

The Scale of Black Income: a Fiscal Approach

1. Introduction

Our attempt, in the previous chapter, to gauge the scale of black income through a currency demand equation approach ended on an agnostic note. In this chapter we mount a fiscal approach to the problem.¹ In doing so, we emulate earlier exponents of this approach—Kaldor (1956), Wanchoo Committee Report (1971) and Chopra (1982)—in two essential respects. First, the concept of black income pertinent to this approach is the fiscal one, namely, income which should have been declared to the tax authorities, but was not. Second, the crux of the method lies in arriving at an independent estimate of total income subject to tax and comparing this to total income actually assessed for taxation (typically a lower amount), with the discrepancy being the measure of black income. Given the availability of data, the basic exercise is limited to 1975-76, though a crude extrapolation is also attempted for a more recent year, 1980-81. Furthermore, the exercise is confined to the evasion of non-corporate incomes, though, as we shall argue later, this limitation may not be as much of a handicap as it may appear at first sight.

The essence of our approach consists of estimating a *distribution of income by earner* and then allowing for the main exclusions, exemptions and deductions which are permitted

under the Income Tax Act in order to arrive at an estimate of incomes which should have been assessed to tax. We believe that operating with an earner-wise income distribution allows us to obtain much better estimates than the Kaldor/Wanchoo/Chopra method which relies on rough guesses about the proportions of non-salary income in each sector which are believed to be above the basic exemption limit for income tax.

The principal steps in our analysis are as follows:

- (i) The official National Accounts Statistics (NAS) are used as a starting point to derive an estimate of gross personal income accruing to households. The procedure is outlined in Section 2.
- (ii) For essentially the same concept, namely, gross personal incomes, the all-India survey of household incomes for 1975-76 by the National Council of Applied Economic Research (NCAER) provides estimates of the distribution of income, separately for urban and rural *households* (NCAER, 1980). These distributions by *household* are *converted* to distributions by *earner* on the basis of certain assumptions. To facilitate further computations the actual distributions are then approximated by log normal distributions. Section 3 summarises the assumptions and procedures.
- (iii) The total gross personal income estimated by the NCAER survey falls substantially below the corresponding estimate in the NAS. We treat the NAS total as the controlling one and "scale-up" the NCAER-based distributions according to several alternative assumptions. The underlying rationale and assumptions are described in Section 4.
- (iv) The lognormal, earner-wise distributions of income, so obtained, constitute our key analytical tools. Working with these distributions we proceed to make allowances for the major exclusions, exemptions and deductions permitted under the Income Tax Act. This is done separately for the urban and rural distributions, with due allowance for different components of income (salary, business, etc.). The result of these labours

yields estimates under alternative assumptions, of the total income which should have been declared for for income tax assessment. Section 5 outlines the procedure and the results.

- (v) These estimated totals are then compared in the next section, Section 6, with the information from the AIITS (suitably adjusted for undercoverage) about the total of non-corporate incomes *actually* assessed to tax. The discrepancies yield alternative estimates of black income under the fiscal approach.
- (vi) In Section 7 the results obtained for 1975-76 are extrapolated to 1980-81 on the basis of a number of assumptions and some more recent information.
- (vii) Thus far the analysis is predicated on the assumption that the NAS estimate of gross personal household income is correct. In Section 8 we relax this assumption and explore the consequences of some alternative assumptions regarding the extent to which the NAS estimates may be biased downwards because of tax evasion and related factors.
- (viii) The entire analysis is subject to a large number of qualifications and shortcomings. The principal ones are discussed in Section 9. In each case we offer a judgement about the direction of resulting bias in our estimates of black income.

2. National Accounts Statistics: From Net Domestic Product to Gross Personal Income

The annual CSO publications on National Accounts Statistics readily provide information on such concepts as GNP, GDP and NDP. They also present the steps necessary to go from these aggregates to the corresponding total of gross personal income accruing to households. Table 5.2.1 presents the steps in the transition from NDP at factor cost to gross personal income accruing to households for the years 1975-76 and 1980-81.

These totals of gross personal income are only the starting point for the estimation of taxable income. It is easy to see why. If the total of gross personal income were distributed

equally across all earners, then each earner would have earned about Rs 3,500 in 1975-76, less than half the income tax exemption limit of Rs 8,000.² In other words, taxable income would have been zero. Therefore, quite obviously, it is essential to have some knowledge about the *distribution* of gross personal income in order to arrive at any estimate of taxable income. It is to this that we now turn.

TABLE 5.2.1
From Net Domestic Product to Gross Personal Income
(Rs crore in current prices)

	1975-76	1980-81
1. <i>Net Domestic Product at factor cost</i>	62,324	106,209
2. <i>Less</i> income from entrepreneurship and government accruing to government administrative departments	997	2,245
3. <i>Less</i> saving of non-departmental enterprises	222	184
4. <i>Income from domestic product accruing to the private sector</i>	61,105	103,780
5. <i>add</i> interest on national debt	491	1,500
6. <i>add</i> net factor income from abroad	-255	330
7. <i>add</i> current transfers from government administrative departments	1,350	2,808
8. <i>add</i> current transfers from the rest of the world	528	2,064
9. <i>Private income</i>	63,219	110,482
10. <i>Less</i> savings of private corporate sector	347	2,513
11. <i>Less</i> corporation tax	862	1,311
12. <i>Net Personal Income</i>	62,010	106,658
13. <i>add</i> consumption of fixed capital (households)	2,492	4,871
14. <i>Gross personal income</i>	64,502	111,529

Source : Government of India, CSO (1983).

The Distribution of Gross Personal Income

The most recent all-India survey of household income is the one carried out by the NCAER for 1975-76. The results of this survey were published in two volumes (NCAER, 1980). In addition, the NCAER made available to us some

hitherto unpublished cross-tabulations of the survey information. Since the survey is our primary data source on the distribution of income, a few remarks on its nature and quality are in order.

The survey employed a multi-stage sampling strategy to obtain a final sample of 5124 households. In order to improve the estimates for the relatively small number of high and middle income households in the country, the sampling strategy was deliberately skewed to achieve over-representation of these households. As a consequence, about two-fifths of the sample was drawn from urban households, though these households accounted for just over one-fifth of the nation's population. This characteristic of the survey as well as the separate tabulations for urban and rural households are particularly desirable features for our purposes, since the bulk of taxable income can be expected to be attributable to urban households. This is so partly because urban households, are, on average, richer than rural households, and, more importantly, because incomes from agriculture are exempted from taxation. The survey's definition of income suffers from no obvious drawbacks. More importantly, for our purposes, the income concept is more or less congruent with the notion of gross personal income in the NAS.³ For example, capital gains and other windfall receipts appear to be excluded from both concepts of income.

The survey data used in this report are recorded in Tables A.1.1 through A.1.4 of Appendix 1. These tables present the survey results according to a three-way classification, separately for urban and rural households. This three-way classification consists of household income ranges (or classes), source components of income (agriculture, business, salary, etc.) and, what we call the earner-density of households, that is, the number of earners per household. There are two key tables (separately for urban and rural households), one giving the frequency distribution of households and the other presenting the distribution of household incomes, in each according to the same three-way classification. For easy reference, summary versions of the two *urban* tables are shown in Tables 5.3.1 and 5.3.2. Note that

TABLE 5.3.1

Summary Version of the Household Distribution of Income (NCAER)
by Source Component of Income for Urban India. 1975-76

Rs. million				
Household income ranges (Rs)	Agricultu- ral income	Livestock income	Business income	Salary income
(1)	(2)	(3)	(4)	(5)
0-1200	26.40	0.00	44.17	42.45
1201-2400	116.31	1.09	422.24	253.29
2401-3600	387.25	215.79	2313.33	2390.98
3601-4800	508.95	98.24	2605.19	6292.82
4801-6000	587.62	176.15	3485.10	8302.60
6001-7500	533.79	299.58	3075.55	7901.01
7501-10000	619.35	317.09	5409.39	11510.74
10001-15000	821.77	228.50	595.056	12318.48
15001-20000	480.41	113.97	4031.14	9170.60
20001-25000	377.06	37.66	2554.99	6179.87
25001-30000	117.65	88.26	2927.32	3237.94
30001-60000	295.67	73.27	1597.44	4117.12
40001-50000	311.08	25.22	1563.20	1436.60
Over60000	239.04	15.89	3510.93	633.70
All Income Ranges²	5422.36	1690.72	39496.54	73788.10
<i>Earners-Density of Household¹</i>				
One-Earner	3191.22	1003.57	20718.67	47792.94
Two-Earner	1142.35	346.91	10136.39	18895.78
Three-Earner	696.25	74.06	3896.90	5070.81
Four-Earner	197.57	31.49	1604.49	1548.95
More than Four- Earners	194.95	234.69	3140.08	479.63
GRAND TOTAL	5422.36	1690.72	39496.54	73788.10

Notes: 1. Earner-Density of households are given only for 'All Income Ranges'. For the other income ranges, see Table A.1.1 Appendix 1.

2. Totals may not tally due to rounding.

Source: Same as for Table A.1.1, Appendix 1.

(Rs million)

Agricultural wage income	Non-agricultural wage income	Housing income	Dividend and interest income	Transfer income	Gross income
(6)	(7)	(8)	(9)	(10)	(11)
25.70	73.04	20.15	0.00	16.02	247.92
361.44	3243.19	132.51	0.00	31.81	4561.80
88.15	5014.65	403.03	3.44	519.23	11335.86
56.00	3598.78	738.07	2.44	286.21	14186.70
207.99	1640.90	514.49	45.23	628.78	15589.25
0.00	1498.99	452.08	31.50	790.79	14492.79
0.00	673.06	780.44	39.99	907.31	20257.38
19.44	183.56	1570.23	95.51	448.39	21941.92
0.00	16.42	764.82	118.53	585.40	15281.79
0.00	2.27	534.97	52.46	110.95	9850.14
0.00	0.00	487.18	44.14	117.95	7020.40
0.00	6.53	430.72	46.64	81.35	6648.90
0.00	0.00	349.41	43.57	7.35	3736.65
0.00	0.00	284.29	2.70	0.00	4685.54
758.72	15861.39	7762.39	526.14	4531.76	149838.12
272.36	7736.60	4602.60	310.94	3484.25	89113.14
230.92	6242.75	1777.29	174.91	537.54	39484.85
36.64	1496.01	778.08	30.03	258.24	12337.02
207.99	386.03	265.63	8.55	245.58	4496.28
10.80	0.00	338.80	1.71	6.16	4406.83
758.72	15861.39	7762.39	526.14	4531.76	149838.12

TABLE 5.3.2

Summary Version of the Frequency Distribution of Reporting Households (NCAER) by Source Components of Income for Urban India, 1975-76

(Households in Hundred)

Household Income ranges (Rs)	Agricultural income	Livestock income	Business income	Salary income
(1)	(2)	(3)	(4)	(5)
0-1200	1200	0	800	36
1201-2400	1816	2908	2944	1272
2401-3600	4153	4180	9236	8854
3601-4800	5636	5036	7771	15724
4801-6000	2108	3672	7834	16796
6001-7500	2926	2670	5866	13952
7501-10000	2154	3363	8345	15873
10001-15000	2321	2667	6549	12295
15001-20000	715	823	3351	5935
20001-25000	414	459	1593	3118
25001-30000	207	571	1372	1404
30001-40000	234	234	576	1386
40001-60000	135	162	432	387
Over 60000	90	144	405	189
All Income Ranges	24109	27889	57074	98221
<i>Earners Density of Households¹</i>				
One-Earner	15432	17252	33554	71745
Two-Earner	5786	7575	16455	19949
Three-Earner	1767	1839	4313	4849
Four-Earner	589	234	1183	963
More than Four-Earner	535	989	1569	715

Note: 1. Same as note 1 of Table 5.3.1.

Source: Same as for Table A.1.2.

Table 5.3.2 Contd.

Agricultural wage income	Non-agricultural wage income	Housing income	Dividend and interest income	Transfer income	Gross income
(6)	(7)	(8)	(9)	(10)	(12)
400	1200	1672	0	836	2836
2800	18544	10396	0	1272	24468
436	20481	19906	2800	3600	38315
800	11744	18760	1600	2072	34495
430	4180	12342	2836	3317	29210
0	2544	10244	2580	4180	21463
0	2216	11520	3705	4585	23800
72	504	11623	2664	1579	18264
0	36	4427	2492	1255	8872
0	9	2493	666	198	4387
0	0	1966	297	207	2587
0	18	1368	306	225	1935
0	0	639	171	18	774
0		423	72	0	468
4908	61476	107779	20189	23344	211874
2036	31034	66594	14850	17710	144114
2000	24140	29736	4021	3269	51567
436	5205	7402	1048	976	11215
400	1097	2752	234	980	3220
36	0	1295	36	409	1758

the incomes from different sources, shown in columns (2) to (10) of Table 5.3.1 add up across the columns to give total household income. But in Table 5.3.2 the number of households under each source component of income are *not* mutually exclusive, and are, therefore, not column-wise additive. However, there is a one-to-one correspondence between the amount of income (Table 5.3.1) and the number of households who earned it (Table 5.3.2), given the income range, the earner density of the household and the source component of income.

For our purposes the NCAER data set suffers from one important drawback: it relates to *households*, not *earners*. Yet, for any exploration of taxable income, we need to have the distribution of income by earners, since it is they who are assesseees, not the households. The original NCAER data are coded in a way which does not permit extraction of an earner-wise distribution. We have, therefore, to make certain assumptions to convert the NCAER's household distributions to earner-wise distributions.

Note that the single-earner households present no problem in such a conversion since the income of the household is also the income of the earner. If we treat the income classes as those for earners rather than households, we immediately have the frequency distribution of earners for such households. The ease of this transition is significant given that single-earner households accounted for 68 per cent of all urban households (the primary focus of our analysis) and for 43 per cent of all rural households in 1975-76 (Table 5.3.3). However, the picture is not quite so sanguine when we consider distribution of *earners* by households of varying earner-density (Table 5.3.4). Only 47 per cent of all urban earners belonged to single-earner households; the corresponding percentage for rural households was only 23. Viewed from a different angle we have to devise some procedures, however approximate, for allocating the 53 per cent of urban earners from multi-earner households (and 71 per cent of rural earners from such households) to appropriate income ranges.

TABLE 5.3.3

**Frequency Distribution of Reporting Households (Urban and Rural) by
Earner-Density of Households, 1975-76**

(in million)

Earner-density of households	Frequency of Households	
	Urban	Rural
One-earner	14.4114 (68.02)	33.5484 (43.33)
Two-earner	5.1567 (24.33)	28.0044 (36.17)
Three-earner	1.1215 (5.29)	9.5292 (12.31)
Four-earner	0.3220 (1.52)	4.0392 (5.22)
More than four-earner	0.1758 (0.83)	2.2608 (2.92)
No earner	0.0 (0.00)	0.0360 (0.05)
All households	21.1874 (100.00)	77.4180 (100.00)

Note: Figures in parentheses are percentages.

Source: Based on Tables A.1.2 and A.1.4 of Appendix 1.

The procedure we adopted can be illustrated with the case of two-earner urban households. The distributions of gross personal income and of the number of earners in these households are available from the NCAER data and shown in columns (2) and (3) respectively, of Table 5.3.5. For each (household) income range the average per-earner income is computed and recorded in column (4). We now assume that the *average* income per earner is also the *actual* income for all earners in the relevant (household) income range. Thus, the 0.800 million earners corresponding to the household income range Rs 0-1200, are all assumed to earn Rs 452 each. Similarly the 1.5488 million earners in the next household income range are assumed to earn Rs 880 each. On the basis of the data in column (3) and (4) we can now allocate all

earners from two-earner urban households to appropriate income classes (for earners). Thus, the sum of the first two elements of column (3) gives the total number of earner (from two-earner urban households) earning in the range Rs 0-1200. This total, of 1.6289 million, is only recorded as the first entry in column (6). Proceeding in this manner all of column (6), a derived frequency distribution for earners, is completed. By addition with the *known* frequency distribution for single earner households [(in column (5))] we obtain, in column (7), a derived frequency distribution of earners from single and two-earner households, arranged according to income ranges for *earners*. The same procedure is repeated for all other multi-earner households to yield an approximate frequency distribution of *all* urban earners classified according to income

TABLE 5.3.4

Distribution of Earners (Urban and Rural) from Households of Varying Earner-Density, 1975-76.

Earner-density of household	(in million)			
	Number of earners			
	Urban	Urban cumulative	Rural	Rural cumulative
One-earner	14.4114 (47.48)	14.4114 (47.49)	33.5484 (22.83)	33.5484 (22.83)
Two-earner	10.3134 (33.98)	24.7248 (81.47)	56.0088 (38.11)	89.5572 (60.93)
Three-earner	3.3645 (11.08)	28.0893 (92.55)	28.5876 (19.45)	118.1448 (80.38)
Four-earner	1.2880 (4.24)	29.3773 (96.80)	16.1568 (10.99)	134.3016 (91.38)
More than four-earner	0.9725 (3.20)	30.3498 (100.00)	12.6720 (8.62)	146.9736 (100.00)
All-earners	30.3498 (100.00)		146.9736 (100.00)	

Note: Figures in parentheses are shares in total number of earners.

Source: Same as in Table 5.3.3.

TABLE 5.3.5
Conversion of Household Frequency Distribution to Earner-Wise Frequency
Distribution : Illustration for 'Two-Earner' Urban Households, 1975-76

Income ranges (Rs)	Two-earner households		Derived Frequency distribution of earners			
	Gross income (Rs. mil)	Number of earners (Mil.)	Per- earner income (Rs)	One-earner households	Two-earner households	One+two- earner house holds
(1)	(2)	(3)	(4)=2÷3	(5)	(6)	(7)=5+6
0-1200	36.20	0.0800	452	0.2436	1.6288	1.8724
1201-2400	1362.74	1.5488	880	1.5524	3.4976	5.0500
2401-3600	1872.34	1.3016	1438	3.0207	1.6262	4.6469
3601-4800	4529.85	2.1960	2063	2.2715	1.1332	3.4047
4801-6000	2340.58	0.8890	2633	2.3349	1.2928	3.6277
6001-7500	2468.20	0.7372	3348	1.5597	NIL	1.5597
7501-10000	4897.03	1.1332	4321	1.5751	0.4680	2.0431
10001-15000	7736.27	1.2928	5984	0.9483	0.4454	1.3937
15001-20000	4035.94	0.4680	8624	0.5236	0.1404	0.6640
20001-25000	3632.74	0.3194	11374	0.1764	0.0576	0.2340
25001-30000	1712.68	0.1260	13593	0.1080	NIL	0.1080
30001-40000	2392.61	0.1404	17041	0.0720	NIL	0.0720
40001-60000	1388.59	0.0576	24107	0.0162	0.0234	0.0396
60000 & above	1079.08	0.0234	45114	0.0090	NIL	0.0090
	N	10.3134	---	14.4114	10.3134	24.7248

Source: As explained in the text.

classes which pertain to earners. A similar procedure is used to generate a frequency distribution for rural earner-wise income ranges. The details are given in Appendix 1.

The procedure deployed is admittedly crude. It is based on the crucial assumption that for any given household income range and earner-density the average per earner income is in fact the income earned by all earners in that group. The assumption clearly violates reality and is a possible source of error. But given the limitations of the underlying data and the nature of our enterprise we feel justified in treating the assumption as a necessary approximation.

The frequency distributions so obtained are not readily tractable to analytical manipulations. For that we need to fit analytical distributions to the given frequency distributions. We note that our frequency distributions resemble typical distributions for income, wealth and consumption, in which a large number of earners are concentrated at relatively low levels of income, while relatively fewer earners are scattered at the higher income levels. Figure V.1 shows a plot of the urban frequency distribution. It has been found that this type of frequency distribution can be approximated by a log-normal function. The lognormal is a two parameter distribution, with μ as the "location" parameter and σ as the "dispersion" parameter. It recommends itself because of its analytical tractability.

We fitted lognormal functions to our urban and rural frequency distributions and tested for "goodness of fit" with the χ^2 -statistic. The details are given in Appendix 1. Basically, the fit was "good" (i.e., above 90 per cent confidence level) for the urban frequency distribution. In the rural case, the lognormal was a "good fit" only in the case of the single-earner distribution. For the all-earners case we assumed the lognormal to be a crude approximation, with σ , the dispersion parameter, being taken from the single-earner fitted distribution, and with μ being given by the total number of earners and total rural income.

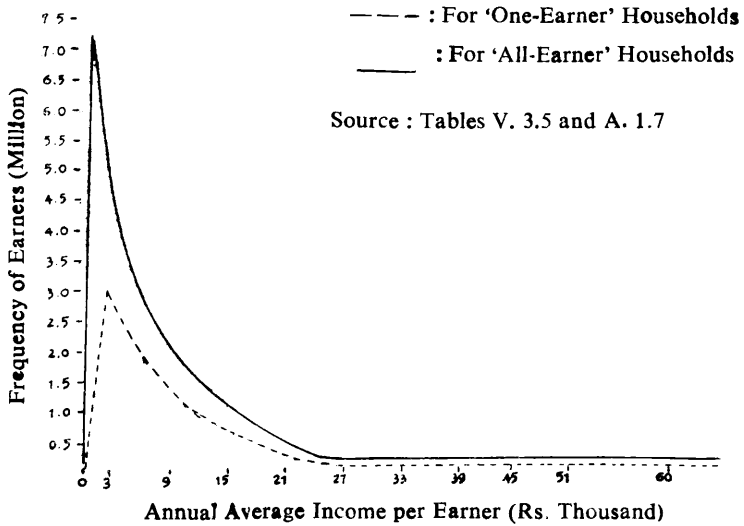
4. Matching the NCAER and NAS totals of Gross Personal Income

Based on the survey results and the sampling fractions used, the NCAER study estimates gross household personal income at Rs 45.1 thousand crore in 1975-76. The corresponding estimate of gross personal income from the NAS for the same year is Rs 64.5 thousand crore⁵. That is, the NCAER total is just 70 per cent of the NAS total. How do we account for this discrepancy and what should we do about it?

First, as we noted earlier, the concept of gross personal income is almost identical in both data sources. So, lack of conceptual congruence is not a promising line of enquiry to explain the substantial divergence in the estimates. Second, some mileage can be had from adjustments in the population data. The NCAER reports a 1975-76 population total of 588.9 million, with 122.9 million in urban areas and 466.0 million in rural areas (the classification of urban and rural areas was based on the 1971 census). But in the light of the final totals for the 1981 census we interpolate an estimate of 616.7 million for all India in 1975-76. Following Bhalla and Vashista (1983) we use this information to compute an adjustment factor ($616.7/588.9=1.047$) to be applied to the NCAER total of gross household income. This yields a revised total of Rs 47.3 thousand crore. But this total is still only 73.3 per cent of the corresponding NAS figure; the two dilemmas of how to explain the discrepancy and what to do about it remain.

We resolve the first dilemma by choosing to treat the NAS estimate of gross personal income as the "controlling" total. We justify this decision on the following grounds. First, as Bhalla and Vashista (1983, p. 11) observe, national accounts data command a "natural" authority. National and international bodies regularly analyse and appraise economic performance on their basis. Planning, investment allocation, regional policy, fiscal and monetary policies all habitually rely on the national accounts statistics. The overwhelming

FIGURE V.1
Frequency Distribution for Urban India by Income
Ranges for Earners: 1975-76
(Based on NCAER Data)



bulk of macroeconomic research is predicated on the accuracy of national accounts data. Second, and perhaps more substantively, the machinery for compiling national accounts data reflects a very considerable history of investment and effort in statistical systems, data compilation and analysis, an investment which is many times greater than that devoted to a single (and relatively small) household survey. Third, the phenomenon of household surveys yielding lower totals for macroeconomic aggregates than national accounts is quite common, especially in developing countries. The divergence is usually attributed to systematic incentives for under-reporting survey responses, such as fear of fiscal consequences. Fourth, as argued in a later section and Appendix 2, we have reason to believe that the estimates of national income are themselves biased downwards by tax evasion and related behaviour. So considering them as controlling totals imparts, if anything, a downward bias to our estimates of tax-evaded income.

The decision to accept the NAS estimate of gross personal income as the controlling total still leaves open the question of *how* we adjust the NCAER distributions for urban and rural households to take account of the Rs 17.2 thousand crore difference between the (population-adjusted) NCAER total and the NAS total. We proceed as follows. First, the (population-adjusted) NCAER all-India total of gross household income is split between urban and rural sectors in the same proportion as the unadjusted NCAER estimate (Table 5.4.1). This assumes that the shares of urban and rural sectors in the adjusted population total for 1975-76 are the same as in the unadjusted data and, further, that the ratio of earners to population also remains unchanged for both urban and rural sectors.

Second, we allocate the "missing income" of Rs 17.2 thousand crore between the urban and rural sectors according to three different sets of assumptions. Case 1 represents the simplest assumption, namely, that *all* earners underreport income by the same proportion. This assumption can be decomposed into two constituent assumptions: first, that urban earners underreport income to the same degree as rural

earners; and second, that the degree of underreporting is uniform across all income ranges within the urban and rural sectors. From the viewpoint of gauging taxable income both assumptions are conservative. We would expect the proportion of underreporting to be higher among urban earners, partly because the opportunities for reaping black incomes are skewed in their favour and partly because the exemption of agricultural incomes from taxation reduces the incentive to underreport incomes among rural earners as compared to urban ones. Similarly, given a progressive structure of income taxation the probability of underreporting income (to a household survey) is likely to increase with income, in tandem with the probability to underdeclare income to tax authorities.

TABLE 5.4.1

Population-Adjusted Estimates of Gross Household Income (NCAER) and Earners for Urban and Rural India, 1975-76

Item	(Income in Rs crore. Population and earners in million)		
	Urban India	Rural India	All India
Total income (NCAER unadjusted)	14984	30167	45151
Number of earners (unadjusted)	30.35	146.91	177.26
Population (NCAER)	122.90	466.00	588.90
Population (1981 census)	128.70	487.98	616.68
Adjustment factor (Population as per 1981 census ÷ population as per NCAER)	1.047	1.047	1.047
Total income (adjusted) ¹	15691	31590	47281
Number of earners ² (Adjusted)	31.78	153.81	185.69

Note: 1, 2. For details of these computations, see Appendix 1.

Source: As explained in the text.

The equiproportionate scaling up of all incomes in Case 1 implies that the ratio of total urban incomes to total rural incomes remains the same as in the unadjusted NCAER data, that is, in the ratio of 149.8 : 301.7, which is almost exactly 1:2. Thus, in Case 1 the "missing income" of Rs 17.2 thousand crore is allocated in the ratio of 1:2 to urban versus rural earners.

Cases 2 and 3 explore less conservative scenarios by altering this ratio (for allocating the "missing income") in favour of urban earners. In Case 2 the ratio is taken to be 1:1.5 and in Case 3 it is taken as 1:1. In effect these Cases assume that the underreporting of incomes is systematically greater for urban incomes than for rural incomes. Table 5.4.2 presents the consequences of these different assumptions for

TABLE 5.4.2
Gross Personal Income Distributed under Three Different Scenarios
for Urban and Rural India, 1975-76

Item	(Rs crore)		
	Urban India	Rural India	All India
<i>Gross personal income</i> (unscaled, population- adjusted NCAER estimates)	15691.0	31590.0	47281.0
<i>Alternative Allocation of "Missing Income"¹</i>			
(a) U:R = 1:2	5740.3	11480.7	17221.0
(b) U:R = 1:1.5	6888.4	10332.6	17221.0
(c) U:R = 1:1	8610.5	8610.5	17221.0
<i>Scaled-up gross personal income</i>			
(a) U:R = 1:2	21431.3	43070.7	64502.0
(b) U:R = 1:1.5	22579.4	41922.6	64502.0
(c) U:R = 1:1	24301.5	40200.5	64502.0

Note: 1. Missing income for all-India was Rs 17221 crore in 1975-76. For the first scenario (U:R = 1:2) the scaled-up urban total, Rs 21431.3 crore has been obtained by adding one-third of Rs 17221 crore that is, Rs 5740.3 crore to the unscaled urban (NCAER) estimate of Rs 15691 crore. A similar procedure was followed for the other two scenarios by using the corresponding urban-to-rural ratios.

Source: As explained in the text.

the overall split of gross personal income (scaled up to the NAS total) between urban and rural earners. The three different assumptions for allocating "missing income" imply different degrees of underreporting for urban and rural earners. In Case 1 all earners underreport by 27 per cent. In Case 2 urban earners underreport by 31 per cent, while rural earners underreport by 25 per cent. In Case 3 underreporting by urban earners climbs to 35 per cent, while underreporting by rural earners falls to 21 per cent. Note that none of these assumptions is particularly extreme. A really extreme assumption—one whose implication we do not explore—would be that *all* the "missing income" is attributable to underreporting of urban incomes. This would imply that urban incomes were underreported by more than 50 per cent.

However, in all three Cases we retain the assumption that, *within* urban and rural categories, the proportion of underreporting is invariant across income ranges. This permits us to readily modify the log-normal distributions fitted to the urban and rural distributions in the previous section. The details of the procedure are explained in Appendix 1. In essence, the equiproportionate "increase" in the income of all earners in a given frequency distribution leaves the relative relationship of each earner to all others unchanged, and is equivalent to holding the dispersion parameter, σ , constant. The different "scaling up" assumptions—corresponding to the different assumptions for allocating "missing income"—simply lead to different values for μ for each of the urban and rural distributions in the three scenarios. Clearly, for a given urban or rural distribution, the greater the proportionate scaling up, the higher is the amount of income falling in upper income ranges.

This can be seen from Tables 5.4.3 through 5.4.5, which show the details of the estimated distributions of gross personal income by (earner-wise) income ranges for Urban India, Rural India and all-India.

At this stage it is pertinent to ask whether the various assumptions and procedures that we have adopted to go from the raw household-based NCAER information to earner-wise

distributions, scaled up to match the NAS total of gross personal income, may not have done rough violence to reality. In the absence of actual information on the earner-wise distribution of income we cannot give a direct answer to this question. However, it may be suggestive to compare the size distribution of income associated with our derived earner-wise distribution with the size distribution of income implied by the raw NCAER data. Columns (4) and (5) of Table 5.4.6 do this. It is interesting, and reassuring, to observe that the size distributions are remarkably similar. Of course, there is no theorem which says that a size distribution based on household incomes should be similar to the corresponding size distribution based on earners. Nevertheless, we offer Table 5.4.6 as heuristic evidence in support of the assumptions and procedures that we have deployed to derive earner-wise distributions, consistent with the NAS controlling total for gross personal income.

TABLE 5.4.3

Estimated Distribution of Gross Personal Income by Income Ranges for Earners—Urban India 1975-76

Income ranges (Rs) for earners	Gross personal income under		
	Case 1	Case 2	Case 3
	U:R = 1:2	U:R = 1:1.5	U:R = 1:1
1-1200	154.75	138.87	113.76
1201-2400	894.94	833.21	768.85
2401-3600	1497.99	1457.61	1379.91
3601-4800	1652.05	1625.35	1676.72
4801-6000	1740.94	1690.26	1770.03
6001-7500	2015.04	1985.44	2043.19
7501-10000	2866.08	2989.53	3060.19
10001-15000	3846.10	4107.75	4393.71
15001-20000	2312.96	2400.96	2870.07
20001-25000	1340.93	1560.49	1796.01
25001-30000	867.97	1033.35	1166.65
30001-40000	953.61	1096.13	1363.64
40001-60000	708.45	831.64	1028.45
Above 60000	581.19	830.42	871.82
All Income ranges	21433.00	22581.00	24303.00

Source: As explained in the text.

TABLE 5.4.4

Estimated Distribution of Gross Personal Income by Income Ranges for Earners—Rural India, 1975-76

(Rs crore)

Income range for earners (Rs)	Gross personal income under		
	Case 1	Case 2	Case 3
	U:R = 1:2	U:R = 1:1.5	U:R = 1:1
1-1200	2939.35	3003.94	3243.30
1201-2400	8447.39	8868.26	8670.95
2401-3600	8380.84	8269.94	8179.13
3601-4800	6091.41	5831.58	5753.42
4801-6000	4296.62	4281.32	3700.30
6001-7500	3613.76	3452.52	3244.69
7501-10000	3443.24	3326.89	2975.63
10001-15000	2780.86	2581.72	2306.14
15001-20000	899.13	838.86	700.29
20001-25000	345.26	307.02	260.89
25001-30000	142.73	131.11	110.01
30001-40000	104.12	89.13	74.86
40001-60000	37.49	33.38	25.96
Above 60000	1547.80	906.33	954.43
All income ranges	43070.00	41922.00	40200.00

Source: As explained in the text.

5. The Derivation of Taxable Income

The derivation of (approximate) earner-wise distributions which are consistent with the NAS total for gross personal income was a necessary preliminary stage. We now turn to the heart of the matter: the estimation of taxable non-corporate income. We begin by emphasising certain caveats. First, given the complexity of the Indian Income Tax, Act, we cannot hope to account for all the exclusions, exemptions, deductions and allowances which apply to different source components of income. All we can attempt is to gauge the effects of the

TABLE 5.4.5
Estimated Distribution of Gross Personal Income by Income Ranges for Earners - All India, 1975-76

Income ranges for earners (Rs)	Gross personal income under		
	Case 1	Case 2	Case 3
	U:R = 1:2	U:R = 1:1.5	U:R = 1:1
1-1200	3094.10	3142.13	3357.06
1201-2400	9342.33	9701.47	9439.80
2401-3600	9878.83	9727.55	9559.04
3601-4800	7743.46	7456.93	7430.14
4801-6000	6037.56	5971.58	5470.33
6001-7500	5628.80	5437.96	5287.88
7501-10000	6309.32	6316.42	6035.82
10001-15000	6626.96	6689.47	6699.85
15001-20000	3212.09	3239.82	3570.36
20001-25000	1686.19	1867.51	2056.90
25001-30000	1010.70	1164.46	1276.66
30001-40000	1057.73	1185.26	1438.50
40001-60000	745.94	865.02	1054.41
Above 60000	2128.99	1736.75	1826.25
All income ranges	64503.00	64503.00	64503.00

Source: As explained in the text.

TABLE 5.4.6
Size Distribution of Income Based on Derived Earner-Wise Data and the NCAER Raw Household Data for Urban and Rural India, 1975-76

Fractiles	Proportion of Earners			Proportion of households (NCAER raw data) ¹ All India
	Urban India	Rural India	All India	
Bottom 20%	4.55	5.80	5.39	5.77
Bottom 40%	13.66	16.88	15.81	15.69
Top 20%	49.21	25.90	47.00	49.34
Top 10%	31.10	28.39	29.29	33.90

Note; 1. Figures in this column are taken from Bhalla and Vashishta (1983).

Source: As explained in the text.

major ones. Second, the "scaling up" procedure that we adopted in the previous section implicitly assumed uniform degrees of underreporting for all source components of income. Though this is a strong assumption, we shall argue later that it biases our results in a conservative direction, namely, towards underestimating total taxable income, and hence, tax-evaded income. Third, in going from gross personal income to estimates of taxable income, the exercise entails estimation of the quantitative significance of the principal exclusions and deductions. These estimates are based on strong assumptions and scanty data. Such weaknesses are inherent in the nature of the exercise. All we can do is to spell out our assumptions and leave it to the reader to judge the validity of the results obtained.

Our basic approach is to begin with the totals of gross personal income associated with our estimated distributions (earner-income-wise) of urban and rural income and then to proceed to subtract, by stages, tranches of income corresponding to the estimated application of the major exclusions, exemptions and deductions, until one is left with estimates of total assessable income. It is this total of assessable income (urban and rural) which is compared in the next section, to estimates of actual assessed income, with the difference being a measure of noncorporate tax-evaded income.

The exclusions, exemptions and deductions which we try to take into account are as follows:

- (i) the *exclusion of agricultural income*;
- (ii) the *exclusion of house rent allowances (HRA)*, up to certain specified limits, for salary earners;
- (iii) the *exemption (in the hands of salary earners) of employers' contribution to provident funds*;
- (iv) the *standard deduction* pertaining to salary incomes;
- (v) the *deduction of depreciation* from business income;
- (vi) all "*Chapter VI A deductions*", including those pertaining to Sections 80C and 80L of the Income Tax Act, which are designed to enhance incentives for financial savings; and
- (vii) the *exemption limit for income taxation*

We shall consider each of these separately. But before we do so, we note that the list highlights two general points. First, most of the exclusions or deductions pertain not to income in general, but to particular source components of income. This means that we have to have recourse to information on different source components of income. Fortunately, the NCAER survey data provide valuable information, but, as we shall see, their use for our purposes requires additional assumptions. Second, the list of exemptions and deductions is far from complete. Just to take one example it makes no reference to deductions relating to income from housing. Our only defence here is to reiterate that we believe that we have accounted for the *quantitatively important* exclusions, exemptions and deductions, and that is both necessary and sufficient for the kind of "orders of magnitude" exercise that we are engaged in here. In any case, the data necessary to take account of other exemptions and deductions were simply not available.

a. Source component of income : use of the NCAER Survey data. The underlying NCAER survey information is classified according to nine different source components of income. For our purposes, it is generally convenient to aggregate this information into four income categories as follows:

<i>Our Categories</i>	<i>NCAER Survey Components</i>
1. Agricultural Income	Agricultural Income, Livestock Income, Agricultural Wages
2. Salary Income	Salary Non-Agricultural Wages
3. Business Income	Business Income
4. Other Income	Income from Housing Transfers Dividend and Interest

The quantitative importance of different source components of income, according to these two different income classifications, is given for urban and rural India in Table 5.5.1.

In the NCAER survey the information on source components of income is available according to *household* income

ranges (or classes). To make use of this information we have first to transform the information to *earner* income classes. This transformation is accomplished by applying the same procedure that was used in Section 3 to transform the distribution of *households* by *household* income ranges into a distribution of *earners* by *earner* income ranges. Where, earlier, earners were reshuffled across income ranges, this time it is the income of these earners—disaggregated by source components—which is regrouped into earner-wise

TABLE 5.5.1

Composition of Gross Household Income by Source Components
for Urban and Rural India, 1975-76

Source of component of income	(Per cent)	
	Urban India	Rural India
A. NCAER classification		
Agricultural income	3.61	47.88
Livestock income	1.13	6.55
Business income	26.30	7.94
Salary income	49.12	9.51
Agricultural wage income	0.51	13.27
Non-agricultural wage income	10.59	8.36
Housing income	5.17	3.61
Dividends and interest	0.35	0.12
Transfer income	3.22	2.75
Gross income	100.00	100.00
B. Our classification		
Agricultural income (including livestock and agricultural wages)	5.25	67.71
Salary income (including non- agricultural wage income)	59.71	17.87
Business Income	26.30	7.94
Other income (including housing income, dividends and interest, and transfer income)	8.74	6.48
Gross income	100.00	100.00

income ranges. An illustration of the procedure is given in Appendix 1. The net results (shown in tables 5.5.2 and 5.5.3) are distributions of income, disaggregated by source components, and according to earner-wise income classes. We should emphasise that these regroupings of income are consistent with the frequency distributions of earners by earner-wise income ranges that were derived earlier.

The information in Tables 5.5.2 and 5.5.3 relates to earner-wise income distributions prior to the scaling up exercises, conducted in section 4, to match with the NAS controlling total of gross personal income. However, given our assumption that the scaling up exercises are neutral with respect to the different income components, it turns out that the share of each income component in the gross income of any given income range remains unaltered by the scaling up. This means that the weights derived from Tables 5.5.2 and 5.5.3 can be used to compute the distribution of gross income (by component and by income class) in the case of the three pairs (urban and rural) of scaled up distributions obtained under our three different scenarios in the previous Section.⁶ This is done.

To estimate the effect of the standard deduction on salary income it is also necessary to estimate *frequency distributions* for the salary component. This is accomplished by applying the weights (for the salary component) derived from Tables 5.5.2 and 5.5.3 to the frequency distributions of gross income estimated earlier. This yields frequency distributions for salary income according to the 14 major income ranges shown in our tables. To facilitate more precise estimation of the aggregate of standard deductions, lognormal distributions have been fitted to these frequency distributions for salary income. Appendix 1 provides more detail.

We now proceed to estimate the effects of the principal exclusions, deductions and exemptions.

b. Exclusion of agricultural incomes. Under Section 10 of the Income Tax Act, incomes from agriculture are exempt from tax. Strictly speaking, full exemption does not extend to livestock income, the taxation of which is governed by

Section 80 JJ. However, the exemption provisions under this section are so liberal, that we decided to err on the conservative side and assume that all livestock income was tax exempt. Similarly, given the low level of agricultural wages, it is a reasonable approximation to assume that all agricultural wages are exempt from taxation. Thus, we proceeded on the basis that all income connoted by our broad notion of agricultural income was exempt from tax.

Since we have already computed the distribution of agricultural income for both the urban and rural cases, corresponding to our three different scenarios of scaling up, it is a relatively simple matter to subtract the entire amount, in each income class, from the corresponding total of gross income in that class, as a first step in the journey from total gross income to assessable income.

Tables 5.5.4. to 5.5.9 present the result of the step-wise subtractions of the amounts corresponding to the different exemptions and deductions, separately for urban and rural India and for each of our three different scenarios of scaling up. The amount for subtraction attributed to the exemption of agricultural incomes is shown in column (3) of each of these tables.

c. Exclusion of house rent allowance. Under Section 10 (13A) of the Income Tax Act, house rent allowance (HRA) paid to salary earners by their employers is exempt from tax subject to certain specified limits. It did not prove possible to directly apply the tax norms to estimate the quantitative effect of this exemption. Instead, we relied on some earlier work by Bagchi (1975)).⁷ Based on a sample of 1,000 salary earners in Delhi, taken from statements furnished by employers to the Income Tax authorities regarding salaries paid to their employees for 1971-72 (and deductions thereon), Bagchi had computed average rates for HRA and conveyance (taken together) as a proportion of gross income across different income groups.

This use of Bagchi's rates poses some minor difficulties for us. First, the estimated rates include deductions for

TABLE 5.5.2

Unscaled Gross Personal Income Distribution by Income Ranges for Earners, Urban India, 1975-76

Income ranges for earners (Rs)	Agricul tural Income	Livestock income	Business income	Salary Income
(1)	(2)	(3)	(4)	(5)
0-1200	73.27	-11.60	167.58	141.56
1201-2400	586.49	243.70	2870.04	1708.89
2401-3600	451.07	346.04	4379.53	4187.97
3601-4800	372.45	119.99	3747.32	9247.32
4801-6000	1043.86	234.41	5787.96	14004.84
6001-7500	397.42	292.14	2525.46	7963.06
7501-10000	609.56	213.35	4113.53	12704.42
10001-15000	572.78	61.51	5261.96	10027.74
15001-20000	574.56	101.27	3721.69	6707.99
20001-25000	259.50	27.92	3110.32	3077.56
25001-30000	179.20	-1.17	1621.84	1807.43
30001-40000	187.05	57.71	585.33	1439.40
40001-60000	48.44	-0.90	1191.50	518.72
Above 60000	66.71	6.35	412.48	251.20
All income ranges	5422.36	1690.72	39496.54	73788.10

Source: As explained in the text.

(Rs million)

Agricultural wage income	Non-Agricultural wage income	Housing income	Dividend and interest income	Transfer income	Gross income
(6)	(7)	(8)	(9)	(10)	(11)
276.62	1555.23	52.20	nil	39.20	22294.06
337.32	6567.41	492.63	1.47	367.56	13175.51
88.14	4873.91	736.82	15.44	662.39	15741.31
56.64	1916.70	897.83	11.73	203.23	16573.21
nil	698.20	1009.79	82.97	841.98	23704.01
nil	230.27	475.55	37.29	739.72	12660.91
nil	5.27	756.76	55.77	701.61	9160.27
nil	13.14	1537.51	100.20	328.39	17903.23
nil	nil	673.49	124.41	509.71	12413.12
nii	nil	473.38	70.33	66.15	7085.16
nil	nil	312.31	9.72	71.82	4001.15
nil	1.26	206.97	7.48	nil	2485.20
nil	nil	96.15	7.66	nil	1861.57
nil	nil	41.00	1.67	nil	779.41
758.72	15861.39	7762.39	526.14	4531.75	149838.12

TABLE 5.5.3

**Unscaled Gross Personal Income Distribution by Income Ranges for
Earners, Rural India, 1975-76**

Income ranges for earners (Rs)	Agricultural income	Livestock income	Business income	Salary income
(1)	(2)	(3)	(4)	(5)
0-1200	14315.70	1439.13	1376.53	540.00
1201-2400	42437.35	6941.14	5791.82	5234.06
2401-3600	26433.66	4220.41	3596.81	5322.58
3601-4800	17511.91	3291.04	3692.91	5553.61
4801-6000	9306.43	1166.24	1780.96	3388.37
6001-7500	10633.67	1776.98	1054.37	4459.42
7501-10000	9128.17	622.93	1703.44	2648.61
10001-15000	9542.04	264.83	1725.14	1192.98
15001-20000	3010.49	-13.49	325.48	300.78
20001-25000	1619.28	69.89	662.40	0.00
25001-30000	266.47	8.69	522.72	58.10
30001-40000	15.08	2.47	0.00	0.00
40001-60000	190.11	-3.29	0.00	0.00
Above 60000	0.00	0.00	1705.68	0.00
All Income Ranges	144410.36	19786.97	23938.26	28698.37

Source: As explained in the text.

(Rs million)					
Agricultural wage income	Non-agricultural wage income	Housing income	Dividend and interest income	Transfer income	Gross Income
(6)	(7)	(8)	(9)	(10)	(11)
20250.33	7548.91	1321.48	0.99	632.95	47473.76
15931.96	10364.72	3039.15	47.19	1900.84	91752.13
3053.84	4767.54	1964.20	9.81	1659.20	51105.05
650.30	2074.49	1456.77	8.96	1443.11	35699.04
13844.44	402.19	701.61	3.99	432.14	17337.57
5.18	27.90	896.28	1.79	285.28	19273.80
0.09	1.94	626.15	75.17	537.63	15361.02
0.00	0.00	493.52	26.85	776.12	14150.93
0.00	0.00	130.66	5.17	54.00	3816.16
0.00	0.00	70.26	51.88	23.76	2497.47
0.00	0.00	71.33	127.44	0.00	1054.74
0.00	0.00	4.23	0.00	0.00	108.17
0.00	0.00	2.79	0.00	9.00	198.60
0.00	0.00	109.08	0.00	0.00	1814.76
40030.05	25187.69	10887.51	359.24	7753.96	301607.10

TABLE 5.5.4

Step-wise Derivation of the Distribution of 'Net Income' from Gross Income for Urban India, 1975-76, Case 1 ('Missing Income' Allocated in Ratio of U:R=1:2)

Income ranges for earners	Gross income	Agricultural income	Depreciation	Standard deductions	H.R.A. Deductions
(1)	(2)	(3)	(4)	(5)	(6)
1-1200	154.75	28.49	1.03	26.32	0.00
1201-2400	894.94	82.52	17.79	117.71	0.00
2401-3600	1497.99	87.61	38.03	185.77	0.00
3601-4800	1652.05	56.74	34.09	189.68	0.00
4801-6000	1740.94	96.92	38.31	202.53	50.02
6001-7500	2015.04	114.07	36.67	222.61	67.55
7501-10000	2866.08	128.10	56.15	321.46	97.53
10001-15000	3846.10	140.61	103.15	396.11	109.88
15001-20000	2312.96	122.01	63.28	208.53	67.42
20001-25000	1340.93	56.56	53.71	125.61	58.33
25001-30000	867.97	40.09	32.10	71.06	39.06
30001-40000	953.61	97.74	20.37	64.43	52.43
40001-60000	708.45	17.53	40.92	37.90	18.90
Above 60000	581.19	56.69	28.00	98.70	7.12
All Income Ranges	21433.00	1125.68	563.68	2268.42	568.24

Source: As explained in the text.

(Rs crore)

Employers' contribution to P.F.	Ch.VIA rates	Sum of cols. 3 through 7	Col.2 minus col.9	Amount of ch.VIA deductions	Net income (Col. 10-11)	Cumulative of Col. 12.
(7)	(8)	(9)	(10)	(11)	(12)	(13)
3.79	0.3171	59.63	95.11	30.16	64.95	64.95
16.96	0.3171	234.98	659.96	209.27	45.69	515.64
26.77	0.3171	338.19	1159.80	367.77	192.03	1307.67
27.33	0.3171	307.84	1344.21	426.25	917.96	2225.63
29.18	0.1270	416.95	1323.99	168.94	1155.05	3380.68
32.07	0.1276	472.97	1542.07	196.77	1345.30	4725.98
46.31	0.1051	649.55	2216.53	232.96	1983.57	6709.55
62.59	0.1071	812.35	3033.75	324.91	2708.83	9418.39
37.95	0.0988	499.19	1813.77	179.20	1634.57	11052.96
24.96	0.0790	319.17	1021.70	80.72	941.04	11994.00
15.99	0.0914	198.30	669.67	61.21	608.47	12602.46
18.12	0.0712	253.09	700.53	49.88	650.65	13253.11
14.79	0.0742	130.04	578.41	42.92	535.49	13788.60
8.40	0.0585	198.90	382.21	22.36	359.85	14148.45
365.21	N.A.	4891.23	16541.77	2393.32	14148.45	14148.45

TABLE 5.5.5

Step-Wise Derivation of the Distribution of "Net Income" From Gross Income for Urban India, 1975-76. Case 2 ("Missing Income" Allocated in Ratio of U:R 1:1.5)

Income ranges for earners	Gross income	Agricultural income	Depreciation	Standard deductions	H.R.A. deductions
(1)	(2)	(3)	(4)	(5)	(6)
1-1200	138.87	25.53	0.90	22.58	0.00
1201-2400	833.21	76.71	16.16	114.80	0.00
2401-3600	1457.51	85.11	36.14	180.30	0.00
3601-4800	1625.35	55.73	32.75	199.62	0.00
4801-6000	1690.26	93.94	36.32	180.38	45.82
6001-7500	1985.44	112.21	35.29	218.53	66.77
7501-10000	2989.53	133.41	57.20	335.08	102.37
10001-15000	4107.75	149.94	107.50	422.80	118.08
15001-20000	2400.96	126.45	64.16	233.99	76.27
20001-25000	1560.49	65.72	61.05	132.96	62.21
25001-30000	1033.35	47.66	37.33	80.04	44.11
30001-40000	1096.13	112.16	22.87	75.26	61.76
40001-60000	831.64	20.55	46.91	42.63	21.34
Above 60000	830.41	80.88	39.17	123.55	8.64
All income ranges	22581.00	1185.98	593.87	2362.48	607.37

Note: Totals may not tally due to rounding.

Source: As explained in the text.

(Rs crore)

Employers' contribution to P.F.	Ch.VI A rates	Sum of Cols. 3 through 7	Col.2 minus col. 9	Amount of Ch.VI A deductions	Net income (col. 10-11)	Cumulative of col. 12
(7)	(8)	(9)	(10)	(11)	(12)	(13)
3.17	0.3171	52.18	86.69	27.49	59.20	59.20
16.10	0.3171	223.78	609.42	193.25	416.18	475.38
25.29	0.3171	326.84	1130.76	358.57	772.20	1247.58
28.00	0.3171	316.10	1309.24	415.16	894.08	2141.65
25.39	0.1276	381.70	1308.55	166.97	1141.58	3283.84
30.65	0.1276	463.45	1521.98	194.21	1327.78	4511.02
46.99	0.1051	675.08	2314.48	243.25	2071.23	6582.25
65.02	0.1071	863.44	3244.31	347.47	2896.84	9579.09
41.50	0.0988	542.37	1868.59	183.60	1674.96	11254.06
25.73	0.0790	347.67	1212.82	95.81	1117.01	12371.07
17.45	0.0914	226.59	806.76	73.74	733.02	13104.08
20.63	0.0712	292.68	803.45	57.21	746.24	13850.33
16.27	0.0742	147.70	683.94	50.75	633.19	14485.52
9.85	0.0585	262.09	568.34	33.25	535.10	15018.62
371.94	N.A.	5121.64	17459.36	24440.74	15018.62	15019.62

TABLE 5.5.6

Step-wise Derivation of the Distribution of "Net Income" from Gross Income for Urban India, 1975-76, Case 3 ("Missing Income" Allocated in Ratio of U:R = 1:1)

Income ranges for earners (Rs)	Gross income	Agricultural income	Depreciation	Standard deductions	H.R.A. deductions
(1)	(2)	(3)	(4)	(5)	(6)
1-1200	113.76	21.00	0.73	20.12	0.00
1201-2400	768.85	71.07	14.72	105.67	0.00
2401-3600	1379.91	80.90	33.73	165.94	0.00
3601-4800	1676.72	57.72	33.31	190.80	0.00
4801-6000	1770.03	98.77	37.50	199.79	51.67
6001-7500	2043.19	115.94	35.81	235.33	71.81
7501-10000	3060.19	137.11	57.72	353.54	107.87
10001-15000	4393.71	161.03	113.46	449.41	125.28
15001-20000	2870.07	152.07	75.60	261.98	85.30
20001-25000	1796.01	75.93	69.27	152.27	71.16
25001-30000	1166.65	54.03	41.55	93.27	51.44
30001-40000	1363.64	140.10	28.04	89.47	73.47
40001-60000	1028.45	25.52	57.18	52.15	26.10
Above 60000	871.81	85.25	40.54	113.75	11.06
All income ranges	24303.00	1276.42	639.16	2483.49	675.16

Note: Totals may not tally due to rounding.

Source: As explained in the text.

(Rs crore)

Employers' contributions to P.F.	Ch.VIA rates	Sum of cols.3 through 7	Col.2 minus col.9	Amount of Ch.VIA deductions	Net income (col. 10-11)	Cumulative of col.12
(7)	(8)	(9)	(10)	(11)	(12)	(13)
2.69	0.3171	44.54	69.22	21.95	47.27	47.27
14.11	0.3171	205.57	563.28	178.62	384.67	431.94
22.16	0.3171	302.73	1077.18	341.57	735.61	1167.55
25.47	0.3171	307.30	1369.42	434.24	935.18	2102.72
26.67	0.1276	414.40	1355.63	172.98	1182.66	3285.38
31.42	0.1276	490.31	1552.88	198.15	1354.73	4640.11
47.20	0.1051	703.44	2356.75	247.69	2109.06	6749.17
65.76	0.1071	914.94	3478.78	372.58	3106.20	9855.37
44.24	0.0988	619.19	2250.88	222.39	2028.50	11883.87
28.05	0.0790	396.68	1399.33	110.55	1288.78	13172.65
19.41	0.0914	259.69	906.96	82.90	824.06	13996.71
23.39	0.0712	354.47	1009.17	71.85	937.31	14934.03
19.00	0.0742	179.94	848.51	62.96	785.55	15719.57
12.02	0.0585	262.62	609.19	35.64	573.56	16293.13
381.58	N.A.	5455.81	18847.19	2554.06	16293.13	16293.13

TABLE 5.5.7

Step-wise Derivation of the Distribution of "Net Income" From Gross Income for Rural India, 1975-76, Case 1

Income ranges for earners (Rs)	Gross in- come	Agri- cultural income	Depre- ciation	Stand- ard deductions	H.R.A. deduc- tions
(1)	(2)	(3)	(4)	(5)	(6)
1-1200	2939.35	2363.21	5.96	6.69	0.00
1201-2400	8447.39	6369.40	37.26	96.38	0.00
2401-3600	8380.84	5855.52	41.21	174.57	0.00
3601-4800	6091.41	3877.61	44.03	189.52	0.00
4801-6000	4296.62	2785.54	30.84	167.94	34.12
6001-7500	3613.76	2465.91	13.81	167.22	41.85
7501-10000	3443.24	2315.32	26.68	118.75	29.71
10001-15000	2780.86	2041.43	23.69	43.23	9.78
15001-20000	899.13	747.99	5.36	11.26	2.99
20001-25000	345.26	247.36	6.40	0.00	0.00
25001-30000	142.73	39.45	4.94	1.02	0.46
30001-40000	104.12	17.89	0.00	0.00	0.00
40001-60000	37.49	37.36	0.00	0.00	0.00
Above 60000	1547.81	0.00	101.66	0.00	0.00
All income ranges	43070.00	29163.99	341.84	976.58	118.91

Note: Totals may not tally due to rounding.

Source: As explained in the text.

(Rs crore)

Emp- loyers' contribu- tion to P.F.	Ch.VIA rates	Sum of cols.3 through 7	Col.2 minus col.9	Amount of Ch. VIA deduct- ions	Net income (col.10 -11)	Cumula- tive of col. 12
(7)	(8)	(9)	(10)	(11)	(12)	(13)
0.80	0.3171	2376.66	562.69	178.43	384.26	384.26
11.45	0.3171	6514.49	1932.90	612.92	1319.97	1704.24
20.74	0.3171	6092.04	2228.80	725.78	1563.02	3267.26
22.52	0.3171	4133.68	1957.73	620.79	1336.93	4604.19
19.96	0.1276	3038.40	1258.21	160.55	1097.67	5701.85
19.87	0.1276	2708.67	905.09	115.49	789.60	6491.46
14.11	0.1051	2504.57	938.67	98.65	840.02	7331.47
5.57	0.1071	2123.70	657.16	70.38	586.78	7918.25
1.68	0.0988	769.28	129.85	12.83	117.02	8035.28
0.00	0.0790	253.76	91.50	7.23	84.27	8119.55
0.19	0.0914	46.06	96.67	8.84	87.84	8207.38
0.00	0.0712	17.89	86.23	6.14	80.09	8287.47
0.00	0.0742	37.36	0.13	0.01	0.12	8287.59
0.00	0.0585	101.66	1446.15	84.60	1361.55	9649.15
116.90	N.A.	30718.22	12351.78	2702.64	9649.15	9649.15

TABLE 5.5.8

State-wise Derivation of the Distribution of "Net Income" From Gross Income for Rural India, 1975-76, Case 2

Income ranges for earners (Rs)	Gross income	Agri-cultural income	Depreciation	Standard deductions	H.R.A. deduction
(1)	(2)	(3)	(4)	(5)	(6)
1-1200	3003.94	2375.62	6.88	6.84	0.00
1201-2400	8868.26	6577.40	44.20	101.18	0.00
2401-3600	8269.94	5683.54	45.95	172.26	0.00
3601-4800	5831.58	3651.51	47.63	181.44	0.00
4801-6000	4281.32	2730.24	34.72	167.34	34.15
6001-7500	3452.52	2317.36	14.91	159.76	39.86
7501-10000	3326.89	2200.50	29.13	114.73	28.63
10001-15000	2581.72	1864.25	24.85	40.76	9.05
15001-20000	838.86	686.43	5.65	10.52	2.78
20001-25000	307.02	216.36	6.43	0.00	0.00
25001-30000	131.11	35.63	5.13	0.93	0.42
30001-40000	89.13	15.07	0.00	0.00	0.00
40001-60000	33.38	32.72	0.00	0.00	0.00
Above 60000	906.32	0.00	67.25	0.00	0.00
All income ranges	41922.00	28386.64	332.73	955.16	114.89

Note: Totals may not tally due to rounding.

Source: As explained in the text.

(Rs. crore)						
Employers' contribution to P.F.	Ch. VIA rates	Sum of cols.3 through 7	Col.2 minus col. 9	Amount of Ch. VIA deductions	Net income (Col.10 -11)	Cumulative of col.12
(7)	(8)	(9)	(10)	(11)	(12)	(13)
0.73	0.3171	2390.14	613.80	194.64	419.16	419.16
11.59	0.3171	6734.36	2133.90	676.66	1457.24	1876.40
19.73	0.3171	5921.48	2348.46	744.70	1603.76	3480.17
20.78	0.3171	3901.36	1930.22	612.07	1318.15	4798.31
19.17	0.1276	2985.62	1295.70	165.33	1130.37	5928.68
18.30	0.1276	2550.20	902.33	115.14	787.19	6715.87
13.14	0.1071	2386.12	940.77	98.87	841.90	7557.77
4.99	0.1071	1943.29	638.43	68.38	570.05	8127.82
1.51	0.0988	706.88	131.98	13.04	118.94	8246.75
0.00	0.0790	222.79	84.23	6.65	77.58	8324.33
0.17	0.0914	42.29	88.82	8.12	80.70	8405.04
0.00	0.0712	15.07	74.06	5.27	68.79	8473.83
0.00	0.0742	32.72	0.00	0.05	0.61	8474.44
0.00	0.0585	67.25	839.07	49.09	789.98	9264.42
110.16	N.A.	29899.58	12022.42	2758.00	9262.42	9264.42

TABLE 5.5.9

Step-Wise Derivation of the Distribution of "Net Income" From
Gross Income for Rural India, 1975-76. Case 3

Income ranges for earners (Rs)	Gross income	Agri- cultural income	Depre- ciation	Stan- dard deduc- tions	H.R.A. deduc- tions
(1)	(2)	(3)	(4)	(5)	(6)
1-1200	3243.30	2565.41	7.39	7.38	0.00
1201-2400	8670.95	6432.24	43.00	98.93	0.00
2401-3600	8179.13	5622.18	45.22	170.37	0.00
3601-4800	5753.42	3603.24	46.76	179.01	0.00
4801-6000	3700.30	2360.14	29.86	144.63	29.52
6001-7500	3244.69	2178.27	13.94	150.15	38.15
7501-10000	2975.63	1968.52	25.92	102.62	26.07
10001-15000	2306.14	1665.56	22.08	35.88	8.24
15001-20000	700.29	573.15	4.69	8.77	2.37
20001-25000	260.89	183.89	5.44	0.00	0.00
25001-30000	110.01	29.91	4.28	0.78	0.36
30001-40000	74.86	12.66	0.00	0.00	0.00
40001-60000	25.96	25.45	0.00	0.00	0.00
Above 60000	954.42	0.00	70.47	0.00	0.00
All income ranges	40200.00	27220.63	319.06	898.52	104.71

Note Totals may not tally due to rounding.

Source: As explained in the text.

(Rs crore)

Employers' contribution to P.F.	Ch. VIA rates	Sum of cols.3 through 7	Col.2 minus col.9	Amount of Ch. VIA deductions	Net income (col.10 11)	Cumulative of col.12
(7)	(8)	(9)	(10)	(11)	(12)	(13)
0.82	0.3171	2581.01	662.20	210.01	452.28	452.28
11.00	0.3171	6585.18	2085.77	661.40	1424.38	1876.66
18.94	0.3171	5856.71	2322.42	736.44	1585.98	3462.64
19.90	0.3171	3848.91	1904.51	603.92	1300.59	4763.23
16.08	0.1276	2580.23	1120.07	142.92	977.15	5740.37
16.69	0.1276	2397.20	847.49	108.14	739.35	6479.72
11.41	0.1051	2134.55	841.08	88.40	752.68	7232.41
4.32	0.1071	1736.08	570.06	61.05	509.00	7741.41
1.23	0.0988	590.21	110.08	10.88	99.20	7840.61
0.00	0.0790	189.32	71.57	5.65	65.91	7906.53
0.13	0.0914	35.46	74.55	6.31	67.74	7974.26
0.00	0.0712	12.66	62.20	4.43	57.77	8032.03
0.00	0.0742	25.45	0.51	0.04	0.47	8032.50
0.00	0.0585	70.47	883.95	51.71	832.24	8864.74
100.53	N.A.	28643.45	11556.55	2691.80	8864.74	8864.74

conveyance allowance, which were probably quite significant in 1971-72, since the standard deduction on salaries had not yet been instituted. To allow for this we assumed (after consultation with Bagchi) that two-thirds of the total deductions towards HRA plus conveyance would be attributable to HRA alone (the resulting rates are given in Table A. 1.30 of Appendix 1). Second, there is some question as to whether the income concepts pertaining to Bagchi's estimates are identical to those used here. However, since we have no way of correcting for any such mismatch we have assumed that the errors stemming from such definitional incongruence are small enough to be ignored for our purposes.

Accordingly, we have proceeded to apply the Bagchi-based rates to our distributions of salary income to estimate the corresponding deductions for urban and rural India in our three scenarios. The results of these exercises are summarised in column (6) of Tables 5.5.5 to 5.5.9.

d. *Employer's contribution to provident fund.* The concept of gross personal income in the NAS and in the NCAER survey includes all regular allowances, including employers' contribution to provident fund (P.F.), which nationally accrues to the concerned salary earners. But such contributions to P.F. are not taxable (see Schedule IV of the Income Tax Act) and hence we have to estimate these amounts and subtract them from gross income.

The total P.F. contributions of employers and employees were estimated (see Appendix 1) at Rs 964 crore in 1975-76. Assuming that the share of employers is 50 per cent, it works out to Rs 482 crore. Each of our three basic scenarios has associated with it a total of salary income (urban plus rural), which can be divided into the total of employers' P.F. contributions to yield corresponding "average rates". These average rates range from 2.6 to 2.9 per cent across the three scenarios (see Appendix 1).

By applying these average rates of P.F. contributions to the salary income distributions in our three scenarios, the deductions corresponding to P.F. contribution are estimated by income class. The results are shown in column (7) of Tables 5.5.4 to 5.5.9.

e. *Standard deductions for salary incomes.* The standard deduction is easily the most important deduction pertaining to salary incomes under Chapter IV of the Income Tax Act. The Finance Act of 1974 gives the formula relevant for 1975-76 (assessment year 1976-77). The rate of deduction was 20 per cent of salary income of an assessee upto Rs 10,000 per annum plus 10 per cent of the excess over Rs 10,000, subject to a maximum limit of Rs 3,500.

This formula is applied to our estimated frequency distributions for salary incomes. In a given distribution, for each income class, the mid-point of the class interval is designated as the representative income for all salary earners in that class. On this basis, the standard deduction is estimated for each income class. In the case of urban India our fitted lognormal distributions for salary income permit application of this procedure for finely divided class intervals. The results are aggregated to the 14-class level of disaggregation for presentation. However, for rural India the exercise has to be carried out at the level of the 14 broad income intervals in which the data are available. Column (5) of Tables 5.5.4 to 5.5.9 present the outcomes of these exercises.

f. *Deduction of depreciation from business income.* The notion of gross income in the NCAER survey and the corresponding NAS total of gross personal income are both gross of depreciation. But under Section 32, Chapter IV, of the Income Tax Act, depreciation of fixed capital used in business or profession is an allowable deduction. Therefore, in continuing our journey towards assessable income, we are obliged to estimate and deduct depreciation pertaining to business income.

The key problem here is to estimate a rate of depreciation which is appropriate for business income. The CSO estimated depreciation for the household sector at Rs 2,497 crore in 1975-76, which was 3.9 per cent of the CSO's estimate of gross personal income. It would be inappropriate to apply this rate to business income since gross personal income includes forms of income (such as wages and salaries and transfers) against which depreciation cannot be legitimately assigned. If we consider only those forms of income against

which depreciation *can* be assigned, then the computed rate comes to 7 per cent. However, this includes depreciation pertaining to agricultural incomes. And agricultural activities, it could be argued, are, on balance, less capital-intensive than most other activities which generate business income. So, the argument runs, the depreciation rate relevant for business income (in our sense) should be higher. This is a debatable proposition, since many forms of business-income-earning activities (such as trade and professions) make relatively little use of fixed capital. In any case, to err on the conservative side, we have assumed a depreciation rate (in relation to income) of 10 per cent for business income. Incidentally, this is identical to the depreciation assumption made by the NCAER (1972) in its survey of income and expenditure for 1967-68 with regard to income from self-employment.

This 10 per cent rate of depreciation is then applied to our distributions of business income in urban and rural cases and across our three basic scenarios, to estimate the quantum of deduction, by income class, in each case. The results are reported in column (4) of Tables 5.5.4 to 5.5.9.

g. Chapter VIA deductions. The exemptions and deductions considered thus far apply to particular source components of income, notably, agricultural income, salaries and business income. Chapter VIA deductions are applicable to all income, irrespective of source. The important deductions relevant for non-corporate assesseees include those under Section 80C (employee's contribution to P.F., life insurance premium paid, savings in other specified forms) and 80L (interest on bank deposits and certain specified securities).

The first step in estimating the quantitative significance of these deductions is to estimate the average rate of Chapter VIA deductions (as a percentage of income) by different income classes. This is accomplished by using data published in the annual AIITS publications. While the details of the procedure are given in Appendix 1, we should emphasise that the rates obtained should be treated as approximation for several reasons. First there is doubt about the completeness of coverage of the AIITS data with respect to Chapter VIA

deductions. Second, the published information is organised according to assessments completed during a financial year, not by assessments pertaining to a particular year. Averaging the published information over several years provides only a partial solution to this problem. Third, the notions of income and income ranges in the AIITS data are not identical to those used here. Nevertheless, the estimated rates are probably reasonable approximations for our purposes.

To compute the estimates of Chapter VIA deductions according to our 14 income classes, an estimate of gross income minus the five deductions previously mentioned is first obtained, and shown in column (10) of each of our tables 5.5.4 to 5.5.9. It is to this concept of income that the estimated average rates of Chapter VIA deductions are applied to yield the quanta of such deductions in each of the 14 income ranges for each of our three basic scenarios, separately for urban and rural India. Column (11) of Tables 5.5.4 to 5.5.9 records the amounts of Chapter VIA deductions thus estimated.

h. *The exemption limit.* We come now to the last step in the journey from gross personal income (of earners) to income assessable to tax, namely, the application of the exemption limit. Column (12) of Tables 5.5.4 to 5.5.9 records incomes after Chapter VIA deductions have been deducted. This is termed 'net income'. In the absence of an exemption limit all the income in this column could be considered as income which should have been assessed to tax, or taxable income for short. In fact, of course, there was an exemption limit of Rs 8,000 operative in the assessment year 1976-77 (relevant for incomes earned in financial year 1975-76), which has to be taken into account.

One might think that the application of the exemption limit is a straightforward matter which merely involves excluding all incomes in column (12) which fall in income ranges below Rs 8,000. Unfortunately, the matter is not so simple. The income ranges in Tables 5.5.4 to 5.5.9 refer to *gross income* of earners, whereas the exemption limit relates to *income after all exclusions, deductions and exemptions have been allowed for*. To take account of this fact, we would,

ideally, wish to rearrange the net incomes in column (12) according to income ranges defined in terms of *net* income.

However, we do not have the information necessary to carry out this transformation. We have, therefore, pursued an alternative route of estimating the gross income corresponding to a "net income" of Rs 8,000. We have done so for each of our three scenarios by taking the ratio of gross income in column (2) to "net income" in column (12) for income ranges proximate to the exemption limit and then multiplying this derived ratio by Rs 8,000. Appendix 1 describes the details. This procedure yields, for each of our scenarios, a cut-off value of gross income such that all incomes above this value in column (13) can be aggregated to yield, for that scenario, an estimate of total noncorporate income which should have been assessed to tax.

Table 5.5.10 summarises the estimates of total taxable income for our three basic scenarios and gives the urban/rural breakdown in each case.

6. Estimates of Tax-Evaded Income:

First Approximations

To obtain estimates of tax-evaded income we have to subtract the total of income actually assessed to tax from the estimates of taxable income derived in the previous section. To do so we need to know the amount of non-corporate income actually assessed to tax in the assessment year 1976-77. Once again, this crucial element of information is not readily available in the official data; it has to be derived on the basis of certain assumptions.

As we noted in Chapter 3, a new series of AIITS publications does provide information on incomes assessed to tax on an *assessment year basis* for a few years. Fortunately, this new series includes 1976-77, the year of primary interest to us. Unfortunately, the data in this publication suffer from the same grievous deficiency of undercoverage which bedevils the "regular" AIITS volumes presenting information according to assessments conducted in a given financial year. The crux of the problem is to adjust for the undercoverage.

In Chapter 3 we discussed some alternative indicators of the extent of undercoverage and concluded that, where available, the best indicator was the ratio total of number of assessments reported in the AIITS (assessment year basis) to the number of *assesseees* on the rolls of the department at the end of that year as reported in the C.&A.G.'s reports. The inverse of this ratio can then be used to "blow up" the the information on incomes assessed presented in the AIITS new series) publication.

Before applying this procedure we make three further modifications. First, as we observed in Chapter 3, the gap between the total number of assessments recorded in the AIITS and the total number of assesseees reported by the C. & A.G. is not entirely attributable to undercoverage. The AIITS totals also exclude assessments which did not result in either demand or refund. Before computing blow-up factors this number of assessments has either to be added to the AIITS number of assessments or subtracted from the C. & A.G.'s total. Almost all of these excluded assessments relate to cases of "N.A. and filed" relating to individuals and firms. Discussions with the Directorate of Research, Statistics and Public Relations (of the Income Tax Department) indicate that such cases were running at about 10 per cent of all assessments (C. & A.G.'s total) in the late 1970s. We have, accordingly, adjusted the C. & A.G.s numbers for assesseees (individuals and firms) for 1976-77 downwards by 10 per cent.

Second, in conducting the "blowing up" exercise, we have computed and used separate blow-up factors for the income of assesseees of different status: individuals, Hindu Undivided Families (H.U.Fs.), Associations of Persons (A.O.Ps.) and unregistered firms.⁸ Third, before we apply the blow-up factors to AIITS information on incomes assessed we have to subtract capital gains income assessed from total incomes assessed for the different categories of assesseees. This adjustment is necessary to improve the comparability between our independent NAS/NCAER-based estimates of taxable income (which, by definition, exclude income from capital gains) and the estimated total of income actually assessed.⁹ Table 5.6.1 presents, for the assessment year

TABLE

Summary Estimates of Taxable Income Under Different Scenarios

Sl. No.	Item (1)	Urban India		
		Case 1 (2)	Case 2 (3)	Case 3 (4)
1.	Gross income	21433.00	22581.00	24303.00
2. a.	Agricultural income	1125.68	1185.98	1276.42
b.	Depreciation	563.68	593.87	639.16
c.	Standard deduction	2268.42	2362.48	2483.49
d.	HRA deduction	568.24	607.37	675.16
e.	Employers' contribution to provident fund	365.21	371.94	381.58
f.	Amount of Ch. VIA deduction	2393.32	2440.74	2554.06
	Sub-total of a. to f.	7284.55	7562.38	8009.87
3.	Net income (1-2)	14148.45	15018.62	16293.13
4.	Income below exemption limit (Rs 8000)	8776.11	8889.38	9116.92
5.	Taxable (assessable) income (3-4)	5372.34	6129.24	7176.21

Source: Based on Tables 5.5.4 through 5.5.9.

5.5.10

1975-76 (Assessment Year: 1976-77)

(Rs crore)

Rural India			All India		
Case 1	Case 2	Case 3	Case 1	Case 2	Case 3
(5)	(6)	(7)	(8)	(9)	(10)
43070.00	41922.00	40200.00	64503.00	64503.00	64503.00
29163.99	28386.64	27220.63	30289.67	29572.62	28497.05
341.84	332.73	319.06	905.52	926.60	958.22
976.58	955.16	898.52	3245.00	3317.64	3382.01
118.91	114.89	104.71	687.15	722.26	779.87
116.90	110.16	100.53	482.11	482.10	482.11
2702.64	2758.00	2691.80	5095.96	5198.74	5245.86
33420.86	32657.58	31335.25	40705.41	40219.96	39345.12
9649.14	9264.42	8864.75	23797.59	24283.04	25157.88
8276.19	8461.97	8022.10	17052.30	17351.35	17139.02
1372.95	802.45	842.65	6745.29	6931.69	8018.86

1976-77, the unadjusted data on incomes assessed (by status of assessees), the same data after adjustment for capital gains, the blow-up factors used and the resulting estimates of non-corporate income assessed to tax.

We can, at last, compute our first estimates of tax-evaded income by subtracting the total of estimated non-corporate income assessed to tax (from Table 5.6.1) from our earlier estimates of *taxable* noncorporate income derived independently in Section 5. The results are shown in Table 5.6.2, first in absolute terms and then as percentages of (a) GDP for 1975-76 and (b) noncorporate income actually assessed to tax.

7. Estimates of Tax-Evaded Income for 1980-81

Our analysis thus far has been confined to 1975-76. The principal reason for this was the availability of data, notably the income distributions from the NCAER survey as well as other supporting elements such as AIITS information on an assessment year basis. In this section we make an attempt to extend our analysis to 1980-81. The paucity of relevant and recent data inevitably obliges us to make more assumptions and approximations. Nevertheless, we consider the exercise worthwhile and the results interesting.

We begin with the all-India figure of gross personal income for 1980-81. This is taken directly from the official NAS (see Table 5.2.1). The first, and most important, problem is to construct rural and urban income distributions corresponding to this total of gross personal incomes. To solve this problem we first compute the rural and urban population on the basis of the 1981 census results. We then estimate the number of rural and urban earners in 1980-81 on the assumption that the ratio of earners to population is the same (for rural and urban India, separately) as it was in 1975-76.¹⁰

The next step is to find a plausible method for partitioning total gross personal income into urban and rural subtotals. We do this for three alternative cases which correspond to our three basic scenarios for 1975-76. In each case the correspondence is established by the following assumption:

TABLE 5.6.1
Adjustments of Income Assessed to Tax by Status of Assesseees,
1975-76 (Assessment Year, 1976-77)

(Rs crore)

Status of assesseees (non-corporate sector)	Assessed income (unadjusted)	Income assessed from capital gains	Assessed income minus capital gains col (2-3)	Blow-up factors for under-coverage	Income assessed to tax (adjusted) col (4x5)
(1)	(2)	(3)	(4)	(5)	(6)
Individuals	2696.13	22.65	2673.48	1.4188	3793.13
Hindu undivided family	135.43	4.46	130.97	2.8657	375.32
Association of persons	24.10	2.74	21.36	2.2410	47.87
Unregistered firm	32.32	0.05	32.27	1.9181	61.90
Total (Non-corporate sector)	2887.98	29.90	2858.08	N.A.	4278.22

Note: N.A. means not applicable

Source: For cols. 2, 3 and 4, see AIITS, Assessment Years 1976-77 to 1978-79. For col. 5 see Table A.1.44 of Appendix 1.

that the urban to rural ratio of per earner gross income remains the same as in 1975-76. For our purposes this is a conservative assumption, since there is some evidence (Mohan, 1984) to suggest that the ratio has been increasing over time, a fact which would imply a higher allocation to urban income—and hence taxable income—than is warranted by our assumption. With this assumption, and the knowledge that the urban income subtotal plus the rural income subtotal must add to the NAS total of gross personal income, we have, essentially, two equations in two unknowns for each of our scenarios. The unknowns here are the subtotals for urban and rural incomes. Solution of the equations readily gives us the desired split of NAS gross personal income into urban and rural incomes for each of our three cases (see Appendix 1 for further details).

TABLE 5.6.2

**Estimates of Tax-Evaded Income in India (First Approximation)
Under Three Scenarios for Non-Corporate Sector, 1975-76
(Assessment year, 1976-77)**

Item (1)	Case 1 (2)	Case 2 (3)	Case 3 (4)
1. Taxable (assessable) income	6745.3	6931.7	8018.9
2. Assessed income (adjusted for undercoverage)	4278.2	4278.2	4278.2
3. Tax-evaded income (Row 1 minus Row 2)	2467.1	2653.5	3740.7
4. Tax-evaded income as percentage of GDP at current prices in 1975-76 ¹	3.7	4.0	5.6
5. Tax-evaded income as percentage of income actually assessed to tax	57.7	62.0	87.4

Note: 1. GDP at current prices and at factor cost was Rs 66370 crore in 1975-76 (Government of India, CSO, 1983)

Source: Based on Tables 5.5.10 and 5.6.1.

Having estimated total urban (and rural) incomes for each scenario and the total number of urban (and rural) earners, which is the same for all scenarios, we now have to devise a method for constructing the corresponding *frequency distributions* of earners. The central assumption we make here is to assume that, for each case, the concentration of incomes remains unchanged between 1975-76 and 1980-81. Once again, this is probably a conservative assumption, since it is widely believed that the distribution of income has worsened over time, a fact, which, if true, would imply more taxable income than is entailed by our constancy assumption. Unchanged concentration of income means that the σ parameters estimated for our 1975-76 lognormal distributions also apply to the corresponding 1980-81 distributions. The location parameter, μ , is, of course, different because means of earner income are different in 1980-81. But in each case, we can compute it since it depends only on σ and the value of mean

earner income (α) σ we know by assumption and α by computation). Hence, for all our three cases (and for urban and rural India separately in each case), we now have the values for μ , σ and the total number of earners, which is all the information necessary to generate the frequency distributions of earners and the corresponding distributions of income by specified income ranges.

We turn now to the estimation of taxable income. First, we make the additional assumption that the *shares* of different components of income (agricultural income, salary, business income, etc.) in total gross income are the same as they were for the corresponding scenarios in 1975-76. We can then proceed with a stepwise application of the principal exclusions, exemptions and deductions.

First, all agricultural incomes (defined broadly) are excluded. HRA deductions are computed using the same rate structure as was used with respect to salary incomes in 1975-76. The tax law (and hence the formula) for the standard deduction against salary was the same in assessment year 1981-82 as it was in 1976-77. This, together with the assumption that the distribution characteristics of salary income are the same as earlier, allows us to estimate the quantitative significance of standard deductions by income ranges. The deductions corresponding to employers' contribution to provident fund have been estimated on the basis of fresh information relating to 1980-81, though the procedure followed is unchanged. For business income, the same 10 per cent deduction for depreciation is applied. The application of Chapter VIA deductions uses more recent data available from the annual series of AITS publications. The numerical details of these stepwise deductions and results are given in Appendix Tables A. 1. 36 to A.1. 42. Finally, the exemption limit (Rs 12,000 for assessment year 1981-82) is applied along the lines adopted in 1975-76. Table 5.7.1 summarises the estimates of total taxable income for the three cases in 1980-81 and gives the urban/rural decomposition for each case.

The next step is to estimate noncorporate incomes *actually assessed* for taxation in the assessment year 1981-82. Unfor-

TABLE 5.7.1

Summary Estimates of Taxable Income Under Different Scenarios,
1980-87 (Assessment Year 1981-82)

Sl. No.	Item	Urban India			
		Case 1	Case 2	Case 3	Case 1
	(1)	(2)	(3)	(4)	(5)
1.	Gross Income	40668.00	42648.00	45837.00	70861.00
2.	a. Agricultural income	2135.92	2239.92	2407.41	47982.11
	b. Depreciation	1069.56	1121.63	1205.55	562.42
	c. Standard deduction	3787.27	3954.88	4056.61	1784.50
	d. H.R.A. deduction	1233.30	1310.02	1410.31	254.00
	e. Employer's contribution to provident fund	421.45	428.21	438.33	116.95
	f. Amount of Ch. VIA deductions	3619.81	3772.01	3885.37	3251.49
	Sub-total	12267.31	12826.67	13403.58	53951.47
3.	Net Income (1—2)	28400.69	29821.33	32433.42	16909.53
4.	Income below exemption limit (Rs 12000	16629.21	17280.27	17141.09	16764.65
5.	Taxable income (3-4)	11771.48	12540.96	15223.31	144.18

Source: Based on Tables A.1.36 through A.8.41 and A.1.43 of Appendix I.

(Rs crore)

Rural India		All India		
Case 2	Case 3	Case 1 Cols.2+5	Case 2 Cols.3+6	Case 3 Cols.4+7
(6)	(7)	(8)	(9)	(10)
68881.00	65692.00	111529.00	111529.00	111529.00
46641.39	44482.02	50118.03	48881.31	46889.43
546.70	521.39	1631.98	1668.33	1726.94
1712.50	1630.04	5571.77	5667.38	5686.65
253.59	226.05	1487.30	1563.61	1636.36
110.17	100.05	538.40	538.38	538.38
3152.56	2999.64	6871.30	6924.57	6885.01
52416.91	49959.19	66218.78	65243.58	63362.77
16464.09	15732.81	45310.22	46285.42	48166.23
15223.31	14134.67	33393.67	32503.68	31275.76
1240.78	1598.14	11916.36	13781.74	16890.47

tunately, the AIITS have not yet published the assessment years-basis volume for 1981-82¹¹. Indeed, the AIITS volume containing data on assessments completed in the financial year 1981-82 has only become available very recently (in August 1984). We have, therefore, been obliged to use the data in the latter volume as an approximation, even though we recognise that only about 60 per cent of the assessments conducted in a given financial year relate to that assessment year while the rest pertain to preceding assessment years (NIPFP, 1983a).

As in 1975-76, the AIITS information on incomes assessed has to be adjusted for undercoverage. This is accomplished using analogous "blow up" factors and after allowing for exclusion of "N.A. and Filed" case. Furthermore, adjustments are made excluding capital gains from the AIITS information. Table 5.7.2 presents the data on income assessed, the "blow up" factors, the estimate of total income assessed and the estimates of tax-evaded income. The last is derived by subtracting the estimate of total noncorporate income assessed from the three alternative estimates of taxable income obtained earlier.

Comparing the results in Table 5.7.2 with those reported for 1975-76 in Table 5.6.2 we note that the estimates of tax-evaded income in 1980-81 are not only higher in absolute terms but also as percentages of GDP and income assessed to tax. Thus, where the ratio of tax-evaded income to GDP was estimated to range from 3.7 per cent to 5.7 per cent in 1975-76, the corresponding range in 1980-81 is between 4.2 and 8.6 per cent. As a ratio to *income assessed*, a more relevant ratio in our view, tax-evaded income was estimated to range from 57 per cent to 87 per cent in 1975-76. The comparable range in 1980-81 is between 68 and 139 per cent.

8. What if National Income is Underestimated ?

The estimates of tax-evaded income presented in the last two sections are predicated on the assumption that the estimates of national income are accurate. Crucial to the estimation procedure is the use of the NAS aggregates as controlling totals. But what if these aggregates themselves are

TABLE 5.7.2

**Estimates of Taxable Income, Income Assessed and Tax-Evaded
Income, 1980-81 (Assessment year 1981-82)**

<i>A. Estimates of Income Assessed</i>					(Rs crore)
Status of assesseees (non-corporate sector)	Assessed income (unadjusted)	Income from capital gains	Assessed income minus capital gains Col. (2)-(3)	"Blow-up" factors for under-coverage	Income assessed to tax (adjusted) Col. (4)×(5)
(1)	(2)	(3)	(4)	(5)	(6)
Individuals	2210.60	6.35	2204.25	2.8476	6276.82
Hindu Undivided Family	110.00	1.09	108.91	5.3169	579.06
Association of persons	25.50	0.19	25.31	4.3112	109.12
Unregistered firm	36.90	0.02	36.83	3.0476	112.39
Total (Non-corporate sector)	2383.00	7.65	2373.35	—	7077.39
<i>B. Estimates of Tax-Evaded Income</i>					(Rs crore)
(1)	(2)	(3)	(4)		
<i>Item</i>	<i>Case 1</i>	<i>Case 2</i>	<i>Case 3</i>		
Taxable income	11916.36	13781.74	16890.47		
Tax-evaded income (taxable income minus assessed income of Rs 7077.39 crore)	4838.97	6704.35	9813.08		
Tax-evaded income as per cent of GDP at current prices and at factor cost in 1980-81 ¹	4.23	5.87	8.59		
Tax-evaded income as per cent of assessed income	68.37	94.74	138.65		

Note: GDP at current prices and at factor cost was Rs 114271 crore in 1980-81 (Government of India, CSO, 1983).

Source: For cols. 2,3 and 4, 4 of (A) AIITS Financial Year, 1981-82 and for col. 5, see Table A.1.45 of Appendix 1. For details of Taxable Income, see Table A. 1.43 of Appendix 1.

distorted by evasion behaviour? This is not just possible but probable. To take just one example, when a manufacturing enterprise underreports production and sales or overreports expenses (perhaps by showing personal expenses as deductible business expenses), the associated reduction in taxable profits is likely to lead to the underestimation of value-added for the manufacturing sector, and hence to the underestimation of GDP.

It was, partly, the recognition of this possibility that led us in Chapter 2 to distinguish an alternative definition of black income, namely, "the extent to which estimates of national income and output are biased downwards because of deliberate, false reporting of incomes, output and transactions for reasons of tax evasion, flouting of other economic controls and related motives. "The extent to which NAS aggregates are distorted by evasion and related behaviour depends not only on the nature and prevalence of such behaviour but also on the sources and methods of national income accounting. As we noted in Chapter 2, evasion does not necessarily lead to misestimation of national income. Much depends on the sources and methods of compiling NAS estimates.

The problem at hand is to assess the extent to which NAS aggregates are *in fact* misestimated because of evasion and related behaviour. In Appendix 2 we review the sources and methods of national income accounting used by the CSO and provide some qualitative judgements about the extent to which the value-added estimates for different sectors are vulnerable to the practice of evasion of taxes and other economic regulations. We conclude that there is a strong *prima facie* case for suspecting significant underestimation of total GDP. Based on our qualitative appraisal, we suggest that such underestimation may be most pronounced in the following sectors: "Manufacturing (Registered and Un-registered)" "Transport by any other means and storage", Trade, Hotels and Restaurant" and "Other Services". These views are consistent with the ones advanced by Ghosh *et.al.* (1981) in their paper which we reviewed in Chapter 3.

What about the *extent* of such underestimation? Based on guestimates for several specific sectors, Ghosh *et. al.* "estimated" that GDP was underestimated by about 8 per cent in 1975-76. We do not make bold to offer specific estimates. Instead, we explore some of the implications of assuming that GDP in 1975-76 and 1980-81 exceeded the officially estimated figure by 5, 10 and 15 per cent, respectively. In the light of available information and the views of national accounts experts (including Ghosh *et. al.*) this range of underestimation in the official numbers seems "reasonable". Some have commented that these numbers are on the conservative side.

One way of conducting the sensitivity analysis with respect to alternative "inflations" of the official GDP estimates would be to revise the corresponding NAS total in Sections 5 and 7 accordingly and rework the entire analysis of these sections, including the use of the NCAER-based distributions of income and so forth. However, given that we are assuming that the omission of 5, 10 and 15 per cent, respectively, of GDP from the official estimates is being attributed entirely to the phenomenon of evasion, this does not seem to be a reasonable way to proceed. Instead, it may be more acceptable to make two assumptions: first, that most, if not all of the "omitted GDP" accrues to earners who are already in taxable income brackets, and second, that all legitimate deductions and exclusions have already been claimed so that no further ones are pertinent for the incomes associated with these "omitted" GDP increments. This means that most of the "additional" income can be treated as tax-evaded income.

More specifically, we explore, numerically, the implications of two assumptions. In the first case three-quarters of the "omitted GDP" is assumed to accrue to earners in the form of tax-evaded income, while in the second, half of the increment to GDP is assumed to have the character of tax-evaded income. The results of these assumptions are shown in Table 5.8.1.

These results are revealing. They suggest that even modest degrees of (evasion-related) under-estimation of GDP, could,

TABLE 5.8.1

Tax-Evaded Income Associated with Adjustments to GDP to Allow for Underestimation: Some Speculations

(Rs crore)

Percentage by which official GDP (factor cost) inflated ¹	Assumed proportion of GDP "inflation" taking the form of tax-evaded income			
	1975-76		1980-81	
	Three-quarters	Half	Three-quarters	Half
(1)	(2)	(3)	(4)	(5)
5	2489	1659	4285	2857
10	4978	3318	8570	5713
15	7467	4978	12855	8570

Note: 1. GDP at factor cost and at current prices was Rs 66370 crore in 1975-76 and Rs 114,271 crore in 1980-81 (Government of India, CSO, 1983).

Source: As explained in the text.

on our assumptions, be associated with amounts of "additional" tax-evaded income which are large in relation to our earlier estimates of tax-evaded income—and in relation to income assessed to tax. Thus, if in 1975-76, official GDP has to be adjusted upwards by 10 per cent and three-quarters of this increment is assumed to take the form of tax-evaded income, then an associated "additional" tax-evaded income of almost Rs 5,000 crore has to be added to our earlier estimates, which ranged, across our three scenarios in Table 5.6.2, from Rs 2,467 crore to Rs 3,741 crore. Thus, this particular adjustment for evasion-related underestimation of GDP has the effect of more than doubling our earlier highest estimate of tax-evaded income. Furthermore, the resulting total of tax-evaded income is also more than double the estimated total of noncorporate income assessed to tax.

9. Overview and Assessment

It is now time to pull together the results of our labours

(and assumptions) and to assess their strengths and weaknesses.

a. Overview. In Table 5.9.1 we provide an illustrative overview, which chooses *one* possible estimate of *some* major components of tax-evaded income for each of the years 1975-76 and 1980-81. The table calls for some explanatory remarks. First, it is important to emphasise that alternative estimates are available for each row element. Thus row (1) gives the estimates for tax-evaded income which correspond to scenario 3 of our work in Sections 4 and 5, where the "missing income" between the NCAER estimate of total gross personal incomes and the official NAS total for the same concept is split in the ratio of 1:1, urban:rural, in the course of the "blow-up" exercise. Though this gives the highest estimate of our three scenarios, we have argued earlier that even this estimate is based on conservative assumptions (see Section 4). Row (2) of the table gives "guestimates" of "additional" tax-evaded income, based on the assumption that the official GDP estimate requires upward adjustment by 10 per cent and that half of this "increment" accrues to earners in the form of tax-evaded income. Compared to the other guestimates in Table 5.8.1, this corresponds to a "middle" set of assumptions. Finally, row (3) gives a "middle" case of guestimates of black income obtained through leakages from public expenditures. Though the basis for these numbers is presented in Chapter 8, it is convenient, for exposition, to include them in the illustrative overview presented here.

Rows (5) and (6) present, for comparative purposes, the official estimates of GDP and our estimates (from Section 6) of total non-corporate income assessed to tax in 1976-77 and 1981-82, which corresponds to incomes earned in financial years 1975-76 and 1980-81. The "estimated" subtotals of tax-evaded income are displayed as percentages of GDP and income assessed, in rows (7) and (8), respectively.

Second, it should be obvious that the empirical bases for the numbers shown in Table 5.9.1 vary enormously. The magnitudes in row (1) can be genuinely called estimates, which reflect the detailed quantitative work described in the

TABLE 5.9.1

Estimates of Tax-Evaded Income: An Illustrative Overview

	(Rs crore)	
	1975-76	1980-81
Tax-evaded income from:		
1. Non-corporate income from current, legal economic activity and legal transfers assuming official NAS data to be correct ¹	3,741	9,813
2. Adjustment to (1) for possible under-estimation of official GDP ²	3,318	5,713
3. Illegal transfers from public expenditure ³	900	1,683
4. Sub-total	7,959	17,209
5. GDP at factor cost at current price	66,370	114,271
6. Assessed income (adjusted for undercoverage)	4,278	7,077
7. Sub-total as per cent of GDP at factor cost (row 5)	11.99	15.06
8. Sub-total as per cent of assessed income (row 6)	186.04	243.17

Notes: 1. The estimates presented here correspond to scenario 3, where the "missing income" is split between urban and rural in the ratio of 1:1 in the course of the "blow-up" to the NAS controlling total.

2. The data shown here correspond to the assumption that official GDP requires upward adjustment by 10 per cent and that half of this "increment" accrues to earners in the form tax-evaded income.

3. These estimates (explained in more detail in Chapter 8) assume that 10 per cent of a relevant subtotal of public expenditures are "siphoned off" in one form or another and three-quarter of this amount accrues to people with taxable income.

Source: As explained in the text.

earlier sections of this chapter and in Appendix 1. The numbers in rows (2) and (3) are more in the nature of estimates. The only justification for mixing numbers of such qualitatively diverse origin is to convey a flavour of the magnitudes that may be involved.

Third, if we hark to the distinctions drawn in Chapter 2 between different categories of income which should be included in a complete notion of tax-evaded income, we can see that both rows (1) and (2) refer to two kinds of income, namely, income from current, legal economic activity and from legal transfer payments. Row (3) pertains to one form—arguably the most relevant form—of illegal payments. The table offers no estimates for tax-evaded income from capital gains (legal or illegal) or from illegal current economic activities such as smuggling and black marketing. To that extent, the totals in the table do not encompass all tax-evaded income.

b. *Some limitations and their Consequences.* We turn now to some of the more obvious limitations of our work. We begin with our basic estimates of tax-evaded income relating to officially estimated (NAS) current economic activity and legal transfers.

The most glaring lacuna here is that we have omitted consideration of evasion pertaining to corporate incomes. In one sense this is an obvious shortcoming. However, if we take the view that our study should be limited to assessing evasion of incomes only once, and not include evasion when the same income is transferred to other economic agents, then this criticism loses much of its force. For the fact is that our total of gross personal incomes includes, in principle, incomes which have passed through corporate entities. Ultimately, it is households and individuals who enjoy all incomes.¹² Of course, companies may provide potent conduits for evasion through their multitude of complex transactions, including the opportunities for misclassifying personal consumption as business expense.¹³ But the fact remains, that such evaded income finds its way to individuals through all sorts of “under the table” payments and misclassified expenses.¹⁴

However, where the activity of evasion through the corporate cover leads to underestimation of GDP, then our (that is the CSO’s) total of gross personal income is directly affected (underestimated) and in turn, biases our estimates of tax-evaded income downwards. But if our crude upward

adjustment of the official GDP estimate is an accurate one, then (a) the total of gross personal incomes should be correct and (b) it should include all incomes which have come to households via corporate entities (see Table 5.2.1). If, however, we confine ourselves to the estimates corresponding to the unadjusted GDP total, then there is little doubt that our basic estimates of tax-evaded income are biased downwards because amongst other things, they fail to adequately reflect evasion through corporate cover. Looked at another way, the misestimation of NAS totals due to falsification of corporate accounts is a particular case of the more general problem of underestimation of GDP because of tax evasion and related behaviour.

Second, our basic estimates of taxable income which were computed in Sections 4 and 5 rely on the simplifying assumptions that where the NCAER totals of gross personal income are "blown up" to match the NAS total, this scaling up is neutral with regard to different components of income. This, it could be argued, is an unreasonable assumption. In particular, salaries are likely to be underreported much less than other components such as business income. We have two responses to this criticism. First, the practice of "topping up" salaries through under-the-table payments has reportedly become widespread in recent years. So one should be wary of assuming that incentives to underreport salary are nil or negligible. More importantly, even if we grant the validity of this criticism, we should emphasise that our procedure (of uniform scaling up) is then conservative, in the sense that it biases *downwards* our estimates of tax-evaded income. This is because the cumulative deductions and exemptions applied, in Section 5, to salary incomes are much greater than those applied to business income.¹⁵

Third, the scaling up procedure adopted in Section 4 is also assumed to be neutral across income ranges. In fact, given a progressive income tax schedule, common sense would suggest that those with higher incomes are likely to underreport a higher proportion of their incomes than those with lower incomes. Thus the neutral scaling up assumption results in underestimation of taxable and tax-evaded income.

Fourth (a point we have already made), our estimates of tax-evaded income are biased downwards to the extent that they exclude consideration of certain categories of income, notably undeclared capital gains (legal and illegal), income from illegal current economic activities and illegal current economic activities and illegal transfers.

With respect to illegal transfers we have offered, in Table 5.9.1, some guestimates relating to "siphoning off" from public expenditures. But this excludes illegal transfers in the form of bribes from one individual to another. Such an exclusion may be defensible if we wish to consider incomes only once. For then the exclusion of a bribe in the hands of a recipient may be justified on the grounds that the income was already taxed (in principle) in the hands of the donor. Inter-individual bribes do not swell the total of gross personal incomes. This argument does not apply to illegal transfers (or "leakages") from public expenditures, where the flows *do* augment the total of gross personal income.

All the factors considered thus far point in the direction of *downward* bias in our estimates of tax-evaded income. On the other side there are some factors which work in the opposite direction. First, our estimates do not take adequate account of legal avoidance through entities like trusts and H.U.F.s. To the extent such legal avoidance is not allowed for, estimates of taxable income, and tax-evaded income, are upward biased. Second, as we pointed out in Section 5, we have not been able to allow for all the exclusions, exemptions and deductions that exist in the law. Our analysis in that section was explicitly limited to the important ones. Consequently, our estimates of tax-evaded income are biased upwards on this count.

For easy reference Table 5.9.2 lists the significant limitations in our basic estimates of tax-evaded income. A glance at this table should confirm that the factors imparting *downward* bias to our estimates are likely to far outweigh those working in the opposite direction. So our basic, official NAS-based estimates of tax-evaded income are, very probably, quite conservative. This judgement remains plausible even with respect to the totals in Table 5.9.1 where we

have explicitly made (crude) allowances for two of the sources of downward bias: the underestimation of GDP due to tax evasion and the exclusion of illegal transfers from public expenditures.

TABLE 5.9.2
NAS-based Estimates of Tax-evaded Income: Some Sources of Bias

Nature of limitation	Resulting direction of bias
1. Official NAS total is likely to be downward biased due to evasion behaviour ¹	Downwards
2. Assumption of neutrality with respect to income components in scaling up the NCAER total to the NAS total of income	"
3. Assumption of neutrality with respect to income ranges in scaling up the NCAER total to the NAS total of gross personal income	"
4. Excludes capital gains (on both legally and illegally transferred asset)	"
5. Excludes incomes from illegal current economic activity	"
6. Excludes illegal transfers ²	"
7. Does not consider all legitimate exclusion, exemptions and deductions	Upwards
8. Does not allow for legal avoidance through trusts, H.U.F.s etc.	"

Notes: 1. In the estimates presented in Tables 5.6.2 and 5.7.2, a crude attempt is made to allow for this.

2. Table 5.9.1 (and Chapter 8) present illustrative guestimates of the scale of illegal transfers from public expenditure.

Source: As explained in the text.

Notes

1. Similar approaches have been tried for other countries. See, for example, Herschel (1978) for Argentina and Park (1981, 1983) for the USA.
2. Based on the NCAER survey estimate of 17.7 crore earners in India in 1975-76.

3. The congruency may not be perfect because of some features such as different procedures for imputations of items such as income from owner-occupied house property.
4. We should emphasise that the income ranges in column (1) of Table 5.3.5 pertain to *household* income in the case of columns (2), (3) and (4), and to *earner* income in the case of columns (5), (6) and (7).
5. Note that the reference period for the NCAER survey was July 1975-June 1976, while the NAS data are computed for the fiscal year April 1975 to March 1976. No adjustment is attempted for this temporal discrepancy.
6. For any given income range i and income component j , the weight W_{ij} is simply $\frac{Y_{ij}}{Y_j}$ where Y_{ij} is the income in its income class attributable to the j th component and y_i is gross income in the i th class.
7. Bagchi's unpublished dissertation, *Taxation of Income in India: A Study in Base Erosion*, is a masterly work which contains a definitive treatment, to date, of these issues in the public finance literature on India.
8. The details of the computation of the "blow-up" factors are given in Appendix 1. Though *registered firms* are not corporate entities, we exclude their income assessed. We do so because the income of these firms is also taxed in the hands of individuals (as partners) and including their income would amount to double counting for our purpose of computing a total of noncorporate income assessed to tax which is comparable with our estimates of noncorporate taxable income derived in Section 5.
9. The dimensions of this adjustment—based on information from the regular AIITS series of publications—is actually rather small, as can be seen from Table 5.6.1.
10. In this way we retain a comparable definition of earners for 1980-81.
11. Publication of the volumes containing information by assessment year normally involves a six-year lag, while the regular series, giving information on assessments conducted in a financial year, emerge with a 2-3 year lag.
12. The argument here is analogous to the reasoning advanced in tax incidence studies, where the point is made that *all* taxes (including corporation tax), are, in an important sense, borne by individuals.
13. Bagchi (1975, pp. 42-49) provides a telling illustration of how such misclassification can reduce the effective tax burden of an individual with business income.
14. Of course, corporate profits which are actually not distributed (that is, undistributed corporate profits as shown in company accounts) should and are excluded from the estimate of gross personal incomes presented by the CSO.

15. Thus, for example, in Case 3 for urban India in 1975-76, the total of deductions, HRA deduction and employers' contribution to provident fund together amounted to 24 per cent of gross salary income, as computed to an assumed deduction of 10 per cent for depreciation against business income.