However, this was drastically changed in the 16th (1960-61) and 17th (1961-62) rounds to include only land wholly or partly put to agricultural use, operated by one person alone or with the assistance of others without regard to size and title, provided the holdings were located in the same state. The holding might consist of one or more parcels provided they came under the same technical unit which was defined to include resources like land, implements, livestock, etc. Holdings put exclusively to pastures and livestock raising or production of livestock and pisciculture were excluded which later, in the 37th round (1982), came to be included. In the 26th round (1971-72) there was only a minor change, namely, the condition of location of a parcel being 'within a state' was changed to 'within India'.

The definition in the 8th round was obviously too wide as it included land under agricultural and non-agricultural use. Fortunately, in the report of the 8th round, separate figures are also given under the caption 'agricultural holdings' which are directly comparable with operational holdings of the subsequent rounds. Hence, to ensure comparability, we shall use 'agricultural holdings' instead of the operational holdings of the 8th round. The 37th round is strictly not comparable because it includes holdings put exclusively to livestock raising, dairy and pisciculture which were earlier excluded. There is no way to correct this. At best, we may hope that it would not greatly affect the shape of the distribution of the operational holdings.

In spite of its non-comparability of definition, the 37th round has certain important advantages. For the first time, it provided information about the number of operational holdings in the zero farm size group though we could not use it in the absence of similar information in the earlier rounds. In the 37th round, operational holdings were also classified on the basis of leasing-in pattern under the heads such as entirely owned holdings, mixed holdings, neither owned nor leased-in holdings (e.g. illegal encroachment on government land) and other holdings. Similar estimates could be derived for the 8th and 26th rounds except for the estimates of 'neither owned nor leased-in' and 'other' holdings; in fact, we do not know whether the last two were included in the previous rounds. Neverthless, for purposes of comparison, we have grouped together holdings in the 37th round given under the heads 'neither owned nor leased-in', 'others' and 'mixed'.

In a study of agrarian relations, estimates of households not operating any land and their components, namely, households 'owning but not operating any land' and households 'neither owning nor operating any land' are important. In the 17th and 26th rounds, these two components are available while in the 37th round, estimates of households not operating any land are available without the two components. Therefore, we have derived some approximate estimates of the two components for the 37th round by the following procedure: (i) Estimates of households not operating any land are derived by clubbing the households given under the nil and zero farm size groups of household operational holdings in Report No. 338 (37th Round); (ii) Estimates of the entirely leased-in holdings were derived from Report No. 331 (37th Round); (iii) After obtaining these estimates, the entirely leased-in holdings were subtracted from landless households to arrive at the estimates of households who neither owned nor operated any land; and, finally, (iv) Subtracting the households who neither owned nor operated any land from the households not operating any land, we got the estimates of households who owned but did not operate.

We suppose that the above procedure gives us good enough estimates of what we need. Nevertheless, we should note that while the estimates of landless households relate to the date of survey in the calender year of 1982, the estimates of households operating no land relate to the major agricultural seasons of the agricultural year

1981-82. Besides, there is also an assumption that multiple and joint holdings are negligible; according to the 16th round, they constituted hardly about 2 per cent. Presumably, they would be fewer still in the entirely leased-in holdings which are mainly small in size.

Tenancy: NSS surveys give detailed information on land leased-out and land leased-in by different farm size groups, as also on terms and conditions of leasing-in and leasing-out. However, there are inevitable changes in definitions and classifications from one round to another which we need to take into account.

As already mentioned, in the 8th round (1953-54), separate figures are given for 'agricultural holdings' and 'operational holdings' and that the former are comparable with operational holdings in subsequent rounds. However, break up into owned area and leased-in is given only for operational holdings and not for agricultural holdings. Hence, as an approximation, we divide total area under each size-class of agricultural holdings into owned and leased-in area in the same proportion as in the corresponding size-class of operational holdings. Another lacuna in the 8th round is that detailed farm size-wise data on terms and conditions of tenancy are not available. In the 16th and 17th rounds, tenancy aspect is almost completely ignored; details regarding the proportion of land leased-in as also the terms and conditions of tenancy by different farm size groups are not given.

In the 26th round (1971-72), essential details of the tenancy such as the proportion of land leased-out, land leased-in, and terms and conditions of leases are given by size-class of ownership holdings. In respect of operational holdings these details are available for proportion of holdings leading in and land leased in. Leasing-out contracts are classified into (a) crop sharing; (b) usufructuary mortgage; and (c) other terms but fixed money and fixed produce contracts are not distinguished. This is done in the classification of leasing-in contracts. In the 37th round (1982), the distinction is made in the classification of both leasing-out and leasing-in contracts. In fact, in the classification of leasing-in contracts, two new terms: (i) share of produce with other terms, and (ii) not recorded terms were introduced to make it comparable these new terms were clubbed with the 'other terms' and posited against the 'other terms' of the 26th round. In the 37th round, there is yet another category of operated area, namely, area neither owned nor leased-in but occupied. Presumably, such area was not included in the 26th or any earlier round. We have therefore excluded it from the 37th round. There are some minor differences between the 26th and the 37th rounds in the presentation of the data. In principle, they affect strict comparability and we have resorted to some *ad hoc* adjustments to achieve as much comparability as possible.

Agricultural Labour: Major sources of data on agriculture labour are i) *Agricultural Wages in India* (AWI) published annually since 1950-51 by the Directorate of Economics and Statistics, Ministry of Agriculture; ii) *Agricultural Labour Enquiry* (ALE) reports of 1950-51 and 1956-57 and *Rural Labour Enquiry* (RLE) reports for 1963-65, 1974-75, 1977-78 and 1983 published by the Labour Bureau, Ministry of Labour; iii) The *Farm Management Studies* for selected districts of the late 1960s published by the Directorate of Economics and Statistics, Ministry of Agriculture; and iv) *Population Census*, Government of India.

AWI collects data on monthly wage rates for different categories of agricultural labour for a few selected centres/villages in some districts of each state. This is the only source which furnishes a time series of male, female and child labour wage rates. However, it suffers from many serious methodological flaws. The centres/villages chosen are very few and often do not represent the district. The number of villages chosen keeps on changing and sometimes a village is dropped and replaced by another. Wages are defined merely as those most commonly, "current during the month and that cash wages as well as equivalent of the wages paid in kind and their totals in cash equivalent be given" [Rao, 1972, Pp. 38-39]. The scheme also does not specify the procedures for the conversion of kind wages into cash wages. Data on wages are collected by various local level agencies such as revenue officials, primary school teachers, presidents of the local boards, etc., and often probably by none at all; for many areas and many years, wages reported have remained constant for all the twelve months.

Data on wages in the Farm Management Studies are limited in coverage and do not produce a time series. Population Censuses give only numbers of different categories of workers which are not comparable over time because of changing definition of workers [Sinha, 1982, Pp. 195-203].

The ALE and RLE reports are much more comprehensive and cover diverse aspects germane for the study of agricultural labourers as a part of agrarian relations. These surveys are also based on relatively more satisfactory methodology. Nevertheless, concepts and definitions have changed over time and it is essential to examine these changes. The first Agricultural Labour Enquiry was conducted in 1950-51. Being the first, it was conceptually weak and methodologically less satisfactory. Hence, in the second ALE, the concepts and definitions were substantially revised. The following are the major methodological and definitional differences between the two ALEs.

(i) The use of random sampling without replacement in the first enquiry was replaced with random sampling with replacement in the second enquiry. The second ALE also adopted the moving sample of the villages compared to the fixed sample of villages adopted in the first ALE. Reference period in the second ALE was a week, whereas in the first ALE it was a month. These methodological changes are expected to improve the sample estimates. (ii) In the first ALE (1950-51), definition of agricultural labour was confined to those employed for wages in the process of crop production; in the second ALE, labour hired for other agricultural occupations such as dairy farming, horticulture, raising of livestock, bees, poultry, was also included. (iii) In the first ALE, agricultural labour household was defined as one in which either the head or 50 per cent or more of the earners reported agricultural labour as their main occupation; in the second ALE, it was defined as one for which the major source of income during the year was agricultural wages. (iv) In the first ALE, wage labour for half a day was considered full day and less than half was ignored and all those who worked even for a day in a month were considered to be gainfully employed. In the second ALE, these definitions were made somewhat more precise. Length of a working day was taken to be of 10 hours. A full-day work meant three fourth or more of the normal working hours, more than one fourth and less than three fourth was counted as half-day, and less than one fourth was counted as one-eighth day. (v) In the first ALE, payments in kind were evaluated on the basis of local retail prices; in the second ALE, they were evaluated on the basis of local wholesale prices. These are all improvements but they affect strict comparability between the first two ALEs.

The scope of the subsequent ALEs was considerably broadened to include all rural labourers; in fact, for that reason, they were called Rural Labour Enquiries (RLE). Happily, to ensure comparability with the second ALE, the agricultural labour households were separately analysed. The first RLE (1963-65) did not make significant conceptual departures from the second ALE. The few changes made were, firstly, distinction between casual and attached labour was dispensed with and, secondly, while the second ALE provided information on daily wage rates, the first RLE provided information on average daily wage earnings. The average earnings were arrived at by dividing the aggregate of earnings for each activity by the corresponding equivalent full working days.

No conceptual change was made in respect of measurement of employment and unemployment days in the first RLE except for a slight variation in the presentation of the data; in particular, only days with no activity were treated as unemployed days. However, in the second ALE (1956-57), the number of days by which total number of employment and self-employment days, converted to equivalent full working days, fell short of 365 days, were considered unemployed days. In the first and second RLEs, earnings in kind continued to be converted into cash earnings on the basis of local wholesale prices as in the second ALE. However, in the third and fourth RLEs, they began to be converted on the basis of local retail prices as in the first ALE. There were no other changes in the third and fourth RLEs.

Consumption expenditure in the ALE/RLEs was defined to include expenditure incurred on purchases for domestic consumption only, such as (a) food, (b) clothing, footwear, bedding, and household requisites, (c) fuel and lighting, (d) house rent and repairs, (e) services and miscellaneous items, and (f) ceremonies and functions. Expenditure of capital nature was excluded. Similarly, certain items of disbursement such as payment of interest on loans and repayment of debts were also excluded. Saving and investment were not included. But where the households had drawn on savings, remittances, sale of stocks, capital assets, etc., to meet consumption expenditure, these were enquired into and indicated.

OWNERSHIP HOLDINGS

Enactment and implementation of land reform is a state subject. Also, quality of land and agricultural conditions generally vary from state to state so that landholding of a given size does not carry the same connotation in different states. Therefore, the analysis is carried essentially at the state level. For convenience of discussion, landholdings are divided into five size classes, viz., sub-marginal (0.01 - 0.99 acres), marginal (1.00-2.49 acres), small (2.50-4.99 acres), medium (5.00-14.99 acres) and large (15.00 acres and above). The terms holdings and households are used inter-changeably, because of the extremely low incidence of multiple and joint holdings. To make inter-temporal comparisons of the changes involved over the period of the study (1953-54 to 1982), the data from the National Sample Survey (NSS) for four years, namely, 1953-54, 1961-62, 1971-72, and 1982, are examined.

Changes in Ownership Holdings and Area Owned

In Table 1, we give distribution of ownership holdings in fifteen major states in the four years and, in Table 1.A, percentage changes in number of ownership holdings and amount of area owned in different size classes between the years. During 1953-54 to 1961-62, the percentage change in the number of holdings varied from -11.34 per cent in Andhra Pradesh to 47.19 per cent in Kerala. The change in the amount of area owned, on the other hand, ranged from -19.23 per cent in Punjab & Haryana to 27.15 per cent in Kerala. In Tamil Nadu, the number of holdings and the amount of area owned increased by 160.35 per cent and 106.24 per cent, respectively. At the all-India level, increase in the number of holdings and the amount of area owned were 13.97 and 4.07 per cent respectively. In most states, increase in area owned was much less compared to increase in number of holdings resulting in a decline in the average size of holdings (Table 1B).

Comparing different size classes, sub-marginal holdings (0.01 - 0.99 acres) increased in eleven states, namely, Andhra Pradesh, Assam, Bihar, Gujarat, Kerala, Madhya Pradesh, Maharashtra, Orissa, Punjab & Haryana, Rajasthan and Tamil Nadu; marginal holdings (1.00 - 2.49 acres) in Jammu & Kashmir only; small holdings (2.50 - 4.99 acres) in Uttar Pradesh and West Bengal and medium holdings (5.00 - 14.99 acres) in Karnataka where they showed the highest percentage increase both in number of holdings and area owned. The increase in area owned was generally much less compared to increase in number of holdings resulting in a decline in the average size of holdings in all size classes.

A substantial increase in the number of sub-marginal holdings seems to have taken place in many states. Unfortunately, we have no direct explanation for this crucial agrarian development. Possible explanations include ; (a) sub-division of holdings because of pressure of population without alternative employment opportunities; (b) granting of ownership rights to erstwhile tenants as a consequence of abolition of intermediaries and tenancy legislation; (c) definitional changes in ownership holdings between 8th and 17th rounds of the National Sample Surveys (NSS): The concept of ownership holding in 8th round was defined to include land held under permanent, inheritable possession with or without the right to transfer the title. In 17th round, ownership holding, besides land held under permanent and inheritable rights, also included land held in ownership-like possession. Since land transfers to tenants were not complete in 1953-54, all such holdings were presumably excluded in 8th round.

Variations in number of holdings and area owned during 1961-62 to 1971-72, compared to 1953-54 to 1961-62, were smaller in a majority of states. For example, during 1961-62 to 1971-72, changes in number of holdings in different states varied from -13.81 per cent in Tamil Nadu to 29.12 per cent in Maharashtra. On the other hand, area owned declined by varying degrees in thirteen of fifteen major states. The magnitude of decline ranged from 4.83 per cent in Karnataka to 23.70 per cent in Bihar. At the all-India level, the increase in number of holdings (8.24 per cent) was accompanied by a decline in area owned (-7.03 per cent). The size of holdings declined across the states and at the all-India level, except in Assam and Tamil Nadu.

Unlike during 1953-54 to 1961-62, in the period 1961-62 to 1971-72, sub-marginal holdings increased most in five states, viz., Bihar, Karnataka, Kerala, Punjab & Haryana and West Bengal. In Orissa, Assam, and Jammu & Kashmir, largest increase was in marginal holdings whereas in Andhra Pradesh, Gujarat, Madhya Pradesh, Maharashtra and Rajasthan, it was so in small holdings. In Uttar Pradesh, number of landless households recorded maximum increase while in Tamil Nadu, holdings in all size classes declined. At the all-India level, the largest increase was in marginal holdings. There is another important difference between the two sub-periods. Unlike during 1953-54 to 1961-62, in the period 1961-62 to 1971-72, in as many as nine states, namely, Andhra Pradesh, Assam, Gujarat, Madhya Pradesh, Maharashtra, Orissa, Rajasthan, Uttar Pradesh and West Bengal, increase in number of sub-marginal holdings was more or less matched by an increase in area owned so that the size of these holdings either increased, albeit by negligible margins, or stayed practically unchanged.

During 1971-72 to 1982 also there were wide variations in the number of holdings and area owned. The change in number of holdings ranged from -0.47 per cent in Orissa to 44.25 per cent in Jammu & Kashmir. Likewise, change in area owned varied from -19.49 per cent in Madhya Pradesh to 39.23 per cent in Punjab & Haryana. In all states except Assam, Orissa, Punjab & Haryana, increase in number of holdings was more than increase in area owned resulting in decline in average size of holdings. At the all-India level, number of holdings increased by 19.76 per cent with practically no change in area owned.

Unlike during the first two sub-periods, during 1971-72 to 1982, the number of households owning no land increased greatly in most states except Assam, Orissa, Punjab & Haryana. In Jammu & Kashmir, Rajasthan, Andhra Pradesh, and Madhya Pradesh, the increase was very large. Among land owning groups, increase was maximum in sub-marginal holdings in Assam, Karnataka, Kerala, Maharashtra, Tamil Nadu, and West Bengal; in marginal holdings in Bihar, Gujarat, Madhya Pradesh, Rajasthan and Uttar Pradesh; in small holdings in Andhra Pradesh, Orissa, Punjab & Haryana and in large holdings in Jammu & Kashmir. In Bihar, Jammu & Kashmir, Karnataka, Maharashtra, Punjab & Haryana, Rajasthan, Tamil Nadu, and West Bengal, increase in number of sub-marginal holdings was more or less matched by an increase in area owned so that there was practically no change in the average size of these holdings. In Jammu & Kashmir, Punjab & Haryana, increase in area owned by large holdings was larger than increase in their number whereas in Assam and Orissa, decline in area owned by large holdings was much smaller than the decline in their number. As a result, size of large holdings increased in both cases.

In sum, a neat pattern of change is not discernible over the years. Sudden increase or decrease in number of holdings and in area owned from one NSS round to the other, especially the steep and unexpected decline in area owned between 1961-62 and 1971-72 and, by implication, the steep hike during the succeeding decade in a majority of the states, is difficult to comprehend. The estimates for 1971-72 (26th round) compared with those for 1961-62 (17th round) appear to be underestimates for a majority of the states. Consequently, its comparability both with the past (17th) round and the subsequent (37th) round is of doubtful validity. For instance, in the following we compare percentage change in the area owned, estimated in 1982 (37th round) over 1961-62 (17th round) and also 1971-72 (26th round) (Table 2). The implication is obvious.

TABLE 2. CHANGE IN AREA OWNED IN 37TH ROUND OVER 17TH AND 26TH ROUNDS

(per cent)

States	Change Over	
	17th round	26th round
Andhra Pradesh	2.54	7.84
Bihar	6.80	22.04
Jammu & Kashmir	10.58	19.25
Kerala	3.54	21.73
Punjab & Haryana	22.35	39.23
Rajasthan	4.59	11.20
West Bengal	7.62	9.99

The response bias, as a consequence of numerous land legislations, is cited as the main reason for the underestimation. [Sanyal, 1977, Pp. 1-13, 65-76]. During the fifties there was a large decline in the proportion of landless households. On acquiring land, they moved to farm size categories of 0.00 to 0.01 -0.99 acre group or in some cases to 1.00-2.49 acre group. On the other hand there was an increase in landless households during the sixties (in some states) and the seventies (in most states).

Landlessness

According to the definition of landless households adopted in the successive NSS rounds, landless households own less than 0.01 acres of land whether agricultural or non-agricultural. Between 1953-54 and 1961-62, the incidence of landlessness, as defined above (Table 1, col. 3), declined substantially in all states and the decline was particularly sharp in Punjab & Haryana, Andhra Pradesh, Madhya Pradesh, Gujarat, Assam, Rajasthan, and Maharashtra. Broadly speaking, the decline in the incidence of landlessness was more in the states with larger average landholdings compared to those with smaller holdings. The trends are similar at the all-India level too. A large part of this decline in landlessness is, however, because of a change in the definition of 'ownership holding' between the 8th and the 17th rounds of the NSS. As mentioned above, 'ownership' in the 8th round meant pure legal ownership whereas in subsequent rounds, besides pure legal ownership, ownership-like possession was also included. In particular, in the 8th round, households who cultivated land of which the title remained in the patriarch were classified as landless even if they would ultimately inherit the land [Mead, 1983, Pp. 149-167].

Between 1961-62 and 1971-72, decline in landlessness slowed down considerably in most states except Kerala, Jammu & Kashmir, and Karnataka. In Andhra Pradesh, Madhya Pradesh and Maharashtra, landlessness remained practically unchanged, whereas in Orissa and Uttar Pradesh it increased marginally. Among the remaining states, it declined substantially in Rajasthan, Tamil Nadu, Bihar, Punjab & Haryana. At the all-India level also there was some decline. The decline in landlessness in most of states during this period was due largely to the indirect impact of ceiling laws. The acquisition of some land by the landless households in many states is confirmed by a number of empirical studies [Dantwala and Shah 1971, Rao 1972, Vyas 1976, Bhalla 1977].

Between 1971-72 and 1982, landlessness declined further in Assam, Kerala, Orissa, Punjab & Haryana. In Bihar and Uttar Pradesh, it remained more or less constant. In all other states, it increased in varying degrees particularly in West Bengal, Jammu & Kashmir, Maharashtra, Rajasthan, Andhra Pradesh, and Madhya Pradesh. At the all-India level, the increase was marginal.

A number of factors could explain the increase in landlessness during the 1970s. First, increasing population without corresponding increase in employment opportunities outside agriculture causes continued sub-division of holdings pushing some sub-divisions below 0.01 acres. Second, some small and marginal farmers might lose their lands to private money-lenders. Third, it might be possible that some who secured land ownership during the 1960s, as a consequence of tenancy and land ceiling legislations, might have lost their lands to erstwhile landowners with connivance of the revenue officials. Fourth, because of the non-viability of their holdings some might have given up agriculture and moved to urban areas in search of other occupations.

Concentration of Ownership Holdings as measured by Gini Coefficient

We propose to measure concentration of holdings in terms of Gini coefficient though it has well known limitations. It is a summary measure of concentration and does not tell at what point of the distribution concentration has increased or decreased. For instance, the value of Gini coefficient might increase despite decline in the proportion of large holdings and area owned by them. It could happen due to growing concentration at the bottom and/or at the medium level. Yet, as a summary measure of inequality, it is a useful measure and is most commonly used.

The Gini coefficients are calculated for the twelve uniform size classes including landless households and for eleven uniform size classes excluding landless households for all the states and for all the four years (Table 3). The formula used to compute the Gini coefficient is:

$$Gc = \frac{\Sigma(| XiYi+1-(Xi+1Yi) |)}{100 \times 100}$$

where: Xi = the cumulative frequency of the percentage of holdings in the ith class. Yi = the cumulative frequency of the percentage of area in the ith class.

TABLE 3. GINI CONCENTRATION OF OWNERSHIP HOLDINGS IN RURAL INDIA: MAJOR STATES, 1953-54 TO 1982

States	Including Landless Households				Excluding Landless Households			
	1953-54	1961-62	1971-72	1982	1953-54	1961-62	1971-72	1982
1	2	3	4	5	6	7	8	9
Andhra Pradesh	0.8012	0.7613	0.7255	0.7310	0.7146	0.7438	0.7050	0.6945
Assam	0.7355	0.6216	0.6210	0.5492	0.5438	0.4855	0.4948	0.5125
Bihar	0.7029	0.6954	0.6776	0.6692	0.6439	0.6666	0.6630	0.6551
Gujarat	0.7198	0.6815	0.6899	0.6908	0.5969	0.6264	0.6418	0.6282
Jammu & Kashmir	0.5887	0.5314	0.4161	0.5163	0.5027	0.4739	0.4105	0.4808
Karnataka	0.7246	0.6626	0.6610	0.6826	0.6431	0.5852	0.6127	0.6332
Kerala	0.7898	0.7547	0.6698	0.6479	0.6701	0.6450	0.6081	0.5964
Madhya Pradesh	0.7092	0.6363	0.6210	0.6449	0.5856	0.5997	0.5809	0.5852
Maharashtra	0.7358	0.7061	0.6798	0.7051	0.6302	0.6500	0.6195	0.6256
Orissa	0.6826	0.6802	0.6322	0.6062	0.6382	0.6530	0.5887	0.5735
Punjab & Haryana	0.7574	0.7469	0.7343	0.7344	0.6158	0.7114	0.7083	0.7165
Rajasthan	0.6913	0.6530	0.6064	0.6211	0.5892	0.6104	0.5946	0.5876
Tamil Nadu	0.7918	0.7441	0.7377	0.7429	0.6866	0.6623	0.6840	0.6821
Uttar Pradesh	0.6403	0.6169	0.6253	0.6302	0.6032	0.6060	0.6075	0.6114
West Bengal	0.7271	0.6617	0.6552	0.6791	0.6566	0.6131	0.6179	0.6124
All-India	0.7511	0.7174	0.7062	0.7076	0.6763	0.6800	0.6749	0.6703

Source: As in Table 1.

The following points may be noted: (i) concentration of holdings, including landless, declined between 1953-54 and 1961-62 in all the states; (ii) the decline was pronounced in Assam, Karnataka, Tamil Nadu, Jammu & Kashmir and Rajasthan; (iii) but was negligible in Bihar and Orissa, the two most classic states of the erstwhile zamindari tenure, and also in Punjab & Haryana, agriculturally the most progressive states; (iv) concentration of holdings excluding landless households, though significantly lower, increased by varying degrees in Andhra Pradesh, Bihar, Gujarat, Madhya Pradesh, Maharashtra, Orissa, Punjab & Haryana, and Rajasthan and remained unchanged in Uttar Pradesh; (v) it declined at the all-India level.

The marked decline in the levels of inequalities (including landless households) between 1953-54 and 1961-62 might be explained, *inter alia*, in terms of (i) the disintegration of large holdings as a consequence of the abolition of intermediaries and conferment of ownership rights on the erstwhile tenants (ii) the liberal definition of ownership holdings adopted in the 17th round compared to the 8th round, and (iii) sub-division of holdings consequent to growing population.

Between 1961-62 and 1971-72, concentration of holdings, including landless, remained practically unchanged in Assam, Gujarat, Karnataka, Punjab & Haryana, Tamil Nadu, Uttar Pradesh and West Bengal. However, in the remaining states, the decline seen in the previous period gained further momentum; this was more pronounced in Jammu & Kashmir followed by Kerala, Rajasthan, and Orissa. At the all-India level, the decline was marginal. On the other hand, the concentration of holdings, excluding landless, declined noticeably across the states except in Assam, Gujarat, Karnataka and Tamil Nadu. The decline, during this period, could be attributed primarily to, apart from normal subdivision, the enactment and implementation of land ceiling laws. Although, these legislations failed to create substantial direct effect on the distribution of holdings, yet they appeared to have created considerable indirect effect on the big landlords [NCA, 1976, Ch. III]. Apprehending vigorous implementation of these laws, the landlords disposed of substantial amounts of their land by resorting to transfer to kith and kin and natural heirs. A considerable number of such transfers were reportedly benami and fictitious.

Between 1971-72 and 1982, the enactment and implementation of ceiling laws was supposed to be more rigorous. But it did not make much difference; the concentration of holdings including landless remained practically unchanged in Andhra Pradesh, Bihar, Gujarat, Punjab & Haryana, Tamil Nadu, and Uttar Pradesh. In six other states, it increased marginally. Concentration of holdings excluding landless show similar changes. In overall terms, the concentration of ownership holdings measured by the Gini coefficient declined between 1953-54 and 1982 with little evidence of any increase.

Area Owned in Holdings of Different Size Classes

Another way to look at the trends in the concentration of holdings is to compute the changes in the percentage of area owned by different segments of rural households, say, those at the top, middle and at the bottom (Table 4). We choose 1 per cent, 5 per cent, 10 per cent and 20 per cent at the top, 40 per cent and 30 per cent in the middle and, 40 per cent and 50 per cent at the bottom. Looking at the distribution from the bottom, the middle level households have been defined as those falling between bottom 40 per cent and bottom 80 percent and between bottom 50 per cent and bottom 80 per cent. The main features are: (i) between 1953-54 and 1961-62, decline in the top concentration across the states was accompanied by an increase in the concentration in the middle. The concentration at the bottom, however, remained practically unchanged in a majority of the states except Jammu & Kashmir, Karnataka, Madhya Pradesh, Rajasthan and Uttar Pradesh. Notable exceptions were Bihar and Orissa where there was not much change in the proportion of area owned by different segments. (ii) Between 1961-62 and 1971-72, trends were mixed. For instance, (a) in Andhra Pradesh, Bihar, Kerala and Madhya Pradesh, decline in the top concentration at various levels was associated with practically no change in the bottom concentration but noticeable increase in the middle concentration; (b) in Assam, Jammu & Kashmir, Orissa and Rajasthan decline in the top concentration was accompanied by an increase of varying margins both in the bottom and middle concentrations. Trends were similar in Maharashtra except that concentration at the top one per cent, increased slightly; (c) in Gujarat, Karnataka, Punjab & Haryana, Tamil Nadu, Uttar Pradesh and West Bengal, top concentration at various levels increased by different degrees along with either practically no change or some decline in the bottom and middle level concentrations. (iii) Between 1971-72 and 1982, concentration at various levels remained practically unchanged in Andhra Pradesh, Gujarat, and Uttar Pradesh. In Assam and Orissa, concentration declined at the top along with an increase at the bottom and in the middle. In Punjab & Haryana, on the other hand, decline in the top concentration was accompanied by a pronounced increase in the middle. Increase of varying degree in the top concentration in Jammu & Kashmir, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan and West Bengal was accompanied by a decline in the concentration at the bottom and in the middle. There was no neat pattern in Bihar, Kerala, Rajasthan and Tamil Nadu. At the all-India level, the concentration of area owned at various segments remained practically unchanged.

In brief, the decade of 1950s was marked by a decline in the concentration of holdings across the states. Similar trends continued further during 1960s in a majority of the states. The decade of 1970s was, however, marked by a departure from the earlier trends inasmuch as the distribution of holdings tended to become more skewed in most of the states. Nevertheless, taking a long period view, the degree of concentration in the distribution of holdings in the early eighties was strikingly less compared to the early fifties. Further, decline in the percentage of area owned by different segments of households at the top over the period was accompanied by a pronounced increase in the percentage of area owned by the middle 40 per cent households between 40 to 80 per cent of land ownership hierarchy. The percentage of area owned by the bottom 40 per cent of households, however, remained practically unchanged across the states except in Assam, Jammu & Kashmir, Kerala, Orissa and Rajasthan.

Distribution of Ownership Holdings: Erstwhile Zamindari vs. Ryotwari Areas

Land settlements in pre-independent India were primarily of two varieties, viz., zamindari tenure and ryotwari tenure covering respectively about 57 per cent and 38 per cent of the total privately owned agricultural land. While ownership was conferred on a few big landlords under the erstwhile zamindari tenure, peasant proprietorship was sought to be introduced under the erstwhile ryotwari tenure. The distribution of land was highly unequal under both the tenures notwithstanding the very high preponderance of small holdings in the former compared to the latter. In the following (Tables 5 to 7), we shall examine the changes in concentration of holdings in the two areas. For this purpose, Bihar, Orissa and West Bengal were combined to represent the erstwhile predominantly Zamindari area. Uttar Pradesh was not included due to the mixed tenurial system in that State. Gujarat, Maharashtra, Karnataka, Tamil Nadu and Kerala were combined to represent the erstwhile ryotwari area. Notable contrasts are: (i) Concentration of holdings, measured by Gini coefficient both including and excluding zero class (Table 6.4), was more pronounced in the erstwhile ryotwari compared to the zamindari areas. Over time, the concentration of holdings including zero class declined in both areas during the 1950s and the 1960s. However, the concentration of holdings during the 1970s remained practically unchanged, both including and excluding zero class in the zamindari areas but increased, albeit marginally, in the ryotwari areas; (ii) Concentration at the top at various levels was noticeably higher in the erstwhile ryotwari areas compared to the zamindari areas (Table 6). The middle and bottom concentration was, however, higher in the latter as compared to the former. Over time, trends were almost similar in both the areas. While decline in the top concentration at different levels between 1953-54 and 1961-62, and between 1961-62 and 1971-72 was accompanied by an increase in the middle level concentration, the top concentration increased in varying degrees between 1971-72 and 1982; (iii) Distribution of holdings and area owned among different categories (Table 7) became less unequal in both the areas as evidenced from the decline in the proportion of large holdings and area owned by them and its distribution in favour of medium, small and marginal holdings. However, while the changes in the distribution over time largely benefited medium holdings in the erstwhile ryotwari areas, marginal and small holdings gained relatively more in the zamindari areas; (iv) The erstwhile ryotwari areas reflected a higher degree of inequality compared to the erstwhile zamindari areas. In the former, in contrast to the latter, a much higher percentage of holdings at the bottom owned a much smaller share of land, while a small percentage of holdings at the top continued to enjoy a much bigger share of land.

The analysis suggests a higher degree of concentration of holdings in the ryotwari areas in contrast to the zamindari areas measured both in terms of Gini coefficient and percentage of area owned by different segments of households at the top. Another notable contrast is that the changes in the distribution of holdings and area owned over time largely benefited medium holdings in the former, while marginal and small holdings gained relatively more in the latter areas.

Distribution of Ownership Holdings: Green Revolution States vs. Non -Green Revolution States

We may compare changes in distribution of holdings in green revolution states with those in non-green revolution states and also changes between before and after the pre-green revolution within green revolution states (Tables 8, 9 and 10). For this purpose, Punjab & Haryana are selected to represent green revolution states and Bihar and Orissa non-green revolution states. Notable contrasts : (i) Concentration of holdings measured by Gini coefficient, both including and excluding zero class (Table 8), was noticeably higher in green revolution states compared to non-green revolution states. Over time, it tended to decline in both cases; (ii) During the 1950s, when the green revolution was yet to unfold, decline in top concentration of area owned by different sections of households (Table 9) in green revolution states was accompanied by a pronounced increase in concentration at middle level in contrast to non-green revolution states where concentration remained practically unchanged. During 1960s, when effects of green revolution were already visible, top concentration at various levels increased in green revolution states, while in the other states the increase was more pronounced at middle level. In 1970s, there was a substantial increase in concentration at middle level in green revolution states in contrast to non-green revolution states where there was some concentration at the bottom; (iii) There was (a) a continuous decline in the proportion of landless households both in green revolution and non-green revolution states; (b) a substantial decline in proportion of large holdings and area owned by them; and (c) over time, while marginal and small holdings gained relatively more in the non-green revolution states, medium holdings emerged stronger in green revolution states (Table 10).

These changes in distribution of holdings in green revolution states both over time and in comparison to non-green revolution states refute the hypothesis that the new agricultural technology was accompanied by rising concentration of holdings and increasing incidence of landlessness.

OPERATIONAL HOLDINGS

The distribution of operational holdings differs from that of ownership holdings because of the existence of the lease markets. In this section, we shall examine various aspects of changes in the distribution of operational holdings.

Changes in Operational Holdings and Area Operated

In Table 11, we give distribution of operational holdings, in Table 11A, the percentage change in number of holdings and area operated and, in Table 11B, average size of operational holdings. Major changes occurring in different periods are: (i) During 1953-54 to 1961-62, increase in number of holdings ranged from as high as 87.48 per cent in Tamil Nadu and 75.46 per cent in Gujarat to as low as 2.80 per cent in West Bengal (Table 11A). In Andhra Pradesh, Assam, Karnataka, and Punjab & Haryana, number of holdings actually declined, ranging from 13.98 per cent in Assam to 3.75 per cent in Karnataka. However, variation in area operated was much less sharp. It increased from 45.83 per cent in Tamil Nadu to 1.69 per cent in Andhra Pradesh. In Assam, Punjab & Haryana, it declined by 42.64 per cent and 22.93 per cent respectively, whereas in Madhya Pradesh it remained nearly unchanged. Consequently, average size of operational holdings declined in most states (Table 11B).

In Assam, Bihar, Madhya Pradesh, Punjab & Haryana and Tamil Nadu, increase in the number of marginal holdings was maximum compared to other categories of holdings (Table 11A). In Maharashtra, Orissa, Rajasthan, Uttar Pradesh and West Bengal the increase was highest for small holdings. Among the remaining states, the increase was more pronounced in sub-marginal holdings in Kerala and Jammu & Kashmir, in medium holdings in Gujarat and Karnataka, and in large holdings in Andhra Pradesh. Number of sub-marginal holdings along with area operated declined by varying degrees in Andhra Pradesh, Karnataka, Orissa, Rajasthan and West Bengal. In Assam, Madhya Pradesh and Maharashtra, the decline in number of these holdings was accompanied by an increase in area operated, whereas in Punjab & Haryana, there was no change in number of holdings but very large increase in area operated (65.22 per cent). In Bihar, Jammu & Kashmir, Kerala, and Tamil Nadu, increase in area operated by sub-marginal holdings was much higher compared to an increase in their number.

(ii) During 1961-62 to 1971-72, increase in number of holdings was much less pronounced. It ranged from 31.04 per cent in Maharashtra to 4.70 per cent in Uttar Pradesh. In Bihar and Jammu & Kashmir, number of holdings remained nearly unchanged while in Punjab & Haryana and Tamil Nadu the number declined by 11.75 per cent and 5.13 per cent respectively. On the other hand, area operated declined by varying degrees in a majority of the states except Assam, Madhya Pradesh and Maharashtra. However, even in these latter states, increase in area was markedly lower compared to increase in number of holdings. Consequently, the average size of holdings declined.

There was a pronounced increase in number of sub-marginal holdings compared to other categories of holdings in most states and at the all-India level. Notable exceptions were Karnataka and Uttar Pradesh where maximum increase was in marginal holdings and Punjab & Haryana and Maharashtra where it was more marked in small holdings. However, in Andhra Pradesh, Assam, Gujarat, Karnataka, Maharashtra, and Uttar Pradesh, increase in area operated by sub- marginal holdings was more than increase in their number. Likewise, in Punjab & Haryana, decline in the number of holdings (-68.21 per cent) was accompanied by an abnormally high increase (238.16 per cent) in area operated.

(iii) During 1971-72 to 1982, there was a phenomenal increase in number of holdings in most of states except Madhya Pradesh, Maharashtra, and Orissa. The increase ranged from 122.34 per cent in Punjab & Haryana, 57.78 per cent in West Bengal and 7.57 per cent in Gujarat. The amount of area operated, on the other hand, increased in nine states ranging between 21.82 per cent in Jammu & Kashmir and 1.19 per cent in Orissa. In Gujarat, Karnataka, Madhya Pradesh, Maharashtra, Tamil Nadu, and Uttar Pradesh, the amount of area operated declined, varying between 22.48 per cent and 2.37 per cent. At the all-India level, number of holdings increased (23.11 per cent) but area operated declined (-5.11 per cent).

Looking at changes in number of different categories of holdings and area operated by them, the increase was maximum in sub-marginal holdings compared to other categories of holdings in practically all the states except Andhra Pradesh and Rajasthan where the increase was more pronounced in small and marginal holdings, respectively. In Jammu & Kashmir, Punjab & Haryana, Tamil Nadu, and West Bengal, increase in number of sub-marginal holdings was very large. In Orissa, number of holdings of all sizes, except for large holdings, and area operated by them both declined. In a majority of the states, increase in area operated by sub- marginal holdings was not only much less but in Madhya Pradesh, and Punjab & Haryana it even declined. Size of these holdings was, therefore, reduced to very low levels.

Changes in number of operational holdings and area operated from one round to another might be explained in terms of the same factors as mentioned earlier in connection with ownership holdings. However, they cannot explain the very large fluctuations seen from one round to another. In the circumstance, we prefer to analyse these changes in terms of proportions rather than absolute number of holdings and area operated.

Households not Operating any Land

Households not operating any land form the zero class of the distribution of household operational holdings. They comprised two types of households: those who own land but do not operate and those who neither own nor operate any land. While the first category constitute the rentiers and/or absentee landowners, a large majority of the second category (because it also includes some artisans, and salaried and business class) constitute some of the poorest. The proportion of non-operators to all rural households divided in the two categories for the years 1961-62, 1971-72, and 1982 are given in Table 12. It will be noticed that in 1961-62, the non-operators were mainly rentiers and/or absentee landowners in Andhra Pradesh, Bihar, Madhya Pradesh, Orissa, Punjab & Haryana, Rajasthan, and West Bengal. In five other states most of them neither owned nor operated any land. In Jammu & Kashmir, Maharashtra, and Uttar Pradesh, they were almost evenly divided between the two categories.

TABLE 12. INCIDENCE OF HOUSEHOLDS NOT OPERATING ANY LAND, HOUSEHOLDS OWNING BUT NOT OPERATING ANY LAND AND HOUSEHOLDS NEITHER OWNING NOR OPERATING ANY LAND IN RURAL INDIA: MAJOR STATES, 1961-62 TO 1982

(per cent)

States	Households not Operating any Land			Households Owning but not Operating any Land			Households Neither Owning nor Operating any Land		
	1961-62	1971-72	1982	1961-62	1971-72	1982	1961-62	1971-72	1982
1	2	3	4	5	6	7	8	9	10
Andhra Pradesh	37.95	36.05	40.47	32.03	29.68	29.58	5.92	6.37	10.89
Assam	36.22	28.39	13.27	15.27	13.76	8.56	20.95	14.63	4.71
Bihar	21.71	20.65	18.17	15.28	17.52	15.09	6.43	3.13	3.08
Gujarat	25.41	33.75	36.14	11.78	25.47	20.06	13.63	8.28	16.08
Jammu & Kashmir	11.09	6.64	11.77	5.30	6.07	4.94	5.79	0.57	6.83
Karnataka	24.11	29.77	27.02	10.51	20.28	14.95	13.60	9.49	12.07
Kerala	23.76	11.69	12.99	8.91	1.44	3.06	14.85	10.25	9.93
Madhya Pradesh	18.45	16.95	24.06	10.69	12.09	10.74	7.76	4.86	13.22
Maharashtra	26.29	30.97	41.25	12.41	21.09	21.31	13.88	9.88	19.94
Orissa	32.59	25.13	27.78	26.22	17.30	21.73	6.37	7.83	6.05
Punjab & Haryana	39.09	48.03	27.74	30.51	41.82	23.06	8.58	6.21	4.68
Rajasthan	11.84	7.83	12.29	9.64	5.52	5.42	2.20	2.31	6.87
Tamil Nadu	39.98	41.95	37.26	18.10	27.86	25.77	21.88	14.09	11.49
Uttar Pradesh	20.76	24.26	20.00	11.09	20.42	15.97	9.67	3.84	4.03
West Bengal	33.88	30.94	22.14	22.77	23.09	11.66	11.11	7.85	10.48
All-India	26.86	27.42	26.06	17.45	20.51	16.89	9.41	6.90	9.17

Source: As in Table 13

During 1961-62 to 1971-72, their proportion declined considerably in Assam, Jammu & Kashmir, Kerala, Orissa, and Rajasthan and marginally in West Bengal, Andhra Pradesh, Madhya Pradesh, and Bihar. The decline, where it was considerable, was largely in the proportion of in the second category. In Gujarat, Karnataka, Maharashtra, Punjab & Haryana, and Uttar Pradesh the proportion of non-operators increased largely in the first category.

During 1971-72 to 1982, there were varying degrees of decline in the proportion of households who owned but did not cultivate land except in Andhra Pradesh, Maharashtra, and Orissa. Proportion of households who neither owned nor operated any land declined only in Assam, Tamil Nadu, Orissa, and Punjab & Haryana. It remained practically unchanged in Bihar, Kerala, and Uttar Pradesh. In Andhra Pradesh, Gujarat, Jammu & Kashmir, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan, and West Bengal, the proportion of such households increased considerably. Consequently, the proportion of households not operating any land increased in all these states except in West Bengal where there was a more than compensating decline in the proportion of households who owned but did not cultivate any land. Likewise, in Kerala and Orissa, increase in the proportion of those who owned but did not cultivate any land led to an increase in the proportion of households not operating any land.

On the whole, proportion of rentiers and absentee land owners has declined and, by implication, proportion of self-cultivating households has increased. These trends are attributable to various land legislations and also to spread of new agricultural technology, backed by institutional and price support measures. As a consequence, the lease market has diminished, there are large numbers of land seekers and an increase in the proportion of households who neither own nor operate any land.

Concentration of Holding as measured by Gini Coefficient

The changes in the concentration of operational holdings, as measured by the Gini coefficient are shown in Table 13. The features are: (i) During 1953-54 to 1961-62, the concentration of holdings showed a fairly sizeable decline in practically all the states particularly in Tamil Nadu, West Bengal, Assam, Orissa, Gujarat, Karnataka, and Madhya Pradesh. At the all-India level, the Gini Coefficient declined from 0.6212 to 0.5831. The decline in the concentration of operational holdings might, *inter alia*, be attributed to the disintegration of large ownership holdings, the active functioning of the lease markets, etc.; (ii) During 1961-62 to 1971-72, the decline in concentration slowed down; in fact, in some states, it increased. The decline was negligible in Kerala and Uttar Pradesh and was practically nil in Andhra Pradesh, Bihar, Gujarat, Karnataka, and Madhya Pradesh. On the whole, the decline in the concentration of holdings during the sixties was much less pronounced compared to the fifties. In Rajasthan, Tamil Nadu, West Bengal, and Assam, there was a slight increase in the concentration. At the all-India level, Gini coefficient remained almost unchanged.

Thus the decade of the 1960s was marked by either an increase, or practically no change, in the concentration of operational holdings in most of the states. This could possibly be due to tenancy legislation. The legislation was not very effective in giving 'land to the tiller'. On the contrary, many landowners resorted to eviction of tenants for self-cultivation or to report self-cultivation with hired agricultural labour.

TABLE 13. GINI CONCENTRATION OF OPERATIONAL HOLDINGS IN RURAL INDIA: MAJOR STATES, 1953-54 TO 1982

States 1	1953-54 2	1961-62 3	1971-72 4	1982 5
Andhra Pradesh	0.6424	0.6157	0.6027	0.5947
Assam	0.4586	0.3810	0.4156	0.5113
Bihar	0.5704	0.5584	0.5501	0.5936
Gujarat	0.5759	0.5191	0.5369	0.5553
Jammu & Kashmir	0.4236	0.4173	0.3913	0.4524
Karnataka	0.5805	0.5246	0.5255	0.5799
Kerala	0.6380	0.6134	0.6068	0.5957
Madhya Pradesh	0.5584	0.5197	0.5289	0.5336
Maharashtra	0.5818	0.5549	0.5348	0.5694
Orissa	0.5786	0.5139	0.4984	0.5327
Punjab & Haryana	0.5161	0.4981	0.4417	0.6590
Rajasthan	0.5728	0.5564	0.6236	0.5681
Tamil Nadu	0.6137	0.4955	0.5148	0.6233
Uttar Pradesh	0.5110	0.5071	0.4948	0.5581
West Bengal	0.5614	0.4603	0.4819	0.5779
All-India	0.6212	0.5831	0.5876	0.6241

Source: As in Table 1; for the 37th round however, the Report No. is 331.

During 1971-72 to 1982, Gini coefficient increased by varying degrees in a majority of the states except Andhra Pradesh, Kerala, Madhya Pradesh and Rajasthan. The increase was more pronounced in Punjab & Haryana, Tamil Nadu, Assam, West Bengal, Jammu & Kashmir, and Uttar Pradesh. At the all-India level also there was some increase. The reasons are the same as mentioned above but now, with the spread of new agricultural technology and institutional and price support to agriculture, resumption for self-cultivation was probably more genuine than earlier.

With changes in Gini coefficients during 1970s, concentration of operational holdings in 1982 was not much different compared to 1953-54; in some states it was even higher. However, to reiterate, Gini coefficient could change in many ways and does not reveal at what level concentration increased or declined. It is, therefore, advisable to analyse changes at different levels such as at the top, middle, and at the bottom.

Area Operated in Holdings of Different Size Classes

In Table 14, we present proportion of area operated by various groups of holdings, namely, top 20 per cent, top 10 per cent, top 5 per cent and top 1 per cent; middle 40 per cent, middle 30 per cent and bottom 50 per cent, bottom 40 per cent and bottom 25 per cent in various periods. Notable features are: (i) During 1953-54 to 1961-62, there was a marked decline of varying degrees in the top concentration at different levels along with an increase in the concentration at the middle and bottom levels in Andhra Pradesh, Assam, Karnataka, Kerala, Maharashtra, Orissa, Punjab & Haryana, Tamil Nadu, and West Bengal. Trends in Jammu & Kashmir and Maharashtra were similar except that middle level concentration in the former and top 1 per cent concentration in the latter remained unchanged. In Bihar, concentration in top 5 per cent and 1 per cent increased but declined in top 20 per cent and in the middle. There was a slight increase in concentration at the bottom. In Gujarat, Rajasthan and Uttar Pradesh, concentration in top 5 per cent and 1 per cent increase of varying degrees in the concentration of operated area at the bottom and middle levels was associated with an increase in the levels.

(ii) As regards the period 1961-62 to 1971-72, three distinct patterns emerged : (a) states where decline in the top concentration at various levels was accompanied by an increase of varying degrees in the bottom and middle level concentration. Bihar, Jammu & Kashmir, Kerala, Orissa and Punjab & Haryana conformed to this pattern; (b) states where top concentration at 1 per cent level either increased or remained unchanged but declined at other levels along with an increase in the bottom and middle level concentration. Andhra Pradesh, Karnataka and Maharashtra belonged to this category; (c) the states where the concentration at the bottom and middle level declined but top concentration at different levels increased. This pattern was noted in Assam, Gujarat, Madhya Pradesh, Rajasthan, Tamil Nadu and West Bengal. The proportion of area operated by various groups of holdings remained practically unchanged in Uttar Pradesh and also at the all-India level.

(iii) The decade of 1970s (1971-72 to 1982), was marked by an increase in the top concentration at various levels in a majority of the states. The notable exceptions to the above trend were the states of Andhra Pradesh, Kerala, Madhya Pradesh and Rajasthan, where decline in the top concentration was accompanied by an increase in the concentration of area operated at the bottom and middle levels. At the all-India level also, the concentration of area operated at the top increased by varying proportions.

To sum up, the concentration of holdings, as measured by Gini Coefficient, declined across the states during the 1950s and in a majority of the states during 1960s. However, changes in concentration at various levels of holdings are varying. On the other hand, during 1970s, there was a marked increase in concentration of holdings measured by Gini coefficient in most of the states with an increase in the top concentration at different levels in a majority of the states.

Distribution of Operational Holdings: Erstwhile Zamindari vs. Ryotwari Areas

Historically, lease markets were more active in the erstwhile zamindari compared to those in the ryotwari areas. Accordingly, on *a priori* basis, the distribution of operational holdings is expected to be much less unequal in these areas than in the ryotwari areas. To see whether the pre-independence historical factors continue to exercise their influence on the distribution of operational holdings after the abolition of zamindari, we compared the changing distribution of operational holdings between the erstwhile zamindari and the ryotwari areas (Tables 15 to 17). Notable features are: (i) Concentration of operational holdings, measured by Gini coefficient, (Table 15), was more pronounced in the erstwhile ryotwari compared to the zamindari areas. It declined during 1950s, remained practically unchanged during 1960s, and increased considerably during 1970s in both sets of states. (ii) Top concentration at various levels was higher in the erstwhile ryotwari areas in contrast to the erstwhile zamindari areas (Table 16). The bottom concentration at different levels was, on the other hand, higher in the latter areas. However, in both the areas, there was a decline in top concentration and an increase in the bottom concentration during 1950s, practically no change during 1960s, and an increase of varying degrees in the top concentration during 1970s. (iii) In both the set of states there was a decline in the proportion of area operated by large holdings, more pronounced in the ryotwari areas (Table 17). There was an extreme proliferation of holdings at the bottom, in particular during the decade of the 1970s, more pronounced in the erstwhile zamindari areas. Over the whole period from 1953-54 to 1982, marginal and small holdings, gained relatively more in the erstwhile zamindari areas compared to the erstwhile ryotwari areas. Nevertheless, medium holdings in both the areas, had emerged much stronger in 1982 compared to 1953-54.

In brief, the initial agrarian contrasts between the two sets of areas notwithstanding, the post-Independence changes in the agrarian situation were more or less of the same nature leading to similar directional changes. At least partly, this could be attributed to the various land legislations conforming to certain national norms.

Distribution of Operational Holdings: Green Revolution vs. Non-Green Revolution States

Distribution of operational holdings is expected to be more skewed in the green revolution than in the non-green revolution states. In technologically advanced areas, cultivation becomes profitable so that there is a tendency to enlarge operational holdings either by purchase or leasing in land. This is complemented by a tendency among small and marginal farmers to lease out their land and make themselves fully available for hired farm jobs or non-farm employment. In contrast, in technologically backward areas, cultivation is not profitable and landowners tend to lease out their land and engage in money-lending, and trading. On their part, the small and marginal farmers remain tied to the land making a meagre living. The notable contrasts in the distribution of operational holdings between the green revolution and the non-green revolution states are: (i) During 1950s and 1960s, concentration of operational holdings, measured by Gini coefficient (Table 18), was considerably higher in the non-green revolution states in contrast to the green revolution states. During 1970s, when difference in agricultural development in the two sets of states became more pronounced, the concentration of holdings became higher in the green revolution states. (ii) While top concentration at different levels was noticeably higher in the non-green revolution states compared to the green revolution states, the concentration in the middle 30 per cent level was substantially higher in the green revolution states (Table 19). During 1970s, top concentration increased in both the sets of states but much more in the green revolution states. Bottom concentration did not differ noticeably between the two sets of states towards the end of 1950s. However, during 1960s, it increased strikingly in the green revolution states. In contrast, in the non-green revolution states, it remained practically unchanged during 1960s, and declined somewhat, particularly in the bottom 40 per cent level, during 1970s. (iii) During 1970s, there was a continuous decline in the proportion of area operated in large holdings and its distribution in favour of smaller holdings in the green revolution states in contrast to the non-green revolution states where it remained practically unchanged (Table 20). Further, there was an extreme proliferation of sub-marginal holdings in the green revolution states compared to the non-green revolution states. which cannot be fully accounted for.

TENURIAL RELATIONS

There is evidence that, over the years, there is a decline in tenancy and changes in the nature of tenurial contracts. For example, reportedly, landlords are participating more actively in production by sharing input costs while share tenancy is gradually declining in favour of fixed rent tenancy. Again, reportedly, substantial changes in tenurial relations have occurred particularly in agriculturally advanced areas. With the spread of new agricultural technology, agriculture has become profitable and medium and large farmers tend to lease-in additional land since there is a ceiling on ownership holdings and none on the operational holdings.[1] On the other hand, sub-marginal, marginal and small households have their own compulsions to opt out of cultivation by leasing out their land; they are too small to make self-cultivation worthwhile. We shall examine the available statistical evidence.

Changes in the Magnitude of Agricultural Tenancy: Changes in the magnitude of tenancy may be measured either in terms of the proportion of area leased-in or leased-out. While the former is based on the information supplied by the tenants, the latter is based on that supplied by the land-owners. It is widely believed that while tenancy estimates derived from both sources are gross under-estimates, they are particularly so as reported by the landlords. Hence, we shall measure changes in the magnitude of tenancy by changes in the proportion of operated area leased-in.[2] However, we shall also examine changes in the proportion of entirely owned self-cultivated holdings, mixed holdings, and entirely leased-in holdings.[3] The details are presented in Table 21. The broad features are:

(i) Between 1953-54 and 1971-72, incidence of tenancy declined sharply in a majority of the states and at the all-India level; there is marked decrease in the proportion of operated area leased-in on the one hand and an increase in the proportion of entirely owned self-operated holdings on the other. Notable exceptions are Bihar, Orissa, and Uttar Pradesh where the proportion of operated area leased-in increased marginally. Among states where the incidence of tenancy had declined, it was relatively sharp in respect of smaller holdings compared to the medium and large holdings in as many as eight states, namely, Andhra Pradesh, Gujarat, Jammu & Kashmir, Karnataka, Kerala, Maharashtra, Rajasthan and Tamil Nadu. In three other states, namely, Madhya Pradesh, Punjab & Haryana and West Bengal, there is no neat pattern, while in Assam, the decline was more pronounced in larger holdings. At the all-India level, the decline was more pronounced in respect of large holdings followed by small holdings. On the other hand, in three states where tenancy had actually increased, the increase was more in large holdings in Orissa and in medium holdings in Uttar Pradesh. Only in Bihar, sub-marginal and marginal holdings leased-in higher proportion of operated area during 1971-72 compared with 1953-54. The declining incidence of tenancy, particularly in respect of smaller holdings was also evident from the fact that in most of the states there was a decline in entirely leased-in holdings below five acres.

It is generally expected that smaller holdings lease-in higher proportion of their operated area compared to medium and large holdings. This seems to be so in the early 1950s for eight states, i.e., Andhra Pradesh, Bihar, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan, Tamil Nadu and Uttar Pradesh. In three other states (Gujarat, Jammu & Kashmir and Orissa) this is true excepting sub-marginal holdings. In the remaining few states, (Assam, Kerala, Punjab & Haryana and West Bengal) there is no such clear relationship. Consequent to the changes in the tenurial relations between 1953-54 and 1971-72, the relationship prevailed in only five states, namely, Assam, Bihar, Madhya Pradesh, Tamil Nadu and Uttar Pradesh. In Andhra Pradesh, Orissa and West Bengal, the relationship held, excepting for marginal and sub-marginal holdings. In as many as seven states, namely, Gujarat, Jammu & Kashmir, Karnataka, Kerala, Maharashtra, Punjab & Haryana and Rajasthan, there is no such neat relationship.

(ii) The incidence of tenancy declined further by varying degree during 1971-72 to 1982 in as many as ten states, namely, Andhra Pradesh, Assam, Bihar, Gujarat, Jammu & Kashmir, Karnataka, Kerala, Punjab & Haryana, Uttar Pradesh and West Bengal. The decline was, however, much smaller than in the previous period, 1953-54 to 1971-72. In the remaining five states, the proportion of operated area leased-in did not change beyond narrow margins except in Orissa where some increase was in evidence. At the all-India level, there was a slight decline.

The decline in tenancy was relatively large in smaller holdings and, in as many as six states, namely, Assam, Bihar, Kerala, Orissa, Tamil Nadu and Uttar Pradesh, the proportion of net operated area leased-in by large holdings increased by varying degree. In Madhya Pradesh and Maharashtra, it remained practically unchanged. In three other states, namely, Andhra Pradesh, Jammu & Kashmir and Karnataka, the decline in tenancy was more or less the same in all size classes, while in Rajasthan, tenancy increased in all size classes except in sub-marginal holdings. In as many as ten states, there was no clear cut relationship between the size of operational holdings and the proportion of operated area leased-in.

Changes in Terms of Tenancy: A number of legislative measures have been enacted in different states to convert share of produce into fixed cash rent and thereby protect the interests of the share-croppers.[4] Technological changes in agriculture have also effected the nature of tenurial contracts. In the following, we shall examine such changes during the 1970s. Share of produce, fixed cash rent, and fixed produce rent are the most important tenancy contracts under which the land is leased-in or leased-out. Our main interest is to see whether share tenancy has declined and replaced by fixed cash rent and whether this has happened not only in large and medium holdings but also in small holdings. In Table 22, we give proportion of holdings leasing-in and area operated leased-in under various tenurial contracts. Some notable features are:

(i) Share tenancy both in terms of the proportion of holdings leasing-in and area operated leased-in declined by varying degree across the states and also at the all-India level with the exception of Maharashtra where share tenancy remained almost unchanged. The decline was the sharpest in West Bengal followed by Bihar, Punjab & Haryana, and Karnataka.[5] (ii) In five states, namely, Bihar, Haryana, Tamil Nadu, Uttar Pradesh, and West Bengal, fixed cash rent tenancy remained practically constant or slightly increased. (iii) Fixed produce tenancy declined in all the states except Haryana and West Bengal. (iv) In seven states, namely, Andhra Pradesh, Gujarat, Jammu & Kashmir, Karnataka, Maharashtra, Tamil Nadu and West Bengal, tenancy under 'other terms' increased by varying degree. In Bihar, Haryana, and Uttar Pradesh and at the all-India level, the proportion of holdings leasing-in under 'other terms' declined but the proportion of area operated leased-in remained practically unchanged. (v) Usufructuary mortgage both in terms of proportion of holdings and area leased-in declined sharply in practically all the states and at the all-India level.

In Table 22, we give the proportion of area operated leased-in under different tenancy contracts in different size classes of holdings. The broad features are: (i) In all states, except Jammu & Kashmir, Haryana, Punjab and Gujarat, and at the all-India level, share tenancy declined. In large holdings in six states, namely, Assam, Bihar, Kerala, Madhya Pradesh, Maharashtra and Uttar Pradesh and in medium and small holdings in Rajasthan, share tenancy either increased slightly or remained practically unchanged. In two other states, Orissa and Karnataka, there is no neat pattern. (ii) In states most infested by tenancy, notably, Bihar, Haryana, Punjab, Tamil Nadu, and Uttar Pradesh, fixed cash tenancy in smaller holdings generally remained constant rather than declined; in fact, in some cases, it increased. In West Bengal, the increase was confined to large holdings. In the remaining states, fixed cash tenancy declined more or less equally in all size class of holdings. In Haryana, Jammu & Kashmir, Orissa, and Rajasthan, fixed produce tenancy increased in all size classes including smaller holdings. In Bihar and West Bengal, the increase was confined to large holdings. (iii) Usufructuary mortgage declined sharply in all size classes of holdings in most states except in large holdings in Rajasthan, marginal, small and medium holdings in Tamil Nadu, and marginal and sub-marginal holdings in Maharashtra, Orissa, and West Bengal. (iv) Finally, tenancy on 'other terms' also increased in as many as eleven states, namely, Assam, Bihar, Gujarat, Haryana, Jammu & Kashmir, Karnataka, Maharashtra, Orissa, Punjab, Rajasthan and Uttar Pradesh though the increase was generally confined to larger holdings. Among the remaining states, tenancy under unspecified contracts increased for all size classes of holdings in Andhra Pradesh, Tamil Nadu and West Bengal but declined in Kerala and Madhya Pradesh.

Who Leases-in and Who Leases-Out: In Table 23, we give distribution of lessees and lessors alongwith area leased-in and leased-out in different size classes of households. Notable features are: (i) Both in 1971-72 and 1982, sub-marginal and marginal farmers accounted for more than 70 per cent of all lessees and area leased-in in Bihar, Kerala, Tamil Nadu, and West Bengal and around 55 per cent in Orissa. In Uttar Pradesh they accounted for more than seventy per cent in 1971-72 and more than 55 per cent in 1982. In all the six states sub-marginal, marginal, and small holders together accounted for more than 80 per cent of all lessees, both numbers and in acreage terms, in 1971-72 as well as in 1982. In Assam, they accounted for around 90 per cent in 1971-72 and more than 70 per cent in 1982. During 1970s, share of sub-marginal holdings increased in all lessees in Kerala followed by West Bengal and Bihar while it declined in Assam, Tamil Nadu, and Uttar Pradesh. In Orissa, on the other hand, it declined but with practically no change in the proportion of total area leased-in by them. The proportion of area leased-in by medium and large households remained practically unchanged except in Assam, where it increased markedly, particularly in respect of medium households. (ii) In three other states, namely, Andhra Pradesh, Jammu & Kashmir and Haryana, sub-marginal, marginal, and small holders together accounted for more than 70 per cent of all lessees both 1971-72 and in 1982. Their share in the total leased-in area varied between 65 per cent to 75 per cent in Jammu & Kashmir, around 62 per cent in Andhra Pradesh and between 57 per cent to 62 per cent in Haryana. Between 1971-72 and 1982, the share of sub-marginal holdings in Jammu & Kashmir, marginal holdings in Andhra Pradesh, and small holdings in Haryana increased significantly, both in numbers and in acreage terms. On the other hand, the share of medium and large holdings increased marginally in Jammu & Kashmir, and declined in Andhra Pradesh. In Haryana, there was some decline in the share of large holdings as lessees but with practically no change in the proportion of area leased-in by them. (iii) In the remaining states, namely, Gujarat, Karnataka, Madhya Pradesh, Maharashtra, Punjab and Rajasthan, sub-marginal, marginal and small households together accounted for more than 60 per cent of all lessees. Their share in the leased-in area was, however, smaller in 1982 than in 1971-72. For instance, while these holdings accounted for more than 50 per cent of leased-in area in 1971-72, except in Maharashtra, in 1982 it was less than 50 per cent. The decline was more sharp in the share of sub-marginal holdings in all the states except Gujarat where it was more or less equal for sub-marginal, marginal and small holdings. Proportion of area leased-in by large holdings increased in Gujarat, Karnataka and Rajasthan and that by medium holdings in Madhya Pradesh and medium and large holdings in Punjab. In Maharashtra, it remained almost unchanged.

In sum, sub-marginal, marginal, and small holdings together accounted for more than 50 per cent of area leased-in in as many as eleven states. In the remaining five states, namely, Gujarat, Karnataka, Maharashtra, Punjab, and Rajasthan, share of medium and large holdings in leased-in area increased during 1970s; it was either around 50 per cent or higher in 1982.

As to shares of different size classes of holdings in lessors and area leased-out and changes therein during 1970s, notable facts are:[6] (i) Sub-marginal, marginal, and small holdings together accounted for more than 80 per cent of all lessors in Kerala and Orissa and 70 to 80 per cent in Bihar, Uttar Pradesh, and West Bengal both in 1971-72 and 1982. In Tamil Nadu, their share increased during 1970s and was more than 80 per cent in 1982. Proportion leased out by these holdings ranged between 40 to 50 per cent in Bihar and Uttar Pradesh, around 55 per cent in Orissa and between 50 to 60 per cent in West Bengal. In Kerala and Tamil Nadu, it increased sharply from 65 per cent to 93 per cent in Kerala and from 30 per cent to 62 per cent in Tamil Nadu. Increase in proportion of area leased-out was greater in respect of small holdings in Bihar, Orissa, Uttar Pradesh, marginal and small holdings in West Bengal and Tamil Nadu and sub-marginal households in Kerala. Share of medium and large holdings declined, both in numbers and acreage, in Bihar, Kerala, Uttar Pradesh, and West Bengal. (ii) In Andhra Pradesh, Assam and Jammu & Kashmir, 69 to 77 per cent the lessors were sub-marginal, marginal or small holders both in 1971-72 and 1982. Increase during 1970s was greater in sub-marginal holdings in Assam and Jammu & Kashmir and small holdings in Andhra Pradesh. Their share in the area leased out declined marginally in Andhra Pradesh and Assam and sharply in Jammu & Kashmir; the decline was greater in small holdings in all the three states. The share increased fairly sharply in Jammu & Kashmir and somewhat less so in Andhra Pradesh and Assam. (iii) Among the remaining states, the proportion of sub-marginal, marginal or small holders in all lessors remained practically unchanged in Gujarat, declined in Karnataka and Madhya Pradesh but increased by varying degree in Haryana, Punjab, Maharashtra, and Rajasthan. The increase was greater in sub-marginal holdings in Punjab and Maharashtra, sub-marginal and small households in Haryana, and sub-marginal households in Rajasthan. In 1982, 53 per cent of all lessors in Gujarat, 61 per cent in Haryana, 41 per cent in Karnataka, 26 per cent in Madhya Pradesh, 63 per cent in Maharashtra, 56 per cent in Punjab and 41 per cent in Rajasthan were sub-marginal, marginal or small holders. Their share in area leased out was, however, less than one-fourth ranging between 5.84 per cent in Madhya Pradesh and 26.46 per cent in Gujarat.

To conclude, the findings indicate that lessors as well as lessees among sub-marginal, marginal and small holders were predominant in lease markets in most states except Karnataka, Madhya Pradesh and Rajasthan.[7] A state by state analysis shows that, in 1982, in nine states, (Andhra Pradesh, Assam, Bihar, Jammu & Kashmir, Kerala, Orissa, Tamil Nadu, Uttar Pradesh and West Bengal) and at the all-India level, they accounted for around 70 per cent of all lessors as well as lessees. In Haryana and Maharashtra, they constituted 60 to 70 per cent, while in Gujarat and Punjab, 55 to 60 per cent. Only in three states, namely, Karnataka, Madhya Pradesh, and Rajasthan lessees predominantly belonged to smaller size classes and lessors to larger size classes, thus following the traditional tenancy relations.

In terms of area leased-in and leased-out, we find that: (i) in five states, namely, Kerala, Orissa, Tamil Nadu, Uttar Pradesh and West Bengal more than 50 per cent of the area was leased-in and leased-out by sub-marginal, marginal and small holders; (ii) in five other states, namely, Gujarat, Karnataka, Maharashtra, Punjab and Rajasthan around 50 per cent or more of area leased-in or leased-out belonged to medium and large holdings; (iii) traditional tenurial relations, in which normally sub-marginal, marginal, and small holders leased-in and medium and large holders leased-out, prevailed only in six states, namely, Andhra Pradesh, Assam, Bihar, Haryana, Jammu & Kashmir and Madhya Pradesh. However, at the all-India level, most of the leasing-in was by sub-marginal, marginal, and small holders and leasing-out by medium and large holders.

Tenurial Relations: Erstwhile Zamindari vs. Ryotwari Areas

Comparative data on tenurial relations in erstwhile zamindari areas and ryotwari areas are given in Tables 24, through 27. Major features are:

(i) During 1953-54 to 1971-72, extent of tenancy remained unchanged in erstwhile zamindari areas but declined markedly in ryotwari areas. Proportion of entirely owned self-cultivated holdings increased in ryotwari areas with practically no change in zamindari areas. Nevertheless, in zamindari areas, proportion of mixed holdings increased significantly and purely leased-in holdings declined. Also, among different size classes of holdings, while the incidence of tenancy remained nearly unchanged in sub-marginal and marginal holdings, it declined by varying degrees in small, medium and large holdings. On the other hand, in ryotwari areas, decline in tenancy was relatively greater in sub-marginal, marginal and small holdings than in medium and large holdings.

During 1971-72 to 1982, tenancy declined almost equally in both zamindari and ryotwari areas; there was an increase in the proportion of purely owned self-operated holdings and a decline in the proportion of mixed holdings. The proportion of purely leased-in holdings, however, slightly increased in zamindari areas but slightly declined in ryotwari areas. In both the areas, there was a decline in the proportion of operated area leased-in in smaller holdings and an increase in larger holdings, particularly in zamindari areas. Further, while the proportion of purely leased-in holdings either declined or remained practically unchanged in all size classes of holdings in ryotwari areas, it increased markedly in sub-marginal and medium holdings in zamindari areas.

(ii) Notable features of tenancy contracts are: First, share tenancy declined in both the areas. Second, in zamindari areas, fixed cash tenancy declined in terms of numbers but remained practically unchanged in terms of area; in contrast, in ryotwari areas, fixed cash tenancy declined both in terms of numbers and area. Third, tenancy under other terms increased in ryotwari areas whereas in zamindari areas there was a slight decline in terms of numbers but little change in terms of area.

(iii) Share tenancy accounted for most of the leased-in area and more so in zamindari areas compared to ryotwari areas. But, while in ryotwari areas it declined in all size classes of holdings, in zamindari areas it increased in all size classes except in sub-marginal holdings where it was replaced to a large extent by tenancy under other terms. Moreover, in zamindari areas, fixed cash tenancy increased, albeit by small margins, in all size classes of holdings except large holdings.

(iv) In both the areas, sub-marginal, marginal, and small holdings were predominant in the lease markets both in terms of numbers and area. This was particularly so in zamindari areas; in ryotwari areas, medium and large holdings accounted for around 42 per cent leased-in area both in 1971-72 and 1982. Sub-marginal, marginal, and small households constituted about 80 per cent of all lessors in zamindari areas and 60 to 70 per cent in ryotwari areas. Their share in the areas leased out was naturally much smaller; it was around 50 per cent in zamindari areas and around 27 per cent in ryotwari areas.

Tenurial Relations: Green Revolution vs. Non-Green Revolution States

Comparative data on tenurial relations in green revolution and non-green revolution states are given in Tables 28 through 31. Major features are:

(i) While the incidence of tenancy during 1953-54 to 1971-72 declined in green revolution states, it increased in non-green revolution states. There was a substantial increase in proportion of purely owned holdings in green revolution states and some decline in non-green revolution states. However, proportion of mixed holdings increased significantly in both categories of states. Decline in tenancy was greater in sub-marginal, marginal and small holdings compared to medium and large holdings in green revolution states. In contrast, in non-green revolution states, tenancy increased in sub-marginal, marginal and small holdings and declined in medium and large holdings.

During 1971-72 to 1982 tenancy declined further in green revolution states. It also declined in non-green revolution states but only to return to its level in 1953-54. Decline in tenancy was greater in smaller holdings except sub-marginal holdings. In both categories of states, there was a substantial increase in proportion of entirely owned self-operated holdings and a significant decline in proportion of mixed holdings. Consequently, there was a marked decline in proportion of operated area leased-in. Nevertheless, the proportion was higher in green revolution states compared to non-green revolution states.

(ii) Similarly, though share tenancy declined in both green and non-green revolution states, its incidence was higher in green revolution states. Among different size class of holdings, sub-marginal holdings in green revolution states leased-in significantly higher proportion of their operated area under fixed cash tenancy in 1982. The increase was smaller for small and large holdings. In non-green revolution states, on the other hand, proportion of area leased-in under fixed cash tenancy declined particularly in smaller class size of holdings. Share tenancy declined in all size class of holdings except sub-marginal holdings in green revolution states and large holdings in non-green revolution states.

(iii) In 1982, share tenancy accounted for about 80 per cent of leased-in operated area in non-green revolution states but only about 50 per cent in green revolution states. Proportion of area leased-in under fixed cash tenancy generally increased for different size classes of holdings in both categories of states though much less so in non-green revolution states. Proportion of area leased-in under fixed produce tenancy increased in sub-marginal and marginal holdings in green revolution states and in large holdings in non-green revolution states.

(iv) Smaller holders were more preponderant, both as lessors as well as lessees, in numbers and in area, in both categories of states though such preponderance was very high in non-green revolution states. For instance, in non-green revolution states, sub-marginal, marginal and small holders leased-in about 91 per cent of area compared to 53 per cent in green revolution states. Similarly, in non-green revolution states, they accounted for about 50 per cent of the leased-out area compared to only around 20 per cent in green revolution states. Thus, in terms of acreage transacted upon, the lease market in the green revolution states was relatively more differentiated with petty lessors leasing-in most of the land (53 per cent) and medium and large households supplying most of it (around 78 per cent) Nevertheless,in view of the increasing share of medium and large households in area leased-in, the lease market, particularly in green revolution states, seems to be in a transitory state.

AGRICULTURAL LABOUR

In Table 32, we give proportion of agricultural labour households in all rural households since 1956-57 and, in Table 33, division of agricultural labour households into those with and without land. Notable features:

(i) During 1956-57 to 1964-65, proportion of agricultural labour households declined by varying degrees in most of the states; exceptions were Kerala, Maharashtra, and Punjab where the proportion increased and Karnataka and West Bengal where it remained constant. Proportion of agricultural labour households with land remained practically unchanged in a majority of the states except in Assam and Tamil Nadu where it declined and in Kerala where it increased. However, changes in proportion of households without land are rather mixed. It declined by varying degree in seven states, namely, Andhra Pradesh, Assam, Kerala, Madhya Pradesh, Orissa, Tamil Nadu, and Rajasthan, did not change much in four other states, namely, Bihar, Karnataka, Uttar Pradesh, and West Bengal and increased in two states, namely, Maharashtra and Punjab.

(ii) Between 1964-65 and 1977-78, the proportion of agricultural labour households increased in all states except Kerala. The increase was particularly large in Gujarat, Orissa, Assam, Tamil Nadu, Karnataka, West Bengal, and Andhra Pradesh. Proportions of those with and without land both increased by varying degrees in most states. Exceptions were Punjab where proportion of those with land and Jammu & Kashmir, Maharashtra, and Uttar Pradesh where of those without land declined. In seven states, namely, Andhra Pradesh, Gujarat, Jammu & Kashmir, Karnataka, Kerala, Maharashtra, and Uttar Pradesh, increase in proportion of those with land was greater compared to of those without land. In six others states, namely, Bihar, Madhya Pradesh, Orissa, Rajasthan, Tamil Nadu, and West Bengal, the increase was nearly equal. Only in Assam and Punjab increase in proportion of those without land was greater than in those with land.

(iii) Between 1977-78 and 1983, proportion of agricultural labour households remained practically unchanged in nine states, namely, Andhra Pradesh, Bihar, Gujarat, Karnataka, Maharashtra, Orissa, Punjab, Rajasthan, and Uttar Pradesh. In the remaining states, it increased by varying degrees; increase was particularly large in Kerala, Jammu & Kashmir and Tamil Nadu. The proportion of those with land, increased by varying degrees in eight states, namely, Andhra Pradesh, Jammu & Kashmir, Karnataka, Kerala, Madhya Pradesh, Orissa, Rajasthan and West Bengal. In six other states, namely, Assam, Gujarat, Haryana, Maharashtra, Punjab and Uttar Pradesh, it remained practically unchanged. Proportion of those without land increased considerably in all states more particularly in Haryana, Gujarat, Tamil Nadu, Maharashtra, Bihar, and Assam.

Employment

We now turn to examine changes in economic conditions of agricultural labour households and begin with changes in the quantum of employment. In Tables 34 and 35, we give number of employment days available to adult male, adult female, and child agricultural labourers in agricultural and non-agricultural occupations respectively. Notable features are:

(i) During 1956-57 to 1964-65, employment of all the three categories of agricultural labour in agricultural occupations increased by varying degrees in all the states and at the all-India level except in Andhra Pradesh and Madhya Pradesh where it declined. Increase in employment of adult male and female labour was larger in Assam, Karnataka, Orissa, and West Bengal. Increase in employment of child labour was particularly large in Punjab, Rajasthan and West Bengal.

Employment in non-agricultural occupations does not show any clear pattern. Employment of adult male labour in non-agricultural occupations remained practically unchanged in Karnataka, Kerala, Maharashtra, Orissa, and Uttar Pradesh and declined in Assam, Bihar, Rajasthan, Tamil Nadu, and West Bengal. In Andhra Pradesh and Madhya Pradesh where employment in agricultural occupations had declined, employment in non-agricultural occupations increased though not enough to compensate the decline in the former. Employment of adult female and child labour too either declined or remained practically unchanged except in Andhra Pradesh, Karnataka, and Madhya Pradesh where it increased somewhat.

(ii) During 1964-65 to 1977-78, employment in agricultural occupations, particularly of adult male labour, shows mixed trends. It increased in Andhra Pradesh, Assam, Bihar, Madhya Pradesh, and Uttar Pradesh, but declined in Gujarat, Jammu & Kashmir, Maharashtra, Punjab, Rajasthan, and West Bengal. There was little change in the other states. On the other hand, employment of adult female and child labour increased by varying degrees in a majority of states except Gujarat, Jammu & Kashmir, Orissa and West Bengal where employment of adult female labour declined and Gujarat and Rajasthan where employment of child labour declined.

Employment in non-agricultural activities declined sharply for all the categories of agricultural labour. Exceptions were Maharashtra, where such employment of adult male increased, Rajasthan where the same of child labour increased, and Gujarat, Kerala, and Maharashtra the same of adult female labour increased.

Daily Real Wage Earnings

Because of the large rise in prices over the years, changes in money wages are not very meaningful. Hence, we have converted them into real wages by making use of the Consumer Price Index (General) for Agricultural Labour (1960-61 = 100) [*Agricultural Situation in India*, various issues]. Daily real wage earnings of adult male, adult female, and child agricultural labour from agricultural occupations and non-agricultural occupations are given in Tables 36 and 37 respectively. In Table 38, we give the ratio of female to male earnings. Notable features are:

(i) Between 1956-57 and 1964-65, daily real wage earnings of adult male labour from agricultural occupations increased by varying degrees in Kerala, Madhya Pradesh, Maharashtra, Orissa, Rajasthan, and Tamil Nadu. They declined in Karnataka, Punjab, Uttar Pradesh, and West Bengal and remained nearly unchanged in Andhra Pradesh, Assam, and Bihar. Earnings of female labour increased by varying degrees in Andhra Pradesh, Assam, Bihar, Kerala, Orissa, Rajasthan, Tamil Nadu, and West Bengal. In the remaining states, namely, Karnataka, Madhya Pradesh, Maharashtra, Punjab, and Uttar Pradesh, these either declined or remained practically unchanged. Earnings of child labour declined by varying degrees in half the states. In the remaining states, namely, Andhra Pradesh, Assam, Bihar, Kerala, Punjab, Rajasthan, and Tamil Nadu, they remained either unchanged or increased slightly. Daily real wage earnings, from non-agricultural occupations, of adult male labour increased in Assam, Kerala, Madhya Pradesh, Maharashtra, Orissa, Punjab, and Tamil Nadu. In the remaining states, they declined by varying degrees. Earnings of adult female labour increased in Assam, Kerala, Madhya Pradesh, Orissa, Punjab, Rajasthan, and Tamil Nadu and declined in others. Earnings of child labour declined in most states except Andhra Pradesh, Tamil Nadu, and West Bengal where there was little change and Punjab where they increased.

(ii) Between 1964-65 to 1977-78, daily real wage earnings of adult male labour from agricultural occupations increased by varying degrees again in a majority of the states. Exceptions were Assam and Orissa where they declined and

Madhya Pradesh, Maharashtra, and West Bengal where there was little change. Earnings of adult female and child labour increased in all states except Jammu & Kashmir, and Madhya Pradesh. Real wage earnings, from non-agricultural occupations, particularly for adult male and child labour, increased. Earnings of adult female labour increased by varying degrees in Andhra Pradesh, Assam, Bihar, Gujarat, Karnataka, Kerala, Maharashtra, and Uttar Pradesh. In the remaining states, they either declined or remained practically constant.

(iii) The differential between male and female real wage earning, though marked by frequent fluctuations, tended to decline over time in most states and at the All-India level. The only exceptions are Maharashtra where the differential in earnings from agricultural occupations and Maharashtra, Madhya Pradesh, Orissa, and West Bengal where differential in earnings from non-agricultural occupations tended to increase. Among different states, the differential in earnings from agricultural occupations were more pronounced in Karnataka, Kerala, Maharashtra, Punjab, Rajasthan, and Tamil Nadu. The differential in earnings from non-agricultural occupations were more sharp in Haryana, Kerala, Maharashtra, Punjab, Tamil Nadu, and West Bengal. Generally, the differentials in the real wage earnings were larger in non-agricultural occupations than in agricultural ones.

Summing Up

Agrarian relations in India have undergone substantial changes since Independence. From every conceivable angle, the inequalities in the distribution of holdings have become less pronounced. Not only has the magnitude of tenancy declined, but terms of tenancy have also changed and there is an evidence of growing tendency for self-cultivation. Available statistical evidence also indicate the improvement in the economic conditions of agricultural labour households in terms of employment and real wages. In more concrete terms, agrarian regime in India, on a general plane, appeared to have been largely transformed from a system where a majority among the organizers of production had no incentive to effect any improvement on land, as a different class of owners appropriated the gains, to one where the participants in the production process have direct stakes in increasing production with the gains to stay largerly with them. These broad trends notwithstanding, agrarian relations vary greatly from one state to the other and present a highly differentiated picture. An aggregative analysis at the all India level, naturally looses much of this detail.

NOTES

1. The reversal in the tenurial relations is reported by Vyas [1970], Rao [1974], Bharadwaj and Das [1975], Nadkarni [1976], Ray [1978], Jodha [1981a, 1981b, 1984], and Singh [1989]. Also see: Bandopadhyaya, [1975, Pp. 700-701].

2. Narain and Joshi have argued that the real test for a decline in the proportion of leased-in area cannot emerge with reference to changing tenancy figures in respect of tiny cultivators. Their argument is that a relatively larger decline in the proportion of operated area leased-in in respect of lower categories of tenant cultivators may well be due to the reporting of these cultivators as agricultural labourers. According to them, the decline in the incidence of tenancy, therefore, ought to be reflected in the large and medium cultivators. We do not question the underestimation of the proportion of operated area leased-in or the reporting of lower categories of cultivators as agricultural labourers. However, in view of numerous institutional and technological changes, documentation of eviction of tenants and the resumption of the erstwhile leased-out land for self-cultivation reported by a number of micro level studies and decline in the proportion of households owning but not operating any land are some of the emerging features which might justify the pronounced decline in the incidence of tenancy in respect of lower categories of holdings. See: Dharm Narain and Joshi [1969], and S.K. Sanyal [1972, Pp. 943-945].

3. The operational holdings were decomposed into the entirely owned self-cultivated holdings, the mixed holdings and the entirely leased-in holdings by using the following procedure: (i) All Holdings = Proportion of owned holdings + Proportion of leased-in holdings. (ii) Mixed holdings = All holdings - 100. (iii) Purely leased-in holdings = Proportion of leased-in holdings - Mixed holdings. (iv) Purely owned self-cultivated holdings = 100- Proportion of mixed holdings - Proportion of purely leased-in holdings.

4. The details of the tenancy legislations enacted and implemented in post independent India are reviewed in the earlier article published in this journal.

5. Number of scholars, notably, Bharadwaj and Das [1975], Rudra [1975], Bardhan-Rudra [1978], Ghosh [1981], Bhalla [1983], Dasgupta [1987] and Singh [1989] have reported the replacement of share tenancy with fixed money and/or fixed produce tenancy. A more recent study also reported the above trends for three villages in Uttar Pradesh. See: Ravi Srivastava, [1989, Pp. 339-395]. Bharadwaj and Das reported that the replacement of share tenancy with fixed money rent or fixed produce rent was accompanied by shortening of lease period and raising of rent for each subsequent lease. Besides this, the landlords reportedly lease-out land to those tenants who have large families to extract what the authors called 'hidden labour rent'. Bhalla, however, found fixed cash rent substantially lower compared to share of produce particularly in the agricultural developed regions of Haryana. See: Bharadwaj

and Das [1975, Pp. 235-237], Bhalla [1983, Pp. 841-847].

6. The amount of leased-out area is less than the amount of leased-in area. This discrepancy is often attributed to the reporting bias. However, more importantly, the difference arises because rural households might also lease-in land from urban households, persons employed in the armed forces and from other institutions such as temples, panchayats, and so on. Since these households/ agencies are not covered under NSS, a major part of the discrepancy may legitimately be accounted for by these factors.

It is also argued that the leased-out estimates are less reliable because of the tendency of under-reporting. We do not question the under-reporting bias but in our wisdom the proportion of area leased-out by different categories of farmers would not get much distracted from reality even if the tendency for under reporting is slightly more pronounced among big farmers.

7. Some micro level studies have also reported the preponderance of lessors and lessees belonging to similar categories. For example, Bhalla in her study of Haryana observed that 'in many cases tenants and the owners were economic equals'. [Bhalla, 1983, p. 835]. Like-wise, Ray also reported the preponderance of lessors and lessees belonging to lower categories [Ray 1978]. The experience of the implementation of the 'Operation Barga' by the West Bengal Government has also brought out the fact that significant number of lessors were small households who have opted out from cultivation for a variety of reasons [Dasgupta 1984].

The tendency to lease-out land to the households belonging to similar economic status appeared to have emerged because of the enactment and implementation of protective tenancy legislations. Landowners fearing to regain the control over the leased-out land prefer to lease-out mostly to those households who own some land or whom they know socially or are their kith and kin.

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TABLE 1. DISTRIBUTION OF OWNERSHIP HOLDINGS IN RURAL INDIA: MAJOR STATES 1953-54 TO 1982

(Percentage of All Holdings)

States	Year	Households Owning No Land	Sub-marginal Holdings		Marginal Holdings		Small Holdings		Medium Holdings		Large Holdings	
			H	A	H	A	H	A	H	A	H	A
1	2	3	4	5	6	7	8	9	10	11	12	13
Andhra Pradesh	1953-54	30.33	27.74	1.87	13.51	6.15	10.87	12.47	12.52	29.45	5.03	50.06
	1961-62	6.84	41.54	1.49	17.93	6.67	11.46	9.69	15.06	29.51	7.17	52.64
	1971-72	6.95	40.64	2.23	17.70	7.69	13.65	13.16	15.85	36.22	5.21	40.70
	1982	11.93	37.42	2.15	18.14	9.12	14.03	15.28	14.19	35.70	4.29	37.75
Assam	1953-54	41.58	12.23	1.84	10.78	6.14	17.01	21.03	16.09	43.94	2.31	27.05
	1961-62	26.46	20.81	3.80	15.11	11.69	24.39	33.45	12.52	44.85	0.71	6.21
	1971-72	24.99	21.14	3.84	23.44	18.31	18.20	30.23	11.32	39.29	0.91	8.33
	1982	7.53	34.18	5.71	24.99	18.83	22.00	34.80	10.67	34.98	0.63	5.68
Bihar	1953-54	16.56	34.66	3.54	16.04	9.12	14.86	18.03	14.76	41.88	3.12	27.43
	1961-62	8.63	42.48	3.74	16.98	10.00	15.83	20.25	13.41	40.69	2.67	25.32
	1971-72	4.34	48.64	4.75	18.73	13.45	15.11	23.43	11.47	40.35	1.71	18.02
	1982	4.10	50.83	6.25	21.71	17.71	12.42	22.91	9.59	37.79	1.35	15.34
Gujarat	1953-54	30.48	12.33	0.27	7.65	1.38	8.66	3.32	19.62	19.69	21.26	75.34
	1961-62	14.74	23.02	0.46	11.05	2.69	11.05	5.66	24.60	30.61	15.34	60.58
	1971-72	13.44	25.80	0.70	13.02	3.83	15.24	9.94	21.37	32.73	11.13	52.80
	1982	16.83	23.95	0.72	16.48	5.93	13.61	10.78	20.92	38.75	8.21	43.82
Jammu & Kashmir	1953-54	17.31	17.69	2.52	25.19	13.86	21.54	25.78	15.96	41.19	2.31	16.65
	1961-62	10.93	19.54	2.72	29.30	17.63	23.18	28.62	15.89	41.63	1.16	9.40
	1971-72	0.96	21.01	3.28	37.22	24.16	29.20	39.34	11.27	30.59	0.34	2.63
	1982	6.84	28.93	5.30	31.37	22.83	20.51	30.28	11.74	36.09	0.61	5.50
Karnataka	1953-54	22.84	17.90	0.55	11.83	3.22	13.84	7.83	22.47	30.60	11.12	57.80
	1961-62	18.64	16.90	0.55	10.99	2.94	12.93	7.30	29.18	38.64	11.36	50.57
	1971-72	12.46	23.62	0.66	14.87	5.08	16.27	11.81	24.69	39.98	8.09	42.47
	1982	13.70	26.03	0.87	14.68	5.35	16.82	13.56	21.82	38.53	6.95	41.69
Kerala	1953-54	36.27	35.56	9.64	15.12	16.62	6.50	15.80	5.32	28.73	1.23	29.21
	1961-62	30.90	41.49	12.25	14.77	18.13	7.38	20.20	4.61	27.53	0.85	21.89
	1971-72	15.74	56.49	16.80	16.46	24.07	7.32	24.32	3.68	27.72	0.31	7.09
	1982	12.76	63.49	20.95	14.41	24.78	6.07	23.51	3.04	25.84	0.23	4.92
Madhya Pradesh	1953-54	29.82	9.60	0.37	8.67	1.93	11.91	5.62	25.20	29.23	14.80	62.85
	1961-62	9.14	19.89	0.43	11.39	2.61	15.42	7.46	29.42	34.26	14.74	55.24
	1971-72	9.58	19.21	0.48	11.46	2.86	16.96	9.16	30.64	38.89	12.15	48.61
	1982	14.39	20.24	0.67	14.12	4.50	16.24	11.48	26.89	41.70	8.12	41.65
Maharashtra	1953-54	28.56	14.33	0.43	9.87	2.30	10.98	5.46	22.22	27.13	14.04	64.68
	1961-62	16.03	23.88	0.40	10.35	2.40	11.41	5.50	22.58	27.52	15.75	64.18
	1971-72	15.85	20.17	0.46	12.34	3.03	14.93	8.58	24.65	34.23	12.06	53.70
	1982	21.24	21.53	0.68	12.11	3.97	14.96	10.90	21.34	36.71	8.82	47.74
Orissa	1953-54	12.29	31.44	2.37	16.78	7.45	17.99	18.15	17.26	39.21	4.24	32.82
	1961-62	7.84	36.64	2.16	18.19	9.23	17.24	19.19	17.06	42.41	3.03	27.01
	1971-72	10.57	34.27	3.83	24.10	16.62	18.08	26.95	11.49	38.14	1.49	14.46
	1982	7.66	32.36	3.24	26.04	16.64	20.83	29.73	11.67	36.40	1.44	13.99
Punjab & Haryana	1953-54	36.86	13.90	0.59	8.84	2.69	9.28	6.23	20.32	31.67	10.80	58.52
	1961-62	12.30	40.91	1.02	8.25	2.86	9.21	6.99	19.43	34.88	9.90	54.25
	1971-72	9.09	48.55	0.92	8.37	3.63	8.61	8.22	18.57	42.12	6.81	45.11
	1982	6.30	46.15	0.86	10.10	4.45	12.42	12.06	18.70	42.34	6.33	40.29
Rajasthan	1953-54	24.85	5.99	0.21	8.39	1.26	12.70	4.02	25.55	20.36	22.52	74.15
	1961-62	10.95	13.79	0.21	9.85	1.58	14.29	4.83	29.78	24.36	21.34	69.02
	1971-72	2.91	12.38	0.24	11.67	1.78	19.87	6.77	32.22	26.15	20.95	65.06
	1982	8.13	14.07	0.41	14.87	3.23	16.73	7.29	31.58	34.12	14.62	54.95
Tamil Nadu	1953-54	33.56	29.72	3.34	13.90	10.22	10.12	16.36	10.28	36.16	2.42	33.92
	1961-62	24.20	37.54	4.25	16.68	15.75	11.07	21.67	9.09	39.07	1.42	19.26
	1971-72	17.01	43.52	4.45	17.87	15.77	11.39	21.84	8.76	38.20	1.45	19.74
	1982	19.13	47.85	6.50	14.86	17.08	10.89	27.24	6.45	35.83	0.82	13.35
Uttar Pradesh	1953-54	9.36	30.32	2.38	20.34	10.13	18.40	19.39	18.12	42.97	3.46	25.13
	1961-62	2.77	33.90	2.45	20.78	9.88	21.39	22.21	17.82	41.87	3.34	23.59
	1971-72	4.55	38.83	3.91	22.20	13.57	18.60	24.66	13.79	41.08	2.03	16.78
	1982	4.85	38.71	3.62	24.40	15.73	17.38	24.38	12.92	40.92	1.74	15.35
West Bengal	1953-54	20.54	36.29	4.29	16.64	11.61	12.61	18.60	11.32	39.50	2.60	26.00
	1961-62	12.56	38.58	4.11	18.11	13.44	16.81	25.97	12.41	42.22	1.53	14.26
	1971-72	9.78	46.74	6.83	21.10	20.45	12.65	25.68	9.01	39.27	0.72	7.77
	1982	17.21	47.03	9.42	17.36	20.91	11.50	28.77	6.62	36.70	0.28	4.20
All-India	1953-54	23.09	24.18	1.36	13.98	4.86	13.49	10.09	17.54	31.18	7.72	52.51
	1961-62	11.69	32.56	1.59	15.86	6.00	15.09	12.40	17.96	34.51	6.84	45.50
	1971-72	9.64	35.24	2.07	17.74	7.69	15.49	14.67	16.56	36.49	5.33	39.08
	1982	11.33	36.88	2.75	18.43	9.47	14.70	16.49	14.68	38.03	3.98	33.26

Note: H = Holdings; A = Area

Source: 1. Report on Landholdings(3); 8th Round 1953-54, NSS Report No. 36. 2. Report on Landholdings(4); 8th Round 1953-54, NSS Report No. 66. 3. Report on Some Aspects of Landholdings; 17th Round 1961-62, NSS Report No. 144. 4. Report on Some Aspects of Landholdings; 26th Round 1971-72, NSS Report No. 215. 5. Report on Landholdings(1); 37th Round, NSS Report No. 330.

TABLE 1A. PERCENTAGE CHANGE IN NUMBER OF OWNERSHIP HOLDINGS AND AREA OWNED IN RURAL INDIA: MAJOR STATES, 1953-54 TO 1982

(per ce nt)

States	Period	Households Owning No Land	Sub-marginal Holdings		Marginal Holdings		Small Holdings		Medium Holdings		Large Holdings		All Holdings	
			H	A	H	A	H	A	H	A	H	A	H	A
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Andhra Pradesh	I	-80.02	32.77	-14.98	17.69	15.66	6.96	-17.19	6.61	6.76	26.60	12.03	-11.34	6.55
	II	6.38	2.46	34.76	3.44	4.11	24.84	22.70	10.30	10.93	-23.95	-30.13	4.76	-9.64
	III	112.22	13.72	3.89	26.38	27.87	26.84	25.30	10.52	6.26	1.66	0.02	23.46	7.84
Assam	I	-27.48	93.86	68.63	59.70	55.59	63.41	30.07	-11.33	-16.56	-65.12	-81.23	13.95	-18.23
	II	-5.69	1.58	2.91	54.83	60.11	-25.48	-7.60	-9.77	-10.44	26.67	37.37	-0.14	2.23
	III	-67.92	71.71	62.71	13.48	12.16	28.76	25.59	0.42	-2.86	-26.32	-25.65	6.41	9.10
Bihar	I	-37.63	46.65	19.76	26.67	24.04	27.46	27.12	8.67	9.96	2.25	4.50	19.64	13.18
	II	-51.50	10.35	-3.16	6.30	2.67	-8.02	-11.70	-17.54	-24.33	-37.89	-45.71	-3.61	-23.70
	III	29.77	43.53	60.44	59.21	60.68	12.92	19.31	14.89	14.30	7.80	3.91	37.35	22.04
Gujarat	I	-30.38	168.77	84.21	107.78	113.99	83.60	86.94	80.61	70.77	5.17	-11.69	43.95	9.82
	II	5.83	30.01	39.05	36.60	31.37	59.94	61.65	0.65	-1.62	-16.60	-19.79	16.01	-7.97
	III	34.08	-0.64	-13.01	35.65	29.85	-4.32	-8.84	4.88	-0.48	-21.38	-30.24	7.05	-15.95
Jammu & Kashmir	I	-26.66	28.26	69.20	35.11	39.25	25.00	21.60	15.66	10.69	-41.67	-38.13	16.15	10.80
	II	-92.42	0.84	-25.76	18.64	22.48	17.85	22.73	-33.33	-34.38	-71.43	-74.84	-6.46	-11.74
	III	1020.00	98.32	102.04	21.90	16.99	0.61	-4.71	50.00	46.10	150.00	157.50	44.25	23.84
Karnataka	I	-17.39	-4.44	4.07	-5.99	-6.09	-5.53	-3.93	31.44	30.09	3.32	-9.92	1.19	2.99
	II	-18.80	69.82	13.28	64.29	64.60	52.93	53.80	2.79	-1.54	-13.33	-20.02	21.50	-4.83
	III	22.22	22.46	26.21	9.94	1.79	15.04	11.07	-1.68	-6.87	-4.56	-5.11	11.21	-3.35
Kerala	I	25.41	71.76	61.34	43.75	38.78	67.27	62.56	27.77	21.86	0.00	-4.72	47.19	27.15
	II	-48.05	38.97	16.93	13.85	12.82	1.09	2.37	-18.26	-14.35	-61.90	-72.49	2.09	-14.95
	III	16.25	60.89	51.67	25.30	25.39	18.82	17.72	18.08	13.37	0.00	-15.34	43.16	21.73
Madhya Pradesh	I	-67.88	117.13	18.79	47.17	40.15	35.63	37.29	22.31	21.29	4.26	-9.05	5.31	3.47
	II	16.97	7.89	14.12	12.34	10.10	22.84	23.24	16.32	13.93	-7.93	-11.67	11.68	0.38
	III	63.31	14.54	11.88	34.09	26.36	4.14	0.93	-4.53	-13.67	-27.46	-31.01	8.74	-19.49
Maharashtra	I	-38.00	84.01	2.63	15.82	17.00	14.80	12.90	12.18	13.62	23.89	11.14	10.44	12.01
	II	27.65	9.08	25.64	53.92	38.71	68.93	71.32	41.02	36.58	-1.20	-8.13	29.12	9.80
	III	49.49	19.04	30.10	9.47	12.76	11.74	9.48	-3.50	-7.58	-18.42	-23.38	11.52	-13.82
Orissa	I	-23.20	40.18	-2.22	30.37	32.94	15.32	13.32	18.90	15.93	-14.20	-11.75	20.30	7.21
	II	44.63	0.43	40.53	42.26	41.95	12.67	10.82	-27.63	-29.06	-46.96	-57.77	7.40	-21.11
	III	-27.84	-6.01	-11.86	7.63	4.68	14.63	15.30	1.07	-0.24	-4.92	1.17	-0.47	4.52
Punjab & Haryana	I	-68.55	177.44	39.77	-11.97	-14.14	-6.50	-9.44	-9.85	-11.04	-13.64	-25.50	-5.74	-17.23
	II	-16.94	33.50	-21.14	14.08	11.56	5.22	3.44	7.42	6.12	-23.07	-26.93	12.41	-12.12
	III	-3.92	31.47	31.96	66.81	70.47	99.17	104.12	39.35	39.97	29.47	24.35	38.28	39.23
Rajasthan	I	-48.60	168.90	10.45	36.96	39.29	31.32	33.18	36.00	29.35	10.53	3.05	16.68	10.09
	II	-74.86	-14.29	8.11	12.38	6.15	31.95	32.07	2.73	3.39	-6.74	-11.36	-5.00	-5.40
	III	303.41	62.43	91.25	83.33	100.68	21.06	19.53	40.90	45.07	0.47	-6.04	43.73	11.20
Tamil Nadu	I	87.73	228.89	162.37	212.47	217.85	184.79	173.29	130.34	122.78	52.38	17.14	160.35	106.24
	II	-39.46	-0.08	-7.07	-7.62	-11.28	-11.35	-10.77	-16.91	-13.40	-11.46	-9.26	-13.81	-11.43
	III	35.92	32.79	34.46	0.48	-0.30	15.51	14.88	-11.15	-13.63	-31.76	-37.74	20.79	-7.92
Uttar Pradesh	I	-65.29	30.94	21.89	19.63	15.73	36.13	35.72	15.08	15.49	13.16	11.25	17.09	18.52
	II	80.59	26.05	36.98	17.52	17.55	-4.30	-4.85	-14.78	-15.92	-33.33	-39.05	10.24	-14.31
	III	11.49	4.41	-9.02	15.13	13.96	-2.12	-2.78	-1.87	-2.06	-10.07	-10.03	4.54	-1.67
West Bengal	I	-29.72	22.24	6.61	25.18	28.62	53.25	55.28	26.03	18.88	-32.43	-38.98	14.97	11.21
	II	-12.16	36.50	39.32	31.24	27.88	-15.25	-16.92	-18.20	-21.88	-46.66	-54.28	12.68	-16.01
	III	145.00	40.26	51.84	14.64	12.49	26.86	23.18	2.61	2.80	-45.00	-40.57	39.41	9.99
All-India	I	-42.29	53.51	21.51	29.34	28.47	27.48	27.84	16.66	15.20	0.84	-9.82	13.97	4.07
	II	-10.73	17.09	20.62	21.08	19.20	11.14	10.05	-0.20	-1.70	-15.55	-20.16	8.24	-7.03
	III	40.74	25.37	32.98	24.43	23.30	13.62	12.52	6.17	4.31	-10.79	-14.78	19.76	0.11

Note: I = 1953-54 to 1961-62; II = 1961-62 to 1971-72; III = 1971-72 to 1982
H = Holdings; A = Area
Source: As in Table 1.

TABLE 1B. AVERAGE SIZE OF HOLDINGS IN RURAL INDIA: MAJOR STATES, 1953-54 TO 1982

(Acres)

States 1	Year 2	Sub-Marginal Holdings 3	Marginal Holdings 4	Small Holdings 5	Medium Holdings 6	Large Holdings 7	All Holdings 8
Andhra Pradesh	1953-54	0.24	1.60	4.04	8.28	35.11	3.52
	1961-62	0.15	1.57	3.58	8.29	31.07	4.23
	1971-72	0.20	1.59	3.52	8.34	28.52	3.65
	1982	0.18	1.60	3.47	8.01	28.05	3.19
Assam	1953-54	0.45	1.69	3.67	8.11	27.05	2.96
	1961-62	0.39	1.65	2.92	7.63	18.73	2.13
	1971-72	0.39	1.70	3.62	7.58	20.34	2.18
	1982	0.37	1.68	3.54	7.33	20.50	2.24
Bihar	1953-54	0.30	1.67	3.56	8.34	25.80	2.94
	1961-62	0.24	1.64	3.56	8.43	26.37	2.78
	1971-72	0.21	1.58	3.41	7.74	23.12	2.20
	1982	0.24	1.59	3.61	7.70	22.28	1.95
Gujarat	1953-54	0.21	1.71	3.65	9.53	33.66	9.50
	1961-62	0.14	1.76	3.71	9.02	28.26	7.25
	1971-72	0.15	1.70	3.75	8.81	27.27	5.75
	1982	0.13	1.62	3.58	8.36	24.10	4.51
Jammu & Kashmir	1953-54	0.42	1.63	3.55	7.66	21.42	2.97
	1961-62	0.55	1.68	3.46	7.33	22.71	2.80
	1971-72	0.41	1.73	3.60	7.25	20.00	2.67
	1982	0.42	1.66	3.38	7.04	20.60	2.29
Karnataka	1953-54	0.19	1.73	3.60	8.66	34.05	6.36
	1961-62	0.21	1.73	3.66	8.57	28.81	6.47
	1971-72	0.14	1.73	3.68	8.20	26.60	5.07
	1982	0.15	1.60	3.55	7.78	26.43	4.40
Kerala	1953-54	0.39	1.60	3.54	7.88	34.33	1.46
	1961-62	0.37	1.54	3.45	7.51	32.71	1.26
	1971-72	0.31	1.53	3.48	7.91	23.62	1.05
	1982	0.29	1.53	3.45	7.58	20.00	0.89
Madhya Pradesh	1953-54	0.30	1.83	3.64	8.94	32.73	7.71
	1961-62	0.16	1.74	3.68	8.86	28.55	7.61
	1971-72	0.17	1.71	3.69	8.68	27.39	6.84
	1982	0.17	1.61	3.58	7.85	26.04	5.06
Maharashtra	1953-54	0.22	1.70	3.63	8.93	33.68	7.31
	1961-62	0.12	1.72	3.57	9.04	30.22	7.41
	1971-72	0.14	1.55	3.62	8.75	28.10	6.30
	1982	0.15	1.51	3.55	8.38	26.40	4.87
Orissa	1953-54	0.27	1.60	3.65	8.21	27.95	3.62
	1961-62	0.19	1.63	3.58	8.01	28.75	3.22
	1971-72	0.26	1.63	3.53	7.85	22.90	2.38
	1982	0.25	1.59	3.54	7.74	24.17	2.48
Punjab & Haryana	1953-54	0.24	1.72	3.79	8.80	30.76	5.65
	1961-62	0.12	1.68	3.67	8.69	26.53	4.84
	1971-72	0.07	1.64	3.61	8.57	25.20	3.78
	1982	0.07	1.68	3.69	8.62	24.20	3.81
Rajasthan	1953-54	0.41	1.73	3.65	9.19	37.98	11.53
	1961-62	0.17	1.76	3.70	8.74	35.41	10.95
	1971-72	0.21	1.66	3.70	8.80	33.65	10.84
	1982	0.25	1.81	3.65	9.06	31.49	8.38
Tamil Nadu	1953-54	0.25	1.64	3.62	7.88	31.30	2.24
	1961-62	0.20	1.67	3.47	7.62	24.06	1.77
	1971-72	0.19	1.61	3.49	7.94	24.69	1.82
	1982	0.19	1.59	3.47	7.72	22.62	1.39
Uttar Pradesh	1953-54	0.27	1.69	3.58	8.05	24.67	3.40
	1961-62	0.25	1.64	3.57	8.08	24.25	3.44
	1971-72	0.27	1.64	3.55	7.97	22.16	2.68
	1982	0.23	1.62	3.52	7.96	22.16	2.51
West Bengal	1953-54	0.28	1.67	3.53	8.35	23.96	2.39
	1961-62	0.25	1.71	3.58	7.87	21.64	2.31
	1971-72	0.25	1.65	3.50	7.52	18.74	1.73
	1982	0.27	1.64	3.41	7.54	20.43	1.36
All-India	1953-54	0.27	1.67	3.60	8.54	32.66	4.81
	1961-62	0.21	1.66	3.61	8.44	29.21	4.39
	1971-72	0.22	1.63	3.57	8.31	27.62	3.77
	1982	0.23	1.62	3.54	8.16	26.38	3.15

Source: As in Table 1.

Table 2 & 3 on page 208 & 209.

TABLE 4. SHARE OF AREA OWNED BY VARIOUS SEGMENTS OF HOUSEHOLDS IN RURAL INDIA: MAJOR STATES, 1953-54 TO 1982

States	Year	Share of Bottom:		Share of Middle:		Share of Top:			
		40%	50%	40 to 80%	50 to 80%	20%	10%	5%	1%
1	2	3	4	5	6	7	8	9	10
Andhra Pradesh	1953-54	1.02	1.08	16.32	16.26	82.66	65.61	49.92	24.45
	1961-62	0.70	1.94	19.89	18.65	79.41	61.14	44.02	18.15
	1971-72	1.09	3.08	23.48	21.49	75.43	56.16	39.84	16.79
	1982	0.57	2.42	24.01	22.16	75.42	56.83	40.79	16.78
Assam	1953-54	0.00	0.79	26.98	26.19	73.02	52.59	36.08	16.26
	1961-62	0.80	6.20	37.01	31.61	62.19	41.04	27.31	7.58
	1971-72	1.82	6.66	37.28	32.44	60.90	41.57	26.14	8.82
	1982	5.03	11.45	41.66	35.24	53.31	36.41	24.08	7.63
Bihar	1953-54	1.25	3.17	28.70	24.28	72.55	52.36	35.35	14.20
	1961-62	1.46	3.39	25.74	23.81	72.80	51.77	35.40	14.20
	1971-72	1.96	3.76	27.61	25.81	70.43	49.79	34.02	12.57
	1982	1.90	4.94	28.77	25.73	69.33	50.25	34.13	12.31
Gujarat	1953-54	0.04	1.53	26.77	25.28	73.19	50.64	35.95	8.20
	1961-62	0.83	3.59	30.50	27.44	68.67	47.56	30.96	10.53
	1971-72	0.84	3.62	28.58	25.80	70.58	49.62	32.19	10.44
	1982	0.58	3.37	28.80	26.01	70.62	49.29	31.74	10.48
Jammu & Kashmir	1953-54	4.91	9.85	34.58	29.64	60.51	41.19	26.76	8.72
	1961-62	8.10	13.66	52.58	30.82	55.52	36.24	23.01	9.15
	1971-72	14.59	20.68	41.35	35.26	44.06	29.38	18.53	5.89
	1982	8.90	15.79	37.03	30.14	54.07	34.33	22.92	7.91
Karnataka	1953-54	0.44	2.86	26.28	23.36	73.78	54.94	38.84	14.26
	1961-62	1.43	5.00	32.06	28.49	66.51	47.19	31.66	11.19
	1971-72	1.60	5.27	31.88	28.81	66.52	47.59	32.07	12.06
	1982	0.92	4.07	30.07	26.92	69.01	50.38	34.13	12.42
Kerala	1953-54	3.49	7.60	15.21	11.10	81.30	66.92	51.74	26.71
	1961-62	8.83	11.14	13.26	10.95	77.91	61.68	46.64	23.46
	1971-72	7.21	10.19	20.91	17.93	71.84	54.77	38.17	14.94
	1982	8.29	12.29	19.12	15.12	72.59	55.39	37.45	14.01
Madhya Pradesh	1953-54	0.45	2.96	28.00	25.49	71.55	52.16	36.38	11.90
	1961-62	2.89	7.13	32.75	28.51	64.36	44.66	29.69	11.34
	1971-72	3.25	7.98	34.06	29.33	62.69	43.60	28.89	10.14
	1982	1.91	5.88	35.13	31.16	62.96	46.61	31.09	11.39
Maharashtra	1953-54	0.12	1.88	24.94	23.18	74.94	55.27	38.95	11.93
	1961-62	0.41	2.72	27.78	25.47	71.81	50.32	34.18	10.25
	1971-72	1.11	4.21	30.04	26.94	68.85	48.55	31.93	11.23
	1982	0.24	2.63	27.79	25.40	71.97	51.06	34.14	11.91
Orissa	1953-54	1.57	4.50	28.72	25.79	69.71	50.51	35.79	13.80
	1961-62	1.12	4.24	29.61	26.49	69.27	50.10	34.37	14.62
	1971-72	2.38	7.34	34.01	29.05	63.61	45.39	30.56	11.08
	1982	3.23	9.05	36.18	30.36	60.59	42.99	29.57	11.22
Punjab & Haryana	1953-54	N	0.47	22.69	22.22	77.31	56.58	39.33	16.86
	1961-62	N	0.55	32.73	32.18	67.27	54.55	36.28	15.02
	1971-72	N	0.28	20.74	20.46	79.26	56.01	37.44	14.70
	1982	N	0.34	34.19	33.85	65.81	52.37	37.74	13.95
Rajasthan	1953-54	1.65	4.70	27.76	24.71	70.59	62.63	51.85	37.47
	1961-62	3.32	7.13	29.57	25.76	67.11	47.98	35.71	8.16
	1971-72	6.16	10.21	30.10	26.05	63.74	45.02	32.14	7.31
	1982	4.61	8.85	32.50	28.86	62.89	49.90	32.54	11.47
Tamil Nadu	1953-54	0.61	0.89	16.10	15.82	83.29	63.06	47.12	21.49
	1961-62	0.80	1.06	22.38	22.12	76.82	56.65	39.60	15.40
	1971-72	0.42	1.04	22.44	21.82	76.78	57.23	39.88	15.60
	1982	N	1.50	20.95	19.45	79.05	56.01	39.41	14.70
Uttar Pradesh	1953-54	2.51	6.79	32.17	27.89	65.32	45.83	31.01	11.20
	1961-62	3.74	8.08	32.80	28.46	63.46	44.32	29.55	10.66
	1971-72	2.92	7.54	32.64	28.02	64.44	45.05	29.99	10.23
	1982	2.60	7.74	32.38	27.24	65.02	45.48	29.76	10.49
West Bengal	1953-54	1.33	2.40	22.98	21.91	75.69	55.73	38.26	13.98
	1961-62	0.93	3.64	32.62	29.91	66.45	46.80	30.95	10.42
	1971-72	1.25	2.64	31.32	29.93	67.43	47.72	31.21	9.94
	1982	1.75	2.90	26.65	25.50	71.60	48.66	32.55	10.54
All-India	1953-54	0.36	2.08	22.26	20.54	77.38	58.80	42.71	18.41
	1961-62	0.85	3.31	25.37	22.91	73.78	54.60	38.56	16.51
	1971-72	1.15	3.86	26.02	23.31	72.83	53.75	37.66	15.20
	1982	1.20	3.52	25.61	23.29	73.19	53.78	37.55	14.35

Source: As in Table 1 Note: N = Negligible

TABLE 5. GINI COEFFICIENT OF OWNERSHIP HOLDINGS: ERSTWHILE ZAMINDARI VS. RYOTWARI AREAS, 1953-54 TO 1982

Year	Erstwhile Zamindari Areas		Erstwhile Ryotwari Areas	
	Including Landless Households	Excluding Landless Households	Including Landless Households	Excluding Landless Households
1953-54	0.7069	0.6477	0.7688	0.6732
1961-62	0.6849	0.6515	0.7515	0.6870
1971-72	0.6628	0.6357	0.7263	0.6776
1982	0.6659	0.6324	0.7429	0.6881

Source: As in Table 1.

TABLE 6. SHARE OF AREA OWNED BY VARIOUS SEGMENTS OF HOLDINGS: ERSTWHILE ZAMINDARI VS. RYOTWARI AREAS, 1953-54 TO 1982

Types of Areas	Year	Share of Bottom:		Share of Middle:		Share of Top:			
		40 %	50%	40% to 80%	50% to 80%	20%	10%	5%	1%
1	2	3	4	5	6	7	8	9	10
Erstwhile Zamindari Areas	1953-54	1.19	3.03	25.85	24.01	72.96	52.92	36.35	13.89
	1961-62	1.18	3.45	28.55	26.28	70.27	54.60	34.10	13.62
	1971-72	1.90	2.65	30.24	29.49	67.86	48.09	32.47	11.69
	1982	2.16	4.55	29.67	27.28	68.17	49.53	33.46	12.27
Erstwhile Ryotwari Areas	1953-54	0.05	0.89	20.37	19.53	79.58	59.93	42.16	14.69
	1961-62	0.19	1.30	21.96	20.85	77.85	57.43	39.48	15.28
	1971-72	0.46	1.80	24.70	23.36	74.84	54.45	37.47	14.22
	1982	0.52	1.94	22.51	21.09	76.97	56.99	39.50	15.23

Source: As in Table 1.

TABLE 7. DISTRIBUTION OF OWNERSHIP HOLDINGS: ERSTWHILE ZAMINDARI AREAS VS. RYOTWARI AREAS, 1953-54 TO 1982
(Percentage of All Holdings)

	Year		Categories of Holdings					
			Landless	Sub-Marginal	Marginal	Small	Medium	Large
1	2		3	4	5	6	7	8
Erstwhile Zamindari Areas	1953-54	H	16.80	34.44	16.38	14.88	14.29	3.21
		A	0.00	3.41	9.27	18.20	40.59	28.53
	1961-62	H	9.58	40.08	17.57	16.42	13.93	2.42
		A	0.00	3.42	10.63	21.35	41.50	23.10
	1971-72	H	7.46	44.76	20.69	15.03	10.71	1.35
		A	0.00	5.04	16.07	24.92	39.50	14.47
	1982	H	9.12	46.30	21.01	13.60	8.97	1.00
		A	0.00	6.32	18.25	25.97	37.19	12.27
Erstwhile Ryotwari Areas	1953-54	H	29.24	20.01	11.32	10.66	17.87	10.90
		A	0.00	0.88	3.26	6.59	26.90	62.37
	1961-62	H	20.62	28.99	13.09	11.03	17.59	8.68
		A	0.00	1.28	4.68	8.34	32.17	53.53
	1971-72	H	15.12	31.55	14.76	13.50	17.85	7.22
		A	0.00	1.42	5.57	11.42	35.44	46.15
	1982	H	17.57	35.19	14.23	12.84	15.02	5.15
		A	0.00	2.11	6.89	13.76	37.06	40.18

Note: H = Holdings; A = Area Owned.
Source: As in Table 1.

TABLE 8. GINI COEFFICIENT OF OWNERSHIP HOLDINGS: GREEN REVOLUTION VS. NON-GREEN REVOLUTION STATES, 1953-54 TO 1982

Year	Green Revolution States		Non-Green Revolution States	
	Including Landless Households	Excluding Landless Households	Including Landless Households	Excluding Landless Households
1	2	3	4	5
1953-54	0.7574	0.6158	0.6973	0.6428
1961-62	0.7469	0.7114	0.6912	0.6629
1971-72	0.7343	0.7083	0.6631	0.6400
1982	0.7344	0.7165	0.6543	0.6359

Source: As in Table 1.

TABLE 9. SHARE OF AREA OWNED BY VARIOUS SEGMENTS OF HOLDINGS: THE GREEN REVOLUTION VS. NON-GREEN REVOLUTION STATES

Types of Areas	Year	Share of Bottom:		Share of Middle:		Share of Top:			
		40 %	50%	40% to 80%	50% to 80%	20%	10%	5%	1%
1	2	3	4	5	6	7	8	9	10
Green Revolution States	1953-54	N	0.47	22.69	22.22	77.31	56.58	39.33	16.86
	1961-62	N	0.55	32.73	32.18	67.27	54.55	36.28	15.02
	1971-72	N	0.28	20.74	20.46	79.26	56.01	37.44	14.70
	1982	N	0.34	34.19	33.85	65.81	52.37	37.74	13.95
Non-Green Revolution States	1953-54	1.28	3.45	26.95	24.78	71.77	51.74	35.63	13.57
	1961-62	1.10	2.06	27.41	26.45	71.49	51.34	35.10	14.40
	1971-72	1.84	2.55	30.08	29.37	68.08	48.22	32.78	11.98
	1982	1.80	4.97	31.23	28.06	66.97	47.94	32.66	12.16

Note: N = Negligible.
Source: As in Table 1.

TABLE 10. DISTRIBUTION OF OWNERSHIP HOLDINGS: GREEN REVOLUTION VS. NON-GREEN REVOLUTION STATES, 1953-54 TO 1982

(Percentage of All Holdings)

	Year		Categories of Holdings					
			Landless	Sub-Marginal	Marginal	Small	Medium	Large
1	2		3	4	5	6	7	8
Green Revolution States	1953-54	H	36.86	13.90	8.83	9.29	20.32	10.80
		A	0.00	0.59	2.69	6.23	31.67	58.82
	1961-62	H	12.30	40.91	8.25	9.21	19.43	9.90
		A	0.00	1.02	2.86	6.99	34.88	54.25
	1971-72	H	8.94	47.70	8.23	8.46	18.24	8.43
		A	0.00	0.92	3.63	8.22	42.12	45.11
	1982	H	6.30	46.15	10.10	12.42	18.70	6.33
		A	0.00	0.86	4.45	12.06	42.34	40.29
Non-Green Revolution States	1953-54	H	15.25	33.67	16.27	15.82	15.52	3.47
		A	0.00	3.13	8.53	18.07	40.94	29.33
	1961-62	H	8.39	40.68	17.35	16.27	14.53	2.78
		A	0.00	3.20	9.74	19.89	41.27	25.90
	1971-72	H	6.41	43.86	20.51	16.10	11.48	1.64
		A	0.00	4.43	14.56	24.66	39.57	16.78
	1982	H	5.05	45.93	22.86	14.65	10.14	1.37
		A	0.00	5.30	17.38	25.06	37.35	14.91

Note: H = Holdings; A = Area
Source: As in Table 1.

TABLE 11. DISTRIBUTION OF OPERATIONAL HOLDINGS IN RURAL INDIA: MAJOR STATES, 1953-54 TO 1982

(Percentage of All Holdings)

States	Year	Sub-marginal Holdings		Marginal Holdings		Small Holdings		Medium Holdings		Large Holdings	
		H	A	H	A	H	A	H	A	H	A
1	2	3	4	5	6	7	8	9	10	11	12
Andhra Pradesh	1953-54	23.45	1.53	23.72	6.25	20.01	11.52	23.70	31.33	9.12	49.37
	1961-62	15.90	0.95	25.99	5.82	18.60	9.31	26.90	30.50	12.61	53.42
	1971-72	20.84	1.78	26.45	7.50	19.14	11.74	24.99	36.20	8.58	42.78
	1982	22.04	1.67	26.47	8.59	22.19	15.36	22.66	37.41	6.64	36.97
Assam	1953-54	13.18	1.18	14.98	4.77	34.65	23.92	33.04	48.64	4.15	21.49
	1961-62	14.07	2.22	24.65	11.49	37.95	37.03	22.40	44.46	0.93	4.80
	1971-72	19.74	3.65	32.66	17.98	30.23	34.90	16.59	38.65	0.78	4.82
	1982	34.44	4.77	26.77	17.34	24.55	33.52	13.57	38.89	0.67	5.48
Bihar	1953-54	29.46	3.02	21.77	8.82	22.77	19.73	21.78	43.19	4.28	25.24
	1961-62	29.58	3.87	24.80	10.99	22.89	21.53	19.28	40.71	3.45	22.90
	1971-72	33.44	4.47	25.42	13.69	23.33	26.24	15.71	39.84	2.10	15.76
	1982	42.32	5.49	26.30	16.92	17.66	25.85	12.17	37.68	1.55	14.06
Gujarat	1953-54	8.12	0.26	13.90	1.72	16.00	4.12	33.00	21.68	28.98	72.22
	1961-62	6.21	0.23	13.56	2.08	15.80	5.01	39.52	29.88	24.91	62.80
	1971-72	8.86	0.54	18.32	3.37	20.70	8.55	34.24	33.20	17.88	54.34
	1982	13.97	0.70	23.51	5.82	20.75	11.33	29.92	37.88	11.85	44.27
Jammu & Kashmir	1953-54	11.85	1.43	30.37	13.01	31.11	27.90	24.94	48.36	1.73	9.30
	1961-62	13.94	2.35	33.52	16.21	29.76	29.06	21.28	44.11	1.50	8.27
	1971-72	16.27	2.97	38.24	21.90	30.85	37.39	14.22	35.12	0.42	2.62
	1982	26.25	4.68	34.47	21.77	24.96	32.00	13.69	36.68	0.63	4.87
Karnataka	1953-54	11.64	0.43	16.40	2.99	20.15	7.54	34.33	30.97	17.48	58.07
	1961-62	6.57	0.26	13.98	2.35	17.46	6.17	43.49	36.15	18.50	55.07
	1971-72	6.60	0.39	22.16	4.71	22.82	10.69	35.06	37.96	13.36	46.25
	1982	18.81	0.67	19.24	5.14	22.66	13.18	29.27	37.30	10.02	43.71
Kerala	1953-54	52.35	9.08	25.69	18.66	11.51	18.54	8.51	31.08	1.94	22.64
	1961-62	57.05	12.28	22.23	18.37	12.14	22.78	7.58	31.19	1.00	15.38
	1971-72	67.80	17.33	18.41	22.71	8.90	24.75	4.52	28.36	0.37	6.85
	1982	72.05	20.49	16.88	24.96	7.29	24.09	3.50	25.09	0.28	5.37
Madhya Pradesh	1953-54	11.70	0.31	10.49	1.48	14.62	4.39	37.91	28.20	25.28	65.62
	1961-62	7.50	0.36	14.22	2.54	19.34	7.12	39.20	34.64	19.74	55.34
	1971-72	11.59	0.49	14.53	2.94	20.29	8.86	38.13	38.57	15.46	49.14
	1982	14.40	0.56	17.49	4.11	22.87	12.31	34.80	44.19	10.44	38.83
Maharashtra	1953-54	10.76	0.32	13.97	1.95	16.41	4.84	33.81	24.86	25.05	68.03
	1961-62	8.49	0.32	15.07	2.23	18.03	5.61	33.31	26.02	25.10	65.82
	1971-72	7.77	0.39	15.95	2.67	21.75	8.38	35.98	33.34	18.55	55.22
	1982	16.66	0.51	15.10	3.11	20.52	9.35	32.84	36.17	14.88	50.86
Orissa	1953-54	23.98	1.74	20.99	6.97	23.64	17.02	24.97	39.87	6.42	34.40
	1961-62	14.94	1.45	24.41	7.95	28.79	20.63	27.09	44.22	4.77	25.75
	1971-72	22.17	2.81	32.35	15.79	25.78	27.32	17.47	39.37	2.23	14.71
	1982	21.68	2.10	32.76	14.93	26.12	26.47	17.36	37.00	2.08	19.50
Punjab & Haryana	1953-54	11.45	0.26	9.33	1.38	14.30	4.72	38.78	30.87	26.14	62.77
	1961-62	12.10	0.56	11.33	1.92	14.20	5.08	39.85	36.44	22.52	56.00
	1971-72	4.35	0.21	10.07	1.74	18.35	6.84	47.85	43.53	19.38	47.68
	1982	42.01	0.78	9.23	3.06	11.62	8.18	27.69	45.78	9.45	42.20
Rajasthan	1953-54	4.93	0.16	10.68	1.08	15.06	3.21	36.65	20.04	32.68	75.51
	1961-62	4.02	0.13	12.01	1.53	17.71	4.62	37.49	23.20	28.77	70.52
	1971-72	20.81	0.34	10.19	1.67	16.40	5.79	32.90	27.75	19.70	64.45
	1982	13.14	0.38	16.31	3.16	17.75	6.97	36.45	35.73	16.35	53.76
Tamil Nadu	1953-54	30.19	2.30	25.09	9.78	20.46	18.19	20.20	40.06	4.00	29.68
	1961-62	20.15	3.04	32.30	14.68	24.47	23.07	20.48	42.42	2.60	16.79
	1971-72	24.30	3.77	35.76	18.17	21.26	22.73	16.25	38.50	2.43	16.83
	1982	47.81	5.53	23.17	16.85	16.95	26.73	10.76	37.65	1.31	13.24
Uttar Pradesh	1953-54	17.67	1.90	25.14	8.90	25.80	19.38	25.54	43.32	5.85	26.50
	1961-62	17.98	2.10	25.35	9.06	26.54	20.73	25.28	44.42	4.85	23.69
	1971-72	20.41	2.85	29.37	12.80	26.91	25.30	20.50	42.54	2.81	16.51
	1982	32.20	3.95	27.19	14.14	21.71	23.76	16.67	41.67	2.23	16.48
West Bengal	1953-54	32.48	3.31	21.91	10.50	22.38	22.56	20.14	44.42	3.09	19.21
	1961-62	19.20	2.29	25.78	11.68	29.73	28.08	23.09	46.11	2.20	11.84
	1971-72	28.73	4.35	32.48	20.45	22.80	28.92	15.06	39.84	0.93	6.44
	1982	49.41	8.39	24.73	20.88	15.14	28.77	9.50	36.76	0.42	5.20
All-India	1953-54	19.71	1.07	19.44	4.36	20.85	10.01	27.48	31.15	12.52	53.41
	1961-62	17.13	1.26	21.94	5.59	22.62	12.33	27.75	34.90	10.56	45.92
	1971-72	21.25	1.69	24.52	7.53	22.38	14.80	24.13	36.81	7.72	39.17
	1982	32.30	2.42	23.21	9.08	19.53	16.59	19.71	38.75	5.25	33.16

Note: H = Holdings; A = Area

Source: As in Table 1.

TABLE 11A. PERCENTAGE CHANGE IN NUMBER OF OPERATIONAL HOLDINGS AND AREA OPERATED IN RURAL INDIA: MAJOR STATES, 1953-54 TO 1982

States	Period	Sub-marginal Holdings		Marginal Holdings		Small Holdings		Medium Holdings		Large Holdings		All Holdings	
		H	A	H	A	H	A	H	A	H	A	H	A
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Andhra	I	-39.92	-37.65	-2.91	-5.31	-17.71	-17.85	0.56	-0.99	22.49	10.05	-11.42	1.69
Pradesh	II	46.04	68.68	13.46	14.98	14.75	12.33	3.55	5.73	-24.15	-28.67	11.47	-10.90
	III	22.97	-4.47	16.21	16.21	34.67	32.94	5.34	4.97	-10.00	-12.22	16.18	1.58
Assam	I	-8.12	7.29	41.52	37.98	-5.79	-11.15	-41.70	-47.56	-80.65	-87.20	- 13.98	-42.64
	II	69.61	74.76	60.25	66.10	-3.69	-0.12	-10.42	-7.84	0.00	6.28	20.92	6.02
	III	122.80	37.78	4.72	1.59	3.83	1.22	4.26	6.04	8.33	19.83	27.72	5.38
Bihar	I	23.81	43.94	40.87	39.96	23.98	22.58	9.14	5.87	-0.89	1.93	23.30	12.32
	II	12.37	-6.11	1.86	1.22	1.28	-0.91	-18.98	-20.45	-39.29	-44.03	-0.60	-18.70
	III	83.86	42.60	50.33	43.81	10.01	14.50	12.50	9.98	6.62	3.66	45.27	16.26
Gujarat	I	34.02	20.45	71.08	67.71	73.30	67.34	110.15	89.66	50.87	19.67	75.46	37.63
	II	59.23	115.09	50.70	47.62	46.22	55.46	-3.38	1.33	-19.92	-21.08	11.55	-8.80
	III	69.56	0.87	38.08	33.75	7.85	2.71	-6.00	-11.54	-28.71	-36.85	7.57	-22.48
Jammu &	I	54.17	91.30	44.72	44.76	25.40	21.11	11.88	6.03	14.29	3.33	31.11	16.24
Kashmir	II	16.22	6.82	12.92	13.16	2.53	7.89	-33.63	-33.25	-75.00	-73.55	-0.94	-16.16
	III	122.09	91.49	24.38	21.22	11.73	4.25	32.00	27.17	150.00	126.83	38.02	21.82
Karnataka	I	-45.67	-37.62	-17.94	-19.35	-16.60	-15.98	21.95	19.74	1.84	-2.71	-3.75	2.59
	II	28.03	47.62	102.09	98.25	66.43	71.30	2.69	3.84	-7.92	-16.95	27.42	-1.11
	III	227.86	54.84	-0.15	-2.30	14.26	10.56	-3.94	-11.91	-13.76	-15.26	15.05	-10.34
Kerala	I	58.51	66.67	25.87	21.34	53.52	51.29	29.52	23.61	-25.00	-16.29	45.46	23.19
	II	48.83	19.51	3.76	4.40	-8.26	-8.15	-25.00	-23.13	-55.56	-62.45	25.24	-15.47
	III	50.33	40.20	29.71	30.42	16.00	15.45	8.82	4.87	12.50	-6.74	41.46	18.63
Madhya	I	-21.67	16.28	65.66	70.30	61.73	60.64	26.39	21.53	-4.56	-16.57	22.22	-1.05
Pradesh	II	85.22	41.33	22.39	20.36	25.61	29.71	16.61	16.06	-6.21	-7.46	19.81	4.22
	III	22.58	-9.91	18.83	9.55	11.36	8.42	-9.91	-10.55	-32.25	-38.31	-1.26	21.92
Maharashtra	I	-10.62	4.80	22.27	21.06	24.56	22.81	11.64	10.81	13.56	2.45	13.33	5.88
	II	19.81	31.30	38.85	29.87	57.92	61.72	41.55	38.75	-3.13	-9.14	31.04	8.30
	III	106.34	2.33	-9.10	-8.76	-9.34	-12.75	-12.30	-15.13	-22.93	-27.95	-3.91	-21.77
Orissa	I	-31.37	-11.59	28.11	20.87	34.18	28.59	19.52	17.60	-18.00	-20.62	10.18	6.04
	II	74.55	59.02	55.96	63.07	5.26	8.73	-24.07	-26.82	-45.53	-53.11	17.62	-17.89
	III	-5.95	-24.40	-2.75	-4.34	-2.56	-1.91	-4.53	-4.93	-8.95	34.17	-3.86	1.19
Punjab &	I	0.00	65.22	14.89	7.41	-6.02	-17.05	-2.73	-9.03	-18.48	-31.24	-5.36	-22.93
Haryana	II	-68.21	238.16	-21.60	-17.62	13.79	22.43	5.96	8.49	-23.91	-22.68	-11.75	-7.48
	III	2043.64	-55.25	103.94	110.70	41.13	43.26	28.64	26.01	8.16	6.09	122.34	17.64
Rajasthan	I	-0.92	-20.00	36.75	39.40	43.03	41.69	24.41	14.01	7.12	-8.02	21.63	-1.51
	II	529.91	135.42	3.13	-0.36	12.50	14.15	6.61	9.06	-16.82	-16.68	21.50	-8.83
	III	-27.00	16.81	85.15	99.46	25.24	27.33	28.71	35.86	-4.08	-11.98	15.66	5.53
Tamil Nadu	I	25.09	91.79	141.30	119.11	124.16	85.02	90.10	54.42	20.78	-17.50	87.48	45.83
	II	14.48	4.79	5.04	4.31	-17.55	-16.89	-24.79	-23.38	-11.83	-15.40	-5.13	-15.63
	III	156.69	28.61	-15.38	-18.91	4.03	2.74	-13.48	-14.56	-29.27	-31.26	30.55	-12.60
Uttar	I	26.29	27.53	25.21	18.24	27.75	24.27	22.89	19.09	2.81	3.86	24.15	16.14
Pradesh	II	18.82	21.59	21.25	26.57	6.20	9.73	-15.07	-14.18	-39.38	-37.56	4.70	-10.39
	III	85.93	35.51	9.07	7.87	-5.03	-8.34	-4.23	-4.37	-6.11	-2.52	17.80	-2.37
West Bengal	I	-39.24	-23.73	20.98	22.50	36.57	37.01	17.81	14.31	-26.53	-32.12	2.80	10.11
	II	75.28	61.19	47.62	48.25	-10.09	-12.75	-23.47	-26.83	-50.00	-53.96	17.21	-15.30
	III	171.16	111.06	20.19	11.93	10.31	9.06	-0.52	1.16	-30.55	-11.45	57.78	9.62
All-India	I	-0.55	17.06	29.27	26.54	24.14	21.53	15.57	10.57	-3.49	-15.16	14.45	-1.31
	II	39.45	25.51	25.60	26.82	11.23	13.04	2.23	-0.65	-17.78	-19.65	12.42	-5.82
	III	87.12	35.02	16.59	13.78	7.45	5.76	0.54	-0.71	-16.36	-20.13	23.11	-5.66

Note: As in Table 1A.
Source: As in Table 1.

TABLE 11B. AVERAGE SIZE OF OPERATIONAL HOLDINGS IN RURAL INDIA: MAJOR STATES, 1953-54 TO 1982

(Acres)

States 1	Year 2	Sub-Marginal Holdings 3	Marginal Holdings 4	Small Holdings 5	Medium Holdings 6	Large Holdings 7	All Holdings 8
Andhra Pradesh	1953-54	0.40	1.63	3.56	8.18	33.49	6.19
	1961-62	0.42	1.59	3.55	8.05	30.09	7.10
	1971-72	0.48	1.61	3.48	8.22	28.28	5.67
	1982	0.37	1.61	3.43	8.19	27.59	4.96
Assam	1953-54	0.49	1.73	3.74	7.98	28.09	5.42
	1961-62	0.57	1.68	3.53	7.17	18.58	3.61
	1971-72	0.58	1.75	3.66	7.39	19.45	3.17
	1982	0.36	1.69	3.57	7.49	21.25	2.61
Bihar	1953-54	0.42	1.68	3.59	8.21	24.39	4.14
	1961-62	0.49	1.67	3.55	7.96	25.08	3.77
	1971-72	0.41	1.66	3.47	7.82	23.16	3.08
	1982	0.32	1.59	3.61	7.65	22.45	2.47
Gujarat	1953-54	0.45	1.73	3.64	9.27	35.17	14.11
	1961-62	0.41	1.70	3.51	8.37	27.90	11.07
	1971-72	0.55	1.67	3.74	8.78	27.53	9.07
	1982	0.33	1.61	3.56	8.26	24.37	6.52
Jammu & Kashmir	1953-54	0.48	1.71	3.57	7.72	21.43	3.98
	1961-62	0.59	1.71	3.44	7.32	19.37	3.53
	1971-72	0.54	1.71	3.62	7.36	20.50	2.99
	1982	0.47	1.67	3.38	7.07	18.60	2.64
Karnataka	1953-54	0.35	1.74	3.57	8.60	31.66	9.53
	1961-62	0.40	1.71	3.59	8.45	30.25	10.16
	1971-72	0.46	1.68	3.69	8.54	27.29	7.88
	1982	0.22	1.64	3.57	7.82	26.80	6.14
Kerala	1953-54	0.38	1.59	3.54	8.03	25.58	2.20
	1961-62	0.40	1.54	3.49	7.66	28.55	1.86
	1971-72	0.32	1.55	3.49	7.88	23.02	1.26
	1982	0.30	1.56	3.48	7.55	20.46	1.05
Madhya Pradesh	1953-54	0.32	1.71	3.65	9.06	31.60	12.17
	1961-62	0.47	1.76	3.63	8.71	27.63	9.85
	1971-72	0.36	1.73	3.74	8.67	27.25	8.57
	1982	0.26	1.59	3.65	8.60	25.19	6.78
Maharashtra	1953-54	0.37	1.71	3.62	9.03	33.36	12.28
	1961-62	0.43	1.70	3.57	8.97	30.10	11.48
	1971-72	0.47	1.59	3.65	8.79	28.23	9.48
	1982	0.23	1.59	3.52	8.51	26.39	7.72
Orissa	1953-54	0.37	1.69	3.65	8.11	27.26	5.08
	1961-62	0.47	1.59	3.50	7.98	26.39	4.89
	1971-72	0.43	1.67	3.62	7.69	22.55	3.41
	1982	0.35	1.64	3.64	7.65	33.70	3.59
Punjab & Haryana	1953-54	0.27	1.72	3.85	9.30	28.05	11.68
	1961-62	0.44	1.61	3.40	8.70	23.66	9.51
	1971-72	0.47	1.70	3.65	8.91	24.08	9.97
	1982	0.09	1.74	3.71	8.72	23.56	5.28
Rajasthan	1953-54	0.56	1.71	3.61	9.26	39.14	16.94
	1961-62	0.45	1.75	3.58	8.49	33.61	13.71
	1971-72	0.17	1.70	3.63	8.68	33.66	10.29
	1982	0.27	1.82	3.69	9.20	30.90	9.39
Tamil Nadu	1953-54	0.36	1.84	4.20	9.37	34.65	4.73
	1961-62	0.55	1.67	3.47	7.61	23.67	3.68
	1971-72	0.50	1.66	3.50	7.75	22.70	3.27
	1982	0.25	1.59	3.45	7.66	22.07	2.19
Uttar Pradesh	1953-54	0.52	1.70	3.60	8.13	21.69	4.79
	1961-62	0.52	1.60	3.50	7.88	21.91	4.48
	1971-72	0.53	1.67	3.61	7.96	22.58	3.84
	1982	0.39	1.65	3.48	7.95	23.46	3.18
West Bengal	1953-54	0.36	1.71	3.60	7.87	22.23	3.57
	1961-62	0.45	1.73	3.61	7.64	20.54	3.82
	1971-72	0.42	1.74	3.50	7.31	19.92	2.76
	1982	0.32	1.62	3.46	7.43	24.12	1.92
All-India	1953-54	0.41	1.69	3.61	8.53	32.11	7.53
	1961-62	0.48	1.65	3.54	8.16	28.23	6.49
	1971-72	0.43	1.67	3.58	8.29	27.59	5.44
	1982	0.31	1.63	3.54	8.19	26.34	4.17

Source: As in Table 1.

Table 12 and 13 on page 214 & 215.

TABLE: 14. SHARE OF AREA OPERATED BY VARIOUS SEGMENTS OF HOLDINGS IN RURAL INDIA: MAJOR STATES, 1953-54 TO 1982

States	Year	Share of Bottom:			Share of Middle:		Share of Top:			
		25%	40 %	50%	40 to 80%	50 to 80%	20%	10%	5%	1%
1	2	3	4	5	6	7	8	9	10	11
Andhra Pradesh	1953-54	1.84	5.37	9.15	26.99	23.21	67.64	51.43	36.98	13.96
	1961-62	2.39	6.12	10.41	28.42	24.13	65.46	47.84	33.17	10.18
	1971-72	2.74	6.64	10.72	29.14	25.06	64.22	46.20	31.75	12.77
	1982	2.52	6.96	11.26	29.43	25.13	63.61	45.16	31.54	12.47
Assam	1953-54	4.68	13.67	20.10	35.38	28.95	50.95	34.25	23.57	11.45
	1961-62	6.52	15.43	26.43	41.95	30.95	42.62	27.70	16.76	5.06
	1971-72	6.06	13.55	19.87	39.66	33.34	46.79	30.63	17.31	5.75
	1982	1.71	7.79	13.81	39.63	33.61	52.57	35.10	21.73	7.16
Bihar	1953-54	2.08	6.63	11.19	33.25	28.69	60.12	41.65	27.59	9.90
	1961-62	2.82	7.81	12.37	32.38	27.82	59.81	41.50	28.16	10.73
	1971-72	2.34	7.88	12.86	33.26	28.28	58.86	40.27	26.88	9.62
	1982	2.44	4.84	9.78	33.77	28.83	61.39	43.24	28.77	10.19
Gujarat	1953-54	2.53	6.82	11.47	32.16	27.51	61.02	43.51	25.34	5.20
	1961-62	3.54	9.47	15.29	35.06	29.24	55.47	37.05	26.23	6.52
	1971-72	3.33	8.72	13.64	33.60	28.68	57.68	38.71	24.92	7.19
	1982	2.79	7.67	12.67	32.72	27.72	59.61	39.65	24.87	7.98
Jammu & Kashmir	1953-54	6.41	13.23	20.44	39.00	31.79	47.47	29.29	12.38	7.32
	1961-62	7.15	14.21	21.34	38.26	31.13	47.53	31.24	19.54	6.77
	1971-72	7.71	15.51	21.62	39.67	33.56	44.82	28.28	16.54	2.96
	1982	4.27	13.38	19.08	36.72	31.02	49.90	31.12	20.31	6.69
Karnataka	1953-54	2.70	7.31	11.94	31.02	26.39	61.67	43.77	31.05	8.36
	1961-62	3.79	9.91	15.69	32.89	27.11	57.20	39.39	26.82	6.85
	1971-72	3.99	9.46	14.80	33.51	28.17	57.03	39.17	25.39	8.51
	1982	1.85	6.77	12.01	32.11	26.87	61.12	43.65	29.08	10.27
Kerala	1953-54	6.25	6.94	8.44	24.06	22.56	69.00	52.50	37.58	15.11
	1961-62	6.35	7.10	10.62	25.19	21.67	67.71	49.79	35.37	15.22
	1971-72	6.39	10.23	12.79	22.16	19.60	67.61	49.42	35.51	12.89
	1982	7.11	11.37	14.22	20.88	18.03	67.75	51.02	34.49	12.95
Madhya Pradesh	1953-54	2.40	7.62	12.85	33.83	28.60	58.55	40.21	29.38	6.85
	1961-62	3.84	9.51	15.04	34.77	29.24	55.72	37.87	25.83	7.75
	1971-72	3.09	8.94	14.57	34.91	29.28	56.15	38.36	24.66	8.28
	1982	2.57	8.45	13.87	35.87	30.45	55.68	37.77	24.76	7.25
Maharashtra	1953-54	2.32	6.65	11.43	32.10	27.37	61.20	42.87	29.84	6.48
	1961-62	2.88	7.50	12.32	34.02	29.20	58.48	39.18	27.42	6.37
	1971-72	3.42	8.80	14.05	33.62	28.37	57.58	37.96	24.69	6.87
	1982	1.90	6.87	11.67	33.67	28.87	59.46	40.25	25.89	8.21
Orissa	1953-54	1.97	6.54	12.14	32.45	26.85	61.05	43.21	29.85	10.75
	1961-62	4.05	9.88	16.58	34.05	27.35	56.07	37.63	26.36	9.44
	1971-72	4.00	10.40	15.68	35.12	29.84	54.48	37.26	23.84	8.21
	1982	3.37	9.30	14.30	33.51	28.51	57.19	40.88	28.81	14.15
Punjab & Haryana	1953-54	2.77	8.67	14.88	37.25	31.04	54.08	35.38	25.91	6.76
	1961-62	2.85	8.84	15.20	39.38	33.02	51.78	33.66	21.17	5.54
	1971-72	5.42	12.72	19.34	38.69	32.07	48.59	31.16	19.47	6.43
	1982	N	0.42	3.26	33.81	30.97	65.77	43.67	27.56	9.48
Rajasthan	1953-54	2.96	7.72	12.46	30.30	25.56	61.98	45.90	26.21	5.24
	1961-62	3.73	8.54	13.56	31.23	26.21	60.23	44.30	29.57	6.00
	1971-72	0.85	4.88	9.03	30.24	26.09	64.88	45.89	32.77	7.64
	1982	2.43	7.16	12.12	34.13	29.17	58.71	37.45	18.35	2.89
Tamil Nadu	1953-54	1.44	5.34	9.31	31.13	27.16	63.53	46.05	32.69	14.31
	1961-62	5.09	11.26	16.26	34.59	29.59	54.15	37.13	24.75	9.00
	1971-72	4.21	11.76	16.22	31.07	26.61	57.17	39.39	26.08	9.11
	1982	1.73	3.32	7.21	33.55	29.66	63.13	45.80	30.62	10.95
Uttar Pradesh	1953-54	3.97	9.48	15.70	34.86	28.64	55.66	37.12	23.61	3.68
	1961-62	4.16	9.60	15.11	35.90	30.39	54.50	37.26	24.26	8.13
	1971-72	4.52	10.50	15.89	35.42	30.03	54.08	36.46	23.68	8.03
	1982	2.24	7.86	12.61	32.38	27.63	59.76	40.82	26.48	9.66
West Bengal	1953-54	2.50	6.28	11.13	35.37	30.52	58.35	39.18	26.26	8.76
	1961-62	3.45	11.09	19.24	38.55	30.40	50.36	32.49	20.05	6.42
	1971-72	3.21	11.00	16.77	37.34	31.57	51.66	34.64	20.89	6.78
	1982	3.53	5.44	8.99	35.41	31.86	59.15	42.14	27.06	8.21
All-India	1953-54	1.97	5.77	9.71	28.92	24.98	65.35	47.88	33.24	10.97
	1961-62	2.83	7.30	12.12	30.53	25.71	62.17	44.52	30.63	11.25
	1971-72	2.59	6.94	11.74	30.40	25.60	62.66	44.71	30.69	12.07
	1982	1.21	4.91	8.74	29.77	25.94	65.32	46.71	32.16	12.68

Note: N = Negligible
Source: As in Table 13.

TABLE 15. CONCENTRATION OF OPERATIONAL HOLDINGS (GINI COEFFICIENT): ERSTWHILE ZAMINDARI VS. RYOTWARI AREAS, 1953-54 TO 1982

Year	Erstwhile Zamindari Areas	Erstwhile Ryotwari Areas
1953-54	0.5727	0.6298
1961-62	0.5268	0.6005
1971-72	0.5212	0.5973
1982	0.5855	0.6485

Source: As in Table 13.

TABLE 16. SHARE OF AREA OPERATED BY VARIOUS SEGMENTS OF HOLDINGS: ERSTWHILE ZAMINDARI AREAS VS. RYOTWARI AREAS, 1953-54 TO 1982

Types of Areas	Year	Share of Bottom:			Share of Middle:		Share of Top:			
		25%	40%	50%	40% to 80%	50% to 80%	20%	10%	5%	1%
1	2	3	4	5	6	7	8	9	10	11
Erstwhile Zamindari Areas	1953-54	1.88	6.45	11.09	41.42	36.78	52.13	41.82	28.13	9.36
	1961-62	3.15	8.82	14.45	34.55	28.92	56.63	38.73	25.77	9.65
	1971-72	2.80	9.38	14.54	34.57	29.41	56.05	37.96	24.97	8.69
	1982	2.11	5.03	10.51	34.62	29.14	60.35	42.42	28.73	11.32
Erstwhile Ryotwari Areas	1953-54	1.59	4.96	8.78	37.12	33.30	57.92	47.47	33.67	8.60
	1961-62	2.29	6.12	10.29	30.27	26.10	63.61	44.68	29.67	9.15
	1971-72	2.18	6.03	10.41	30.89	26.51	63.08	44.23	29.32	10.17
	1982	0.74	3.46	6.92	29.03	25.57	67.51	48.36	32.78	12.04

Source: As in Table 13.

TABLE 17. DISTRIBUTION OF OPERATIONAL HOLDINGS: ERSTWHILE ZAMINDARI VS. RYOTWARI AREAS, 1953-54 TO 1982

(Percentage of All holdings)

	Year		Categories of Holdings				
			Sub-Marginal	Marginal	Small	Medium	Large
1	2		3	4	5	6	7
Erstwhile Zamindari Areas	1953-54	H	29.16	21.62	22.84	21.99	4.39
		A	2.76	8.75	19.73	42.62	26.14
	1961-62	H	23.78	24.98	25.93	21.92	3.39
		A	2.86	10.39	22.97	42.96	20.84
	1971-72	H	29.52	29.03	23.73	15.93	1.79
		A	4.02	15.97	27.21	39.72	13.08
	1982	H	41.38	26.81	18.44	12.11	1.26
		A	5.45	17.48	26.74	37.29	13.04
Erstwhile Ryotwari Areas	1953-54	H	19.53	18.14	17.46	28.11	16.76
		A	0.80	3.45	7.14	27.55	61.06
	1961-62	H	17.39	20.17	18.51	29.24	14.69
		A	1.01	4.30	8.34	31.43	54.92
	1971-72	H	19.87	22.13	19.85	26.78	11.37
		A	1.24	5.49	10.93	34.80	47.54
	1982	H	34.03	19.35	17.77	21.21	7.64
		A	1.93	6.55	13.23	36.51	41.78

Note: H = Holdings; A = Area
Source: As in Table 13.

TABLE 18. CONCENTRATION OF OPERATIONAL HOLDING (GINI COEFFICIENT): GREEN REVOLUTION VS. NON-GREEN REVOLUTION STATES, 1953-54 TO 1982

Year	Green Revolution States	Non-Green Revolution States
1953-54	0.5161	0.5748
1961-62	0.4981	0.5478
1971-72	0.4417	0.5340
1982	0.6590	0.5822

Source: As in Table: 13.

TABLE 19. SHARE OF AREA OPERATED BY VARIOUS SEGMENTS OF HOLDINGS: GREEN REVOLUTION VS. NON-GREEN REVOLUTION STATES, 1953-54 TO 1982

Types of States	Year	Share of Bottom:			Share of Middle:		Share of Top:			
		25%	40%	50%	40 to 80%	50 to 80%	20%	10%	5%	1%
1	2	3	4	5	6	7	8	9	10	11
Green Revolution States	1953-54	2.77	8.67	14.88	37.25	31.04	54.08	35.38	25.91	6.76
	1961-62	2.85	8.84	15.20	39.38	33.02	51.78	33.66	21.17	5.54
	1971-72	5.42	12.72	19.34	38.69	32.07	48.59	31.16	19.47	6.43
	1982	N	0.42	3.26	33.81	30.97	65.77	43.67	27.56	9.48
Non-Green Revolution States	1953-54	2.00	6.53	11.32	32.93	28.14	60.54	42.15	28.70	10.65
	1961-62	2.95	8.16	12.95	32.59	27.80	59.25	40.20	27.59	10.66
	1971-72	2.66	8.75	13.72	33.92	28.95	57.33	39.25	25.99	9.12
	1982	1.96	5.76	13.73	33.87	25.89	60.38	42.61	29.11	11.73

Source: As in Table 13.
Note: N = Negligible

TABLE 20. DISTRIBUTION OF OPERATIONAL HOLDINGS: GREEN REVOLUTION VS. NON-GREEN REVOLUTION STATES, 1953-54 TO 1982

(Percentage of All Holdings)

	Year		Categories of Holdings				
			Sub-Marginal	Marginal	Small	Medium	Large
1	2		3	4	5	6	7
Green Revolution States	1953-54	H	11.45	9.33	14.30	38.78	26.14
		A	0.26	1.38	4.72	30.87	62.77
	1961-62	H	12.10	11.33	14.20	39.85	22.52
		A	0.56	1.92	5.08	36.44	56.00
	1971-72	H	4.35	10.07	18.35	47.85	19.38
		A	0.21	1.74	6.84	43.53	47.68
	1982	H	42.01	9.23	11.62	27.69	9.45
		A	0.78	3.06	8.18	45.78	42.20
Non-Green Revolution States	1953-54	H	27.78	21.49	23.03	22.76	4.94
		A	2.57	8.17	18.77	42.02	28.47
	1961-62	H	25.42	24.69	24.57	21.50	3.82
		A	3.05	9.96	21.22	41.90	23.87
	1971-72	H	29.84	27.63	24.11	16.28	2.14
		A	3.90	14.41	26.61	39.68	15.40
	1982	H	37.43	27.83	19.67	13.40	1.67
		A	4.43	16.31	26.04	37.47	15.75

Note: H = Holdings; A = Area
Source: As in Table 13.

TABLE 21. CHANGING LEASING-IN PATTERN OF OPERATIONAL HOLDINGS IN RURAL INDIA: MAJOR STATES, 1953-54 TO 1982

(per cent)

States	H/A	Sub-Marginal Holdings			Marginal Holdings			Small Holdings			Medium Holdings			Large Holdings			All Sizes		
		1953-54	1971-72	1982	1953-54	1971-72	1982	1953-54	1971-72	1982	1953-54	1971-72	1982	1953-54	1971-72	1982	1953-54	1971-72	1982
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	EO	59.22	86.95	87.19	54.14	74.60	85.95	54.68	77.43	80.89	55.22	76.57	79.22	63.81	76.12	86.32	56.58	78.34	83.59
Andhra	H– MIX	6.08	11.19	9.64	17.29	25.27	12.85	33.63	21.60	18.99	36.88	23.10	20.77	32.03	23.51	13.68	26.59	20.94	15.36
Pradesh	ELI	34.70	1.86	3.17	28.57	0.13	1.20	11.69	0.97	0.12	7.90	0.33	0.01	4.16	0.37	0.00	16.83	0.72	1.05
	A– OWN	66.59	91.04	90.56	66.26	86.24	90.70	71.33	88.97	91.49	76.88	90.40	91.15	83.83	92.85	96.07	78.79	90.98	92.98
	LI	33.41	8.96	9.44	33.74	13.76	9.30	28.67	11.03	8.51	23.12	9.60	8.85	16.17	7.15	3.93	21.21	9.02	7.02
	EO	39.59	61.25	90.70	42.86	81.36	86.71	39.00	79.80	82.67	43.93	71.14	68.53	37.10	86.89	68.66	41.20	75.27	84.51
Assam	H– MIX	0.00	0.00	2.65	15.63	1.73	11.30	26.83	13.69	17.33	31.17	24.05	31.47	38.71	13.11	31.34	23.55	7.83	12.67
	ELI	60.41	38.75	6.65	41.51	16.91	1.99	34.17	6.51	0.00	24.90	4.81	0.00	24.19	0.00	0.00	35.25	16.90	2.82
	A– OWN	55.80	56.70	94.85	50.88	76.22	92.53	52.58	77.18	92.92	62.86	85.29	87.97	50.29	96.13	92.39	57.05	80.31	90.99
	LI	44.20	43.30	5.15	49.12	23.78	7.47	47.42	22.82	7.08	37.14	14.71	12.03	49.71	3.87	7.61	42.95	19.69	9.01
	EO	59.91	64.53	84.30	62.62	52.43	74.94	62.28	56.02	67.34	73.36	67.25	78.69	79.65	80.71	87.60	64.83	60.24	78.21
Bihar	H– MIX	11.65	34.13	13.88	30.57	46.48	24.26	32.22	43.98	32.66	24.46	32.75	21.02	19.02	19.29	12.40	23.53	39.03	20.77
	ELI	28.44	1.34	1.82	6.81	1.09	0.80	5.50	0.00	0.00	2.18	0.00	0.29	1.13	0.00	0.00	11.64	0.73	1.02
	A– OWN	73.13	69.36	83.77	77.84	74.70	86.54	79.31	79.95	83.39	90.05	90.34	91.41	95.23	96.44	95.56	87.65	85.50	88.68
	LI	26.87	30.64	16.23	22.16	25.30	13.46	20.69	20.05	16.61	9.95	9.66	8.59	4.77	3.56	4.44	12.35	14.50	11.32
	EO	58.76	90.25	89.81	59.64	90.89	93.93	60.73	93.63	95.28	69.04	88.42	96.88	60.69	91.57	94.96	63.15	90.68	94.63
Gujarat	H– MIX	8.25	5.40	3.47	17.47	7.87	6.07	23.56	6.37	4.72	18.27	11.35	2.31	33.82	8.31	4.37	22.70	8.61	4.11
	ELI	32.99	4.35	6.72	22.89	1.24	0.00	15.71	0.00	0.00	12.69	0.23	0.81	5.49	0.12	0.67	14.15	0.71	1.26
	A– OWN	72.37	92.52	98.35	67.71	96.20	97.28	70.79	96.84	98.58	79.43	95.62	97.91	81.89	96.28	97.56	80.63	96.09	97.80
	LI	27.63	7.48	1.65	32.29	3.80	2.72	29.21	3.16	1.42	20.57	4.38	2.09	18.11	3.72	2.44	19.37	3.91	2.20
	EO	68.75	95.56	92.34	57.25	76.79	87.46	61.90	87.06	86.91	58.42	66.17	85.80	71.43	72.73	76.09	65.22	85.78	88.20
Jammu&	H– MIX	10.42	4.44	7.61	22.36	20.90	10.60	23.81	12.94	13.09	28.71	33.56	14.20	28.57	27.27	23.91	20.96	13.78	11.77
Kashmir	ELI	20.83	0.00	0.05	20.39	2.31	1.94	14.29	0.00	0.00	12.87	0.27	0.00	0.00	0.00	0.00	13.82	0.44	0.03
	A– OWN	83.35	96.78	96.86	74.65	94.89	89.46	75.66	93.76	94.42	77.77	87.62	95.07	89.33	93.67	98.09	77.93	91.81	95.19
	LI	16.65	3.22	3.14	25.35	5.11	10.54	24.34	6.24	5.58	22.23	12.38	4.93	10.67	6.33	1.91	22.07	8.19	4.81
	EO	60.21	81.77	89.43	57.25	76.79	87.46	58.00	69.32	78.58	59.15	69.48	82.32	60.83	64.30	78.20	59.03	71.18	83.33
Karnataka	H– MIX	0.00	13.05	7.09	22.36	20.90	10.60	31.00	11.97	20.94	34.04	28.25	16.42	35.48	35.18	20.53	27.80	22.84	15.04
	ELI	39.79	5.18	3.48	20.39	2.31	1.94	11.00	18.71	0.48	6.81	2.27	1.26	3.69	0.52	1.27	13.17	5.98	1.63
	A– OWN	68.32	81.02	91.08	67.66	82.13	89.46	73.75	79.52	89.38	79.41	84.90	93.69	81.14	84.76	91.91	79.59	84.11	92.11
	LI	31.68	18.98	8.92	32.34	17.87	10.54	26.25	20.48	10.62	20.59	15.10	6.31	18.86	15.24	8.09	20.41	15.89	7.89

(Contd.)

TABLE 21. *(Contd.)*

States	H/A	Sub-Marginal Holdings			Marginal Holdings			Small Holdings			Medium Holdings			Large Holdings			All Sizes		
		1953-54	1971-72	1982	1953-54	1971-72	1982	1953-54	1971-72	1982	1953-54	1971-72	1982	1953-54	1971-72	1982	1953-54	1971-72	1982
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	EO	55.42	83.88	91.03	52.68	81.63	93.68	50.71	79.30	87.51	52.38	76.40	93.79	54.17	71.43	88.64	53.89	82.67	84.93
Kerala	H– MIX	8.67	6.15	5.16	36.59	16.75	5.90	40.14	17.65	12.26	41.90	22.32	6.21	45.83	28.57	11.36	23.01	9.94	12.24
	ELI	35.91	9.97	3.81	10.73	1.62	0.42	9.15	3.05	0.23	5.72	1.28	0.00	0.00	0.00	0.00	23.10	7.39	2.83
	A– OWN	71.95	88.90	95.93	73.32	92.19	95.83	91.65	90.96	94.18	76.75	91.60	96.83	83.22	95.98	92.41	79.90	91.41	95.52
	LI	28.05	11.10	4.07	26.68	7.81	4.17	8.35	9.04	5.82	23.25	8.40	3.17	16.78	4.02	7.59	20.10	8.59	4.48
	EO	31.03	70.09	85.20	48.07	72.25	86.27	45.17	80.33	76.23	44.41	82.14	81.95	42.08	82.38	80.32	42.75	78.98	81.70
Madhya	H– MIX	6.65	10.44	8.90	24.73	18.86	12.01	44.38	17.14	23.77	47.30	15.12	18.03	51.31	16.26	19.68	40.76	15.71	16.69
Pradesh	ELI	62.32	19.47	5.90	27.20	8.89	1.72	10.45	2.53	0.00	8.29	2.74	0.02	6.61	1.36	0.00	16.49	5.31	1.61
	A– OWN	59.69	73.67	90.40	62.44	79.88	89.48	76.13	89.72	89.12	79.98	91.64	92.58	81.59	94.68	94.21	80.55	92.54	92.65
	LI	40.31	26.33	9.60	37.56	20.12	10.52	23.87	10.28	10.88	20.02	8.36	7.42	18.41	5.32	5.79	19.45	7.46	7.35
	EO	56.05	82.50	86.21	53.18	90.26	90.62	49.90	86.44	93.81	54.55	88.68	86.66	49.94	89.06	82.31	52.60	88.03	88.01
Maha-	H– MIX	8.26	16.10	7.89	36.59	7.54	8.26	41.20	10.18	6.08	39.91	10.68	12.95	47.15	10.93	17.69	38.06	10.54	10.69
rashtra	ELI	35.69	1.40	5.90	10.23	2.20	1.12	8.90	3.38	0.11	5.54	0.64	0.39	2.91	0.01	0.00	9.34	1.43	1.30
	A– OWN	71.20	88.80	91.74	73.91	93.57	94.74	80.50	92.18	98.08	78.99	93.58	93.94	81.03	94.27	93.68	80.32	93.83	94.21
	LI	28.80	11.20	8.26	26.09	6.43	5.26	19.50	7.82	1.92	21.01	6.42	6.06	18.97	5.73	6.32	19.68	6.17	5.79
	EO	70.59	75.13	83.17	58.45	63.35	74.21	62.57	66.56	69.85	63.53	67.31	70.08	77.33	75.85	74.25	64.81	67.76	74.30
Orissa	H– MIX	7.84	14.96	12.59	34.42	29.77	23.95	34.36	33.44	30.15	35.27	32.37	29.43	20.00	21.19	25.75	27.32	27.70	24.09
	ELI	21.57	9.91	4.24	7.13	6.88	1.84	3.07	0.00	0.00	1.20	0.32	0.49	2.67	2.96	0.00	7.87	4.54	1.61
	A– OWN	80.52	80.77	87.26	76.14	77.40	85.87	82.54	87.09	88.82	86.92	88.43	90.45	93.09	91.39	63.24	87.43	86.54	83.96
	LI	19.48	19.23	12.74	23.86	22.60	14.13	17.46	12.91	11.18	13.08	11.57	9.55	6.91	8.61	36.76	12.57	13.46	16.04
	EO	64.16	94.17	88.51	53.19	74.17	82.49	45.37	52.03	70.24	36.52	47.78	56.69	40.76	55.48	58.72	43.62	54.72	74.30
Punjab&	H– MIX	3.47	3.10	9.11	27.66	15.91	12.11	34.26	42.44	29.76	42.15	47.52	42.99	45.06	41.21	40.90	36.00	40.26	24.07
Haryana	ELI	32.37	2.73	2.38	19.15	9.92	5.40	20.37	5.53	0.00	21.33	4.70	0.32	14.18	3.31	0.38	20.38	5.02	1.63
	A– OWN	70.02	97.65	82.04	64.35	76.79	86.15	63.63	65.11	84.30	55.03	70.57	79.63	62.37	78.54	82.09	60.21	74.16	81.27
	LI	29.98	2.35	17.96	35.65	23.21	13.85	36.37	34.89	15.70	44.97	29.43	20.37	37.63	21.46	17.91	39.79	25.84	18.73
	EO	69.44	98.59	95.45	66.67	94.55	92.47	68.48	89.79	90.07	69.24	87.39	86.91	65.64	88.54	88.00	67.69	91.08	89.68
Rajasthan	H– MIX	5.56	0.28	1.91	10.26	5.45	6.76	14.85	10.21	9.09	17.81	12.12	11.82	22.07	10.30	11.13	17.34	8.30	9.11
	ELI	25.00	1.13	2.64	23.07	0.00	0.77	16.67	0.00	0.84	12.95	0.49	1.27	12.29	1.16	0.87	14.97	0.62	1.21
	A– OWN	71.43	97.24	98.22	71.53	94.55	92.47	77.41	95.07	94.22	79.13	94.00	93.97	79.27	95.03	94.73	79.08	94.72	94.46
	LI	28.57	2.76	1.78	28.47	5.45	7.53	22.59	4.93	5.78	20.87	6.00	6.03	20.73	4.97	5.27	20.92	5.28	5.54

(Contd.)

TABLE 21. *(Concld.)*

States	H/A	Sub-Marginal Holdings			Marginal Holdings			Small Holdings			Medium Holdings			Large Holdings			All Sizes		
		1953-54	1971-72	1982	1953-54	1971-72	1982	1953-54	1971-72	1982	1953-54	1971-72	1982	1953-54	1971-72	1982	1953-54	1971-72	1982
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	EO	43.38	63.38	71.62	47.17	66.78	70.41	44.22	71.75	68.44	47.66	72.38	73.26	59.74	84.47	86.95	46.03	68.35	71.17
Tamil	H– MIX	6.45	26.83	14.00	31.24	29.25	27.45	40.62	26.59	30.00	40.63	26.66	26.18	31.17	15.53	11.83	27.56	27.35	21.19
Nadu	ELI	50.17	9.79	14.38	21.59	3.97	2.14	15.16	1.66	1.56	11.71	0.96	0.56	9.09	0.00	1.22	26.41	4.30	7.64
	A– OWN	57.97	73.12	79.60	61.32	79.89	82.78	65.75	85.23	85.38	73.55	88.97	89.58	81.67	95.30	94.22	72.99	86.94	87.37
	LI	42.03	26.88	20.40	38.68	20.11	17.22	34.25	14.77	14.62	26.45	11.03	10.42	18.33	4.70	5.78	27.01	13.06	12.63
	EO	77.22	74.54	88.65	69.52	69.05	73.87	66.92	71.01	71.37	73.81	74.77	74.85	76.95	80.15	81.10	71.14	72.18	78.41
Uttar	H– MIX	10.42	23.30	10.40	26.33	29.24	24.99	30.44	27.71	27.93	24.72	24.17	24.85	21.64	13.48	18.90	23.89	26.34	20.77
Pradesh	ELI	12.36	2.16	0.95	4.15	1.71	1.14	2.64	1.28	0.70	1.47	1.06	0.30	1.41	6.37	0.00	4.37	1.48	0.82
	A– OWN	77.68	78.77	88.76	81.79	81.74	87.31	83.73	85.15	86.98	90.24	88.31	89.47	92.84	91.89	86.48	88.67	86.99	88.05
	LI	22.32	21.23	11.24	18.21	18.26	12.69	16.27	14.85	13.02	9.76	11.69	10.53	7.16	8.11	13.52	11.33	13.01	11.95
	EO	59.50	77.10	70.89	61.06	54.94	71.99	53.73	54.95	71.56	55.31	71.67	74.82	77.55	90.50	89.20	58.26	65.44	71.72
West	H– MIX	5.03	19.07	17.46	29.60	42.50	26.11	35.44	42.50	27.78	39.69	25.83	21.14	21.43	9.50	10.80	24.71	31.28	21.55
Bengal	ELI	35.47	3.83	11.65	9.34	2.56	1.90	10.83	2.55	0.66	5.00	2.50	4.04	1.02	0.00	0.00	17.03	3.28	6.73
	A– OWN	69.49	78.39	79.81	71.68	73.29	85.67	67.06	75.92	87.24	72.29	87.63	89.71	91.57	93.17	96.23	74.66	81.26	86.18
	LI	30.51	21.61	20.19	28.32	26.71	14.33	32.94	24.08	12.76	27.71	12.37	10.29	8.43	6.83	3.77	25.34	18.74	13.82
	EO	63.14	76.16	84.03	60.04	70.21	79.85	58.21	72.17	76.81	60.98	76.57	79.64	60.86	81.47	82.28	60.63	74.31	80.67
All-India	H– MIX	9.90	13.53	10.97	27.37	26.67	18.82	31.74	25.52	22.83	31.71	22.11	19.75	33.47	17.58	17.26	26.79	21.83	17.17
	ELI	26.96	10.31	5.00	12.59	3.12	1.33	10.05	2.31	0.36	7.31	1.32	0.61	5.67	0.95	0.46	12.58	3.86	2.16
	A– OWN	71.41	79.26	87.45	72.76	81.45	88.89	75.01	85.40	89.32	80.12	89.54	91.51	80.73	92.81	92.34	79.48	89.43	91.08
	LI	28.59	20.74	12.55	27.24	18.55	11.11	24.99	14.60	10.68	19.88	10.46	8.49	19.27	7.19	7.66	20.52	10.57	8.92

Note: H = Holdings; EO = Entirely Owned Holdings; MIX = Mixed Holdings; ELI = Entirely Leased-in Holdings.
A = Area; OWN = Owned; LI = Leased-in.

Source: 1. Report on Landholdings(4); 8th Round 1953-54, *NSS Report No.66*. 2. Report on Landholdings(5); 8th Round 1953-54, *NSS Report No.74*. 3. Report on Some Aspects of Landholdings; 17th Round 1961-62, *NSS Report No. 144*. 4. Report on Some Aspects of Landholdings; 26th Round 1971-72, *NSS Report No. 215*. 5. Report on Landholdings(2); 37th Round 1982, *NSS Report No. 331*.

TABLE 22. PERCENTAGE OF OPERATIONAL HOLDINGS LEASING-IN AND AREA OPERATED LEASED-IN UNDER DIFFERENT TERMS OF TENANCY IN RURAL INDIA: MAJOR STATES, 1971-72 TO 1982

(per cent)

States	H/A	Terms of Tenancy	Sub-Marginal Holdings		Marginal Holdings		Small Holdings		Medium Holdings		Large Holdings		All Sizes	
			1971-72	1982	1971-72	1982	1971-72	1982	1971-72	1982	1971-72	1982	1971-72	1982
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Andhra Pradesh	H	FM	1.47	0.87	3.69	0.33	3.55	0.80	6.24	3.00	9.28	0.68	4.32	1.18
		FP	1.24	0.38	5.10	2.42	3.83	2.02	3.97	2.07	1.92	1.43	3.50	1.74
		SP	4.62	0.00	8.99	1.22	8.22	1.91	9.39	0.78	9.02	0.70	8.03	0.97
		UM	0.67	0.00	2.55	0.00	2.74	0.00	0.54	0.00	0.58	0.00	1.52	0.00
		OT	5.56	9.43	6.68	8.16	7.27	10.59	4.90	12.09	6.23	10.72	6.08	10.04
	A	FM	1.16	0.44	2.26	0.10	1.25	0.57	2.79	1.67	2.83	0.21	2.56	0.81
		FP	0.73	0.51	2.83	1.49	1.96	1.01	1.84	0.69	0.38	0.38	1.28	0.69
		SP	4.50	0.00	5.38	0.76	3.77	1.45	3.16	0.40	2.62	0.30	3.19	0.55
		UM	0.58	0.00	0.85	0.00	0.78	0.00	0.07	0.00	0.03	0.00	0.21	0.00
		OT	2.46	6.30	2.44	5.44	3.27	3.62	1.73	5.19	1.29	3.01	1.79	4.18
Assam	H	FM	5.74	1.20	9.65	1.94	9.36	1.12	7.37	3.61	3.28	4.51	8.36	1.73
		FP	1.44	0.34	2.03	0.05	4.96	1.37	9.54	2.05	6.56	0.00	4.08	0.75
		SP	5.90	0.36	11.78	2.26	21.26	5.09	16.17	7.20	2.66	8.19	4.14	3.01
		UM	2.35	0.00	3.47	0.54	0.55	0.00	1.47	0.28	3.28	0.00	2.03	0.18
		OT	27.58	5.13	12.76	4.16	6.94	6.95	7.22	14.54	0.00	10.71	12.91	6.63
	A	FM	3.00	0.99	4.65	2.20	3.81	0.41	2.71	0.97	0.84	0.71	3.36	0.98
		FP	1.78	0.31	0.81	0.04	2.80	0.51	4.66	0.88	1.60	0.00	3.06	0.53
		SP	6.01	0.02	9.60	1.19	12.16	3.02	5.15	2.40	1.26	1.61	8.24	2.24
		UM	4.28	0.00	1.96	0.10	0.70	0.00	0.34	0.01	0.17	0.00	0.89	0.02
		OT	28.24	1.92	6.76	2.23	3.35	1.79	1.85	3.37	0.00	3.31	4.13	2.57
Bihar	H	FM	0.90	1.29	1.56	1.06	0.89	2.54	1.86	2.15	1.11	0.95	1.22	1.55
		FP	1.19	0.43	1.71	0.96	3.23	2.44	2.08	0.58	0.74	0.97	1.93	0.95
		SP	23.34	6.28	35.75	15.69	38.87	21.48	20.46	12.82	7.44	7.15	27.93	12.25
		UM	1.84	0.59	4.40	2.42	3.77	1.22	6.51	0.18	6.77	0.00	3.78	1.13
		OT	8.71	5.64	6.18	4.45	4.17	4.13	3.77	2.23	4.12	0.76	6.14	4.57
	A	FM	0.46	1.33	0.52	0.93	0.07	1.11	0.13	0.40	0.09	0.01	0.18	0.67
		FP	0.73	0.32	1.07	0.35	2.09	0.64	0.67	0.26	0.09	0.25	1.01	0.37
		SP	22.53	7.87	19.84	8.70	16.77	2.23	7.46	5.74	1.61	2.10	11.35	4.94
		UM	2.02	0.72	1.28	0.57	0.69	0.26	0.83	0.01	0.60	0.00	0.87	0.21
		OT	4.90	5.45	2.60	2.41	0.43	1.54	0.56	1.02	1.16	0.02	1.10	1.49
Gujarat	H	FM	7.43	0.00	2.55	0.00	3.56	0.24	1.29	0.41	2.94	0.33	2.83	0.21
		FP	0.00	0.00	0.00	0.00	0.00	0.00	1.67	0.01	0.31	0.00	0.63	0.00
		SP	0.00	0.00	2.03	2.11	0.91	0.00	4.49	0.05	2.49	0.23	2.54	0.54
		UM	0.00	0.00	0.93	0.00	0.91	0.15	2.75	0.00	1.72	1.02	1.61	0.15
		OT	2.32	10.13	3.60	3.59	0.99	3.08	1.32	2.07	0.96	3.28	1.69	3.91
	A	FM	6.42	0.00	1.27	0.00	2.07	0.04	0.27	0.09	1.00	0.13	0.89	0.10
		FP	0.00	0.00	0.00	0.00	0.00	0.00	0.84	0.01	0.22	0.00	0.40	0.00
		SP	0.00	0.00	1.51	1.98	0.72	0.00	2.17	0.05	1.32	0.13	1.55	0.19
		UM	0.00	0.00	0.44	0.00	0.37	0.04	0.84	0.00	0.70	0.59	0.71	0.27
		OT	1.05	0.83	0.59	0.45	0.01	0.30	0.26	1.69	0.48	1.52	0.37	1.39

(Contd.)

TABLE 22. (Contd.)

States	H/A	Terms of Tenancy	Sub-Marginal Holdings		Marginal Holdings		Small Holdings		Medium Holdings		Large Holdings		All Sizes	
			1971-72	1982	1971-72	1982	1971-72	1982	1971-72	1982	1971-72	1982	1971-72	1982
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Haryana	H	FM	0.00	3.28	5.26	5.77	3.67	6.58	8.85	8.97	5.26	13.77	6.33	7.12
		FP	0.00	1.81	0.00	2.51	3.47	0.00	5.11	6.71	3.70	8.72	3.64	4.11
		SP	0.00	0.00	10.79	5.37	21.62	18.25	23.73	15.62	21.14	12.86	20.07	9.73
		UM	0.00	0.00	3.16	0.00	2.90	0.00	3.67	0.90	4.44	0.95	3.46	0.41
		OT	3.66	0.00	14.60	5.99	14.19	0.00	8.24	12.27	4.36	9.57	9.09	5.94
	A	FM	0.00	0.57	5.05	3.35	2.65	3.72	3.86	4.13	2.08	4.95	2.89	4.41
		FP	0.00	11.03	0.00	2.91	1.46	0.00	3.27	2.01	1.12	2.12	1.98	1.97
		SP	0.00	0.00	9.42	6.26	16.38	6.88	14.49	9.25	10.74	5.86	12.55	7.51
		UM	0.00	0.00	2.79	0.00	1.25	0.00	1.62	0.10	1.93	0.04	1.78	0.07
		OT	0.67	0.00	11.77	6.94	12.15	0.00	4.16	6.01	2.61	2.91	4.06	4.27
Jammu & Kashmir	H	FM	0.12	0.04	0.35	0.15	0.25	0.20	0.53	0.00	0.00	0.00	0.31	0.11
		FP	0.82	0.47	0.20	1.04	1.79	0.11	5.88	0.89	0.00	0.00	1.60	0.63
		SP	3.51	0.00	8.35	1.53	10.47	4.02	26.61	6.49	27.27	13.43	10.89	2.50
		UM	0.00	0.00	0.10	0.00	0.43	0.00	0.93	0.00	0.00	0.00	0.30	0.00
		OT	0.00	2.19	2.48	3.25	0.00	0.84	1.20	2.41	0.00	0.00	1.12	2.24
	A	FM	0.43	0.01	0.01	0.07	0.05	0.10	0.07	0.00	0.00	0.00	0.06	0.05
		FP	0.43	0.01	0.23	0.61	0.49	0.04	1.14	0.38	0.00	0.00	0.65	0.29
		SP	2.35	0.00	3.98	0.44	5.67	1.90	10.75	2.21	5.80	1.34	6.99	1.58
		UM	0.00	0.00	0.09	0.00	0.03	0.00	0.14	0.00	0.00	0.00	0.08	0.00
		OT	0.00	0.80	0.81	0.63	0.00	0.25	0.27	0.54	0.00	0.00	0.27	0.45
Karnataka	H	FM	1.14	1.14	6.82	0.00	9.07	3.61	7.64	0.38	14.30	2.00	8.25	1.34
		FP	2.84	0.48	3.40	0.00	9.87	1.31	8.90	1.22	3.66	0.43	6.80	0.79
		SP	7.42	0.64	10.19	1.67	5.77	2.15	9.94	2.14	16.20	5.52	9.71	2.11
		UM	0.00	0.00	0.00	0.00	2.47	0.00	2.69	0.13	1.81	0.17	1.75	0.06
		OT	10.31	2.96	5.49	4.74	6.04	6.79	5.82	8.19	2.01	10.80	5.59	6.49
	A	FM	1.29	0.93	4.25	0.00	6.42	0.49	4.58	0.10	4.91	0.27	4.90	0.22
		FP	3.10	0.09	2.78	0.00	6.68	0.93	4.45	0.24	0.99	0.13	3.00	0.27
		SP	5.52	0.06	6.27	1.23	2.82	1.13	4.34	1.09	8.53	2.63	6.21	1.17
		UM	0.00	0.00	0.00	0.00	0.92	0.00	0.40	0.05	0.33	0.04	0.40	0.04
		OT	9.08	1.05	4.57	2.68	3.64	2.57	1.33	3.46	0.48	4.50	1.37	3.74
Kerala	H	FM	2.05	0.00	2.94	0.00	4.15	1.48	4.03	0.00	16.67	1.66	2.54	0.12
		FP	2.68	0.00	5.70	0.00	10.90	0.00	10.92	0.00	9.52	0.00	4.37	0.00
		SP	0.86	0.00	2.08	0.00	1.70	0.00	1.28	0.00	0.00	5.07	1.18	0.01
		UM	0.53	0.49	1.81	0.20	1.00	0.00	1.57	0.00	2.38	0.00	0.86	0.39
		OT	11.34	6.95	6.57	3.66	5.80	5.01	8.85	2.00	9.52	2.45	9.85	6.06
	A	FM	0.96	0.00	0.56	0.00	1.40	0.02	1.26	0.00	1.75	1.22	1.12	0.07
		FP	2.29	0.00	3.15	0.00	4.33	0.00	4.14	0.00	1.09	0.00	3.43	0.00
		SP	1.02	0.00	0.93	0.00	0.76	0.00	0.20	0.00	0.00	4.94	0.63	0.27
		UM	0.59	0.10	0.47	0.12	0.17	0.00	0.10	0.00	0.21	0.00	0.29	0.05
		OT	6.24	3.10	2.70	1.99	2.38	1.57	2.68	0.59	0.93	0.01	3.11	1.66

(Contd.)

TABLE 22. (*Contd.*)

States	H/A	Terms of Tenancy	Sub-Marginal Holdings		Marginal Holdings		Small Holdings		Medium Holdings		Large Holdings		All Sizes	
			1971-72	1982	1971-72	1982	1971-72	1982	1971-72	1982	1971-72	1982	1971-72	1982
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Madhya Pradesh	H	FM	1.69	0.04	4.12	0.76	3.40	0.79	1.70	0.04	3.90	0.29	2.74	0.36
		FP	0.92	0.22	1.99	0.43	2.21	0.00	1.25	0.30	2.05	0.00	1.64	0.21
		SP	1.98	0.00	6.78	0.84	4.00	0.66	7.31	1.60	4.85	4.22	5.56	1.30
		UM	0.00	0.00	0.00	0.00	0.51	0.00	0.50	0.31	0.69	0.00	0.40	0.11
		OT	25.36	5.29	18.07	3.67	11.31	7.91	8.34	7.24	7.72	4.54	12.23	6.21
	A	FM	1.83	0.05	2.61	0.47	1.15	0.22	0.74	0.01	1.32	0.03	1.12	0.06
		FP	1.27	0.01	1.52	0.12	0.98	0.00	0.50	0.08	0.63	0.00	0.64	0.04
		SP	2.82	0.00	4.63	0.73	2.17	0.38	3.32	0.75	1.09	1.50	2.16	0.99
		UM	0.00	0.00	0.00	0.00	0.25	0.00	0.07	0.05	0.15	0.00	0.12	0.02
		OT	20.41	2.30	11.36	1.93	5.73	2.79	3.70	3.07	2.14	1.68	3.42	2.44
Maharashtra	H	FM	0.62	2.98	3.35	0.00	2.71	0.34	3.49	1.18	3.97	2.81	3.16	1.37
		FP	1.16	0.00	1.79	0.73	3.14	1.07	1.69	0.51	1.61	0.56	1.97	0.58
		SP	1.04	1.11	2.54	0.00	3.40	0.95	5.72	4.02	6.38	8.17	4.47	2.92
		UM	0.00	0.52	0.00	0.00	1.17	0.00	0.24	0.09	0.77	0.36	0.49	0.17
		OT	11.15	5.98	3.75	6.05	4.43	2.67	3.32	4.84	1.22	4.28	3.85	4.68
	A	FM	4.02	3.97	1.81	0.00	1.86	0.21	1.58	0.47	1.44	0.71	1.54	0.57
		FP	0.58	0.00	1.45	0.04	1.22	0.04	0.69	0.08	0.86	0.18	0.85	0.12
		SP	0.29	1.18	0.71	0.00	1.73	0.73	2.56	2.21	2.78	3.25	2.55	2.53
		UM	0.00	0.74	0.00	0.00	0.35	0.00	0.08	0.04	0.27	0.12	0.21	0.08
		OT	6.32	1.89	2.42	4.05	2.66	1.61	1.43	2.18	0.39	1.81	1.00	1.90
Orissa	H	FM	4.73	0.49	3.48	1.22	3.30	3.30	3.51	2.94	6.22	2.44	3.78	1.93
		FP	1.11	1.39	5.64	2.96	2.69	1.73	3.74	2.68	4.00	7.10	3.51	2.34
		SP	5.77	2.15	13.43	8.10	14.37	13.78	17.11	11.30	4.15	5.12	12.41	8.79
		UM	0.00	1.89	0.00	0.00	1.27	0.00	1.42	1.09	0.59	0.00	0.59	0.60
		OT	13.53	5.80	15.81	6.76	12.26	3.29	9.69	3.71	9.78	8.04	13.19	5.14
	A	FM	2.86	1.24	1.68	0.80	1.11	0.61	0.76	0.45	0.45	0.22	1.01	0.51
		FP	0.62	1.60	3.82	1.88	0.93	0.34	1.36	0.98	2.68	0.20	1.80	0.80
		SP	4.71	4.33	9.22	5.21	5.64	7.12	6.13	3.42	0.91	0.74	5.68	4.16
		UM	0.00	1.69	0.00	0.00	0.40	0.00	0.28	0.31	0.03	0.00	0.22	0.15
		OT	11.04	0.44	7.87	2.20	4.83	0.77	3.04	1.07	4.56	17.15	4.74	4.28
Punjab	H	FM	7.97	3.62	4.51	1.84	7.42	12.06	19.31	13.86	19.43	21.44	15.47	8.32
		FP	0.00	0.00	4.31	0.00	7.81	0.05	8.28	3.52	3.82	0.81	6.73	0.91
		SP	0.00	1.84	6.86	7.68	28.52	21.86	28.64	18.44	22.77	11.39	24.71	9.20
		UM	0.00	0.00	0.00	0.00	5.31	0.00	2.02	0.93	8.29	4.34	3.56	0.58
		OT	0.00	5.49	4.31	3.81	4.92	3.19	8.66	2.37	7.07	6.70	6.97	4.47
	A	FM	4.22	14.49	5.11	1.29	4.34	5.35	8.31	6.10	8.30	7.96	7.97	6.77
		FP	0.00	0.00	1.28	0.00	6.04	0.05	4.56	1.43	1.56	0.22	3.27	0.74
		SP	0.00	1.96	2.90	2.85	20.32	12.41	13.91	7.58	10.30	4.25	12.58	6.41
		UM	0.00	0.00	0.00	0.00	1.83	0.00	0.33	0.24	0.85	0.52	0.67	0.33
		OT	0.00	2.80	5.22	3.07	3.13	0.95	3.78	1.11	3.28	2.64	3.52	1.82

(*Contd.*)

TABLE 22 (Contd.)

States	H/A	Terms of Tenancy	Sub-Marginal Holdings		Marginal Holdings		Small Holdings		Medium Holdings		Large Holdings		All Sizes	
			1971-72	1982	1971-72	1982	1971-72	1982	1971-72	1982	1971-72	1982	1971-72	1982
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Rajasthan	H	FM	0.00	0.00	0.00	0.11	1.45	0.27	0.58	0.51	1.39	0.31	0.70	0.30
		FP	0.00	0.00	0.00	0.77	0.98	0.00	2.29	0.25	0.77	0.29	1.07	0.26
		SP	0.00	0.00	2.25	1.78	1.58	1.78	2.19	2.50	4.66	1.59	2.13	1.78
		UM	0.00	0.00	0.00	0.00	0.00	0.00	0.92	0.13	1.58	1.37	0.61	0.27
		OT	1.41	2.93	3.21	2.54	6.21	3.27	6.99	6.02	3.72	5.13	4.67	4.41
	A	FM	0.00	0.00	0.00	0.13	0.70	0.21	0.21	0.12	0.66	0.16	0.52	0.15
		FP	0.00	0.00	0.00	0.67	0.75	0.00	1.18	0.08	0.29	0.01	0.56	0.06
		SP	0.00	0.00	2.12	0.68	0.90	0.93	1.18	1.41	1.47	0.63	1.36	0.93
		UM	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.03	0.12	1.23	0.14	0.67
		OT	2.76	1.57	4.63	2.11	2.58	1.27	3.19	3.83	2.43	1.81	2.69	2.50
Tamil Nadu	H	FM	5.66	6.75	5.32	5.63	3.17	3.69	5.86	4.11	3.76	6.19	5.00	5.68
		FP	6.34	2.04	6.87	3.90	9.70	3.85	6.86	4.20	3.04	1.77	7.25	3.01
		SP	13.16	1.34	17.12	10.82	10.52	9.00	9.76	7.74	5.22	2.27	13.27	5.54
		UM	1.07	0.14	0.00	1.98	1.54	1.90	0.95	0.44	0.85	0.00	0.76	0.89
		OT	14.14	13.17	8.54	5.78	5.82	6.88	5.37	6.83	3.03	4.23	8.67	9.59
	A	FM	2.02	5.04	2.58	3.02	1.77	1.35	2.44	1.78	0.57	2.18	1.98	2.11
		FP	5.83	4.36	4.59	3.22	6.07	2.12	2.87	1.95	1.23	0.61	3.74	2.17
		SP	13.51	2.51	11.10	6.46	5.24	5.39	3.93	2.99	1.74	1.45	5.52	3.99
		UM	0.62	0.28	0.00	0.62	0.33	0.37	0.11	0.13	0.15	0.00	0.17	0.27
		OT	4.89	5.67	1.84	2.97	1.36	2.56	1.69	1.84	1.01	1.52	1.65	2.39
Uttar Pradesh	H	FM	1.92	2.38	3.53	2.35	2.27	2.52	1.77	2.87	1.16	2.34	2.44	2.48
		FP	0.00	1.22	1.70	2.15	1.51	1.31	2.53	0.58	0.90	1.60	1.45	1.39
		SP	8.83	3.79	17.13	10.98	17.76	16.43	16.35	10.92	5.53	11.94	15.12	9.86
		UM	0.96	0.59	0.75	0.29	1.94	0.43	1.43	0.47	3.02	0.31	1.32	0.45
		OT	14.73	2.78	11.63	10.38	7.55	8.40	5.92	9.27	9.97	3.21	9.95	7.16
	A	FM	1.21	3.87	1.72	0.93	0.73	0.71	0.84	0.97	0.46	0.12	0.87	0.88
		FP	0.00	1.07	0.81	0.94	0.76	0.39	1.07	0.46	0.04	0.25	0.76	0.50
		SP	7.37	3.39	9.95	6.02	9.82	7.51	6.83	4.25	1.80	3.57	7.17	5.13
		UM	0.86	0.19	0.34	0.04	0.40	0.02	0.15	0.07	0.37	0.02	0.29	0.05
		OT	12.12	2.36	5.44	4.56	3.14	3.65	2.80	3.50	5.44	3.78	3.93	3.69

(Contd.)

TABLE 22. *(Concld.)*

States	H/A	Terms of Tenancy	Sub-Marginal Holdings		Marginal Holdings		Small Holdings		Medium Holdings		Large Holdings		All Sizes	
			1971-72	1982	1971-72	1982	1971-72	1982	1971-72	1982	1971-72	1982	1971-72	1982
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
West Bengal	H	FM	0.28	0.30	1.15	0.46	0.79	2.40	0.16	0.88	0.00	0.00	0.66	0.73
		FP	0.33	1.06	0.51	3.29	1.52	0.50	0.69	5.36	0.00	5.66	0.71	1.95
		SP	17.39	6.67	36.55	13.80	41.93	18.77	27.60	13.75	6.15	0.00	30.64	11.01
		UM	0.29	0.00	0.25	0.22	0.39	0.42	0.26	0.00	0.00	0.00	0.29	0.12
		OT	5.72	14.78	6.37	6.42	3.57	2.53	1.56	7.89	3.35	15.90	4.79	10.11
	A	FM	0.11	0.01	0.46	0.07	0.19	1.07	0.01	0.08	0.00	0.00	0.16	0.35
		FP	0.57	0.54	0.38	1.43	0.87	0.12	0.32	2.90	0.00	0.14	0.48	1.47
		SP	18.70	6.95	24.41	8.30	22.64	8.83	11.79	5.42	4.48	0.00	17.34	6.85
		UM	0.24	0.00	0.03	0.28	0.03	0.02	0.02	0.00	0.00	0.00	0.03	0.06
		OT	2.00	8.37	1.44	2.13	0.35	1.22	0.23	1.06	2.35	3.24	0.72	2.48
All-India	H	FM	2.11	1.76	3.54	1.39	3.10	2.11	3.59	2.13	5.01	2.55	3.26	1.86
		FP	1.40	0.78	2.84	1.73	3.40	1.29	3.35	1.33	1.78	0.99	2.70	1.22
		SP	9.53	3.01	16.59	7.78	15.53	9.81	11.85	6.28	7.36	5.24	13.00	6.21
		UM	0.78	0.35	1.16	0.60	1.71	0.38	1.60	0.29	1.71	0.63	1.35	0.42
		OT	11.08	7.11	9.00	6.31	6.71	5.81	5.67	6.85	4.34	5.77	7.76	6.55
	A	FM	1.38	1.93	1.80	0.75	1.43	0.74	1.57	0.80	1.74	0.69	1.63	0.78
		FP	1.17	0.92	1.76	0.94	1.88	0.47	1.52	0.53	0.61	0.20	1.23	0.45
		SP	9.49	3.53	10.39	4.48	8.10	5.06	4.87	2.68	2.87	1.91	5.06	3.00
		UM	0.86	0.27	0.42	0.16	0.45	0.06	0.28	0.06	0.31	0.33	0.34	0.17
		OT	7.84	4.14	4.17	3.10	2.74	2.13	2.25	2.89	1.66	2.79	2.33	2.78

Note: H = Holdings; A = Area.

FM = Fixed Money, *FP* = Fixed Produce, *SP* = Share of Produce, *UM* = Usufructuary Mortgage, *OT* = Other Terms.

Source: 1. Report on Some Aspects of Landholdings; 26th Round 1971-72, *NSS Report No. 215.*

2. Report on Landholdings (2); 37th Round 1982, *NSS Report No. 331.*

TABLE 23. DISTRIBUTION OF HOUSEHOLDS LEASING-IN AND LEASING-OUT AND AREA LEASED-IN AND LEASED-OUT BY LAND OWNERSHIP STATUS IN RURAL INDIA: MAJOR STATES, 1971-72 TO 1982

(Percentage of All Holdings)

States	H/A	Year	Households Leasing-in					Households Leasing-out				
			Sub-Marginal Holds	Mar-ginal Holds	Small Holds	Medium Holds	Large Holds	Sub-Marginal Holds	Mar-ginal Holds	Small Holds	Medium Holds	Large Holds
1	2	3	4	5	6	7	8	9	10	11	12	13
Andhra Pradesh	H	1971-72	41.93	21.00	18.01	14.93	4.13	28.19	24.52	20.79	20.55	5.95
		1982	36.23	31.88	14.62	14.59	2.68	27.66	30.05	17.74	16.89	7.66
	A	1971-72	31.91	13.19	16.34	25.66	12.90	2.65	9.83	18.66	35.47	33.39
		1982	16.10	28.00	17.81	28.29	9.80	1.65	11.45	14.38	29.07	43.45
Assam	H	1971-72	41.71	32.34	18.26	7.40	0.29	7.80	31.05	29.95	28.32	2.88
		1982	14.32	27.69	34.29	22.54	1.16	33.00	33.01	6.88	25.14	1.97
	A	1971-72	28.21	37.93	23.19	10.20	0.47	1.95	17.99	28.94	38.46	12.66
		1982	13.93	23.47	34.62	24.11	3.87	11.20	28.42	6.28	46.45	7.65
Bihar	H	1971-72	55.84	23.42	11.86	8.28	0.60	33.32	23.05	20.12	20.00	3.51
		1982	58.37	26.24	11.05	4.09	0.25	34.41	26.66	20.43	15.28	3.22
	A	1971-72	47.24	25.16	15.47	10.36	1.77	9.65	14.46	20.10	40.24	15.55
		1982	58.48	24.58	9.99	6.58	0.37	5.52	15.85	27.16	32.29	19.18
Gujarat	H	1971-72	21.02	26.23	21.52	24.50	6.73	8.06	23.51	21.83	34.76	11.84
		1982	26.54	19.72	16.41	28.99	8.34	3.32	28.95	20.77	44.64	2.32
	A	1971-72	26.02	20.18	15.04	22.83	15.93	1.55	8.26	16.48	43.08	30.63
		1982	17.58	5.68	15.16	34.63	26.95	0.01	7.89	18.56	62.47	11.07
Haryana	H	1971-72	37.27	17.37	15.75	20.84	8.77	30.39	15.69	6.29	27.45	20.18
		1982	21.57	17.06	29.77	26.34	5.26	10.42	17.27	33.52	23.11	15.68
	A	1971-72	33.04	13.93	14.87	27.06	11.10	1.86	7.65	5.27	42.89	42.33
		1982	16.43	15.88	25.49	31.34	10.86	1.30	4.55	18.30	25.41	50.44
Jammu & Kashmir	H	1971-72	17.57	39.52	26.63	16.28	0.00	4.31	24.88	42.10	22.97	5.74
		1982	30.46	34.73	15.00	18.36	1.45	25.39	25.40	26.19	21.43	1.59
	A	1971-72	14.09	29.97	21.10	34.84	0.00	1.15	17.34	57.23	10.41	13.87
		1982	30.46	31.56	16.06	19.53	2.39	2.74	12.33	23.29	60.27	1.37
Karnataka	H	1971-72	32.50	14.63	16.36	27.05	9.46	8.49	18.56	30.32	34.45	8.18
		1982	27.03	12.78	28.67	22.42	9.10	8.03	16.10	15.95	51.46	8.46
	A	1971-72	22.59	14.44	14.79	28.07	20.11	0.93	6.21	23.21	46.96	22.69
		1982	17.57	7.68	24.39	23.25	27.11	0.51	3.32	7.16	47.44	41.57
Kerala	H	1971-72	51.91	30.89	10.49	5.87	0.84	44.25	31.29	13.43	9.39	1.64
		1982	76.47	15.42	4.44	2.99	0.68	78.47	10.77	8.15	2.28	0.33
	A	1971-72	36.59	31.55	18.20	12.20	1.46	12.04	33.33	20.06	26.23	8.34
		1982	50.34	24.26	9.22	16.17	0.01	52.63	14.04	26.32	1.75	5.26

(Contd.)

TABLE 23. (Concld.)

States	H/A	Year	Households Leasing-in					Households Leasing-out				
			Sub-Marginal Holds	Mar-ginal Holds	Small Holds	Medium Holds	Large Holds	Sub-Marginal Holds	Mar-ginal Holds	Small Holds	Medium Holds	Large Holds
1	2	3	4	5	6	7	8	10	11	12	13	14
Madhya Pradesh	H	1971-72	28.84	17.98	18.31	25.47	9.40	6.69	11.91	22.72	39.70	18.98
		1982	19.45	18.94	25.43	32.50	3.68	6.89	11.79	7.64	50.85	22.83
	A	1971-72	22.99	12.68	16.57	28.99	18.77	0.59	4.15	14.47	47.78	33.01
		1982	18.00	13.10	22.90	39.81	6.19	0.22	2.37	3.25	39.42	54.74
Maharashtra	H	1971-72	26.37	16.06	20.72	27.32	9.53	7.13	16.23	23.67	41.21	11.76
		1982	29.78	14.61	20.91	27.48	7.22	16.70	20.42	25.92	21.23	15.73
	A	1971-72	26.28	9.16	10.43	33.86	20.27	0.46	4.17	14.39	41.24	39.74
		1982	21.18	9.93	17.19	34.63	17.07	1.89	6.44	16.35	28.92	46.40
Orissa	H	1971-72	40.65	29.34	19.91	9.39	0.71	25.23	39.57	15.77	16.75	2.68
		1982	36.56	26.57	23.50	12.24	1.13	15.44	40.84	28.77	11.78	3.17
	A	1971-72	32.60	29.06	18.79	18.14	1.41	7.67	27.84	17.99	37.59	8.91
		1982	31.57	27.80	22.75	16.72	1.16	0.99	18.72	35.82	26.77	17.70
Punjab	H	1971-72	29.04	16.32	16.69	33.66	4.29	7.44	23.64	15.63	40.94	12.35
		1982	25.44	15.94	19.52	31.79	7.31	16.02	28.32	11.66	34.56	9.44
	A	1971-72	36.41	11.42	14.78	27.56	9.83	1.00	6.33	9.28	50.30	33.14
		1982	15.24	14.98	18.54	34.67	16.57	1.26	9.71	7.80	37.86	43.37
Rajasthan	H	1971-72	24.24	13.21	26.54	26.27	9.74	0.82	7.74	20.53	32.73	38.18
		1982	17.75	14.52	19.39	35.66	12.68	13.95	4.94	22.24	37.03	21.84
	A	1971-72	24.80	10.46	17.96	28.88	17.90	0.04	0.98	6.85	14.97	77.16
		1982	5.29	20.35	19.27	26.94	28.15	1.10	1.51	10.11	29.22	58.06
Tamil Nadu	H	1971-72	56.39	24.23	10.90	8.04	0.44	28.00	22.52	23.70	21.25	4.53
		1982	58.92	20.51	13.20	7.09	0.28	37.09	21.08	24.72	16.07	1.04
	A	1971-72	60.55	17.22	12.29	8.80	1.14	4.87	9.26	16.07	35.10	34.70
		1982	49.63	21.23	17.29	11.03	0.82	9.56	22.30	30.02	34.35	3.77
Uttar Pradesh	H	1971-72	49.32	28.13	14.53	7.18	0.84	24.69	30.31	20.12	20.61	4.27
		1982	40.25	33.63	17.87	7.68	0.57	24.35	30.30	24.10	17.97	3.28
	A	1971-72	47.47	24.30	15.79	11.34	1.10	5.86	19.17	17.63	43.99	13.35
		1982	27.22	30.31	24.41	13.82	4.24	4.31	18.57	27.24	40.10	9.78
West Bengal	H	1971-72	53.96	28.14	13.02	4.70	0.18	27.75	30.45	21.19	17.41	3.20
		1982	60.80	18.96	14.32	5.92	0.00	27.36	16.37	27.09	27.78	1.40
	A	1971-72	32.10	51.97	10.03	5.62	0.28	4.90	19.19	27.50	38.81	9.60
		1982	54.48	20.46	17.90	7.16	0.00	4.83	16.59	36.78	33.36	8.44
All-India	H	1971-72	45.41	24.45	15.93	11.26	2.95	22.67	25.17	21.01	24.26	6.89
		1982	53.51	20.32	14.03	10.37	1.77	24.45	24.96	21.33	22.99	6.27
	A	1971-72	34.74	18.02	15.92	20.14	11.18	3.20	10.64	16.94	39.14	30.08
		1982	29.82	20.42	19.53	21.57	8.66	2.82	10.76	17.55	35.25	33.62

Note: H & Holds = Households, A = Area

Source: 1. Report on Some Aspects of Landholdings; 26th Round 1971-72, *NSS Report No. 215*. 2. Report on Landholdings(1); 37th Round 1982, *NSS Report No. 330*.

TABLE 24. CHANGING LEASING-IN PATTERN OF OPERATIONAL HOLDINGS: THE ERSTWHILE ZAMINDARI VS. RYOTWARI AREAS, 1953-54 TO 1982

(per cent)

States	H/A		Sub-Marginal Holdings			Marginal Holdings			Small Holdings			Medium Holdings			Large Holdings			All Sizes		
			1953-54	1971-72	1982	1953-54	1971-72	1982	1953-54	1971-72	1982	1953-54	1971-72	1982	1953-54	1971-72	1982	1953-54	1971-72	1982
1	2		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
		EO	61.68	69.85	79.21	61.28	57.26	73.91	59.88	58.32	69 11	66.07	68.46	75.74	78.48	80.80	94.10	62.89	63.44	78.80
	H	MIX	8.80	26.65	14.89	31.09	39.32	24.73	33.63	40.97	30.70	31.23	30.78	22.96	19.83	18.36	5.90	24.71	34.23	18.09
Erstwhile		ELI	29.52	3.50	5.90	7.63	3.42	1.36	6.49	0.71	0.19	2.70	0.76	1.30	1.69	0.84	0.00	12.40	2.33	3.11
Zamindari																				
Areas	A	OWN	73.26	73.91	82.52	75.62	74.91	86.14	76.52	80.66	85.70	84.62	89.16	90.76	93.81	94.58	84.43	84.32	84.67	86.94
		LI	26.74	26.09	17.48	24.38	25.09	13.86	23.48	19.34	14.30	15.38	10.84	9.24	6.19	5.42	15.57	15.68	15.33	13.06
		EO	52.85	78.60	83.55	53.02	78.52	85.14	52.21	79.89	83.95	56.96	81.33	86.05	55.51	83.71	84.22	54.37	80.15	84.50
	H	MIX	6.63	13.15	8.63	30.22	18.83	13.58	36.12	14.26	15.63	35.25	17.64	13.23	40.60	16.14	15.25	29.80	16.17	12.33
Erstwhile		ELI	40.52	8.25	7.82	16.76	2.65	1.28	11.67	5.85	0.42	7.79	1.03	0.72	3.89	0.15	0.53	15.83	3.68	3.17
Ryotwari																				
Areas	A	OWN	67.36	83.52	89.96	68.31	86.63	90.82	74.75	88.43	92.81	78.32	90.91	94.23	81.30	92.64	94.02	79.45	91.23	93.65
		LI	32.64	16.48	10.04	31.69	13.37	9.18	25.25	11.57	7.19	21.68	8.81	5.77	18.70	7.36	5.98	20.55	8.77	6.35

Note: H, EO, MIX, ELI and A, OWN, LI are explained in Table 21.

Source: As in Table 21.

TABLE 25. PERCENTAGE OF OPERATIONAL HOLDINGS LEASING-IN AND AREA OPERATED LEASED-IN UNDER DIFFERENT TERMS OF TENANCY: ERSTWHILE ZAMINDARI VS. RYOTWARI AREAS, 1971-72 TO 1982

(per cent)

Types of Areas	H/A	Terms of Tenancy	Sub-Marginal Holdings		Marginal Holdings		Small Holdings		Medium Holdings		Large Holdings		All Sizes	
			1971-72	1982	1971-72	1982	1971-72	1982	1971-72	1982	1971-72	1982	1971-72	1982
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
		FM	1.38	0.84	1.91	0.91	1.46	2.67	1.81	2.00	2.38	1.24	1.64	1.34
		FP	0.94	0.76	2.32	2.06	2.62	1.73	2.12	2.29	1.55	3.09	1.94	1.50
	H	SP	18.68	6.09	30.35	13.64	30.80	18.98	21.56	12.71	6.32	5.84	25.18	11.29
		UM	1.09	0.47	1.95	1.28	2.22	0.72	3.54	0.34	4.02	0.00	2.05	0.71
Erstwhile		OT	8.70	9.25	8.68	5.50	6.00	3.49	4.64	4.03	5.60	4.31	7.35	6.48
Zamindari														
Areas		FM	0.79	0.80	0.79	0.64	0.37	0.98	0.26	0.33	0.18	0.08	0.38	0.55
		FP	0.66	0.52	1.53	0.98	1.46	0.43	0.75	1.09	0.81	0.26	1.07	0.76
	A	SP	18.30	7.19	18.69	7.89	15.56	5.17	8.25	5.13	1.78	1.41	11.46	5.25
		UM	1.16	0.52	0.54	0.37	0.43	0.13	0.48	0.08	0.36	0.00	0.49	0.16
		OT	5.17	6.15	3.53	2.28	1.53	1.28	1.10	1.05	2.28	6.66	1.29	1.54
		FM	3.13	2.80	4.56	1.64	4.46	1.99	4.45	1.14	6.13	2.20	4.41	2.04
		FP	3.30	0.75	4.12	1.28	6.17	1.52	4.42	1.05	1.88	0.45	4.19	1.03
	H	SP	4.49	0.66	8.99	3.84	5.08	2.90	6.98	3.09	7.63	5.53	6.25	2.56
		UM	0.54	0.29	0.33	0.61	1.49	0.47	1.47	0.12	1.24	0.44	1.01	0.36
Erstwhile		OT	11.39	8.72	6.08	4.94	4.66	4.90	3.98	5.36	1.46	5.71	5.76	6.36
Ryotwari														
Areas		FM	2.22	2.13	2.36	0.88	2.88	0.50	2.18	0.44	2.09	0.53	2.22	0.55
		FP	3.06	1.42	2.84	0.94	3.54	0.73	2.00	0.32	0.75	0.14	1.64	0.36
	A	SP	5.21	0.94	5.61	2.46	2.54	1.72	3.05	1.53	3.68	2.40	3.46	1.97
		UM	0.43	0.21	0.11	0.20	0.47	0.09	0.31	0.05	0.38	0.19	0.35	0.12
		OT	5.56	3.52	2.45	2.55	2.15	1.56	1.23	2.33	0.45	2.44	1.08	2.31

Note: H, A and FM, FP, SP, UM and OT are explained in Table 22.
Source: As in Table 22.

TABLE 26. DISTRIBUTION OF LEASED-IN AREA OPERATED UNDER DIFFERENT TERMS OF TENANCY: THE ERSTWHILE ZAMINDARI VS. RYOTWARI AREAS, 1971-72 TO 1982

(per cent)

Types of Areas	Terms of Tenancy	Sub-Marginal Holdings		Marginal Holdings		Small Holdings		Medium Holdings		Large Holdings		All Sizes	
		1971-72	1982	1971-72	1982	1971-72	1982	1971-72	1982	1971-72	1982	1971-72	1982
1	2	3	4	5	6	7	8	9	10	11	12	13	14
	FM	6.22	8.84	3.67	6.46	2.06	14.66	2.66	4.94	5.81	4.71	2.87	8.21
Erstwhile	FP	5.61	5.75	7.10	9.96	8.19	6.37	7.70	16.46	25.90	14.97	8.00	11.26
Zamindari	SP	84.39	79.63	86.71	79.85	87.31	76.97	84.68	77.41	56.72	80.32	85.47	78.18
Areas	UM	3.78	5.78	2.52	3.75	2.44	2.00	4.96	1.19	11.57	0.00	3.66	2.35
	FM	15.20	45.36	21.62	19.61	30.58	16.42	28.91	18.69	30.24	16.29	28.98	18.19
Erstwhile	FP	37.01	30.16	25.97	21.09	37.53	23.95	26.57	13.86	10.93	4.38	21.33	12.12
Ryotwari	SP	42.94	20.02	51.42	54.90	26.93	56.64	40.37	65.48	53.35	73.56	45.11	65.55
Areas	UM	4.85	4.46	0.99	4.40	4.96	2.99	4.15	1.97	5.48	5.77	4.58	4.14

Note: FM, FP, SP and UM are explained in Table 22.
Source: As in Table 22.

TABLE 27. DISTRIBUTION OF HOUSEHOLDS LEASING-IN AND LEASING-OUT AND AREA LEASED-IN AND LEASED-OUT BY LAND OWNERSHIP STATUS: THE ERSTWHILE ZAMINDARI VS. RYOTWARI AREAS, 1971-72 TO 1982

(Percentage of All Holdings)

States	H/A	Year	Households Leasing-in					Households Leasing-out				
			Sub-Marginal Holds	Marginal Holds	Small Holds	Medium Holds	Large Holds	Sub-Marginal Holds	Marginal Holds	Small Holds	Medium Holds	Large Holds
1	2	3	4	5	6	7	8	10	11	12	13	14
Erstwhile	H	1971-72	52.35	25.85	13.74	7.54	0.52	30.25	28.26	19.40	18.73	3.26
Zamindari		1982	55.94	23.92	13.95	5.89	0.30	29.26	27.32	23.42	17.16	2.84
Areas	A	1971-72	38.43	36.71	13.88	9.88	1.10	7.69	19.22	21.88	39.14	12.07
		1982	52.92	24.04	14.20	8.43	0.41	4.11	16.79	31.00	30.83	17.27
Erstwhile	H	1971-72	39.57	20.25	15.51	19.04	5.63	17.38	20.88	24.79	29.59	7.36
Ryotwari		1982	45.28	17.28	17.52	15.85	4.07	26.02	19.86	21.80	26.66	5.66
Areas	A	1971-72	30.36	14.22	13.15	25.93	16.34	1.85	6.90	18.36	42.06	30.83
		1982	26.87	11.82	19.04	25.70	16.57	2.95	8.59	15.97	39.87	32.62

Note :H, Holds and A are explained in Table 23.
Source: As in Table 23.

TABLE 28 CHANGING LEASING-IN PATTERN OF OPERATIONAL HOLDINGS: THE GREEN REVOLUTION VS. NON-GREEN REVOLUTION STATES, 1953-54 TO 1982

(per cent)

States	H/A		Sub-Marginal Holdings			Marginal Holdings			Small Holdings			Medium Holdings			Large Holdings			All Sizes		
			1953-54	1971-72	1982	1953-54	1971-72	1982	1953-54	1971-72	1982	1953-54	1971-72	1982	1953-54	1971-72	1982	1953-54	1971-72	1982
1		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Green Revolution States	H	EO	64.16	94.17	88.51	53.19	74.17	82.49	45.37	52.03	70.24	36.52	47.78	56.69	40.76	55.48	58.72	43.62	54.72	74.20
		MIX	3.47	3.10	9.11	27.66	15.91	12.11	34.26	42.44	29.76	42.15	47.52	42.99	45.06	41.21	40.90	36.00	40.26	24.17
		ELI	32.37	2.73	2.38	19.15	9.92	5.40	20.37	5.53	0.00	21.33	4.70	0.32	14.18	3.31	0.38	20.38	5.02	1.63
	A	OWN	70.02	97.65	82.04	64.35	76.79	86.15	63.63	65.11	84.30	55.03	70.57	79.63	62.37	78.54	82.09	60.21	74.16	81.27
		LI	29.98	2.35	17.96	35.65	23.21	13.85	36.37	34.89	15.70	44.97	29.43	20.37	37.63	21.46	17.91	39.79	25.84	18.73
Non-Green Revolution States	H	EO	62.70	67.04	84.14	61.37	56.61	74.74	62.37	59.61	68.13	70.05	67.27	76.08	78.72	79.09	83.62	64.80	62.63	77.29
		MIX	10.69	29.59	13.71	31.72	40.23	24.17	32.90	40.39	31.87	28.10	32.62	23.57	19.42	19.93	16.38	24.72	35.42	21.55
		ELI	26.61	3.37	2.15	6.91	3.26	1.09	4.73	0.00	0.00	1.85	0.11	0.35	1.86	0.98	0.00	10.48	1.95	1.16
	A	OWN	74.89	72.16	84.28	77.33	75.71	86.35	84.34	82.45	85.11	89.00	89.69	91.11	94.32	94.79	83.11	87.57	85.85	87.21
		LI	25.11	27.84	15.72	22.67	24.29	13.65	19.66	17.55	14.89	11.00	10.31	8.89	5.68	5.21	16.89	12.43	14.15	12.79

Note: H, EO, MIX, ELI and A, OWN, LI are explained in Table 21.
Source: As in Table 21.

TABLE 29. PERCENTAGE OF OPERATIONAL HOLDINGS LEASING-IN AND AREA OPERATED LEASED-IN UNDER DIFFERENT TERMS OF TENANCY: THE GREEN REVOLUTION VS. NON-GREEN REVOLUTION STATES, 1971-72 TO 1982

(per cent)

Types of Areas		Terms of Tenancy	Sub-Marginal Holdings		Marginal Holdings		Small Holdings		Medium Holdings		Large Holdings		All Sizes	
			1971-72	1982	1971-72	1982	1971-72	1982	1971-72	1982	1971-72	1982	1971-72	1982
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Green Revolution States	H	FM	4.01	3.53	4.96	3.81	5.74	9.74	14.77	11.56	12.39	17.89	11.20	7.86
		FP	0.00	0.50	1.73	1.26	5.87	0.03	6.90	5.02	3.76	4.48	5.28	2.14
		SP	0.00	1.33	9.21	6.53	25.43	20.33	26.51	17.11	21.96	12.07	22.54	9.41
		UM	0.00	0.00	1.89	0.00	4.23	0.00	2.74	2.77	6.38	2.77	3.51	0.51
		OT	1.82	3.99	10.47	4.90	9.07	1.84	8.48	7.94	5.72	7.94	7.96	5.04
	A	FM	1.99	11.27	5.06	2.31	3.60	4.69	6.44	5.19	5.27	6.60	5.65	5.70
		FP	0.00	2.56	0.51	1.44	4.04	0.03	4.02	1.70	1.35	1.08	2.68	1.30
		SP	0.00	1.51	6.81	4.54	18.60	10.18	14.15	8.35	10.51	4.98	12.57	6.91
		UM	0.00	0.00	1.67	0.00	1.58	0.00	0.88	0.18	1.38	0.30	1.17	0.21
		OT	0.36	2.15	9.15	4.99	7.07	0.57	3.94	3.37	2.95	2.76	3.77	2.93
Non-Green Revolution States	H	FM	1.81	1.18	2.28	1.10	1.71	2.78	2.43	2.40	2.80	1.39	2.04	1.64
		FP	1.71	0.56	3.18	1.52	3.05	2.22	2.65	1.23	1.82	2.78	2.43	1.28
		SP	19.18	5.71	27.41	13.57	26.56	19.06	19.31	12.35	6.35	6.55	22.98	11.43
		UM	1.40	0.77	2.75	1.75	2.92	0.84	4.77	0.46	4.72	0.00	2.76	1.00
		OT	9.86	5.66	9.78	5.09	6.93	3.87	5.79	2.68	6.00	2.90	8.39	4.71
	A	FM	1.05	1.32	0.95	0.89	0.43	0.95	0.35	0.41	0.21	0.09	0.46	0.62
		FP	0.70	0.50	2.10	0.79	1.68	0.55	0.90	0.48	0.93	0.23	1.28	0.51
		SP	18.15	7.35	15.87	7.71	12.87	3.78	7.01	5.03	1.38	1.57	9.41	4.70
		UM	1.52	0.86	0.80	0.41	0.59	0.18	0.65	0.11	0.42	0.00	0.65	0.19
		OT	6.41	4.71	4.57	2.35	1.97	1.30	1.40	1.04	2.27	6.62	2.34	2.36

Note: H, A and FM, FP, SP, UM, OT are explained in Table 22.
Source: As in Table 22.

TABLE 30. DISTRIBUTION OF LEASED-IN AREA OPERATED UNDER DIFFERENT TERMS OF TENANCY: THE GREEN REVOLUTION VS. NON-GREEN REVOLUTION STATES, 1971-72 TO 1982

(per cent)

Types of Areas	Terms of Tenancy	Sub-Marginal Holdings		Marginal Holdings		Small Holdings		Medium Holdings		Large Holdings		All Sizes	
		1971-72	1982	1971-72	1982	1971-72	1982	1971-72	1982	1971-72	1982	1971-72	1982
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Green Revolution States	FM	100.00	73.49	36.02	27.88	12.95	31.49	25.26	33.66	28.45	50.91	25.61	40.39
	FP	0.00	16.67	3.65	17.37	14.52	0.20	15.77	11.01	7.29	8.33	12.13	9.20
	SP	0.00	9.84	48.45	54.75	66.86	68.31	55.54	54.19	56.82	38.42	56.94	48.94
	UM	0.00	0.00	11.88	0.00	5.67	0.00	3.43	1.14	7.44	2.34	5.32	1.47
Non-Green Revolution States	FM	7.27	13.14	4.84	9.09	2.79	17.46	3.88	6.84	7.10	4.87	3.92	10.31
	FP	6.57	5.03	10.65	8.02	10.81	10.00	10.13	7.95	31.68	12.18	10.84	8.45
	SP	82.99	73.24	80.45	78.72	82.62	69.28	78.73	83.46	47.08	82.95	79.72	78.07
	UM	3.17	8.59	4.06	4.17	3.78	3.26	7.26	1.75	14.14	0.00	5.52	3.17

Note: FM, FP, SP and UM are explained in Table 22
Source: As in Table 22

TABLE: 31. DISTRIBUTION OF HOUSEHOLDS LEASING-IN AND LEASING-OUT AND AREA LEASED-IN AND LEASED-OUT BY LAND OWNERSHIP STATUS: THE GREEN REVOLUTION VS. NON-GREEN REVOLUTION STATES, 1971-72 TO 1982

(Percentage of All Holdings)

States	H/A	Year	Households Leasing-in					Households Leasing-out				
			Sub-Marginal Holds	Marginal Holds	Small Holds	Medium Holds	Large Holds	Sub-Marginal Holds	Marginal Holds	Small Holds	Medium Holds	Large Holds
1	2	3	4	5	6	7	8	10	11	12	13	14
Green Revolution States	H	1971-72	32.48	16.75	16.30	28.30	6.17	15.89	20.72	12.19	35.97	15.23
		1982	23.72	16.44	24.07	29.37	6.40	13.45	23.20	21.74	29.27	12.34
	A	1971-72	35.06	12.42	14.82	27.36	10.34	1.25	6.68	8.15	48.30	35.62
		1982	15.82	15.42	21.95	33.04	13.77	1.28	7.26	12.77	31.98	46.71
Non-Green Revolution States	H	1971-72	51.76	25.01	14.01	8.58	0.64	31.07	27.65	18.91	19.09	3.28
		1982	53.60	26.31	13.77	5.88	0.44	29.75	30.13	22.48	14.43	3.21
	A	1971-72	42.71	26.37	16.49	12.77	1.66	8.94	19.24	19.35	39.29	13.18
		1982	52.37	25.31	12.89	8.88	0.55	3.99	16.81	30.07	30.44	18.69

Note: H, Holds and A are explained in Table 23
Source: As in Table 23.

TABLE 32. CHANGING PROPORTION OF AGRICULTURAL LABOUR HOUSEHOLDS: MAJOR STATES, 1956-57 TO 1983

(per cent)

States	Proportion of Agricultural Labour Households to Total Rural Households					Distribution of Agricultural Labour Households among States				
	1956-57	1964-65	1974-75	1977-78	1983	1956-57	1964-65	1974-75	1977-78	1983
1	2	3	4	5	6	7	8	9	10	11
Andhra Pradesh	35.59	31.42	35.78	41.45	41.55	13.54	12.68	12.86	11.86	13.43
Assam	18.18	4.90	13.06	17.01	19.45	2.58	0.61	1.36	0.75	0.32
Bihar	29.55	27.96	33.27	36.08	37.11	16.77	14.06	14.27	14.30	14.29
Gujarat	-	16.68	22.30	31.08	30.69	-	3.25	3.66	2.44	2.12
Haryana	-	-	9.11	18.19	20.24	-	-	0.60	2.12	3.67
Jammu & Kashmir	-	0.88	1.83	3.11	6.35	-	0.03	0.06	0.05	0.11
Karnataka	27.27	27.23	30.78	37.92	36.59	5.81	6.24	6.04	4.72	4.63
Kerala	22.73	28.16	27.40	26.99	31.70	3.23	4.56	4.27	2.52	2.60
Madhya Pradesh	24.53	20.33	21.79	27.90	30.15	8.39	7.93	6.39	5.32	4.73
Maharashtra[b]	26.03	31.08	31.96	38.64	38.55	12.26	10.11	9.38	4.50	4.18
Orissa	29.41	24.72	30.12	37.09	36.41	6.45	5.63	6.02	4.86	4.03
Punjab[c]	9.38	14.34	20.88	24.10	25.26	1.94	2.49	1.83	4.32	3.91
Rajasthan	6.90	5.47	3.96	10.08	11.10	1.29	1.28	0.76	2.15	2.61
Tamil Nadu	36.54	28.06	38.06	39.34	42.24	12.26	11.35	11.57	12.55	11.87
Uttar Pradesh	17.24	13.89	15.81	18.11	18.01	7.74	11.64	11.55	17.35	15.73
West Bengal	25.00	25.43	30.94	41.95	38.50	7.74	8.00	8.79	9.59	11.35
Others	-	-	-	-	-	-	0.14	0.59	0.60	0.42
All-India	24.47	21.72	25.27	29.88	30.70	100.00	100.00	100.00	100.00	100.00

Note: a. Figures for Assam for the year 1956-57 are inclusive of Manipur and Tripura.

b. Figures for the 1956-57 pertain to the old Bombay State and are thus inclusive of modern Gujarat.

c. Figures for the years 1956-57 and 1964-65 are for combined Punjab including Haryana.

Source: 1. *The Second Agricultural Labour Enquiry Report*, 1956-57; Vol. 1, Statement: 4-1, p. 47.

2. *Rural Labour Enquiry: Final Report, 1963-65;* Table 2.1, p. 3.

3. *Rural Labour Enquiry, 1974-75:* Final Report on Wages and Earnings; Table: 2.1, Pp. 18-19.

4. *Rural Labour Enquiry, 1977-78:* Report on Wages and Earnings; Table: 2.1, p. 23.

5. *Rural Labour Enquiry, 1983:* Report on Consumption Expenditure; Table: 2.1 p. 40.

TABLE 33. CHANGING PROPORTION OF AGRICULTURAL LABOUR HOUSEHOLDS WITH LAND AND WITHOUT LAND: MAJOR STATES, 1956-57 TO 1983

(per cent)

States	Households with Land					Households without Land				
	1956-57	1964-65	1974-75	1977-78	1983	1956-57	1964-65	1974-75	1977-78	1983
1	2	3	4	5	6	7	8	9	10	11
Andhra Pradesh	12.19	10.87	14.00	17.06	16.38	23.40	20.55	21.78	24.39	25.17
Assam[a]	6.73	2.81	7.27	7.93	8.41	11.45	2.09	5.78	9.08	11.04
Bihar	18.09	17.46	19.36	21.66	17.79	11.46	10.05	13.91	14.42	19.32
Gujarat	-	4.26	7.70	12.50	8.12	-	12.42	14.60	18.58	22.57
Haryana	-	-	1.53	1.39	0.92	-	-	7.58	16.80	19.32
Jammu & Kashmir	-	0.53	1.07	2.21	4.19	-	0.35	0.76	0.90	2.16
Karnataka	9.87	9.56	14.38	17.30	16.75	17.40	17.67	16.40	20.62	19.84
Kerala	11.72	19.76	23.75	23.61	26.02	11.01	8.40	3.65	3.38	5.68
Madhya Pradesh	9.94	9.40	11.49	13.85	14.82	14.59	10.93	10.30	14.05	15.33
Maharashtra[b]	8.66	9.81	15.03	16.38	16.15	17.37	21.27	16.93	22.26	22.40
Orissa	13.67	13.52	18.86	19.82	20.33	15.74	11.20	11.26	17.27	16.08
Punjab[c]	0.87	1.77	1.76	1.71	1.20	8.51	12.57	19.12	22.39	24.06
Rajasthan	2.57	2.69	1.84	5.79	5.95	4.33	2.78	2.12	4.29	5.15
Tamil Nadu	13.62	8.83	13.78	14.30	11.99	22.92	19.23	24.28	25.04	30.25
Uttar Pradesh	9.58	7.48	8.98	11.03	9.66	7.66	6.41	6.83	7.08	8.35
West Bengal	9.12	10.65	14.16	19.15	18.09	15.88	14.78	16.78	22.79	20.41
All-India	10.49	9.54	12.43	14.53	13.53	13.98	12.18	12.84	15.35	17.17

Note: a, b and c are explained in Table 32.

Source: 1. *The Second Agricultural Labour Enquiry Report, 1956-57;* Vol. 1, Statements: 4-1 and 4-2, Pp. 47 & 63.

2. *Rural Labour Enquiry, 1963-65:* Final Report; Tables 2.1 & 2.2, Pp. 3 & 5.

3. *Rural Labour Enquiry, 1974-75:* Report on Wages and Earnings; Tables 2.1 & 2.2, Pp. 18-19.

4. *Rural Labour Enquiry, 1977-78:* Report on Wages and Earnings; Tables 2.1 & 2.2(a).1, Pp. 23 & 27.

5. *Rural Labour Enquiry, 1983:* Report on Consumption Expenditure; Tables 2.1 & 2.2(a), Pp. 40 & 44.

TABLE 34. NUMBER OF EMPLOYMENT DAYS AVAILABLE PER AGRICULTURAL LABOURER IN AGRICULTURAL OCCUPATIONS: MAJOR STATES, 1956-57 TO 1978-78

(days)

States	Adult Male				Adult Female				Child Labour			
	1956-57	1964-65	1974-75	1977-78	1956-57	1964-65	1974-75	1977-78	1956-57	1964-65	1974-75	1977-78
1	2	3	4	5	6	7	8	9	10	11	12	13
Andhra Pradesh	211	204	193	213	140	104	138	182	214	212	192	249
Assam[a]	248	282	304	309	219	246	274	293	253	141	273	311
Bihar	190	198	186	265	115	127	114	208	162	187	120	236
Gujarat	-	278	206	234	-	240	160	194	-	272	145	202
Haryana	-	-	203	324	-	-	131	198	-	-	214	240
Jammu & Kashmir	-	228	189	201	-	365	175	203	-	287	269	-
Karnataka	198	228	204	-	148	192	175	-	193	204	181	-
Kerala	156	173	138	171	123	147	108	158	174	182	179	213
Madhya Pradesh	216	212	198	248	132	147	125	199	177	174	152	241
Maharashtra[b]	220	239	221	229	160	183	180	187	193	221	211	246
Orissa	176	224	164	219	70	165	111	160	171	212	143	237
Punjab[c]	229	282	233	260	145	173	170	259	227	301	244	313
Rajasthan	180	210	239	186	117	153	163	187	152	220	197	208
Tamil Nadu	173	194	148	193	135	146	118	177	199	209	154	237
Uttar Pradesh	174	189	200	213	96	102	124	159	145	166	169	200
West Bengal	187	269	210	242	138	216	147	200	213	303	246	305
All-India	194	217	193	229	131	149	138	186	187	207	178	243

Note: a, b and c are explained in Table 32.
Source: 1. *The Second Agricultural Labour Enquiry Report, 1956-57;* Vol. 1., Statement: 5.3 p. 71, Statement: 10.3 Pp. 242-243 and Statement: 11.3, p. 262.
2. *Rural Labour Enquiry, 1963-65:* Final Report; Table 3.3, p. 18, Table 8.4, p. 125 and Table 9.2, Pp. 175-176.
3. *Rural Labour Enquiry, 1974-75:* Report on Employment and Unemployment; Tables 3. 3(a). 1M, 1W and 1C, Pp. 140, 143 and 146.
4. *Rural Labour Enquiry, 1977-78:* Report on Employment and Unemployment: Tables 3. 3(a). 1M, 1W and 1C.

TABLE 35. NUMBER OF EMPLOYMENT DAYS AVAILABLE PER AGRICULTURAL LABOURER IN NON-AGRICULTURAL OCCUPATIONS: MAJOR STATES, 1956-57 TO 1978-78

(days)

States	Adult Male				Adult Female				Child Labour			
	1956-57	1964-65	1974-75	1977-78	1956-57	1964-65	1974-75	1977-78	1956-57	1964-65	1974-75	1977-78
1	2	3	4	5	6	7	8	9	10	11	12	13
Andhra Pradesh	18	27	21	20	8	14	10	9	8	17	9	10
Assam[a]	34	15	9	1	11	3	3	2	2	-	21	-
Bihar	37	24	18	8	9	7	7	4	16	16	15	14
Gujarat	-	11	27	5	-	7	17	7	-	3	32	10
Haryana	-	-	24	11	-	-	27	6	-	-	18	11
Jammu & Kashmir	-	-	16	19	-	-	19	-	-	-	-	-
Karnataka	19	19	26	-	9	11	10	-	9	17	19	-
Kerala	14	14	12	7	7	10	6	8	-	9	10	-
Madhya Pradesh	24	33	32	14	13	21	21	9	20	32	26	15
Maharashtra[b]	21	20	24	22	8	9	15	13	13	14	17	12
Orissa	31	32	27	16	21	11	6	7	33	12	17	4
Punjab[c]	15	23	13	8	13	9	15	-	6	8	25	-
Rajasthan	35	22	17	15	22	8	8	1	6	4	22	7
Tamil Nadu	20	14	23	9	7	3	8	3	26	10	13	1
Uttar Pradesh	37	36	21	10	8	13	4	2	20	21	13	15
West Bengal	54	28	23	12	30	30	10	21	69	20	18	2
All-India	28	25	22	13	10	11	11	8	17	17	16	9

Note: a, b and c are explained in Table 32.
Source: Same as mentioned in Table 34.

TABLE 36. AVERAGE DAILY REAL WAGE EARNINGS PER AGRICULTURAL LABOURER FROM AGRICULTURAL OCCUPATIONS: MAJOR STATES, 1956-57 TO 1978-78

(Rupees)

States	Adult Male				Adult Female				Child Labour			
	1956-57*	1964-65	1974-75	1977-78	1956-57*	1964-65	1974-75	1977-78	1956-57*	1964-65	1974-75	1977-78
1	2	3	4	5	6	7	8	9	10	11	12	13
Andhra Pradesh	0.95	0.97	0.82	1.15	0.60	0.68	0.61	0.80	0.53	0.52	0.50	0.67
Assam[a]	1.67	1.69	1.18	1.62	1.25	1.30	0.90	1.40	1.09	1.12	0.78	1.33
Bihar	0.92	0.93	0.82	1.03	0.49	0.80	0.70	0.93	0.71	0.68	0.67	0.77
Gujarat	-	1.11	1.02	1.43	-	0.89	0.79	1.27	-	0.68	0.73	1.11
Haryana	-	-	1.44	1.73	-	-	1.17	1.45	-	-	0.76	0.98
Jammu & Kashmir	-	1.47	1.59	.1.83	-	1.15	1.12	1.30	-	1.09	0.76	0.88
Karnataka	0.94	0.83	0.83	1.01	0.62	0.54	0.53	0.68	0.53	0.47	0.53	0.64
Kerala	1.29	1.60	1.57	2.15	0.71	0.93	1.12	1.48	0.64	0.76	0.52	0.76
Madhya Pradesh	0.75	0.80	0.59	0.79	0.58	0.57	0.66	0.63	0.56	0.54	1.09	0.54
Maharashtra[b]	0.89	0.97	0.72	0.98	0.56	0.51	0.42	0.62	0.51	0.45	0.38	0.55
Orissa	0.84	0.93	0.66	0.88	0.58	0.62	0.46	0.67	0.54	0.47	0.39	0.54
Punjab[c]	2.00	1.53	1.90	2.20	1.23	1.04	1.01	1.38	0.70	0.75	1.02	1.18
Rajasthan	1.02	1.33	0.99	1.39	0.64	0.83	0.70	0.96	0.46	0.57	0.60	0.68
Tamil Nadu	0.86	1.01	0.90	1.26	0.49	0.62	0.57	0.76	0.40	0.51	0.39	0.58
Uttar Pradesh	0.91	0.67	0.84	1.06	0.64	0.57	0.65	0.77	0.54	0.51	0.61	0.80
West Bengal	1.43	1.33	1.03	1.32	0.98	1.00	0.84	1.15	0.89	0.76	0.62	0.89
All-India	0.99	1.00	0.88	1.16	0.61	0.66	0.62	0.81	0.55	0.50	0.49	0.67

* Figures for 1956-57 are average real wages per casual labourer.
Note: a, b and c are explained in Table 32.

TABLE 37. AVERAGE DAILY REAL WAGE EARNINGS PER AGRICULTURAL LABOURER FROM NON-AGRICULTURAL OCCUPATIONS: MAJOR STATES, 1956-57 TO 1978-78

(Rupees)

States	Adult Male				Adult Female				Child Labour			
	1956-57*	1964-65	1974-75	1977-78	1956-57*	1964-65	1974-75	1977-78	1956-57*	1964-65	1974-75	1977-78
1	2	3	4	5	6	7	8	9	10	11	12	13
Andhra Pradesh	1.07	1.03	0.87	1.37	0.74	0.59	0.70	0.95	0.48	0.47	0.57	0.85
Assam	1.83	1.98	0.96	1.54	0.62	1.30	0.76	1.39	1.02	-	0.55	1.09
Bihar	1.16	1.03	0.86	1.34	0.73	0.61	0.59	0.99	0.87	0.67	0.56	1.07
Gujarat	-	1.23	1.01	2.07	-	0.90	0.90	1.18	-	0.98	0.76	1.02
Haryana	-	-	1.24	1.66	-	-	0.79	0.92	-	-	0.57	0.96
Jammu & Kashmir	-	-	1.65	1.39	-	-	0.92	1.17	-	-	-	0.75
Karnataka	1.26	0.94	0.92	1.17	0.66	0.60	0.69	0.85	0.63	0.54	0.55	0.75
Kerala	1.37	2.33	1.43	1.92	0.59	0.83	0.73	1.10	-	0.53	0.45	0.66
Madhya Pradesh	0.89	0.92	0.60	0.99	0.56	0.65	0.43	0.63	0.65	0.53	0.30	0.54
Maharashtra	1.01	1.33	0.79	1.58	0.61	0.58	0.52	0.73	0.49	0.44	0.41	0.66
Orissa	0.95	1.06	0.63	1.66	0.60	0.65	0.45	0.62	0.46	0.40	0.39	0.85
Punjab	1.39	1.49	1.74	2.04	0.40	0.70	0.56	0.68	0.67	0.91	0.92	1.17
Rajasthan	1.30	1.20	0.89	1.49	0.63	1.11	0.53	0.86	1.42	0.65	0.39	1.10
Tamil Nadu	0.93	1.11	0.88	1.52	0.49	0.86	0.50	0.78	0.54	0.57	0.37	0.70
Uttar Pradesh	0.98	0.90	0.97	1.46	0.58	0.49	0.57	0.91	0.48	0.43	0.56	0.88
West Bengal	1.27	1.23	0.97	1.65	0.90	0.72	0.55	0.72	0.66	0.64	0.53	0.72
All-India	1.10	1.08	0.89	1.46	0.64	0.64	0.58	0.82	0.57	0.52	0.50	0.79

* Figures for 1956-57 are real wages per casual labourer.

TABLE 38. RATIO OF FEMALE TO MALE DAILY AVERAGE REAL WAGE EARNINGS: MAJOR STATES, 1956-57 TO 1977-78

(per cent)

States	Agricultural Occupations				Non-Agricultural Occupations			
	1956-57	1964-65	1974-75	1977-78	1956-57	1964-65	1974-75	1977-78
1	2	3	4	5	6	7	8	9
Andhra Pradesh	63.15	70.10	74.39	69.57	69.16	57.28	80.46	69.34
Assam	74.85	76.92	76.27	86.42	33.88	65.66	79.17	90.26
Bihar	53.26	86.02	85.37	90.29	62.93	59.22	68.60	73.88
Gujarat	-	80.18	77.45	88.81	-	73.17	89.11	57.00
Haryana	-	-	81.25	83.82	-	-	63.71	55.42
Jammu & Kashmir	-	78.23	70.44	71.04	-	-	55.76	84.17
Karnataka	65.96	65.06	63.86	67.32	52.38	63.83	75.00	72.65
Kerala	55.04	58.13	71.34	68.84	43.07	35.62	51.05	57.29
Madhya Pradesh	77.33	71.25	111.86	79.75	62.92	70.65	71.67	63.64
Maharashtra	62.92	52.38	58.33	63.27	60.40	43.61	65.82	46.20
Orissa	69.05	66.67	69.70	76.14	63.16	61.32	71.43	37.35
Punjab	61.50	67.97	53.16	69.73	28.78	46.98	32.18	33.33
Rajasthan	62.75	62.41	70.71	69.06	48.46	92.50	59.55	57.72
Tamil Nadu	56.98	61.39	63.33	60.32	52.69	77.48	56.82	51.32
Uttar Pradesh	70.33	85.07	77.38	72.64	59.18	54.44	58.76	62.33
West Bengal	68.53	75.19	81.55	87.12	70.87	58.53	56.70	43.64
All-India	61.62	66.00	70.45	69.83	58.18	59.26	65.17	56.16

Source: Calculated by using Tables 36 and 37.

APPENDIX

TABLE 1. CHANGES IN THE NUMBER OF OWNERSHIP HOLDINGS AND THE AMOUNT OF AREA OWNED IN RURAL INDIA: MAJOR STATES: 1953-54 TO 1982

Holdings = 000'
Area = 000 acres

States	Year	Holdings Owning No Land	Sub-marginal Holdings		Marginal Holdings		Small Holdings		Medium Holdings		Large Holdings		All Holdings	
			H	A	H	A	H	A	H	A	H	A	H	A
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Andhra Pradesh	1953-54	2,272	2,078	494	1,012	1,621	814	3,287	938	7,765	376	13,200	7,490	26,367
	1961-62	454	2,759	420	1,191	1,875	761	2,722	1,000	8,290	476	14,788	6,641	28,095
	1971-72	483	2,827	566	1,232	1,952	950	3,340	1,103	9,196	362	10,332	6,957	25,386
	1982	1,025	3,215	588	1,557	2,496	1,205	4,185	1,219	9,772	368	10,334	8,589	27,375
Assam	1953-54	775	228	102	201	340	317	1,164	300	2,432	43	1,497	1,864	5,535
	1961-62	562	442	172	321	529	518	1,514	266	2,030	15	281	2,124	4,526
	1971-72	530	449	177	497	847	386	1,399	240	1,818	19	386	2,121	4,627
	1982	170	771	288	564	950	497	1,757	241	1,766	14	287	2,257	5,048
Bihar	1953-54	1,177	2,463	739	1,140	1,905	1,056	3,765	1,049	8,745	222	5,727	7,107	20,881
	1961-62	734	3,612	885	1,444	2,363	1,346	4,786	1,140	9,616	227	5,985	8,503	23,635
	1971-72	356	3,986	857	1,535	2,426	1,238	4,226	940	7,276	141	3,249	8,196	18,034
	1982	462	5,721	1,375	2,444	3,898	1,398	5,042	1,080	8,317	152	3,376	11,257	22,008
Gujarat	1953-54	665	269	57	167	286	189	689	428	4,081	464	15,617	2,182	20,730
	1961-62	463	723	105	347	612	347	1,288	773	6,969	488	13,791	3,141	22,765
	1971-72	490	940	146	474	804	555	2,082	778	6,856	407	11,062	3,644	20,950
	1982	657	934	127	643	1,044	531	1,898	816	6,823	320	7,177	3,901	17,609
Jammu & Kashmir	1953-54	90	92	39	131	214	112	398	83	636	12	257	520	1,544
	1961-62	66	118	66	177	298	140	484	96	704	7	159	604	1,711
	1971-72	5	119	49	210	365	165	594	64	462	2	40	565	1,510
	1982	56	236	99	256	427	166	566	96	675	5	103	815	1,870
Karnataka	1953-54	805	631	123	417	722	488	1,755	792	6,857	392	12,955	3,525	22,412
	1961-62	665	603	128	392	678	461	1,686	1,041	8,920	405	11,670	3,567	23,082
	1971-72	540	1,024	145	644	1,116	705	2,593	1,070	8,783	351	9,329	4,334	21,966
	1982	660	1,254	183	708	1,136	811	2,880	1,052	8,180	335	8,852	4,820	21,231
Kerala	1953-54	614	602	238	256	410	110	390	90	709	21	721	1,693	2,468
	1961-62	770	1,034	384	368	569	184	634	115	864	21	687	2,492	3,138
	1971-72	400	1,437	449	419	642	186	649	94	740	8	189	2,544	2,669
	1982	465	2,312	681	525	805	221	764	111	839	8	160	3,642	3,249
Madhya Pradesh	1953-54	1,560	502	149	424	777	623	2,266	1,318	11,782	774	25,335	5,201	40,309
	1961-62	501	1,090	177	624	1,089	845	3,111	1,612	14,290	807	23,041	5,479	41,708
	1971-72	586	1,176	202	701	1,199	1,038	3,834	1,875	16,280	743	20,351	6,119	41,866
	1982	957	1,347	226	940	1,515	1,081	3,870	1,790	14,055	539	14,040	6,654	33,706

(contd.)

TABLE 1. *(CONCLD.)*

States	Year	Holdings Owning No Land	Sub-marginal Holdings		Marginal Holdings		Small Holdings		Medium Holdings		Large Holdings		All Holdings	
			H	A	H	A	H	A	H	A	H	A	H	A
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Maharashtra	1953-54	1,371	688	152	474	806	527	1,915	1,067	9,524	674	22,702	4,801	35,099
	1961-62	850	1,266	156	549	943	605	2,162	1,197	10,821	835	25,232	5,302	39,314
	1971-72	1,085	1,381	196	845	1,308	1,022	3,704	1,688	14,779	825	23,181	6,846	43,168
	1982	1,622	1,644	255	925	1,475	1,142	4,055	1,629	13,659	673	17,760	7,635	37,204
Orissa	1953-54	388	993	270	530	850	568	2,072	545	4,477	134	3,746	3,158	11,415
	1961-62	298	1,392	264	691	1,130	655	2,348	648	5,190	115	3,306	3,799	12,238
	1971-72	431	1,398	371	983	1,604	738	2,602	469	3,682	61	1,396	4,080	9,655
	1982	311	1,314	327	1,058	1,679	846	3,000	474	3,673	58	1,412	4,061	10,091
Punjab & Haryana	1953-54	976	368	88	234	403	246	932	538	4,736	286	8,797	2,648	14,596
	1961-62	307	1,021	123	206	346	230	844	485	4,213	247	6,554	2,496	12,080
	1971-72	255	1,363	97	235	386	242	873	521	4,471	190	4,789	2,806	10,616
	1982	245	1,792	128	392	658	482	1,782	726	6,258	246	5,955	3,883	14,781
Rajasthan	1953-54	681	164	67	230	397	348	1,269	700	6,436	617	23,435	2,740	31,604
	1961-62	350	441	74	315	553	457	1,690	952	8,325	682	24,149	3,197	34,791
	1971-72	88	378	80	354	587	603	2,232	978	8,607	636	21,405	3,037	32,911
	1982	355	614	153	649	1,178	730	2,668	1,378	12,486	639	20,112	4,365	36,597
Tamil Nadu	1953-54	872	772	194	361	594	263	951	267	2,103	63	1,972	2,598	5,814
	1961-62	1,637	2,539	509	1,128	1,888	749	2,599	615	4,685	96	2,310	6,764	11,991
	1971-72	991	2,537	473	1,042	1,675	664	2,319	511	4,057	85	2,096	5,830	10,620
	1982	1,347	3,369	636	1,047	1,670	767	2,664	454	3,504	58	1,305	7,042	9,779
Uttar Pradesh	1953-54	1,069	3,462	923	2,323	3,929	2,101	7,520	2,069	16,661	395	9,744	11,419	38,777
	1961-62	371	4,533	1,125	2,779	4,547	2,860	10,206	2,381	19,242	447	10,840	13,371	45,960
	1971-72	670	5,714	1,541	3,266	5,345	2,737	9,711	2,029	16,179	298	6,607	14,741	39,383
	1982	747	5,966	1,402	3,760	6,091	2,679	9,442	1,991	15,846	268	5,944	15,411	38,725
West Bengal	1953-54	878	1,551	439	711	1,188	539	1,903	484	4,041	111	2,660	4,274	10,231
	1971-72	617	1,896	468	890	1,528	826	2,955	610	4,804	75	1,623	4,914	11,378
	1971-72	542	2,588	652	1168	1,954	700	2,455	499	3,753	40	742	5,537	9,556
	1982	1,328	3,630	990	1339	2,198	888	3,024	512	3,858	22	441	7,719	10,511
All-India	1953-54	14,669	15,360	4,166	8,879	14,839	8,569	30,821	11,145	95,230	4,910	160,375	63,532	305,431
	1961-62	8,466	23,579	5,062	11,484	19,064	10,924	39,401	13,002	109,703	4,951	144,631	72,406	317,861
	1971-72	7,558	27,609	6,106	13,905	22,726	12,141	43,361	12,976	107,840	4,181	115,467	78,370	295,500
	1982	10,637	34,614	8,120	17,302	28,022	13,795	48,790	13,777	112,484	3,730	98,404	93,855	295,820

Source: 1. Report on Landholdings(3); 8th Round 1953-54,NSS Report No. 36. 2. Report on Landholdings(4); 8th Round 1953-54,NSS Report No. 66. 3. Report on Some Aspects of Landholdings; 17th Round 1961-62, NSS Report No. 144. 4. Report on Some Aspects of Landholdings; 26th Round 1971-72, NSS Report No. 215. 5. Report on Landholdings(1); 37th Round 1982, NSS Report No. 330.

TABLE 2. CHANGES IN THE NUMBER OF OPERATIONAL HOLDINGS AND THE AMOUNT OF AREA OPERATED IN RURAL INDIA: MAJOR STATES: 1953-54 TO 1982

Holdings = 000'
Area = 000 acres

States	Year	Sub-marginal Holdings		Marginal Holdings		Small Holdings		Medium Holdings		Large Holdings		All Holdings	
		H	A	H	A	H	A	H	A	H	A	H	A
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Andhra Pradesh	1953-54	1,052	425	1,064	1,734	898	3,198	1,063	8,693	409	13,700	4,486	27,750
	1961-62	632	265	1,033	1,642	739	2,627	1,069	8,607	501	15,077	3,974	28,218
	1971-72	923	447	1,172	1,888	848	2,951	1,107	9,100	380	10,755	4,430	25,141
	1982	1,135	427	1,362	2,194	1,142	3,923	1,166	9,552	342	9,441	5,147	25,537
Assam	1953-54	197	96	224	387	518	1,938	494	3,942	62	1,742	1,495	8,105
	1961-62	181	103	317	534	488	1,722	288	2,067	12	223	1,286	4,649
	1971-72	307	180	508	887	470	1,720	258	1,905	12	237	1,555	4,929
	1982	684	248	532	901	488	1,741	269	2,020	13	284	1,986	5,194
Bihar	1953-54	1,554	660	1,145	1,927	1,201	4,310	1,149	9,435	226	5,513	5,275	21,845
	1961-62	1,924	950	1,613	2,697	1,489	5,283	1,254	9,989	224	5,619	6,504	24,538
	1971-72	2,162	892	1,643	2,730	1,508	5,235	1,016	7,946	136	3,145	6,465	19,948
	1982	3,975	1,272	2,470	3,926	1,659	5,994	1,143	8,739	145	3,260	9,392	23,191
Gujarat	1953-54	97	44	166	288	191	695	394	3,654	346	12,171	1,194	16,852
	1961-62	130	53	284	483	331	1,163	828	6,930	552	14,565	2,095	23,194
	1971-72	207	114	428	714	484	1,808	800	7,022	418	11,495	2,337	21,153
	1982	351	115	591	955	522	1,857	752	6,212	298	7,259	2,514	16,398
Jammu & Kashmir	1953-54	48	23	123	210	126	450	101	780	7	150	405	1,613
	1961-62	74	44	178	304	158	545	113	827	8	155	531	1,875
	1971-72	86	47	201	344	162	588	75	552	2	41	526	1,572
	1982	191	90	250	417	181	613	992	702	5	93	726	1,915
Karnataka	1953-54	289	101	407	708	500	1,783	852	7,329	434	13,742	2,482	23,663
	1961-62	157	63	334	571	417	1,498	1,039	8,776	442	13,369	2,389	24,277
	1971-72	201	93	675	1,132	694	2,566	1,067	9,113	407	11,103	3,044	24,007
	1982	659	144	674	1,106	293	2,837	1,025	8,028	351	9,409	3,502	21,524
Kerala	1953-54	646	246	317	506	142	503	105	843	24	614	1,234	2,712
	1961-62	1,024	410	399	614	218	761	136	1,042	18	514	1,795	3,341
	1971-72	1,524	490	414	641	200	699	102	801	8	193	2,248	2,824
	1982	2,291	687	537	836	232	807	111	840	9	180	3,180	3,350
Madhya Pradesh	1953-54	406	129	364	623	507	1,852	1,315	11,910	877	27,717	3,469	42,231
	1961-62	318	150	603	1,061	820	2,975	1,662	14,475	837	23,125	4,240	41,786
	1971-72	589	212	738	1,277	1,030	3,859	1,938	16,799	785	21,401	5,080	43,548
	1982	722	191	877	1,399	1,147	4,184	1,746	15,026	524	13,203	5,016	34,003

(Contd.)

TABLE 2. *(CONCLD.)*

States	Year	Sub-marginal Holdings		Marginal Holdings		Small Holdings		Medium Holdings		Large Holdings		All Holdings	
		H	A	H	A	H	A	H	A	H	A	H	A
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Maharashtra	1953-54	339	125	440	755	517	1,872	1,065	9,622	789	26,235	3,150	38,699
	1961-62	303	131	538	914	644	2,299	1,189	10,662	896	26,970	3,570	40,976
	1971-72	363	172	747	1,187	1,017	3,718	1,683	14,793	868	24,505	4,678	44,375
	1982	749	176	679	1,083	922	3,244	1,476	12,555	669	17,655	4,495	34,713
Orissa	1953-54	561	207	491	829	553	2,022	584	4,739	150	4,089	2,339	11,886
	1961-62	385	183	629	1,002	742	2,600	698	5,573	123	3,246	2,577	12,604
	1971-72	672	291	981	1,634	781	2,827	530	4,075	67	1,522	3,031	10,349
	1982	632	220	954	1,563	761	2,773	506	3,874	61	2,042	2,914	140,472
Punjab & Haryana	1953-54	173	46	141	243	216	833	586	5,450	395	11,081	1,511	17,653
	1961-62	173	76	162	261	203	691	570	4,958	322	7,619	1,430	13,605
	1971-72	55	257	127	215	231	846	604	5,379	245	5,891	1,262	12,588
	1982	1,179	115	259	453	326	1,212	777	6,778	265	6,250	2,806	14,808
Rajasthan	1953-54	108	60	234	401	330	1,192	803	7,438	716	28,023	2,191	37,114
	1961-62	107	48	320	559	472	1,689	999	8,480	767	25,776	2,665	36,552
	1971-72	674	113	330	557	531	1,928	1,065	9,248	638	21,477	3,238	33,323
	1982	492	132	611	1,111	665	2,455	1,365	12,564	612	18,904	3,745	35,166
Tamil Nadu	1953-54	574	207	477	879	389	1,635	384	3,600	77	2,668	1,901	8,989
	1961-62	718	397	1,151	1,926	872	3,025	730	5,559	93	2,201	3,564	13,108
	1971-72	822	416	1,209	2,009	719	2,514	549	4,259	82	1,862	3,381	11,060
	1982	2,110	535	1,023	1,629	748	2,583	475	3,639	58	1,280	4,414	9,666
Uttar Pradesh	1953-54	1,506	781	2,142	3,635	2,198	7,916	2,176	17,696	499	10,824	8,521	40,852
	1961-62	1,902	996	2,682	4,298	2,808	9,837	2,674	21,074	513	11,242	10,579	47,447
	1971-72	2,260	1211	3,252	5,440	2,982	10,759	2,271	18,086	311	7,019	11,076	42,515
	1982	4,202	1641	3,547	5,868	2,832	9,862	2,175	17,296	292	6,842	13,048	41,509
West Bengal	1953-54	1,032	375	696	1,191	711	2,559	640	5,038	98	2,179	3,177	11,342
	1961-62	627	286	842	1,459	971	3,506	754	5,759	72	1,479	3,266	12,489
	1971-72	1,099	461	1,243	2,163	873	3,059	577	4,214	36	681	3,828	10,578
	1982	2,984	973	1,494	2,421	963	3,336	574	4,263	25	603	6,040	11,596
All-India	1953-54	8,744	3,576	8,616	14,560	9,250	33,440	12,189	104,029	5,555	178,388	44,354	333,993
	1961-62	8,696	4,186	11,138	18,424	11,483	40,638	14,087	115,025	5,361	151,345	50,765	329,618
	1971-72	12,127	5,254	13,898	23,366	12,773	45,937	13,773	114,282	4,408	121,600	57,070	310,439
	1982	22,692	7,094	16,310	26,587	13,724	48,582	13,847	113,475	3,687	97,121	70,260	292,859

Source: 1. Report on Landholdings(4); 8th Round 1953-54, NSS Report No. 66. 2. Report on Landholdings(5); 8th Round 1953-54, NSS Report No. 74. 3. Report on Some Aspects of Landholdings; 17th Round 1961-62, NSS Report No. 144. 4. Report on Some Aspects of Landholdings; 26th Round 1971-72, NSS Report No. 215. 5. Report on Landholdings(2); 37th Round 1982, NSS Report No. 331.

INDIAN TEA INDUSTRY

T. Chiranjeevi

The paper is divided in two parts. In Part I, an attempt is made to evaluate the performance of the Indian tea industry, during the decade 1976-86, in terms of trends and variations in output, area, yield, prices, and exports. The structural changes in the industry are brought out by analysing the changes in the size of holdings, method of marketing, etc. In Part II, the supply response of the industry is examined in terms of decisions regarding new plantings, replantings, and yield per hectare. Appropriate regression methods are used. The Editor has added a statistical appendix.

I. INDIAN TEA INDUSTRY: A PROFILE

Production of tea in India is highly concentrated in a few areas. Of the 14 major states, Assam and West Bengal in the North and Tamil Nadu, Kerala, and Karnataka in the South, account for about 97 per cent of the total area and about 99 per cent of the total production of tea in India. Among these states, the districts of Darrang, Lakhimpur, Sibsagar, and Cachar in Assam, Darjeeling, Dooars, and Terai in West Bengal, Coimbatore, and Nilgiris in Tamil Nadu, and Idduki from Kerala, account for 90 per cent of the total area and 93 per cent of the total tea production. Further, Lakhimpur and Sibsagar in Assam, Dooars in West Bengal, and Nilgiris in Tamil Nadu are the more important tea producing districts.

In 1961, orthodox tea formed about 57 per cent of the total tea produced. It has come down to about 26 per cent in 1987. The Green tea produced had always formed a small part of our tea production and has remained at around 1.5 per cent. At present, a major part of the tea produced in India is of cut, tear and curl (C.T.C.) type. It constitutes about 79 per cent of the tea produced in North India and about 69 per cent in South India. West Bengal is the major producer of Green tea (about 45 per cent), followed by Nilgiris (about 26 per cent) and Assam (about 19 per cent).

MARKETING OF TEA

About 70 per cent of the total tea sold in 1987, was through various Indian auctions and only about 2 per cent through London auction. The rest is sold through other means like, forward contracts and ex-garden sales, which form about 4 and 24 per cent, respectively. There are mainly 6 auction centres in India, 3 in the North and 3 in the South. In the North, Calcutta, Guwahati, and Siliguri are the main auction centres and in the South, Cochin, Coonoor and Coimbatore. In North India, about 26, 29 and 16 per cent of total tea is sold through Calcutta, Guwahati, and Siliguri auction centres, respectively. In South India, about 36 per cent is through Cochin, 22 per cent through Coimbatore, and 19 per cent is through Coonoor auction. Thus, next to Indian auctions, ex-garden sales appear to be the most important mode of tea marketing.

In the North, a majority of tea producers have their own processing factories. In the South, a majority of the producers sell their green leaves to the co-operative or other bought leaf factories, which after processing sell the tea in the auctions. Thus, in the North, the producers themselves market the final product, whereas in the South middlemen market the final product. Of course, the prices the Southern tea producers receive for their green leaves depend on the prices that the factories get in the auction centres.

Tea sold in auction centres is mainly of two types of each variety, namely, the leaf and dust types of C.T.C. and the orthodox varieties. The prices these teas command are different. Between leaf and dust varieties, the former generally commands a higher price and between C.T.C. and orthodox, it depends on the auction centre. In Calcutta auctions, the orthodox leaf variety appears to get better prices, whereas in Guwahati, in some years the C.T.C. commands a better price and in others the orthodox. In Calcutta auction, the Assam orthodox type of leaf tea commands, in general, a higher price, next to Darjeeling tea, whose prices are way ahead of all others. Calcutta has the largest share of Darjeeling tea sales, among all the auction centres of India.

While in Calcutta auction, sales of orthodox tea

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are higher compared to C.T.C. and others, in Guwahati and Siliguri auctions, the sales of C.T.C. are more. In Siliguri auction centre, C.T.C. tea commands a higher price compared to orthodox variety. Till 1986, the total sales of Guwahati and Siliguri auction centres were much smaller compared to sales in Calcutta; but in 1987, sales in Guwahati were larger. The three auction centres recorded different growth rates for different teas during the decade of 1977-87. Guwahati recorded relatively higher growth rates for all types of teas. The C.T.C. dust variety, sold in Guwahati auction, tops the list with a 6.64 per cent growth rate per annum, followed by the orthodox leaf, with 6.48 per cent and C.T.C. leaf with 6.32 per cent. In Calcutta auction, the orthodox dust variety recorded the lowest growth rate of 3.44 per cent, followed by the same of Siliguri auction with 3.49 per cent per annum. All the other varieties have recorded more than 4 per cent annual growth rates.

In the South, in Cochin auction, the orthodox leaf variety commands the highest price followed by C.T.C. dust variety. In Coonoor, the C.T.C. and orthodox are not separately given; between the leaf and dust varieties, in some years the former gets a better price and in others the latter. In Coimbatore, the leaf and dust varieties are combined together. Thus, between C.T.C. and orthodox, the latter is in general found to get a higher price. In Cochin, the volume of C.T.C. dust variety sales is found to be larger compared to others. In Coonoor, though in earlier years, the dust tea volumes were higher, recently both leaf and dust are found to have almost equal sales volume. Coimbatore has larger volume of orthodox teas compared to C.T.C. But Cochin dominates in total volume of sales, where the volumes of sales of both C.T.C. and orthodox teas are higher than the other two auction centres in the South. The South Indian auction centres recorded very low growth rates. The growth rates for Coonoor, which has the largest volume of sales in South Indian auctions, and for which the comparable data are available, were from around 3.14 for orthodox dust variety to 3.76 for C.T.C. dust variety; much lower compared to those of the centres in the North.

RELATIVE PERFORMANCE OF INDIAN TEA INDUSTRY

For many years, India has been the largest single producer and exporter of tea in the world. Because of increasing competition from the newly emerging tea producers, this position is now threatened. During 1976-86, India's share in world tea production has come down from 32.24 per cent to 27.65 per cent. The main competitors are China and Kenya and their shares have gone up from 14.68 to 20.51 per cent and from 3.90 to 6.38 per cent, respectively. The decline has been even more in exports, where it came down from 29.67 to 21.53 per cent, while China's improved from 7.77 to 16.98 and Kenya's from 7.55 to 13.89 per cent. Thus, during the decade, India's share has declined in output of tea by 14.24 per cent and in exports by 27.44 per cent.

This erosion in India's position in the world market is despite an annual growth of 1.23 per cent in area and 1.95 per cent in production. The fact is that these growth rates are much smaller than those of Kenya where they are 2.50 and 8.74 per cent, respectively. For China, the area figures are not available, but production has increased at an annual rate of 7.05 per cent. Moreover, the total world production itself has been growing at 3.53 per cent per annum. In exports, India's performance has been even more disappointing. While total world exports have been growing at 2.15 per cent per annum and those of China and Kenya at 10.89 and 6.96 per cent, respectively, India's exports have declined by 1.39 per cent per annum. Clearly, the decline in our tea exports is more due to internal problems than any lack of external demand. The only positive point in this dismal picture is that our per unit value realisation has been higher than that of Kenya. It was 1.31 dollars/kg in 1976 and increased to 2.27 dollars in 1986 with a growth rate of 5.65 per cent. In comparison, for Kenya, it was 1.28 dollars/kg and increased to 1.83 dollars/kg with a growth rate of 3.64 per cent per annum.

There has been a gradual change in our exports destinations. In 1951, about 63 per cent of our exports were going to U.K., which formed about

59 per cent of its total imports. It has come down to 19 per cent, with our exports constituting also 19 per cent of U.K.'s imports. While our destination shifted to U.S.S.R. with a share of 45 per cent in our total exports, U.K.'s demand shifted to Kenya with 31 per cent of its total imports met by Kenya. These market changes could be a direct result of our decreasing participation in London auction with 70 per cent of total production being sold through domestic auctions. India's direct exports to the London auction, as also sales of Indian tea at London auction, came down drastically from 76 thousand tonnes to 19 thousand tonnes and from 82 thousand tonnes' to 18 thousand tonnes, respectively.

The composition of India's tea exports has also changed, though for the better. Among the value added items, instant tea has the highest unit value realised, followed by tea bags and other packet teas. All the three types of teas had very high growth rates during the period between 1971-72 and 1981-82, with packet teas (other than tea bags and instant tea) growing at 16.01 per cent, tea bags at 69.37 per cent and instant teas 13.62 per cent. Between 1981-82 and 1986-87, exports of both packet tea and tea bags declined by -3.85 and -9.68 per cent per annum, respectively, while the growth rate of instant tea has been halved to 6.39 per cent. But the values realised in the two periods had high growth rates of 9.20 and 9.13 per cent for packet tea, 7.82 and 9.52 per cent for tea bags, and 4.36 and 10.79 per cent for instant tea at current prices. This is partly due to the fact that the export of the highest value added item, instant tea, has been rapidly increasing in terms of quantity exported as well as value realised. Nevertheless, considering our overall poor performance of exports and production, the need to examine the problem at a deeper level cannot be over-emphasised.

The first constraint on maintaining or expanding our exports is the rapidly growing domestic demand for tea. Because of growing population, changing social habits, and improved sales organization, the domestic consumption of tea more than doubled from 221 million kgs in 1971 to 462 million kgs in 1988, that is, at an annual growth rate of 4.43 per cent. On the other hand, during the same period, the output increased from 436 million kgs to 665 million kgs, that is, at only 2.51 per cent per annum. There is thus a decline in exportable surplus. If these trends continue, it is feared that not only our exports will vanish but we may need imports to meet domestic demand. These fears are shared equally by all concerned with the tea industry, namely, the planters, the Tea Board and the policy makers. The tea development plan prepared by the Tea Board in consultation with the Planters' Associations explicitly acknowledges this threatening situation and attributes the low growth in production to the existence of a very large area under old and unproductive bushes; over 60 per cent of the total area is under bushes aged above 30 years (Table 1). Technically the economic age of the tea bush is 30 years, beyond which it needs careful attention to maintain satisfactory yield. Though this economic age depends on the soil type and management factors, considering our low levels of yield, it is certain that at least 50 per cent of the area is past its economic age. Besides, there is a substantial area vacant due to lack of infillings.

TABLE 1. PERCENTAGE OF AREA UNDER DIFFERENT AGE GROUP OF BUSHES

Age group (Hectares)	North India		South India		All India	
	1982	1987	1982	1987	1982	1987
< 5	7.88	7.41	2.17	1.56	6.70	6.29
5 - 10	8.11	9.05	6.56	6.16	7.79	8.50
11 - 20	14.49	12.22	8.53	7.81	13.26	11.38
21 - 30	12.56	14.00	6.30	6.50	11.27	12.57
31 - 40	7.61	9.14	9.27	9.70	7.96	9.25
41 - 50	8.87	7.76	13.97	9.59	9.92	8.11
> 50	40.48	40.42	53.20	58.68	43.10	43.90

TRENDS AT THE REGIONAL LEVEL

Classifying the tea bushes into three broad categories as young and non-bearing (upto 10 years), mature and technically economic (11-30 years) and old and technically uneconomic (over 30 years), Table 1 shows that, during 1982-87, there has been no change at the aggregate level in the composition of bushes with 15 per cent of the area under young bushes, 24 per cent under mature and economic bushes and 61 per cent under old and uneconomic bushes. But at the regional level, the picture is different. In 1982, while North India had 16, 28, and 58 per cent of area under the three categories of bushes, South India had 9, 15 and 72 per cent of area in the respective categories. In 1987, the composition had changed to 16, 26, and 57 in the North, and 8, 15, and 76 in the South. Thus, in both the regions, the composition has worsened. In the North, although the proportion of old bushes declined, the proportion of young bushes did not increase, and that of mature bushes declined. In the South, the proportion of mature bushes remained unchanged but that of young bushes declined and that of the old bushes increased greatly. In order to maintain the short-run output, it is necessary to have a larger proportion of area under mature bushes with economic yield. But, to increase the long-run output level, the extension of area and replanting of old bushes are very important. The small proportion of area under young bushes coupled with an undesirably large area under old bushes reflects badly on the past trends in replanting and new planting operations. Tables 2 and 3 bring out these features clearly for All India, North and South India separately. The growth rates are computed for a four year period due to the cycles observed in these variables.

TABLE 2. ANNUAL COMPOUND GROWTH RATES OF DIFFERENT TYPES OF PLANTINGS (ALL INDIA LEVEL)

(Per cent per annum)

Period	New Plantings	Replantings	Replacement plantings	Yield/ hectare	Prices
1960-64	17.64	2.58	9.33	2.38	-0.11
1965-69	-9.05	-12.61	-11.45	0.93	1.31
1970-74	-5.64	1.75	9.72	2.79	8.01
1975-79	13.14	-2.76	5.29	1.45	4.20
1980-84	-4.72	3.67	-17.02	1.50	16.01
1985-87	8.81	3.38	17.05	-0.72	2.48

It is evident from Table 2 that, despite a good price situation, the performance of the industry in terms of increasing the yield/hectare has not been satisfactory. The high negative growth rates indicate steep fall in new plantings during 1965-74. Fortunately, this was compensated by substantial increases in the later periods. The growth rates of replantings have been very moderate. Hence, a more or less flat trend in replantings is marked by drastic occasional decline. Moreover, although the replacements had better growth than new plantings, their proportion in total area being very small, their impact on changing the age composition is not much. Considering that more than 50 per cent of the total area is under old bushes, it is necessary that at least 2 per cent of the area (as stipulated) should be replanted every year. But, on an average, only around 0.30 per cent of the area is replanted and about 0.10 per cent is replacement planted. Naturally, this affects the yields. The highest yield/hectare that we achieved so far is 1,641 kgs/hectare, whereas the corresponding figures for Kenya, Japan, U.S.S.R. and Turkey are 1,846, 1,765, 1,872 and 2,039 kgs per hectare, respectively [*Tea Statistics 1986-87*, Tea Board, India, 1988, Calcutta].

TABLE 3. COMPOUND GROWTH RATES OF DIFFERENT TYPES OF PLANTINGS (AT REGIONAL LEVEL)

(Per cent per annum)

Period	North India			South India		
	New Plantings	Replantings	Replacement Plantings	New Plantings	Replantings	Replacement Plantings
1960-64	7.73	-1.54	-5.16	-6.52	19.60	-1.80
1965-69	-7.58	-10.08	-7.56	-6.05	-10.69	-4.78
1970-74	-5.25	1.24	2.10	8.57	18.15	80.32
1975-79	15.95	1.39	3.95	4.76	-20.90	32.24
1980-84	-3.74	3.15	-16.62	-25.81	24.95	-
1985-87	9.61	5.99	16.56	-3.19	-28.45	58.53

TABLE 4. CHANGES IN THE SIZE STRUCTURE OF THE INDUSTRY BETWEEN 1978-87 (REGIONAL LEVEL)

	North India			South India		
	1978	1987	% growth rate	1978	1987	% growth rate
Upto 8.09 hectares						
No. of Estates	49	41	-1.96	10,237	10,481	0.26
Area	172	177	2.91	9,347	10,707	1.52
Average size	3.51	4.32		0.91	1.02	
8.09-50 hectares						
No. of Estates	128	94	-3.37	238	183	-2.88
Area	3,694	2,685	-3.48	4,321	3,355	-2.77
Average size	28.86	28.56		18.16	18.33	
Above 50 & Upto 100						
No. of Estates	133	130	-2.26	42	42	0
Area	9,611	9,573	-0.04	3,106	3,196	0.32
Average size	72.26	73.64		73.95	76.10	
Above 100 & upto 200						
No. of Estates	256	234	-0.99	64	57	-1.28
Area	36,555	34,371	-0.68	9,644	8,641	-1.21
Average size	142.80	146.89		150.69	151.60	
Above 200 & upto 400						
No. of Estates	339	302	-1.28	101	103	0.22
Area	99,847	89,006	-1.27	29,173	30,084	0.34
Average size	294.53	294.72		288.84	292.08	
Above 400						
No. of Estates	247	306	2.41	37	36	-0.30
Area	1,40,390	1,77,943	2.67	18,989	18,630	-0.21
Average size	568.38	581.51		513.22	517.5	

Table 3 shows that replantings in the North have picked up since the 1970's, though, the growth rates are not very high. New plantings are also doing better since 1975, except for a marginal decline during 1980-84. In contrast, in the South, with a larger area under old bushes, the positive growth rates are alternated with high negative rates in new plantings, replantings, and replacement plantings. The differences in the age-compositions and the growth rates in the two regions may be due to the differences in the size distribution of holdings (Table 4). In the South, the majority of holdings have less than 8.09 hectares, whereas in the North, they have more than 200 hectares. Further, while in the North, the shift is towards large estates with more than 400 hectares, in the South, it is towards small (less than 8.09 hectares) and medium (200-400 hectares) holdings. Given the predominance of small holdings in the South and that of large estates in the North, the two regions face different constraints. In the South, the main problem may be of resources for replanting and new planting. In the North, the concern for maintaining the output in order to spread the large overhead costs, may make the planters reluctant to uproot the old bushes and incur losses in the short-run.

A STATE LEVEL ANALYSIS

Over the years, the distribution of area under tea, across states, has changed with Assam gaining and the rest loosing. Moreover, Assam's share in total production has been larger than that in total area, except in 1987. The output share of West Bengal though it was initially larger than its share in the area, has been falling over the years and, since 1981, is smaller than its share in area. In contrast, Tamil Nadu has improved its share in production from about 9 per cent to 13 per cent. Kerala and Karnataka also, for most of the periods, have larger share in output than in area. From Table 5, it is clear that different states have experienced different rates of growth in different periods. For all the states, the yield per hectare has grown at a higher rate than area. Assam experienced a higher growth rate than the rest in area, in all the periods. Except for Tamil Nadu, during 1951-61, and Kerala in most of the periods, all the states had a general increase in area though at a low rate.

TABLE 5. PERCENTAGE AREA AND PRODUCTION OF FIVE MAJOR TEA PRODUCING STATES, DURING 1951-87

States	1951		1961		1971		1981		1987	
	A	P	A	P	A	P	A	P	A	P
Assam	49.13	52.69	49.02	51.44	51.14	51.36	52.93	54.45	54.77	54.68
W.B.	25.11	25.98	24.97	24.34	24.82	23.90	24.26	22.89	24.27	22.49
T.N.	10.53	8.84	9.88	11.22	9.72	13.21	9.65	12.78	9.19	12.98
Kerala	10.48	9.03	12.01	11.16	10.45	9.81	9.28	8.50	8.36	8.46
Karnataka	0.53	0.31	0.54	0.50	0.53	0.66	0.50	0.61	0.46	0.64

Note: A: total area under tea, P: total production of tea.

Tamil Nadu had a generally higher growth in yield compared to the other states. During 1971-81, the rise in yield is the lowest for all the Southern States, compared to that in other periods. During the same period, the Northern States had their highest growth in yield. While the Southern States had better area growth rates prior to 1981, it is the other way for the Northern States. During 1978-87, compared to the previous decade, growth in area under tea was larger in the North and growth in yield per hectare was larger in the South.

TABLE 6. COMPOUND GROWTH RATES OF AREA AND YIELD (STATE LEVEL)

(Per cent per annum)

States	1951-61		1961-71		1971-81		1981-87	
	Area	Yield	Area	Yield	Area	Yield	Area	Yield
Assam	0.42	1.52	1.17	0.89	1.08	2.05	1.87	1.08
West Bengal	0.39	0.61	0.68	1.21	0.60	1.50	1.13	1.45
Tamil Nadu	-0.20	4.86	0.57	3.18	0.67	1.52	0.46	2.72
Kerala	1.83	2.51	-0.65	1.59	-0.46	1.40	-0.45	3.29
Karnataka	0.73	6.80	0.42	4.82	0.17	1.22	0.07	3.69

We have seen from the aggregate and regional level analysis that the North is moving towards large estates, the number of estates with more than 400 hectares on the rise, whereas the South appears to favour small and medium holdings. The observed trends in area and yield growth rates in individual States could be a direct consequence of the changing size structure. In order to trace these regional tendencies, a State level analysis of changes in the size structure is attempted.

Table 7 shows that, during 1978-87, there was a change in the size structure in all the states. The average size of the holdings has in general risen with different growth rates across all states except West Bengal where there was an increase in the number of estates with less than 8.09 hectares. Both Assam and West Bengal had an increase in the largest size holding, with the former having a faster growth. Similarly, in both the States, there was an increase in the holdings with 50-100 hectares, though this is very insignificant in Assam. Other size holdings in both the States have shown a decline.

In the South, Kerala shows a decline in the number of holdings of all sizes except the smallest (i.e. less than 8.09). On the other hand Karnataka, which has no estates greater than 400 hectares, had almost no change in the size distribution of the holdings. In Tamil Nadu, the number of estates with 200-400 hectares increased substantially. There was a marginal increase in the number of holdings with less than 8.09 hectares and with 50-100 hectares and a marginal decline in the number of estates with 100-200 and more than 400 hectares. The number of holdings with more than 8.09 but less than 50 hectares declined sharply.

Thus, while small holdings (less than 8.09 hectares) have increased in West Bengal, they declined in Assam. The holdings with more than 8.09 but less than 50 hectares have declined across all the States, except Karnataka, where none of the size classes had shown any change. Number of holdings with 50-100 hectares increased significantly in West Bengal. There is a general decline in the number of holdings with 100-200 hectares and with 200-400 hectares, the latter with an exception of Tamil Nadu. Assam shows a tendency towards large estates (with more than 400 hectares). West Bengal and Tamil Nadu moved towards small and medium holdings. Kerala shows a general decline in all size holdings, and Karnataka shows no change in size structure.

Besides these differential changes in the size structure of holdings in different states, the area under different age groups of bushes might also have changed across states and, as discussed earlier, affected their yield performance. In order to see how the age distribution of the gardens changed over time in different States, the growth rates of area under each age group for the five states are computed for the period 1977-87 (Table 8). The data on new plantings and replantings are not available at the State or district level. The changes in the area under different age groups of bushes indirectly indicate changes in the planting and uprooting operations overtime. The changes in the area under less than 5 years old bushes and that of over 50 years old bushes indicate future potential output whereas the middle aged groups indicate the current potential output. These groups also indicate the changes in the level of plantings in the past whereas the area under more than 50 years old bushes indicate the level of uprootings in the past as well as current years.

Given the above assumptions regarding the impact of different age groups on the present and

TABLE 7. STATE LEVEL CHANGES IN THE SIZE STRUCTURE OF THE TEA INDUSTRY BETWEEN 1978 & 1987

Size of the holdings		Assam			West Bengal			Tamil Nadu			Kerala			Karnataka		
		1978	1987	Av. growth rate %	1978	1987	Av. growth rate %	1978	1987	Av. growth rate %	1978	1987	Av. growth rate %	1978	1987	Av. growth rate %
upto 8.09	No. of estates	32	21	-4.57	9	17	7.32	6,346	6,558	0.37	3,889	3,920	0.09	2	3	4.61
hectares	Area	111	97	-1.49	19	63	14.25	7,211	8,178	1.41	2,127	2,520	1.90	9	9	0.0
	Av. Size of the estates	3.47	4.62	3.23	2.11	3.71	6.93	1.14	1.25	1.04	0.55	0.64	1.81	4.5	3	-4.61
above 8.09	No. of estates	97	75	-2.82	11	10	-1.05	156	130	-2.01	79	50	-4.96	3	3	0.0
and upto 50	Area	2866	2,138	-3.20	310	273	-1.40	2,741	2,310	-1.88	1,513	979	-4.72	67	67	.0.0
hectares	Av. Size of the estates	29.55	28.51	-0.40	28.18	27.30	-0.35	17.57	17.77	0.13	19.15	19.58	0.14	22.33	22.33	0.0
above 50	No. of estates	91	92	0.12	15	20	3.25	21	22	0.52	19	18	-0.60	2	2	0.0
and upto 100	Area	6503	6,756	0.43	1,141	1,499	3.08	1,577	1,691	0.78	1,393	1,351	-0.34	136	155	1.46
hectares	Av. Size of the estates	71.46	73.44	0.30	76.07	74.95	-0.17	75.10	76.86	-0.26	73.32	75.06	0.26	68	77.50	1.46
above 100	No. of estates	153	148	-0.37	73	64	-1.45	28	26	-0.82	31	26	-1.94	5	5	0.0
and upto 200	Area	21226	21,347	0.06	11,148	9,765	-1.46	4,402	3,960	-1.17	4,426	3,866	-1.49	816	816	0.0
hectares	Av. Size of the estates	138.73	144.24	0.43	152.71	152.58	-0.01	157.21	152.21	-0.35	142.77	148.69	0.45	163.20	163.20	0.0
above 200	No. of estates	227	202	-1.29	107	94	-1.43	43	48	1.23	55	52	-0.62	3	3	0.0
and upto 400	Area	66,961	59,972	-1.22	31,706	27,612	-1.52	12,621	14,226	1.34	15,743	14,996	-0.54	809	862	0.71
hectares	Av. Size of the estates	294.98	296.89	-0.07	296.32	293.75	-0.09	293.51	296.38	0.11	286.24	288.39	0.08	269.66	287.33	0.71
above 400	No. of estates	163	210	2.86	84	96	1.50	17	16	-0.67	20	20	0.0	-	-	-
hectares	Area	94,760	1,22,910	2.93	45,630	55,033	2.10	8,041	7,702	-0.48	10,948	10,928	-0.02	-	-	-
	Av. Size of the estates	581.35	585.29	0.07	543.21	573.26	0.60	473	481.38	0.20	547.40	546.40	0.20	-	-	-

TABLE 8. COMPOUND GROWTH RATES OF AREA UNDER DIFFERENT AGE GROUP OF BUSHES DURING 1977-87 (STATE LEVEL)

(Per cent per annum)

Age group (years)	Assam	West Bengal	Tamil Nadu	Kerala	Karnataka
<5	2.22	6.50	-9.38	-7.62	-8.22
5-10	1.08	0.53	-0.26	-12.25	-3.85
11-20	-0.71	-4.78	3.75	-9.41	14.71
21-30	3.55	7.57	0.98	-0.44	4.99
31-40	1.91	0.79	0.58	1.17	-2.27
41-50	-1.64	-4.57	-8.85	-10.94	-5.04
>50	1.45	2.53	4.26	3.89	16.06

future output potential, it seems that the Northern States are faring much better than the Southern States. The positive growth rates of area under less than 5 and 5-10 years age group of bushes show that the new plantings in these states are increasing. The smaller growth of the latter age group indicates that the increase in plantings is a recent phenomenon. Further, the positive growth rates of 21-30 and 31-40 years old bushes, which are results of plantings 20 or 30 years ago, indicate a kind of stability in maintaining the increase in the short run output. The relatively small growth in 5-10 years age group and the negative rate of growth of 11-20 years, coupled with the positive growth rates of the next age groups imply that the plantings were rising during the 1960's, then declined for some 10 or 15 years and then increased again during the 1980's.

The general decline in area under 41-50 years age group, observed across all states, might be due to several reasons such as a long declining trend in plantings in the distant past or the bushes under this age group being more prone to disease or the new short duration varieties which have a shorter economic life compared to the traditional varieties.

The area under very old bushes (more than 50 years old) has been increasing in all the states, but at a higher rate in the Southern States, especially in Karnataka. This rise in area under uneconomic bushes coupled with a sharp decline in almost all the younger age groups across these states, indicates a bleak future for the tea industry in the South. Tamil Nadu and Karnataka have at least an increasing potential in the short-run but Kerala shows a state of general debility. These trends in the state level performances need to be further examined at the district level in order to identify and separate the districts with good prospects from those which need closer attention. For this purpose, 10 districts are selected based on their contributions to area and output of their respective states: Four from Assam, three from West Bengal, two from Tamil Nadu, and one from Kerala. These 10 districts together account for more than 83 per cent of the total area under tea and for more than 92 per cent of the total output produced in India. Their performance in terms of area and yield changes are presented in Table 9.

TABLE 9. COMPOUND GROWTH RATES OF AREA AND YIELD (DISTRICT LEVEL)

(Per cent per annum)

District	Area					Yield/hectare				
	1961-66	1966-71	1971-76	1976-81	1981-86	1961-66	1966-71	1971-76	1976-81	1981-86
Darrang	1.61	1.48	1.22	1.40	1.97	0.74	1.82	1.45	2.88	0.93
Lakhimpur	1.31	1.34	0.89	1.32	1.60	-1.01	2.95	3.43	1.43	-1.33
Sibsagar	1.20	1.05	0.78	1.78	2.55	-0.90	1.27	4.40	-1.71	0.91
Cachar	0.17	0.55	-6.61	0.96	1.42	-0.75	2.46	6.85	-2.41	1.75
Darjeeling	-0.27	-0.12	-0.32	1.39	0.80	-2.64	3.50	2.30	0.10	-3.99
Terai	1.41	1.45	0.50	0.49	2.67	-1.76	5.84	0.56	2.43	3.04
Dooars	0.90	0.76	0.11	1.18	1.17	-0.21	2.37	2.68	0.38	0.70
Coimbatore	-0.23	-0.15	-0.11	0.02	0.02	3.71	2.40	2.58	2.40	2.42
Nilgiris	0.88	0.80	1.06	0.80	0.76	3.41	3.15	-1.59	3.91	3.58
Idduki	-	-	-0.17	0.12	-0.20	-	-	2.56	0.86	0.49

The Table shows that, except in the period 1971-76, there has been a general increase in the area under tea in almost all the districts. In fact, except for Darjeeling, Coimbatore and Idduki, the area in all the districts has increased. Darjeeling and Coimbatore started improving in the decade after 1976. But Idduki continues to decline in area even after 1976. Of all the districts, Darrang had a higher growth in area in all the periods, followed by Lakhimpur and Terai. But after 1981, Sibsagar and Terai are in the lead. In the South, only Nilgiris shows continuous increase in area.

TABLE 10. COMPOUND GROWTH RATES OF AREA UNDER DIFFERENT AGE GROUP OF BUSHES DURING 1977-87 (DISTRICT LEVEL)

(Per cent per annum)

District	Age Group						
	<5	5-10	11-20	21-30	31-40	41-50	>50
Darrang	0.48	1.02	3.08	5.28	4.11	-5.35	-0.08
Lakhimpur	2.97	1.63	-2.99	4.80	2.66	-1.91	2.50
Sibsagar	1.68	0.89	-0.59	2.53	1.00	-0.59	1.69
Cachar	2.89	2.62	-0.07	4.49	-1.10	-0.10	0.76
Darjeeling	8.31	-5.30	-1.73	1.73	-2.87	-2.27	-0.36
Terai	6.88	2.23	-1.90	6.03	1.79	-3.92	1.63
Dooars	4.76	1.10	-4.86	8.41	0.42	-2.50	0.76
Coimbatore	-15.77	-13.07	5.84	-4.18	-2.36	-2.19	5.32
Nilgiris	-7.35	-24.75	3.45	1.13	0.39	-3.54	2.60
Idduki	-1.66	-2.13	-8.77	-4.05	0.68	-12.49	4.10

The period 1971-76 is marked for a low growth or even a decline in area compared to the other periods. But during 1981-86 there was a substantial increase in the area across the districts. In general, the southern districts had low growth rates of area compared to the northern districts. In the North, growth was slow in Cachar and Dooars. Darjeeling had a continuous decline in area until 1976 but it improved later. Thus the currently problem districts seem to be Idduki, where the area continues to decline and Coimbatore, where the rate of growth is much smaller compared to the rest.

The districts which did better in terms of area are relatively poor performers in terms of yield. Darrang which was leading in terms of increase in area is trailing behind in terms of yield. In fact the southern districts have better yield growth rates compared to the northern districts. Nilgiris especially shows an almost steady growth in yield. Even Idduki, with a continuously declining area, shows positive yield growth rates. Darjeeling, had rising yields during 1966-76 but a decline or a small growth in yield in other periods. Lakhimpur, Sibsagar, and Dooars, which had positive rate of growth in area in all the periods, showed decline in yields in one or more periods. Terai, Nilgiris, and Coimbatore appear to be strong in terms of yield, according to the current trends. The trends in yield may be misleading because of changes in age composition of the area. The southern districts, which showed better yield growth, in fact have a worsening age composition, with area under young bushes declining and that under old bushes increasing. The present trend in yield may last for another 10 to 20 years due to their high growth rates of area under the 11-20 age group. More can be learnt about the future performances of these districts only by looking at the trends in area under various age groups of bushes.

In the North, there appears to be continuous plantings as area under the less than 5 years age group in these districts, led by Darjeeling, Terai, and Dooars, in that order, has increased substantially. The decline in the 11-20 age group in some of these districts implies that the rising trend in plantings is a relatively recent phenomenon. Terai and Dooars appear to be the most prospective leaders in raising the output in future as they have very high growth rates in the younger and middle age group of bushes coupled with a relatively smaller rise in old bushes.

TABLE 11. DISTRICT LEVEL CHANGES IN THE SIZE STRUCTURE OF THE TEA INDUSTRY BETWEEN 1978 AND 1987

District		Upto 8.09 hectares			From 8.09 to 50 hectares			From 50 to 100 hectares			From 100 to 200 hectares			From 200 to 400 hectares			Above 400 hectares		
		No. of estates	Area	Av. size of estate	No. of estates	Area	Av. size of estate	No. of estates	Area	Av. size of estate	No. of estates	Area	Av. size of estate	No. of estates	Area	Av. size of estate	No. of estates	Area	Av. size of estate
Darrang	1978	1	8	8.00	3	79	26.33	3	213	71.00	15	2081	138.73	38	12090	318.16	33	19074	578.00
	1987	-	-	-	-	-	-	3	219	73.00	15	2255	150.33	28	9378	334.93	44	26452	601.18
Rate of growth		-	-	-	-	-	-	0	3.09	-	0	0.90	-	-3.34	-2.78	-	3.25	3.70	-
Lakhimpur	1978	14	38	2.71	28	698	24.93	23	1693	73.61	55	7802	141.86	66	18747	284.05	55	31825	578.64
	1987	14	62	4.43	24	560	23.33	31	2327	75.05	52	7914	152.19	58	17321	298.64	65	39971	615.94
Rate of growth		0	5.59		-1.70	-2.42	-	3.37	3.60	-	-0.62	0.16	-	-1.43	-0.88	-	1.87	2.57	-
Sibsagar	1978	16	65	4.06	50	1524	30.48	47	3431	73.00	49	6311	128.00	59	17692	299.86	46	25745	559.67
	1987	6	33	5.55	46	1389	30.20	44	3224	73.27	51	6782	132.98	50	15200	304.00	56	32967	588.70
Rate of growth		-10.33	-6.55	-	-0.92	-1.03	-	-0.73	-0.69	-	4.46	0.80	-	-1.82	-1.67	-	2.21	2.79	-
Cachar	1978	-	-	-	9	331	36.78	13	837	64.39	22	3253	147.86	49	14249	290.80	20	12765	638.25
	1987	1	2	2.00	5	189	37.80	7	463	66.14	20	2927	146.35	50	13535	270.70	33	16359	495.73
Rate of growth		-	-	-	-6.32	-6.04	-	-6.65	-6.37	-	-1.05	-1.17	-	0.23	-0.57	-	5.72	2.80	-
Darjeeling	1978	7	11	1.57	97	2866	29.55	91	6503	71.46	36	5344	148.44	35	9146	261.31	6	2683	447.17
	1987	4	6	1.50	4	130	32.50	11	887	80.64	33	5001	151.45	31	8870	286.13	7	3182	454.57
Rate of growth		-6.03	-6.51	-	-29.83	-29.09	-	-20.93	-19.86	-	-0.96	0.73	-	-1.34	-0.34	-	1.73	1.91	-
Terai	1978	1	N.A.	-	1	17	17.00	2	151	75.50	19	2877	151.42	18	5690	316.11	5	2329	465.80
	1987	9	31	3.44	3	65	21.66	3	187	62.33	17	2544	149.65	16	4444	277.75	10	4714	471.40
Rate of growth		27.65	-	-	12.98	16.07	-	4.61	2.40	-	-1.23	-1.36	-	-1.30	-2.71	-	8.01	8.15	-
Dooars	1978	1	8	8.00	3	76	25.33	3	240	80.00	18	2927	162.61	54	16871	312.43	73	40618	556.41
	1987	4	26	6.50	3	78	26.00	6	425	70.83	14	2220	158.57	47	14298	304.21	79	47137	596.67
Rate of growth		16.65	13.99	-	0.00	0.29	-	8.01	6.56	-	-2.75	-3.03	-	-1.53	-1.82	-	0.88	1.67	-
Coimbatore	1978	-	-	-	-	-	-	1	99	99.00	2	331	165.50	19	5732	301.68	9	3846	427.33
	1987	-	-	-	6	74	12.33	1	98	98.00	2	319	159.50	20	6116	305.80	8	3433	429.13
Rate of growth		-	-	-	-	-	-	0.00	-0.11	-	0.00	-0.41	-	0.57	0.72	-	-1.30	-1.25	-
Nilgiris	1978	6,344	7,205	1.14	153	2655	17.35	17	1216	71.53	25	3887	155.48	18	5240	291.11	8	4195	524.38
	1987	6,554	8,159	1.25	121	2150	17.77	18	1328	73.78	23	3470	150.87	22	6473	294.23	8	4269	533.63
Rate of growth		0.36	1.39	-	-2.57	-2.32	-	0.64	0.98	-	-0.92	-1.25	-	2.26	2.38	-	0.00	0.20	-
Idduki	1978	83	155	1.87	29	611	21.07	8	625	78.13	18	2662	147.89	43	12411	288.63	14	7588	542.00
	1987	100	512	5.12	25	470	18.80	8	664	83.00	15	2348	156.53	41	11923	290.81	14	27685	548.93
Rate of growth		2.09	14.20	-	-1.64	-2.87	-	0.00	0.68	-	-2.01	-1.39	-	-0.53	-0.45	-	0.00	0.14	-

Among other districts, the northern districts are much better placed than the southern districts. In fact, these southern districts may disappear from the tea map of India if due attention is not paid immediately to their problems and constraints. These may be better understood and attended to by understanding the size distribution of the holdings in these districts in contrast to the others.

Table 11 shows that among the three southern districts, Nilgiris has the highest number of small holdings and Idduki has the highest number of large holdings with more than 400 hectares. While Nilgiris is a predominantly small holders' district, Coimbatore and Idduki are dominated by medium and large estates. But, there has been almost no change in the number and average size of the large estates in all the three districts, whereas the number of small holdings have been increasing. On the other hand there has been a significant decline in the number of holders with 8.09-50 hectares in Nilgiris and Idduki. These factors probably explain, to some extent, the decline in the total area as well as plantings.

The districts of West Bengal, except Darjeeling, although they have a small number of holdings compared to the southern districts, show a rise in the small holders sector. Darjeeling which was dominated by holdings with 8.09-50 and 50-100 hectares of land in 1978, shows a general decline in the number of holdings of almost all size classes except the largest. The worst affected are the ones that were once dominating. The smallest and medium size holdings had a relatively smaller decline in their number.

In Terai and Dooars, all the size classes except the 100-200 and 200-400 hectares, had an increase in the number of holdings. Dooars, among the three West Bengal districts, has the largest number of large estates, followed by Terai. In Assam, small holdings are on the decline in almost all the districts while the number of large estates are increasing. Though, they show varying trends in other size holdings, the number of largest size holdings in all the districts are increasing and the holdings with less than 50 hectares are declining. The holdings with 200-400 hectares, which have declined in number, show a tendency to join the larger estates.

Thus, in a majority of the districts, the holdings with less than 8.09 hectares, with 50-100 hectares and with more than 400 hectares have increased during the recent decade in 1978-87. The other size holdings have declined in number. It seems that although the number of small holdings is increasing, mostly in the South, the general tendency in the tea industry is towards large estates. These changes in the number of holdings in each size class may be either due to the uprooting or extending of area under the crop on a large scale. Of the two explanations, the former seems more plausible.

PROSPECTS

The dismal performance of Indian Tea industry at the international level and the consequent erosion in its position as the largest single producer and exporter appears to be largely rooted in the domestic situation. Despite a steady rise in tea production for the past several years, today a situation has arisen where the output, after meeting the domestic demand, is not sufficient to meet our export requirements. While the output is growing at a rate of 2.5 per cent per annum, the domestic demand is growing at an average rate of 4.3 per cent per annum. The imbalance between supply and demand is causing a rise in tea prices. Even with an increase in retention for domestic purposes, from 20 per cent of production in 1950's to 60 per cent in 1980's, the prices have kept rising. During 1960-70, the average Indian auction prices rose at a low rate of 2.05 per cent per annum; in the last two decades, the prices have increased at 8.31 per cent per annum. All this rise in prices is not due to supply shortage; it is at least partly due to the general inflationary rise in prices in the country which in turn affects adversely our price competitiveness in the international market.

In order to control the domestic tea prices, the government had to place export curbs from time to time. This uncertainty in meeting the export commitments results in losing our export markets. Besides, given the captive market at home, there could have been some laxity on the part of the producers in developing the export markets. Whatever the reasons, there has been a stagnation in the level of our exports at around two million tonnes for the past two decades.

There have been suggestions to import cheap teas to meet our domestic demand, so that our higher quality teas may become available for export. This may provide temporary relief but does not address the problem of why we have not been able to expand production fast enough to meet the growing demand both at home and abroad. At the bottom, the disproportionately large area under old and uneconomic bushes in all producing areas, is one of the major constraints in expanding the current and future output levels. In order to increase our exports and meet the challenges imposed by the growing competition in the international market, it is necessary to conceive output expansion plans with emphasis on increased productivity with quality. This could be achieved only by reducing the uneconomic use of land in terms of old bushes and large vacancies.

The planters argue that they are unable to generate necessary funds for investing in replantings. According to them, the tea industry is so heavily burdened with various taxes and cesses that the profits after taxes are not sufficient to undertake any large scale reinvestment in the industry. But, it is also possible that, with rising prices, the producers are unwilling to forego short-run revenues in favour of future earnings. Replantings cause loss of output in the short-run due to the uprooting of old, but still productive bushes. Once they replant this uprooted area, they have to wait for another 4 to 5 years to get any returns on this investment. And it may take another 10 years, before the output from these new plants fully compensate for the loss in output due to uprooting. Thus it may be necessary to compensate for the losses due to uprooting, besides providing loan facilities. This need has been recognised by the policy makers, and a subsidy programme has been effected to encourage replantings.

'The Fifteen Year Tea Development Plan' prepared by the Tea Board, in consultation with the major tea planters' association, sets a target output of 950 million kgs to be produced by 2000 A.D. This figure had been arrived at by presuming a domestic consumption level of 530 million kgs, under the assumption that India's population increases by 10 million every year and the per capita consumption increases by 10 grams annually. In addition to the estimated domestic consumption, the Tea Board has set an export target of 420 million kgs, with an annual increase of 10 million kgs. The two add up to the target output level of 950 million kgs or say 1,000 million kgs of output by 2000 A.D. This implies an annual rate of growth of about 3 per cent per annum compared to the present 2.5 per cent per annum.

II. SUPPLY RESPONSE OF INDIAN TEA

Supply response of perennial crops differs from that of annual and semi-perennial crops. This is basically due to two reasons: First, unlike other crops, perennial crops have gestation periods ranging from 2 to more than 10 years. Second, they have a long economic life, ranging from 15 to 100 years, marked by a multiple age-yield profile, which can be broadly divided into three important phases. During the first phase, as the age of the plant increases yield increases, during the second phase the yield reaches its peak level and in the third phase it starts declining. Each perennial crop has its own age-yield profile. The ages where these phases start or the duration of each phase differs from crop to crop. The change from one phase to the other may be sudden or gradual depending upon the crop.

Because of these typical output characteristics of the perennial crops, the resources in them are locked up for a long-term, and investment or disinvestment decisions are based on long-term expectations. The producer cannot immediately react to the changes in the external factors. His capacity to react in the short-term is limited to marginal changes in the output. Thus, while the investment decisions indicate the long run responses of a perennial crop, the harvesting decision reflects the short-run responses. Further, while the potential output is determined by the investment decisions, the actual output produced in any period depends on the harvesting decision. The period gap between investment and returns is so long that the chances for the profit and other conditions to change and for the experience to deviate from expectations are more here than in the case of annual crops.

Besides its impact on output and price expectation behaviour, another important role played by the time element is reflected in the number and variety of decisions the perennial crop producers make from time to time in planning to achieve their desired level of output. For an annual crop producer the implementation of his output plans may be in the form of decisions regarding the allocation of land and other inputs, which can be revised in the next production period. For the perennial crop producer the choice is between the short-run maintenance and/or long-run changes in the level of output. Therefore, maintenance of a certain age-composition of his gardens in order to satisfy his current and future output plans becomes a governing consideration. Hence, his decisions are not a once and for all decisions but they consist of a series of decisions to extend, uproot, and replant areas. In making these decisions, the producer has to consider the output that could be obtained from the existing stock of trees as well as weigh the future gains resulting from these operations against the current losses that he may incur by uprooting the existing stock.

Two types of planting decisions, viz., new plantings or extension of area under the crop and replanting of area from which old and disease affected trees are uprooted, need to be distinguished because the factors which influence these decisions are different and the impact of any common factor on each of them may also be different. But, the data on these variables may not be always available particularly at the disaggregate level. In such cases, composite variables like total plantings in a year or the change in total area or total bearing acreage, etc., are used. This is not quite satisfactory because, first, the distinct individual responses of the two planting decisions are obscured and, second, the estimated response coefficients may be under or over estimated depending on the degree of divergence of these decision variables in their responses to various factors.

Another alternative is to consider the changes in the area composition under different age groups of trees. Age and varietal composition of the total area under the crop is a strong determinant of the current and future potential outputs. This is determined by the producer's planting and uprooting decisions in the past and present and hence can be used as an indirect reflector of the producer's long term responses. The producer, rather than increasing or reducing the area under the crop mechanically, may try to maintain or change the existing age composition of the area under the crop in a systematic way, so as to have the desired levels of current and future outputs.

The following analysis is confined to new plantings, replantings, and yield per hectare. Specifications of various decision models are described below.

The new planting decisions model:

The model:

$$N_t = a_o + a_1N_{t-1} + a_2RPC_{t-1} + a_3A_{t-1} + a_4Y_{et} + a_5P_{et} + a_6CVP_t + u_t \qquad \text{.... (1)}$$

Where N_t and N_{t-1} = New plantings in year t and t-1

RPC_{t-1} = Replacement plantings in year t-1

A_{t-1} = total area under the crop in year t-1, (all India)

Y_{et} = The expected future yield per hectare, in the year t

P_{et} = The expected trend in future prices, in the year t

CVP_t = risk due to price variation, as perceived by the producer in the current period.

u_t = random disturbance term.

The new planting operations are carried out in a planned manner rather than on an year to year basis. Therefore the lagged variable exerts influence on the current. Hence, lagged replantings is included as one of the explanatory variables. The replacement plantings, carried in anticipation of uprootings is used here to represent the expected future uprootings. These are believed to have a positive impact on the new plantings. The lagged total area, expected yield, and expected price variables are included for obvious reasons. Risk due to price variation has been found to have a significant impact on new plantings. It is included here to test the risk taking nature of the tea planters.

The replantings and replacement plantings decision model:

The replanting model:

$$RP_t = b_0 + b_1 P_{et} + b_2 CVP_t b_3 (P_t - P_{et}) + b_4 A_{t-1}^{>50} + U_t \quad \ldots (2)$$

The replacement model:

$$RPC_t = b_0 + b_1 P_{et} + b_2 CVP_t b_3 (P_t - P_{et}) + b_4 A_{t-1}^{>50} + b_5 A_{t-1}^{41-50} + U_t \quad \ldots (2a)$$

Where
RP_t = Area replanted in year t
RPC_t = Area replacement planted in year t
P_{et} = expected price in year t
P_t-P_{et} = Deviation of current prices from their long-run expected trend
$A(41\text{-}50)_{t-1}$ = Area under bushes aged 41-50 years in year t-1
$A(>50)_{t-1}$ = Area under bushes aged above 50 years in year t-1
CVP_t = Risk due to price variation, as perceived by the producer, in period t. and
u_t = Random disturbance term.

The model for replacement plantings (RPC_t) is similar.

We have divided the area under old bushes into two age groups in order to see where the actual replantings occur. Technically, the tea bush is expected to give optimum yield upto only 30 years; beyond this age, the yield depends on the soil and management factors. By dividing the technically uneconomic bushes into two groups, we can find whether the replantings take place only in the above 50 age group or even in the younger age group. The disease influenced uprootings, represented by the younger age group are not included as they form an insignificant proportion of total uprootings. Further, rather than a simple short-run price variable, the deviation of it from the long-run expected trend in prices is considered. The replacement plantings and replantings are estimated separately in order to bring out their differential responses to price factors.

The yield model

Yield per hectare has been included in the studies by, Choudhry and Ram [1978] and Misra [1986]. Misra specified a short term yield function and a long-term yield function. Following Misra, Chiranjeevi [1987], also had separate short and long term yield functions. While Misra's study does not include the impact of long-term factors like age-composition of the gardens, the latter study tries to incorporate this impact in terms of proxies for age variables. The inclusion of the age groups may require a time series which is difficult to obtain. Hence, we propose to overcome this problem by pooling cross-section and time series data. Thus, we have only one yield function, which incorporates long-term as well as short term factors.

The model:

$$Y_t = \delta + \sum_{i=1}^{6} e_i A_t^i + e_7 P_t + e_8 P_{t-1} + \varepsilon_t \quad \ldots (3)$$

where Y_t = Yield per hectare in kgs
A_{it} = Proportion of area under i^{th} age group of bushes starting from 5-10 years
P_t = Current price of tea
P_{t-1} = Price in year t-1 and
ε_t = Random disturbance term.

The model excludes the area under the bushes aged less than five years because the contribution of this age group to the yield per hectare is negligible.

The period of study covers the years from 1960 to 1987 though the periods considered for estimating different models are not the same. Data on total area, under different types of plantings, area under different age groups of bushes and yield per hectare are drawn from different issues of Tea Statistics, published by the Tea Board. The prices used are the average Indian auction prices as published in *Tea Statistics* by J. Thomas & Co. Ltd, Calcutta.

The new planting and replanting models are estimated using the Ordinary Least Squares

(OLS) method, for North and South India separately, covering the period 1964-85. The yield model is estimated by pooling the time series and cross section data. When a model uses pooled data, it cannot be estimated by OLS method because the random disturbance term does not satisfy the homoscadaticity and non-autocorrelation properties. Hence, to get consistent and efficient regression estimates the Maximum Likelihood Method is used. The estimation procedure is available under the 'pool command' in the 'SCHAZAM' package (For details see Kmenta [1986]).

ANALYSIS OF THE AREA DECISIONS

Measurement of unobservable variables

The analysis uses three variables, which are not directly measurable. They are: the expected prices, expected yield, and the risk due to price variation. Measures used for these unobservables are described below:

Expected prices: These are measured as the simple mean of the preceding eight years' average Indian auction prices. Average Indian auction prices as published in *Tea Statistics* by J. Thomas & Co. Ltd., Calcutta are used. There is therefore an assumption that the trends in the prices of different types of tea produced follow the trend in average Indian auction prices.

Price risk: The risk arising out of fluctuations in tea auction prices is measured by coefficient of variation of average Indian auction prices in the preceding eight years.

Expected yield: This is taken as the simple mean of the average yield in the preceding three years.

We shall now discuss the impact of these and other factors on the planting decisions in North and South Indian tea producing regions. The regression results of the three models (1), (2) and (3), are presented in Tables 12, 13, and 14, respectively. All the models were estimated using linear and loglinear functional forms but, in each case, the results of only the more appropriate functional form as judged by its explanatory power are presented. The Durbin-Watson's D-statistic is used to test for the presence of auto-correlation. This test may not be adequate for new planting equations which have the lagged dependent variable as one of the explanatory variables. Hence, the new planting results could probably involve auto-correlation. The other equations do not have this problem.

New Planting Decisions

As earlier mentioned, both North and South India experienced differential growth rates of new plantings and replantings in different sub-periods during 1965-84. High positive growth rates followed by substantial negative growth rates were observed in both the regions. But during the recent decade 1975-84, the performance of North India appeared to be better than that of South India. The factors responsible for this differential performances of the two regions are now examined with the help of the regression results (Table 12). It is clear that factors included in the analysis have had differential impacts on North and South Indias' new plantings.

The expected prices had positive but statistically not significant impact on North India, whereas it had statistically significant negative impact on South India. Both types of impact are possible. The rise in expected prices increases the desired acreage, at the same time it may reduce the need for additional acreage by making some of the previously uneconomic area under old bushes now economic. It appears that, in North India, the two reactions are almost equal but that, in South India, the former dominates.

A possible explanation for the differential response in the two regions to expected prices may be in the age-composition of the total area. While in North about 40 per cent of the total area is of above 50 years of age, in South, about 59 per cent of the area is of above 50 years of age. Given the larger area under old bushes, it is natural that the negative impact of expected prices on new plantings may be more in South India than in North. Besides, the size of holdings may also decide ue net impact of these differential influences. North India being dominated by large estates may have better capacity to increase the output through area expansion than South India which is dominated by small holders. Earlier we have seen that, in South India, the area under older bushes has been increasing while that under the younger bushes has been declining. This accords with its negative response to expected prices.

TABLE 12. REGRESSION COEFFICIENTS FOR NORTH AND SOUTH INDIA

Variable	North India (Linear regression)	South India (loglinear regression)
Constant	4703.38	-8.92
	(1.37)	(0.40)
N_{t-1}	0.783***	0.126
	(3.23)	(0.37)
A_{t-1}	0.002	-1.292
	(0.31)	(1.18)
Y_{α}	-5.222*	4.907*
	(1.51)	(1.55)
P_{α}	165.79	-2.929***
	(1.18)	(3.42)
CVP_t	47.182**	0.216
	(1.89)	(0.81)
R^2	0.69	0.72
F	10.08	7.71
D.W.	1.946	2.197
	NA	IC

Notes: Variable RPC_{t-1} is omitted.
Figures in brackets are t values. * ; ** and *** indicate levels of significance at 10, 5 and 1 per cent probabilities, respectively.
D.W. = Durbin-Watson test statistics; NA = No auto-correlation, IC = Test inconclusive.

Expected yield also shows different responses in the two regions. In North India, the response is negative while in South India it is positive and, in both cases, it is statistically significant. This implies that as the expected yield increases the new plantings decrease in the North whereas in the South they increase. Expected yield is higher when relatively large area is under younger bushes and the need for increase in the capacity is low. Expected yield declines when relatively larger area is under older bushes. The positive response to this variable implies that the larger the area under old bushes, the smaller will be the new plantings. On the other hand, the negative response implies that the larger the area under old bushes, the higher will be the new plantings. Positive response in the South and negative response in the North to expected yield is in line with their above discussed responses to expected prices. In North India the response is mostly in terms of area expansion, whereas in South India the response is in terms of improvement of yields. Further, in South India, positive response to yield implies that though new plantings decrease when the expected yield is decreasing, they increase when the latter is increasing. Probably, with rising yield levels the producers in South India may have more resources to expand the area and therefore may increase new plantings in order to meet desired levels of output in the future.

The impact of price risk on new plantings is positive in both the regions though it is not statistically significant in the South. This implies that larger the risk due to prices the higher will be the desired capacity. Probably larger capacity to produce enables the producers to cope better with the price variation; with larger capacity, it is possible to increase the output produced and thereby maintain the revenue when the prices are falling and increase it when the prices are rising. Especially for large estates with large establishment costs (like investment in tea processing factories), the protection against risk may be to expand the output in order to reduce the per unit cost and thereby increase the per unit revenue. The higher and statistically significant positive response of the North (dominated by large estates) supports the above contention.

Among the other factors, only the lagged new plantings are found to have positive and statistically significant impact on new plantings in North India. The impact of total area on new plantings, though not statistically significant for either region, is positive in the North and negative in the South. Since, the relationship is not significant for either region, the estimates only indicate association between total area at the all India level and the regional new plantings.

On the other hand, the positive impact of industry wide lagged new plantings on the new plantings in both the regions indicates a kind of continuity in new plantings though the impact is statistically significant only in North India but not in South India.

Thus, the two regions differ in their responses to different factors regarding the new planting decisions. While expected prices are important for South Indian planters, it is the risk due to prices which is important for North Indian planters. Planters in both the regions, take into account the expected yield from the existing stock while making their new planting decisions.

Replanting and Replacement Planting Decisions:

Difference between replanting and replacement planting is that while the former follows uprootings, the latter precedes it. Further, while the replantings are done on soils from which old bushes were removed, replacement plantings are done on virgin soils. Due to these differences, the impact of various factors may be different on each. The results for these two planting decisions are presented in Table 13.

TABLE 13. LINEAR REGRESSION COEFFICIENTS FOR REPLANTINGS AND REPLACEMENT PLANTINGS FOR NORTH AND SOUTH INDIA

Variable	Replantings		Replacement plantings	
	N. India	S. India	N. India	S. India
Constant	1897.23**	102.41	-1719.23	151.48
	(2.66)	(0.72)	(1.13)	(0.51)
P_{et}	11.36	7.30	32.85	-0.06
	(0.83)	(0.96)	(1.31)	(0.03)
CVP_t	-9.59*	0.60	-0.17	0.45
	(2.06)	(0.43)	(0.03)	(0.85)
$P_t - P_{et}$	-2.10	0.28	-22.21*	-0.60
	(0.20)	(0.10)	(2.02)	(0.89)
A_{t-1}^{41-50}	-	-	0.05	-0.003
	-	-	(1.38)	(0.48)
$A_{t-1}^{>50}$	-0.01	-0.004	0.003	-0.0003
	(0.74)	(0.82)	(0.43)	(0.54)
R^2	0.38	0.30	0.59	0.45
D.W.	2.63	1.91	2.31	2.47
	IC	IC	IC	IC

Note:- Figures in brackets are t values. * ; ** and *** indicate levels of significance at 10, 5 and 1 per cent probabilities, respectively. D.W. = Durbin-Watson test statistic; NA = No auto-correlation, IC = Test inconclusive.

The price and risk variables are found to have some impact on both replacement plantings and replantings in North India. Price expectations (P_{et}), though not statistically significant, have positive coefficients for replantings in both regions. However, deviation of current prices from their expected trend (P_t - P_{et}) has negative coefficient for replantings in the North and positive in the South. That is, if current price is higher than the expected trend price, then replantings decline in North but increase in South and vice versa. As the coefficients are not statistically significant, it is not worthwhile speculating about underlying reasons.

Similarly the risk due to price variation (CVP_t) has a differential impact on both the regions. While its impact on replantings is negative and statistically significant in North, it is positive but not significant in South. These findings are in line with the earlier arguments which explained the new planting responses. The planters in North seem to prefer a larger capacity as a protection against price risk. Thus, in order to combat the fluctuations in their revenue due to price fluctuations they reduce the replantings and thereby maintain the output. Whereas, planters in South prefer to maintain a better stock by replanting the older bushes with young.

The age factors are found to be not significant for both replantings and replacement plantings in both the regions. The 41-50 age group, originally appearing in model (2), was dropped after seeing that the coefficients were not statistically significant and its exclusion improved the results.

The results of replacement plantings are also included in Table 13. Here again all the factors except the one measuring the price deviations ($P_t - P_{et}$) have contrasting influences on the replacement plantings in the two regions. But, in North India, the responses of planting decision to all the factors included are similar to those of the replanting decisions. Hence, it seems that the North Indian planters do not differentiate between replantings and replacement plantings. However, in the case of replacement plantings, the price differentials seem to have higher and statistically significant impact compared to risk due to price variation. Following the earlier explanation, such a response may be expected because replacement plantings do not reduce the stock. Therefore, risks may not have as much impact on replacement plantings as the price differentials may do.

In contrast to the North, replacement plantings responses in South India are different from their replanting responses, except those for price risk (CVP). Unlike the replantings, the replacement plantings are found to respond negatively to both expected prices and price differentials. Both these planting operations satisfy the same need of replacing the uprooted bushes. But, the replacement planting requires virgin soils while the replanting temporarily reduces the stock. When the prices are rising, the planters may prefer replantings to replacement plantings, as suitable land may not be easily available.

The above discussion on planting decisions, clearly shows that the objectives and constraints are different for the producers in the two regions and consequently their responses to different factors are also different. In conclusion we may note that the expected prices have positive impact on all types of plantings in North India, while it has negative impact on both new plantings and replantings in South India. Risk due to price variation has positive impact on all types of plantings in the South, whereas in the North it has negative impact on all except new plantings. The replantings as well as replacement plantings are in general found to be non-responsive to any of the factors.

YIELD RESPONSES OF TEA: A COMBINED CROSS-SECTION AND TIME-SERIES ANALYSIS

Age-composition of stock is one of the most important determinants of yield per hectare. In fact, as seen above, the extent and direction of a region's response to price factors depends on the age-composition of the total area under tea in the region. Hence, in the yield model, we have included all age-groups as explanatory variables, besides the current and lagged prices.

While the age-composition helps in explaining the long-term factors influencing the yield responses, the current and lagged prices reflect the short-term yield responses. When the yield functions are estimated with seven age groups, of less than 5, 5-10, 11-20, 21-30, 31-40, 41-50 and over 50 years old, and 2 price variables, the residual degrees of freedom are found to be too small to give any credence to the results. The available time-series required for estimating this function is limited to only 12 years, starting from 1975. Hence, as mentioned earlier, we decided to pool the time-series and the cross-section data.

The yield responses are estimated using two different data sets: In one, data on the five selected states for 1975-86 are pooled together. In the second, data on 10 districts over the same period are pooled together. Thus, the yield function has two sets of estimates of impact of various age groups and prices obtained from two different data sets. Besides this aggregate level estimation of yield responses, separate estimation for the two regions, North and South, is also done. The yield function for the Northern region is estimated by pooling the data on Assam and West Bengal. Similarly, for the Southern region, the yield responses are estimated by pooling the data on the three Southern states of Tamil Nadu, Kerala and Karnataka.

The yield function initially specified and estimated, contained all the age-groups except the 'less than 5 years' age group, besides the current and lagged prices (P_t and P_{t-1}), as explanatory variables. However, it was found that different age groups and the two price variables are intercorrelated, causing multi-collinearity problem. Therefore, several alternative specifications, containing only those variables which are not highly correlated are used and the results of all the specifications are presented. All the equations are estimated using the linear and log linear functional forms.

Aggregate Level Yield Responses based on Pooling of Time Series Data Across States

Earlier studies have largely neglected the effect of age-composition of the stock on the yield per hectare. Though in model (3), we have included five different age groups and also P_t and P_{t-1} as explanatory variables, we thought it would be useful to try different combinations of them. We have tried 8 different combinations (Table 14). In all the equations, the age group 41-50 is included. Besides, age groups 11-20 and 31-40 are included in equations (1) and (5); age groups 11-20 and >50 are included in equations (2) and (6); age groups 21-30 and 31-40 are included in equations (3) and (7); and age groups 21-30 and >50 are included in equations (4) and (8). The difference between equations (1) to (4) and (5) to (8) is that while the former includes P_t, the latter includes P_{t-1}. All functional forms are simple linear. Clearly, different age groups have different impacts on yield. The proportions of area under the 11-20, 31-40 and 41-50 age groups are found to have a positive impact on the yield per hectare, whereas the proportions of area under the 21-30 and over 50 years age groups are found to have a negative impact. The positive impact implies that as the proportion of area under these groups increases the yield per hectare also increases, and vice versa. The negative impact implies that as the proportion of area under these age groups increases, the yield per hectare declines and vice versa.

TABLE 14. LINEAR REGRESSION COEFFICIENTS FOR YIELD BASED ON POOLING OF TIME SERIES DATA ACROSS STATES AGGREGATE FOR NORTH AND SOUTH INDIA

Eq. No.	11-20	21-30	31-40	41-50	> 50	P_t	P_{t-1}	Constant	AIC	R^2
1.	0.80	-	13.82	6.13	-	13.30***	-	1043.1***	-0.404	0.60
	(0.24)		(1.22)	(1.65)		(3.01)		(8.98)		
2.	-1.30	-	-	5.29	-4.82	14.67***	-	1402.0***	-0.416	0.51
	(-0.35)			(1.12)	(-1.19)	(3.00)		(4.51)		
3.	-	-0.39	13.19	6.13*	-	13.30***	-	1061.4***	-0.404	0.59
		(-0.11)	(1.17)	(1.68)		(2.95)		(9.43)		
4.	-	-3.62	-	5.19	-4.58	15.08	-	1400.7***	-0.414	0.53
		(-0.94)		(1.22)	(1.30)	(3.20)		(5.07)		
5.	2.79	-	9.76	8.30***	-	-	20.50***	915.16***	-0.402	0.69
	(0.89)		(1.08)	(2.77)			(5.59)	(8.13)		
6.	0.63	-	-	5.11	-5.67	-	21.90***	1339.2***	-0.416	0.70
	(0.18)			(1.00)	(-1.38)		(5.78)	(3.98)		
7.	-	0.78	9.61	8.01***	-	-	20.23***	947.08***	-0.402	0.68
		(0.25)	(1.05)	(2.69)			(5.45)	(8.55)		
8.	-	3.13	-	4.89	-5.41	-	21.49***	1364.9***	-0.419	0.74
		(-0.86)		(1.04)	(-1.46)		(5.87)	(4.47)		

Note:- Figures in brackets indicate t values.
* ; ** and *** indicate levels of significance at 10, 5 and 1 per cent, respectively.
AIC = Akaike Information Criteria.

From Table 14, we can see that, at the aggregate level, the changes in yield during the period 1975-86, are mainly due to changes in the proportion of area under the 41-50 age group. Besides these long-run changes in yield, there have been some short-run changes also, in response to changes in short-run prices. Both the current (P_t) and lagged (P_{t-1}) prices are found to have a significant and positive impact on yield per hectare. But, the lagged price is found to have a larger coefficient compared to the current price. The yield elasticity, (estimated at means) to current prices (P_t) is found to be around 15 per cent, whereas, to the lagged prices it is around 20 per cent. On the other hand, the yield elasticity with respect to changes in the proportion of area under the 41-50 age group is only around 7 per cent. Thus, we can see that the age-induced changes in the yield are very small, compared to the price induced. It may be because, during the short-period considered for analysis, the age-composition at the aggregate level may not have changed substantially to cause any significant changes in the yield per hectare. Either a longer time series analysis or a more disaggregate level analysis may bring out more clearly the age-induced changes in yield.

But, from the aggregate analysis, we notice that the contribution of the age groups, except for the 41-50 age group, to the yield changes is not significant. Moreover, while the 11-20 age group has a positive impact, the 21-30 age group has a negative impact (though not statistically significant). According to the age-yield profile of tea, a bush reaches its peak yield around the age of 20 years, thereafter the yield starts declining. Hence, the impact of the 11-20 and 21-30 age groups conform to this age-yield profile. But the positive impact of the older age-groups, namely, the 31-40 and 41-50 age groups, goes contrary to this age-yield relationship.

Aggregate Level Yield Responses based on pooling of time series data across districts

Regional Level Yield Responses:

We may now do the same analysis but separately for North (Table 15) and South (Table 16). Clearly, the responses of the Northern region are substantially different. Here, most of the age groups are found to have significant impact on the yield per hectare. The 11-20 age-group shows a high positive impact on yield per hectare. The 21-30 age group which showed negative (but not significant) impact at the aggregate level, turns out to have a significantly positive impact on yield per hectare though its influence is found to be smaller than that of the 11-20 age group. The impact of the 31-40 and over 50 years age groups is found to be statistically not significant. But, surprisingly, the 41-50 age group is found to have a significantly positive impact on the yield per hectare. The prices, once again, are found to have a significant and positive impact on the yield. Thus, the age-yield relationship in North India appears to, more or less, conform to the expected age-yield profile, except for the impact of the 41-50 age group. The coefficient of this age group is positive and significant, when included along with the lagged price variable (P_{t-1}) whereas, when it is included along with the current prices, it is either negative or not statistically significant. Therefore, it appears that this variable is highly correlated with the two price variables. The partial correlation coefficient is found to be -0.36, with both the price variables. This could explain the coefficient becoming statistically not significant, when included along with the current price. Nevertheless, the positive impact of this older age-group on the yield per hectare needs an explanation. It may lie in what some planters say that the productivity of a bush depends on its maintenance and soil type as well as its age and varietal composition.

TABLE 15. LINEAR REGRESSION COEFFICIENTS FOR YIELD BASED ON POOLING OF TIME SERIES DATA ACROSS STATES FOR NORTH INDIA

Eq. No.	11-20	21-30	31-40	41-50	>50	P_t	P_{t-1}	Constant	AIC	R^2
1.	17.44	-	6.64	-3.11	-	12.16**	-	979.85***	-0.125	0.61
	(1.32)		(3.38)	(-0.13)		(2.54)		(4.82)		
2.	13.16	-	-	-3.01	-2.13	11.60**	-	1191.80***	-0.124	0.62
	(0.88)			(-0.15)	(-0.66)	(2.72)		(2.76)		
3.	32.85***	-	-10.63	1.57	-	-	18.35***	761.57***	-0.123	0.76
	(2.97)		(-0.78)	(0.09)			(5.03)	(4.96)		
4.	31.24**	-	-	-6.06	0.57	-	16.84***	773.95**	-0.123	0.76
	(2.46)			(-0.40)	(0.22)		(4.88)	(2.29)		
5.	-	17.30*	-17.33	35.65	-	10.42**	-	892.50***	-0.124	0.66
		(1.72)	(-0.75)	(1.36)		(2.42)		(4.35)		
6.	-	37.62	-	60.43	9.88	8.12**	-	-77.38	-0.127	0.69
		(1.67)		(1.65)	(1.20)	(2.43)		(-0.08)		
7.	-	18.07	-	-41.50		-	10.07***	656.14	-0.123	0.72
		(0.76)		(0.86)			(3.02)	(0.68)		
8.	-	18.11**	-26.78	46.47**	3.23	-	12.86***	828.89***	-0.122	0.75
		(2.11)	(1.33)	(2.08)	(0.37)			(8.98)		

Note:- Figures in brackets indicate t values.
*, ** and *** indicate levels of significance at 10, 5 and 1 per cent, respectively.
AIC = Akaike Information Criteria.

Moreover, in North India, the yield changes appear to be as much due to price variation as due to changes in the age-composition of stock. The price elasticities are found to be slightly higher than those at the aggregate level. The yield elasticity with respect to current price is found to be around 20 per cent and that with respect to lagged price is found to be around 23 per cent. The yield elasticities with respect to the 11-20, 21-30 and 41-50 age groups are found to be around 30, 13 and 29 per cents. Thus, yield appears to be more responsive to younger and older age-groups compared to the 21-30 age group.

In South India, younger age groups seem to have little impact on yield (Table 16). The yield changes are mainly accounted for by the changes in the proportions of area under the 41-50 and over 50 years age groups and the price factors. These responses of yield are directly in line with our observation in the area analysis that, the responses in South are more in the nature of yield changes than of area expansion. The findings here imply that there has been no substantial change, in favour of younger age groups in this region. Therefore, their impact or role in changing per hectare yield is not significant, whereas, the change in the proportion of areas under the older age-groups has been substantial and this is shown in its impact on yield.

TABLE 16. LINEAR REGRESSION COEFFICIENTS FOR YIELD BASED ON POOLING OF TIME SERIES DATA ACROSS STATES FOR SOUTH INDIA

Eq. No.	11-20	21-30	31-40	41-50	>50	P_t	P_{t-1}	Constant	AIC	R^2
1.	0.57	-	9.12	2.88	-	18.77**	-	1225.70***	-0.262	0.25
	(0.14)		(0.73)	(0.67)		(2.48)		(4.36)		
2.	-0.68	-	-	-18.81***	-22.62***	21.42***	-	2804.50***	-0.266	0.66
	(-0.19)			(-3.46)	(-5.19)	(3.07)		(7.87)		
3.	2.30	-	4.48	5.39	-	-	23.74***	1130.50***	-0.266	0.42
	(0.65)		(0.44)	(1.46)			(3.81)	(4.15)		
4.	1.29	-	-	-18.31***	-22.82***	-	26.42***	2731.30***	-0.266	0.78
	(0.39)			(-4.85)	(-7.18)		(4.70)	(10.83)		
5.	-	-0.17	0.13	0.94	-	16.32**	-	1557.7***	-0.267	0.22
		(-0.04)	(0.01)	(0.22)		(2.28)		(4.68)		
6.	-	-1.07	-	-18.67***	-22.46***	21.42***	-	2795.50***	-0.265	0.66
		(-0.30)		(-3.47)	(-5.20)	(3.09)		(7.96)		
7.	-	1.60	-2.14	3.24	-	-	21.02***	1028.30	-0.271	0.42
		(0.47)	(-0.20)	(0.88)			(3.50)	(4.42)		
8.	-	1.06	-	-18.56***	-23.05***	-	26.38***	2751.50***	-0.266	0.78
		(0.32)		(-5.04)	(-7.34)		(4.69)	(11.34)		

Note:- Figures in brackets indicate t values.
* ; ** and *** indicate levels of significance at 10, 5 and 1 per cent, respectively.
AIC = Akaike Information Criteria.

In South India, yield appears to be so predominantly dependent on the older age groups that, a one per cent rise in the proportion of area under the 41-50 age group reduces the yield by around 30 per cent. Whereas, a similar increase in the over 50 years age group reduces the yield by around 49 per cent. This over-dependence of yield on older age groups explains the non-responsiveness of replantings and replacement plantings in South. But, the region is not lacking in short-run positive responses to prices. The elasticity with respect to the current price is found to be around 21 per cent and that to the lagged price is found to be around 24 per cent. In fact, they are slightly higher than those in North India.

Thus, from the regional level analysis, we conclude that the age impact on the yield, varies from region to region and it is dependent on many other factors such as the varietal composition as well as the soil type of the region. The prices are found to have substantial impact on the short-run changes in yield. In this respect, the responses of both the regions conform to the findings at the aggregate level.

The present problem of the Indian tea industry is to meet the increasing domestic demand and maintain, if not increase, exports in the international market. There is a Fifteen Year Tea Development Plan, prepared by the Tea Board in consultation with major Tea Planters' Associations. The plan envisages targets for output for the year 2000 A.D. based on certain estimates of the future domestic consumption and export levels. An examination of the performance during 1985-87, falling within the plan period, shows that, if the present trends in the industry continue, the chances for meeting these targets are slim. Apparently, the steps described in the plan, in order to induce the producers to increase the production levels, are either not adequate or they have no influence on the production decisions. In this context, it becomes necessary to reflect on the response behaviour of the Indian tea producers. It is found that the earlier studies mainly focusing on the aggregate level responses are not adequate, in view of the diverse production conditions under which tea is grown in India.

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APPENDIX

I. TEA: ALL-INDIA AREA, PRODUCTION AND YIELD, 1916-1988

Year	Area (hectares)	Production (tonnes)	Yield (kgs per ha)	Year	Area (hectares)	Production (tonnes)	Yield (kgs per ha)
1916	262,335	167,973	640	1951	316,870	285,399	901
1917	269,960	168,419	624	1952	317,916	278,671	877
1918	274,592	172,578	629	1953	318,642	278,777	875
1919	279,948	171,031	611	1954	319,478	295,519	925
1920	284,922	165,645	549	1955	320,238	307,704	961
1921	286,924	124,405	434	1956	320,588	308,719	963
1922	286,597	141,359	493	1957	323,285	310,802	961
1923	287,816	170,260	592	1958	325,357	325,225	1,000
1924	289,232	170,215	588	1959	326,494	325,955	998
1925	294,474	164,886	559	1960	330,738	321,077	971
1926	299,233	178,233	595	1961	331,229	354,397	1,070
1927	305,939	177,320	579	1962	332,524	345,735	1,043
1928	313,994	183,322	584	1963	334,036	346,413	1,037
1929	318,892	196,336	615	1964	337,874	372,485	1,102
1930	325,177	177,393	546	1965	341,762	366,374	1,072
1931	326,512	178,755	547	1966	345,256	375,983	1,089
1932	327,574	196,711	601	1967	342,653	384,759	1,107
1933	331,000	174,033	526	1968	351,065	402,489	1,146
1934	334,406	181,099	541	1969	353,359	393,588	1,114
1935	336,572	178,912	531	1970	354,133	418,517	1,182
1936	337,553	179,252	531	1971	356,516	435,468	1,221
1937	337,630	195,160	578	1972	358,675	455,996	1,271
1938	337,414	204,963	608	1973	360,108	471,952	1,311
1939	336,901	205,296	610	1974	361,663	489,475	1,353
1940	337,034	210,415	624	1975	363,303	487,137	1,341
1941	339,832	226,844	688	1976	364,275	511,817	1,405
1942	310,081	233,502	752	1977	366,276	556,267	1,519
1943	309,919	237,834	768	1978	369,184	563,846	1,527
1944	308,518	213,856	693	1979	372,980	543,776	1,458
1945	308,922	229,038	741	1980	381,086	569,172	1,494
1946	309,256	246,068	796	1981	383,629	560,427	1,461
1947	309,986	254,801	822	1982	394,170	560,562	1,422
1948	310,798	262,092	843	1983	396,066	581,484	1,468
1949	312,398	236,753	850	1984	398,453	639,864	1,606
1950	315,656	278,093	881	1985	399,936	656,162	1,641
				1986	411,673	620,803	1,508
				1987*	414,232	665,251	1,606
				1988†	-	701,087	1,692@

Note: Figures for 1916-1946 are inclusive of Bangla Desh; upto 1977 estimates for April-March; thereafter calender year.
* Provisional; † Estimated; @ Based on 1987 area.
Source: *Tea Statistics 1987-88*, Tea Board, India.

II. TEA EXTENSIONS, REPLACEMENTS AND REPLANTINGS

(Hectares)

Year	NORTH INDIA			SOUTH INDIA			ALL INDIA		
	Extensions	Replacements	Replantings	Extensions	Replacements	Replantings	Extensions	Replacements	Replantings
1	2	3	4	5	6	7	8	9	10
1952-53	1,503.09	172.28	1,182.82	663.74	7.72	6.88	2,116.83	180.00	1,189.70
1953-54	899.58	206.87	818.51	447.20	32.85	25.89	1,346.78	239.72	844.40
1954-55	1,791.88	529.92	1,403.72	530.23	19.95	14.33	2,322.41	549.85	1,418.05
1955-56	251.98	239.03	1,974.87	403.03	25.00	23.85	655.01	264.03	2,004.72
1956-57	679.57	473.31	2,385.69	274.72	7.49	14.77	954.29	480.80	2,400.46
1957-58	1,621.05	749.19	2,372.72	331.23	6.10	27.25	1,952.28	755.29	2,399.97
1958-59	1,835.09	588.08	2,374.64	274.23	-	59.69	2,109.32	588.08	2,434.33
1959-60	2,009.52	488.34	1,878.36	307.31	37.66	8.50	2,316.83	526.00	1,886.86
1960-61	1,626.73	345.99	1,769.40	86.74	6.78	12.47	1,713.47	352.77	1,781.87
1961-62	1,638.96	389.09	1,601.14	113.24	4.09	6.34	1,852.20	393.18	1,607.48
1962-63	2,009.45	399.31	1,548.19	215.43	1.82	22.97	2,224.86	401.13	1,571.16
1963-64	2,915.96	377.22	1,738.04	219.42	34.40	20.80	3,135.38	411.62	1,758.84
1964-65	3,612.57	540.50	1,957.84	247.58	10.64	66.42	3,860.15	551.14	2,024.26
1965-66	3,245.13	509.35	1,866.01	249.60	1.10	71.35	3,494.43	510.45	1,937.36
1966-67	2,965.07	436.76	1,606.77	363.81	23.07	21.30	3,328.88	459.83	1,628.07
1967-68	2,637.97	460.78	1,290.49	322.84	13.85	16.62	2,960.81	474.63	1,397.11
1968-69	2,453.95	364.87	1,150.93	181.24	8.33	37.75	2,635.91	373.20	1,188.68
1969-70	1,985.82	277.20	955.12	188.86	0.78	32.30	2,174.68	277.98	987.42
1970-71	2,151.04	195.57	1,076.51	203.31	5.55	42.45	2,355.35	201.12	1,118.96
1971-72	1,557.86	176.61	1,258.73	273.77	18.05	63.48	1,831.63	194.66	1,322.21
1972-73	1,390.52	173.20	1,046.42	242.39	7.16	62.80	1,632.98	180.36	1,109.22
1973-74	1,516.66	307.61	1,015.98	284.95	14.87	74.37	1,801.01	322.48	1,090.35
1974-75	1,487.23	315.94	1,139.69	275.06	3.89	80.38	1,762.29	319.83	1,220.07
1975-76	1,421.60	354.50	1,117.40	237.29	7.72	60.43	1,658.89	362.22	1,177.83
1976-77	1,521.62	360.68	1,166.67	248.07	5.58	36.09	1,769.69	366.66	1,202.76
1977-78	2,145.68	265.14	1,183.11	188.43	2.00	42.25	2,234.11	267.14	1,225.25
1978-79	3,117.46	383.49	1,221.33	347.09	15.73	24.89	3,464.55	399.22	1,246.22
1980	2,863.98	457.63	1,007.64	211.35	11.15	16.15	3,075.33	468.78	1,023.79
1981	1,921.43	470.06	1,251.32	65.07	5.69	37.66	1,986.50	475.75	1,288.98
1982	1,902.89	188.83	1,314.53	79.04	-	41.02	1,981.93	188.83	1,355.55
1983	1,886.73	210.52	1,250.48	59.16	-	27.66	1,945.89	210.52	1,278.14
1984	2,367.32	184.40	1,176.59	47.50	-	49.18	2,414.82	184.40	1,225.77
1985	2,224.23	294.22	972.37	166.12	2.51	113.24	2,390.35	296.73	1,085.61
1986	3,333.98	465.03	1,207.58	157.31	14.24	51.88	3,491.29	479.27	1,259.46
1987	2,929.01	465.88	1,157.85	150.71	10.00	41.48	3,079.72	475.88	1,199.33

Note: Figures upto 1978-79 are as on March 31, and from 1980 onwards are on calender year basis (Jan. 1 - Dec. 31).
Source: *Tea Statistics, 1987-88*, Tea Board, India.

III. AVAILABILITY OF TEA FOR INTERNAL CONSUMPTION

Year	Production (tonnes)	Exports (tonnes)	Difference (tonnes)	Population (million)	Per Capita Availability (4)/(5) (kgs)
1	2	3	4	5	6
1953	278,777	227,097	51,680	372	0.14
1954	295,519	203,195	92,324	379	0.24
1955	307,704	166,708	140,996	386	0.37
1956	308,719	237,484	71,235	393	0.18
1957	310,802	200,786	110,016	401	0.27
1958	325,225	229,503	95,722	409	0.23
1959	325,955	213,680	112,275	418	0.27
1960	321,077	193,063	128,014	426	0.30
1961	354,397	206,292	148,105	434	0.34
1962	345,735	211,826	133,909	444	0.30
1963	346,413	223,542	122,871	454	0.27
1964	372,485	210,523	161,962	464	0.35
1965	366,374	199,565	166,809	474	0.35
1966	375,983	179,205	196,778	485	0.41
1967	384,759	213,676	171,083	495	0.35
1968	402,489	208,440	194,049	506	0.38
1969	393,588	168,709	224,879	518	0.43
1970	418,517	202,016	216,501	529	0.41
1971	435,468	202,052	233,416	541	0.43
1972	455,996	198,195	257,801	554	0.47
1973	471,952	188,192	283,760	567	0.50
1974	489,475	210,583	278,892	580	0.48
1975	487,137	218,128	269,009	593	0.45
1976	511,817	233,611	278,206	607	0.46
1977	556,267	229,637	326,630	620	0.53
1978	563,846	176,051	387,795	634	0.61
1979	543,776	199,639	344,137	648	0.53
1980	569,172	224,026	345,146	664	0.52
1981	560,427	241,246	319,181	679	0.47
1982	560,562	189,933	370,629	694	0.53
1983	581,484	208,476	373,008	709	0.53
1984	639,864	217,040	422,824	724	0.58
1985	656,162	214,021	442,141	739	0.60
1986	620,803	203,149	417,654	755	0.55
1987	665,251	201,891	463,360	770	0.60
1988*	701,087	215,420	485,667	785	0.62

* Provisional

Sources: 1. Production and Export figures from *Tea Statistics, 1987-88*, Tea Board, India.
2. Population figures from *National Accounts Statistics*, 1991, CSO, Government of India.

IV. EXPORTS OF TEA FROM INDIA

Year (1)	Quantity (tonnes) (2)	Value (Rs lakh) (3)	Unit Price (Rs per kg) (4)	World Exports (5)	(2) as percent of (5) (6)
1953	227,097	10,421.73	4.59	471,378	48.18
1954	203,195	13,075.23	6.43	497,414	40.85
1955	166,708	11,361.32	6.82	452,146	36.87
1956	237,484	14,282.49	6.01	535,880	44.32
1957	200,786	12,338.59	6.15	514,198	39.05
1958	229,503	13,658.59	5.95	562,914	40.77
1959	213,680	12,601.35	5.90	540,143	39.56
1960	193,063	11,998.83	6.21	529,575	36.46
1961	206,292	12,425.13	6.02	546,358	37.76
1962	211,826	12,353.39	5.83	565,630	37.45
1963	223,542	13,237.10	5.92	573,567	38.97
1964	210,523	12,490.12	5.91	571,800	36.82
1965	199,565	11,497.47	5.77	601,400	33.18
1966	179,205	15,659.21	8.74	568,100	31.54
1967	213,676	18,903.84	8.85	608,500	35.12
1968	208,440	16,648.25	7.99	622,700	33.47
1969	168,709	12,053.71	7.14	579,900	29.09
1970	202,016	14,875.33	7.36	635,600	31.78
1971	202,052	15,366.78	7.61	679,369	29.74
1972	198,195	15,114.36	7.63	688,585	28.78
1973	188,192	14,270.72	7.58	709,986	26.51
1974	210,583	19,279.72	9.16	735,874	28.62
1975	218,128	24,465.92	11.22	750,138	29.08
1976	233,611	27,313.64	11.09	785,140	29.75
1977	229,637	54,161.57	23.59	815,330	28.16
1978	176,051	36,289.16	20.61	803,703	21.90
1979	199,639	36,184.01	18.12	850,644	23.47
1980	224,026	42,902.77	19.15	858,995	26.08
1981	241,246	43,425.41	18.00	852,128	28.31
1982	189,933	35,555.25	18.72	819,209	23.18
1983	208,476	51,681.45	24.79	870,798	23.94
1984	217,040	74,045.51	34.12	941,389	23.06
1985	214,021	69,529.96	32.49	953,256	22.45
1986	203,149	58,085.10	28.59	973,770	20.86
1987	201,891	63,924.65	31.66	976,297	20.68
1988*	215,420	65,118.00	30.23	1,047,399	20.57

* Provisional
Source: *Tea Statistics, 1987-88*, Tea Board, India (various issues).

SHARE OF WORLD PRODUCTION AND EXPORT OF IMPORTANT TEA EXPORTING COUNTRIES

(per cent)

Country 1	2	1978 3	1979 4	1980 5	1981 6	1982 7	1983 8	1984 9	1985 10	1986 11	1987 12	1988* 13
India	a) Production	31.62	30.11	31.02	29.98	29.04	28.66	29.61	29.01	27.23	28.35	28.28
	b) Exports	21.91	23.47	26.08	28.31	23.18	23.91	23.01	22.40	21.53	20.68	20.57
Sri Lanka	a) Production	11.16	11.43	10.42	11.24	9.77	8.87	9.68	9.52	9.33	9.15	9.21
	b) Exports	23.96	22.03	21.48	21.45	22.11	18.10	21.65	20.68	20.67	20.56	20.98
Indonesia	a) Production	5.00	5.03	5.38	5.82	4.67	5.50	5.84	5.85	5.68	5.43	5.47
	b) Exports	6.99	7.07	7.88	8.36	7.77	7.87	9.08	9.43	9.26	9.26	8.85
China	a) Production	15.03	15.34	16.54	18.32	20.56	19.74	19.17	19.11	20.20	21.65	21.99
	b) Exports	10.81	12.56	12.57	10.79	12.92	14.35	15.41	14.32	16.98	17.85	18.93
Kenya	a) Production	5.24	5.50	5.90	4.86	4.97	5.90	5.38	6.50	6.29	6.64	6.62
	b) Exports	10.57	11.06	8.71	8.88	9.74	11.55	9.67	13.19	13.89	13.82	13.20
Malawi	a) Production	1.78	1.80	1.63	1.71	1.99	1.58	1.74	1.77	1.71	1.36	1.62
	b) Exports	3.81	3.64	3.64	3.64	4.45	4.13	3.94	3.91	3.50	3.42	3.53
Bangla Desh	a) Production	2.13	1.93	2.18	2.21	2.12	2.15	1.77	1.91	1.65	1.73	1.72
	b) Exports	3.84	3.75	3.61	3.43	4.20	3.44	2.45	3.17	2.22	2.21	2.50
Argentina	a) Production	1.47	1.78	1.12	1.59	1.91	1.85	1.94	1.28	1.80	1.49	1.41
	b) Exports	3.85	3.48	3.90	3.04	4.04	5.13	4.46	3.35	3.19	3.45	3.15
World	a) Production(tonnes)	1786,965	1818,664	1847,638	1884,317	1946,318	2053,995	2192,874	2288,693	2279,763	2346,435	2478,775
	b) Exports(tonnes)	803,703	850,644	858,995	852,128	819,209	870,798	941,389	953,256	973,770	976,297	1047,399

* Provisional

Source: *Tea Statistics, 1987-88*, Tea Board, India.

INDIA'S FLUE CURED VIRGINIA TOBACCO

Sunil Mani

Indian Flue Cured Virginia Tobacco is largely an export crop and has been under the control of private trade for a long time. Beginning with 1984-85, it has come under governmental regulation which covers both production and marketing. The purpose of the present paper is to study (i) the long term trends in the production, productivity, domestic consumption and export of the crop; (ii) the working of the tobacco market particularly the trader's margins; and (iii) the export competitiveness of Indian FCV tobacco.

The saga of Indian tobacco goes back to the 17th century when the Portuguese traders introduced India to the world of tobacco. There are two types of tobacco grown in India, viz., Flue Cured Virginia (FCV) and non-virginia. The former is used in the manufacture of cigarettes while the latter is used in the manufacture of a number of products like beedies, cigars, cheroots, snuff, hookah, etc. (Table 1). This study is confined to FCV tobacco.

TABLE 1. VARIETAL PRODUCTION OF TOBACCO IN INDIA: 1986-87

Variety	Area ('000 ha.)	Production (Million Kg.)
A. Virginia	114.10 (29.73)	106.70 (23.19)
B. Non-Virginia of which,	269.70 (70.27)	353.50 (76.81)
a. Bidi	128.00 (33.35)	185.00 (40.20)
b. Chewing	65.00 (16.94)	78.00 (16.95)
c. Natu	38.00 (9.90)	44.00 (9.56)
d. Hookah	24.00 (6.25)	28.00 (6.08)
e. Cigar & Cheroot	10.00 (2.61)	11.00 (2.39)
f. Snuff	4.70 (1.22)	7.50 (1.63)
C. Total (A+B)	383.80 (100.00)	460.20 (100.00)

Notes: Figures in brackets indicate percentage share of the total.
Source: *Tobacco in India, A Handbook of Statistics*, Directorate of Tobacco Development, Ministry of Agriculture, Madras, 1989, p. 20.

The commercial cultivation of FCV tobacco in India can be traced to the early years of this century when the British American Tobacco Company (BAT) pioneered its cultivation in Guntur district of Andhra Pradesh. The primary impetus for the indigenous production came from the imposition of tariffs on imported leaf tobacco and cigarettes in 1910-1911. For a very long time till the 1950s, the production and marketing of FCV tobacco was controlled by a subsidiary of the BAT, namely, the Indian Leaf Tobacco Development Corporation (ILTDC).

Cultivation of FCV tobacco in India is highly concentrated. In Annexure 1, we give the area under the crop in three regions of Andhra Pradesh and in Karnataka. Of the total output, over 90 per cent is in Andhra Pradesh and a little under 8 per cent in Karnataka (Table 2).

TABLE 2. REGIONAL DISTRIBUTION OF FLUE CURED VIRGINIA TOBACCO OUTPUT IN INDIA

(per cent)

Year	Andhra Pradesh	Karnataka	Others
1981-82	92.39	7.53	0.08
1982-83	93.91	5.88	0.21
1983-84	92.54	7.23	0.23
1984-85	90.55	8.82	0.63
1985-86	87.19	11.81	1.00
1986-87	91.14	8.31	0.55
1987-88	90.82	7.31	1.81
1988-89	92.57	6.70	0.73
Average	91.38	7.95	0.67

Source: 1. *Tobacco in India* (1989), op. cit., p. 22; 2. *Annual Administrative Report*, Tobacco Board, 1988-89, Pp. 117-8.

Sunil Mani is Research Associate at the Centre for Development Studies, Trivandrum.

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The FCV tobacco growing regions may be classified into four areas based on soil type, namely (1) Northern Light Soil; (2) Southern Light Soil; (3) Black Cotton Soil; and (4) Light Soils of Karnataka. Of the four, in terms of share in total production, the black cotton soil area is the most important (Table 3). However, as we shall presently see, the rather heavy concentration of tobacco cultivation has had a deleterious effect on the productivity of the crop.

TABLE 3. FLUE CURED VIRGINIA TOBACCO GROWING REGIONS IN ANDHRA PRADESH AND KARNATAKA ACCORDING TO AGROCLIMATIC REGIONS

Region	Districts Included	Percentage share of output	Productivity (Kg/ha)	Characteristics
ANDHRA PRADESH				
1. Northern Light Soil (NLS)	West Godavari East Godavari (part) and Khammam (miniscule)	15	1,250	Soil is of sandy loam. The crop is grown under irrigated conditions. The source of irrigation is mainly ground water. Since irrigation is regulated, the response of yield to fertilizer is quite high. This is the best suited region for FCV production. In this region, the seeds are raised in July through August; planted in October-November; harvested in January-February and marketed in February-May. This type of tobacco contains medium to high nicotine and nitrogen and it is exported mainly to the United Kingdom.
2. Southern Light Soils (SLS)	Light Soils of Prakasam and Nellore	17	700	Clay is almost 30 to 40 per cent and sand is about 10 to 15 percent. An important characteristic is the fact that the ferrous bromide content in the soil is very high and because of this the whole plant growth is stunted leading to extremely low levels of productivity. Profile of the cropping calender is exactly the same as above. This tobacco is low in nicotine, medium in nitrogen and sugars with high filling value. Most of it is exported to the U.K., Other West European countries and Japan.
3. Black Cotton Soil	Khammam, Krishna, Guntur, Prakasam (part) East and West Godavari (part)	52	1,000	Management of the crop is extremely difficult due essentially to the rainfall pattern. The soils are clay loams to silty clay loams pattern. Profile of the cropping calender is exactly the same as above. This is considered to be neutral and blends itself very favourably with other tobaccos. The bulk of this tobacco is exported to the USSR, Eastern Europe and the Middle-East. The balance is used by the domestic cigarette industry.
KARNATAKA				
4. Light Soils (KLS)	Mysore, Hassan, Shimoga, Chik-maglur, Kolar, Coorg, Dharwar Mandya, Chitra-durga	16	940	The crop is grown in the transitional belt between the Eastern slopes of the Western ghats and the plains in the state under monsoon conditions. The soils are sandy loams and loamy sands. It is low to medium in nicotine and medium to high in sugars and it is exported mainly to U.K. and European countries.

Note: Annexure-1 gives region-wise area under FCV tobacco since 1970-71.
Source: 1. Tobacco Board; 2. *Indian Tobacco*, Tobacco Board, Guntur, undated, (Pamphlet); 3. *Annual Report*, Tobacco Board, (Various Issues).

Tobacco is mainly a small-holder crop. The average size of a tobacco plantation is 1.74 hectares. The average size in Andhra Pradesh is a little higher (2.02 ha) compared to that in Karnataka (1.46 ha). See Table 4. In Table 5, we give the area, production, and productivity of FCV tobacco in India. In the last but one line at the bottom, we give the annual rate of growth obtained by fitting an exponential curve to the whole data. It will be noticed that the annual rates of growth are 0.65 per cent in area, 1.49 per cent in production, and 0.82 per cent in productivity. It means that there is near stagnancy in all the three. Even more importantly, the values of R^2 are very low in all the three cases which means that there have been large year to year fluctuations.

TABLE 4. AVERAGE SIZE OF FCV TOBACCO PLANTATIONS IN INDIA

(hectares)

Year	Andhra Pradesh		Karnataka		India Average
	Light soil	Black Soil	Average	Light Soil	
1984-85	0.68	1.30	0.90	1.49	1.20
1985-86	2.55	2.45	2.49	1.45	1.97
1986-87	2.28	2.35	2.32	1.47	1.90
1987-88	1.85	1.63	1.70	1.35	1.53
1988-89	2.71	2.69	2.70	1.53	2.12
Average	2.01	2.08	2.02	1.46	1.74

Source: *Annual Administrative Report*, Tobacco Board, Ministry of Commerce, 1984-85 and subsequent Issues.

TABLE 5. AREA, PRODUCTION, AND PRODUCTIVITY OF INDIAN FCV TOBACCO

Year	Area ('000 ha)	Production (million kg)	Productivity (kg/ha)	Estimated world average (kg/ha)
1950-51	61.5	42.7	695	
1960-61	89.4	70.1	784	
1961-62	85.9	62.7	730	
1962-63	97.1	73.0	752	
1963-64	143.6	114.4	797	
1964-65	109.7	91.8	837	
1965-66	N.A.	N.A.	N.A.	
1966-67	125.6	102.5	816	
1967-68	144.1	105.1	729	
1968-69	167.5	133.3	796	
1969-70	152.3	89.9	590	
1970-71	159.0	96.2	605	
1971-72	173.4	139.4	804	
1972-73	169.2	120.1	710	
1973-74	156.4	144.9	926	
1974-75	119.0	99.5	836	
1975-76	121.9	96.8	794	
1976-77	142.1	95.7	673	
1977-78	202.3	164.8	815	1,506
1978-79	165.1	142.8	865	1,460
1979-80	140.5	100.9	718	1,513
1980-81	142.4	117.0	822	1,633
1981-82	150.9	135.5	898	1,826
1982-83	202.6	188.7	931	1,654
1983-84	152.3	130.0	854	1,834
1984-85	133.1	110.0	826	1,785
1985-86	116.5	79.6	695	1,561
1986-87	105.6	109.5	1,065	1,684
1987-88	68.4	64.3	871	N.A.
1988-89	105.5	116.5	1,104	N.A.
1989-90	102.8	100.2	975	N.A.
Annual rate of Growth per cent.	0.65	1.49	0.82	
R^2	0.0456	0.2047	0.2916	

Source: 1. *Indian Tobacco Statistics*, Directorate of Tobacco Development, Ministry of Agriculture, Madras, 1975, p. 18. 2. *Tobacco in India, A Handbook of Statistics*, Directorate of Tobacco Development, Ministry of Agriculture, Madras, 1989, p. 17. 3. *Annual Administrative Report*, Tobacco Board, Ministry of Commerce, Guntur, 1989-90, Pp. 107-8.

This virtual absence of large holdings or large estates is an important characteristic of FCV production. It will be noticed that, by world standards, the productivity of Indian tobacco is very low. The very slow growth in productivity is probably due to continuous monoculture, shortage of critical inputs and slow response of tobacco farmers to new methods of cultivation and processing. The large year to year variations are due to weather. FCV tobacco is mainly a rainfed crop; only ten per cent of the area under FCV tobacco is irrigated. Much of the tobacco growing regions in Andhra Pradesh are subject to the vagaries of nature: cyclones and prolonged summer. Nevertheless, it is said that, though the productivity per hectare has not much increased, the quality has improved; that there is now a higher proportion of bright grades in the output than before.

FCV TOBACCO MARKET

Evolution of FCV tobacco market may be divided into three phases. The first phase is the period from the beginning of the century up to about the 1950s when the entire tobacco cultivation and trade was under the direct control of the Indian Leaf Tobacco Development Corporation (ILTDC). The control over production and marketing manifested itself in the form of a contractual relationship with farmers. This 'control system' could be described as follows: Farmers were supplied with all the requisite inputs like seed, fertilizer and working capital and they in turn were obliged to sell the produce to the company at prices determined by it after adjusting for the input prices. Though the contract system assured a ready market for the produce, it was highly exploitative; it has been shown that on an average the producers' share in the final export price was only 30 to 40 per cent. Nevertheless, even during the depression of the 1930s, FCV tobacco was one of the most profitable crops to the producers in the region because of a steady increase in demand, both domestic and foreign.

By the early 1950s, this contract system came to an end mainly because of changes in the direction of export trade in FCV tobacco. Share of UK which earlier was a little over 75 per cent of the export from India came down to only about two-thirds. The share vacated by UK was taken up by Soviet Union and other East European countries. This diversification of the export trade opened up new possibilities and a number of traders came up specialising in exporting to the new markets ending the monopoly of ILTDC in the purchase of leaf tobacco from the growers. Second, with the increase in the supply of FCV tobacco and also with the diffusion of technology of production and processing (curing), it was no longer necessary to have any direct links with the growers as in the earlier 'contract' system. Gradually, another marketing system evolved, known as the depot system, in which all the leading traders had their purchase depots located within the villages. But, soon, the system again became exploitative: delayed payments to the growers, ranging from a minimum of two months to as much as a year, down grading at the time of purchase, etc., were common complaints.

Recognising the commercial value of the crop and the need for co-ordinated efforts for the development of different kinds of tobacco, Government of India established the Indian Central Tobacco Committee in 1945 and the Central Tobacco Research Institute at Rajahmundry in 1947. Later, in 1956, the Tobacco Export Promotion Council was established. In spite of the existence of these several agencies, the need for an apex body to promote an integrated development of the industry was felt and, in 1976, Government set up the Tobacco Board under the Tobacco Board Act of 1975. Among other things, the Board was expected to regulate production and curing of virginia tobacco, taking into account the demand for it in India and abroad and to ensure fair and remunerative prices to the growers by establishing auction platforms. The Board introduced the auction system for FCV in 1984 in Karnataka and in 1985 in Andhra Pradesh. The period from early 1950s to 1984-85 constitutes the second phase in the evolution of FCV tobacco market in India.

AUCTIONING SYSTEM

With the introduction of auction system in 1984-85 begins the third phase. The system was introduced in the crop season of 1984 in Karnataka and in 1985 in Andhra Pradesh. For this purpose, the FCV growing regions in Andhra Pradesh and Karnataka are divided into a number of platforms from where the auctions are conducted. On an average there have been 21 such platforms in Andhra Pradesh and 8 in Karnataka. The villages under the jurisdiction of each platform are grouped into a number of clusters, each cluster consisting of around three hundred growers. The growers in a cluster are given authorization to deliver their quota or produce on a particular day for sale. The bales so received as per the quota allotment are unloaded, weighed, samples drawn, and classified according to the standard grading system. There are two broad types of grading: farm grades (F1 to F10) for tobacco grown in black cotton soils and plant position grades for tobacco grown in Northern light-soils. The bales are then offered for sale.

An official of the Tobacco Board termed 'starter' after appraising the quality, grade, and the minimum support price (MSP) for the particular grade fixed by the Commission for Agricultural Costs and Prices (CACP), announces the starting price. Eventually the bale is sold to the highest bidder. If the highest bid is below the MSP, the Board or any other agency nominated for the purpose is under obligation to purchase it at the MSP. The MSP announced by the government from time to time are presented in Annexure 2. Since 1989-90, the Tobacco Board have been able to prevail upon the participating traders to adhere to a minimum guaranteed price (MGP) through essentially 'a gentlemen's agreement' between the two. Since it is a gentlemen's agreement it is not binding on the traders. The MGP for the different grades during 1989-90 is presented in Annexure 3.

Once the sale is concluded, the grower is paid promptly. The system differs between Andhra Pradesh and Karnataka. In Andhra Pradesh, the payment of sale proceeds (net of service charges and cess) is by way of two post-dated cheques, 15 and 45 days, respectively from the date of conclusion of sale. The payment is divided equally between the two cheques. In Karnataka, the grower is paid by a single cheque post-dated by 15 days for the entire value of the sale proceeds after deducting one per cent towards service charges on the value of tobacco and tobacco cess at the rate of Rs. 0.01 per kg. For this purpose, the buyers are required to make payment to the Board in settlement of the invoices issued to them by means of a cheque post-dated by ten days.

We have data on the working of the Auction System for the period from 1985 to 1989 giving (a) number of participating growers and traders; (b) quantity and value of tobacco transacted; (c) varietal composition of the quantity transacted; and (d) average price received by the grower. We shall discuss the Andhra Pradesh and Karnataka cases separately as the two have certain distinct features. However, before we do that, we wish to make an observation regarding the grading procedure. In the above, we said that grading is done after the bales are received at the platform. But, actual grading is done by the farmer at his own premises with some assistance from the field staff of the Tobacco Board. Though this has resulted in some standardisation at the auction level, a view was expressed mainly by the exporters that there is really no correspondence between the auction grades and the final grades at which the merchandise is exported. In fact, there is a multiplicity of grades at the auction level determined by the Tobacco Board and at the export level determined by the AGMARK. Finally, as a matter of convention, the merchandise is exported at grades prescribed by the US Department of Agriculture though they have very little relation to the 'AGMARK' grades.

Let us now turn to the working of the Auction System (Table 6). We shall first examine the situation in Andhra Pradesh. By and large, the entire quantum of production during a year is marketed during that year, except in 1985. This shows that sales outside the auction platform, if any, are minimal. The variability in the quantum of tobacco transacted is because of fluctuations in production earlier noted. The number of traders per 1,000 tonnes of tobacco transacted has increased over time indicating greater competition between the traders though it should be noted that there is fair amount of concentration in the domestic purchase of FCV tobacco. Besides, there are a large number of commission agents who purchase tobacco on behalf of larger companies.

There are two aspects which distinguish Karnataka from Andhra Pradesh auctions. First, the crop calendar in Karnataka being earlier, the auctions there are normally held during the months of September through December: at least four months earlier than in Andhra Pradesh. Second, the competition in the Karnataka auction appears to be greater as judged by the number of traders per 1,000 tonnes of tobacco transacted. However, the number of growers participating in the auctions have been steadily declining over time and so is the quantity of tobacco transacted. The prices in Karnataka auction appear to be more variable: the co-efficient of variation works out to almost 34 per cent as compared to about 25 per cent in the case of Andhra Pradesh. Finally, the difference between the highest bid and the average bid has also increased over time.

TABLE 6. WORKING OF THE AUCTION SYSTEM IN ANDHRA PRADESH & KARNATAKA

	Andhra Pradesh					Karnataka				
Particulars	1985	1986	1987	1988	1989	1985	1986	1987	1988	1989
No. of auction platforms	21	21	19	17	18	8	8	7	7	7
No. of effective auction days per platform	55	52	73	39	57	56	55	58	60	48
No. of growers who participated (in thousands)	56	39	38	24	33	134	123	117	114	103
No. of traders who participated	111	152	178	146	245	29	47	61	63	99
Quantity of tobacco transacted (in Million Kg)	90.66 (85)[1]	80.47 (100)	97.51 (100)	47.63 (100)	105.63 (100)	16.77	17.57	16.22	11.67	10.58
Value of tobacco transacted (Rs crore)	93.29	100.55	80.06	77.84	175.28	22.50	19.47	19.12	11.97	22.86
Average Price (Rs/kg)	10.29	12.49	8.22	16.33	16.59 (27.90)[2]	13.41 (23.30)[3]	11.08 (25.90)	11.79 (28.50)	10.25 (28.60)	21.61 (37.00)
Number of traders per 1000 tonnes of tobacco transacted	1.22	1.89	1.83	3.09	2.32	1.73	2.68	3.76	5.40	9.36

Notes: 1. Figures in brackets indicate the quantity of tobacco transacted as a per cent of the actual production during the year. 2. This shows the highest bid during 1989 auction. 3. Figures in brackets indicates the highest bid in each year.
Sources: 1. *Tobacco Auction Statistics, 1984 to 1989*, Tobacco Board, Guntur, 1989, p. 1. 2. *Annual Administrative Report*, Tobacco Board, (Various Issues).

TABLE 7. VARIETAL COMPOSITION OF FCV TOBACCO TRANSACTED IN AUCTIONS IN ANDHRA PRADESH

(million kg)

Variety	1985	1986	1987	1988	1989
A. Farm Grades	80.35 (81.00)[1]	66.00 (82.02)	82.99 (85.11)	37.30 (78.31)	88.45 (83.76)
a) F1 through F4	49.05 (61.05)[2]	47.68 (72.74)	51.96 (62.60)	25.79 (69.14)	64.87 (73.32)
B. Plant Position Grades, of which:	9.93 (11.00)[3]	14.51 (18.03)	14.52 (14.89)	10.39 (21.81)	17.14 (16.23)
a) X1L through X5L	1.46	2.24	3.08	1.47	2.92
b) L1L through L5L	0.81	2.69	2.43	3.02	6.54
c) L1O through L5O	2.52	2.46	1.37	1.83	2.79
Total	4.79 (48.24)[4]	7.39 (50.93)	6.88 (47.38)	6.32 (60.83)	12.25 (73.80)
C. All Grades (A+B)	90.28	80.51	97.51	47.69	105.62

Notes: 1. Figures in brackets indicate farm grade tobacco as a per cent of all grades transacted. 2. Figures in brackets indicate the specific farm grades as a percentage of all farm grade tobacco. There are incidentally ten grades of farm grade tobacco designated as F1 through F10. In addition there is one called nograde (NOG) 3. Figures in brackets indicate plant position grades as a per cent of all grades (i.e. farm + plant position) transacted. 4. Figures in brackets indicate the share of specific plant position grades in all plant position grades. There are seventy-one plant position grades.
Source: *Tobacco Auction Statistics*, Tobacco Board, Ministry of Commerce, Guntur, 1989.

In Table 7, we give varietal composition of the quantity transacted in auctions in Andhra Pradesh. Evidently, the farm grades are more common than the plant position grades. This is because grading at plant position is applicable only for tobacco grown in Northern Light Soils (NLS) which account for only a small percentage of the total output of FCV tobacco. It is also seen that though there is multiplicity of farm grades, much of the transactions (on an average nearly 56 per cent) fall into four farm grades (viz., F1 through F4). In Karnataka, tobacco is grown only on light soils and there is only one grade of the produce that is auctioned.

TOBACCO PRICES

The government has been trying to regulate not only the domestic prices but also the prices at which exports are effected. In fact, the restrictions on export prices preceded the ones on domestic prices. These regulations have manifested themselves in the form of: (a) Minimum Export Prices (MEP); and (b) Minimum Support Prices (MSP). The MEP has been in existence since 1963, while the MSP was introduced only in 1984-85. The MEP is fixed by the Tobacco Board and announced by the government. In addition to these two statutory prices, as mentioned above, there is also the voluntary Minimum Guaranteed Price (MGP) since 1989-90. Besides, of course, there is the actual auction price and the actual unit value of exports. There are thus five different kinds of prices in the market (Table 8). Since there are a large number of grades (about eighty grades at the production level and almost one hundred and thirty grades at the export level) we have selected a representative grade at the production and export levels. These are F3 grade at the auction level and its equivalent export grade, namely LBY2-RS.

TABLE 8. STRUCTURE OF FCV TOBACCO PRICES

(Rs per kg)

Year	Minimum Support Price	Minimum Guaranteed Price	Auction Price	Minimum Export Price	Unit Value of Exports (FOB)
	Grade: F3			Grade: LBY2-RS	
1984-85	9.00	Nil	11.98	23.25	25.29
1985-86	9.00	Nil	13.01	23.25	26.27
1986-87	9.90	Nil	9.34	23.25	25.20
1987-88	9.90	Nil	17.64	24.55	26.64
1988-89	9.90	Nil	15.90	27.00	31.37
1989-90	9.90	14.00(15.10)	15.01	27.00	30.41

Note: 1. NA Not available.
2. Figures in brackets indicate the MGP for Southern Light Soils.
Source: 1. *Annual Administrative Reports*, Tobacco Board, 1984-85 and subsequent issues.
2. *Tobacco Auction Statistics, 1984 to 1989*, Tobacco Board, (Mimeo), 1989.
3. Directorate of Marketing and Inspection, Guntur.

The following salient points emerge from the above Table: (a) There is little correspondence between the Minimum Support Price and the actual auction prices. In fact in 1987, the actual auction prices are lower than the MSP. In spite of price support operations by at least three agencies, viz., the Tobacco Board, the State Trading Corporatión, the Andhra Pradesh Tobacco Growers Co-operative Union, the actual prices realised are lower than the MSP. (b) This raises the question about the level of MSP fixed by the government. A view has been expressed in the trade circles that the MSP is deliberately kept low and infrequently revised to prevent any meaningful market support operations. (c) There is also no correspondence between the auction price and the unit value of exports. In fact, the unit value of exports is almost twice as high as the auction price. One reason for this is the excise duty on tobacco. Until 1979-80, the excise duty was levied on raw tobacco. Since then, it has been shifted to the manufactured tobacco such as cigarettes. Nevertheless, it would affect the auction price of raw tobacco. An èxcise duty, whether on the raw material or the manufacture, which applies only to domestic consumption and not to exports would in general depress the domestic price of the raw material. (d) There is a fair amount of correlation between the minimum export price and the actual unit value of exports. This means that the MEP is fixed with good judgement.

Actual market prices of course depend on the grades. In Table 9, we give the grade-wise prices obtained in the auctions in Andhra Pradesh. It will be noticed that the plant position grades fetch, on an average, 25 per cent, more than do the farm grades. The differential has remained the same over the years implying that the market for the two grades is perfectly integrated.

TABLE 9. GRADE-WISE PRICES OBTAINED IN AUCTION IN ANDHRA PRADESH

(Rs per kg)

Average Price	1985	1986	1987	1988	1989
Weighted average prices of the specific farm grades	12.41 (9.96)[1]	13.75 (11.97)	9.92 (7.79)	18.60 (16.03)	18.29 (16.07)
Weighted average prices of the specific plant position grades	16.04 (12.98)[2]	17.81 (14.87)	13.95 (10.61)	21.53 (17.38)	21.72 (19.31)

Notes: 1. Figures in brackets indicate weighted average price of all farm grades.
2. Figures in brackets indicate the weighted average prices of all plant position grades.
Source: *Tobacco Auction Statistics*, Tobacco Board, 1989.

We may now compare the auction prices in Karnataka with those in Andhra Pradesh. This is done in Table 10. We have already noted that the Karnataka auctions are conducted earlier than in Andhra Pradesh. Hence, Karnataka auction prices in 1984 are compared with the Andhra Pradesh auction prices in 1985 and so on. Also, because the entire quantity of tobacco grown in Karnataka conforms to the light soil grades, their prices should be compared only with the average price obtained for plant position grades (which are essentially light soil tobacco) in Andhra Pradesh auctions. It will be seen that there is no systematic relation between the two sets of prices implying low level of integration between the two, the reasons for which could not be ascertained.

TABLE 10. PRICES IN KARNATAKA AUCTIONS VIS-A-VIS PRICES OF PLANT POSITION GRADES IN ANDHRA PRADESH AUCTIONS

Year	Karnataka Auctions	Andhra Pradesh Auctions
1984 (1985)	13.41	16.04
1985 (1986)	11.08	17.81
1986 (1987)	11.79	13.95
1987 (1988)	10.25	21.53
1988 (1989)	21.61	21.72

Source: Table 6 and 9.

EXPORTS OF INDIAN FLUE CURED VIRGINIA TOBACCO

In Table 11, we show India's production, domestic consumption and exports of FCV tobacco. It shows that while domestic consumption has remained almost constant over the decade from 1980-81 to 1989-90, there is a general decline in both production and exports. It seems that exports have been affected by a constant domestic demand and a fluctuating domestic production.

TABLE 11. PRODUCTION, DOMESTIC CONSUMPTION, AND EXPORT OF FCV TOBACCO

(in million kg)

Year	Domestic Production	Domestic Consumption	Export
1975-76	96.80	42.80	64.50
1976-77	95.70	45.50	67.00
1977-78	164.80	43.80	62.80
1978-79	142.80	41.60	65.50
1979-80	100.90	44.50	58.40
1980-81	117.00	47.70	65.60
1981-82	135.50	51.10	97.90
1982-83	188.70	54.70	83.70
1983-84	130.00	57.50	72.30
1984-85	110.00	60.00	58.20
1985-86	81.00	51.00	50.60
1986-87	112.50	50.00	51.70
1987-88	59.60	51.00	31.03
1988-89	116.50	52.00	29.45
1989-90	100.20	55.00	35.37

Note: The sum of domestic consumption and exports need not equal domestic production because of changes in the level of stocks, and variations in the weight of tobacco, resulting from the amount of moisture contained in it. See in this connection, Deepak Nayyar. *India's Exports and Export Policies in the 1960s*, Cambridge University Press, Cambridge, 1976, p.128.
Source: *Annual Administrative Reports*, Tobacco Board, 1984-85 and subsequent issues. *Status Paper on Tobacco*, Directorate of Tobacco Development, Ministry of Agriculture, Madras, 1991, p. 10.

It will be noticed that the quantity of exports was more or less constant between 1975-76 and 1980-81, except a small decline in 1979-80. There was a sudden increase in 1981-82, almost 50 per cent over the previous year. Since then there has been a steep decline. Exports in 1988-89 were less than one third of those in 1981-82. There are signs of revival in 1989-90; but we should wait before we know whether they are real or merely accidental.

As noted above, the quantity of FCV exports (barring 1980-81, 1981-82 and 1982-83) has actually declined. This can be due to pressure of domestic demand and consequent greater profitability in the domestic market. We do not have any idea on the relative rates of profitability of domestic *vis-a-vis* export sales. This is because the major exporter (viz. ILTD division of the conglomerate firm ITC) is also the largest domestic purchaser as well as the largest domestic consumer. We do not have any data on these intra-firm transactions and specifically the price at which ILTD (which is the tobacco leaf trading division of the cigarette manufacturer ITC) sells it to the manufacturing wing. In fact, since the profits whether based on domestic or export sales remain with the same firm, the amount to be exported should be dictated more by the pressure from domestic demand

The recent decline in India's exports cannot be attributed to increased domestic consumption. In fact, since 1981-82, domestic consumption, except for some increase in the following three years, namely, 1982-85, has remained more or less constant. In terms of per capita, it has of course declined. A possible reason, as mentioned above, is the high excise duty. Hence, the decline in exports should be judged in the context of total world exports, in particular, whether they are declining due to increasing consciousness of harmful effects of tobacco on human health. In Table 12, we present the relevant data. It will be noticed that the world exports did not decline until 1985. But, India's share began to decline in 1984 and has been declining since then. India is one among the top-four exporters (Annexure-10). But, in fact, USA, Brazil, and Rhodesia/Zimbabwe are the major exporters; since, 1980, India ranks fourth.

TABLE 12. INDIA'S SHARE OF WORLD FCV EXPORTS

Year	Total World Exports (million kg)	Share of The Top Four Exporters (in per cent)	Share of India (in per cent)
1960-64 (Average)	350.20	89.00	13.00
1965-69 (Average)	356.90	82.00	12.00
1970	367.40	71.00	11.00
1971	405.10	66.00	12.00
1972	475.80	72.00	15.00
1973	449.10	69.00	14.00
1977	561.80	68.00	12.00
1978	619.70	67.00	11.00
1979	560.50	66.00	11.00
1980	601.50	73.00	11.00
1981	684.80	72.00	13.00
1982	632.20	71.00	13.00
1983	613.30	69.00	11.00
1984	642.50	70.00	10.00
1985	642.80	72.00	9.00
1986	595.50	65.00	8.00
1987	587.90	70.00	9.00

Source: *Indian Tobacco Statistics*, 1975, 1983 and 1989.

In Table 13, we give the direction of Indian FCV tobacco exports in 1960-61 and for the decade since 1980-81 to 1989-90. It will be noticed that while, in 1960-61, UK accounted for 78.81 per cent of India's FCV exports, its share came down to 26.91 per cent in 1980-81 and though there was a further decline upto 1985-86, it has recovered since then. On the other hand, the share of USSR which, in 1960-61, was only 6.33 per cent rose to 43.59 per cent in 1980-81 and though it increased further up to 1985-86 (61.16), it has declined since then and was 30.97 per cent in 1989-90. With some fluctuations, UK and USSR account for about two thirds of India's FCV tobacco exports. Their share has come down in the 1980s while South and South-East Asia is emerging as a new market.

TABLE 13. DIVERSIFICATION OF INDIAN FCV TOBACCO EXPORT MARKET

(Percentage share)

Year	UK	USSR	Egypt	Other western European Countries	South and South East Asia	Other	Total
1960-61	78.81	6.33	1.57	4.87	3.72	4.70	100.00
1980-81	26.91	43.59				29.50	100.00
1981-82	21.87	35.74				42.39	100.00
1982-83	24.04	51.12				24.84	100.00
1983-84	23.57	58.85				18.28	100.00
1984-85	20.08	47.48				32.44	100.00
1985-86	18.86	61.16				9.98	100.00
1986-87	25.48	48.02				26.50	100.00
1987-88	29.04	45.16				25.80	100.00
1988-89	26.40	40.10				33.50	100.00
1989-90	21.46	30.97	6.29	13.11	13.64	14.53	100.00

Source: Computed from: 1. *Indian Tobacco Statistics* Directorate of Tobacco Development Ministry of Agriculture and Irrigation, Madras, 1975.
2. *Annual Administrative Report*, Tobacco Board, Ministry of Commerce, Guntur, 1984-85 and subsequent issues.

There is another way to look at India's exports of FCV tobacco to UK and USSR, namely, to examine India's share in the total imports of FCV tobacco in these countries (Table 14).

TABLE 14. INDIA'S SHARE IN TOTAL FCV TOBACCO IMPORTS INTO UK AND USSR

(in per cent)

Year	UK	USSR
1984	13.63	36.06
1985	8.65	34.63
1986	10.72	37.28
1987	9.31	26.00
1988	5.16	26.26
1989	7.00	29.63

Source: Computed from *Tobacco Quarterly*, Global Commodities Intelligence, Surrey (UK) No. 14, 1990, Pp. 26-31.

Clearly, with some fluctuations, India's share in both the markets is declining. Let us first look at the UK market. In the UK market, major competitors to Indian Tobacco are Brazil, Zimbabwe, USA and Canada. Italy is also emerging as a major supplier to the UK market. Is India losing in price competition? In Table 15, we give the unit prices of imports from India, USA, Brazil, and Zimbabwe. It will be seen that Indian tobacco is the cheapest in the UK market and certainly it is not losing in price competition. Evidently, Indian tobacco is cheap both in price and quality. In fact, it is being used in blends as a filter in cigarettes. This contradicts the claim earlier made that though the productivity of Indian tobacco has not much increased, its quality is improving.

TABLE 15. AVERAGE UNIT VALUE OF FLUE CURED (STRIPPED) LEAF TOBACCO IMPORTS INTO UK FROM DIFFERENT COUNTRIES

(CIF price in UK Pounds/kg exclusive of duty)

Year/Country	India	USA	Brazil	Zimbabwe
1982	1.56	3.09	1.87	1.65
1983	1.70	3.59	1.90	1.94
1984	1.78(14)	4.36(14)	2.02(23)	1.99(12)
1985	2.06(9)	4.96(8)	2.39(27)	2.36(17)
1986	1.87(11)	4.49(11)	2.15(22)	2.45(15)
1987	1.54(9)	3.97(7)	1.97(29)	2.18(11)
1988	1.54(5)	3.14(9)	1.90(31)	2.07(12)

Note: Figures in brackets indicate the market shares in per cent.
Source: *Tobacco Quarterly*, Global Commodities Intelligence, Surrey, No. 1, 1989, p. 42.

In the USSR market, the main competitor is Bulgaria. As the dealings are not in convertible currency, prices of Indian and Bulgarian tobacco in the USSR market cannot be compared. But, it should be noted that the exports to the USSR market are at the Minimum Export Price. Naturally, during 1980s, unit value of exports to UK, on an average, are higher than that realised from USSR by about 12 per cent (Table 16).

TABLE 16. AVERAGE UNIT OF VALUE OF INDIAN FCV TOBACCO EXPORTS

(FOB price in Rs/kg)

Year	UK	USSR	Average unit realisation from all countries	Ratio of UK to USSR Prices
1980-81	19.37	17.58	17.69	1.10
1981-82	21.31	20.53	19.50	1.04
1982-83	24.29	18.96	23.31	1.28
1983-84	24.40	22.91	22.28	1.07
1984-85	26.02	24.26	23.98	1.07
1985-86	28.41	24.89	24.93	1.14
1986-87	28.47	25.27	25.44	1.14
1987-88	25.86	25.34	25.32	1.02
1988-89	26.40	26.47	28.02	1.00
1989-90	39.44	32.78	31.50	1.20

Source: 1. *Tobacco in India*, (various issues); 2. *Annual Administrative Report*, Tobacco Board, (various issues).

EXPORTER'S MARGINS

A recurring theme in the literature is the high margins retained by the trader/exporter. The margins may be gross or net of costs of trading/exporting. The gross margin (GM) is the difference between the actual unit value of exports (EP) and the auction price (AP), expressed as a percentage of the export price. As noted earlier, all prices in the tobacco market are grade-specific. Hence for AP, we take the weighted average price of the two prominent grades, viz., F2 and F3 and for EP, we take the weighted average prices of equivalent export grades like LBY and LBY(2). The difference between the two gives us an estimate of GM. To derive the Net Margin (NM), we deduct the various costs incurred by the exporter (C). These consist of ten components: (1) Tobacco Board Service; (2) Buying and primary handling; (3) Insurance and interest; (4) Transport at various stages; (5) Grading; (6) AGMARK; (7) Stripping; (8)Redrying; (9) Packing; and (10) FOB charges. We have been able to obtain an average estimate of these various components from the Tobacco Board as well as prominent exporters in Guntur (the leading centre for Tobacco trade). These are shown in Table 17. Taking these into account, we present the estimates of the exporter's margin in Table 18.

TABLE 17. AVERAGE EXPORT COSTS DURING THE 1980S (FROM GUNTUR TO MADRAS/KAKINADA)[1]

Particulars	Cost as a per cent of Fob price
1. Tobacco Board Service Charges[2]	0.48
2. Buying and primary handling charges	1.00
3. Insurance and interest charges	3.60
4. Transport at various stages	1.20
5. Grading charges	1.60
6. Agmark charges	0.20
7. Stripping charges	5.00
8. Redrying charges	2.40
9. Packing charges	8.00
10. FOB charges	3.00
Total	26.48

Notes: 1. Both these ports are equidistant from Guntur at about 300 kms. 2. These charges are since the introduction of auctions, i.e., since 1984-85 only.
Source: As mentioned in the text.

TABLE 18. EXPORTER'S MARGINS

Particulars	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90
1. Average unit value of Exports (FOB) (Rs per Kg)	25.60	27.95	37.02	28.09	33.04	33.08
2. Costs to the exporter, (Rs per Kg)	6.35	6.60	6.74	6.70	7.44	8.00
3. Average auction price, (Rs per Kg)	13.18	14.04	10.28	18.87	17.63	16.67
4. Gross Margin, (in per cent)	48.52	43.94	72.23	32.82	46.64	49.61
5. Net Margin, (in per cent)	23.71	26,15	54.02	8.97	24.12	25.42

Note: 1.These are estimated costs of exports and not actually incurred expenditure.
2. It is known that the tobacco purchased in the auction suffers some loss in its weight while it is in the process of being readied for exports. This weight loss is not accounted for in our above calculations. But it is also known that the stems, etc., which are stripped off the leaf are also sold. So the fall in the value of the produce as a result of weight loss is offset by the sale proceeds from these by-products. Consequently we do not make any adjustments for these on the prices.
Source: 1. For average unit value of exports: Directorate of Marketing and Inspection, Guntur.
2. For average auction price: *Tobacco Auction Statistics, 1984-1989*, Tobacco Board, Guntur.

It will be noticed that the gross margin, on an average, works out to 47 per cent while the net margin to about 24 per cent. Year to year variations can be attributed, by and large, to variations in the auction prices, with the export prices and the cost of exports remaining more or less stable during the period. The variations in margins are therefore small except in 1987-88 when there was a sudden increase in the auction prices and the margins were quite low. It is difficult to say whether a net margin of 24 per cent is too high without knowing the working capital requirements of the business. But, probably, it does reflect some market power on the part of the buyers. In fact, there is considerable buyer concentration in the sense that the four-firm buyer concentration ratios have worked to about 66 per cent. But this needs to be examined in greater detail before one can draw firm conclusions.

PROTECTION TO INDIAN TOBACCO

In India, import of tobacco, unmanufactured or otherwise, has always been restricted and subject to high custom duties. In that sense, Indian tobacco has been protected. On the other hand, tobacco and products thereof are subject to excise duties which apply only to domestic consumption but not to exports. To see whether on balance, Indian FCV tobacco receives any protection in international trade, we work out, in the first instance, the Nominal Protection Co-efficient (NPC) which for any commodity is defined as the ratio of its domestic price to its world reference price. The implicit assumption is that if the commodity is freely traded internationally, the two prices would be close together. A domestic price higher than the export price means that the commodity is protected and NPC measures the extent of protection.

We consider two variants of the domestic (auction) price of tobacco viz., Pd being the weighted average price of all grades, and PD being the weighted average prices of specific farm grades, namely, F2 and F3 which together account for about 50 per cent of all farm grades auctioned. Similarly, we have two variants of export price, Pr being the weighted average unit value of exports of all grades and PR being the weighted average unit value of exports of two specific farm grades, namely, LBY and LBY(2) which are equivalent to the grades F2 and F3 respectively at the auction level. These unit values of exports (f.o.b.) at Kakinada/Madras port are adjusted for internal transport and marketing costs including distribution margins from Guntur to Kakinada/Madras (Table 17).

Pd is available for Andhra Pradesh and Karnataka separately and for various agro-climatic regions within Andhra Pradesh. But, PD, Pr, and PR are available only for Andhra Pradesh. Both Pr and PR have Guntur as the reference point because though tobacco is purchased from various interior points, it is finally made ready for exports from Guntur. In fact, almost all the major exporters are headquartered in Guntur. Thus, we shall present two sets of NPCs: the first based on Pd and Pr (for Andhra Pradesh and Karnataka as well as for different tobacco growing regions within Andhra Pradesh) and the second based on PD and PR (only for Andhra Pradesh). The results are presented in Table 19.

Clearly, growers in both the states are disprotected all through the years with the sole exception of Karnataka for the year 1987-88, with no major difference in the degree of disprotection in the two states. With the relative upward movement in the domestic prices there has been reduction in the degree of disprotection since 1987-88. Within Andhra Pradesh, there are of course significant differences in the rate of disprotection between 'Northern Light Soil' region and the other two regions. As seen earlier, this region is one of the most efficient regions for FCV production; the quality of tobacco produced is much superior and fetches a better price. There is very little difference between the other two regions. The results of the second set are not very different.

TABLE 19. STATE, AND REGION-WISE NOMINAL PROTECTION CO-EFFICIENTS FOR TOBACCO

State	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90
Andhra Pradesh (I Set)	0.80 (0.92)	0.60 (0.94)	0.64 (0.88)	0.58 (0.84)	0.69 (0.83)	0.44 (0.89)	0.87 (0.82)	0.81 -	
Northern Light Soil (AP)	N.A.	N.A.	N.A.	0.74 (0.11)	0.81 (0.18)	0.57 (0.15)	0.93 (0.22)	0.94 (0.16)	
Southern Light Soil (AP)	N.A.	N.A.	N.A.	0.60 (0.22)	0.65 (0.15)	0.42 (0.15)	0.84 (0.20)	0.78 (0.22)	
Black Cotton Soil (AP)	N.A.	N.A.	N.A.	0.55 (0.67)	0.66 (0.67)	0.41 (0.70)	0.86 (0.58)	0.78 (0.62)	
Karnataka	0.64 (0.08)	0.49 (0.06)	0.59 (0.12)	0.63 (0.16)	0.64 (0.17)	0.55 (0.11)	1.16 (0.18)	-	
Weighted Average	0.79	0.59	0.63	0.59	0.68	0.45	0.92	-	
Andhra Pradesh (II Set)				0.70	0.68	0.39	0.91	0.62	0.68

Note: Figures in brackets indicate value weights.
Source: For Domestic Price - I set: Annexure 7; II set: Annexure 9(a).
For unit value of exports -I set: Annexure 5; II set: Annexure 9(a).
For Value Weights (I set): Annexure 6.

There is another measure of protection commonly used, namely, the Effective Protection Co-efficient (EPC) which is defined as the ratio of value added at domestic prices to value added at world reference prices. In the present case, it takes into account any subsidies given to the tradeable inputs. We should note that, for the purpose of EPC, value added is defined as value of output at domestic/reference prices minus only the internationally traded inputs. For FCV, there is only one important input which is internationally tradeable, namely, fertilizers. It accounts for about 10 per cent of the cost of cultivation of FCV (Table 20) and involves some amount of subsidy, Hence, even as judged by the EPC, Indian FCV tobacco remains disprotected.

TABLE 20. STRUCTURE OF COST OF CULTIVATION OF FCV TOBACCO
(Average for 1981-84 in per cent)

Particulars	Share of Cost
A. Variable Cost	74.00
of which:	
1. Labour	19.00
a. Human	12.00
b. Bullock	4.00
c. Machine	3.00
2. Material	21.00
a. Seed	11.00
b. Fertilizer	10.00
c. Insecticide	0.40
3. Irrigation Charges	0.93
4. Curing Cost	30.00
a. Material	19.33
b. Labour	11.00
5. Interest on Working Capital	2.00
B. Fixed Cost (a+b+c)	26.00
a. Rental	16.00
b. Interest	6.00
c. Depreciation	3.00
Total Cost (A+B)	100.00

Note: 1. The total may not add upto exactly 100 due to approximation at a number of stages.
2. See Annexure 4 for actual cost of production.
Source: *Tobacco In India, A Handbook of Statistics*, Directorate of Tobacco Development, Ministry of Agriculture, Madras, 1989.

Sometimes, a third measure of protection is computed, namely the Effective Subsidy Coefficient (ESC) which takes into account subsidies on non-tradeable inputs like electricity, water, and credit. However, because only a small proportion of FCV tobacco is grown under irrigated conditions subsidies on electricity and water are really not important. The interest on working capital, on an average, works to about 6 per cent of the cost of production and though some subsidy is involved, computation of the ESCs shall not make much difference to the evidence of disprotection indicated by the NPC.

To sum up, Indian FCV tobacco has remained disprotected whether measured by NPC, EPC, or ESC. This is primarily because of the high excise duty it carries. No wonder, its domestic consumption has remained almost stagnant over the years. Of greater concern is the fact that, in spite of almost stagnant consumption, Indian FCV tobacco is losing its share in the international market.

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ANNEXURE-1: REGION-WISE AREA UNDER FCV TOBACCO

('000 ha)

Year	Black Cotton Soil	Southern Light Soil	Northern Light Soil	Karnataka Light Soil
1970-71	143.00	8.85	2.03	1.60
1971-72	150.20	14.36	4.09	2.26
1972-73	142.40	15.31	6.79	3.01
1973-74	138.50	17.69	8.77	3.88
1974-75	81.00	23.39	8.60	5.50
1975-76	74.20	32.30	8.10	5.39
1976-77	87.70	41.10	8.90	6.36
1977-78	85.40	52.80	12.50	12.00
1978-79	NA	42.95	17.09	16.68
1979-80	NA	NA	NA	23.34
1984-85	77.19	38.14		19.98
1985-86	54.70	43.65		17.86
1986-87	53.36	35.45		17.22
1987-88	31.29	21.70		15.38
1988-89	54.49	89.40		15.82

Sources: 1. *Perspective Plan For Tobacco Development*, National Council of Applied Economic Research, New Delhi, 1979.
2. *Annual Administrative Report*, Tobacco Board, Ministry of Commerce, Guntur, 1984-85 and subsequent issues.

ANNEXURE-2. MINIMUM SUPPORT PRICE OF VIRGINIA FLUE-CURED TOBACCO

(Rs per kg)

	Minimum Support Prices			
	Recommended by CACP		Announced by the Government	
	L2	F2	L2	F2
1978-79	-	7.50	-	7.50
1979-80	-	7.50	-	7.50
1980-81	-	8.25*	-	8.25
		7.50$		8.00$
1982-83	11.25	8.75	9.50	8.75
1983-84	11.50	9.25	11.50	Not announced
1984-85	11.50	9.25	12.00	11.15
1985-86	12.00	11.15	12.00	11.15
1986-87	12.00	11.15	12.00	11.15@
1987-88	12.20	11.25	12.20	11.25
1988-89	12.80	11.75	12.80	11.75

Note: MSP was announced for leaf grade - L2 since 1982-83.
* Light Soil, $ Black Soil, @ Revised to Rs 11.25 in the middle of the marketing season.
Source: Ministry of Agriculture, Government of India.

ANNEXURE-3. MINIMUM GUARANTEED PRICES (GRADE-WISE) FOR 1989-90 SEASON IN ANDHRA PRADESH

(Rs per kg)

Selected Farm Grades	Southern Light Soils	Black Soils
F1	18.60	17.50
F2	17.80	16.60
F3	15.10	14.00
F4	10.30	9.70
Average for all farm grades	14.00	13.00

Selected Plant Position Grades	MGP	Grade	MGP
X1L	21.00	L1L	22.00
X2L	19.50	L2L	20.50
X3L	17.00	L3L	18.00
X4L	7.50	L4L	12.00
		L5L	6.10
Average for all plant position grades		13.78	

Source: *Annual Administrative Report*, Tobacco Board, Guntur, 1989-90, Pp. 96-7.

ANNEXURE-4. COST OF PRODUCTION OF FCV TOBACCO IN ANDHRA PRADESH

(Rs/Quintal)

	1981-82	1982-83	1983-84	1986-87	1987-88
A. Variable Cost of which:	506.98(74)	508.97(72)	684.12(75)	1,588.31	1,715.25
1. Labour of which:	125.19(18)	144.75(20)	185.64(20)	359.50	472.22
a. human	75.28(11)	91.91(13)	114.59(13)		
b. bullock	31.61(5)	31.24(4)	39.34(4)		
c. machine	18.30(3)	21.60(3)	31.71(4)		
2. Material of which:	187.83(27)	123.54(17)	163.81(18)	291.85	262.63
a. seedlings	117.36(17)	40.89(6)	82.18(9)		
b. fertiliser and manure	67.47(10)	79.34(11)	79.12(9)		
c. insecticides	3.00(0.40)	3.31(0.50)	2.51(0.30)		
3. Irrigation charges	7.39(1.10)	5.16(0.70)	9.18(1.00)	21.33	27.68
4. Curing cost of which:	171.05(25)	219.93(31)	304.56(33)	915.63	952.72
a. material	111.94(16)	142.50(20)	197.31(22)	255.96	246.03
b. labour	59.11(9)	77.43(11)	107.25(12)	659.67	706.69
5. Interest on Working Capital	15.52(2)	15.59(2)	20.93(2)	-	-
B. Fixed Costs	178.96(26)	203.32(29)	227.94(25)	300.00	350.00
a. Rental Value of owned land	114.54(17)	133.69(19)	148.34(16)		
b. Interest on Fixed Capital	41.38(6)	44.42(6)	59.41(7)		
c. Depreciation on farm buildings & implements	23.04(3)	25.21(4)	20.19(2)		
C. Cost of Production	685.94	712.29	912.06	1,888.31	2,065.25

Note: Figures in brackets indicate percentage share of the total.

Source: *Tobacco in India* (1989), Op. cit., Pp. 86-95.

ANNEXURE-5: REFERENCE PRICES OF FCV TOBACCO

Reference	Unit	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89
1. Average Unit value exports (FOB)	Rs/quintal	1,950.00	2,331.00	2,238.00	2,398.00	2,393.00	2,544.00	2,532.00	2,809.00
2. Transport and other costs	Rs/quintal	507.00	606.06	581.88	634.99	660.15	673.65	670.47	743.82
3. Reference Price - (1-2)	Rs/quintal	1,443.00	1,724.94	1,656.12	1,763.01	1,832.85	1,870.35	1,861.53	2,065.18

Source: 1. *Annual Administrative Reports*, Tobacco Board, Guntur, 1981-82 and subsequent issues.

2. Table 17.

ANNEXURE-6. DERIVATION OF VALUE WEIGHTS

	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89
1. Production/Qty. transacted[1] in Andhra Pradesh (million Kg)	125.20	177.20	120.30	90.66	80.47	97.51	47.63	105.63
1.2. Value of Prodn.[2] in Andhra Pradesh (Rs million)	1,806.64 (0.92)[3]	3,054.93 (0.94)	1,992.17 (0.88)	1,598.34 (0.84)	1,475.02 (0.83)	1,823.44 (0.89)	886.87 (0.82)	2,181.26 -
2. Production/Qty. transacted in Karnataka[4] (million Kg)	10.20	11.10	16.77	17.57	16.22	11.67	10.58	-
2.1. Value of Prodn. in Karnataka[5] (Rs million)	147.19 (0.08)[6]	191.48 (0.06)	277.71 (0.12)	309.76 (0.16)	297.31 (0.17)	218.23 (0.11)	197.00 (0.18)	-
Total Value of Production/ Quantity transacted (million Kg)	1,953.83	3,246.41	2,269.88	1,908.10	1,772.33	2,041.67	1,083.87	-

Notes: 1. Upto 1983-84 it the actual production and thereafter it is the quantity transacted.
2. This is obtained by multiplying the yearly production/quantity transacted with the respective reference prices.
3. These are the value-weights for A.P.
4. Upto 1983-84 it is the actual production and thereafter it is the quantity transacted.
5. This is obtained by multiplying the years production/quantity transacted with the respective reference prices.
6. These are the value weights for Karnataka.
Source: 1. Annexure-4. 2. *Tobacco In India*, (1989), Op. cit., p. 22. 3. *Tobacco Auction Statistics*, (1989), Op. cit., p. 1.

ANNEXURE-7. STATE-WISE DOMESTIC PRICE OF FLUE-CURED VIRGINIA TOBACCO FIRST SET

State	Unit	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89
Andhra Pradesh	Rs/Quintal	1,152.00	1,026.00	1,059.00	1,029.00	1,261.00	817.00	1,624.00	1,669.00
Karnataka	"	927.00	846.00	979.00	1,108.00	1,179.00	1,025.00	2,161.00	-
Weighted Average	"	1,134.00	1,015.20	1,049.40	1,041.64	1,247.06	839.88	1,720.66	-

ANNEXURE-8: DOMESTIC PRICE OF FCV TOBACCO IN ANDHRA PRADESH FIRST SET

State	Unit	1984-85	1985-86	1986-87	1987-88	1988-89
Andhra Pradesh	Rs/quintal	1,298	1,487	1,061	1,738	1,931
Black Cotton soil	"	977	1,210	770	1,600	1,620
Southern Light soil	"	1,053	1,198	791	1,566	1,616
Weighted Average		1,029	1,261	817	1,624	1,669

Note: The weights are based on share in the year-wise quantity auctioned.

ANNEXURE-9. DOMESTIC AND REFERENCE PRICES OF FCV TOBACCO (ANDHRA PRADESH) SECOND SET

(Rs/Kg)

(a). *Domestic Prices - Second Set*

Grade F2 + F3	1984-85	1985-86	1986-87	1987-88	1988-89
Price of F2	14.49	14.77	12.22	19.39	18.52
Price of F3	11.98	13.01	9.34	17.84	15.90
Weighted Average domestic price	13.18	14.05	10.58	18.86	17.63

Notes: Weights are based on relative shares of the grades in quantity transacted.
Source: *Tobacco Auction Statistics*, Tobacco Board, 1989, (mimeo.).

(b). *Reference Prices - Second Set*

Grades LBY & LBY2	1984-85	1985-86	1986-87	1987-88	1988-89
Unit Value of LBY	28.07(.11)	28.81(.66)	38.41(.1)	30.31(.48)	34.47(.54)
Unit Value of LBY2	25.29(.89)	26.27(.34)	37.02(.99)	26.63(.62)	31.37(.46)
Weighted average unit value of exports	25.60	27.95	37.02	28.09	33.04

Note: Figures in brackets indicate relative weights based value of exports.
Source: *Directorate of Marketing and Inspection*, South Central Region, Guntur.

ANNEXURE 10. WORLD EXPORT MARKET FOR FCV TOBACCO

Year	Total World Exports (million kgs)	Share of the Top-Four Exporting Countries (in per cent)				Total Share of the top 4 exporting countries (in per cent)
1960-64 (Average)	350.20	USA(49),	Rhodesia(22),	India(13),	Canada(5)	89
1965-69 (Average)	356.90	USA(53),	Rhodesia(12),	India(12),	Canada(5)	82
1970	367.40	USA(45),	India(11),	Rhodesia(9),	Canada(6)	71
1971	405.10	USA(38),	India(12),	Rhodesia(11),	Canada(5)	66
1972	475.80	USA(41),	India(15),	Rhodesia(11),	Canada(5)	72
1973	449.10	USA(42),	India(14),	Rhodesia(8),	Canada(5)	69
1977	561.80	USA(33),	India(12),	Brazil(12),	Rhodesia(11)	68
1978	619.70	USA(33),	Rhodesia(12),	Brazil(11),	India(11)	67
1979	560.50	USA(30),	Brazil(15),	India(11),	Rhodesia(10)	66
1980	601.50	USA(29),	Zimbabwe(18),	Brazil(15),	India(11)	73
1981	684.80	USA(26),	Zimbabwe(17),	Brazil(15),	India(13)	72
1982	632.20	USA(25),	Brazil(20),	Zimbabwe(13),	India(13)	71
1983	613.30	USA(23),	Brazil(21),	Zimbabwe(14),	India(11)	69
1984	642.50	USA(25),	Brazil(22),	Zimbabwe(13),	India(10)	70
1985	642.80	USA(24),	Brazil(24),	Zimbabwe(15),	India(9)	72
1986	595.50	Brazil(22),	USA(20),	Zimbabwe(15),	India(8)	65
1987	587.90	USA(23),	Brazil(21),	Zimbabwe(17),	India(9)	70

Notes: Figures in brackets indicate percentage share of each country.
Source: *Indian Tobacco Statistics*, 1975, 1983 and 1989.

ELECTRONICS INDUSTRY UNDER LIBERALIZATION

K. J. Joseph

Electronics industry is generally considered as one with high employment potential both for the skilled and semi skilled labour force. The shift in government strategy towards the industry during the eighties has led to an unprecedented output growth in the short run. However, there has been a drastic decline in the industry's capacity to generate employment. Given the technology intensive nature of the industry, an explanation was often sought mainly in terms of the technological behaviour of the firms. This paper suggests that the declining employment generation capability of the Indian electronics industry cannot be delinked from the emerging trend wherein foreign technology is considered a substitute for local R&D effort.

The experiences of developed capitalist economies have shown the multifarious ways in which the diffusion of microelectronics technology could augment productivity and efficiency in the process of production and exchange. In the area of international trade it had the effect of tilting the comparative advantage in favour of the developed countries even in those labour intensive products where the developing countries used to hold some sway. The developed countries thus left no option for the developing countries but to increasingly incorporate microelectronics technology into their production system. Hence many developing countries have been attempting to develop an electronics production base through different strategies and with varying levels of success. The process also has had behind it the belief that the electronics industry had high employment potential, both for the skilled and the semi skilled labour. Thus inspired by the employment prospects on the one hand and modernizing capability on the other, in India too attempts have been made since the seventies towards developing a broad-based and technologically dynamic electronics industry.

Initially, the Indian electronics strategy, in tune with the then general industrial technology strategy, aimed at an import substituting, self reliant and public sector led growth under the umbrella of government protection and regulation. Towards the close of the seventies and, in particular, during the early eighties, there was a shift towards a more open and market oriented strategy with a view to making the industry competitive in structure and vibrant in growth. The employment implications need a closer examination. Employment potential has two dimensions: the direct and the indirect. The former refers to employment in the production processes of electronics equipment and components while the latter refers to employment implications of the diffusion of microelectronics technology in other sectors. The present paper is concerned only with the direct employment effect.

INDIAN ELECTRONICS: AN OVERVIEW OF MAJOR TRENDS

We may begin with the overall output growth of electronics industry during the last two decades dividing it into two sub-periods viz. 1971-80 and 1981-90. The above periodisation roughly corresponds to the two distinct policy phases - one marked by 'government intervention' and the other by 'market orientation' respectively. The latter period could further be sub-divided into two phases; viz., the first phase (1981-87) wherein the output recorded an unprecedented growth rate and the second phase (1987-90) when the growth rate decelerated, with the major product, viz., television receivers, recording even negative growth rate.

During the first period, 1971-80, Indian electronics industry grew at an annual compound growth rate of 18 per cent (at current prices). As against this, the growth rate during the second period (1981-87) was as high as 33 per cent. The tempo could not, however, be sustained since 1987; the growth rate during 1987-90 was only

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K. J. Joseph is a faculty member at the Centre for Development Studies, Trivandrum.

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25 per cent with the terminal year's growth being as low as 10 per cent.

Next, let us consider the three major sub-sectors of the industry, viz., consumer electronics, professional electronics, and components. In Table 1 are shown the growth trends of the three sub-sectors during the period and its sub-periods. During 1971-80, the three product-groups grew more or less at the same rate, namely, 17 per cent, 20 per cent and 17 per cent, respectively. Further, the professional electronics continued to have the dominant share in the gross output of the industry. As the professional electronics could be viewed as being more technology-intensive, some studies even attributed the dominance of professional electronics to represent the higher technological capability of Indian electronics as compared to the Newly Industrializing Countries (NICs). One may say that the growth pattern of Indian electronics during the seventies reflected the government strategy of licensing capacities with a view to achieving a balanced growth of different sub-sectors for the self-reliant growth of electronics industry.

TABLE 1. GROSS OUTPUT OF ELECTRONICS INDUSTRY

(Rs Crore)

Year	Consumer Electronics	Professional Electronics	Components	Total Electronics Output
1971	52.5	80.5	40.0	173.0
1972	62.5	93.5	44.0	200.0
1973	64.0	113.0	51.0	228.0
1974	78.0	151.0	72.0	301.0
1975	84.5	204.5	75.0	364.5
1976	103.0	224.0	80.0	410.0
1977	130.5	283.5	90.5	508.5
1978	158.5	307.5	117.0	590.5
1979	179.0	320.0	136.0	646.5
1980	214.0	412.5	163.0	806.0
1981	246.0	411.5	173.0	856.0
1982	337.0	605.5	214.0	1,205.0
1983	330.0	725.0	230.0	1,360.0
1984	587.0	896.5	303.0	1,890.0
1985	1,030.0	1,135.0	410.0	2,660.0
1986	1,275.0	1,531.0	510.0	3,460.0
1987	1,820.0	2,070.0	700.0	4,720.0
1988	2,400.0	2,771.0	1,025.0	6,300.0
1989	2,800.0	3,835.0	1,440.0	8,309.0
1990	2,938.0	4,420.0	1,520.0	9,200.0
Annual Compound Growth rates				
1971-80	16.9	19.9	16.9	18.6
1981-87	39.6	30.9	26.2	32.9
1987-90	17.3	28.7	29.5	24.9
1989-90	4.9	15.3	5.6	10.7

Source: Department of Electronics (DoE), ***Annual Report***, for different years. Note: The sub-sectoral total may not add up to the total output because total output in the table includes production in Santa Cruz Electronics Export Processing Zone also.

In contrast, during 1981-87, growth rates in the three sub-sectors differed with consumer electronics the highest, (nearly 40 per cent) followed by professional electronics (31 per cent) and components (26 per cent). It may also be noted that the growth in all the three sub-sectors was accounted for by a few products. For instance, the growth of consumer electronics was mostly on account of television receivers growing at an annual growth rate of 56 per cent between 1981-1987 taking their share in the sub-sector from 36 per cent in 1981 to 71 per cent in 1987; in fact, television sets alone accounted for 28 per cent of the total electronics output in 1987.

The high growth rate of consumer electronics did not continue after 1987; growth rate during 1987-90 was just 17.3 per cent and, in the last year, it was as low as 4.9 per cent. As for the television sets, against the unprecedented growth rate of 56 per cent during 1981-87, the growth rate during 1987-90 was only 6.6 per cent with actually negative growth in the last two years.

As noted earlier, professional electronics was the dominant sector during the seventies and this is what differentiated Indian electronics from those of the other NICs. Professional electronics sector consists of the following broad product groups: telecommunication, defence, computers, and control instrumentation & industrial electronics (CI&IE). In this sector, growth rate of CI&IE was the highest (over 30 per cent) during the seventies. During the first phase of the eighties also it had the highest growth rate compared to other product groups in this sector. Nevertheless, it lagged much behind consumer electronics. Given the extent of investment taking place as a part of industrial restructuring and modernization of capital goods sector in India, one could have expected a higher growth of CI&IE during the 1980's. Probably, the demand for CI&IE products was largely met by imports facilitated by the liberal import policies of the eighties though we are not in a position to present independent evidence on this point. Growth of the component sub-sector was the lowest in the eighties and its share in the gross output of the industry declined from 23 per cent in 1971 to 20 per cent in 1980 and to 16 per cent in 1987. Even the moderate growth was primarily due to the unprecedented growth in a few components like picture tubes and other television components though, again, it did not meet the domestic requirements of the television industry; the television output had grown at a rate of over 56 per cent during 1981-87, whereas the output of picture tubes grew only at 42 per cent. Further, during this period, production of high-technology components like semiconductor devices had stagnated. However, there was a marginal improvement in the rate of growth of components during 1987-90. Given the stagnant or declining growth of the consumer and professional electronics equipment sub-sectors, it may not be possible to sustain the higher growth of components; for instance, the growth in 1989-90 was only 10 per cent.

Thus, the growth pattern during the early eighties was markedly different from the one in the seventies. The overall growth rate of electronics industry in the seventies was low but it was even between the sub-sectors. During the eighties, overall growth was higher but it was uneven between sub-sectors. Moreover, there are indications of deceleration and some of the major products are showing even negative growth during recent years. In other words, with the shift in the development strategy towards greater play of market forces and increasing role of the private sector, the aggregate output growth of the electronics industry improved considerably. However, this was primarily accounted by consumer electronics with considerable pent up demand and hence proved short lived. In fact, a single product exercised a dominant influence in each of the sub-sectors: television receivers in consumer electronics, computers in professional electronics, and electron tubes in components. Moreover, one suspects that much of it was import-dependent.

IMPORTS

The data on electronics imports into the country is practically non existent. The Department of Electronics (DoE) used to publish the product-wise import data till 1982. However, for some reason, publication of this data was stopped since 1982. In the absence of any reliable time series data on import, we have worked out the component requirements in electronics production on the basis of component-equipment ratios for different equipments taken from following the Bureau of Industrial Costs and Prices (BICP). We obtain the component requirements for each product group and then sum these up to obtain total components required for electronics industry. To estimate imports, we subtract from the total requirement domestic output net of exports. Estimates of imports thus obtained are given in Table 2. There is a clear indication of increasing import dependence. The import content increased from around 25 per cent in the early 1980's to nearly 32 per cent in 1984 and to nearly 34 per cent in 1988-89. The sudden increase in 1984 was possibly due to the expansion of output of television sets largely based on imported kits. Though the import content during 1984-89 increased only by two percentage points, the foreign exchange outgo on account of the import of components alone increased more than five times during this period.

TABLE 2. IMPORT CONTENT IN ELECTRONICS PRODUCTION

Year	Total Output (Rs. Crore)	Value of Imported Components (CIF Rs. Crore)	Import Content (per cent)
1981	683	162.7	23.80
1982	991	249.7	25.20
1983	1,130	289.7	25.60
1984	1,587	507.2	31.90
1985	2,250	754.1	33.50
1986	2,950	989.6	33.50
1987	4,020	1,374.2	34.18
1988	5,275	1,837.4	34.80
1989	6,869	2,329.2	33.90

The import content, of course, varies across products. Particularly, in computers, the import content was very high. For instance, in the case of mini and micro computers, a study has shown that with the current (1987) foreign exchange outgo on account of computer production, India could have imported more computers than what was domestically produced. On the whole, the study concluded that 'our ... efforts at producing (assembling) microprocessor systems, in reality, results in negligible value added at international prices' [BICP, 1989, p. 22].

The increasing import content has to be viewed in the context of increasing external liberalization and the consequent increase in the number of foreign collaborations. It is evident from the literature that, in most cases, foreign collaborations involve, apart from the direct technology payments, indirect price tags which take the form of conditions like import of the required components/sub-assemblies from the technology supplier, restrictions on export to certain markets where the technology exporter holds the market and so on. In electronics, the number of collaborations suddenly increased from 76 in 1984 to 192 in 1985 and, with some decline in between, was again 192 in 1988 (Table 3). The number was suddenly reduced to 88 in 1989. We have not been able to ascertain the reasons for such large fluctuations in the number of foreign collaborations.

TABLE 3. FOREIGN COLLABORATION AGREEMENTS AND LUMP SUM PAYMENTS FOR IMPORTED TECHNOLOGY

Year	Number of Foreign Collaboration Agreements			
	Electronic Equipments	Electronic Components	Total	Total Lump Sum Payment (Rs Crore)
1981	40	18	58	13.12
1982	45	30	75	6.40
1983	48	43	91	13.70
1984	45	31	76	13.57
1985	125	67	192	44.39
1986	148	38	186	101.94
1987	104	62	166	89.65
1988	124	68	192	67.87
1989	56	32	88	35.56

Source: Department of Scientific and Industrial Research (DSIR), *Foreign Collaboration: A Compilation* (various issues).

Foreign collaborations would involve considerable foreign exchange outgo on account of dividend, royalty, and lump sum payments. In the absence of any estimates on dividends and royalty payments, we have estimated total lump sum payments (as per approvals). The large jump in lump sum payments between 1985 (Rs 44.39 crore) and 1986 (Rs 101.94 crore) probably reflects the large jump in the number of collaborations between 1984 and 1985. Thereafter, the lump sum payments have gradually declined. But, of course, there would be, in addition, payments of dividends and royalties on collaborations earlier signed. On the whole, the shift in government policy towards greater emphasis on market forces and increased external orientation has resulted in a substantially higher output growth. But it has also caused greater dependence of the industry on imports.

EMPLOYMENT

It is often held that electronics is one of the most labour intensive industries. It generates the maximum employment per unit of investment not only for the semi skilled labour on the assembling floors, but also for the professionals in design and development. It was shown by the Review Committee on Electronics, Department of Electronics, 1979 that employment per unit of investment in electronics is nearly two and a half times higher than in textiles, six times higher than in non-ferrous metals and nearly ten times higher than that in chemicals (Table 4).

To examine the facts in the electronic industry, we shall use data on employment furnished by the Annual Survey of Industries (ASI) which covers only the factory sector but accounts for nearly 72 per cent of the total electronics output as reported by DoE. In Table 5, we give labour/capital (L/K) and labour/output (L/O) ratios for the years from 1973-74 to 1986-87. Both ratios show a consistent decline over the years. However, this by itself is not sufficient evidence of decline in the labour potential of the industry because, while L is number of workers, fixed capital in (L/K) is valued at historical (not constant) prices and output in (L/O) is valued at current prices which have increased over the years. Hence, we shall compare changes, over a decade from 1976-77 and 1986-87, in employment potential in electronics industry with the same in other industries.

TABLE 4. EMPLOYMENT/INVESTMENT RATIOS IN DIFFERENT INDUSTRIES

Industry Group	Number of additional jobs per Rs crore of additional investment
Chemicals & Petrochemicals	33
Power generation	35
Non-ferrous metal products	49
Ferrous products	66
Sugar	70
Rubber products	76
Automobile & bicycles	91
Pulp, paper & paper products	103
Machinery manufacturing	126
Textiles	133
Electrical equipment	246
Electronics	312

Source: Department of Electronics, (1979).

TABLE 5. LABOUR COEFFICIENTS IN ELECTRONICS INDUSTRY

Year	Consumer		Professional		Components		Total	
	L/K	L/O	L/K	L/O	L/K	L/O	L/K	L/O
1973-74	4.73	3.28	1.68	2.63	4.94	3.99	4.31	3.27
1974-75	3.69	2.67	1.75	2.16	3.99	3.22	3.31	3.24
1975-76	3.11	2.42	1.71	1.56	3.33	3.44	2.65	3.32
1976-77	3.14	2.65	1.75	1.92	3.06	2.93	2.65	3.19
1977-78	3.16	2.05	1.76	1.91	2.95	2.47	2.81	2.05
1978-79	2.96	1.91	1.71	1.49	2.96	3.13	2.63	1.90
1979-80	2.45	1.70	1.61	1.34	2.14	2.26	2.22	1.61
1980-81	1.85	1.56	1.45	1.16	1.84	1.98	1.74	1.47
1981-82	1.89	1.26	1.54	1.13	1.89	1.98	1.79	1.28
1982-83	1.55	1.01	1.22	0.76	1.79	1.72	1.49	0.98
1983-84	1.34	0.96	1.10	0.79	1.32	1.54	1.27	0.95
1984-85	1.17	0.80	1.04	0.70	1.53	1.03	1.18	0.80
1985-86	1.08	0.61	0.83	0.59	0.71	0.87	0.96	0.63
1986-87	1.02	0.52	0.86	0.45	0.60	0.77	0.86	0.52

Source: Calculations based on ASI data
Note : L/K is defined as number of persons employed per Rs. lakh of investment. L/O is number of persons employed per Rs. lakh of output.

In Table 6, we give the L/K and L/O ratios for different industries for 1976-77 and 1986-87. It is evident that in 1976-77 more than three persons were required to produce one lakh rupees of output in electronics industry. Compared with other industries, electronics stood fourth; that is to say, there were only three industries with more employment potential than electronics. After a decade, in 1986-87, the rank of electronics came down to 16 among 19 industries. Clearly, compared with other industries, the employment potential of electronics, measured by labour/output ratio, had declined very rapidly. In fact, in 1986-87, there were only four industries with smaller employment potential than in electronics. The pertinent question is why has there been such a drastic decline in the employment potential of electronics industry compared to other industries.

TABLE 6. EMPLOYMENT GENERATION CAPABILITY OF ELECTRONICS VIS-A-VIS OTHER INDUSTRIES

	1976-77				1986-87			
NIC	L/K	Rank	L/O	Rank	L/K	Rank	L/O	Rank
21	2.13	10	2.12	10	1.75	7	0.56	14
22	3.60	3	3.60	3	3.88	2	1.56	2
23	3.00	4	3.00	5	2.26	4	1.17	4
24	1.66	14	1.66	14	1.07	10	0.57	13
25	5.18	1	5.18	1	6.08	1	2.18	1
26	1.99	12	1.99	12	2.17	5	0.66	10
27	4.18	2	4.18	2	2.60	3	1.35	3
28	2.59	7	2.59	7	0.98	12	0.74	8
29	1.44	15	1.44	15	1.92	6	0.69	9
30	0.49	19	0.49	19	0.39	19	0.13	19
31	0.88	18	0.88	18	0.43	18	0.29	18
32	2.96	5	2.96	6	0.95	14	0.89	5
33	1.33	17	1.33	17	0.47	17	0.39	17
34	2.16	9	2.17	9	1.57	8	0.77	7
35	1.73	13	1.73	13	0.97	13	0.58	12
36	1.39	16	1.39	16	0.91	15	0.48	16
37	2.07	11	2.07	11	0.99	11	0.64	11
38	2.20	8	2.45	8	1.29	9	0.79	6
Electronics	2.45	6	3.19	4	0.86	16	0.52	15

Source: ASI
Note: NIC represents code numbers of different industries according to National Industrial Classification.

DECLINING EMPLOYMENT POTENTIAL OF ELECTRONICS INDUSTRY

It could be argued that the nature of technological change in electronics was at the bottom of the decline in the industry's employment potential. For instance, the switch-over from transistor technology to integrated circuit (IC) technology would reduce the number of components to be assembled in a final equipment thereby reducing the employment potential of the industry [Frances, 1986, p. 6]. Further, the very assembling and testing operations have increasingly become automated with the introduction of wave soldering machines, in-line testers, and such other processes.

Like many other industries, electronics industry encompasses both manufacturing and assembling process. While the components involve a large extent of manufacturing process, the equipments are made by assembling components on the basis of a design. Hence, production of components and equipments involve different stages with varying labour requirements of both skilled and unskilled labour. For instance, ICs involves the following stages: Design, Mask Making, Wafer Fabrication, Assembly, and Testing. Each of these stages could be further subdivided; the design process for instance, involves the following stages: (a) Conception of a new circuit, namely, specification of the functional characteristics of the device and determining the processing steps in its manufacture; (b) Preliminary Design involving the estimation of the size and approximate location of every circuit element and the operational characteristics simulated with the help of a computer; and (c) Final Layout, namely, finalizing the precise positions of the various circuit elements with the help of Computer Aided Design (CAD) [Ernst, 1986, p. 318]. Obviously, there is the need for labour with varying levels of skill. To elaborate, the initial stages like the design, mask making and wafer fabrication requires highly skilled labour and the final stage, viz., the assembly and testing requires semi skilled or unskilled labour.

In the case of equipments also the skills required at different stages vary. For example, the skill required for the design of architecture and software development would be higher than what is required for making of sub-assemblies and testing [Dau and Manck, 1986]. Thus, it is only if a firm or industry is capable of successfully carrying out all the stages of production implying higher level integration, both in the case of components and equipment, the electronics industry would be capable of generating more employment per unit of investment than most other industries.

Now the question is what enables the industry/firm to successfully carry out the different stages involved in the production process to active or higher level of integration. The obvious answer, particularly in a technologically dynamic industry like electronics, is the level of technological capability of the industry, namely, the ability to undertake different technology related tasks. It is evident from the existing literature that technological capability of the developing countries is manifested in their ability to bring about incremental improvements in products and processes that they import as distinct from the radical innovations that take place in the developed countries [Frances, 1986]. Technological capability of an industry/firm is difficult to measure in precise terms. However, there is a general consensus that there are mainly two forces behind the process of building technological capability. The first one is the in-house R&D effort by the firms and the second one is the transfer of technology by the firms both internal and international [Blumenthal, 1979]. It seems that the movement of the developing economies along the 'dependence- independence' continuum is associated with a more than proportionate increase in the in-house R&D effort by the firm/industry as compared to their effort towards technology import and that effect of these two factors on the employment potential of the firm/industry is different [Subrahmanian, 1984].

The need for in-house R&D effort is obvious. Technology, because of its complexity, cannot be transferred in its entirety and the purchaser inevitably receives less than complete information that the seller has. Moreover, the technology transferred by the developed countries is suited to their own economies and requires adaptations to suit the local conditions of the developing countries. This needs local R&D effort which would enable the firm to undertake more stages of production and thus generate more employment than without it.

Next consider the effect of technology import, more popularly known as foreign collaborations, on the employment potential of the importing firms. The connection is rather complex. For the technology exporting firms, the technology export has become a double edged sword. On the one hand, they are under increasing pressure to expand the world wide proliferation of their technologies in order to expand the life cycle of these technologies, penetrate or at least retain increasingly protected markets, and spread their excessive cost burden on research and development. On the other hand, the process of transferring and disseminating technology once started tends to increasingly erode the capacity of the exporting firms to control such technology. Consequently, these firms are forced to develop ever new methods to protect and secure their effective control over key technologies and innovative capabilities and thus to rely on increasingly tough technological protectionism [Ernst, 1986]. Hence conditions like retention of certain aspects of the technology, the tied import of components/sub-assemblies, restrictions on export to certain markets and so on must be accepted by the developing countries given their low technological capability and consequent poor bargaining power. Such conditions would obviously force the importing firms to skip certain vital stages in the production process. This adversely affects their employment potential and technological capability. The restrictions on export also effect the scale of their operation and hence again their employment potential. Thus one could expect a negative association between technology import and employment potential.

TABLE 7. SALES, EMPLOYMENT, AND EXPENDITURE ON R&D IN 55 FIRMS IN ELECTRONIC INDUSTRIES

Sales Rs lakhs	EMPT Number	R&D Rs lakhs	Foreign Collaboration (1) No Collaboration (0)
750	282	5.36	0
108	8	3.84	0
304	110	13.04	0
1,480	203	70.5	1
7,833	1500	32.52	1
4,273	1224	51.5	1
385	54	2.8	0
1,445	780	91.75	1
887	16	17.7	1
120	50	1.11	0
2,158	901	16.45	0
135	146	6.0	1
3,200	470	5.1	0
166	136	6.2	1
204	130	10.68	1
5,367	650	0.81	1
14,480	7,625	245.9	1
110	47	4.74	1
748	156	7.72	1
65	70	1.8	0
122	106	1.58	0
45	26	7.28	0
667	489	6.76	1
419	350	12.48	0
9,931	221	45.75	1
1,904	1,916	22.21	0
198	378	2.19	0
150	70	2.0	1
4,480	973	53.0	1
3,000	94	6.9	0
56,770	269	298.6	1
400	73	4.47	1
60	5	0.7	1
500	20	28.0	1
21,900	140	1.7	1
300	120	12.25	0
4,270	208	7.5	0
545	485	19.6	1
1,750	1,209	16.11	1
35,400	1,412	60.62	1
100	47	3.48	1
37,990	4,000	538.9	1
68	60	11.8	0
450	50	2.8	1
84	18	12.68	1
1,200	611	258.0	1
160	22	5.5	1
1,227	173	1.05	1
6,269	553	35.9	1
33	4	1.7	1
190	86	7.8	1
300	275	22.7	0
6,800	319	88.0	1
44,070	16,347	1,288.0	1
7,377	1,465	513.0	1

With a view to verifying empirically the above hypothesis, we have collected firm wise data on research and development, employment and sales from 55 firms operating in the electronics industry (Table 7). It was also ascertained whether the firm had at present any foreign collaboration. Data on in-house R&D expenditure was collected from the in-house R&D Compendium published by the Department of Scientific and Industrial Research (DSIR). This compendium also provided information on the sales turnover of the firms and also whether the firms had any foreign collaborations. The information on foreign collaboration was further checked with the help of another publication from DSIR, viz., *The Foreign Collaborations - a Compilation.* Firm wise employment figures were collected from the directory of electronics producing units published by the Department of Electronics. Unfortunately, since the data on firm wise employment was available only for one year (1987) our analysis is confined to one year. Hence the results of our analysis may be considered as no more than indicative. Using the above data we run a multiple regression of the following form

$$\log EMT/S = a + b_1 \log R\&D/S + b_2\ D + e$$

Where

EMT = Employment in the firm in 1987
R&D = Research and Development expenditure in 1987.
S = Sales turnover of the firms 1987.
D = Dummy variable, taking the value 1 for those firms with foreign collaboration and 0 for those units without foreign collaborations.

The estimated regression equation is given below.

$$\underset{}{\text{Log EMT/S}} = \underset{(1.591)}{0.754} + \underset{(4.417)^*}{0.4231 \log R\&D/S} \underset{(-2.286)^*}{- 0.722D}$$

$R^2 = 0.329$; adjusted $R^2 = 0.303$

Figures in the brackets show t values
* indicates significance at 5 per cent level

It will be noticed that the estimated coefficient of R&D/sales ratio is positive and that of dummy variable is negative. Both of the coefficients are found to be statistically significant. The positive and significant coefficient of R&D sales ratio tend to suggest the inexorable relation between technological capability and employment generation capacity in a technology intensive industry like electronics. In the case of technology import the relation is found to be different. With the dummy variable showing statistically significant negative sign implies that the foreign collaborations tend to exert a dampening influence on the employment generation capacity of the industry. On the whole the statistical exercise carried out tend to suggest that the firms with emphasis on in-house R&D efforts with lesser dependence on foreign collaborations would be able to carry out more of the stages involved in the electronics production and hence would generate more employment. Thus technological capability of an industry and its employment generation capacity appears to be complimentary. On the whole the above exercise tends to suggest that the declining employment generation capability of the Indian electronics industry cannot be delinked from the emerging trend where in foreign technology is considered a substitute for local R&D effort [Joseph, 1991].

CONCLUSION

Electronics industry is generally considered as one of the industries with high employment generation potential both for the skilled and semi-skilled labour force. Given the resource endowment of the country on the one hand and the modernizing capability on the other, in India a concerted attempt has been made to develop a broad based and technologically dynamic electronics industry. In the seventies, the Indian electronics strategy was characterized by selective regulation. Later, in the early eighties, there has been a shift towards more open and market oriented strategy with a view to making the industry competitive in structure and vibrant in growth. The shift in the government strategy towards the industry has led to an unprecedented output growth. However, the higher growth could not be sustained for long. The trends have already set in where there was a general decline in the output growth with certain major products recording even negative growth rates. The outward oriented growth strategy with greater role to the market forces also led to an unprecedented increase in the dependence on foreign technology and imported components and sub-assemblies.

Along with these trends there has been a decline in the industry's employment potential. Given the technology intensive nature of the industry, an explanation to the observed trend was sought mainly in terms of the technological behavior of the firms. An empirical analysis in this direction shows that firms with higher local R&D effort tend to have higher employment potential. But the available evidence shows a general decline in the R&D intensity of firms in the eighties. Many firms resorted to foreign collaborations as a substitute and not to compliment their local R&D efforts which in turn led to increased dependence on foreign technology and reduced employment potential. On the whole, it appears that while the liberalization of the kind that India follows today may lead to a higher output growth in the short run, it will be at the cost of long term sustained growth and employment potential of the industry.

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CHASING BLACK MONEY IN INDIA

Kishore C. Samal

The paper gives a history of the various measures taken by the Government of India to mop up black money since 1946 such as demonetisation, voluntary disclosure schemes, and bearer bonds. Certain other measures have also been taken in the various central budgets particularly since 1974 to check tax evasion and avoidance and generation of black money. Because of failure of earlier amnesty schemes and improper implementation of budgetary measures, three more amnesty schemes were launched in 1991. These had no more than a marginal impact on the problem of black money. On the other hand they discriminate against honest tax payers, reward tax evaders and black money operators with various concessions and immunities and, in the process, demoralise the taxation authorities. More importantly, they do little to curb generation of black money; in fact, to the extent black money sooner or later gets adequately rewarded, they encourage generation of and transactions in black money. It is a case of living with the devil. Recent liberalisation policies which are trying to reduce controls, licences, and bureaucracy may reduce to some extent corruption, hush money, and bribing prevalent in many important Government departments. But, Government cannot function without levying some taxes and duties and their avoidance and evasion cause generation of black money. In the circumstance, there appears to be no alternative to direct action against black money holder through presumptive tax and raids.

The Indian economy has a dual nature. There is a formal and an informal but legal economy, functioning on the basis of the official monetary system involving open transactions financed through identifiable sources of funds and operating in conformity with government rules and regulations. Side by side, an informal and illegal economy exists which operates outside the legal economy and the government's monetary, banking, and fiscal system. It involves a range of undisclosed deals and transactions. The money generated out of these clandestine and undisclosed deals and income is called black money. One may make a further distinction. The income which is legitimate but not disclosed in order to evade tax may be termed as 'grey money', while income earned in the illegal informal economy and which, of course is not disclosed, as pure 'black money'. In this paper, we have used the term 'black money' in the wider sense including both grey and black money, the common element being undisclosed income.

The illegal economy grows mainly due to (i) tax laws and (ii) restrictions on and regulation of certain activities of economic agents. Of course, even if there were no such restrictions and regulations, tax laws would create an illegal economy with prospective taxpayers evading payment of taxes. In recent times, large-scale evasion of income, excise, and sales taxes has created a large volume of black money which is circulating in an ever expanding illegal informal economy. Evasion of income tax may create an illegal informal market in services. Similarly, evasion of excise, sales tax, and custom duties are likely to create an illegal informal market in commodities. An illegal informal market in commodities is also created as a result of price control and other restrictions. Black money is generated in this illegal informal market and the unaccounted incomes therefrom, in turn, are used for further transactions in the illegal informal market.

Illegal informal market and black money are naturally connected. An illegal informal market may develop, besides through evasion and avoidance of tax laws and other regulations, out of scarcity, shortage, hoarding, illegal production, illegitimate speculation, smuggling, and so on. As the illegal informal market proliferates, the volume of black money in the economy expands. But this remains largely outside the network of the tax authority. Black money, in a broader sense, denotes unaccounted currency which is either hoarded or is in circulation in clandestine dealings, as well as its investment in gold, jewellery, precious stones, land, buildings and investments made secretly over and above the reported income.

Kishore C. Samal is Reader in Economics in the G. M. College, Sambalpur, Orissa. The author is grateful to Prof. V. M. Dandekar for his editorial comments and to Prof. R. S. Rao for suggesting the subject of the paper. The usual disclaimer applies.

By its very nature, it is difficult to quantify tax evasion. An estimate was made in 1956 by Nicholas Kaldor. According to him, the income-tax loss through tax evasion was of the order of Rs 200 to Rs 300 crore in 1953-54. As against this, the Central Board of Revenue, as it then was, expressed the opinion that tax evaded in the year 1953-54 could not have exceeded Rs 20-30 crore. The Direct Taxes Administration Enquiry Committee (1958-59) also considered the extent of tax evasion in the country and observed that the quantum of tax evasion, though undoubtedly high, was not of the magnitude indicated by Kaldor. On the basis of some data for 1961-62 obtained from the Directorate of Inspection (Research, Statistics and Publications), adopting the Kaldor method with suitable modifications, the Direct Taxes Enquiry Committee (1971) concluded that the assessable non-salary income and the actually assessed non-salary income for the financial year 1961-62 were Rs 2,686 crore and Rs 1,875 crore respectively so that the income which escaped tax for that year would be of the order of Rs 811 crore. A comparable estimate of assessable non-salary income for the financial year 1965-66 was Rs 4,027 crore and, assuming that the evasion was at the same rate as in 1961-62, the Committee estimated evaded income for 1965-66 at Rs 1,216 crore. The Committee expressed some reservations on these estimates and, after making rough adjustments on the basis of information available, income on which tax was evaded was estimated at around Rs 700 crore and Rs 1,000 crore for the years 1961-62 and 1965-66, respectively. Further, on the basis of increase in national income from 1961-62 to 1968-69, tax-evaded income for 1968-69 was estimated at about Rs 1,400 crore. Assuming that rate of tax evasion would be at least one-third of the tax-evaded income, income-tax evaded during 1968-69 was estimated at Rs 470 crore [Wanchoo, 1971, paras 2.15-2.18]. According to the estimate of National Institute of Public Finance and Policy, tax evaded income, in 1980-81, ranged between Rs 4,839 crore and Rs 9,813 crore [Acharya *et. al.*, 1986, p. 133]. Income tax evasion may be taken at around one-third of the tax evaded income.

Though it is difficult to estimate the exact volume of black money, it is clear that the volume of black money and the proportion of national output entering into the illegal informal economy has tended to increase. This has several adverse effects.[1] Government controls and other economic measures including the credit policy of the Reserve Bank of India becomes ineffective owing to the ever expanding illegal informal market and a surge of black money. There is undesirable diversion of resources from essential and useful investment in the formal economy to non-essential investment and production in illegal informal economy. The generation of black money particularly from smuggling has an adverse effect on the external value of the Indian Rupee. The use of black money on conspicuous consumption creates social tensions between black money holders and honest taxpayers.

Hence, it is necessary to prevent illegitimate income generating activities and to stop generation of black money. In March 1970, the Government of India appointed a committee (Direct Taxes Enquiry Committee) whose very first term of reference was to (a) recommend concrete and effective measures (i) to unearth black money and prevent its proliferation through further evasion; (ii) to check avoidance of tax through various legal devices, including the formation of trusts; and (iii) to reduce tax arrears [Wanchoo, 1971, p. 1].

Direct Taxes Enquiry Committee (DTEC) suggested a number of measures to mop up black money as well as to check its generation. Some of the important suggestions made were demonetisation in the interim report and scaling down of the marginal rate of income tax in the final report. Voluntary disclosure scheme and issue of bearer bonds were considered but not favoured. However, M. P. Chitale, one of the Members of DTEC, suggested the issue of bearer bonds in his minute of dissent [Wanchoo, 1971, Pp. 209-230]. Various other measures have also been suggested from time to time. In this paper we will examine the steps taken by the Government of India to mop up black money (Table 1) as well as to check generation of black money through budgetary measures (Table 2).

TABLE 1. MEASURES TO MOP UP BLACK MONEY

Years	Measures Taken
1946	Demonetisation
1951	Voluntary Disclosure Scheme (VDS)
1965	i) VDS (60-40 Scheme)
	ii) VDS (Block Scheme)
1975	Voluntary Disclosure Scheme
1978	Demonetisation
1981	Special Bearer Bond
1985	VDS (Executive fiats)
1986	Indira Vikas Patra
1991	i) Voluntary Deposit Scheme of NHB
	ii) Foreign Exchange Remittance Scheme
	iii) India Development Bond of SBI
	iv) Liberalisation

TABLE 2. BUDGETARY MEASURES TO CHECK GENERATION OF BLACK MONEY

Central Budget year		Measures Taken/Suggested
1974-75		Reduction of marginal rate of Income Tax from 97.75 to 77 per cent
1976-77		Reduction of marginal rate of IT from 77 to 66 per cent
1981-82		Finance Minister's observation on menace of black money, viz. inflation in his Budget Speech
1984-85	i)	Reduction of marginal rate of IT from 67.5 to 61.9 per cent
	ii)	Audit of accounts of tax payers
	iii)	Account payee cheque/draft in case of deposits/loans
1985-86	i)	Reduction of effective marginal rate of tax from 61.9 to 50.0 per cent
	ii)	Reform in personal Income Tax
	iii)	Change in tax laws relating to penalties and association of persons
1987-88		Tax on hotel expenditure
1988-89		Assessment of income of persons engaged in certain trades
1990-91	i)	Donee-based gift tax
	ii)	Abolition of Gold Control Act
1991-92	i)	Tax deduction at source on the interest on Bank's time deposits, Commission, etc.
	ii)	Announcement of three Schemes

STEPS TO MOP UP BLACK MONEY

Demonetisation : 1946

Hundred rupee currency notes were demonetised by the Government of India with immediate effect in 1946. A time limit was fixed for exchange of demonetised notes by genuine holders at the Reserve Bank of India or its agencies on the basis of their declarations. Their declarations and explanations regarding the source of earnings and others were investigated carefully. The exchange was not permitted if the explanation of the source of income was not satisfactory. But this caused great difficulties to people. It did not also produce impressive results. At that time, total notes of the value of Rs 1,235.93 crore were in circulation of which hundred rupee currency notes of the value of Rs 143.97 crore were demonetised. In fact, only Rs 9 crore worth of hundred rupee currency notes were immobilised.

Voluntary Disclosure Schemes

A number of Voluntary Disclosure Schemes were announced from time to time (Table 3). In the following, we shall review them briefly.

TABLE 3. VOLUNTARY DISCLOSURE SCHEMES: AMOUNT DISCLOSED AND TAX COLLECTED

(Rs Crore)

Year	Amount Disclosed	Tax collected
1951	70.20	10.89
1965-I	52.18	30.80
1965-II	145.00	19.45
1975	1,578.00	248.70
1985	10,778.00	459.00
1991 Voluntary Deposit Scheme of NHB	24.00*	-

* up to 30th November 1991.

1951: A voluntary disclosure scheme was first announced in 1951. Under this scheme, the tax law was relaxed to persuade tax evaders to come forth and disclose their unaccounted incomes. A total amount of Rs 70.20 crore was disclosed in 20,912 cases. Additional tax collected was Rs 10.89 crore.

1965: Two schemes of voluntary disclosure were announced in 1965. The first scheme was implemented under Section 68 of the Finance Act of 1965. It was also known as '60-40 scheme'. Under the scheme, the tax evader who disclosed his unaccounted income paid 60 per cent of the disclosed income in the form of taxes and the rest 40 per cent was accounted into the books. The total amount of income disclosed was Rs 52.18 crore and tax realised was Rs 30.80 crore.

The second scheme, known as 'block scheme', was under Section 24 of the Finance Act, 1965 (No. 2). Under this scheme, instead of a flat rate of 60 per cent, different tax rates were determined on the basis of the blocks of unaccounted income disclosed. The total amount disclosed was Rs 145.00 crore and tax realised was Rs 19.45 crore. Thus, under the two Voluntary Disclosure Schemes (VDS) of 1965, around Rs 197 crore of concealed income was disclosed and about Rs 50 crore of tax collected. DTEC criticised these schemes because they favoured the fraudulent and dishonest persons at the cost of honest and law-abiding tax payers [Wanchoo, 1971, Pp. 12-13].

1975: In spite of DTEC's criticism, Voluntary Disclosure of Income and Wealth Ordinance, 1975 was promulgated on October 8, 1975. The aim of the 1975 scheme was to bring about voluntary disclosure of unaccounted income and wealth as well as undervalued assets. Three months time was given for declaring unaccounted income and wealth under any of the following three categories: (i) income for which a person failed to file a return under the Income Tax Act; (ii) income which a person failed to disclose in a return of income filed before October 8, 1975; and (iii) income which escaped assessment in any assessment made by the income tax department. The scheme envisaged a special rate of tax on a slab basis ranging from 25 to 60 per cent at different levels of disclosed incomes. They were treated as a separate block irrespective of the years in which they were earned. In the case of companies the rate was a uniform 60 per cent. In addition, the person concerned was required to invest 5 per cent of the disclosed income in notified government securities. There was no penalty and no wealth tax was payable on the disclosed income and wealth.

The benefits of the scheme were not available to smugglers and foreign exchange racketeers who had been detained, or to whom detention orders had been issued, under the Conservation of Foreign Exchange and Prevention of Smuggling Act, 1974. No person could file his regular income-tax return during this period and hide a portion of his income and then declare it at a later stage to get the advantage of concessional tax rates.

In some respect, VDS of 1975 was different from the earlier VDS. Thus, while VDS of 1975 covered concealed wealth, the earlier VDS did not do so. The VDS of 1975 did not allow income already detected while the VDS of 1965 did so. Under the VDS of 1965, a period of six months was allowed for the final tax payment; under the VDS of 1975, a period of 15 months was given.

Around Rs 1,578.00 crore of unaccounted income and wealth came to light in 1975 under the VDS and it brought an estimated Rs 248.70

crore into the tax net (Table 3). Subscription to notified government securities under the VDS amounted to Rs 39.50 crore in 1975-76. The scheme was a success beyond expectation due to various factors like low income tax liability in comparison to normal tax rates, additional concessions, immunities under other Acts, etc., but mainly due to fear psychology during the internal emergency then declared. The scheme helped the Income Tax Department to keep on records at least some of the sources from where black money originated and where it flowed. But all the voluntary disclosure schemes have only marginal impact on the black money problem. On the other hand, tax evaders are rewarded with concessional treatment. Moreover, a majority of the individuals who took advantage of the scheme belonged to the middle income group and the amount declared averaged around Rs 25,000. Declaration by individuals of amount over Rs one lakh constituted only 1.4 per cent of the total, accounted for 15.8 per cent of the amount collected and 26.8 per cent of the tax revenue realised.

1985: The Voluntary Disclosure Scheme of 1985 was sanctioned by a series of executive instructions. The scheme allowed a blanket waiver of interest on arrears and provided for a liberal spread of income for back periods up to 16 years. Further, there was no compulsion to disclose actual sources of income disclosed under 'other sources'. The scheme enabled a number of tax payers to convert their black money into white by paying a small amount as conscience money. Since the scheme was by executive fiats, it was not properly understood by both tax payers and the tax authority. A number of disclosures were of cases already detected. It was also used to avoid tax through declaration by women, minors, and benamis. Moreover, the declarations under VDS of 1985 overlapped with those under VDS of 1975. Rs 10,778.00 crore of unaccounted income was disclosed and resulted in additional revenue of Rs 459.00 crore which is equivalent to only 4.25 per cent of tax on the disclosed income. But the penalty worth of Rs 471.00 crore was waived [Prabhu, 1990].

The floating of voluntary disclosure schemes one after another since 1951 has created a class of tax evaders who are confidently concealing their income and wealth to take advantage of voluntary disclosure schemes at intervals so as to pay income tax at a rate lower than the normal rate. The Comptroller and Auditor General of India (CAG), in his latest Report on VDS refers to these habitual offenders and tax dodgers laundering large amounts of black money at a nominal cost[2] [CAG, 1990].

Demonetisation: 1978

On the night of January 16, 1978, Government withdrew from circulation currency notes of denomination of Rs 1,000 and above. Banks were asked immediately to prepare statements of all currency notes of Rs 1,000, Rs 5,000 and Rs 10,000 in their possession. Persons holding such notes could exchange them before January 19, 1978, at the designated branches of the Reserve Bank of India and other Public Sector banks provided they disclosed the source, the time and the manner of acquisition along with a proper attestation of identity. If for some reason an individual could not apply for exchange of high denomination notes by January 19, 1978 he could do so by January 24, 1978 to the Reserve Bank of India, together with a satisfactory explanation of the reasons for not applying within the earlier time limit.

Demonetisation in 1978 was better implemented than in 1946. The value of these high denomination notes in circulation on January 17, 1978 was estimated at about Rs 180 crore. Of these, notes worth Rs 20 crore were immobilised. But, most holders of high denomination notes did not turn up at bank branches to exchange them. They sold them to others who could present them at the bank with less suspicion. An estimated Rs 20 crore worth of high denomination currency notes were so exchanged at discount for small denomination notes. The element of intended surprise and secrecy was also not well maintained and thousand rupee notes were already out of circulation one week before the demonetisation. Reportedly large amounts of high denomination notes were sent to the Gulf countries especially to Dubai and Kuwait a few days before the Ordinance was announced. In due course, they were presented to the Reserve Bank of India through official channels of the middle-east based foreign banks that had connection with such operations [Venugopal, 1978].

In spite of these limitations, the demonetisation served some useful though limited purpose. First, it brought out into open, cash circulating in the illegal informal economy. Second, the step gave an effective blow to the political use of unaccounted money at that time. Third, the declaration made during the exchange of demonetised notes gave tax officials clue for further investigation. But frequent demonetisation of currency notes does not help; people with black money in high denomination notes convert them in time into smaller denomination notes.

Special Bearer Bonds : 1981

In January 1981, Government issued an Ordinance on the Special Bearer Bond Scheme and on February 2, 1981, issued at par, Special Bearer Bonds of the face value of Rs 10,000. The Bonds were on sale from February 2 to April 30, 1981 and again from December 1, 1981 to January 9, 1982. There was no limit on the investment in these bonds and no questions asked about the source of money from which the bonds were acquired. They carried an interest of 2 per cent per annum, had a maturity period of 10 years, and enjoyed full immunity from wealth, capital gains and gift taxes. Premium payable on the redemption of the bonds was free from income tax. There was facility for bank advances against them as collateral security. In fact, they were freely transferable and ran parallel to the official currency. Allowing tax payers to bring the sale proceeds without any evidence about the initial purchase and resale resulted in multiple sales during the life of each bond thereby helping to continue tax evasion. Thus, though the Bonds ostensibly were to unearth black money, they became an instrument for further transaction in black money, since they were exchanged at a premium. The Union Finance Minister in his 1990-91 budget speech admitted as much.

The collection during 1980-81 amounted to Rs 88.67 crore and during 1981-82 to Rs 875.59 crore [Government of India, Budget Papers]. On maturity of the bonds, around Rs 107.00 crore in 1990-91 and Rs 1,051 crore in 1991-92 were paid towards principal and interest. An important reason for the poor response in the first year was that the Ordinance was challenged in the Supreme Court by R.K. Karanjia, the Editor of Blitz. In his affidavit, he pointed out that the real intention was to help a special category of holders of black money, men in high positions and using government powers for personal enrichment and reaping rich harvests of bribes, pay-off, and kickbacks in national and international sales and purchases constituting a sizeable part of both civil and defence budget. He argued that the scheme violated the very concept of economic, social, and moral justice and discriminated against honest tax payers and favoured black money holders. The Scheme was also referred to the Supreme Court for clarification and the Court ruled in favour of the Government.

Indira Vikas Patra: 1986

Indira Vikas Patra (IVP) is a kind of bearer bond. The IVP scheme was introduced on November 19, 1986 ostensibly to raise resources and mop up excess liquidity in the economy but in reality to mobilise black money into the postal saving scheme; though the Government of India had specifically declared earlier that it would not renew the bearer bond scheme. The scheme is operative for five years. Indira Vikas Patra is a post-dated currency since it is cash for the bearer of the bond at the expiry of five years from the date of issue. The maturity value of the IVP is twice the issue price. The IVP yields around 15 per cent of interest compounded over five years. No questions are asked at the time of purchase or at the time of encashment.

Most of the black money earned by way of bribes, smuggling, etc., might have been invested in the IVP. At the same time, many ordinary honest savers have diverted their resources from term deposits in commercial banks and Post Offices to the IVP. So, it is difficult to estimate the exact amount of black money collected through the IVP. But the issue of the IVP had major impact in the market of financial assets [Ghosh, 1986, Pp. 2251-52]. Receipts and outstandings on account of IVP are shown in Table 4. Government is contemplating a policy designed to induce IVP investors to reinvest the maturity value of the certificates. But, interest at 15 per cent per annum which was once attractive may not be so now because of double-digit inflationary trend.

TABLE 4. INDIRA VIKAS PATRA

(Rs crore)

Year	Receipts	Outstandings
1986-87	838	838
1987-88	1,011	1,848
1988-89	1,708	3,556
1989-90	2,685	6,241
1990-91	2,469	8,709

Source: *Reserve Bank of India Bulletin*, October 1981, December 1992 and May 1992.

BUDGETARY MEASURES TO CHECK GENERATION OF BLACK MONEY

Besides the particular steps taken for mopping up black money, certain measures were taken in various union budgets, particularly since 1974, to check generation of black money. According to the Direct Taxes Enquiry Committee (1971), the higher rates of direct taxes were mainly responsible for tax evasion because they made tax evasion profitable and attractive. For instance, the Committee argued: 'When the marginal rate of taxation is as high as 97.75 per cent, the net profit of concealment can be as much as 4,300 per cent of the after-tax income' [Wanchoo, 1971, para 2.20 (a)]. That is to say, rather than paying 97.75 per cent tax on 100 rupees earned in the top bracket and retaining only 2.25 rupees out of it, by concealing your income, you make a profit of 97.75/2.25 x 100 = 4344 per cent of the after-tax income. Hence the Committee recommended reduction in the rates of direct taxes. On the basis of the Committee's recommendation, the highest marginal rate of individual income tax was reduced from 97.75 per cent to 77 per cent in 1974-75 and further to 66 per cent in 1976-77 (Table 5).

TABLE 5. INCOME TAX RATES AND COLLECTION

Year	Maximum Marginal Rate of Individual Income Tax (Including Surcharge) (Per Cent)	Total Tax Collection (Rs Crore)	GDP at Factor Cost and Current Prices (Rs Crore)	Percentage of Tax Collection to GDP (Per Cent)
1973-74	97.7	745.00	56,954	1.31
1974-75	77.0	874.40	67,039	1.30
1975-76	77.0	1,214.40	71,201	1.71
1976-77	66.0	1,209.50	76,536	1.58
1977-78	69.0	1,002.02	87,351	1.15
1978-79	69.0	1,177.40	93,880	1.25
1979-80	72.0	1,340.30	102,442	1.31
1980-81	66.0	1,506.40	122,427	1.23
1981-82	66.0	1,475.50	143,216	1.03
1982-83	66.0	1,563.00	159,395	0.98
1983-84	67.5	1,699.10	186,723	0.91
1984-85	61.5	1,927.80	208,577	0.92
1985-86	50.0	2,509.30	233,476	1.07
1986-87	50.0	2,878.00	259,055	1.11
1987-88	52.5	3,187.00	294,266	1.08
1988-89	52.5	4,237.00	351,724	1.20
1989-90	54.0	5,004.00	401,569	1.25
1990-91 (RE)	54.0	5,560.00	472,599	1.18

Source: (i) For Income Tax: *Report on Currency and Finance, Vol. II*, Reserve Bank of India (Various issues)
(ii) For Gross Domestic Product (GDP): *National Account Statistics*, Central Statistical Organisation, Government of India.

Tax revenue increased from Rs 745 crore in 1973-74 to Rs 874 crore in 1974-75 which is an increase of about 17 percent. But in 1976-77, with a lower tax rate, the total tax collection was actually smaller despite the internal emergency. Moreover, reduction of marginal tax rates can at best minimise tax evasion, and hence generation of black money through this channel, but cannot bring into tax net money earned in illegal informal market because in any case it remains outside the tax net. It seems that the policy was never certain on this score. The maximum marginal rate of individual income tax was increased to 69 per cent in 1977-78 and further to 72 per cent in 1979-80. But it was again reduced to 66 per cent in 1980-81 and further to 50 per cent in 1985-86. In 1990-91, it was 54 per cent (Table 5).

1984-85 Budget

In 1984-85 budget, certain provisions in the Income Tax Act were made empowering the central government to acquire immovable property in a situation where the declared consideration for transfer of the property was less than the fair market value of the property. Other measures were: (i) audit of accounts of tax payers if their total sales in business was more than Rs 20 lakh or gross receipt from profession exceeded Rs 10 lakh; (ii) issuance of account payee cheques or account payee bank drafts being made mandatory in case of loans and deposits of Rs 10,000 or more, and (iii) debarring the real owner of any owner held benami from enforcing his claim in a court of law unless a notice in a prescribed form is given by him to Income Tax Commissioner within one year from the date of acquisition of property.

1985-86 Budget

The 1985-86 budget introduced some reforms in personal income tax to reduce tax evasion by effectively using administrative machinery such as (i) shifting tax assessment from routine examination of a very large number of returns to a thorough scrutiny of a sample of cases, (ii) ensuring swift and severe penalties in case of detection of tax evasion, (iii) removal of the provisions relating to grant of immunity from penal provisions in the case of those tax evaders who made disclosure only after the seizure, by the Income Tax Department, of incriminating books of accounts and assets in their possession, (iv) proposal to set up special courts to try tax evaders involved in criminal proceedings, and (v) plugging a lacuna in section 167 A of the Income Tax Act to check tax avoidance with the provision that an association of persons shall be charged to income tax at the maximum marginal rate if the individual shares of the members in even a part of its income were indeterminate or unknown.

1988-89 Budget

The 1988-89 budget proposed assessment of income of persons engaged in certain trades like liquor and forest contracts at a reasonably fixed percentage of amount payable by them while purchasing the goods. Tax was to be collected at source.

Though not as a part of the budget, on the basis of the recommendation on benami transaction made by the Law Commission in 1973, the Benami Transaction (Prohibition of the Right to Recover Property) Ordinance 1988 was promulgated. The Ordinance annuls all benami transaction in all kinds of immovable and movable property.

1990-91 Central Budget

In the 1990-91 budget a donee-based gift tax was introduced. In the past, gifts were taxed in the hands of the donor but there was no limit on the amount which a donee could show as having received by way of gifts and the mechanism of gift was used to launder black money. According to the new provision, any person who claims his assets or his expenditures as having been financed from gift is liable to a gift tax on a graduated scale. There is a basic exemption limit of Rs 20,000 per year. For gifts amounting to a total between Rs 20,000 and Rs 50,000, gift tax is levied at 20 per cent and thereafter at 40 per cent. Gifts received at the time of marriage are exempted from gift tax up to a limit of Rs 1 lakh. This would curb to some extent laundering of black money through gifts. But since gift received in foreign exchange through official channels was exempted, it would not be fully effective to check laundering black money through havala market. Another step was abolition of the Gold Control Act which was introduced in 1963 to curb demand. Promises were also made to make changes in tax laws, revamp Economic Intelligence Bureau and to recast the Act on 'benami' transaction, in order to check tax evasion and black money operations. The Finance Minister also proposed to introduce time-bound incentive scheme with a suitable flat rate of tax without any query for unearthing black money and channelling it into desired direction for social purposes such as slum clearance, housing for low and middle income group, and agro-based industries in rural or backward areas. But the government fell and the scheme could not be introduced.

1991-92 Budget

The 1991-92 budget proposed to extend the scheme of tax deduction at source to cover new areas of payment in the nature of commission, interest paid on time deposits in banks and withdrawal from National Saving Scheme to identify income earners most of whom would not otherwise declare their income or would not declare their full income. In his budget speech, the Finance Minister announced three schemes to mop up black money. The schemes which were due to expire on November 20, 1991 were extended till January 31, 1992. The three schemes are:

Voluntary Deposit Scheme of National Housing Bank

In accordance with the announcement of the Finance Minister, the National Housing Bank announced its Voluntary Deposit Scheme. In essence, this was similar to the proposal made in 1990-91 budget. The scheme is being implemented through the Voluntary Deposits (Immunities and Exemptions) Act, 1991. Under this scheme, deposits are accepted in 855 branches of nine designated banks all over the country. The minimum deposit accepted is Rs 10,000 and thereafter in multiples of Rs 1,000. The account can be opened by any person, viz., an individual, Hindu Undivided Family, a company, a firm, an association of persons, or a body of individuals, whether incorporated or not, and persons not falling within any of the above categories. There is no limit on the number of deposits as well as the amount. A person can open more than one account and in more than one designated bank branches. Nomination facility is provided when the account is opened in the name of an individual. No questions are asked as to the source of the money. The deposits cannot be held as evidence in any proceedings or imposition of any penalty. No interest is paid on the deposits.

Forty per cent of the amount deposited is credited to a special fund of the National Housing Bank for slum clearance and low-cost housing for the poor. These are not refundable. Hence, in a sense, the depositor pays 40 per cent tax on total deposits. The depositors are allowed to draw the balance 60 per cent without having to comply with any lock-in period in one or more instalments through account payee cheques for any stated purpose of his choice. This part does not attract any income tax. The provisions of the Wealth Tax Act also do not apply from the assessment year 1991-92.

Foreign Exchange Remittance Scheme

Under this scheme, any person residing in India can receive remittance in foreign exchange from any person residing outside India[3]. The remittances are exempted from income tax, wealth tax, and gift tax, and are immune from exchange control regulation. The scheme also grants immunity in respect of disclosing the nature and source of remittance. However, any income by the persons on the remitted amount is subject to income tax.

The scheme was used to convert black money into foreign currency in the havala market and then receiving it as foreign currency remittance which in turn gets converted into white money at the official exchange rate when it is deposited in the Reserve Bank of India. The unofficial exchange rate in the havala market is generally 25-30 per cent higher than the official rate and this constitutes the cost of converting black money into white. From the standpoint of government, it gets so much foreign exchange.

It will be noticed that the Foreign Exchange Remittance Scheme competes with the Voluntary Deposit Scheme of National Housing Bank (NHB) because the havala commission at about 30 per cent is less than the 40 per cent the National Housing Bank charges on its Voluntary Deposit Scheme. Hence, the NHB scheme was not much of a success; against the expectation of Rs 200 crore, only Rs 24 crore was collected under NHB scheme by 30th November, 1991. In comparison, through the Foreign Exchange Remittance Scheme, government collected around Rs 200 crore worth of foreign exchange by 20th October, 1991 [Economic Times, 1992]. Of course, this again is not a great success.

India Development Bond

On the basis of the announcement of the Union Finance Minister in his 1991-92 budget speech, State Bank of India launched India Development Bond for non-resident Indian (NRI) and their Overseas Corporate Bodies (OCB). The bond was initially opened for subscription from October 1, 1991, to November 30, 1991, and further extended up to January 31, 1992. Non-resident Indians and their OCBs are eligible to apply for the India Development Bond which do not have any upper ceiling. The bonds have a five-year maturity period and denominated in U. S. Dollar (later on, it is also denominated in Pound Sterling). It carries an interest of 9.5 per cent per annum.

So far, the India Development Bond is no more than an instrument for raising foreign currency loans. But they are made freely transferable not only among the NRIs and their OCBs but also among person resident in India. The bonds can be gifted by non-resident Indians to resident Indians who too are entitled to same amnesty and immunity including exchange rate protection until maturity though only the first resident donee of the gift is exempted from the gift tax. The bonds are free from income and wealth taxes for the entire five year period, irrespective of the residential status of the bond holder. These provisions make the bonds an instrument of laundering of black money through illegal havala market as is the Foreign Exchange Remittance Scheme.

To sum up all the Voluntary Disclosure Schemes, including the ones in 1991, have had only a marginal impact on the problem of black money. On the other hand they discriminate against honest tax payers and demoralise the taxation authorities, while rewarding tax evaders and black money operators with various concessions and immunities. More importantly, they do not curb generation of black money; in fact, to the extent black money sooner or later gets adequately rewarded, they encourage generation of and transactions in black money. It is a case of living with the devil. Recent liberalisation policies which are trying to reduce controls, licences, and bureaucracy may reduce to some extent corruption, hush money, and bribing prevalent in many important Government departments. But, Government cannot function without levying some taxes and duties. They provide the occasions for avoidance and evasion and hence generation of black money. There appears to be no alternative to direct action against black money holders through presumptive tax and raids.

NOTES

1. See Samal, [1981, 1984 and 1987].

2. The Comptroller and Auditor General of India (CAG) in its report has given a brief history of five Voluntary Disclosure Schemes by analysing the various reports of expert committees, public accounts committees and National Institute of Public Finance and Policy.

3. According to the clarification by a circular by the Finance Ministry on 25th October 1991 (The Economic Times, Calcutta, November 10, 1991); the permitted currencies are Australian dollar, Austrian schilling, Bahrain dinar, Belgian franc, Canadian dollar, Danish kroner, Deutsche Mark, French franc, Hongkong dollar, Italian lira, Japanese yen, Kuwait dinar, Malaysian vinggit, Netherlands guilder, Norwegian kroner, Pound sterling, Singapore dollar, Swedish kroner, Swiss franc and the U.S. dollar. Also permitted are any other currencies provided the authorised dealer is satisfied that (a) banks in the country of currency are freely permitted under the rule and regulation prevailing in that country to convert authorised dealer's balances in its currency into U.S. dollar, Pound sterling or any other currency mentioned in the above paragraph, (b) a fairly active market exists for dealings in the currency against any currency mentioned in the above paragraph. Instruments issued by overseas branches of Indian banks will also qualify for such immunities.

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DOCUMENTATION

The purpose of this section is to make available to the readers official documents such as reports of committees, commissions, working groups, task forces, etc., appointed by various ministries, departments, and agencies of central and state governments which are not readily accessible either because they are old, or because of the usual problems of acquiring governmental publications, or because they were printed but not published, or because they were not printed and remained in mimeographed form. It will be difficult and probably not worthwhile to publish the documents entirely. We shall publish only such parts of them as we think will interest our readers. The readers are requested to send their recommendations of official documents or parts thereof for inclusion in this section.

In the present section we publish:

Chapter II of the Final Report of the Direct Taxes Enquiry Committee, December 1971 (Chairman Justice K.N. Wanchoo)

DIRECT TAXES ENQUIRY COMMITTEE
FINAL REPORT DECEMBER 1971

CHAPTER 2: BLACK MONEY AND TAX EVASION

INTRODUCTORY

Section 2.1 deleted.

2.2 It was during the Second World War that the terms 'Black market' and 'black money' came into vogue. Due to imposition of various controls on distribution and prices, a clandestine market had sprung up in which things were still available, but at prices higher than the controlled ones. The term 'black money' became current to describe the money received or paid in such 'black market' deals. Since disclosure of these deals, which were entered into in violation of rules and regulations, would have invited severe penalties, these were naturally not entered in the regular books of account and, consequently, remained concealed from the gaze of the tax authorities as well. Afterwards, though black market in the commonly understood sense of the term became rare with the lifting of several controls, transactions still continued to be carried on by the unscrupulous elements in trade and industry outside their books of account, as this practice helped the parties concerned to evade, or substantially reduce, the payment of taxes thereon. With the passage of time, 'black money' acquired a wider connotation - wider than its association with black market transactions alone.

2.3 Today, the term 'black money' is generally used to denote unaccounted money or concealed income and/or undisclosed wealth, as well as money involved in transactions wholly or partly suppressed. Some consider only that as black money which had its origin in clandestine transactions and is currently in circulation. There are others who assert that this is taking too narrow a view of black money. According to them, black money denotes not only unaccounted currency which is either hoarded or is in circulation outside the disclosed trading channels, but also its investment in gold, jewellery and precious stones made secretly and even investments in lands and buildings and business assets over and above the amounts shown in the books of account.

2.4 As mentioned above, tax evasion and black money are closely and inextricably inter-linked. While tax evasion leads to the creation of black money, the black money utilised secretively in business for earning more income inevitably leads to tax evasion. While all tax-evaded income represents black money in a broad sense, all black money does not necessarily originate in tax evasion. Black money is also made through surreptitious use of 'white money'. In this sense, the proliferation of black money derives an additional impetus from the inter-mixing of 'black income' and 'white income'. This phenomenon arises essentially from the dual nature of the national economy. Thus, there is the "official" economy functioning on the basis of the official monetary system, involving open transactions financed through identifiable sources of funds, generating ascertainable income and wealth, and operating generally in conformity with government rules and regulatory and the levy system. But there is another economy, a 'parallel' economy, operating simultaneously and competing with the "official" economy. This parallel economy has ramifications which go beyond one's imagination. It derives its nourishment, strength and support from a secretive, defiant, and an unscrupulous element in our society; it is based not on the official monetary system, but on a secret understanding, and involves a complex range of undisclosed deals and transactions pushed through secretly with unaccounted sources of funds, generating, in the process, income and wealth which escape enumeration or cannot be easily ascertained.

Section 2.5 deleted.

2.6 With the surge of planned expenditures came large government orders, massive industrial outlays, defence programmes, construction and other investments, all creating a boom psychology - one which gave a further thrust to illegal cuts, commissions and transactions and the generation of more black incomes. To mention one example, the cost of land and buildings went up resulting in new rackets; property dealings thus became a significant avenue of illegal deals, with ratios of 'white' and 'black' payments being freely mentioned. In Bombay, for example, during the period of our enquiry, the commonly quoted ratio was 60:40, that is to say that 40 per cent of the total amount for land or buildings had to be paid in 'black', and receipt might be issued only for 60 per cent of the payment. In some cases, the ratio may have been 50:50 or 40:60. Consequently, a significant portion of the payment remained concealed at both ends and even wealth-tax dodged. In the worst days of inflation, the artificial element of shortages has always been large; but as black money multiplied, the area of artificial shortages seems to have grown. Even otherwise, the distortions in the industrial economy, the periodic foreign exchange crisis and the rigorous import curbs have all provided a fertile field to anti-social elements to ensure that their parallel economy is kept flourishing. In an environment such as this, the smuggling of foreign goods, gold and gems, speculation in commodities and land and properties, and surreptitious money lending have by now become the main props of the black money economy.

Section 2.7, 2.8 & 2.9 deleted.

2.10 Black money and tax evasion, which go hand in hand, have also the effect of seriously undermining the equity concept of taxation and warping its progressiveness. Together, they throw a greater burden on the honest taxpayer and lead to economic inequality and concentration of wealth in the hands of the unscrupulous few in the country. In addition, since black money is in a way 'cheap' money too, because it has not suffered reduction by way of taxation, there is a natural tendency among those who possess it to use it for lavish expenditure and conspicuous consumption. The existence of black money has, to a large extent, been responsible for the inflationary pressures, shortages, rise in prices and economically unhealthy speculation in commodities. Part of black money, which is not utilised in lavish consumption, goes into the purchase of bullion, precious stones and other valuable articles. This in turn, encourages large-scale smuggling of gold, etc., into the country, causing considerable strain on its already tight balance of payments position. Further, by keeping their ill-gotten gains outside the country as deposits in foreign banks or with their own associate concerns, whether earned in deals abroad or transferred out of India through clandestine channels, the tax evaders deprive the country of a part of its wealth which could have been put to productive use here. Besides, the leakage of foreign exchange makes our balance of payments rather distorted and unreal. There is also the oddity that a country, where capital and more particularly foreign exchange resources are scarce, becomes a *de facto* lender of aid and capital to economically advanced and wealthier nations, with the concealed outflow of funds.

Section 2.11 deleted.

2.12 Black incomes and tax evasion defeat Government's economic policies and at the very least make the implementation of the policies ineffective; for example, in the field of credit and investment. Monetary policy involving severe restrictions or a curb on disbursement of credit comes straight in the face of a parallel economy functioning outside the purview of the authorities. When a dear money policy is pursued or the Government desires to impose selective control on disbursement of finance to certain sectors, the black money economy can frustrate this by opening up alternative sources of credit at 'free market' rates. This source of credit is available even to what the Government may consider as the non-priority sectors on whom the credit squeeze is to be applied. One of the reasons why the Government's management of credit and money in recent years has been ineffective is the proliferation of black money and rampant tax evasion which provide a free access to surreptitious funds to those who desire them. The impact of this may be somewhat less when the curbs are officially relaxed. It is our view that black money and tax evasion are even otherwise encouraging over-financing of business which is as dangerous as under-financing. These trends add further to the inflationary pressures in the country. They can undo also some of the major investment targets and objectives of Government's planning. Apart from the fact that this situation results in an under-estimation of resources available in the country, thereby inhibiting investment planning, there is reason to believe that the operation of the black money economy has already upset the momentum of our development and distorted the pattern of saving and investment in India.

2.13 Black money and tax evasion have an adverse economic effect in yet another sense, in that they divert the energy of taxpayers and their advisers from productive activities to the non-productive object of manipulation of accounts, creating camouflage around their deals and devising all sorts of facades to escape their legitimate tax liability. In the process, they also compel the administration to spend a lot of its time and resources on tackling their devious ways of tax evasion - time and money which could have been put to more purposeful use.

Section 2.14 deleted.

Extent of Black-Money and Tax Evasion

2.15 Before considering measures for fighting tax evasion, we felt that we should have an idea of the extent of black money and tax evasion in the country as it would help us gauge the dimensions of the problem. While tax evasion in the country is believed to be substantial, the estimates furnished in the course of replies to our Questionnaire varied widely from Rs 100 crores to Rs 15,000 crores. We are fully conscious of the inherent, difficulties involved in attempts to quantify tax evasion. The Taxation Enquiry Commission had observed that "..... the quantum of the evasion which actually takes place and goes undetected could rightly be estimated at a very high figure indeed." An estimate was made in 1956 by Nicholas Kaldor. According to him, the income-tax loss through tax evasion was of the order of Rs 200 to Rs 300 crores in 1953-54. As against Kaldor's estimate, the Central Board of Revenue, as it then was, expressed the opinion that tax evaded in the year 1953-54 could not have exceeded Rs 20-30 crores. The Direct Taxes Administration Enquiry Committee (1958-59) also considered the extent of tax evasion in the country and observed that the quantum of tax evasion, though undoubtedly high, was not of the magnitude indicated by Kaldor.

2.16 Research work on tax evasion in this country is extremely limited; .... we were able to obtain some data for 1961-62 from the Directorate of Inspection (Research, Statistics and Publications). An exercise on the basis of these data is given in Table I.

TABLE I. SECTOR-WISE DISTRIBUTION OF ASSESSABLE NON-SALARY INCOME FOR 1961-62 (ASSESSMENT YEAR 1962-63)

(Rs Crore)

Sector	National income*		Assumed proportion of non salary income above exemption limit	Assessable non-salary income
	Total salary income Rs	Non-salary income Rs	(%)	Rs
1. Mining and Quarrying	60	89	60	53
2. Manufacturing (a)	1,247	1,523	60	914
3. Railways and Communications	286	67	..	..
4. Other transport	151	151	60	91
5. Trade, Hotels and Restaurants	278	1,111	70	777
6. Banking and Insurance	134	49	100	49
7. Public Administration and Defence	475	118	100	118
8. Miscellaneous (b)	..	1,369	50	684
Total	2,631	4,477	..	2,686
9. Agriculture	1,030	6,025		
GRAND TOTAL	3,661	10,502		

Note: (a) Includes large-scale, small-scale, construction, electricity, gas, water supply, etc.

(b) Includes real estate ownership and other services.

* Source: Estimates of National Product (Revised Series) - March, 1969.

Assessed non-salary income referable to the year 1961-62 (Assessment Year 1962-63).

Income referable to assessment year 1962-63 was assessed during the financial year 1962-63 to 1966-67. The break-up is as under:

(Rs Crore)

1962-63	1,022.9
1963-64	373.3
1964-65	155.8
1965-66	168.0
1966-67	507.7
Total	2,227.7
Deduct-salary income assessed during the financial year 1962-63	352.6*
Non-salary income of financial year 1961-62 which was actually assessed to tax	1,875.1

* This is assumed to represent the salary income of financial year 1961-62.

2.17 This study is based on an adoption of the Kaldor method with suitable modifications bearing in mind the structural changes in the economy and certain other developments. The conclusion of this study is that the assessable non-salary income and the actually assessed non-salary income for the financial year 1961-62 were Rs 2,686 crore and Rs 1,875, crore respectively. Accordingly, the income which escaped tax for that year would appear to be of the order of Rs 811 crore. In order to ascertain the position for the financial year 1965-66 (assessment year 1966-67), being the latest year for which detailed revenue statistics are available we arrived at the assessable non-salary income for that year, on the basis that was adopted for 1961-62 financial year, at a figure of Rs 4,027 crore (vide Table II). Applying the ratio of evaded income to the assessable non-salary income of 1961-62 to the assessable non-salary income of 1965-66, the evaded income for 1965-66 works out to Rs 1,216 crore. However, we should like to qualify these estimates for three reasons:

TABLE II. SECTOR-WISE DISTRIBUTION OF ASSESSABLE NON-SALARY INCOME FOR 1965-66 (ASSESSMENT YEAR 1966-67)

(Rs Crore)

Sector	National income*		Assumed proportion of non salary income above exemption limit	Assessable non-salary income
	Total salary income Rs	Non-salary income Rs	(%)	Rs
1. Mining and Quarrying	94	140	60	84
2. Manufacturing (a)	1,890	2,310	60	1,386
3. Railways and Communications	416	97	..	..
4. Other transport	223	222	60	133
5. Trade, Hotels and Restaurants	445	1,784	70	1,249
6. Banking and Insurance	245	90	100	90
7. Public Administration and Defence	1,040	260	100	260
8. Miscellaneous (b)	..	1,651	50	825
Total	4,353	6,554	..	4,027
9. Agriculture	1,575	8,271		
GRAND TOTAL	5,928	14,825		

Note: (a) Includes large-scale, small-scale, construction, electricity, gas, water supply, etc.
(b) Includes real estate ownership and other services.

(i) The income which can be related to the assessment year 1966-67 does not fully represent the income generated in or related to the financial year 1965-66. Accounting years and on varying dates and a certain backlog is also involved in the routine assessments. Larger income cases needing more scrutiny may not always be completed within the relevant years and many such cases may have been carried forward.

(ii) The national income figures cannot be strictly compared with incomes assessed because the Income-tax Act allows a large number of exemptions and deductions (for

example, casual and non-recurring receipts, income of new industrial undertakings and priority industries, and deduction for development rebate, etc.). No adjustment is possible in the case of such exemptions and deductions.

(iii) No adjustment has been made in respect of certain incomes which are subject to income-tax twice due to provisions of the income-tax law. For example, the income of a firm suffers tax not only in the hands of the firm, but also in the hands of its partners. Due to lack of data, no adjustment has been made in respect of such items also.

Even after taking all these limitations into account and after making rough adjustments on the basis of information available, the estimated income on which tax has been evaded would probably be Rs 700 crore and Rs 1,000 crore for the years 1961-62 and 1965-66, respectively. Projecting this estimate further to 1968-69 on the basis of the percentage of increase in the national income from 1961-62 to 1968-69 (during which period the national income increased nearly by 100 per cent), the income on which tax was evaded for 1968-69 can be estimated at a figure of Rs 1,400 crore.

2.18 As regards the extent of tax evasion, we find that the average rate of tax on the income assessed for 1965-66 was around 25 per cent. But considering that the size of the problem of black money and tax evasion has grown over the years and tax evasion is more widely practised at higher levels of income, it would be appropriate to adopt the rate of tax applicable to evaded income at not less than 33-1/3 per cent, for 1968-69. On this basis, the extent of income-tax evaded during 1968-69 would be of the order of Rs 470 crore, being one-third of Rs 1,400 crore. The money value of deals involving black income may, therefore, be not less than Rs 7,000 crore for 1968-69. We would, however, wish to emphasize that the amount of tax-evaded income for 1968-69 is only a justmate based on certain assumptions about which substantial difference of opinion exists for want of adequate data. In addition, we would also like to dispel a possible impression that the tax-evaded income is all lying hoarded which can be seized by the authorities; much of it has been either converted into assets or spent away in consumption or else is in circulation in undisclosed business dealings.

Avenues for Black Money

2.19 The multiplicity of avenues in which black money in the country gets channelised is matched only by the ingenuity of the devices through which it is earned. It is found widely used for conducting business transactions in 'Account No. 2', smuggling of gold, diamonds and luxury articles, indulging in unauthorised transactions involving foreign currency and purchasing scarce commodities for the purpose of hoarding, speculation, profiteering and black-marketing. It is also spent in purchasing illegally quotas and licences at premia, financing secret commissions, bribes, litigation, etc., giving 'on-money' in business transactions, buying industrial peace, financing election expenses and giving donations to political parties. Black money is also utilised in call deposits, bogus hundi loans, acquisition of movable and immovable assets, *e.g.*, jewellery, tax-free Government securities, deposits in Indian and foreign banks in 'ghost' or benami accounts and land and buildings purchased in real or benami names, often with 'on-money' payments. Not infrequently, contributions to charity in anonymous and pseudonymous names also come out of black money. Behind the vulgar display of wealth which is evidenced by ostentatious living and lavish expenditure on weddings, festivals, etc., is this scourge of black money.

Causes of Tax Evasion, Creation of Black Money and its Proliferation

2.20 To be able to suggest remedial measures, we considered it necessary to be clear in our minds as to the causes which have led to this malaise of black money and tax evasion...... The following are said to be the major factors responsible for this evil:-

(a) High rates of taxation under the direct tax laws

We had posed the question whether tax evasion is dependent on the rates of taxation and whether it increases with the increase in the tax rates. An overwhelming majority of the persons, who responded to the Questionnaire, have voiced the opinion that tax evasion is dependent on the rates of taxation and rises with increase in the rates. When the marginal rate of taxation is as high as 97.75 per cent, the net profit on concealment can be as much as 4,300 per cent, of the after-tax income. The implication of 97.75 per cent, income tax is that it is more profitable at a certain level of income to evade tax on Rs 30 than to earn honestly Rs 1,000. We will not be surprised that placed in such a situation, it would be difficult for a person to resist the temptation to evade taxes.

(b) Economy of shortages and consequent controls and licences

The Indian economy before the Second World War was not marked by any significant shortages. This was so not because production was plentiful but because demand in an economy, which was stagnant, was small. During the War, however, things began to change. The Government had to incur vast expenditure on defence and had to divert the existing inadequate resources to meet the urgent and pressing needs of the War. As a result, imbalances in the economy and acute shortages of various goods developed. Shortages had to be regulated by imposing controls on distribution and prices. Controls led to abuse, black-marketing, profiteering and tax evasion.

Shortages and controls did not however, end with the War. With the advent of Independence, to fulfil its promises to the people, the Government had to launch various economic schemes in order to achieve planned progress. With the ever-increasing population and the scarce resources position, it became inevitable for the Government to regulate foreign exchange, imports and exports, to control distribution of scarce commodities and to resort to licensing of industry in order to achieve planned development. In spite of the vigilance exercised by the Government, controls and regulations came to be used by the unscrupulous for amassing money for themselves. Since considerable discretionary power lay in the hands of those who administered controls, this provided them with scope for corruption - 'speed money' for issuing licences and permits, and 'hush money' for turning a blind eye to the violation of controls. All this gave rise to trading in permits, quotas and licences, malpractices in distribution and, in the process, it generated sizable sums of black money. As the transactions in violation of statutory restrictions had to be entered into secretively, these had necessarily to be kept back from the tax authorities. In consequence, evasion of tax on incomes thus made illegally followed inevitably.

(c) Donations to political parties

It has been represented before us that the political climate in India is none too conducive to checking black money transactions. Rather, it is contended that it provides opportunities for generation of black money. In this connection, it has been pointed out that large funds are required to meet election expenses and it is common knowledge that these are financed to a great extent by wealthy persons, with lots of black money. According to some, this is not the cause but an outlet for black money. The situation is stated to have been further aggravated by the ban imposed recently on donations by companies to political parties.

(d) Corrupt business practices

Many of the corrupt practices in business seem to lead to an ever increasing need for keeping on hand funds in black. Payments of secret commission, bribes, on-money, pugree, etc., in a variety of situations have ben referred to us in this connection. It has been particularly mentioned that the manufacturers of popular goods which are in short supply not only exact from parties large sums initially for appointment as selling agents, but also demand recurring secret commission on the sale of goods. Undoubtedly, such corrupt practices are responsible to a considerable extent for the creation of 'black money' in the economy.

(e) Ceilings on, and disallowances of business expenses

It has been represented that the Income-tax Act either completely disallows or imposes ceilings on certain expenses which are required to be incurred on principles of commercial expediency, with the result that such expenses, though actually incurred, are not allowed to be deducted in arriving at the taxable income. It has been pointed out that this artificial limitation adds to the tax burden, particularly in the context of the present day high rates of taxation. The examples usually cited in this regard are those relating to expenses on entertainment, advertisement, guest houses, travelling and perquisites to directors.

(f) High rates of sales-tax and other levies

Many of those who sent replies to our Questionnaire or who appeared before us were of the view that the high rates of Central and State imposts, other than income-tax are contributory factors to evasion of income-tax in the country. It was stated that the high rates of sales-tax, stamp duty, excise duty on certain items, octroi, cess and the like, induce many persons to avoid recording the transactions altogether and in the process they evade income-tax as well. We concede that there are persons who find evasion of these taxes to be quite attractive and profitable, as evasion of one tax offers them relief from the burden of another.

(g) Ineffective enforcement of tax laws

Yet another important cause of tax evasion is said to be the lack of an effective enforcement machinery. It is pointed out that the income-tax administration has not been able to achieve a major breakthrough in fighting evasion for certain technical as well as administrative reasons. In this connection, some have even pointed out that tax administration is not able to function independently and also that the set-up of the Department itself is not quite conducive to effective enforcement of laws. There are others who feel that taxation laws and administrative policies themselves have certain loopholes which water down their efficiency. It is contended that frequent resort to voluntary disclosure schemes to net in untaxed income, absence of an effective intelligence machinery in the Income-tax Department and lack of a vigorous prosecution policy for the offences provide encouragement to tax evaders to carry on with their nefarious activities with impunity in the belief that the Department will not detect them. We agree with this view substantially and do feel that there is need and scope for more vigorous enforcement of tax laws.

(h) Deterioration in moral standards

Another important cause of tax evasion which has been mentioned is the general deterioration in moral standards of our people, lack of tax consciousness and the absence of social stigma against tax evasion. There has been lately a marked tendency towards putting greater premium on material values and, consequently, a growing craze for getting rich quick, by resorting to all possible means - fair or foul. This naturally tempts people to resort to violation of tax laws, for the most obvious means of retaining more money is by not paying tax thereon. In such an atmosphere, no wonder evasion of taxes is not considered by many as undesirable or unethical. Not infrequently one comes across persons who boast privately of their 'achievements' to the field of tax evasion. The lack of social stigma against tax evaders plays an important contributory role in this over-all lack of tax consciousness. Sharing this general atmosphere of moral laxity, it is not surprising that even some tax advisers do not hesitate to lend their support in shielding, and even assisting the tax dodgers.

Steps taken in the past to unearth black money

2.21 Though tax evasion and black money assumed significant dimensions in our country only during and after the Second World War, the problem as such has always been there and has continuously engaged the attention of the Government. As far back as 1936, the Ayers Committee reviewed the Income-tax system in India in all its aspects, and large-scale amendments to the law were made in 1939 to give effect to its recommendations which, it was claimed, were 'designed to secure the fairest possible treatment of the honest taxpayer and at the same time to strengthen the Department in dealing with fraudulent evasion and what is known as 'legal avoidance'.' For dealing with the mounting tax evasion during the war period, the Income-tax Investigation Commission, was appointed in 1947 to investigate individual cases of tax evasion referred to it and also to report on the state of the law and administration and to suggest measures for its improvement with a view to prevent tax evasion. The Taxation Enquiry Commission (1953-54) also went into the question of tax evasion and recommended several legal and procedural changes. In 1956, Nicholas Kaldor made a specialised study of the Indian tax system, particularly with reference to personal and business taxation and the prevalence of tax evasion. The years 1957-58 witnessed several amendments and new legislation based on his report. The Direct Taxes Administration Enquiry Committee, which was appointed in 1958 to advise the Government on the administrative organisation and procedures necessary for implementing the integrated scheme of taxation with due regard to the need for eliminating tax evasion and avoiding inconvenience to the public, also made substantial contribution to the re-organisation of the legal and administrative set-up. In 1968, a Committee of Departmental officers was constituted by the Government to undertake a study of the problems of tax evasion and to suggest ways and means of tackling it. The Administrative Reforms Commission, based on a study of the problem of tax evasion made by the Working Group, suggested certain measures in its report submitted in January, 1969.

2.22 Consequent on the recommendations of these various Commissions, Committees and experts, several changes have been made in the law dealing with tax evasion. The scope of provisions relating to the reopening of past assessments has been progressively widened. Penalties have been made stiffer and deterrent provisions for criminal prosecutions and for awarding exemplary punishment have been introduced. The administrative powers of the authorities for securing information have been enlarged and officers of the Department have been given the powers of search and seizure, and also of spot survey. Simultaneously, the secrecy provisions in the law have been relaxed and greater publicity is now given in respect of tax offences. Several other legislative measures for curbing certain malpractices resulting in evasion or avoidance of tax have also been introduced.

2.23 There have also been changes from time to time in the administrative set up of the Department and its procedures to gear it up to the changing role it has to play in tackling tax evasion. For a detailed and thorough investigation of difficult cases of tax evasion, Central Charges were created at Bombay in 1939 and at Calcutta in 1941 on the basis of the recommendations of the Ayers Committee in 1936. In 1940, the Directorate of Inspection (Income-tax) was set up, and in 1943-44 a Special Branch was set up under the direction and control of that Directorate to do investigation and collation work in connection with the assessment of contractors who were making colossal profits during the war time. The Directorate of Inspection (Investigation) was set up in 1952 for undertaking and coordinating investigation in difficult and complicated cases of tax evasion. This Directorate was later entrusted with the Special Investigation Circles. Following the decision of the Supreme Court which struck down the Taxation on Income (Investigation Commission) Act, 1947, as *ultra vires*, the Directorate of Inspection (Special Investigation) was formed in 1954 to take over and complete the work of the Investigation Commission. In 1966, an Intelligence Wing was created and placed under the charge of the Directorate of Investigation. Special Investigation Branches, which function at the headquarters of the Commissioners for collection, collation and dissemination of information, and survey units have been reorganised from time to time to improve the quality of internal and external survey. On the assessment side, group charges were created to facilitate better investigation and

assessment under the guidance of senior officers. More recently, the functional scheme and the small income assessment scheme have been introduced to release the time and energy of senior and experienced officers for the more important work of investigation and tackling of tax evasion.
2.24 Apart from these legal and administrative measures meant to curb evasion of tax, certain steps were also taken to tackle the black money built up out of past evasions. In 1946, just at the close of the war, high denomination notes were demonetised so as to bring into the tax net black money earned during the war. A voluntary disclosure scheme was announced in 1951 to facilitate the disclosure of suppressed incomes. The penal provisions of the law were suitably relaxed for the purpose. After the lapse of nearly a decade and a half, a second scheme of voluntary disclosure was introduced by section 68 of the Finance Act, 1965. This scheme, popularly known as the '60-40 Scheme', enabled the tax evaders to pay 60 per cent of the concealed income as tax and bring the balance of 40 per cent thereof into their books. Closely on the heels of the scheme, came another under section 24 of the Finance (No. 2) Act, 1965, popularly known as the 'Block Scheme', according to which tax was payable at rates applicable to the block of concealed income disclosed, and not at a flat rate as under the '60-40 Scheme'.

Measures for unearthing black money

2.25 Despite the aforesaid steps taken by the Government from time to time, the twin problems of black money and tax evasion have, if anything continued unabated. It was in this background that we were called upon to recommend remedial measures, both legal and administrative, to unearth black money and to prevent its proliferation through further evasion.

Section 2.26 deleted.

Voluntary disclosure scheme

2.27 We had in the Questionnaire issued by us posed the question whether it would be desirable for the Government to announce another scheme of general amnesty for the declaration of black money. Majority of the persons who have replied to the Questionnaire do not favour another scheme of voluntary disclosure. The general feeling is that such schemes place a premium on fraud and are unfair to the honest taxpayers. Majority of the Departmental officers and some chambers and other representative bodies of the trading community have expressed themselves categorically against the introduction of any further disclosure schemes. A large number of the persons who appeared before us also echoed similar sentiments.
2.28 The principal argument against the introduction of another disclosure scheme is that the results of the three earlier schemes have been disappointing. The total income disclosed in all the three schemes put together was a mere Rs 267 crore which, to say the least, is only a small fraction of even the most modest estimate of concealed income for the period of 15 years from 1951 to 1965. As against this, it was stated that the concealment detected by the Department in the ordinary course during a period of 5 years from 1965 to 1969 was Rs 161 crore and the taxes and penalties in respect of such concealed income worked out to Rs 105 crore or about 65 per cent of the income detected. Moreover, much of the income disclosed during the course of the three schemes had been either already detected or was about to be detected and the schemes did not make any real contribution to bringing to surface concealed incomes. The taxes realised out of the disclosures were even more unimpressive. The 60-40 scheme produced only Rs 30.80 crore. The other two schemes yielded tax of hardly 15 per cent, of the disclosed income. The total tax yield of all the three schemes put together was a mere Rs 61.23 crore.
2.29 All the three earlier schemes were found defective in one respect or another. They were more or less schemes for converting black money into white on payment of what turned out to be in most cases, a small amount of conscience money. Disclosures made in the names of minors, ladies and benamidars have, on the other hand, contributed to perpetuating evasion, and rendered investigation in many a case of suspected tax evasion difficult or even futile. The fact that in

the last of these three schemes, namely, the block scheme, as many as 1,64,226 disclosures were from persons not previously assessed to tax would bear ample testimony to the misuse of the scheme. We were informed by the Central Board of Direct Taxes that there were several instances of the same set of persons taking advantage of all the three disclosure schemes, which would belie the theory that such schemes help to rehabilitate the repentant tax evader who is desirous of mending his ways.

2.30 An argument usually advanced in the favour of announcing another disclosure scheme is that it would help, to broaden the base of investment and accelerate the growth rate. This proposition is, in our view, based on the erroneous assumption that the amounts which disclosures bring out are not already invested. As happens in most cases, the disclosed amounts are already invested surreptitiously in business or property through various devices, and the contribution of disclosure schemes as such to fresh investment is hardly worthwhile.

2.31 We consider that a disclosure scheme is an extraordinary measure, meant for abnormal situations such as after a war or at a time of national crisis. Resorting to such a measure during normal times, and that too frequently, would only shake the confidence of the honest taxpayers in the capacity of the Government to deal with the law breakers and would invite contempt for its enforcement machinery. *We are convinced that any more disclosure schemes would not only fail to achieve the intended purpose of unearthing black money but would have deleterious effect on the level of compliance among the taxpaying public and on the moral of the administration. We are, therefore, strongly opposed to the idea of the introduction of any general scheme of disclosure either now or in the future.*

Settlement machinery

2.32 This, however, does not mean that the door for compromise with an errant taxpayer should for ever remain closed. In the administration of fiscal laws, whose primary objective is to raise revenue, there has to be room for compromise and settlement. A rigid attitude would not only inhibit a one-time tax-evader or an unintending defaulter from making a clean breast of his affairs, but would also unnecessarily strain the investigational resources of the Department in cases of doubtful benefit to revenue, while needlessly proliferating litigation and holding up collections. We would, therefore, suggest that there should be a provision in the law for a settlement with the taxpayer at any stage of the proceedings. In the United Kingdom, the 'confession' method has been in vogue since 1923. In the U.S. law also, there is a provision for compromise with the taxpayer as to his tax liabilities. A provision of this type facilitating settlement in individual cases will have this advantage over general disclosure schemes that misuse thereof will be difficult and the disclosure will not normally breed further tax evasion. Each individual case can be considered on its merits and full disclosures not only of the income but of the *modus operandi* of its build-up can be insisted on, thus sealing off chances of continued evasion through similar practices.

2.33 To ensure that the settlement is fair, prompt and independent, we would suggest that there should be a high level machinery for administering the provisions, which would also incidentally relieve the field officer of an onerous responsibility and the risk of having to face adverse criticism which, we are told, has been responsible for the slow rate of disposal of disclosure petitions. *We would, therefore, recommend that settlements may be entrusted to a separate body within the Department, to be called the Direct Taxes Settlement Tribunal.* It will be a permanent body with three Members. The strength of the Tribunal can be increased later, depending on the work-load. To ensure impartial and quick decisions, and to encourage officers with integrity and wide knowledge and experience to accept assignments on the Tribunal, *we recommend that its members should be given the same status and emoluments as the members of the Central Board of Direct Taxes.*

Any taxpayer will be entitled to move a petition before the Tribunal for settlement of his liability under the direct tax laws. We do not think that it is necessary to provide for cases being referred to the Tribunal by the Department. However, *we wish to emphasise that the Tribunal will proceed* with *the petition filed by a taxpayer only if the Department raises no objection to its being so entertained.* We consider that this will be a salutary safeguard, because otherwise the Tribunal might become an escape route for tax evaders who have been caught and who are likely to be heavily penalised or prosecuted. Once a case is admitted for adjudication, the Tribunal will have exclusive jurisdiction over it and it will no longer be open to the taxpayer to withdraw the petition. The Tribunal will take a decision after hearing both the assessee and the Department. The Tribunal should be vested with full powers as regards discovery and inspection, enforcing the attendance of any person, compelling production of books of account or any other documents and issuing commissions. It should also have the power to investigate cases by itself or, in the alternative, to have investigation carried out on any specific point or generally, in any case through the Income-tax Department. The terms of the award will be set down in writing and it will be open to the Tribunal to determine not only the amount of tax, penalty or interest but also to fix date or dates of payment. The quantum of penalty and interest will be in the discretion of the Tribunal. Similarly, the Tribunal may also in its discretion grant immunity from criminal prosecution in suitable cases. The award will be binding both on the petitioner and on the Department. The application of its decisions on questions of law will, however, be confined to the case under settlement and will not in any way interfere with the interpretation of law in general. No appeal will lie against the decision of the Tribunal by the petitioner or the Department, whether on questions of fact or of law.

Bearer bonds

2.35 Another suggestion that has been made to bring out black money and canalise it into productive channels is a scheme of 'bearer bonds'. In brief, the suggestion is that the Government should issue long term bearer bonds carrying a low rate of interest, say, 3 per cent. Bearer bonds are normally transferred by delivery but these bonds will be negotiable only by endorsement and thereafter they will cease to be bearer bonds. The Government should give the assurance that the source of moneys invested in such bonds by the original holder, so long as they are not endorsed, will not be questioned. The advantages claimed for the scheme are that persons who have unaccounted money, will find it a safe avenue of investment, while at the same time the country will stand to benefit by the utilisation of such black money for development projects. The low rate of interest which the Government would pay on the investment is claimed to represent an indirect levy of tax on the money invested and, as in all disclosure schemes, the Government would realise the tax on the amounts disclosed, though indirectly and at somewhat concessional rates. For the investor, the investment would offer anonymity, security and liquidity. He can borrow against the investment or sell it in the market. By providing that after endorsement the bonds will cease to be bearer bonds, the scheme ensures that it does not invite a chain of black money investments. It is contended by the protagonists of the suggestion that the anonymity which the scheme offers would encourage tax evaders to come out with their cash hoards without fear, proliferation of black money will be checked, inflationary tendencies will be curbed and productive investments will get a fillip.

2.36 We have carefully considered the pros and cones of this suggestion. The Bearer Bond Scheme is a poor substitute even for a disclosure scheme, as it can cover only black money which is not invested and is lying in cash. Further, the investments of black money in such bonds will not connect it up with any particular source of income, and as such, it does not offer to the investor immunity from investigation and proper assessment of the income from that source and the penal consequences. The investor cannot also remain completely anonymous from the Income-tax Department when he sells the bonds or raises loans on their security or offers the interest from such bonds for taxation. These aspects will militate against the success of the scheme even within the limited sphere of persons having unaccounted cash. Making the interest tax-free would tantamount to allowing high rate of interest and would defeat the very purpose of offering a low yield on the investment. On the other hand, if the interest is taxable, the chances are that most of the investors taking advantage of their anonymity would not disclose the interest income and the scheme might in fact lead to further evasion and build up of black money. The possibility of transfer of bearer bonds from hand to hand in violation of the stipulation of endorsement cannot be ruled out and in that event, the bearer bonds will become a parallel currency. It may be that in view of the low rate of interest, the market value of a bond of Rs 100 comes down to Rs 50 or Rs 60. But the difference accrues only to the buyer and not to the Government which will eventually have to redeem the bonds at their full face value. We will not be surprised, if after the expire of the issue period, which will be limited, these bonds start selling at a premium or being lent as short-term accommodation for a consideration, to enable tax evaders to explain away the concealments which might be detected by the Department in their cases. The more we think of it, the more *we feel convinced that the so-called benefits claimed for the bearer bond scheme are illusory.*

Swiss type bank accounts

2.37 Bank accounts of the 'Swiss type' have been advocated as another means of channelising 'black money' now circulating almost as a parallel currency in the country with all its consequent deleterious effects on the economy. Swiss banks with their stringent rules of secrecy have in recent years become known as repositories of black money owned by tax evaders in various countries. The argument is that if India were to offer similar facilities, the Government might be able to mobilise substantial deposits of unaccounted moneys, both from inside India and from abroad. We are not convinced by this argument. Switzerland occupies a unique position - geographically, historically, politically and economically. There is now a growing concern among many countries that the manner in which the Swiss banks operate provides facilities for tax evasion by the nationals of other countries and this tends to facilitate the flight of capital to Switzerland. To combat the threat posed by the system, countries like the U.S.A. have in their tax treaties with Switzerland included clauses for exchange of information for countering fiscal evasion. Recently, the Federal Tribunal, Switzerland's highest court, authorised Swiss federal authorities to give information to the Internal Revenue Service in Washington about an American citizen's account with a Swiss Bank. The Federal Tribunal ruled that Switzerland was obliged under its double taxation agreement with the United States to give competent U.S. authorities information to prevent or detect crime or fraud. They also said that the 'Swiss Banking Agency' - enshrined in the Swiss code since 1934 - protected a bank's customer from routine enquiries about possible tax evasion but not if there were grounds for suspecting more serious offences of tax fraud. In this context, *we do not consider it worthwhile to experiment with the Swiss type of bank accounts in India.*

Canalising black money into certain specified fields

2.38 It has been suggested that black money floating in India could be canalised into social and desirable fields of activity by giving immunity from rendering any explanation about the sources of investment. Such desirable fields of activity could be building water works, roads, bridges, etc., in rural areas which may be thrown open to private initiative and enterprise, and the construction of tenements for slum dwellers in the cities...... It is unlikely that persons who were unwilling to pay a portion of their income as taxes would volunteer to give away the whole of it for a purpose of general public utility. *We are, therefore, of the view that sponsoring official schemes for canalising black money into specified fields will not be desirable.* Elsewhere we have suggested that public conscience should be roused against the evil of tax evasion, and that tax evaders should be made to feel like social outcastes. It will be highly inconsistent with such an attitude and approach if tax evaders were to be allowed to assume in the public eye the role of benefactors.

Searches and seizures

2.39 *Increased use of power of search and seizure* ..... Searches form a necessary and powerful adjunct to investigation as they bring to light assets and information, which would otherwise be beyond the reach of the Department through its normal channels of enquiry and examination of accounts. We consider the power of search under the Income-tax Act as a potent instrument in the hands of the Department to provide direct and clinching evidence about tax evasion and the existence of black money. Searches not only lead to unearthing of black money in kind, but also to getting hold of hidden books of account which would clearly show that what has been disclosed is only part of what has been earned, invested or accumulated. That searches have been found to be useful in the fight against tax evasion is apparent from the following information supplied to us by the Central Board of Direct Taxes:

Year	No. of searches and seizures conducted	No. of successful searches	Amount of assets seized (Rs lakh)
1	2	3	4
1964-65	397	393	147
1965-66	306	293	130
1966-67	189	186	58
1967-68	109	106	90
1968-69	81	79	59
1969-70	170	169	95
1970-71	195	192	120
	1,447	1,418	699

We recommend that the Department should make an increasing use of its powers of search and seizure in appropriate cases.

2.40 In their memoranda as well as statements before us, several persons have pointed out some glaring anomalies in the existing provisions and have also marked out certain problem areas. We have carefully considered the various suggestions made in this behalf. *We recommend below changes, which we would like to be made, so as to render this instrument more effective.*

(a) Commissioner's power - Sub-section (1) of section 132 of the Income-tax Act, 1961, empowers a Commissioner of Income-tax to authorise searches and seizures only in respect of assessees who are within his jurisdiction. Moreover, the search is to be confined to the premises mentioned in the search warrant. It has been brought to our notice that considerable difficulty is being experienced in cases with all-India ramifications when during the course of conducting the search at places in the jurisdiction of another Commissioner of Income-tax, the 'authorised officer' finds it necessary to search some other premises of the same assessee not mentioned in the search warrant. He cannot readily obtain another warrant from the Commissioner of Income-tax who is available locally as the latter has no power under sub-section (1) of section 132 to authorise a search in respect of the proposed premises since they are not connected with any assessee in his jurisdiction. This results in the postponement of the search of such other premises till a warrant can be obtained from the Commissioner of Income-tax who had originally authorised the search. As time is of the essence in these matters, this delay quite often defeats, wholly or partially, the purpose of the search. As the difficulty pointed out is genuine, *we recommend that a Commissioner of Income-tax should have power to authorise search and seizure, irrespective of whether the taxpayer is assessed in his jurisdiction or not.*

Inspecting Assistant Commissioners to have power of Search - We have also considered the desirability of empowering Inspecting Assistant Commissioners to authorise searches and seizures. As the headquarters of the Commissioners of Income-tax are at quite some distance from Income-tax Offices, particularly in mofussil charges, and as the success of a search and seizure lies in secrecy and prompt action, *we recommend that the power of authorising searches and seizures should be available to the Inspecting Assistant Commissioners as well.* In fact, the power to authorise searches and seizures is available under the Customs Act, 1962 and Foreign Exchange Regulation Act, 1947 to officers who are lower in rank than an Assistant Commissioner of Income-tax. We do not apprehend that empowering these officers would result in any harassment to tax-payers. However, an Inspecting Assistant Commissioner should have this power only in respect of cases falling within his jurisdiction.

(b) Search to cover persons, vehicles and vessels - Premises of any person who is suspected to have concealed income or items of wealth can be searched in pursuance of a search warrant issued under section 132 of the Act. We understand that there have been several occasions when searches of persons, vehicles and vessels became inevitable, and yet nothing could be done due to the non-availability of powers of search in this regard. We appreciate that on certain occasions the lack of power to search persons, vehicles and vessels can be a serious handicap. We find that similar powers are available to officers of the Customs Department under sections 100, 101 and 106 of the Customs Act, 1962. *We recommend that the existing powers of search under the Income-tax Act be extended to cover persons, vehicles and* vessels.

(c) Period for making order for retention of seized assets - In case of seizure of an asset, the Income-tax Officer is required to estimate the undisclosed income in a summary manner to the best of his judgement and pass an order under sub-section (5) of section 132 within ninety days of the seizure. Such an order can be made only with the previous approval of the Commissioner of Income-tax after affording the reasonable opportunity to the persons concerned of being heard and making an enquiry as prescribed under Rule 112A of the Income-tax Rules, 1962. It has been represented to us that this period of ninety days is too short because the assessees, whose premises are searched, generally adopt dilatory and obstructionist tactics in order to stall the enquiry contemplated before passing such an order. This period is also stated to be inadequate for scrutiny of important materials vital for the enquiry. We agree that placed in such a situation, any conscientious officer would find it an exasperating experience to adhere to this time-limit. On the one hand, he is expected to make a well-reasoned order which should stand the test of assessee's appeal to the Board, and on the other, he has to reckon with the tactics of a a recalcitrant assessee. *We recommend that the period for making an order under sub-section (5) of section 132 may be extended from the present ninety days to one hundred and eighty days.* As the enquiry proceedings for the purpose of making an order under sub-section (5) of section 132 have to be commenced within fifteen days of the seizure, the tax administration is already committed to initiate proceedings without delay. In a way, this change would also be useful to the assessees as they will have enough time and opportunity to vindicate their stand-point in the matter satisfactorily.

(d) Tax liability to include interest and penalty - Under clause *(ii)* of sub-section (5) of section 132 the assets seized in the course of a search can be retained for the purpose of meeting the tax liability on the estimated undisclosed income. However, the existing provision does not permit retention of assets in order to satisfy the liability on account of interest and penalty that might be determined on such undisclosed income. This appears to us to be an omission and *we recommend that the law may be amended to permit retention of seized assets in order to meet the liability of interest and penalty, in addition to the tax, that may become due on the estimated undisclosed income.*

(e) Definition of 'authorised officer' - Under sub-section (8) of section 132 of the Income-tax Act, 1961, account books and documents seized in the course of search cannot be retained by the 'authorised officer' for a period exceeding one hundred and eighty days unless he records the reasons in writing for the retention, and obtains approval of the Commissioner of Income-tax in this behalf. We are told that this requirement has led to some practical difficulties. Usually the 'authorised officer', *i.e.*, the officer authorised to conduct search and seizure, hands over the seized material to the Income-tax Officer having jurisdiction over the assessee's case. Thereafter, the authorised officer is in no position to decide whether or not the seized records should be retained beyond 180 days. The practice obtaining at present is that the assessing Income-tax Officer records the reasons for retention and requests the 'authorised officer' to endorse the proposal for retention before the same is forwarded to the Commissioner of Income-tax for approval. In many a case, it so happens that the person who acted as an 'authorised officer' goes out on transfer to a far off station or is otherwise not readily available to sign the retention proposal. In

some cases, the 'authorised officer' may not be available with the Department, having either retired or resigned, with the result that it becomes impossible to comply strictly with the provision of sub-section (8) of section 132 of the Act. To resolve these difficulties, *we recommend that the law be amended to provide that the 'authorised officer' and/or the Income-tax Officer having jurisdiction over the case may apply for retention of the seized material beyond the period of 180 days. Similarly, sub-section (9) of section 132, which contemplates copies, etc., of seized documents being made in the presence of the 'authorised officer', or any other person empowered by him in this behalf, may be suitably amended.*

(f) *Year of concealment* - We learn that in several cases of substantial cash seizures, assessees took the plea that the seized assets were referable to the income of the year of seizure and would accordingly be explained or offered for tax in the return to be filed for the relevant assessment year. This opens up an escape route and gives them an opportunity either to cook up evidence during the remaining portion of the year to explain the possession of the seized assets, or to avoid the penal consequences under the Income-tax Act by including the amount in the return of income as unexplained earnings of the year in which the cash was seized. This loophole naturally waters down the efficacy of the powers of search and seizure, which are intended to act as a deterrent. To remedy this situation, *we recommend that the law may be amended to raise a presumption to the effect that, unless proved to the contrary by the assessee, the assets which are seized in the course of a search will be deemed to represent the concealed income and wealth of the previous year/valuation date immediately preceding the date of the search.*

(g) *Onus of proof* - At present, the onus is on the Department to prove that the assets, account books or documents found at the premises of an assessee in the course of a search relate to the assessee. In the very nature of things, it is often difficult for the Department to get independent evidence to prove that the assets, account books and documents found at the assessee's premises belong to him and relate to his affairs. After all, this is a matter within the exclusive and personal knowledge of the assessee himself. Our attention has been drawn to section 2A of the Foreign Exchange Regulation Act, 1947, which provides for certain presumptions as to the documents seized in the course of a search. The absence of an analogous provision in the Income-tax Act is stated to be causing considerable difficulty to the Department. We agree that when an asset, account book or document is found at the premises of an assessee, it would only be reasonable to presume that it belongs to the assessee and relates to his affairs. The onus, in these circumstances, should be on the assessee to prove that it is not so. *We recommend that the law may be amended to provide a rebuttable presumption both for estimating the undisclosed income, and also for prosecution of an assessee or an abettor.*

2.41 *Need for cautious approach* - Having recommended more powers of search and seizure and their extensive use by the Department, we would be failing in our duty if we were not to add a word of caution here. Several persons, who appeared before us, complained against the arbitrary and high-handed manner in which some of the searches were conducted. It was also repeatedly pointed out that whenever a search takes place, there is always inordinate delay in completing the assessment. We have looked into the statistics furnished by the Department and we are satisfied that even after making allowance for the dilatory tactics which the assessees may adopt in such cases, and to which we have referred earlier, there is considerable truth in the representations made to us in this behalf.

We would like the Department to ensure that the actions of its officers in the matter of searches and seizures do not leave any room for complaint and whenever any officer is found, in his misplaced enthusiasm, to err and over-step the limits of reasonableness, he should be promptly and adequately dealt with. With a view to avoiding hardship to the assessees as also to safeguard the interests of revenue, *we consider it to be of paramount importance that assessments in cases where seizures have been made in the course of searches are finalised expeditiously and are not allowed to drag on unnecessarily.* Any avoidable delay not only places impediments in the conduct of even the normal business of the taxpayers but also considerably dilutes the desired impact of searches on tax-evaders and gives them more time to invent fresh explanations.

Section 2.42 deleted.

Measures to fight tax evasion

2.43 Having discussed measures for unearthing black money and for bringing it out into the open, we now proceed to make suggestions which seek to tackle the causes that lead to the evasion and creation of black money. While doing so, we propose to deal with the problem both in its legal as well as administrative aspects.

Section 2.44 deleted.

Reduction in tax rates

2.45 The present combination of high rates of taxation and widespread evasion has created a vicious circle. With the additions made to the returned income on account of estimates of profit or disallowance of expenses, statutory and otherwise, the tax can conceivably exceed the returned income. Even without such additions or disallowances, the effective marginal rate of tax, taking income-tax and wealth-tax together, may well exceed 100 per cent of the income. After all, levy of wealth-tax even at the rate of one per cent, is equivalent to 10 per cent yield. In these conditions, tax evasion almost gets elevated to the status of a defensive weapon in the hands of taxpayers. If public conscience is to be aroused against tax evasion and if tax evaders are to be ostracized by the society at large, the public needs to be convinced that tax evasion is anti-social. This objective is difficult to achieve so long as the marginal rates of taxation are confiscatory.

Section 2.46 & 2.47 deleted.

2.48 Another objection to the high marginal rates of taxation is that they can erode the capacity and sap the incentive to save and invest. This is relevant to our present economic situation where the need to encourage savings and investment has assumed greater significance than ever before for stepping up production and for providing larger employment opportunities.

2.49 Besides, high marginal rates of taxation tend to promote wasteful consumption expenditures. Apart from the fact that evaded income is more often spent than invested, there is the tendency to spend more when expenses are allowable in the computation of income and are in effect heavily subsidized by the Government on account of the high tax saving. Grant of tax free or nominally taxed perquisites to employees is another instance of avoidance developing under the pressure of high rates of taxation. This encourages excessive spending and thereby generates inflationary tendencies.

2.50 We are convinced that high marginal rates of taxation are a powerful contributory factor towards evasion inasmuch as they make the fruits of evasion so attractive that a less scrupulous person would consider the incidental risks worth taking. In addition, the high rates of taxation create a psychological barrier to greater effort, and undermine the capacity and the will to save and invest....

2.51 We do not consider it advisable, for another reason, for our country to resort to such high rates of taxation in normal times. The country has to leave some tax potential in reserve for an emergency. The present high level of taxation leaves the Government with little scope for manoeuverability for raising additional resources in times of emergency.

2.52 Having considered the matter in all its aspects, *we recommend that the maximum marginal rate of income-tax, including surcharge, should be brought down from its present level of 97.75 per cent, to 75 per cent. We further recommend that some reduction in tax rates be also given at the middle and lower levels. In order to create an impact, the reduction in the rates of taxation should be at one stroke. We give below a rate schedule which we would recommend for adoption by the Government:*

Income slab	Rate of tax
0-5,000	Nil
5,001-10,000	10%
10,001-15,000	500+15%
15,001-20,000	1,250+20%
20,001-25,000	2,250+25%
25,001-30,000	3,500+35%
30,001-40,000	5,250+45%
40,001-50,000	9,750+50%
50,001-60,000	14,750+55%
60,001-70,000	20,250+60%
Over-70,000	26,250+65%

Surcharge @ 15% in respect of incomes over Rs 15,000.

2.53 We would like to state here our reasons for keeping the highest marginal tax rate at 75 per cent. The alternatives before us were *(a)* a fairly low rate of tax with no exemptions and deductions, and *(b)* not so low a tax rate but a structure of rates incorporating some incentives for savings and investment, and for giving direction to the economic development of the country. After careful consideration of the pros and cons of the alternatives, we came to the conclusion that, in the context of the existing economic conditions, it was advisable to adopt the latter course. Looking at the rate structure of income-tax, we feel that at no stage of income, however high, should a taxpayer be left with less than 25 per cent, of the additional income after payment of income-tax.

Next, we gave our careful consideration to the level of income at which the maximum marginal rate should apply. Not so long ago, this level was Rs 70,001 in 1967. Recently, under the Finance (No. 2) Act, 1971, the maximum salary and perquisites allowable as deduction in the computation of business income have been fixed at Rs 5,000 p.m. and Rs 1,000 p.m. per employee. Even in Government the maximum salary is Rs 5,000 plus free residential accommodation. Taking into consideration all these factors, we felt that it would be appropriate to fix Rs 70,001 as the level of income at which the maximum marginal rate should apply.

Section 2.54 & 2.55 deleted.

Minimisation of controls and licences

2.56 Controls and black money constitute a vicious circle. Even as controls generate black market, black market generates black money and tax evasion. Controlled goods carry a premium and the premium is always given and demanded in cash to escape detection. Not only goods but certain entitlements and rights in the form of licences and permits command a premium on the sly. In fields like import licences, the practice of paying unofficial premium is so widespread and common that commercial circles have given recognition to it by having the rates regularly quoted in some newspapers. Rent controls have given rise to the 'Pugree system' where a substantial sum is received in cash before the premises are let out at controlled rent. The clandestine deals and undisclosed investments arising from black money have caused a serious problem of tax evasion which increases in geometric progression as black money generates more black money and evasion breeds further evasion.

Section 2.57 deleted.

2.58 What appears to be necessary now is a comprehensive review of the existing controls so that those which are ineffective, redundant or irksome might be eliminated or modified to suit the needs of the changed situation. There is also scope for streamlining some of the controls to make them more effective and to ensure a fairer deal to the common man, and for modifying some of the procedures so as to eliminate the irritants, bottlenecks and above all scope for abuse. For instance, there appears to be need for modifying the import control regulations to eliminate certain malpractices such as the sale or transfer of licences, without adversely affecting the interests of the actual user. Perhaps, import entitlements which are offered as incentives for export performance could be replaced by cash subsidies. Elimination of unwanted and ineffectively enforced controls would considerably reduce the area of black money and tax evasion. *We would recommend that a committee of experts be appointed to enquire into the utility of all existing controls, licensing and permit systems, and suggest elimination of such of these as are no longer considered necessary. This committee may also suggest changes in law and procedures so as to ensure that the controls which are absolutely* essential for *the health of the economy are administered more effectively and with the least harassment to the public.*

Regulation of donations to political parties

2.59 Political parties and elections are a necessary adjunct to a democratic step-up. A majority of the persons who sent replies to our Questionnaire, and those who appeared in person before us, stated that political factors were also responsible to a considerable extent for the generation and proliferation of black money in the country. In this context, one item which was particularly criticised by them was the incongruity existing between the present ban on donations to political parties by companies on the one hand and the enormous funds required to meet election expenses on the other. This ban on donation to political parties by companies was imposed only in 1969 by an amendment to the Companies Act, 1956, since it was considered that such contributions "tended to corrupt political life to adversely affect the healthy growth of democracy in the country". We recognize the need to keep political institutions free of corruption. We are, therefore, not in favour of the ban on donations by companies to political parties being removed, particularly when the shares of many companies are held by public institutions like the Unit Trust of India, Life Insurance Corporation, nationalised banks, etc.

2.60 Nevertheless, it is an accepted fact of life that in a democratic set-up, political parties have to spend considerable sums of money, and that large sums are required for elections...... *We are of the opinion that in our country also, the Government should finance political parties. We recommend that reasonable grants-in-aid should be given by the Government to national political parties and suitable criteria should be evolved for recognizing such parties and determining the extent of grant-in-aid to each of them. For according recognition to a political party for this purpose, it should be necessary, inter alia, that it is registered under the Societies Registration Act, 1860 and its yearly accounts are audited and published within a prescribed time. Irrespective of the decision of Government on the question of* financing *political parties, we recommend that the parties be required to get their accounts audited and published annually.*

2.61 Inasmuch as the grants-in-aid by the Government may not meet fully the requirements of political parties, they will have to look for additional contributions from other quarters. The considerations which weigh against large donations by big industrial and trading units in the corporate sector do not, however, apply to smaller donations by individuals. *We, therefore, recommend that donations by taxpayers, other than companies, to recognized political parties should be allowed as a deduction from the gross total income, subject to certain restrictions. The maximum amount eligible for deduction on account of donations to political parties should be 10 per cent, of the gross total income, subject to a ceiling of rupees ten thousand. The deduction to be allowed should be 50 per cent, of the qualifying amount of the donation.*

Creating confidence among small taxpayers

2.62 There is a widespread belief that much of the tax evasion of lower levels of income is due to fear of the Income-tax Department, or because of lack of confidence in its fairness. This is generally attributed to the practice of estimating income in small cases, pitching up estimates of income almost as a matter of routine, and disallowing expenses indiscriminately. It is stated that many assessees return lower incomes as a cushion against higher estimates of income and disallowance of expenses by the Department. Similarly, it is mentioned that many taxpayers avoid filing of returns of income for fear of harassment by departmental officers.

2.63 Whether such fears and mistrust have any real basis or not, it is amply clear from the evidence given before us that many taxpayers do genuinely apprehend unfair treatment at the hands of departmental authorities. The practice of being too meticulous in small cases, where no worthwhile revenue is involved, has done much to damage the image of the Department in the public eye. The initiative for undoing the damage lies with the Department. One concrete step suggested for restoring public confidence is to dispense with detailed scrutiny in small income cases and accept the returns of income in such cases in large numbers.

2.64 It is not that the Department itself has not been alive to this issue. The small income scheme was introduced, following the recommendations of the Direct Taxes Administration Enquiry Committee. However, in the actual formulation of the scheme several 'ifs' and 'buts' were introduced with the result that it did not achieve any significant success. The scheme did not evoke any great enthusiasm among tax payers, and the assessing officers' reluctance to take the responsibility for accepting any return stood in the way of its success. Subsequently, some improvements were made in the scheme and this helped in reducing the pendency of assessments in small cases to some extent. However, the position in law remained unchanged that a return could be accepted only if the Income-tax Officer was satisfied that it was correct and complete. Thus, the small income scheme lacked legal sanction.

2.65 Recently, the law has been amended so as to facilitate assessments being made on the basis of returns without the requirement that the Income-tax Officer should be satisfied that the return is correct and complete. Such an assessment can be re-examined either at the instance of the assessee or where the Income-tax Officer considers it necessary or expedient to verify the correctness and completeness of the return by requiring the presence of the assessee or the production of evidence in this behalf. In the latter case, the Income-tax Officer has to obtain the previous approval of the Inspecting Assistant Commissioner.

2.66 Following this amendment of the law, the small income scheme, as it existed, has been scrapped with effect from 1st April, 1971 and the Central Board of Direct Taxes have issued fresh instructions on the new procedure for making assessments in small income cases. We have looked into these instructions. They make a bold departure from the past and are likely to achieve more significant results than the earlier small income scheme. *While broadly approving the general principles underlying these instructions, we have to observe that we see no reason why* assessees in certain income groups at some *places should be given a preferential treatment by having their returns accepted under section 143(1), whereas elsewhere assessees in these income groups will have to face annual scrutiny. We feel that the basic criteria for selecting cases for annual scrutiny should be uniform throughout the country.* While selecting cases for scrutiny out of those already disposed of summarily, varying percentages might have to be adopted depending on the workload and manpower available. *We would suggest that the work be so programmed, and the manpower supplemented, if necessary, as to ensure that at the end of each financial year the carry over of work should not be more than what can be disposed of in the next four months.*

2.67 We find that it is proposed to discontinue the procedure of issuing notice under sub-section (2) of section 139 in every case. *We suggest that, notwithstanding this change in procedure, the Department should mail the return forms together with instructions for filling them to all existing taxpayers on the general index registers in the first week of May every year.* This would serve as a timely reminder to the taxpayer of his obligation under the law to file his return of income, would save him the time and trouble in obtaining the form, and would facilitate prompt filing of returns. .....

Allowance of certain business expenses

2.68 While discussing the causes of tax evasion we had referred, *inter alia,* to disallowances and ceilings on certain expenses which are required to be incurred in view of commercial expediency. We had mentioned that this unduly adds to the tax burden on the assessees when such expenses, though actually incurred, are not allowed to be deducted in arriving at the total income. The expenses commonly mentioned in this connection are those relating to entertainment and maintenance of guest houses.

We consider that certain curbs on lavish entertainment are necessary and certain restrictions are also desirable to prevent the unscrupulous amongst the assessees from claiming deduction for personal or non-business expenses. However, a blanket disallowance of entertainment expenses appears to us to be an unduly stringent measure not warranted by a realistic appraisal of commercial considerations. Business is a highly competitive venture and it cannot be denied that occasions do arise when a person carrying on business has to provide food, drinks and other hospitality to prospective buyers or persons otherwise helpful in promoting his business. Such expenses have to be incurred in the ordinary course of business out of sheer commercial expediency, particularly when they relate to overseas customers. Any prohibition of such expenditure has the effect of driving it underground to re-appear in more acceptable forms. In the ultimate analysis, it is only the honest taxpayer who suffers.

2.69 ..... *We recommend that entertainment expenditure which is incurred primarily for the furtherance of the taxpayer's business and is directly related to its active conduct should be allowed to be deducted, upto the ceiling prescribed under sub-section (2A) of section 37 of the Income-Tax Act, 1961.* Of course, the deduction should be allowed only if the taxpayer proves by adequate evidence not only the actual expenditure incurred but also the business purpose of the expenditure and business relationship of the person entertained to the taxpayer.

2.70 Notwithstanding sub-section (1) of section 37 of the Income-tax Act, 1961, which provides for deduction of expenses which are incurred wholly and exclusively for the purpose of business, the Income-tax law imposes certain restrictions in respect of maintenance of guest houses by assessees having income from business or profession. These restrictions were first imposed in 1964. From 1st April 1964, expenses on the maintenance of guest houses incurred by an assessee were to be disallowed unless the expenses were within the prescribed limits and fulfilled certain specified conditions. In 1970, the law in this regard was tightened. By the Finance Act, 1970, it was provided that no allowance shall be made in respect of any expenditure incurred by an assessee on the maintenance of any residential accommodation in the nature of a guest house and also in respect of depreciation of any building or asset used for the purpose of a guest house. The second proviso to sub-section (4) of section 37 of the Income-tax Act, 1961, however, provides an exception to such restrictions in respect of any guest house maintained as a holiday-home for the exclusive use of employees while on leave. We feel that it will also be reasonable to give the benefit to guest houses maintained in the nature of transit houses for employees on duty. *We, therefore, recommend that the exception contained in the second proviso to sub-section (4) of section 37 of Income-tax Act, 1961 should be made applicable to guest houses maintained in the nature of transit houses for employees on duty, provided the stay is temporary and rent is charged. Where no rent is charged,* the daily allowance admissible to *the employee should be restricted on the same lines as for Government servants.*

Changes in penal provisions

2.71 As the number of taxpayers increases, the tax administration has of necessity to rely more and more on voluntary compliance of tax laws by the assessees. Appropriate penal provisions form a necessary complement to this approach as they impel compliance with the tax laws by imposing additional monetary burden on those who happen to go astray either inadvertently or by design. It is in this context that we have considered it necessary to review the penal provisions in the direct tax laws.

Iniquity and severity of penal provisions

2.72 Considerable criticism of the existing penalty provisions has been voiced before us. Our attention has been drawn particularly to the fact that the law provides for levy of interest and penalty, and also prosecution for the same default. Similarly, objection is taken to the penalty for concealment being levied with reference to income or wealth concealed, instead of the tax sought to be evaded. The main criticism levelled is that these provisions are unrealistic and iniquitous, especially from the point of view of small taxpayers. It has been urged that instead of aiding the administration in the enforcement of tax laws, these draconian provisions compel a taxpayer to go underground or practice undercover operations.

2.73 Under clause (c) of sub-section (1) of section 271 of the Income-tax Act, 1961, a person who has concealed the particulars of his income or furnished inaccurate particulars thereof, is liable to pay a minimum penalty equal to the concealed income and maximum penalty of twice that amount. This provision has been the subject of widespread criticism both in the replies to the Questionnaire as well as in the statements made before us. It has been pointed out that apart from the penalty itself acting very harshly on the taxpayers, its severity is enhanced by the Explanation to sub-section (1) of section 271 which is to the effect that where the income returned by any person is less than eighty per cent of the assessed income, he will be deemed to have concealed the particulars of his income or furnished inaccurate particulars thereof, unless he can prove that the failure to return the income as assessed did not arise from any fraud or any gross or willful neglect on his part.

We think this criticism is not without merit. Penalty serves its purpose only so long as it is within reasonable limit. Once it crosses that limit, it is more likely to increase the rigidity of a taxpayer's recalcitrance than to reform him. If a tax evader is really unable to pay a heavy penalty, he would prefer to go underground and start business in benami names. Unduly harsh penalties thus breed only defiance of the law and have to be eschewed. No other country in the world appears to have adopted such a basis for levying penalty for concealment. A penalty based on income instead of tax hits the smaller taxpayers more harshly. The iniquity of this provision is evident from the fact that while the minimum penalty is over nine times the tax sought to be evaded in the case of a taxpayer with income upto Rs 10,000, it is just about equal to the tax in the case of a person with income above Rs 2 lakh. In the desire not to let off the fraudulent tax evaders lightly, it is not correct to penalise the small taxpayer more harshly. The objective can be better served by prosecuting tax evaders in higher income brackets, which would be far more effective than loading everyone with heavy penalties. Later in this report, we have ourselves recommended a vigorous prosecution policy to be adopted by the Department. The purpose of penalty should, however, be only to bend and not to break the taxpayer. *We recommend that the quantum of penalty impossible for concealment of income should be with reference to the tax sought to be evaded, instead of the income concealed. Moreover, the minimum penalty impossible for concealment of income should be the amount of tax sought to be evaded and the maximum penalty impossible should be fixed at twice the said amount. It may also be clarified that 'tax sought to be evaded' in this context means the difference between the tax determined in respect of total income assessed and the tax that would have been payable had the income other than the concealed income been the total income.* This would ensure that taxpayers are not made to pay penalty in respect of certain additions to income, which are not in the nature of concealment but are made only for certain technical reasons.

2.74 We are not unaware that linking concealment penalty to tax sought to be evaded can, at times, lead to some anomalies. *We would recommend that in cases where the concealed income is to be set off against losses incurred by an assessee under other heads of income or against losses brought forward from earlier years, and the total income thus gets reduced to a figure smaller than the concealed income or even to a minus figure, the tax sought to be evaded should be calculated as if the concealed income were the total income.*

Explanation to sec. 271(1)(c)

2.75 Several persons who appeared before us urged the need for deleting the Explanation to clause (c) of sub-section (1) of section 271 of the Income-tax Act, 1961 for various reasons. The primary objection against this Explanation is that it is being invoked indiscriminately and penalty proceedings are initiated in all cases where the income shown in the return is less than eighty per cent of the assessed income.

The Explanation was introduced in order to cast on the assessee the burden of proving that the omission to disclose true income did not proceed from any fraud, or gross or wilful neglect. A similar Explanation was also introduced in the Wealth-tax Act, 1957. This was a sequel to the recommendation made by the Direct Taxes Administration Enquiry Committee (1958-59), based on a similar provision in the United Kingdom law. We understand that in a number of cases that came up on appeal, the appellate authorities were not inclined to uphold the penalties imposed on the basis of this Explanation, since they were of the view that the Department was still under obligation to prove the concealment. The difference between the assessed income and the returned income can be due to a variety of reasons - some technical, like estimate of gross profit and others purely arithmetical - and in our opinion, it would not be correct to initiate proceedings in every case where the difference exceeds twenty per cent. In the United Kingdom itself, the provision on which this Explanation was based has now been dropped. In any event, if past experience is any indication, we feel that this Explanation has failed to serve any useful purpose. On the other hand, it has resulted in unwarranted harassment to the taxpayers, and too much of paper work caused by indiscriminate initiation of penalty proceedings and consequent appeals.

We recommend that Explanation to clause (c) of sub-section (1) of section 271 of the Income-tax Act, 1961 and also Explanation 1 to clause (c) of sub-section (1) of section 18 of the Wealth-tax Act, 1957 may be deleted.

2.76 While we are of the view that penalties should not be draconian, we also strongly feel that those who are tempted to resort to concealment of income should not be allowed to get away with tenuous legal interpretations. We would recommend the following changes in the Income-tax Act in this regard:

(a) Presumption of concealment where explanation found false - Several officers of the Department invited our attention to the Supreme Court's decision in the case of Commissioner of Income-tax, West Bengal *vs.* Anwar Ali (76 ITR 696). It has been held by the Court that penalty for concealment of income cannot be imposed merely because the explanation given by an assessee is found to be false. While this decision was given in the context of clause (c) of sub-section (1) of section 28 of Indian Income-tax Act, 1922, it is not reasonably certain that it would not apply to penalties under the Income-tax Act, 1961. *We would, therefore, recommend, as a measure of abundant caution, that an Explanation to sub-section (1) of section 271 of the Income-tax Act, 1961 may be inserted to clarify that where a taxpayer's explanation in respect of any receipt, deposit, outgoing, or investment is* found to be false, the *amount represented by such receipt, etc., shall be deemed to be income in respect of which particulars have been concealed or inaccurate particulars have ben furnished, within the meaning of clause (c) of sub-section (1) of section 271 of the Income-tax Act, 1961.*

(b) Intangible additions - Additions to income are frequently made by the Income-tax Officers for purely technical reasons, *e.g.*, application of a presumptive rate of gross profit or of yield, or on account of estimated disallowance of certain expenses, shortages, wastage, etc. These are commonly referred to as 'intangible additions' and normally no penalty is levied - and rightly so - for want of adequate material to establish that these additions represent the taxpayer's concealed income. We are, however, informed that these intangible additions are exploited by some taxpayers as a means of escape from tax and penalty in assessments pertaining to subsequent years. Instances are said to be common when a taxpayer, confronted with the need to explain the source of some of his funds, assets, etc., takes the plea in the absence of any other evidence, that the said funds, assets, etc., had emanated from income represented by intangible additions made in earlier assessments. Such explanations also find favour with appellate authorities, with the result that the taxpayer gets away with admitted utilisation of concealed income without paying any penalty. We do not consider this to be justifiable. *We recommend that law should be amended to provide that where intangible additions made in earlier years are cited by an assessee as the source of his funds, assets, etc., in a subsequent year, the said funds, assets, etc., would be deemed to represent the assessee's income, particulars in respect of which have been concealed within the meaning of clause (c) of sub-section (1) of section 271 of the Income-tax Act, 1961, and the quantum of penalty would be determined with reference to the total income of*

the said, assessment year, which shall be *computed for this limited purpose by including the* value of such funds, assets, etc., to the extent they are claimed to be out *of past intangible additions.*

(c) Presumption of concealment in case of failure to file the return - Tax evasion can be attributed to acts of either commission or omission of an assessee. A taxpayer may file his return but may not disclose his income in full. On the other hand, he may decide not to file the return at all, thereby concealing all his income. As stated earlier, penalty is impossible under clause (iii) of sub-section (1) of section 271 of the Income-tax Act, 1961 if an assessee has, in the return filed by him, concealed particulars of his income or furnished inaccurate particulars thereof. Where, however, an assessee does not submit the return of his income, though he had taxable income and this fact is established on assessment, no penalty for concealment of income is leviable under the law. At best, the income-tax officer can levy penalty under clause (i) of sub-section (1) of section 271 of the Act for assessee's failure to submit the return of income. While the maximum penalty under clause (iii) of sub-section (1) of section 271 is twice the concealed income (which we are recommending to be changed to twice the tax sought to be evaded), the maximum penalty for filing of return or non-filing of return is 50 per cent, of the tax payable on assessment. We consider it to be highly unsatisfactory that a complete concealment of income should entail a lighter punishment than partial concealment. *We accordingly recommend that where an assessee does not file a return of income within the normal period of limitation for completion of assessment, and the Income-tax Officer establishes that he had taxable income, the assessee should be deemed in law to have concealed his total income for the purpose of clause (c) of sub-section (1) of section 271 of the Act, notwithstanding that he has subsequently, in response to notice under section* 148, filed a return stating his *correct income. This will apply only to those who have not hitherto been assessed.*

Other Penalties

2.77 In regard to other penalties under section 271, which do not relate to concealment of income, our recommendations are as under:

If an assessee fails to furnish his return of income under sub-section (1) of section 13 of the Income-tax Act, 1961 within the prescribed time, he is liable to pay penal interest and penalty for the period of default, apart from being liable to be prosecuted, in certain circumstances, under section 276C of the Income-tax Act, 1961. We consider that the policy of levying interest and penalty, in addition to making the assessee liable to prosecution is not warranted in all such cases. In our opinion, assessees who furnish returns of income, though belated, should be treated more leniently than assessees who do not furnish returns of income at all. Similarly, the treatment to be meted out to a case of failure to file return of income where no notice under sub-section (2) of section 139 of the Act has been served should be less severe than that to a case where such a notice has been served. Accordingly, we make the following recommendations:

(i) Where a return of income is filed under sub-section (1) of section 139 of the Income-tax Act, 1961, after the prescribed time-limit but within the period of limitation for completion of assessment, the assessee should be liable to pay only interest at the rate of 1 per cent per month on the tax due for the period of delay. There should be no liability for penalty or prosecution.

(ii) Where a return of income is filed beyond the time prescribed under sub-section (2) of section 139 or section 148, but within the time allowed, if any, by the Income-tax Officer, the assessee should be liable to pay interest at the rate of 1 per cent, per month on the tax due for the period of delay.

(iii) Where a return of income is filed beyond the time prescribed under sub-section (2) of section 139 or section 148 and also beyond the time allowed, if any, by the Income-tax Officer, the assessee should be liable to pay interest at the rate of 1 per cent per month, and, in addition penalty at the rate of 1 per cent, of the tax due for every month during which the default continued.

(iv) *Where a person fails to submit a return of income in response to a notice under sub-section (2) of section 139 or section 148 and on assessment his income is found to be above taxable limit, he should be liable to pay interest* at the rate of 1 per cent per month and, in addition, penalty at *the rate of 1 per cent, of the tax due for every month during which the default continued. He should also be liable to prosecution.*

(v) *Where a person fails to submit a return as required under sub-section (1) of section 139 but submits it in response to a notice under sub-section (2) of section 139 or section 148, he should be liable to pay interest at the rate of 1 per cent, of the tax due for every month during which the default continued.*

In the case of a person not hitherto assessed to tax, where the failure has continued beyond the normal period of limitation for completing the assessment under section 143, he should, in addition to interest, be liable to a penalty under clause (c) of sub-section (1) of section 271 as recommended earlier, as also prosecution.

(vi) *For the purpose of levy of interest at the rate of 1 per cent., the period of delay or default should always be counted from the due date for filing the return of income under sub-section (1) of section 139, notwithstanding the extension of time, if any, granted by the Income-tax Officer.*

Penalties under Wealth-tax Act

2.78 Now coming to the penalties under the Wealth-tax Act, 1957, we find that the quantum of penalty for defaults under sub-section (1) of section 18 and the nature of punishment for offences under sub-section (1) of section 36 of the Wealth-tax Act, 1957, substantially differ from those of the Income-tax Act, 1961, even though the nature of default or offence sought to be penalised is more or less the same. To illustrate, the penalty under clause (i) of sub-section (1) of section 18 of the Wealth-tax Act, 1957 for failure to submit the return of net wealth within the prescribed period is one-half per cent, of *the net wealth* for every month of default, subject to a *maximum of an amount equal to the net wealth,* whereas the penalty prescribed under clause (i) of sub-section (1) of section 271 of the Income-tax Act, 1961, for a similar default is two per cent, *of the tax,* for every month of default, subject to a *maximum of fifty per cent of the tax.* We consider this position to be anomalous. *We, therefore, recommend that the provisions in clauses (i) and (ii) of sub-section (1) of section 18 and clauses (a), (b) and (c) of sub-section (1) of section 36 of the Wealth-tax Act, 1957 should be respectively brought in line with the corresponding provisions* of the Income-tax Act.

As regards clause (iii) of sub-section (1) of section 18 of the Wealth-tax Act, 1957, the minimum penalty for concealment of wealth is equal to the concealed wealth and the maximum penalty is twice that amount. Explanation 1 to sub-section (1) of section 18 of the Wealth-tax Act, 1957, which we have elsewhere recommended for deletion, further provides that where the value of any asset returned is less than seventy five per cent, of its value as determined in the assessment, or where the value of any debt returned exceeds the value of such debt as determined in the assessment by more than twenty five per cent., the assessee shall be deemed to have concealed his wealth to the extent of under-valuation of asset or over-valuation of debt, unless he can prove that the failure to return the value as determined in assessment did not arise from any fraud or any gross or willful neglect on his part. Apart from the quantum of penalty itself being quite harsh, we consider that this Explanation makes it all the more stringent. *We recommend that penalty for concealment of wealth should be restricted to only those cases where there is a total omission to include an asset in the return of net wealth. Further, in order to avoid gross under-valuation, the Government may be given the power to acquire the properties, which are considered to be grossly under-valued, on payment of the value put by the assessee plus 15 per cent, thereof by way of compensation.*

Regarding the quantum of penalty on concealment of wealth, we do not approve of the existing provision linking it to the amount of wealth concealed as it leads to inequitable and intolerably oppressive results. For example, if an assessee wants to disclose an asset worth Rs 50,000, which he had not done earlier, he will be liable to minimum penalty of Rs 50,000 and maximum penalty of Rs 1,00,000 under the Wealth-tax Act, apart from penal consequences under the Income-tax Act. If the omission had occurred in returns of net wealth for more than one year, this penalty will get multiplied by the number of years. Thus, omission to disclose an asset worth Rs 50,000 for three years would entail minimum penalty of Rs 1,50,000 and maximum penalty of Rs 3,00,000. In addition he will be exposed to the threat of prosecution. All this, we think, is likely to prompt a taxpayer to remain underground rather than make a clean breast of the whole affair and start paying taxes honestly. In line with our earlier recommendation with regard to the penalty for concealment of income under the Income-tax Act, *we recommend that the penalty for concealment of wealth should be linked to the amount of tax sought to be evaded instead of the concealed wealth.* However, we would prefer a minor departure from our earlier recommendation in so far as the maximum penalty leviable for concealment of wealth is concerned. We consider that maximum penalty equal to twice the tax sought to be evaded may not make the penal provision as effective under the Wealth-tax Act as under the Income-tax Act. *We recommend that the minimum penalty for concealment of wealth under the Wealth-tax Act, 1957 should be equal to the tax sought to be evaded and the maximum penalty should be five times the tax sought to be evaded.*

Penalties under Gift-tax Act

2.79 Under clause (i) of sub-section (1) of section 17 of the Gift-tax Act, 1958, if a person fails to furnish his return of gifts which he is required to file, he is liable to pay penalty equal to two per cent of the tax for every month during which the default continued, but this is subject to a ceiling of fifty per cent of the tax due. Filing of gift-tax return is a very simple matter, unlike the filing of the return of income under the Income-tax Act, 1961, which has to depend on various factors, including the accounts being written up-to-date. Moreover, filing of gift-tax returns will assume far greater importance with the introduction of the provision for aggregation of gifts recommended by us elsewhere. We consider, therefore, that the delayed submission of return of gifts under the Gift-tax Act, 1958 should be subject to a higher penalty than the penalty prescribed for the belated filing of the return of income. Accordingly, *we recommend that while the present rate of penalty at 2 per cent per month prescribed under clause (i) of sub-section (1) of section 17 of the Gift-tax Act should continue, the ceiling of fifty per cent of the tax due should go.*

Mitigation of penalties and interest

2.80 Another aspect to which our attention was invited by several persons who appeared before us related to the need for mitigating the rigors of the penal provisions, which instead of encouraging a one-time tax evader to come back to the path of rectitude, drive him to become a confirmed tax dodger. Even sub-section (4A) of section 271 of the Income-tax Act, 1961, under which Commissioner of Income-tax has the power to reduce or waive penalty, does not cover all the penalties impossible under the Act. Even the reduction or waiver of penalty impossible under clauses (i) and (iii) of sub-section (1) of section 271 of the Act is subject to certain conditions. Some of the conditions are that the assessee should have made voluntary and full disclosure of income *before* the notice calling the return of income was issued to him, and that in cases of liability to penalty under clause (iii) of sub-section (1) of section 271 of the Act, his voluntary disclosure of income should have been made *prior* to the detection of concealment by the Department. There is a similar provision in the Wealth-tax Act, 1957 as well.

Apart from the scope of this provision being very limited, the conditions required to be fulfilled for getting its benefit may not be fully satisfied in certain cases, though facts and circumstances may otherwise justify mitigation of penalty. We consider that it would be advantageous to have a comprehensive provision under which mitigation or remission of penalties is made possible, where facts and circumstances of the case so warrant. We find that a similar provision exists in the Taxes Management Act, 1970 of the United Kingdom. *We recommend that the existing provisions for waiver and reduction* of penalties *may be deleted and, instead all the direct tax laws should contain a provision enabling the Commissioner to mitigate or entirely remit any penalty, or stay, or compound any proceedings for recovery thereof, in cases of* genuine *hardship*. However, this power should be available only in respect of cases other than those which are the subject of settlement proceedings before the Direct Taxes Settlement Tribunal.

2.81 Notwithstanding our recommendations for a comprehensive provision enabling the Commissioner to mitigate penalty in appropriate cases, we consider that there is need for a provision which would mitigate the impact of penalty and interest of belated returns in respect of small income cases at the level of Income-tax Officer himself *suo motu. We, therefore, suggest that where a return of income is filed belatedly by an assessee and his income in no year during a period of four years immediately preceding the year exceeded Rs 15,000, the Income-tax Officer should be under a statutory obligation to consider waiver or reduction of both penalty and interest and should record a note giving reasons for the decision taken by him in the matter.*

Minimum penalty

2.82 In view of the comprehensive mitigation provision recommended by us, we do not consider it necessary to delete, as suggested by some, the statutory minimum prescribed for levy of penalties under the direct tax laws, or to have fixed but graded penalties only for various kinds of defaults. *We are of the opinion that the present policy of having a statutory minimum for penalties has, on the whole, had salutary effect and it should, therefore, continue.*

Vigorous prosecution policy

Need for vigorous prosecution policy

2.83 In the fight against tax evasion, monetary penalties are not enough. Many a calculating tax dodger finds it a profitable proposition to carry on evading taxes over the years, if the only risk to which he is exposed is a monetary penalty in the year in which he happens to be caught. The public in general also tends to lose faith and confidence in the tax administration once it knows that even when a tax evader is caught, the administration lets him get away lightly after paying only a monetary penalty - when money is no longer a major consideration with him if it serves his business interests. Unfortunately, in the present social milieu, such penalties carry no stigma either. In these circumstances, the provisions for imposition of penalty fail to instil adequate fear of the law in the minds of tax evaders. Prospect of landing in jail, on the other hand, is a far more dreaded consequence - to operate *in terrorem* upon the erring taxpayers. Besides, a conviction in a court of law is attended with several legal and social disqualifications as well. In order, therefore, to make enforcement of tax laws really effective, we consider it necessary for the Department to evolve a vigorous prosecution policy and to pursue it unsparingly.

Section 2.84 deleted.

2.85 For a successful enforcement programme, it is not enough that adequate number of cases are taken to court every year. In selecting cases for prosecution, the Department should ensure that these represent a cross-section of the society and are picked up from different regions and all walks of life, viz., persons in employment, profession, trade, industry, etc. *While the power to compound offences presently available to the Department under sub-section (2) of section 279 of the Income-tax Act, 1961 may continue, we recommend that it should be used very sparingly. We also wish to emphasise that flagrant cases of tax evasion, particularly of persons in the high income brackets, should be pursued relentlessly.*

Person behind tax evasion to be prosecuted

2.86 We have examined the adequacy of section 277 of the Income-tax Act, 1961, which deals with prosecution for false statement in declaration, etc. We consider that this provision is not adequate to bring to book those persons who are in fact responsible for false returns being furnished to the Department. Section 140 of the Act authorises the return of income being signed in the case of a company by its 'principal officer'. Clause (35) of section 2 defines a 'principal officer' as the secretary, treasurer, manager or agent of the company or any person connected with the management of administration of the company upon whom the Income-tax Officer has served a notice of his intention of treating him as the principal officer. Section 277 as it stands at present contemplates prosecution of that person only who knowingly makes a false statement in any verification under the Act. In the case of a company, the return is usually signed by the secretary who is merely an employee and thus it is he who can be prosecuted under section 277 of the Act. The managing director and other directors who are in fact the persons in charge of running the concern, and in that capacity are normally responsible for commission of tax offences, escape prosecution. Similarly, in the case of partnerships, the managing partner escapes prosecution if the return is signed by a partner who does not actively participate in managing the business. In order to get at the persons who are really responsible for tax offences, *we recommend that the definition of 'principal officer' for the purpose of signing of the return should be amended so as to provide that the return of income of a limited company should be signed by the person mainly responsible for the management or administration of the affairs of the company. In other words, the liability for signing the return should be fixed primarily on the managing director, failing which on the working director. Similarly, in the case of a partnership, the responsibility to sign the return should rest on the managing partner or the partner in charge of the financial affairs of the firm.*

2.87 Cases may, however, still crop up where a person in charge of, and responsible to, a company for the conduct of its business may have managed to avoid signing the return. It will be desirable to bring him also within the reach of the long arm of the law. Section 140 of the Customs Act, 1962, contains a useful provision to meet such a situation. It provides that where a company commits an offence, every person who, at the time the offence was committed, was in charge of, and was responsible to the company for the conduct of its business, shall be held guilty of the offence and be liable to be prosecuted. It further provides that if the offence is found to have been committed with the consent, connivance or negligence of any director, manager, secretary or other officer of the company, the said person shall also be liable to be prosecuted. *We recommend that a provision analogous to section 140 of the Customs Act, 1962 be incorporated in the Income-tax Act. Further, it should also cover the case of a partner who is really responsible for the tax offence of the firm, although he has not signed the return himself. We would like that choice of person who should be proceeded against to be left to the direction of the Commissioner of Income-tax.*

Scope of sec. 277 to be widened

2.88 The present section 277 of the Income-tax Act, 1961 is very limited in its scope inasmuch as it deals only with cases of signing false verification and delivering false accounts or statements and does not make tax evasion itself an offence punishable under the Act. We examined the proposal to have a comprehensive legislative provision within the Income-tax law in order to deal effectively with tax evasion and attempts to evade or defeat taxes. There are provisions to this effect in the East African Income-tax (Management) Act, 1958. In the United States of America, tax offences committed with criminal intent are treated as felony under section 7201 of Internal Revenue Code which reads as under:-

"Any person who wilfully attempts in any manner to evade or defeat any tax imposed by this title or the payment thereof shall, in addition to other penalties provided by law, be guilty of a felony and, upon conviction thereof, shall be fined not more than $10,000, or imprisoned not more than 5 years, or both, together with the costs of prosecution."

Evidently, this provision has a much wider scope than section 277 of the Income-tax Act, 1961 and covers all situations of attempts to evade or defeat taxes, or the payment thereof. *We have no doubt in our minds that a provision on the lines of Section 7201 of U.S. Internal Revenue Code will be extremely helpful in countering devices of tax* evaders, and we recommend that such a *provision should be incorporated in the Indian tax laws also.*

Probation of Offenders Act not to apply to tax offences

2.89 It has been pointed out to that the Probation of Offenders Act, 1958, has proved a stumbling block in the way of the Department securing conviction under section 277 of the Income-tax Act, 1961. Under section 3 of the Probation of Offenders Act, an offender can be released by the court on probation of good conduct, or even otherwise after due admonition if, *inter alia*, the offence committed is punishable with imprisonment for not more than two years. This provision is stated to have set at nought certain prosecutions launched by the Department under section 277 of the Income-tax Act, 1961, as the offence mentioned in this section is punishable with imprisonment for not more than two years. A suggestion has been made that in order to get over this difficulty, section 277 of the Income-tax Act, 1961 should be amended by suitably enhancing the sentence of punishment to a period which is more than two years. We consider that the remedy for this situation lies elsewhere. *We recommend that section 118 of the Probation of Offenders Act, 1958 should be suitably amended to include all* the direct tax laws among the *statutes which are saved from the operation of the Probation of Offenders Act.*

Fines for certain offences by department officers

2.90 Offences of various kinds are at present committed with impunity in the course of proceedings before the Income-tax Officers, since cognizance of these offences can be taken only by resorting to the Indian Penal Code and complying with the attendant formalities. A suggestion has been made before us that provisions corresponding to some of the relevant sections of the Indian Penal Code should be incorporated in the Income-tax law itself so that the Income-tax Act is made comprehensive enough to deal with such offences. We have examined the feasibility of the suggestion. We are of the opinion that this suggestion is fraught with certain far-reaching consequences and we, therefore, do not approve of it. Nonetheless, there are certain offences, such as those specified in sections 179 and 180 of the Indian Penal Code, which can be incorporated in the Income-tax law itself. Section 179 of the Indian Penal Code makes it an offence for a person to refuse answering a question put to him by a public servant authorised to record statement, and section 180 of the Indian Penal Code relates to punishing a person who refuses to sign any statement made by him before a public servant. We also find that the Customs Act, 1962 contains a comprehensive residuary penalty provision in section 117, which is to the effect that if any person contravenes any provision of the Customs Act or abets any such contravention or fails to comply with any of its provisions, he shall be liable to a penalty not exceeding Rs 1,000 in case no express penalty is elsewhere provided for such contravention or failure. *We recommend that similar provisions should be incorporated in Chapter XXI of the Income-tax Act, 1961 and these contraventions be made liable to a penalty only.* We consider that these changes in law would strengthen the hands of a Department and also relieve the officers of the need of going to the courts and complying with the attendant formalities.

In this connection, we also considered the provisions of section 276 of the Income-tax Act, 1961, which prescribed only monetary fines for the offences specified therein. We see no reason why the Department itself should not be empowered to impose penalties in such cases. *We recommend that the present section 276 of the Income-tax Act, 1961, may be deleted from Chapter XXII dealing with 'Offences and Prosecutions' and may be incorporated with suitable amendments in Chapter XXI of the Income-tax Act, 1961, dealing with 'Penalties impossible'.* We may mention that a provision enabling the imposition of penalties by the officers of the Department would not be a new one. Sub-section (2) of section 131 already empowers an Income-tax Officer to impose penalty, though the word used there by oversight is 'fine' and not 'penalty'.

2.91 *We recommend that the penalties suggested* by us above should be imposed by *officers not below the rank of Inspecting Assistant Commissioner*. If the defaults in question are committed in the course of any proceeding or enquiry before the Income-tax Officer, the penalty should be imposed by the Inspecting Assistant Commissioner of Income-tax on the basis of a complaint made by the Income-tax Officer. However, if these defaults are committed before an Inspecting Assistant Commissioner, or Appellate Assistant Commissioner, or Commissioner of Income-tax, as the case may be, the penalty may be imposed by the Inspecting Assistant Commissioner, or the Appellate Assistant Commissioner or the Commissioner concerned. *The orders imposing penalty may be made appealable to the Appellate Tribunal by suitably amending section 253 of the Income-tax Act, 1961.*

Exclusion of prosecution period for limitation

2.92 At present, a prosecution can be commenced either before or after the completion of assessment proceedings. Normally, a person is proceeded against only after the assessment has been completed. However, cases do arise where documents seized in the course of a search or discovered during assessment proceedings clearly indicate that a taxpayer has suppressed certain receipts, sales, purchases or expenses. There are also cases where materials obtained show that the taxpayer has altogether failed to disclose a particular source of income. Any delay in launching prosecution can provide opportunity to a taxpayer to temper with the evidence, to cook up fresh evidence or to tutor witnesses. In such a case, it becomes desirable to launch prosecution even before the completion of assessment, and soon after the relevant evidence about the commission of an offence has been collected. Since prosecution proceedings are generally time-consuming, filing complaints during the pendency of assessment proceedings would present considerable difficulty to tax authorities in the matter of completion of assessments within the period of limitation prescribed under section 153 of the Income-tax Act, 1961. *We, therefore, recommend that the law be suitably amended to exclude the time spent on prosecution, from the* institution of the complaint to its final disposal, *from the period of limitation prescribed for making on assessment or re-assessment.*

Section 2.93 to 2.97 deleted.

Background and existing set-up of Intelligence Wing

2.98 Prior to the constitution of the Intelligence Wing, the Directorate of Inspection (Investigation) was expected to meet effectively the challenge of big tax evaders. In the field of formations, there were Special Investigation Circles and Central Circles to which cases of suspected tax fraud were specifically assigned. The role of the Directorate was to give guidance in individual cases and to lay down broad lines of investigation. In addition to this Directorate, there was a 'Special Investigation Branch' in each Commissioner's charge. But this was primarily meant to collate and disseminate routine information for verification in the course of assessment proceedings. This set-up was not found to be adequate to undertake any intelligence work. Intelligence Wing was, therefore, set up in 1966 to fill up this gap. Broadly, the functions of this Wing are collection and dissemination of information regarding tax evasion, study of techniques of tax evasion prevalent in various trades and industries, locating concealed assets, forestalling fraudulent transfers to defeat taxes and processing specific cases for prosecution.

2.99 The methods of work adopted by the Intelligence Wing are stated to be maintenance of contact with informers, scrutiny of anonymous and pseudonymous petitions, maintenance of liaison with allied agencies and other Government Departments, conducting *suo motu* enquiries, initiating survey operations under section 133A of the Income-tax Act, 1961 and organising and conducting searches independently of, or in association with, allied agencies.

2.100 Although the Intelligence Wing has only been in existence for five years and can thus be said to be in its infancy, the achievements to its credit are not inconsiderable. Its units have reported concealment of income/wealth in 826 cases during the period from 1966 to 1969. These evaders, and we recommend that such a *provision should be incorporated in the Indian tax laws also.*

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2.100 Although the Intelligence Wing has only been in existence for five years and can thus be said to be in its infancy, the achievements to its credit are not inconsiderable. Its units have reported concealment of income/wealth in 826 cases during the period from 1966 to 1969. These include 150 cases involving concealed income of approximately Rs 42 crore and the tax sought to be evaded in each of these cases exceeds Rs 10 lakh. The searches conducted by the Wing have led to a breakthrough in several rackets involving wide inter-State remifications, e.g., customs clearance permits, hundi hawalas, etc. In addition, a sum of Rs 95 lakh had been seized upto 1969. The four main Intelligence units at Calcutta, Bombay, Madras and Delhi have launched 38 cases of prosecution for concealment, out of which convictions have been secured in 13 cases. Prosecutions were also launched under the Indian Penal Code in four cases, two of which have resulted in convictions.

2.101 It has been stated before us by a number of senior officers of the Department that the Intelligence Wing, though it has done some useful work, is yet far from achieving the objectives. This is said to be so because the officers of the Intelligence Wing have kept themselves largely confined to their own offices, receiving information from outsiders, mostly informants, or scrutinising anonymous or pseudonymous complaints about tax evasion. They have not yet taken the initiative to venture out into the din and bustle of the market-place or to try to enter the inner sanctuaries and the closed precincts of big tax evaders, wherein all the nefarious schemes of evasion are hatched and practised with impunity in the confident belief that the Income-tax Department is incapable of reaching and detecting them. We, therefore, consider it necessary to analyse the causes and to suggest measures which will enable the Intelligence Wing to pay a more dynamic and effective role.

Proposed set-up

2.102 A major criticism against the Intelligence Wing relates to its organisational pattern. It is said that the guidance and control emanating from the top is itself neither adequate nor effective. Another shortcoming stressed by the officers of the Department is that the functioning of the Wing is seriously impeded by duality of control over the Wing exercised by Commissioners of Income-tax and the Director of Inspection (Investigation). We have considered the merits and demerits of the various suggestions offered in this behalf. At the outset, we may observe that the Member, Central Board of Direct Taxes, who is in charge of Intelligence and Investigation is saddled with multifarious other duties. *We are of the opinion that intelligence and investigation should receive exclusive attention of a senior Member of the Central Board of Direct Taxes, and we accordingly suggest that the Member concerned should be freed of all other work. This Member should be designated as a Member (Intelligence and Investigation). He should lay down the policy in matters relating to intelligence and investigation, indicate the lines on which efforts of the officers working in these fields should be directed and provide them with overall guidance and supervision. He should also be responsible for (a) developing expertise generally for handling investigation concerning different trades and industries; (b) collecting and disseminating information regarding commercial and industrial trends, economic malpractices, tax evasion techniques; (c) keeping liaison with the various investigating agencies at Delhi; and (d) giving publicity to the Department's performance in the field of detection of concealments. He should, however, be assisted by two senior officers of the rank of Additional Commissioners. They may be designated as Director (Intelligence) and Director (Investigation). In addition, he should be assisted by a group of specialists for developing expertise, as recommended by us later in this Chapter.* As for eliminating the duality of control by the Director of Inspection (Investigation) and Commissioner of Income-tax, we suggest that *the present Directorate of Inspection (Investigation) should be abolished* in view of our recommendation for an exclusive Member in charge of intelligence and investigation. *As regards the organisational pattern at the Commissioner's level, the ideal position according to us would be to create a separate division for intelligence and investigation under each Commissioner of Income-tax. However, in major cities like Bombay, Calcutta, Delhi and Madras, looking to the workload involved, the intelligence and investigation work should be assigned to Commissioner of Income-tax (Central).* All the Commissioners of

Income-tax, whether of Central charges or otherwise, should be assisted by appropriate number of Inspecting Assistant Commissioners of Income-tax to exclusively look after intelligence and investigation work, the number varying according to the needs of each charge. They may be designated as Inspecting Assistant Commissioners (Intelligence) or Inspecting Assistant Commissioners (Investigation), according to the work handled by them. The Income-tax Officers working under them will be similarly designated Income-tax Officers (Intelligence) and Income-tax Officers (Investigation), depending upon the duty allotted.

Section 2.103 deleted.

Functions of Income-tax Officers (Intelligence)

2.104 The functions to be assigned to the Income-tax Officers (Intelligence) may be divided broadly into three groups. Firstly, one or more Income-tax Officers (Intelligence) should be put on the job of procuring general information likely to be useful in detecting concealment. They should maintain liaison with the field formations of the allied agencies like Directorate of Revenue Intelligence, Central Bureau of Investigation and Special Police Establishment. These officers should further keep a vigilant eye on the malpractices prevailing in the commercial word. They may study the latest tax evasion techniques adopted by evaders in a particular business or locality. They may also obtain and pass on information regarding property deals and constructions, transfer of concerns, issue of big licences and permits, large loans and advances by financial organisations, speculation, concerning of shares, etc., other unusual happenings in the business world and fresh avenues for sudden abnormal profits.

2.105 The second group of Income-tax Officers (Intelligence) should devote themselves exclusively to specific cases of tax dodgers. Not only will they follow up the information received through informants and anonymous petitions, but also collect information pertaining to the particular cases from all possible sources. They will also resort to surveillance so as to shadow the suspect tax evaders, discover their clandestine financial operations and keep track of any large expenditure, for example, on marriages, entertainment, holiday travel and foreign tours. The duty of conducting searches and seizures in specific cases will also be assigned to them.

2.106 The third group of Income-tax Officers (Intelligence) will follow up the leads in cases suspected of serious tax fraud, process them for prosecution and pursue them till the stage of conviction. We may add that *where an Income-tax Officer (Intelligence) has made elaborate enquiries in a particular case over a long period, the jurisdiction for assessment over such a case may also be assigned to him.*

Powers of Income-tax Officers (Intelligence)

2.107 We have been told that at present the Assistant Directors of Inspection (Intelligence) are not able to make proper investigations as they lack statutory powers of compelling attendance, production of accounts and documents, etc. We can well visualize the occasions when it becomes necessary for an Income-tax Officer (Intelligence) to do so. *We, therefore, recommend that* the Income-tax Officers (Intelligence) should be *given the requisite powers under sections 131 and 133A of Income-tax Act, 1961 to enable them to work up cases effectively. This power should be available to them in respect of all the cases falling within the jurisdiction of the Commissioner of Income-tax under whom they are posted, and not only in respect of assessees, whose cases are specifically allotted to them for assessment.*

Section 2.108 to 2.110 deleted.

Workload

2.111 It has been mentioned that the efficiency of Investigation Circles is hampered by the heavy workload assigned to the Income-tax Officers (Central). It is stated that the officers of these circles have usually a large number of cases on hand which are about to get time-barred, and they are constantly goaded into fulfilling certain informally prescribed heavy quotas. All this deters them from undertaking the work in the right spirit and embarking upon thorough and detailed investigations. ....

Section 2.112 & 2.113 deleted.

Specialists at Central office

2.114 The nature of income-tax investigation work is so intricate and its range so wide, that an investigating officer is expected to know many more things than what he is normally able to gather in the course of his day to day work. Methods of tax evasion are also becoming so ingenious and skilful that they vary from business to business and person to person. In these circumstances, the needs of the investigation officers cannot be fully met by training alone. *We, therefore, recommend that a group of senior and capable officers may be constituted under the Central Board of Direct Taxes to act as specialists for guiding investigation in various important business and industries*, e.g., iron and steel, engineering, mines and minerals, textiles, banks, paper, cement, sugar, chemicals and pharmaceuticals, speculation, import/export, trade agencies, etc. They should possess thorough knowledge in their respective fields of specialisation about the working processes, stages of operations, proportions of yields, wastages and by-products, major technical, commercial and administrative difficulties, the ways adopted by assessees to solve them and their financial implications. They should also be in the know of the peculiar accounting methods pertaining to particular business and the special tax dodging devices prevailing therein. These officers should be encouraged to visit the industrial and commercial establishments to acquire first-hand knowledge and to undergo advanced courses of study in their respective spheres. They should keep abreast of all the technical advances, current trends in the particular business/industry and prepare monographs, issue general instructions and guidance to the officers handling investigation cases. *We recommend that the specialists should work under Member (Intelligence and Investigation) and should be selected from among* officers who *have handled assessments of a* particular *business or industry over a long period of time and have acquired special ability in that field.*

Role of informers

2.115 .... *We recommend that provisions of section 182 of the Indian Penal Code be invoked in flagrant cases of informers furnishing false information.* We also recommend *that the existing reward rules should be made more flexible. While there should be no fixed percentage for payment of rewards, the rules may stipulate that if information furnished by an informer is correct and leads to additional tax, or is otherwise useful in checking tax evasion, the Commissioner of Income-tax, and the Central Board of Direct taxes may, in their discretion, pay rewards upto Rs 5,000 and Rs 25,000 respectively....*

Section 2.116 & 2.117 deleted.

2.118 While discussing intelligence, we have recommended certain facilities to be provided to the officers working in that Wing for increasing their efficiency. For similar reasons, *we recommend that the officers working in Investigation Circles should also be given facilities regarding staff assistance, staff car, air travel and residential telephones.*

Publicity

2.119 Lastly, we would like to emphasize that the deterrent impact on tax evaders can be considerably enhanced by giving adequate publicity to the achievements of the intelligence and investigation division. We find that publicity is not at present given to several cases where searches and prosecutions have been conducted by the Department successfully. This is said to be due to the provision in sub-section (2) of section 287 of Income-tax Act, 1961, which is to the effect that penalties imposed and convictions secured in respect of tax offences cannot be published by the Department unless, the time for first appeal has expired without an appeal having been presented or the appeal, if presented, has been disposed of. *We recommend that the*

Department *should widely publicise in newspapers, by way of paid advertisements if necessary, factual details of searches, seizures and* prosecutions, without waiting for the result of appeals; and *for this purpose, the law may be suitably amended.*

Section 2.120 & 2.121 deleted.

Taxation of agricultural income.

2.122 Agricultural income, which is at present outside the Central tax net, offers plenty of scope for comouflaging black money. In recent years agricultural farms, vineyards and orchards have been acquired by many film artistes, industrialists and others, not for the love of agriculture, but to convert their black money into 'white' money. Instances abound where income-tax payers, confronted with the need to explain certain deposits, investments or expenses not converted by their incomes disclosed to the Department for tax purposes, resort to explaining them as entirely or partly financed from their agricultural income. Even where the tax-payer does not have any agricultural income of his own, he manages to find some agriculturists ready to lend their names, for a consideration or otherwise, for explaining deposits, etc. The explanation that agricultural income is the source of such deposits, etc., is offered readily for two reasons. Firstly, the Department finds it difficult to rebut the assessee's claim on account of inadequate means of verification. Secondly, and more importantly, the persons professing to possess considerable agricultural income expose themselves to no liability to tax on that account as there is no tax on agricultural income in several States and even where there is one, the exemptions available are large.

2.123 There is urgent need for agricultural income being subjected to a uniform tax more or less on par with the tax on other incomes so as to eliminate the scope for evasion of direct taxes imposed by the Union Government. Since agriculture is an item falling under the State List of our Constitution, levies pertaining to agricultural income or holdings have baffling variations from State to State and there is no uniformity regarding the tax base or the rate structure. Many State Governments are gradually abolishing even the existing land revenue. There is also a great inequity between the incidence of tax on agricultural income and that on the non-agricultural one. Although agriculture accounts for nearly half of India's national income, the taxes contributed by it are around Rs 113 crore only, whereas the contribution by the non-agricultural sector is over six times as much. In fact, tax burden on the urban income is relatively so high that a taxpayer having urban income of Rs 10 lakh is left after paying income-tax with almost as much income as another person having an agricultural income of Rs 1 lakh only. There is no justifiable reason for this vast disparity between the tax burden on the two sectors, particularly when, as a result of the 'green revolution' and the price-support policy of the Government, income from agricultural holdings has been progressively rising in recent years. In the wake of planning, the urban taxpayers have been subsidizing agricultural income by bearing the full burden of the agricultural development schemes and also sustaining high prices of foodgrains, raw materials and other agricultural produce. Consequently, there has been a one-sided flow of resources from the urban economy to agriculture. In view of the larger objective of achieving a self-sustaining economic growth, there is pressing need for larger and larger resources, and this is another good reason why agriculture should also contribute to the national Exchequer in much the same way as the other sectors are doing.

2.124 The present system of land revenue or tax on agricultural income is neither uniform nor rational. Besides, the benefits of the 'green revolution' have intensified inequalities of income and wealth in the rural sector.

We consider that uniform and progressive taxation of agricultural income is urgently necessary for the purpose of ensuring that agricultural income ceases to offer any scope for tax evasion, and also on grounds of equity and distributive justice.

2.125 The main difficulties and objections generally advanced against the suggestion for uniform and progressive agricultural income-tax are as under:-

(a) The tax on agricultural income will act as a positive disincentive to increased agricultural production. This may not be desirable at present, when the country is just beginning to have a break-through in agriculture.

(b) The per capita income of rural population is very low, and it will only add to poverty of the rural folk.

(c) Maintenance of accounts by the rural population is very difficult.

(d) Such a change cannot be brought about unless the Constitution is suitably amended.

However, on analysis, these difficulties do not seem to us to be insurmountable.

2.126 As the net fiscal burden on the agricultural sector is small at present, we consider that the levy of a uniform income-tax on agricultural income will not adversely affect the production in the farm sector. In fact, a tax on agricultural income, as any other tax, is likely to motivate farmers to increased agricultural production, by the adoption of improved technology for augmenting their income to meet the tax liability.

2.127 Again, in examining the feasibility of subjecting agricultural incomes to income-tax, considerations of per capita income have very little relevance. At present, 18.36 per cent of the number of operational holdings have under their control 61.75 per cent of the total area under cultivation in the country. The agricultural income is concentrated in the hands of a small section of the farmers in India. An attempt to tax only the richer farmers cannot be said to promote poverty among the rural folk. To allay lurking fears, if there be any, we suggest that a higher exemption limit should be provided for agriculturists. We consider that an additional deduction of Rs 5,000 may be given for agricultural income. Thus, in the case of an agriculturist, no tax will be payable where his income does not exceed Rs 10,000. It may also be provided that, in any event, no income tax will be charged on agricultural income if the total agricultural holding of an assessee does not exceed five acres (2.01 hectares). As a result of these exemption limits, all small agriculturists will be excluded from the purview of income-tax.

2.128 As regards the difficulties relating to maintenance of accounts, it may be observed that with the basic exemption limits as suggested above, only assessees having large agricultural holdings will be called upon to prove the extent of their agricultural income. We feel that there should be no difficulty for these persons in maintaining accounts. In any case, if no proper accounts are produced, assessments can be completed on the basis of local information regarding crops and prices. Such presumptive assessments of agricultural income are being made in other countries like Chile, Ceylon and France.

2.129 Now, as regards the constitutional difficulty, the Parliament has exclusive power to make laws with respect to taxes on income other than agricultural income by virtue of Article 246(1) of the Constitution read with Entry 82 of the Union List. Similarly, Article 246(3) of the Constitution read with Entry 46 of the State List empowers a State Legislature to make laws with respect to 'taxes on agricultural income'. Thus, these two entries are to be read as complementary to each other. It would, therefore, follow that if agricultural income is to be taxed, in the manner we desire it to be done, two main courses are open to the Government. Either the Central Government should itself assume the power to levy tax on agricultural income, or request the State Governments to levy agricultural income-tax in accordance with a common code duly drawn up by the Central Government. We are, however, of the opinion that though the alternative to Central administration of tax on agricultural income seems, at first sight, to be easy and attractive, it may pose serious difficulties in persuading all the State Governments to adopt a common pattern of taxation of agricultural incomes. *We, therefore, recommend that in the interest of uniformity and stability, the Central Government should assume the power to levy and administer tax on agricultural income.*

2.130 Towards this end in view, we suggest that the Government may choose any of the following courses, as it deems feasible:

(a) The Constitution may be amended by deleting the words 'other than agricultural income' appearing in Entry 82 of the Union List. Entry 46 of the State List which empowers the State Governments to legislate on matters concerning 'Taxes on agricultural income' may also be deleted. Such a constitutional amendment will unambiguously empower the Union Government to impose taxes on agricultural income.

(b) The Union Government may impose income-tax on agricultural income, provided State Legislatures empower the Union Government in this behalf by necessary resolution in accordance with the provision of Article 252 of the Constitution. It would be pertinent to mention here that estate duty has been extended to agricultural lands in certain States by resorting to this procedure.

(c) Article 269 of the Constitution may be amended to include taxes on agricultural income in the list of taxes levied and collected by the Union, and the taxes so collected may be assigned to the States in accordance with the procedure outlined therein. The advantage of this course of action is that the State Governments are more likely to agree to concede the power to impose tax, as their financial interests will be statutorily protected.

Unexplained expenditure

2.131 Under section 69, 69A and 69B of the Income-tax Act, 1961, any unexplained money or value of any unexplained investment, bullion, jewellery or other valuable article, or the amount of any investment, etc., not fully disclosed in the books of account of an assessee is deemed to be his income for tax purposes. At present, the law does not expressly stipulate that when any expenditure incurred by a taxpayer is not recorded in the books of account, or is only partly recorded, and the source of such expenditure remains unexplained, the amount of such expenditure would be treated as the income of the assessee. We had, therefore, included a question in our Questionnaire whether such a provision was necessary. In the replies received, divergent views have been expressed in this behalf. While some are of the view that such provision would be clarificatory, reasonable and logical, there are others who feel that the taxability of such expenditure is implicit even otherwise in section 4 of the Act and there is, therefore, no need for a new provision to bring to tax such expenditure. There are still others who apprehend that such a provision might be misused by the tax authorities, resulting in harassment of the taxpayers.

2.132 We have carefully considered the pros and cons of having such a provision in the income-tax law. We feel that though the income out of which the 'unexplained' expenditure has been incurred, is intended to be taxed under the present law, the existing legal provisions do not make this quite clear. In the context of the ostentatious living that we see around, made possible mostly due to the availability of black money, we consider that there should be a specific provision in law which will assist the tax authorities in effectively tackling this problem. Apart from being supplemented to the existing sections 69, 69A and 69B of the Act, such a provision would highlight the need to examine expenditure. It would give statutory recognition to the existing practice of treating 'unexplained' expenditure as income from undisclosed sources. Further, it would also fix by statute the financial year in which such income is to be assessed. *We recommend that a separate legal provision, analogous to sections 69, 69A and 69B, be made in the Income-tax Act, 1961, which would enable the tax authorities to bring to tax the amount of 'unexplained' expenditure.* It would, however, be necessary for the administration to ensure that this provision is not used to harass the small taxpayers by making them explain petty items of expenditure.

Substitution of sales-tax by excise duty

2.133 In our country, evasion of income-tax is closely linked with evasion of sales-tax. Though differences of opinion are bound to be there whether evasion of income-tax is the cause or consequence of evasion of sales-tax, it is generally true that since both the purchaser and the seller stand to gain, transactions in many a case are kept out of records.

2.134 Sales taxation in our country has taken multitudinous forms and it has generally "tended to become excessively complex". The present assorted systems of sales-tax in the country thus provide ample opportunities for evasion of sales-tax and, in turn, lead to evasion of income-tax as well. We consider that more revenue with broadly the same incidence of tax can well be secured by the substitution of sales-tax by excise levy in respect of many more items. *We are, therefore, of the opinion that the best way to get over the problem posed by the existing sales-tax systems would be to replace sales-tax levy on various commodities, as far as possible, by additional duty of excise, but in the selection of commodities, care should be taken to minimise the cascading effect on prices.* We consider that such a measure is desirable for tackling evasion of both income-tax and sales-tax. As sales-tax will still continue to be levied on some commodities, *we feel that there should be greater co-ordination between the income-tax authorities and sales-tax authorities in the matter of exchange of information, collection of intelligence about evasion of these taxes and also in taking preventive measures for checking tax evasion.*

Compulsory maintenance of accounts

2.135 One of the devices which tax dodgers often adopt to escape proper liability to tax and penal consequences is to take shelter behind the plea that no accounts have been maintained. The law no doubt provides for 'best judgement' assessments on estimated income in such cases but this provision can hardly be considered as a deterrent, and instances are not wanting where taxpayers, particularly traders and persons in profession, invite best judgement assessments year after year on such a plea. Similarly, the tax dodgers, when confronted with the prospect of a probe, often advance the plea of having no accounts. Even taxpayers with substantial incomes, such as contractors executing large contracts, take the stand that no accounts are maintained. In these circumstances, cross verification of important items of receipts, sales, purchases or expenses becomes difficult and this defeats the object of detailed scrutiny. In cases where the Department strongly suspects that some accounts must in fact exist, it finds itself quite helpless as even powers of search can be exercised only when the Commissioner has, in consequence of information in his possession, reason to believe that books of account exist but will not be produced, if summoned.

2.136 If maintenance of accounts is made a statutory obligation, it would be a potent weapon in the fight against circulation of unaccounted money. Maintenance of faithful accounts at least by some would offer a starting point for uncovering unaccounted money in other cases. While the absence of a legal requirement to maintain accounts enables tax evaders to escape proper assessment and punishment for concealment, it impedes the introduction of a real self-assessment system on others. Compulsory maintenance of accounts would facilitate acceptance of returns, eliminate the evil of arbitrary 'best judgement' assessments and would contribute to improving the relationship between the taxpayers and the taxation department.

2.137 The question of compulsory maintenance of accounts was examined by the Income-tax Investigation Commission, but it did not favour the suggestion in the face of overwhelming public opinion that no such legal obligation should be imposed, particularly in the context of widespread illiteracy in the country. Two decades have since passed and there has been considerable improvement in the standards of literacy. A distinct change in public opinion is also visible. Many persons, who answered a specific query on this subject in our Questionnaire, have expressed themselves in favour of compulsory maintenance of accounts. We feel that the grounds on which the Income-tax Investigation Commission rejected the idea are no longer valid.

2.138 Today, any person earning a worthwhile income from business or profession maintains some sort of accounts as he would like to know whether he is losing or making a profit. Where such a person is assisted by others in his business or profession, he needs accounts all the more as he has also to make sure that he is not being cheated by his associates or assistants. These days even a petty trader running a one-man show is quite often required to make purchases or sales on credit and he has necessarily to maintain some records. Thus, it is reasonable to presume that accounts are by and large maintained in most cases of business and profession, but in the absence of a provision in law requiring maintenance of accounts, it becomes difficult to deal with the plea, when advanced, that no accounts are actually maintained. In most cases, the legal requirement will not cast any additional burden on the taxpayers but will help to bring out in the open the accounts already maintained.

2.139 As regards the argument of widespread illiteracy in our country, it is to be noted that income-tax payers constitute less than one per cent of the population. The mere fact that there is widespread illiteracy does not mean that most of the taxpayers are also illiterate. The exemption limit which is fairly high in comparison with the per capita income eliminates the possibility of any sizable section of the taxpayers being illiterate. This argument of illiteracy is patently inapplicable to professional men many of whom do not at present maintain accounts or at any rate claim that they do not. As regards businessmen, they are already subject to a variety of requirements under various laws for maintaining records, registers and for filing frequent periodical statements. The excise laws and municipal laws are a case in point. The Sales-tax law in some of the States requires compulsory maintenance of accounts. A requirement for maintenance of accounts under the Income-tax law should not by itself cause hardship to the public or pose any insurmountable problems.

Section 2.140 deleted.

2.141 In the initial stages, the form in which accounts are to be maintained and the type of books and records that are to be kept may be left to the discretion of the taxpayers, the Department merely exercising a broad check to ensure that the assessee's income and claims for deductions, exemptions, etc., are correctly and faithfully recorded. In due course, the Central Board of Direct Taxes might settle the form of accounts for different types of businesses and professions in consultation with the Institute of Chartered Accountants, bar associations, medical associations, etc.

2.142 We feel that a provision for mandatory maintenance of accounts might not itself serve the objective in view, unless it is also supplemented by a provision requiring their preservation for a minimum period. The U.S. Canadian and New Zealand laws contain such a provision. *We recommend that the law should provide that ledgers and cash books should be preserved for a period of 16 years and other accounts and records for 8 years.*

2.143 There might be difficulties in enforcing the statutory requirements regarding compulsory maintenance of accounts and their retention for a minimum period unless any failure to comply with them involved penal consequences. Both the Canadian and U.S. laws carry penal sanctions which can be invoked against any taxpayer who wilfully fails to maintain books and records required by law. *We recommend that monetary fines should be provided in the law for failure to maintain accounts in the manner required or to preserve them for the prescribed period.* In the initial stages, the Department should mount a massive publicity programme to educate the public in this behalf. A mild and conciliatory approach will be needed for some years to come and the penal provisions should be invoked only in flagrant cases of deliberate failure to maintain books or records or to preserve them.

Compulsory audit of accounts

2.144 We think it would facilitate the administration of tax laws to a considerable extent if, simultaneously with the compulsory maintenance of accounts, there is a statutory provision for their mandatory audit, at least in the bigger cases. Audit would ensure that the books and records are properly maintained, and that they reflect faithfully the taxpayer's income (as shown in the books of account) and claims for deductions. Audit would also help in the proper presentation of the accounts before the tax authorities, thereby making assessment proceedings more meaningful. Further, in a vast majority of cases, it would save considerable time of the assessing officers which is at present spent on carrying out routine verification, like correctness of totals and whether purchases and sales are properly vouched or not. The time thus saved could then be utilised for attending to more important investigational aspects of a case. The information which the auditor could be required to furnish with his certificate would also enable building up of information exchange for purposes of cross verification which will be invaluable in detecting tax evasion and spotting new assessees. Audit would also help to check fraudulent practices such as concoction of accounts at later dates, maintaining duplicate sets of accounts, etc.

2.145 In his report, Nicholas Kaldor had expressed the view that malpractices like the presentation of false and misleading accounts could be checked to a great extent if it were made compulsory for taxpayers to present audited accounts in all cases in which income or property exceeded certain limits. The idea of compulsory audit of accounts in large income cases has found support even in quarters which were not otherwise quite favourably inclined towards the suggestion of compulsory maintenance of accounts. The Income-tax Investigation Commission, while not favouring the imposition of a legal obligation on all to maintain accounts, was of the view that compulsory audit in the case of business with large incomes would be desirable. The Direct Taxes Administration Enquiry Committee also recommended that in the interest of expeditious and proper assessment of taxpayers in higher income group, audit of accounts in all cases of business, profession and vocation, where the total assessed income in any one of the last three years exceeded Rs 50,000, should be made compulsory by law and that audit should also be made compulsory in those cases of business, profession and vocation where the returned income for the first time exceeds Rs 50,000. The Working Group of the Administrative Reforms Commission also favoured compulsory audit by Chartered Accountants of cases with income over Rs 50,000. However, the Administrative Reforms Commission, while agreeing that audit by qualified Chartered Accountants would be helpful in relieving the assessing authority of the need to make routine checks and enabling him to concentrate on the broader aspects of determination of the assessees correct liability, felt that the number of Chartered Accountants being limited, it may not be possible for all assessees to secure their services except at heavy cost and that the requirement of compulsory audit might delay the submission of returns. The Commission, therefore, recommended only an amendment of the provisions of rule 12A of the Income-tax Rules, 1962, so as to provide for furnishing of certain additional information in all cases in which the returned income from business exceeds Rs 50,000 and the returns are prepared by Chartered Accountants.

2.146 In the Questionnaire issued by us, we had specifically elicited views on this subject. Most of the departmental officers, who appeared before us, welcomed the suggestion and there was near unanimity among them that this would also go a long way in fighting tax evasion. Even among taxpayers, we found a sizable support for the measure, which they felt would smoothen proceedings before the income-tax authorities. Some of the persons who appeared before us have, however, expressed their fears that a provision for compulsory audit of accounts might put an undue burden on the taxpayer. We concede that this may no doubt be true in the case of small business or professional men or persons deriving income from other sources. We are, therefore, of the view that such persons should not be required to get their accounts audited. The requirement of compulsory audit of accounts should be applicable to persons engaged in business or profession where the income or turnover/receipts exceed certain specified limits.

2.147 Doubts have also been expressed whether enough qualified auditors will be available for undertaking audit in all case where it is mandatory. Companies are already statutorily required to get their accounts audited. We feel that if suitable limits are prescribed for the non-corporate sector, the work-load may not be too great to be tackled by the existing professional accountants. We understand that the number of

Chartered Accountants has increased from eight thousand in April, 1967 to over twelve thousand in October, 1971. Further, during the same period the number of Chartered Accountants solely in practice has risen significantly from 2,900 to 5,400. From the concern voiced from time to time in the press and elsewhere about a few well-known firms of Chartered Accountants monopolising bulk of the audit work relating to the corporate sector, it appears that there is a considerably large number of practising Chartered Accountants who can undertake additional work-load of audit in the non-corporate sector without much difficulty.

2.148 .... *We, therefore, recommend that a provision be introduced in the law, making presentation of audited accounts mandatory in all cases of business or profession where the sales/turnover/receipts exceed Rs 5 lakh or the profit before tax exceeds Rs 50,000. We further recommend that a form of audit report be prescribed taking due note of the manner in which documents, records and books are maintained in the non-corporate sector. Auditor's report should include, among other things, pertinent information like the following:*

1. *Scope of examination - whether full check, test-check or mere reconciliation - in order to satisfy that purchases, sales, income and expenses are properly accounted for and balance-sheet is properly drawn up.*

2. *Nature of security offered for obtaining secured loans. Particulars of security not recorded or accounted for in the books to be stated.*

3. *Computation of admissible allowance by way of depreciation.*

4. *Brief particulars of expenditure on entertainment, advertisement, guest house, etc., and the amount, if any, disallowable under section 37 of the Income-tax Act, 1961.*

5. *Particulars of expenses in respect of which payments have been made to directors, partners or persons substantially interested in the concern and their relatives. The amount, if any, not deductible under sections 40 and 40A of the Income-tax Act, 1961.*

6. *Particulars of amounts, if any, chargeable as profits under section 41 of the Income-tax Act, 1961.*

7. *Particulars of payments in respect of which income-tax has not been deducted at source and paid in accordance with the requirements of sections 192-200 of the Income-tax Act, 1961.*

The Government may also, in due course, evolve a proforma of information to be furnished by the auditors which would facilitate completion of assessments.

Section 2.149 deleted

2.150 The question of introducing permanent account numbers has engaged the attention of several experts, and expert bodies in the past Nicholas Kaldor and in his report, while suggesting the introduction of a comprehensive reporting system in respect of all transactions in property, stressed the need to allot a code number to every taxpayer and every other person entering into such transactions. S. Bhoothalingam has in his final report, while dealing with the problem of tax arrears, recommended that each taxpayer should be assigned a distinctive and permanent number. The Administrative Reforms Commission has also recommended that steps should be taken to introduce a system of registration of assessees in an all-India list on the lines suggested by the Working Group. Some of the experts engaged by the Government had also conducted studies in this behalf and made recommendations, e.g., Staunton Calvert, an American expert. All these experts and expert bodies were unanimous in their view that the Department should introduce a permanent code for identifying the taxpayers all over the country. Notwithstanding such unanimity of views and the fact that the earliest of these recommendations was made some 15 years ago, no progress had been made in evolving and implementing a scheme of allotting permanent account numbers or identification codes to all taxpayers. We felt that the absence of a simple but suitable code and the attendant administrative and procedural problems had perhaps stalled the adoption of a measure about the advantage of which there were no two opinions. We had, therefore, drawn up a scheme for the allotment of permanent account numbers, devoting considerable attention to the various problem areas. We had the blueprint of a workable scheme ready when we learnt that the Central Board of Direct Taxes have also been developing a scheme on their own and have decided to introduce it in a few charges with effect from 1st October, 1971. We are glad to note that steps have at last been taken to fulfil a long-felt need....

2.151 While selecting a suitable type of code which would meet the requirements of the Income-tax Department, we have kept in mind the following factors:

(a) The length of the code should be minimal. Unduly long codes are likely to lead to serious errors in reproduction, particularly in the existing manual system.

(b) The system should, however, be capable of covering the entire section of the population which it is intended to cover and also provide sufficient room for expansion over the projected useful life of the code.

(c) The code should be permanently assigned to an entity to provide historical continuity and to facilitate data processing operations.

(d) The code should have a fixed numbers of characters so that, while being suitable for manual processing, it could be adopted without change when machine processing is widely introduced.

Sections 2.152 to 2.159 deleted.

The law should require all persons carrying on business, where the turn-over in a year is likely to exceed Rs 30,000, to apply for allotment of permanent account numbers within the prescribed time - if they are not already taxpayers. The law may also provide that any subsequent change in the business name should be forthwith intimated to the concerned authorities. To save any hardship to the public arising out of delay in allotment of permanent account numbers, it could be provided that if a proper application for allotment of a number has been made within time, entering into transactions even before allotment of the permanent account number will not entail penal consequences.

Section 2.160 deleted.

2.161 While commending the scheme, we would like to make it clear that we are not unaware of the limitations of the system and the problems it might throw up, e.g.,

(i) Some persons might intentionally quote wrong numbers and may not be traceable at all.

(ii) Some persons might not intimate changes in their addresses or might intimate wrong addresses so that it becomes well-nigh impossible to get at them later, after they have obtained a permanent account number.

(iii) Statutory requirement to quote the permanent account number in the documents relating to certain transactions might contribute to increasing the volume of unrecorded or unaccounted transactions, thus breeding further evasion of tax.

(iv) The reporting systems might so increase the volume of information available to the Department that a discriminate use thereof becomes difficult.

Nonetheless, we are convinced that a system of permanent account numbers will be useful and will help the Department to deal with tax evasion more effectively and also improve the accounting and maintenance of records. The system is not a substitute for a vigilant and watchful administration but an aid to make its efforts more rewarding.

Power of survey

2.162 Under Section 133A of the Income-tax Act, 1961, an Income-tax Officer or any Inspector of Income-tax authorised by him, may enter any premises in which a business or profession of an assessee is carried on. He can inspect such books of account or other documents as may be available there. Besides, he is empowered to place marks of identification on such books of account or documents, and to take extracts, if considered necessary. The main purpose of this provision is to enable the Income-tax Officer to make surprise checks at the business premises of the assessee, especially when he suspects the existence of incriminating documents or books of account. This also enables the Income-tax Officer to ensure that the books of account which are currently in use are produced at the time of assessment.

2.163 It has been pointed out that the power available under section 133A of the Act is subject to certain serious limitations. For example, the existing provision does not authorise the Income-tax Officer to check cash, stocks or other valuables. Besides, the present power of survey is exercisable only at the premises where business or profession is carried on. It is not uncommon for businessmen to keep stocks, books of account and cash at residential premises also where strictly speaking no business is carried on. It may be argued that in such cases, the Department should use the powers of search available to it under the law. But it has to be noted that a search under the Income-tax law can be authorised only if certain pre-conditions are fulfilled and that, in any case, it can be authorised only by the Commissioner of Income-tax. We consider that the power of survey, though limited in scope, is, all the same, a useful tool in the hands of the Income-tax Officer to enforce compliance with tax laws. *We recommend that a new provision may be introduced as an adjunct to section 133A of the Income-tax Act, 1961, to enable the Income-tax Officer to visit any premises of an assessee for the purpose of counting cash, verifying stocks, and inspecting such accounts or documents, as he may require and which may be available there. He may also obtain any additional information and record statement of any person who is found at the premises, in respect of matters which would be relevant for making a* proper *assessment.* In order to ensure that this provision does not give room for harassment, we would like this power to be exercised only by an Income-tax Officer and not any lower official. *We also recommend that the law may be amended to confer powers of survey on the Inspecting Assistant Commissioners as well.*

Increasing survey operations

Section 2.164 & 2.165 deleted

2.166 Considering the importance of survey for fighting tax evasion, a special survey drive for discovering new cases was launched by the Income-tax Department in 1964, but these operations were suspended in 1966 in view of the huge pendency of assessments. It was later decided by the Central Board of Direct Taxes in 1969 that external survey should be resumed only on a selective basis. During the last two years, the number of effective cases discovered as a result of survey was only 48,073 and 53,942 respectively. The total number of income-tax assessees on the register of the Department in 1970-71 was 30,13,676 only in a population of 55 crore, which is a mere 0.6 per cent. It is thus obvious that survey has not received the attention it deserves. In our opinion, 'survey circles', even where organised, have not been able to give the desired results because of the faulty system of control and the lack of adequate work programming. With a view to making external survey really effective, *we recommend that adequate number of survey circles should be set up to ensure comprehensive and continuing survey on rotational basis. Further, an officer, of the rank of Assistant Commissioner should be placed in over-all control of survey operations in each Commissioner's charge and he should also hold charge of the Special Investigation Branch.* As he would have materials with him coming from different sources in regard to new assessees, he should be in a position to draw up, and also implement, a well-planned programme of general and selective survey. Besides, *in the bigger cities like Delhi, Bombay, Calcutta and Madras, a survey Range should be created under an Inspecting Assistant Commissioner who will have a contingent of survey circle Income-tax Officers and the necessary complement of Inspectors under him. In other mofussil towns, the survey squad should be* under the local Inspecting *Assistant Commissioner*, who will have one or more Income-tax Officers for survey operations and adequate number of Inspectors for this work. He should be in overall control of the survey programme so as to ensure that every town and locality in his Range is properly surveyed. The Inspecting Assistant Commissioner will also have to ensure that survey reports submitted by the Inspectors are promptly processed and acted upon so that there is no loss of revenue due to departmental delays. He should review the performance of the survey circles every month and report to the Commissioner of Income-tax.

2.167 *The Income-tax Officer in charge of a survey circle should have territorial jurisdiction* and he should be in complete control of the team of Inspectors working under him. To improve the quality of survey, these Income-tax Officers should frequently go out in the localities surveyed by the Inspectors and make test-checks in a fairly large number of cases with a view to ensure the reasonableness of the estimates made by the Inspectors and the comprehensiveness of the survey. *It should be the responsibility of these Income-tax Officers to ensure that all persons having taxable income/wealth within their respective jurisdictions are brought on the registers of the Department.*

Sections 2.168 to 2.171 deleted.

Collection, collation and dissemination of information

2.172 An efficient machinery for collection, collation and dissemination of information is a *sine qua non* for an efficient tax administration charged with the function of collecting taxes and countering tax evasion. At present, a separate cell, called the Special Investigation Branch, functions under each Commissioner of Income-tax for the purpose of collection, collation and dissemination of information. The work programme of this branch is quite impressive. The branch is expected to deal with anonymous petitions, payment intimation slips, newspaper cuttings, information received from other departments like Sales-tax, Central Excise, Registrar of Immovable Properties, Director-General of Supplies and Disposals, Transport authorities, Chief Controller of Imports and Exports, Reserve Bank, Life Insurance Corporation of India, etc. In addition, Income-tax Officers in the field are required to collect data from the statutory information returns furnished by the assessees and also from the account books of the taxpayers.

2.173 The Special Investigation Branch functions under the direct control of the Commissioner of Income-tax, but the Commissioner himself being loaded with multifarious duties can devote little or no time to the work of the branch. The result is that the work is carried on mostly by junior officers or at times, by Inspectors. We understand that there is no system of regular inspection of this work either. Small wonder then that the work is in a state of complete neglect. This branch is neither doing any investigation nor is there anything special about it; it is even a misnomer to call it Special Investigation Branch.

2.174 At the lower levels in the field formations, it is very rarely that the Income-tax Officer effectively utilises the information received from various sources. Information slips received from the Special Investigation Branch are very often not recorded, though a register is required to be maintained for the purpose, and even if they are recorded, they are not promptly verified with the result that such slips go on piling up in the office to be summarily disposed of by the Inspector at a later date. The Income-tax Officer's half-hearted efforts in this direction are stated to be mainly due to lack of time at his disposal and lack of proper emphasis by the senior officers on this aspect of the work.

2.175 The Administrative Reforms Commission has adversely commented on the performance of the Department in this field. It recommended *inter alia* that the Special Investigation Branches should be strengthened and their energies should not be dissipated on work other than collection, collation and dissemination of information. It suggested that these branches should be placed under the immediate supervision of an Inspecting Assistant Commissioner, who will also be in charge of Internal Audit Department, and that their work should be periodically inspected by the

Director of Inspection. The Public Accounts Committee obviously felt unhappy at the working of the Special Investigation Branches when in its 117th Report, it observed as under:-

"There are Special Investigation Branches in Commissioners' charges which are responsible for collecting information from Government agencies, municipalities and other organisations like banks, financing companies, etc., so as to discover new assessees or sources of income not disclosed by existing ones. The Administrative Reforms Commission reported that the working of these Special Investigation Branches is 'unsatisfactory' due, amongst other things, to lack of adequate supervision and their being saddled with items of work not relevant to their main functions. These defects in the working of these branches should be removed. The Committee feel that if all the available information is collected from these sources and systematically analysed and promptly processed in each Commissioner's charge it would lead to the discovery of most of the persons liable to assessment".

Section 2.176 deleted.

2.177 While the ultimate goal for the Income-tax Department should be to develop an information matching programme which fully covers all aspects of the economic activities of the country, it would not be expedient, and it may also not be practicable, to set up such an all embracing machinery all at once. We consider that it would be better to first set up a moderately sized organisation and as it starts running efficiently and is perfected, it should be feasible to build gradually a sound, systematic, efficient and comprehensive machinery for this purpose. The routine and off-hand manner in which the job is handled at present has to give place to a systematic approach. *We recommend that the Central Board of Direct Taxes should lay down each year a programme and specify targets for collection, collation and* dissemination of inform*ation. It should also ensure that the programme is strictly adhered to* and efforts are made to reach the targets fixed. The *sources to be tapped every year should be* decided at the national level by the Board at the *beginning of each year, to be followed and implemented strictly at all levels. Different types of information may be collected in different years so as to keep an element of surprise.*

Section 2.178 deleted.

2.179 With a view to securing efficient functioning of the set-up, *we recommend that standards of work and performance should be laid down, without which it would not be possible to judge the requirements of manpower nor to measure the adequacy or otherwise of the output given by the persons at various levels. The Special Investigation Branches, to be renamed as Central Information Branches, should be suitably strengthened and they should be placed under the* super*vision of the Inspecting Assistant Commissioner in charge of survey operations as suggested by us elsewhere. They should be located at the stations where the headquarters of the Commissioners are but should not form part of* their offices. The work of the Special Investigations Branch should be *inspected at least once a year by the Commissioner of Income-tax himself.*

Co-ordinations between banks and the Income-tax Department

2.180 It has been brought to our notice that the banking channels are utilised for putting through transactions calculated to evade taxes largely because the bank authorities do not insist on proper identification of parties and, in many cases, do not even preserve adequate information on record to enable the Income-tax Department to ascertain the identity of the parties to these transactions. There is need for a better liaison between the banks and the Income-tax Department from the point of view of fighting tax evasion. We have recommended elsewhere in this report a system of permanent account numbers for all taxpayers to facilitate collation of information to help investigation in cases of tax evasion. One of the important ways in which this system can be profitably utilised is to make it obligatory for all taxpayers to quote permanent account numbers in their financial transactions through banks. This will help connect the transactions to the relevant parties. *We accordingly recommend that the legal provisions under which the system of permanent account numbers is introduced should also include that taxpayers should quote their permanent account numbers in applications for bank drafts, mail transfers, telegraphic transfers, etc., if the amount involved in such transactions exceeds five thousand rupees.* Where a party to such transaction has no permanent account number, it should be required to state so specifically. This will limit the scope for benami transactions and clandestine dealings.

2.181 The second point which has engaged our attention concerns banking transactions which are *prima facie* of a suspicious nature, because they are either inconsistent or incommensurate with the customary conduct of the business, industry or profession of the person or the organisation concerned. In the United States of America, the Code of Federal Regulations contains provisions under which banks are required to report unusual and suspicious transactions to revenue authorities *suo motu*. The existing position in our country on the other hand protects the privacy of the transactions with the result that even if the banks come to know that all is not well with certain transactions, they do not bother to alert the Income-tax Department. Such a position permits tax evaders, foreign exchange violations and black marketeers to continue their activities without the fear of being caught. *We accordingly recommend that a suitable provision be introduced in the Banking Regulation Act, 1949, by which all banking institutions coming within the purview of that Act should be under a statutory obligation to report to the Reserve Bank of India all financial transactions in cash over twenty-five thousand rupees which, in the judgment of the banking company concerned, are suspicious or unusual.* The Reserve Bank of India may also be enabled to report all these transactions to the Central Board of Direct Taxes, to be followed up by the officers of the Intelligence Wing of the Department.

Sections 2.182 to 2.192 deleted.

2.193 .... *We would, therefore, suggest that the Government should seriously consider the expediency of prescribing a uniform accounting year for all taxpayers. In that case, the accounting year should coincide with the budget year.*

Whatever might be the objections to the prescription of a uniform accounting year for all taxpayers, we are absolutely no justification for the same person being allowed to adopt different accounting years for different businesses carried on by him. *We, therefore, recommend that, in any event, the law should permit adoption of only one 'previous year' in respect of all businesses carried on by one person.*

Checking under-valuation of immovable properties

2.194 Evasion of direct taxes in our country is closely linked with the practice of under-valuation of properties by the taxpayers, whether in the transfer documents relating to immovable properties, or in their returns of net wealth, or when explaining the source of cost of construction. The absence of a proper valuation machinery in the Income-tax Department helps the tax dodgers in more than one way. It facilitates utilisation of unaccounted money in investments. It also provides scope for reduction of liability to direct taxes, whether on income, capital gains, wealth or gifts. Due to the opportunities available for understating the value of assets in the guise of honest difference of opinion, tax dodgers are able to evade the penal consequences and merrily continue their game of tax evasion.

2.195 There are no two opinions that correct valuation of assets can contribute to an effective administration of income-tax and other direct taxes. Proper valuation of assets also seems necessary for the purpose of effectively implementing the levy of additional wealth-tax on urban properties.

Section 2.196 deleted.

2.197 In our interim report to the Government, we had recommended compulsory acquisition of immovable properties in cases where the sale deeds did not reflect their fair market value. This recommendation has since been accepted and legislation has been introduced in the Parliament. However, the problem of under-valuation is not limited only to understatement of sale consideration in the transfer deeds. Considering the scope for tax evasion through understatement of cost of construction of property by the taxpayer, we examined whether the recommendation made by us earlier in the interim report for compulsory acquisition of immovable properties should be extended to such cases also. *We are of the opinion that it would be expedient for the Government to assume powers to acquire immovable properties in cases of understatement of cost of construction as well. However, as this would be an extension of our recommendation in the interim report, we feel that the Government should consider such extension only after it has had some experience of acquisition of immovable properties in cases of understatement of sale consideration.*

2.198 In this context, we considered the adequacy of the proposed provisions relating to acquisition of immovable properties, as contained in the Taxation Laws (Amendment) Bill, 1971, introduced in the Parliament. However, there may still be certain cases where it may not be expedient to follow the procedure laid down in the Bill. In order to meet this situation, the Land Acquisition Act, 1894 may be invoked and the property acquired for specific public purposes. To avoid unnecessary controversy on the question of valuation of the property, *we recommend that the Land Acquisition Act, 1894 may be amended to the effect that where an immovable property to be acquired under the Act, was the subject matter of a transfer within one year preceding the notification under section 4 of the Land Acquisition Act, 1894, the sale consideration stated in the transfer deed relating to that property will be deemed to be the market value for the purpose of determining compensation under section 23 of the Land Acquisition Act, 1894.*

Section 2.199 deleted.

Ownership flats

2.200 With the increasing pace of urbanisation in the country and the consequent pressure on housing, the system of having what are commonly known as 'flats on ownership basis' or 'ownership flats' has become very popular, especially in bigger cities. Such flats are often constructed through the medium of co-operative housing societies. A person desirous of owning a flat becomes a member of such a society and the purchase of a specified number of shares of the society entitles him to a flat. The flat is transferable by the mere transfer of the shares. Thus, what is acquired or transferred in case of these flats is not the ownership of the flat as such, but the ownership of the shares of the housing society. These transfers are, therefore, not treated as transactions in immovable property and are consequently not required to be registered under the Indian Registration Act, 1908. Even where such flats are purchased from an entity other than a co-operative society, e.g., a limited company, the rights acquired are described as merely rights of occupancy in respect of a tenement. The position regarding requirement of registration under the Indian Registration Act, 1908, therefore, remains the same. For this reason, these transactions will also be outside the purview of the proposed legislation for compulsory acquisition of immovable property in case of understatement of consideration for the transfer.

2.201 The absence of a statutory requirement of registration of these transactions, coupled with the increasing demand for such flats, has led to considerable opportunities for tax evasion and proliferation of black money. Receipt of 'on-money' on transfer of flats, holding flats in bogus and benami names, deriving unaccounted rental therefrom, and ante-dating transactions in them to thwart tax recovery proceedings, etc., have thus become quite common.

2.202 The Maharashtra Government had noticed that consequent on the acute shortage of housing in several areas, certain malpractices and difficulties relating to construction, sale and transfer of flats taken on ownership basis had cropped up. The State Government, therefore, appointed a Committee in 1960 to enquire into these matters and advise the Government. On the basis of the recommendations of this Committee, the Maharashtra Ownership Flats (Regulation of the Promotion of Construction, Sale, Management and Transfer) Act was passed in 1963. This Act provided, *inter alia*, that where a person constructs such flats for sale, he must enter into a written agreement with the intending buyer before accepting any advance or deposit from him and the agreement should be registered under the Indian Registration Act, 1908. Recently, the Government of Maharashtra has enacted another statute, viz., The Maharashtra Apartment Ownership Act, 1970. The preamble states that the Act has been enacted in order to provide ownership rights to persons who buy apartments in a building and also to make such apartments heritable and transferable property. Each apartment owner can avail of these benefits if he executes the prescribed documents and gets them registered under the Indian Registration Act, 1908. No doubt, these enactments are likely to be of some help in checking tax evasion in Maharashtra State, but in our opinion, even these do not go far enough. As indicated above, the first enactment covers only agreements with the promoter and not the subsequent transactions. So far as the second enactment is concerned, it does not apply to co-operative societies, which hold a large number of such flats. Secondly, it leaves non-residential flats out of its purview and, what is more, the option to be governed by this Act is left wholly to the discretion of the owners of the apartments.

2.203 We consider that evasion of taxes through transactions in ownership flats can be checked only if there is all-India legislation providing that such transactions shall be treated as transactions in immovable property and shall consequently have to be registered under the Indian Registration Act, 1908. Such a measure would also be of considerable help to the Department even in the matter of collection of taxes. It will extend the scope of section 230A of the Income-tax Act, 1961 to the flats and will also enable such property being attached in certificate proceedings for recovery of taxes.

We, accordingly, recommend that it may be provided by law that ownership flats, whether acquired through the medium of co-operative housing societies or *otherwise, would be deemed to be immovable property for purposes of the Transfer of Property Act, 1882 and that transfer of such flats shall be required to be registered under the Indian Registration Act, 1908 in the same manner as any other immovable property.*

'Pugree' payments

2.204 'Pugree' is a premium paid at the time of change of tenancy of premises and this payment, being illegal, is made outside the account books and usually out of unaccounted money. The system of 'pugree' payments has its origin in rent control legislation in force in the various States. Rent control was introduced mainly to curb the practice of charging exorbitant rents. Consequently, the various Rent Control Acts put a prohibition on claiming or receiving any sum as premium or pugree, in addition to rent. In spite of the prohibition, 'pugree' system is widely prevalent, particularly in the bigger cities, and leads to tax evasion and circulation of black money.

2.205 .... At present, rent control applies to both residential and non-residential premises. This would mean that doing away with all rent control would result in lifting control in respect of residential buildings also. We are convinced that in view of the larger social objectives, there is justification for protection against exorbitant rents to continue in respect of residential tenancies. No such considerations, however, prevail in the case of non-residential premises. Moreover, any higher rent charged by landlords for letting out non-residential premises is an admissible deduction in computation of income from business or profession. *We recommend that the present legislative control on rent which operates in respect of both residential and non-residential premises be amended so as to restrict its operation to residential premises only.*

Tightening provisions of the Stamp Act

2.206 A convenient device frequently adopted for secretly utilising black money is to invest it in immovable property by understating the purchase consideration. This not only saves stamp duty but also results in evasion of income-tax and wealth-tax in the hands of the investor, while the vendor escapes his proper liability to capital gains tax. In addition, it creates a fresh nucleus of black money in the hands of the vendor, which leads to its proliferation in the economy. It was for this reason that we had recommended in our interim report, a detailed scheme for the take-over of immovable properties by the Government in cases of understatement of purchase consideration. We had stated, *inter alia*, that this measure would act as an effective deterrent and curb the tendency to understate the consideration in documents relating to transfer of immovable properties. While recommending this measure, however, we had ourselves made it clear that it will have to be applied only to cases of substantial under-statement. It is in this context that we recommend below another measure to help deter investment of black money in immovable property.

2.207 We think it will go a long way to achieve this objective if adequate machinery is provided under the Stamp Act for valuation of properties which are the subject of transfer. The Indian Stamp Act, 1899, no doubt provides for impounding instruments not duly stamped and for levy of penalty for the insufficiency of stamps. However, the stamp duty payable on an instrument has to be determined with reference to the terms of the document and the court is not entitled to take into consideration evidence *de hors* the instrument itself. Even where a deed relating to a property is impounded by an authority under section 33 of the Indian Stamp Act, and proceedings are started by the Collector under section 40 of the Act for judging the sufficiency of the stamps and levying penalty where necessary, the Collector has no power to embark upon an enquiry regarding the market value of the property and to require payment of further stamp duty according to the valuation arrived at by him. It is true that a penalty can be imposed under section 6 in case of fraud but, in the very nature of things, it is easier to allege fraud than to establish it, with the result that the provision of section 64 have almost become a dead letter.

Section 2.208 deleted.

2.209 We find that in 1967 the then Madras State Government had introduced certain measures to curb the evil of understatement of purchase consideration. By an amendment to the Indian Stamp Act, 1899, the Registering Officers, within Madras State were empowered to refer cases of suspected understatement of market value in the deeds requiring registration, to the District Collector, for determining the market value of the property mentioned therein. We are of the opinion that it would be advantageous to have similar machinery in other States also. *We recommend that the Indian Stamp Act may be suitably amended in this behalf on the lines of the Madras enactment.*

2.210 Another change we would like to recommend, with a view to checking tax evasion, is in relation to the sale of stamps and stamped papers. At present, the stamps are sold only by licensed stamp vendors who are required to maintain a register of sales showing name and address of the purchaser and the date of sale. These details are also required to be recorded by the vendors on the back of the stamped paper at the time of sale. This entry on the stamped paper is an important means of verifying the genuineness of the transaction sought to be evidenced by the document. However, this procedure is open to considerable abuse. Unscrupulous persons obtain illegitimate tax advantages or defeat certain controls and regulations imposed by other legislation by antedating certain transactions. The entry regarding the name of purchaser and the date of sale is not enough to prevent such ante-dating manoeuvres. Stamped papers of earlier dates can still be used for such purposes because details regarding the nature of transaction sought to be recorded on the stamped paper and names of the parties to the transaction, are nowhere mentioned at the time of purchase of the paper. In view of the widespread misuse of the stamped papers to evade taxes, *we recommend that in addition to indicating the date of sale and name and address of the purchaser, the stamp vendors may be required to state on the stamped paper the purpose for which the paper was purchased and also the names of the parties to the transaction sought to be recorded thereon, except in the case of an agreement or a memorandum of agreement under article 5 of schedule*

I of the Indian Stamp Act, 1899, and power of attorney under *article 48 thereof.* Such a change in the procedure with regard to sale of stamped papers would render it difficult to record on stamped paper a transaction not contemplated at the time of its purchase.

Foreign exchange violations

2.211 In our present economic situation, earning and conservation of foreign exchange are of considerable importance to the development of our country. That foreign exchange violations are of considerable magnitude is perhaps to state the obvious. An official study team appointed by the Government of India has estimated in its report recently submitted that the extent of leakage of foreign exchange is about Rs 240 crore yearly. *Since foreign exchange violations are possible only through clandestine dealings, these necessarily result in evasion of income-tax and other allied taxes. We understand that the Government is examining the report of this study team and is proposing to initiate necessary remedial measures in this regard, including certain amendments to the Foreign Exchange Regulation Act. We expect that the appropriate authorities would deal with this matter effectively.*

Tax treaties for exchange of information relating to tax evasion

2.212 Tax evasion in our country cannot be said to be confined only to transactions taking place within the country; it is closely linked with transactions such as over-invoicing and under-invoicing in import and export business, operations through secret foreign bank accounts and smuggling of valuable articles into and out of India. Moreover, there are cases of taxpayers who thwart the attempts of tax administration to collect tax dues by either retaining their assets abroad, or transferring them secretly outside India. The only answer to these problems appears to us to be to enlarge the field of international co-operation in dealing with tax dodgers, by entering into comprehensive tax treaties with other countries, particularly those with whom we have economic relations and trade on a substantial scale. The United States of America has entered into comprehensive tax treaties with several countries, including Canada and Switzerland.

2.213 We consider that to be of assistance in tackling tax evasion, tax treaties should have a provision for automatic exchange of routine information relating to payment of interest, commission, royalty, rent, etc., to residents of one of the contracting countries in cases where such payments are likely to attract tax liability in that country. The agreements should also provide for exchange of commercial intelligence which is vital for dealing with international tax evasion. This is necessary because it will otherwise be difficult to establish fraud successfully, particularly when it relates to under-invoicing or over-invoicing. The agreements should also facilitate exchange of general information relating to tax laws and fiscal policies. The most important role which such agreements can play is, however, in the field of investigation of specific cases of tax fraud and recovery of tax dues from those who have migrated to the other country or who have assets in the other country, by providing for exchange of information relating to such cases and by making the administrative machinery for investigation and recovery of one country available to the other. The agreements between France and U.S.A. include clauses providing for such mutual assistance. We are of the view that our agreements with other countries should also provide for mutual assistance and should no longer be mere double taxation avoidance agreements as envisaged by section 90 of the Income-tax Act as it stands at present. *We, therefore, recommend that section 90 of the Income-tax Act be suitably amended to enable the Government to enter into agreements with foreign countries not only for the avoidance of double taxation of income, but also for prevention of fiscal evasion. We further recommend that our existing agreements should be revised so as to provide for exchange of routine information and market intelligence as also specific information in individual cases to facilitate investigation of tax evasion and recovery of taxes. The agreements should also enable courts in both the contracting countries to entertain rogatory, commissions or letters of request from the tax* authorities of the other country for the purpose of *securing the evidence of persons resident therein. The agreements should further provide for mutual* assistance in investigation of tax frauds and *recovery of taxes by making the administrative machinery of each available to the other.*

Tax evasion in film industry

2.214 It is generally said that in the film industry, a lot of 'on-money' is paid to artistes and that this practice leads to a chain reaction in the case of producers, financiers, exhibitors, etc., resulting in evasion of proper tax liability at all levels. We had sought views on this matter through a question in our Questionnaire and an overwhelming majority of persons, who sent their replies, was of the opinion that considerable amount of black money passes in transactions in the film world at different stages. It was, however, pointed out that the peculiar features of the film industry, such as the short and uncertain span of the artiste's working life and the need to preserve his glamour in the public eye, were responsible to a considerable extent for the degree of tax evasion in the film industry.

Section 2.215 deleted.

2.216 There was, however, yet another suggestion which in our opinion should, by and large, meet the plea by film artistes that they should have concessional tax treatment in view of short span of their working life. We learn that the Central Board of Direct Taxes had some time back, in an individual case, approved the principle of taxing the remuneration of a film artiste over a period of years if the film producer, instead of paying the amount directly to the film artiste, purchased irrevocable deferred annuities by an agreement with the Life Insurance Corporation of India and assigned the same in favour of the artiste. It was decided that the artiste would be taxed each year only to the extent of the amount of annuity received. Such tax treatment not only frees the artistes from the burden of paying tax at high rates on the large income earned during a short span of popularity but also ensures that he will have a steady income over a period of years. We consider that if this scheme is statutorily introduced, the film artistes would find it quite useful. Besides, we feel that such a concessional tax treatment would encourage the film artistes to disclose their true incomes. *We accordingly recommend that the law should be suitably amended to provide that where under an irrevocable annuity policy, though taken by the producer in his name but assigned in favour of the artiste, the remuneration is paid to the artiste in the form of an annuity spread over a number of years, the artiste should be taxed only on the amount of annuity received during the year. The present value of annuities due in future should be exempt from wealth-tax. Of course, the producer would be entitled to claim the entire amount paid to the Life Insurance Corporation towards taking out such a policy as a deduction in the year of payment.*

2.217 While on this subject, we also considered the adequacy of the existing system of giving concessional tax treatment to the artistes, etc., under section 80C of the Income-tax Act, 1961, read with rule 11A of the Income-tax Rules, 1962, in the matter of deductions of life insurance premia and provident fund contributions. *We recommend that in view of the enhancement of the ceilings under clauses (ii) and (iv) of sub-section (4) of section 80C of the Income-tax Act, 1961, in recent years, the percentage of gross total income and the qualifying amount prescribed for artistes, playwrights, authors, etc., under rule 11A of the Income-tax Rules, 1962 should also be suitably* enhanced.

2.218 In the course of our enquiry, another suggestion was made that copies of all agreements between film producers and film artistes regarding the latter's remuneration should be required to be sent to the Department within a specified period so as to eliminate the scope for subsequent manipulations and spurious claims. We agree that such a measure will help in checking tax evasion in the film industry. *We, therefore, recommend that where the remuneration payable to an artiste under an agreement exceeds Rs 5,000, both the film producer and the artiste should be under a statutory obligation to* furnish a copy of the *agreement to their respective Income-tax Officers, within a period of one month from the date of execution of such an agreement.*

Payment by crossed cheque or crossed bank draft

2.219 Sub-section (3) of section 40A of the Income-tax Act, 1961, provides for the disallowance of any business expenditure in respect of which payment is made in a sum exceeding Rs 2,500, otherwise than by a crossed cheque or crossed bank draft. This provision was introduced in order to check the tendency to claim fictitious business expenses. With a view to avoiding genuine hardship to tax-payers and others, certain exceptions to this provision have been notified from time to time. We consider these exceptions to be unduly wide. It is true that insistence on payment by cheques in respect of all business expenses above Rs 2,500 would cause problems, particularly when payments have to be made across the counter and the seller is not in a position to fully rely on the credit-worthiness of the payer. To facilitate transactions of this nature, a possible approach could be that the payer obtains from his bankers a cheque marked 'good for payment'. In practice, however, this may become difficult, partly on account of hesitation on the part of the banker and partly due to the payer not knowing in advance the quantum of payment involved. We are aware of the prevalence of travellers' cheques which normally could be used for this purpose, but in this case also a complication would arise in that the holder of a traveller's cheque would be obliged to sign it in the presence of the receiver: and ordinarily such a receiver has to be either a banker or a person approved by the bank in this behalf. *We, therefore, consider that an endeavour should be made to evolve a new instrument in the form of a Bank Bill of Exchange which is readily transferable but also contains an obligation for it to be encashed through a bank account. A suitable pay order/draft of different denominations may be designed and introduced for this purpose. In brief, this instrument should contain the following three essentials:*

(i) that it is an equivalent of a pay order or draft, without the name of the payee at the time of issue;

(ii) that the name of the payee is entered on the instrument by the payer at the time of payment; and

(iii) that the instrument is marked 'account payee only' by the issuing bank so that it cannot be encashed except through a bank account of the payee.

We recommend that after the introduction of the new instrument as suggested above, the exceptions provided in rule 6DD of the Income-tax Rules may be suitably curtailed.

'Hundi' loans

2.220 Until some time back, 'hundi' loans provided one of the important outlets for profitably investing or utilising black money. As a result of sustained efforts by the Department, the 'hundi' racket is stated to have ben tackled to a considerable extent. *We would, however, recommend that Permanent Account Numbers, which are to be assigned to taxpayers by the Department, should be statutorily required to be quoted on hundi papers and further that advances of loans on hundi and their repayments, including interest, should be made through 'account payee' cheques only. This should serve as an effective check on bogus hundi loans.*

Checking tax evasion among contractors

2.221 What we have said elsewhere about the need for compulsory maintenance of accounts, compulsory audit of accounts, registration of businesses and allotment of permanent account numbers to taxpayers applies to the case of contractors as well. In addition, we have also recommended that in the case of contracts given by Government, local authorities and public sector undertakings or companies, 3 per cent of the amount billed should be deducted as tax from each bill at the time of payment. We have further recommended that tax at the rate of 2 per cent should be deducted by contractors, other than individuals or Hindu undivided families, from payments made to subcontractors in certain cases.

Dealing with compulsory maintenance of accounts, we have observed that in the initial stages the form in which accounts are to be maintained and the type of books and records to be kept may be left to the taxpayers themselves, but that in due course, the Central Board of Direct Taxes might settle the proforma of accounts for different types of businesses, etc., in consultation with the concerned professional or business associations as also the Institute of Chartered Accountants. We would like to add here that *in the case of contractors, including sub-contractors, a register for recording daily receipts and payments would be essential and should be in a prescribed form in due course.* The maintenance of such a register, we think will limit the scope for inflation of expenses by manipulating the account books at a later date. It will, however, have to be ensured that such a register is periodically inspected and signed by the Income-tax Officer or Inspector under the provisions of section 133A of the Income-tax Act, 1961.

2.222 Apart from the practice of inflating expenses, it has been said that contractors try to evade proper tax liability through the device of 'sub-contracts'. This is often resorted to for the purpose of diversion of income, as it enables transfer of a portion of taxable income to a different entity. We feel that tax evasion through sub-contracts can be substantially checked if the contractors are compelled to make payments to sub-contractors only by 'account payee cheques. Such a measure would, in any case, limit the scope for bogus claims of sub-contracts. Accordingly, *we recommend that the income-tax law may be amended to provide that payment to a sub-contractor will not be allowed as deduction in computing the taxable income of the contractor unless it has been made by an 'account payee' cheque.*

2.223 A person undertaking a contract for construction of a building for supply of goods or services in connection with it, for more than fifty thousand rupees, is required under section 285A of the Income-tax Act, 1961 to furnish particulars of the contract to the Income-tax Officer concerned within a month. We see no reason why this requirement should not be made applicable to all contractors generally. *We, therefore, recommend that the scope of this provision should be extended to apply to all contractors.*

2.224 We have elsewhere recommended that Government patronage should be denied to tax evaders. In conformity with that recommendation, we consider it would be necessary to ensure that contractors who are found to have evaded taxes are denied the opportunity to earn profit from Government contracts. *We, therefore, recommend that contractors who have been penalised or convicted for concealment of income/wealth should not be awarded Government contracts for a period of three years. For this purpose, the form of tax clearance certificate applicable to contractors may be suitably amended to include information whether the contractor was penalised or convicted for concealment of income/wealth during the immediately preceding three years.*

Blank transfer of shares

2.225 The system of blank transfer of shares has been in vogue for quite some time in our country. As this has led to considerable abuse, the desirability of continuing this system has become a controversial issue. We are here concerned with this matter as it still provides considerable scope for tax evasion.

2.226 The controversy with regard to the utility of blank transfer of shares has been examined by various expert bodies. In 1923, the Atlay Committee on Stock Exchanges recommended complete abolition of the system of blank transfer of shares and this view was also later endorsed by the Morison Committee in 1937. This recommendation was not, however, implemented by the Government. Shortly after the war, a one-man study team of P.J. Thomas was appointed to recommend proposals for reform of Stock Exchanges. P.J. Thomas defended the system in his report to the Government in 1947. The controversy again came to the forefront with the appointment of Gorwala Committee in 1951. This Committee, however, left the decision to the Government, as there were sharp differences of opinion among the members on the subject. The

Vivian Bose Inquiry Commission had also considered the need for certain restrictions in order to regulate and control the currency of blank transfer of shares and it had made certain recommendations in this regard. Following these recommendations, the Companies Act, 1956 was amended once in 1965 and again in 1966. The present position in law is that every instrument of transfer should be in a prescribed form and, before it is signed by or on behalf of the transferor and before any entry is made therein, it should be presented to the prescribed authority who will be required to stamp such an instrument or otherwise endorse thereon the date on which it is so presented. It further requires that such a blank instrument of transfer should be delivered to the company at any time before the date on which the register of members is closed, in accordance with law, for the first time after the date of the presentation of the form to the prescribed authority or within two months from the said date, whichever is later; this is for shares dealt in or quoted on a recognised stock exchange. In any other case (i.e., where shares are not dealt in or quoted on a recognised stock exchange), the instrument of transfer must be delivered to the company within two months from the date of such presentation to the prescribed authority. However, these restrictions do not apply to shares held by a company or Government corporation in the name of a director or a nominee, and also in respect of shares which are deposited with the State Bank of India, scheduled banks or any other financial institution approved by the Government by way of security for the repayment of loan. While making these amendments, it was made clear by the Government that the object underlying the new provisions was not to prohibit blank transfers altogether but only to restrict their currency.

2.227 We examined the system of blank transfer of shares to see how far it still facilitates tax evasion. It is generally considered that the practice of blank transfer of shares encourages anti-social activities in a variety of ways. Firstly, it facilitates a person with black money to hide his ill-gotten wealth, since blank transfer helps investment in shares anonymously. Secondly, it enables evasion of income-tax since the tax evader can also escape his full income-tax liability in respect of his income from such shares. Thirdly, this system enables persons to obtain control over companies clandestinely by cornering their shares. The companies themselves have the opportunity to reshuffle shares held on blank transfer between their associates with the object of window-dressing their balance-sheets. It also leaves scope for creation of fictitious losses by ante-dating transactions in the books of the companies. While we are not in a position to confirm the extent of these abuses, we are very clear in our minds that they facilitate tax evasion and black money operations.

Section 2.228 deleted.

2.229 .... *We recommend that the law be suitably amended to provide that before an instrument of transfer is presented to the prescribed authority, the transferor should be required to state in the instrument itself his name, the distinctive numbers and value of shares proposed to be transferred, and the instrument of transfer should be duly signed by the transferor and bear the requisite stamp duty. The prescribed authority should be required to cancel the stamps on the instrument of transfer at the time of stamping or otherwise endorsing thereon the date on which it is so presented. The instrument of transfer should be valid for a period of two months only from the date of its presentation to the prescribed authority. However, in order to protect the interest of genuine share-holders who want to borrow funds from banks on the security of shares, we recommend that such blank instrument of transfer should be valid for the period the shares are held by the bank as security for an advance or overdraft to a registered shareholder.*

Benami investments

2.230 The practice of benami investments, which is peculiar to Indian law, has been widely exploited for evasion of taxes. The matter has been receiving attention of earlier Committees. The form of verification appearing in the returns of income and wealth was amended recently to affirm that the income or *wealth returned covered not only the sources of income or assets held in the name of the taxpayer but also those which were beneficially held for him by others.*

2.231 In pursuance of the recommendation of the Administrative Reforms Commission, the Government has also sponsored legislation through the Taxation Laws (Amendment) Bill, 1971 to discourage benami holding of property. Under the proposed provision which is sought to be inserted as section 281A of the Income-tax Act, 1961, no suit shall be instituted in any court to enforce any right in respect of any property held benami unless the claimant has either disclosed the property in *question or the income therefrom in connection with his wealth-tax or income-tax assessments or given notice to the Income-tax Officer about the particulars of such property in the prescribed form. We consider this to be a step in the right direction.*

Denial of credit facilities to tax evaders

2.232 One of the effective methods of preventing tax evasion would be to choke the flow of finance to tax evaders by denying them credit facilities from banks. We do not deny that such a measure is drastic and it may affect business activity in the country to some extent. But, in the fight against tax evasion, we feel there should be no room for sympathy with tax evaders. This *apart, denial of credit facilities* to tax evaders is also in the interest of *the banks themselves. It is common knowledge that banks generally look to the credit-worthiness* and financial integrity of the person concerned before sanctioning an advance. Since tax evasion is a serious blemish on a person's conduct, it is only in the fitness of things that persons who have cheated the Government in respect of their tax dues are considered unworthy of credit by the banks also. In any case, it is necessary for the Government to ensure that persons who evade taxes do not flourish while persons who pay their taxes correctly suffer due to unfair competition with tax evaders. As the benefits accruing from such a measure would far out-weigh the possible adverse impact that it might have on the extent of business activities, *we recommend that all scheduled banks should be barred from providing credit facilities above Rs 25,000 at any point of time to any person, unless he gives an affidavit to the effect that he has not been subject to any penalty or prosecution for concealment of income/wealth during the immediately preceding three years.* This prohibition shall not, however, apply to cases covered either by sub-section (4A) of section 271 of Income-tax Act, 1961, or by an order of settlement passed by the Direct Taxes Settlement Tribunal proposed by us elsewhere.

Tightening up vigilance machinery

2.233 It is often said that large share of the responsibility for the prevalence of black money and tax evasion in the country should fall on the shoulders of the administration itself which, by its acts of omission, commission and connivance, has allowed such a situation to develop and continue. Tightening up the vigilance machinery so as to tone up administration and deal with its lapses has been suggested as an effective, though indirect, method of tackling black money and tax evasion. We have, while discussing the role of 'controls' in the creation and proliferation of black money, referred to the practice of paying 'speed money' and 'hush money' which creates black money in the hands of the officials administering the controls, as also of the beneficiaries of their actions or inaction. The same is true of many other departments or agencies of the Government, whether they are executing national projects or raising resources for the Government. The Committee on Prevention of Corruption had whole-heartedly endorsed the view that the existence of large amounts of unaccounted black money was a major source of corruption. As black money and corruption go hand in hand, any attempt at tackling black money and tax evasion is likely to yield results only if simultaneously adequate steps are taken to prevent corrupt practices in the administration and also to detect and punish corrupt officials.

2.234 Political corruption is another manifestation of the same disease. We have earlier discussed the question as to how black money, heavy expenditure on elections and contributions to political parties are closely interlinked. Administrative vigilance will not by itself be fully rewarding without similar vigilance at the political level as well.

The Administrative Reforms Commission recommended the appointment of a Lokpal with the power to investigate an administrative act done by or with the approval of a Minister or a Secretary to the Government. The Commission felt that the answer to the oft-expressed public outcry against the prevalence of corruption, the existence of widespread inefficiency and the unresponsiveness of the administration to popular needs lay in the provision of an institution of the 'Ombudsman' type. The Lokpal and Lokayuktas Bill 1968 was introduced in the Lok Sabha on 9th May, 1968 seeking to give effect to the recommendations of the Commission. In its scope, it differed from the draft Bill as proposed by the Commission in two major respects. It did not extend to public servants in the States. Secondly, it did not confine itself to Ministers and Secretaries alone. The Bill was passed by the Lok Sabha on 20th August, 1969 and transmitted to the Rajya Sabha. However, it lapsed in 1970 on the dissolution of the Lok Sabha. A revised Bill has now been reintroduced in the Parliament which, except for modification of a formal nature, is identical with the one that lapsed.

2.235 Elsewhere in this report, we have given our recommendations with regard to prevention of corruption among Government servants generally and in particular, we have given our views on steps needed for prevention or detection and punishment of corruption in the Income-tax Department. We have stated in that context that the existing requirements under the Government Servants Conduct Rules for submission of annual immovable property returns and intimation of all transactions in movable properties over Rs 1,000 are not adequate. We have recommended that in order to have an effective control in this regard, all Government officers should be required to submit an annual statement of net worth to their respective Heads of Departments. *As regards the question of dealing with corruption at higher levels in public life and redressal of public grievances, we trust that the appointment of* Lokpal and *Lokayuktas after passage of the necessary legislation would take adequate care of the situation.*

Sections 2.236 & 2.237 deleted.

Arousing social conscience against tax evasion

2.238 We consider that if a strong public opinion against tax evasion is to be built up, the Government should take a policy decision that tax evaders will not get any sympathy, patronage, licence or facility from the Government and the public sector undertakings. With this end in view, *we recommend that tax evaders who have been penalised or convicted for concealment of income/wealth should be disqualified for the purpose of getting national awards. The law should also be suitably amended to disqualify such persons from holding any public elective office for a period of six years. In addition, we suggest that Ministers and senior officers of the Government should avoid attending social functions sponsored or organised by known tax evaders.* Elsewhere we have also recommended that such persons should be denied credit facilities by the scheduled banks. *We would like to add that a person who has been penalised or convicted for concealment of income/wealth should not be eligible to be a director of a limited company for a period of six years. The Companies Act, 1956, may be amended accordingly.*

Section 2.239 to 2.243 deleted.

Book Reviews

Indian Planning at the Crossroads, Bhabatosh Datta, 1992, Oxford University Press (Delhi), Pp. VIII+251, Price Rs 250/-.

This is a collection of contributions by Bhabatosh Datta mostly to newspapers and occasionally to periodicals like the *Economic & Political Weekly.* By definition they are not learned pieces. But Datta has managed to combine in these short pieces analytical rigour, clarity and lucidity to a very high degree. The general reader for whom these were intended must have enjoyed reading them as well as benefited from them. Their reprint in a book form gives an opportunity to professional economists also to savour them and be stimulated.

Datta has covered a wide range of topics. Beginning with the title topic Indian Planning at the Crossroads he has dealt with fiscal, monetary and banking problems, balance of payments and debt problem, kickbacks, bribes and black money, household savings and the stock market and the two perennial *bete noires,* the World Bank and the International Monetary Fund. It is therefore difficult to state his position in a short review. One has, therefore, to pick and choose, though this is patently unfair to the author who has provided such a varied fare.

The best way to begin would be to take his two pieces on Indian Planning. In the first piece (Introduction) he evaluates the economy's achievements in the forty years from 1950. While he finds the performance of the economy commendable in comparison with what happened in the first half of the 20th century, he finds it unsatisfactory when weighed against what we aimed at. Plan growth rates were lower than the targets except in the eighties, per capita income which was to double in 27 years was only 90 per cent higher, population increased much faster than the rate assumed in the earlier plans and justice in terms of the uplift of the poorest people in society was denied to some 300 million people. Datta does not compare our performance with those of other East Asian countries who started on the growth path at the same time as India, perhaps because our inadequacy would have shown up as even greater. He tends to dismiss the achievements of Hong Kong & Singapore as those of city states and therefore not relevant. He plays down the fact that Korea and Taiwan have achieved middle income country status in this period by emphasising that they have no defence burdens and have had super power support. He does not even mention Communist China which has made striking advances in spite of facing roughly the same problems as India.

Why was this so? Datta does not say so explicitly but hints that this was because of our attempt to combine the Russian type Mahalanobis model with a British type parliamentary democracy. The model required continued expansion of the capital goods sector which was not possible unless consumption is held down and more and more resources are transferred to that sector and Since this was not possible in a democratic regime, Indian planning had to limp along with whatever growth it could get with the available volume of savings. When, from the beginning of the seventies, poverty and unemployment began to get more attention, resources proved even more inadequate to provide growth as well as justice. But planning went on as before with token and ineffective gestures at poverty eradication. The result was neither rapid growth nor justice. What we got was a growing volume of wasteful and ineffective expenditure in the name of development, an expensive and inefficient state industrial sector, vexatious and ineffective controls, bureaucratic and political corruption, continued inflation because of the inadequacy of resources to fund the burgeoning expenditure and continued balance of payments difficulties and a growing external debt.

In the eighties there was a great deal of pressure to remove vexatious controls and regulations which led to delays, cost escalations, slow growth and corruption. The industrial lobby according to Datta wanted greater freedom. He does not mention that there was also a great deal of disenchantment with Public Sector Undertakings (PSUs) which failed to generate more resources for further development and which became more and more green pastures for those working in them. The question became more urgent as problems began to mount and doubts began to be entertained whether a mixed economy of the Indian type can generate high growth as well as eliminate poverty and unemployment?

If we cannot continue the way we have done so far, what is the alternative? 'Market forces', 'competition', 'liberalization', 'free inflow of foreign capital', 'privatization' and all that do not appeal to him and he brings up all the old arguments: market forces lead to monopolies and oligopolies; they lead investment into high profit areas and divert resources from low profit but high utility socially necessary production, they lead to inequalities of income and wealth; and there is no trickle down. But Public Sector Undertakings are no answer because many are inefficient due to a wrong choice of product lines, location and technology, bureaucratic control, leadership failure, high capitalization, over-staffing under political pressure, etc. His solution is relatively simple: ensure that the public sector is concerned with those essential industries (from the point of view of domestic consumption and exports) which the private sector is likely to neglect and also with infrastructure creation. This has to be combined with a cautious policy regarding the entry of foreign capital and foreign collaboration. He is in favour of a clear line of policy which takes into account all relevant factors including, particularly, the question of the relative efficiencies of different types of ownership and management in specific areas.

His prescription seems to fly in the face of the experience: which are those industries which the private sector is now likely to neglect because of low profitability but which are essential from the point of view of domestic consumption and exports? steel was at one time thought to be so. With so many entrepreneurs falling over each other to set up Steel mills it is no longer a certain qualifier for Public Sector investment. Similarly, can a Public Sector unit really be set up for exports? It would require tremendous flexibility in operation, freedom from bureaucratic, Ministerial and parliamentary interference, freedom from trade union arm-twisting, if it is to really perform well. It is somewhat surprising (or perhaps not surprising) that while Datta has been loud in condemning all kinds of lobbies and vested interests, he fights extremely shy of mentioning the role of trade unions in hamstringing our growth. In one of his essays (p 20) he asks the rhetorical question that if we could complete circuses and utsavs in record time why can we not complete projects on time and save much needed resources? If he had waited for an answer he would have found out that the highest in the land were monitoring these projects and any slip up would have meant the rolling of many heads; and cost was of no consequence. On the other hand projects are delayed because of lack of resources, near absence of monitoring by people that matter, near total lack of accountability, spreading existing resources thinly on too many projects to satisfy political objectives and obstacles created by the legal system, vested interests and trade unions. Kerala's development history is full of irrigation projects which have been held up for years by a handful of organised workers irrespective of the complexion of the government in power!

Datta states - and rightly so - that notwithstanding the Mahalanobis model which influenced planning from the Second Plan onwards, our planning system is really nothing more than Fabian Socialism which the Labour Government ushered in Britain after World War II. We were trying to combine parliamentary democracy with a system of planned development under government auspices. Our performance has been both a success and a failure. Success because we have been able to achieve so much in comparison with our performance in the first half of this century. Failure because we have not been able to achieve what we set out to achieve and because we are far short of the achievements of the countries which started on the growth path at about the same level and time as we did. And over the years the Indian system of parliamentary democracy has thrown up tendencies which are inimical to rapid growth. Although they are outside the pale for economists we should take them into account as they deeply influence all the factors related to growth.

Nehru and those around him had a vision of India's growth; of the need for hard work, austerity, involvement of the people in development, elimination of poverty and unemployment. The dominance of the Congress meant that a national view could be taken on projects, programmes and policies. With his successors planned development has increasingly meant the mobilization and expenditure of larger and larger volumes of resources ostensibly on the same goals. But increasingly national considerations are yielding place to local and party considerations in the matter of projects, programmes and policies. Since being elected to power is the name of the game in a parliamentary democracy, placating powerful voting groups, and powerful interests is an important influence on policies and programmes, irrespective of its effects on present and future growth. And corruption has raised its ugly head in an almost uncontrollable manner.

The result is that society is being divided into three or four large and powerful segments whose interests are conflicting. There is the farm lobby, the private industrial lobby and the trade union lobby. Each one exerts pressure on government or rather the elected representatives to get a larger share of the national cake. Development increasingly becomes the result of their efforts to appease these warring interests with an eye on electoral advantage and sometimes personal gain. Thus the result may not turn out to be either adequate or satisfactory. We may also run into a situation of continuous inflation because the resources needed and appropriated may not match.

In view of all these factors it is difficult to be optimistic that there is really a serious alternative to letting the market take over many of the allocative functions of the State so that the influence of politics is minimised. While one would agree that infrastructure should be the concern of the State, the performance of the Railways, State Transport Undertakings and State Electricity Boards does not give much confidence that they will be run efficiently. We may have regularly elected governments but we do not have either institutions or a social system which will ensure that men who will contribute their best instructed judgement to the conduct of public affairs are elected. The result is that such development as occurs is a by-product of the political process rather than its main end-product. Mao Zedong used to say 'politics in command' in development in order to emphasise the need to mobilize the energies of the people. Indian democracy has also adopted the same motto though with a different connotation.

This can be seen quite clearly in the policy regarding population control. Almost at the beginning of independence Nehru had foreseen that population growth needs to be checked, if people's standard of living is to be raised rapidly and that this would require general economic improvement as well as a growth in female literacy. His successors were, however, content to just provide the means of contraception. After Sanjay Gandhi's unfortunate foray into enforced population control, even this took a back seat. More importantly, primary education of both men and women was not emphasised as much as higher education through colleges and other institutions of higher learning. More recently considerations of political advantage have led certain political parties to drag their feet with regard to this programme. The result of all this is that the birth rate has declined only from 35 to 30 per thousand in these forty years while in China it has come down to 19 per thousand in the same period.

The upshot of all this is that India has fallen between the two stools of growth and social justice. Because of the democratic form of government she has not been able to squeeze out of the people the high volume of savings necessary for rapid growth which can make the attainment of social justice easier. On the other hand because we are a democracy we have not been able to achieve social justice through instruments like taxation, government programmes of redistributive expenditure, land reform, a comprehensive programme of primary education, control of population, etc. While the system of governance through freely elected representatives has taken deep roots, institutions like adherence to a programme, accountability of elected representatives, selection of men with vision, understanding and commitment to all round social progress have yet to grow. The long way we have to go can be seen from the fact that while American democracy elected a bumbling cinema actor as President after he spent nearly two decades in public office, the Indian electorate sent three actors straight from the celluloid screen to the Chief Minister's chair and ejected a naive airline pilot from his cockpit to the Prime Minister's seat.

The economic remedies to improve development prospects are well known and Datta has discussed them lucidly in these contributions: cut down non-development expenditure by reducing the expenditure on defence subsidies and administration; reduce wastage and increase the effectiveness of redistributive programmes; raise more resources through better tax policy and administration; cut down delays and wastage in project implementation; improve the performance of public sector enterprises; reduce the rate of growth of population, increase literacy; increase the competitiveness of Indian industry so that more exports take place; and so on. These are not painless remedies. They are bound to hurt some powerful group of people or institution which benefits from the present arrangement and therefore are liable to be resisted. Subsidies cannot be reduced because the urban groups and farmers will suffer, losses of PSUs have to be met from the exchequer as otherwise those employed there will suffer; defence cannot be cut because we have no other way of dealing with external threats; resource mobilization faces snags because while everybody wants higher taxes for the rich even trade unions want higher tax exemption limits so that their well paid members do not have to pay income tax; better PSU performance comes into conflict with the public's desire not to pay cost-related prices; the union's determination not to accept responsibility for more efficient working; the refusal of the bureaucracy, Ministers and the parliament to abrogate their right to interfere in the day to day working of PSUs; and the unwillingness of political parties to worry about explosive population growth; and so on. The result is more likely to be disruption and fractured growth unless we are able to develop greater cohesiveness and have a common vision about future development and greater preparedness to pay for it through austerity and hard work as Nehru repeatedly emphasised. Indian planning is at the crossroads because we have failed to develop institutions and an outlook which will make this possible. Till we do so we must accept that the existence of a democratic form of government is a satisfactory trade-off for inadequate growth. At the same time we should see that barring a few segments all other economic activity is subject to market forces so that efficiency is increased and all forms of corruption are checked. Of course, the operation of market forces would not mean that the State would abrogate totally its regulatory role. This does not happen even in the US, the arch votary of the market system. It will police the system to ensure effective functioning. The word 'effective' needs to be emphasised because experience has shown that regulatory powers that are acquired are not always used promptly and effectively.

Growth league statisticians have now found two more candidates to join the club of Asian Tigers viz. Malaysia and Thailand. India with its large population, deep divisions on account of religion, caste and language and a system of government which forces her to go a step backward for every two steps forward cannot hope to join the league in the foreseeable future. We should be content to move forward steadily albeit relatively slowly, so that major economic tensions in the system ease within a reasonable period of time and circuses and utsavs or scandals and scams will yield place to a genuine concern for providing an adequate life to the Indian people.

R.M. Honavar
Formerly Chief Economic Adviser,
Ministry of Finance,
Government of India;
and Former Director, Institute of
Financial Management and Research,
Madras.

Inden, Ronald, *Imagining India* Published by Basil Blackwell Ltd, 108 Cowley Rd., Oxford, OX 4 IJF, UK; Pp. 299, Price £ 11.95/-.

Ronald Inden starts off the book by saying: 'This book is about human agency, the capacity of the people to order their world'. He also says that his perspective is that of a historian. The book is however entitled: "Imagining India". The reason is that Inden thinks and argues in this book that the image of ancient and medieval India as constructed by the western indologists is a product of their imagination about the essential nature of their own society and that of the Other, i.e. the East, particularly India.

Indological studies began towards the end of the 18th century, when the West had conquered the whole world. Western scholars were therefore naturally convinced that there was something essential in their culture which made them superior to the Other. They therefore constructed two 'essences'. The one of the Western man consisted of a world-ordering rationality, enabling him to interact with the environment and with other individuals on a rational basis and to evolve useful models of social, political and economic relations, including methods of production and distribution. The other essence, that of the Eastern people, and more particularly of India, consisted of a lack of rationality, and therefore of wild imaginations, myths, magic and the excesses of force or of servility. Some of the scholars did not subscribe to the idea of two essences but, all the same, took the above-mentioned differences to be real and only differed as to the causes. They propounded differing stages of human development, the Indians having got stuck up at the tribal or the slightly post-tribal level.

All this interpretation was claimed to have been made on a scientific basis with a well worked out metaphysics of reality and of knowledge. But, says Inden, their basic assumptions regarding the nature of reality (ontology) and of knowledge (epistemology) were wrong. What were these assumptions? As to reality, the assumption was that the universe was a huge well-defined system consisting of discrete, well-defined essences or substances, the inter-relationship between them being like that of the parts of a machine. This system having been created and put into operation by a Creator was immutable. And what was knowledge? It was only the mirroring of this reality in our mind. The knower can only discover something which exists out there. He has no role in shaping it. These assumptions were thus a denial of human agency.

It is surprising that in the West, which was forging ahead vigorously in all directions in the nineteenth and twentieth centuries, its philosophers can be charged with denying human agency. But such is Inden's charge and though it has been made with a good deal of scholarship one cannot but feel skeptical about it.

Coming back to the impugned studies of India, the western scholars, in their 'scientific' way took the Indian texts to be the literal representations of what the Indians saw. The material objects represented in those texts were taken to be nothing more than the objects themselves. No allowance was made for the mental reshaping of objects or ideas. Much of what was seen through these Indian texts- the objects of worship including sex-objects, plurality of gods and goddesses, pantheism and monism, the peculiar caste-system, deification of the king, and, incongruously, the power wielded not by the king but by the priest - all this was seen as the product of a disorderly mind. The determinism presupposed in the ontology further precluded any purposive action.

In order to make us understand the point better, the western essence was termed masculine - meaning practical, purposeful and forcing, while the Eastern essence was termed feminine, i.e., characterised by strong imagination, caprice and dissipation. (Feminists may please note this western equation supposed to be scientifically arrived at).

As may be expected, this knowledge about India was built up through a detailed study of the various components of India's social, cultural and political life.

The unique caste-system was seen as the expression of Aryan domination of the Dravidians. In India, it was pereieved as a divine creation. The result of this caste system was that there were no territorial loyalties and therefore no nation-states. The solidarity was with one's caste-brethren who were spread out all over India cutting across various territories.

The caste system and the religious - cum-metaphysical ideas had their political ramifications also, especially on the institution of kingship. Imagination was, as already pointed out, the dominant feature of the Indian. His religious mind had created a divine Dharma with a Dharma for each caste. The interpreter of this Dharma was the Brahmin so that the Brahmin really controlled the legal-ideological framework of the society. It was the Dharma which was sovereign, neither the king nor the people. With the Brahmin being the sole interpreter of the Dharma, the king was reduced to a subordinate agent of the system. He could assert himself only by being a despot. Historians have actually found

Indian society peaking only under foreign despots.

With the kingship being ineffectual, the western scholars come down to the village system and enquire into the land tenure and the rural occupations. They find that the king was not the owner of the land. Neither was the tiller the owner. With what has been called the 'jajamani' system, where each person of each occupation got a fixed share of the produce, and the king also got a share of produce as his due, the question of ownership was apparently submerged. Rural occupations being fixed hereditarily and the wages fixed by usage, there was no scope for individual trade or industry.

A community with this type of organisation (or the lack of it), was destined to be over-run by the middle-eastern and the western Aryan branches.

This is in short what the western scholars in general found India to be. But no, says the author; that is not what they found but what they imagined. Their own deterministic ideas about reality and the representational theory of knowledge were mirrored in their constructs of India. Early on in the book (p. 5) the author introduces us to a different construct based on the author's researches over the previous fifteen years. In the chapter on 'Reconstructions' however he says (p. 216) that he can give only a few indications of this reconstruction and that the whole project would take several more years to complete and several monographs for its coverage.

The indicated reconstruction consists of an examination of the reign of the Rashtrakutas, who flourished in South India in the ninth and tenth centuries A.D. when Indian civilisation is supposed to have declined. According to the classical indologists, we should have found despotic rulers eternally warring with one another and exploiting the people who, in their turn, should have been going about fatalistically, trusting and propitiating various gods through the Brahmins. But, as Inden argues, such is not the picture we see. Also such is not the picture which the Arab travellers saw at that time. The picture is that of a well-ordered polity, not in the sense of mutually exclusive categories like sovereign states A, B, C, D, etc., or completely secular vs. completely theocratic states, or completely administered polities vs. completely free ones, but a polity of what Inden calls a scale of forms, i.e., one form overlapping another in a continuum. Inden argues that we can see this only by focussing attention on the human agency, i.e., on what people actually did or understood, which are changing entities, rather than trying to identify, in the manner of Hegel or James Mill, permanent essences in a given situation. In the India of Rashtrakutas we find, firstly, not a war-ridden country but a country where imperial formations were made and remade, now by war, now by only a show of force, the result being that lesser powers accepted the overlordship of a greater power, paying tribute to the latter but retaining their own separateness. Many of these adjustments when not brought about by war, were brought about through various ceremonies, each participant understanding the implications of each ceremony and reacting to it politically. Even the erection and consecration of a temple had a political significance. Secondly, each kingdom consisted of various castes and classes of people. The castes could perhaps be looked upon as grades of citizenship, achieving harmonious relationships among them and facilitating the absorption of foreign elements. The classes were not mutually exclusive. Ruling classes, subjects, towns-people, villagers, functionaries, landlords - all these categories overlapped. Lastly, it is clear from the proclamations made on ceremonious occasions that the presiding overlord promised a better time for all the people. Since several categories of agents participated in these ceremonies, there is no reason to doubt that the messages conveyed by these ceremonies and declarations were real for the participants.

This is as far as Inden's analysis goes. We don't know what to expect from several years of his future study and the several monographs that are likely to follow it.

Since Inden has laid stress on the study of human agency, we may as well ask whether his study of human agency is going to be limited to the ancient and medieval period or going to extend to even the contemporary period. If we extend the notion of a scale of forms to human agency itself, the problem before the higher human agents, i.e., the country's leading lights, in the post-1858 India has been how to fashion and mobilise a wider human agency for the uplift of the nation. These leaders had also to find what went wrong. Then only they could correct it. Inden has not so far attempted an answer to what went wrong. So we have in the field only the theory of essences as worked out by the western indologists. Their theory of diametrically opposite essences meant a permanent status of 'patients' (as opposed to agents) for Indians. Since this consequence was unacceptable to the Indians, the main theory was also unacceptable. Three types of reactions appeared. One was a tremendous effort to redefine what the Indian tradition or essence was. This effort was sometimes based on scholarship and sometimes on wishful thinking. K.M. Panikkar has pointed out how in India every great leader tried to re-interpret the Bhagawat-Gita for finding a socially acceptable theory. One of these interpretations was by Lokamanya B.G. Tilak; and one has it from his biographer and lieutenant N.C Kelkar that Tilak did not mind his interpretation being faulted from a differing scholarly viewpoint. 'May be my interpretation is wrong, but that is what society needs today', he is said to have retorted. Continuing this effort, there are today political formations which do not see any other method for forming a nation-wide agency than the utilization of the popular loyalty to and faith in Hinduism's glorious past. Where that faith or loyalty is found to have weakened, it is to be revived! The second reaction was to reject our past and to copy the successful west. The third reaction - or rather a scale of reactions falling between the first two - was a varying degree of attachment to the past, to the religious, philosophies and the ideals expressed therein and also a recognition that, to use the words of Swami Ranganathananda, the 'eternal values' of our culture have to be matched with the needs of a 'changing society'. We had two extremes of this mainstream in the persons of Mahatma Gandhi and Nehru; Gandhi a deeply religious man and skeptical of modern ways; Nehru a completely modern man quite skeptical of the past as popularly presented and needing to discover India afresh for himself. In general, everybody needed a belief in India's 'glorious past' to feel confident of being able to re-attain that glory. It was only through the familiar idioms of the past sages that people could be turned to action. From the great Mahatma Gandhi to the humble Anna Hazare, the agency for change was found in the idioms rooted in the past.

Invoking the past has however led to certain problems. Just as the Hindus find their own regeneration easier through the re-interpretation of their own past and, in some cases like the Ramajanmabhumi, a re-establishment of it, the Muslims would try to solve their problems through a similar approach to their own past. Not much attention has been paid to the possible dialectical relationship between these parallel developments so that the looking to the past makes the divide between the Hindus and the Muslims a divide between two essences which can never be bridged.

That is the genesis of the communal conflict we have in India today. We have proved to the British that we are not formed of a lower essence but we are yet to be convinced that all of us have the same essence, that all humanity is the same.

B.P. Patankar,
155, Hanuman Nagar,
NAGPUR - 440 009.

Madhu Limaye, *Decline of a Political System: Indian Politics at Crossroads*, Wheeler Publishing, 1992, Price Rs 200/-.

This book contains recent writings of Mr. Madhu Limaye on various political events Mr. Limaye is known as an outspoken intellectual and one of the most distinguished Parliamentarians of yester years. His reflections are fearless and candid and their value is greater because he has neither any axe to grind nor is he himself living in a glass house. His criticisms are born out of his sincere lament for the decline of the political system in India. He very subtly and softly points out his disappointments and very critically analyses the political scenario.

In the first article on "Decline of the Indian Political System" the author traces the developments of the last forty years and observes that the Congress is the only national centrist party which can hold the nation together. But in order to be able to play its legitimate role, it must correct the mistakes of the past. It must become again a vibrant mainstream party. It must introduce new blood. It must cultivate the art of power sharing within the party. It must develop team work and learn to govern firmly and imaginatively. And finally, without cutting off its link with the Indian tradition, it must develop a modern outlook and a growth oriented economic programme (p. 77). Madhu Limaye insists that a reform of the polity is urgently required and 'not any rash and ill-advised experiment in the nature of systemic change' (p. 77). This is in contrast to those who assert that the present Constitution needs to be changed lock, stock and barrel, At present this view has gained currency. We feel that not the Constitution but its faulty implementation is to be blamed for today's ills. Some changes in the Constitution might be necessary, but not a radical change leading to a new Constitution. The basic structure of the Constitution is quite sound and needs to be stabilised and strengthened (Sathe 1989). In the following pages the author illustrates such reforms by giving various examples. These include putting new life into our legislatures by reinvigorating various committees and bringing in more openness in government. The author is right in saying that without an ordered state, the ideals of liberty, justice and equality could not be realised. He severely criticises the practice, which unfortunately has grown in recent years of passing laws which could not be enforced. In recent years, another undesirable practice has grown. Parliament passes a law and as usual makes a provision that it would come into effect on such a date as the Government may decide by notification. But no such notification is issued or if issued it is done after several years. The author rightly suggests that a committee should review such laws and repeal those which are unenforceable. But the practice of passing laws without enough discussion, ought to be given up. Of late, many laws which were enacted in hurry had either to be abandoned or their enforcement deferred. Debates in Parliament as well as state legislatures have of late generated greater heat than light. Seldom do we have interventions by opposition members who through their painstaking study and sound home work could pose a challenge to those on the Treasury Benches. How many Limayes or Piloo Modys have we had in recent years? Does it not show erosion of the legislative process?

The author devotes quite some space for the reform of the judicial system. He laments that 'the strong and entrenched vested interests are coming in the way of reform' (p. 79). Some of these comments deserve serious attention. The author rightly points out that proceedings as well as techniques of judicial process have become outdated. It is true that the judges have lost their high social esteem and the legal profession has lost its idealism and is interested in merely breeding litigation. The author observes that the Supreme Court and the High Court followed antiquated mode of transacting business (p. 79). The conduct of the judges was unpredictable and erratic (p. 80). He then elaborates on the malpractices in court management at the Registery's level. The author makes valuable suggestions in this regard. While computerisation and other inputs would doubtless improve the administrative efficiency, we feel that a quality of legal education must now be insisted upon if judicial competence is to be strengthened. How can India have good judges from lawyers educated through the present system of rote learning ? For a country which professes to have rule of law and judicial review, legal expertise not only of the black letter law tradition but of sociological and telelogical tradition would be a necessity. India has many eminent lawyers but no jurists (though the wold jurist is often used to describe any lawyer or a judge). How can the legal system respond to social urges and aspirations unless there is a constant supply of juristic thoughts and ideas? How long can we survive on borrowed wisdom of the West?

Although excessive centralisation of the Indian polity is dangerous, the author warns that extreme forms of regionalism would also be equally dangerous. 'What we have to achieve is the mating of national unity and local autonomy' (p. 81). He is critical of the usurpation of the state power by the Centre. He feels that if the Constitution is given effect to in letter as well as in spirit, and proper conventions on the lines suggested by the Sarkaria Commission are established, the proper balance between the Central authority and the states could be restored. The author urges that the recommendations of the Sarkaria Commission on Centre - State relations be implemented as early as possible. We, however, feel that we ought not to confine ourselves to the recommendations of the Sarkaria Commission. The problems raised by Kashmir, Punjab and Assam and those that may be raised in future by Jharkhand or Bodoland will require a more flexible response. India will become stronger through proper decentralisation. Article 370 of the Constitution which provides for special relationship between India and Jammu & Kashmir is a good example of federal pluralism within the Indian polity. Further, although this reviewer agrees with Limaye that a strong centre should exist, he feels that a strong centre need not be a hegemonic centre as it has been all these years.

The author discusses the proportional representation system and points out its possible implications for India (p. 85). The author had opposed the Fifty Second constitutional amendment which brought in the law against defections. His main objection was that the anti-defection law stifled dissent which was a vital element of the democratic process. Mr. Limaye has been vindicated because even the Supreme Court has interpreted clause 2(b) of the Tenth Schedule of the Constitution (the anti-defection law) in such a way as to attract disqualification on the ground of non-compliance with the party whip only in cases such as matter of policy or no confidence motion (Times of India, 19 Feb. 1992). But the loopholes left in the law permitting defection by one third or more members totally killed the spirit of the law. If one person defects, he is disqualified; but if one third of the members of a party defect, they are not disqualified. Therefore, now people have to muster one third defectors in order to escape disqualification. Where smaller groups are involved, this provision has been a source of horse trading. Further, the Speakers, to whom the power to decide about disqualification was given, have used that power very partisanly. This brought in conflict between the Speakers and the Supreme Court. The Supreme Court has now held that the Speaker's decision is subject to judicial review. (*KIHOTHA HOLLOHON v. ZACHILHU* (1992) 1 SCC 306). Where there is no internal party democracy, such power in the hands of the party bosses, which the anti-defection law vested, was bound to further weaken dissent and promote sycophancy. The author rightly observes that instead of the present complicated anti-defection law, a mere provision disqualifying a person, who changes his party or votes against it on a motion of confidence, from holding any ministerial post for a period of time would have sufficed. It would have permitted legitimate dissent while discouraging horse trading.

Among various questions most often discussed one is of the national government. At the last election and thereafter, many including the President of India, toyed with the idea of a national government. The author points out that a national government is possible only when all parties are involved in it and when they are willing to sink their party ideological differences for a time being. Such a national government is possible only under exceptional circumstances. In India, where the BJP was determined to build the Ram temple at any cost and the Left parties were determined to keep the BJP out, no national government was possible. The author is very critical of the parleys which the President of India held with leaders of some opposition parties to explore the possibility of a national government after the tragic assassination of Rajiv Gandhi (p. 105). In another essay he comments on the power of the President and pleads that the President must not be involved in party politics. His criticism of the President for not making himself available for unveiling the portrait of Dr. Lohia is forthright. Refuting the accusation of being rude to the President, he says:

'The President affronts a great freedom fighter like Lohia. And yet K.R. Malkani talks of my "rudeness". It was the President who was rude and duscourteous. I am not one of those who can take things lying low. I have spent my whole life in the service of the nation. I aspire for no office. I am waiting for my end' (Pp. 125, 126).

His criticism of the policy of awards is also in the same strain. While admitting that Jawaharlal Nehru richly deserved the Bharat Ratna, the author observes that Nehru should have had the generosity to confer Bharat Ratna on Sardar Patel. Lately such awards began to be awarded with political motives. A Bharat Ratna to M.G. Ramachandra was certainly not based on merit but on partisan politics. The same could be said about an award to Giri.

Part III deals with the Speaker, the Defection Law and the Electoral Reform.

In Part IV he discusses the developments in the Soviet Union and the reactions of the Indian political parties. Part V contains a very important discussion about Religion and Politics. The author rightly points out that 'the national unity was not founded on religious identity, but on the non-denominational and all embracing concept of Indian nationhood (p. 193). The author says

'India is today assailed simultaneously by several religious fundamentalisms - Hindu, Muslim, Sikh and Christian. They must be fought and isolated. What we require is mutual tolerance. Only a framework of non-denominational nationalism, democracy, a marriage of strong Centre - which alone can protect the underprivileged and devolution of power, and a ceaseless struggle for social justice would make the Indian Union strong and mighty. *Hindu Rashtra is prescription for its speedy disintegration*' (p. 199).

There is a chapter on RSS and another chapter on Religious Intolerance and Destruction of Religious Shrines in History. Both ought to be read first hand by readers.

These essays are reflections of a person who has been in politics all his life and who is a living example of what happens to one who is not willing to sacrifice principle for expediency. Mr. Limaye was a severe fighter while he was in Parliament. And yet he has no personal bitterness. He is not cynical, nor is he frustrated. The fact that he can look at contemporary events with an amount of aloofness and impartiality and with not even a tinge of bitterness is highly creditable and evidences his undiluted patriotism and humanism. One may not agree with everything he says but a reader does not suspect his sincerity and is doubtless provoked to think on the issues which he has raised in these essays.

REFERENCE

Sathe S.P.; Constitutional Amendments 1950 - 1988 - Law and Politics (1989).

ABBREVIATIONS

SCC: Supreme Court Cases.

S.P. Sathe,
Hon. Director,
Institute of Advanced legal Studies,
ILS Law College, Pune.

Dwijendra Tripathi, (Ed), *Business & Politics in India: A Historical Perspective*, Indian Institute of Management, Ahmedabad, Monograph in Business History III, Manohar Publications, New Delhi, Pp. xvi+375, 1991, Price Rs 270.

This third volume in the IIMA monograph series in Business History focuses on how Indian business reacted to political twists and turns, how it related to various political formations, and what influence it had as the process & events in the transition from a colonial to an independent polity. It compresses paper presented at a seminar held on 29-31 March 1989.

As is expected in such seminars the old notions are reexamined, tested, modified and sharpened and some old myths are laid to lead to a more objective and meaningful account of the subject under discussion. And the book conforms to this model. The overall perspective that emerges is the passivity of Indian business classes throughout, their attempt at safe guarding their interest, but no active or sustained effort to control or mould a political regime. It is a history of shifting allegiances to who soever in their judgement was better placed to guard their interests. This exposes the old myth that the Indian National Congress was a bourgeois formation. It appears that the emerging Indian industrial class was indifferent to the Indian National Congress in the pre-Gandhi era and was more favourably inclined on the side of the imperial regime. But when under Gandhi Congress became a political entity with much more political don't than before the industrial class became more favourable to it to show its own interests. They made common cause with compress in regard to constitutional forms of the freedom struggle but distanced themselves from non-constitutional forms of struggle like non-cooperation and civil disobedience movements. Gandhi was never an instrument in the hands of this class and he was not much influenced by them. The Indian bourgeois had no great influence on the counsels of the Congress nor did it keep it flust with funds.

A large number of industrialists were owners of large landed estates and feared the revolutionary potential of large peasant masses. They, therefore, used their money power to thwart the Kissan sabha movement. And if the Kissan Sabha were banned by the Congress ministries in the late 1930s, it was partly because many congress leaders were beholden to the capitalists for various kinds of material benefits.

There is also no support for the view that the colonial government unduly favoured British firms operating in India or that the ex-patrial houses exercised great influences over the government. These houses were little interested in political before the 1920s. After that when they found the rising competition from Indian business houses, they became moderately politicise to adopt some half-hearted and largely ineffective measures. It is rewarding book and is welcome.

N.V. Sovani,
Former Professor,
Gokhale Institute of Politics and Economics,
Pune.

Books Received

Gaiha; Raghow Structural Adjustment and Household Welfare in Rural Areas: A Micro-Economic Perspective. Food and Agricultural Organisation of the United Nation, Rome, 1991.

The study is a critical survey and discussion of selected methods and results pertaining to distributional and welfare effects of macro-economic policies on the rural poor. It takes into account recent relevant work on computable general equilibrium models-one being an FAO study - and argues that it is necessary to supplement a macro-analysis with an investigation of the linkages between adjustment policies and house-hold welfare in rural areas.

These linkages are embedded in a micro-economic framework which has been wide by used in recent econometric work on household decision-making. The Study reviews major empirical results in this field and draws conclusions on likely impacts of structural adjustment policies on a number of variables that are central to rural welfare.

Iyangar, A.V.K. and B.M. Mahajan - Optimal Location of Cement Plants - Institute for financial Management and Research, Madras, 1992.

This book is aimed at highlighting the need for locating industrial plants with an illustration of a cement industry case study conducted at the macro level by using sophisticated operations research technique, like mixed integer linear programming model and suitable computer package.

Limaye, Madhu - *Decline of a Political System: Indian Politics at cross Roads*, Wheeler Publishing, A.H. Wheeler & Co. Ltd, Allahabad, 1992.

The author gives a birds eye view of Indian Politics since ancient times. The book is divided into five parts. Part I discusses the decline in the Indian Political system, more so since Independence Part II reviews the functions and powers of the President of India. In Part III, the role of the Speaker of the legislators, both Centre and States, in the light of the defection laws and electoral reforms are examined. Part IV is a study of the changes in the soviet union and its fall out on the Communist Parties in India, while Part V discusses the RSS Family Organisation, its politics and religion.

ANNOTATED INDEX OF BOOKS AND ARTICLES IN INDIA

EDITOR'S NOTE

These abstracts are prepared by the author of each book/article sent to us voluntarily in response to our invitation through the Economic and Political Weekly. These cover publications after 1st January 1986. Only abstracts of books/articles so received are published. The index therefore is not exhaustive and complete.
The limit of 250 words and 100 words for abstracts of books and articles respectively is strictly enforced. Only a minimum amount of copy editing is done in order to bring the abstracts within the prescribed limits. The readers should approach the author of the abstract, not this Journal, for any clarifications.

BOOKS

ARTICLES

1989

Tilak, Jandhyala B.G.; 'Analysis of Costs of Education'. *Perspectives in Education,* Vol. 5, No. 4, (October 1989).

This methodological paper provides an analytical framework for studying costs of education. The author highlights the importance of analysis of costs of education in educational planning, followed by a description of the taxonomy of costs of education, including various components of costs such as fixed costs, variable costs, average costs, marginal costs, costs at current prices, costs at constant prices, etc. Various concepts of 'unit' costs and determinants of costs of education are also described.

Tilak, Jandhyala B.G.; 'Expenditure on Education in India: A Comment'. *Journal of Education and Social Change* Vol IV No. 2, (July-September 1990).

The Kothari Commission, and the National Policy on Education 1986, have promised to invest 6 per cent of national income on education in India. However, there have been few attempts in the recent past to mislead the public by arguing that we have already reached this goal, by attributing ambiguity to the unambiguous terms and redefining them. This short paper presents a commentary on such ill-conceived attempts.

1990

Tilak, Jandhyala B.G.; 'Education and Earnings: Gender Differences in India', *International Journal of Development Planning Literature,* Vol. V No. 4,(October 1990).

This paper presents an empirical analysis of an application of mincerian earnings function to the household data collected in India in order to examine the influence of human capital variables, particularly education and experience on the individual earnings of women in comparison with those of men. The results indicate that in both cases the human capital model explains about half the variance in individual earnings, in fact higher in the case of women than in the case of men. Rate of return to women's education is also higher or at best equivalent to the rate of return to men's education.

Tilak, Jandhyala B.G.; 'Education and Economic Growth in China', *Rivista Internazionale Di Scienze Economiche e Commerciali* 37 (12) December 1990.

After describing briefly the growth of education in China during the last three and a half decades, on attempt is made of analyzing the relationship between education and economic growth in China with the help of Cobb-Douglas production function model with enrolments in education as a single explanatory variable regressed on GNP per capita, using national time-series data for a period of 37 years - 1949 to 1985 and provincial level cross-section data for 1982. The results of the production function analysis, based on both time-series and cross-section data, clearly indicate that education contributes positively and significantly to economic growth in China. The time-series analysis reveals that the contribution of primary education is higher than that of secondary education which, in turn, is higher than that of higher education. Within secondary education, the contribution of special (vocational, technical, etc.) education is quite low compared to regular (general) secondary education.

Tilak, Jandhyala B.G.; 'Social Economic Correlates of Infant Mortality in India', *International Review of Economics and Business: Rivista Internazionale Di Science Economiche Commerciali* (Italy) Vol. 38, No. 2 (February 1991).

The paper analyses improvement in infant mortality in rural and urban India over time and also examines inter-state variations in the same. Od the several indicators on socio-economic development, education, health and other development and infrastructure facilities that are analysed, literacy turns out to be the most dominant variable. It alone explains one-third to one-half of variations in infant mortality across different states in India, suggesting that education has a direct and significant effect on infant mortality. The second most important set of variables relates to health.

Tilak, Jandhyala B.G. and N.V. Varghese; 'Financing Higher Education in India', *Higher Education* (Nether lands), Vol. 21, No. 1 (1991).

This paper presents an analysis of the present pattern of funding higher education in India and discusses desirability and feasibility of various alternative methods of funding the same. Higher education in India is basically a state funded sector. There is need to shift the financial burden to the individual domain from the social domain. Some of the alternative policy choices discussed include financing from the public exchequer, student loans, graduate tax, student fees and the role of the private sector. Among the available alternatives, it is argued that a discriminatory pricing mechanism would be relatively more efficient and equitable.

Tilak, Jandhyala B.G.; 'Privatization of Higher Education, *Prospects* (UNESCO) XXI No. 2 (78), 1991.

Privatization of higher education is not a phenomenon of recent origin. Almost all the educational systems in the non-Communist world are characterized by privatization of various degrees and forms. But this has been assuming importance in the context of growing financial squeezes of public budgets for education. The paper analyses the trends in privatization in higher education, and critically examines with the help of available empirical evidence the strengths and weaknesses of the arguments being made in favour of and against privatization, and in the process refutes some of the myths regarding privatization. The author classifies privatization into various forms, and argues in favour of privatization of the type that involves public provision of higher education with reasonable levels of private finances.

Tilak, Jandhyala B.G.; 'Cluster Approach to Educational Planning', *Journal of Education Research and Extension*, Vol. 27, No. 2 (1991).

This paper discusses the importance of cluster approach in the context of educational planning in India. It describes the concept and the rationale of education cluster, the methodology of formation of cluster and the advantages of cluster approach. The methodology of formation of the education cluster is described with the help of an empirical exercise on education cluster in Gurgaon District in Haryana.

Tilak, Jandhyala B.G. and N.V. Varghese; 'resources for Education for All', *Journal of Education and Social Change*, Vol. IV, No. 4 (January-March, 1991).

This paper analyses the growth of expenditure on education in India, in detail, including government and household expenditure on education, inter and intra-sectoral allocation of resources in the five year plans, etc., Concentrating on universalisation of elementary education, the paper discusses the possibility of achieving the goal. The paper also presents detailed estimates on the requirements of financial resources for education to achieve universalisation of elementary education in India.

The Journal will publish in each issue Annotated Bibliography of Books and Articles on Indian Economy, Polity and Society, published after January 1, 1986. Authors are requested to send their entries with full details of publication and annotation not exceeding 250 words for books and not exceeding 100 words for articles. Use separate sheet for each entry.

COMMENTS AND RESPONSE

Distribution of Landholdings in India, 1961-62 To 1982 by Ashok Rudra and Uttara Chakraborty in Journal of Indian School of Political Economy, Vol. III, No. 4, Oct-Dec 1991.

COMMENTS

The authors have compared the distribution of household ownership holdings (say D1) with that of household operational holdings (say D2) by the four broad categories, viz., (i) landless or non-operators (ii) marginal (iii) small and (iv) large (Refer Vol. III, No. 4, p. 727, Table 2). According to them:

> 'As may be seen in Table 2, in 1961-62, there were 7.14 million *fewer marginal operators than marginal owners.* On the other hand there were 11.00 million more non-operators than the landless and 6.14 million more non-marginal operators than non-marginal owners. This means that in 1961-62, 27.91 per cent of the marginal owners had leased out their land to become non-operators and 15.58 per cent had leased in enough land to become non-marginal operators; only the balance of 56.51 per cent non-marginal owners stayed as non-marginal operators. A similar comparison in 1971-72 shows that 33.54 per cent had wholly leased out their land to become non-operators'.

Thus, because the numbers of non-operators and the non-marginal operators are higher than the respective numbers in the non-owner (i.e. landless) and non-marginal owner categories, but marginal operators are fewer in number than the marginal owners, the authors infer that some of the marginal owners must have moved to non-operator category by leasing out wholly their landholdings and some of them (i.e. marginal owners) also must have moved to non-marginal (small and large) operator categories by leasing in 'enough' land.

Our contention is that the entire exercise of comparison between the two (i.e. D1 and D2) attempted by the authors does not appear to be valid due to two reasons.[1]

One, coverage of land holdings under D1, i.e., household ownership holding distribution is different from that under D2 i.e. distribution of household operational holdings. Secondly, even otherwise, the distributions D1 and D2 cannot be compared categorywise because simultaneous downward and/or upward movements of households from every size class to the other size classes do not allow unambiguous interpretation of the net effect of such movements. We shall elaborate these two points. While doing so, in the subsequent discussion we use the terms land owning households and household operational holdings inter-changeably.

As mentioned above, the universes of land which D1 and D2 represent are not identical though the basic unit of observation is household for both of them[2]. D1 covers all the three types of land holdings, viz., (i) entirely non-agricultural holdings (i.e. of land under house sites, other buildings put to non-agricultural uses or under paths, water bodies, etc., or of forest lands), (ii) partly agricultural holdings and (iii) wholly agricultural holdings. But the coverage of D2 is restricted only to the latter two types of holdings. Therefore, households possessing entirely non-agricultural holdings (i.e. the first type of holdings) obviously get classified as non-operating households under D2. Thus, they get treated as non-operators not because of 'their leasing out wholly' but due to possession of non-agricultural land alone.

At this stage, two points deserve special attention. One, the above mentioned differential coverage of land holdings under D2, i.e., of wholly and partly agricultural holdings in exclusion of entirely non-agricultural holdings, was introduced in the National Sample Surveys for the first time since the Sixteenth Round (July 1960-June 1961).[3] The reason was to obtain internationally comparable agricultural statistics in response to the World Food and Agricultural Organisation's (FAO) Programme of Agricultural Census, (1960). Secondly, as D2 by definition includes mixed (i.e. partly agricultural and partly non-agricultural) holdings, area under an operational holding, is classified into four broad categories of land utilisation, viz., (i) net area sown, (ii) current fallow, (iii) other fallow and (iv) others, covering even the non-agricultural uses under the fourth category of 'others'. It is, therefore, evident that such classification of land under operational holding is in no way inconsistent with our argument of differential coverage of land holdings under D1 and D2.

The question that now arises is whether the proportion of entirely non-agricultural holdings is negligible in rural areas. Evidence obtained from the Seventeenth Round demonstrates that it is not so. We preferred to discuss the Seventeenth Round for illustration because it is only for this Round that from the published report we could derive the figures of entirely non-agricultural holdings for different ownership size classes (Appendix I). Published reports for the subsequent rounds do not provide required data to examine this issue.

The total number of rural households as estimated in the Seventeenth Round were 72.466 million in 1961-62. Of them landless households were 8.466 million (same figures are reproduced by the Authors in Column 3, Table 1, page 727). The rest, i.e. 64.0 million, were the land owning households. Out of them ownership holdings reporting agricultural land were estimated to be 48.392 million (Appendix I). This implies that as many as 15.602 million or 21.55 per cent of all the rural households owned entirely non-agricultural holdings in 1961-62. The question of leasing out of agricultural lands and thereby becoming non-operators does not arise in their case. They would remain non-operators due to their non--agricultural ownership provided they do not lease in agricultural lands. Besides, it is pertinent to note that majority of such households (i.e. 13.86 million out of 15.602 million) belong to the lowest size class of ownership, i.e. category 1: 0.006 to 0.49 acres, which is at the bottom of the marginal owner class (Appendix I). Further, it is quite remarkable that the average ownership of households belonging to this lowest class is 0.09 acres (derived from columns (2) and (3) in Appendix I). In all probability, majority of such tiny holdings concentrated in the lowest size-class of ownership appear to be the house-sites and or other lands used for non-agricultural purposes. This feature of ownership holding distribution is not typical of 1961-62 distribution alone but is also revealed by 1971-72 (i.e. 26th Round) and 1981-82 (i.e. 37th Round) household ownership distributions. Therefore, our submission is that it is the presence of large number of such tiny holdings (majority of whom are likely to be non-agricultural even in 1971-72 and 1981-82) in the lowest size class of ownership holdings that explains significant excess of non-operators over the non-owner or landless households and is unlikely to be the result of 'leasing out wholly' by the marginal owners. Thus, one of the major conclusions of the Authors' exercise appears to be incorrect.

Now we turn to the second major comment that categorywise comparison between D1 and D2 on the basis of net effect (i.e. difference between the number of owning households and operating households) may not lead to unambiguous conclusions even if the coverage of holdings under D1 and D2 is identical. Alternative combinations of simultaneous movements of households across the ownership classes may be visualised with alternative interpretations associated with them. For example, net effect of changes due to lease transactions in the 17th Round, shown in Table 2 of the article may be decomposed as shown below in column (5) and interpreted differently than what has been argued by the authors.

SEVENTEENTH ROUND

Category (1)	Household ownership holdings (2)	Household operational holdings (3)	Difference (4)	Decomposition of column (4) (5)
Landless/ non-operators.	8.46	19.46	11	6+5
Marginal	39.41	22.27	-17.14	-17.14-5
Non-Marginal	24.60	30.74	6.14	-6+12.14
All	72.47	72.47	0.0	0.0

It is evident from column (5) in the above table that decline in marginal holders by 17.14 million may not only be the result of 11 million holders moving to the lowest class by 'leasing out wholly' and the rest i.e. 6.14 moving to non-marginal category by leasing in sufficiently. It may be a combination of 5 million marginal owners moving to non-operator's class by leasing out wholly and another 12.14 million becoming non-marginal by leasing in sufficient land. Simultaneously, 6 million non-marginal owners may move to non-operator class by leasing out wholly. Thus, no unique interpretation can be assigned to the observed differences. Hence, categorywise direct comparison between D1 and D2 should not be attempted. For factual assessment what is needed is two-way distribution of households according to ownership and operational size classes. Even this would not help when D1 includes entirely non-agricultural holdings but D2 excludes them i.e. treats them as non-operational.

Finally, attention of the authors may be drawn to a minor mistake in the categorywise number of holders shown in column (3) Table 1 (Page 727). The figures should be 8.47 mill., 35.06 mill., 10.98 mill. and 17.96 million.

(Ms). S.D. Sawant,
Prof. of Agricultural Economics,
Department of Economics,
University of Bombay,
Bombay.

NOTES

1. The author is grateful to Prof. M.L. Dantwala for drawing her attention to this exercise.

2. For details refer to Sawant S.D., 'Distribution of Land Holdings from the National Sample Survey', *Indian Journal of Agricultural Economics*, Vol. 45, No. 2, April-June, 1990.

3. As against the differential coverage of land under D1 and D2 since the Sixteenth Round, coverage was identical in the first National Sample Survey (Eighth Round) on land holdings in rural areas. That is why the NSS Report on Eighth Round specially mentions: "It is important, therefore, to bear in mind that an operational holding may consist, for example, of just a house-site" (NSS Eighth Round: July 1954, Number 10, page 9).

APPENDIX I. DISTRIBUTION OF HOUSEHOLD OWNERSHIP HOLDINGS
(SEVENTEENTH ROUND, RURAL, 1961-62)

	Size Class of Ownership holding (acres) (1)	Estimated number of households/household ownership holdings (000) (2)	Estimated area owned (000 acres) (3)	Estimated number of households reporting agricultural land (000) (4)	Estimated number of households reporting non agricultural land only Col. (2)-(4) (000) (5)
1.	0.006 - 0.49	19,005	1,732	5,159	13,846
2.	0.50 - 0.99	4,574	3,330	4,278	296
3.	1.00 - 2.49	11,484	19,064	11,115	369
4.	2.50 - 4.99	10,984	39,401	10,364	638
5.	5.00 - 7.49	6,007	36,783	5,841	166
6.	7.50 - 9.99	3,310	28,517	3,213	97
7.	10.00 - 12.49	2,310	25,551	2,236	74
8.	12.50 - 14.99	1,375	18,852	1,345	30
9.	15.00 - 19.99	1,793	30,708	1,742	51
10.	20.00 - 24.99	1,094	24,152	1,084	10
11.	25.00 - 29.99	622	16,932	610	12
12.	30.00 - 49.99	1,005	3,746	987	18
13.	50.00 & above	437	35,379	436	1
14.	All sizes (excluding landless)	64,000	328,738	48,393	15,608
15.	Landless (i.e. 0.0 - 0.005)	8,466	0.0	-	-
16.	All households	72,466	328,738	-	-

Sources: Column 4: Based on Table 4, page 22, NSS Report No. 162.
Columns 2 & 3: Based on Table 2, page 13, NSS Report NO. 144.

Response

Professor (Ms.) Sawant considers that one reason why our comparison of the distributions of Household Ownership Holdings and Household Operational Holdings is invalid is that in the second case "only wholly or partly agricultural holdings" are considered, whereas the first case "also covers entirely non-agricultural holdings". This difference is not true of the data that we have used. We are enclosing xerox copies of pages 8 and 9 of the Report Number 331 of NSSO (37th Round, January-December, 1982, Report on Land Holdings - 2, Some Aspects of Operational Holdings). As may be seen clearly from para 1.6.12, land included in the operational holdings are classified into four categories, viz., (I) net area sown, (II) current fallow, (III) other fallow, (IV) "others", which include (i) area under miscellaneous crops, groves, etc., (ii) cultivable waste (iii) barren and uncultivable land, (iv) pastures, (v) forests and (vi) land put to other uses, such as buildings, paths, etc., or under water (tank, canals, wells, etc.).

Another argument advanced by Professor Sawant is that "these criss-cross movement of households over the land holding categories rule out categorywise direct comparison between the two distributions". It is not at all clear why comparison is ruled out. All one has to remember is that the changes reflect the *net* results of all these criss-cross movements - one cannot say anything about the actual movements.

As to the difference between the NSS estimate of marginal owners leasing out land and the inference drawn by us from a comparison of the two distributions, the problem is for the NSSO to explain the lack of consistency. According to us, the most likely reason of the difference lies in the owners of land under-reporting, leasing-out of land. It is well known that for the same reason, NSS estimates of land leased out do not tally with the estimate of land leased in.

Ashok Rudra and Uttara Chakraborty,
Visva Bharati,
Santiniketan.

I - Pages 8 and 9 of the Report number 331 of NSSO (37th Round, January-December, 1982, Report on Land Holdings - 2, Some Aspects of Operational Holdings).

1.6.6 *Individual and joint operational holdings:* An operational holding managed by the members of a single household was taken as an individual holding and a holding managed by members of different households jointly was considered as a joint holding.

1.6.7 *Parcel:* A parcel of an operational holding was a piece of land entirely surrounded by other operational holdings or by land not forming part of any operational holding. It might consist of one or more plots.

1.6.8 *Owned land:* A plot of land, included in the operational holding, was considered to be owned by the operator of the holding if the right of permanent heritable possession, with or without the right to transfer the title, was vested in a member/members of the operator household. Land held in owner like possession on under long term lease or assignment was also considered as land owned.

1.6.9 *Leased in land:* All land included in the operational holding and leased in by an operator household (other than the land which was treated as under owner like possession) who had the possession over the land without the right of ownership constituted 'leased in land' of the holding.

1.6.10 *Neither owned nor leased in land:* All such land included in the operational holding which was neither owned by any operator household nor leased in by them came in this category. Area operated on encroached land, or on squatter basis, are examples of this type.

1.6.11 *Drainage facility:* A plot of land was considered to have drainage facility if there existed some method of removal of excess water from the surface of land, from the upper layers of soil or sub-soil by artificial means for the purpose of making non-productive wet land productive and productive wet land more productive. Natural drainage i.e. automatic outflow of excess water from the plot of land by virtue of the position of the land was not taken into account here.

1.6.12 *Land utilisation of the holdings:* The purpose to which the land included in the operational holding was put during the whole agricultural year gave the land utilisation of the holding. The usual nine-fold classification of land use have been clubbed into 4 classes for presentation of results in this report. These classes are given below:

(i) *Net area sown:* It consisted of area sown with crops and orchards, counting only once the area sown more than once in the same agricultural year.

(ii) *Current fallow:* This comprised of cultivable area kept fallow during the current agricultural year. If any seedling area in the current agricultural year was not cropped again in the same year, it was also treated as current fallow.

(iii) *Other fallow:* All lands which had been taken up for cultivation in the past but were temporarily out of cultivation for a period of not less than one year and not more than five years, including the current agricultural year were classified under 'other fallow'.

(iv) *Others:* This included (i) area under miscellaneous tree crops, groves, etc., such as land under casurina trees, thatching grasses, bamboo bushes and other groves for fuel, etc. (ii) cultivable waste i.e. lands available for cultivation but not taken up for cultivation or abandoned after a few years, (iii) barren and uncultivable land i.e. lands which cannot be brought under cultivation unless at high cost, (iv) pastures and grazing lands, (v) forest and (vi) land put to other uses such as buildings, paths, etc. or under water (tanks, canals, wells, etc.).

II - The National Sample Survey, 17Th Round; September 1961-July 1962, Number 162, Table With Notes On Some Features Of Land Holdings In Rural Areas

This report entitled "Tables with Notes on Some Features of Land Holdings in Rural Areas, Seventeenth Round, September 1961-July 1962" was prepared by the Indian Statistical Institute, Calcutta. The views contained in the report are not necessarily those of the Government of India.

CHAPTER ONE

INTRODUCTION

1.1. In response to the World Food and Agricultural Organisation's (FAO) programme of Agricultural Census (1960), the land holdings enquiry was carried out by the National Sample Survey (NSS) in its sixteenth round (July 1960-June 1961). The survey was continued in the seventeenth round (September 1961-July 1962) also with a view to obtaining dependable estimates at the regional level by pooling the data of both the rounds. The important findings as obtained from the seventeenth round data have been presented in previous report (NSS Report No. 144). Some other results covering various aspects of land holdings especially the characteristics of the household holdings (ownership and operational) and area under different crops in agricultural holdings have been given in this report.

1.2. The sampling design, the concepts and definitions and the items of enquiry were the same as in the sixteenth round. It may be recalled here that an inter-department committee on Agricultural Census (1960) consisting of the Planning Commission, the Central Statistical Organisation, the Indian Council of Agricultural Research, the Ministry of Food and Agriculture, the Ministry of Community Development and the Directorate of National Sample Survey was set up by the Government of India to finalise the concepts and definitions adopted in the survey, taking into account the recommendations from FAO. It may be mentioned that FAO was mainly interested in the data on agricultural holdings while over and above those, the data on the structure of land ownership were required to fulfil the national needs.

1.3. The survey was carried out in the whole of India excluding Andaman and Nicobar Islands, Laccadive, Minicoy and Amindivi Islands, Ladakh district of Jammu & Kashmir, North East Frontier Agency and some inaccessible areas of Manipur.

1.4. The survey started in September 1961 and ended in July 1962. The total period was split up into six sub-rounds of eight weeks each.

1.5. Altogether 3,888 villages were planned to be surveyed under a scheme of three independent and interpenetrating net-work of samples, each of which could provide valid estimates of the characteristics. It may be mentioned that in effect, however, 3,486 villages could be surveyed. This was mainly due to the delay in the recruitment of additional investigators, entrusted with the work of surveying the sample villages of the third sub-sample. Where as in most of the states some villages, generally, those belonging to sub-round 1 of sub-sample 3 could not be surveyed, in Orissa the sample villages of sub-sample 3 could not be surveyed. It may also be noted that mainly on the considerations of availability of the investigating staff, the sampling design was so oriented as to permit only one sample in Delhi (sub-sample 1 only) and two sub-samples in Himachal Pradesh (sub-samples 2 and 3) instead of three sub-samples.

1.6 The results of the survey have been presented for each of the three sub-samples and also by combining the three sub-samples in Appendix II. The divergence between the sub-sample estimates provides some idea about the margin of uncertainty of the estimates. In chapter Two, the important results have been summarised. For ready reference, the concepts, definitions and the sampling design have been given in Appendix I.

Comments

Rudra and Chakraborty in their paper have stated in footnote 1 that the data on household operational holdings were not tabulated for 1953-54 (8th Round). This is not correct. The data are available (NSS Report No. 74, p. 419 and NSS Report No. 66, Pp. 45-110).

H.R. Sharma,
Asstt. Professor,
Dept. of Agricultural Economics,
Himachal Pradesh Krishi Vishvavidyalaya,
PALAMPUR-176 062.

Prof. M.L. Dantwala brought to our notice that in Vol. III No. 4. (October - December 1991) issue of the Journal of Indian School of Political Economy, in the article on 'Growth Performance of Indian Agriculture' by Dr. Deepak Ahluwalia, there appeared to be an error in Table 14 in the figure of yield of foodgrains in the post-green revolution, 1967 - 89, period at 0.9 per cent per annum. We had referred this to the author who has re-done the calculation and the revised figure given is 1.9 per cent per annum. The revised figures of growth rates for the post-green revolution period (1967-89) should read as follows:

Foodgrains P. 2.5
A. 0.2
Y. 1.9

V.M. Dandekar
(Editor)

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