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Economics Research

Research Paper No. 2006/116

## **The Distribution of Household Wealth in India**

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October 2006

### **Abstract**

This paper reviews the principal source of India's wealth distribution statistics, which is constituted by the five decennial Reserve Bank of India National Sample Survey Organization *Surveys on Debt and Investment* of 1961-62, 1971-72, 1981-82, 1991-92, and 2002-03. The data available are described, critically appraised, and analyzed to present some salient findings in terms of the levels of debt, the levels of asset-holdings across the states of the Indian Union and over time, wealth composition, and aspects of vertical and horizontal inequality in the distribution of wealth. The centrality of land and real estate in the wealth status of India is underlined, and some broad aspects of redistributive anti-poverty policy are spelt out.

Keywords: assets, liabilities, vertical inequality, horizontal inequality, land, real estate  
JEL classification: D31

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This study has been prepared within the UNU-WIDER project on Personal Assets from a Global Perspective, directed by Jim Davies.

UNU-WIDER acknowledges with thanks the financial contributions to its research programme by the governments of Denmark (Royal Ministry of Foreign Affairs), Finland (Ministry for Foreign Affairs), Norway (Royal Ministry of Foreign Affairs), Sweden (Swedish International Development Cooperation Agency—Sida) and the United Kingdom (Department for International Development).

ISSN 1810-2611 ISBN 92-9190-900-9 (internet version)

## Acknowledgements

This paper owes much to the detailed and constructive suggestions, with respect to both form and content, made by Jim Davies. The paper could not have been written without the help of R. Dharumaperumal, who provided superb computational assistance under tremendous pressure of time. This work has also benefited from very helpful discussions with A. Vaidyanathan, and from the cues suggested by his own earlier work on the subject. A. Arivazhagan and R. Senthil helped with the word-processing, for which our thanks.

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Camera-ready typescript prepared by Lorraine Telfer-Taivainen at UNU-WIDER

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## 1 Introduction

Amartya Sen (1981: 6) says ‘In understanding general poverty, or regular starvation, or outbursts of famines, it is necessary to look at both ownership patterns and exchange entitlements, and at the forces that lie behind them.’ At a certain level of abstraction, one can discern a formal arithmetical equivalence between shoring up entitlements through the entitlement-mapper and shoring them up through altering endowment. The equivalence is a feature of the simplification inherent in the abstraction, not of the real world. Certain endowments like ‘ability’ are not easily enhanced by transfers, and certain entitlement-mappers like relative prices are not easily altered without accompanying (‘distortionary’) costs. The precise route to improving entitlements must be a function of the specific context at hand. What *is* clear is that the ownership of assets, and their distribution, have a profound impact on the success or failure of entitlement; and that, in principle, tangible asset-redistribution is a means to entitlement-enhancement for the poor.

That India is a poor country needs hardly to be underlined. This fact, taken together with the immediately preceding considerations, suggests that a study of trends and magnitudes in the distribution of household wealth should be of crucial relevance and interest for a country like India. Apart from this, the sheer size of the country—India accounts for nearly a fifth of the world’s population—makes it an important site for the study of personal wealth from a global perspective. Additionally, the country has witnessed a surge in the growth rate of per capita income in the last decade or so: this fact has been widely diagnosed as a reflection of India’s rapid development in the recent past, and it is of interest to examine if any of this dynamism is reflected in the evolution of India’s household wealth. Furthermore, the decadal household asset surveys available for India constitute a remarkably rich source of data, such as are scarcely available in most developing countries, and this makes the data a particularly valuable window on the structure of asset-holdings in countries at a comparable stage of development.

Surprisingly, though, despite the availability of five decades of survey results—for the sixties, the seventies, the eighties, the nineties, and the turn of the millennium—there have been few comprehensive descriptive studies of the subject. Two prominent exceptions are the work of Divatia (1976) and Vaidyanathan (1993): the former analyzed the findings of the Reserve Bank of India’s Rural Debt and Investment Surveys of 1961-62 and 1971-72, and the latter extended the coverage to the results of the 1981-82 National Sample Survey Organization’s Debt and Investment Survey. In the present work, we shall deal with aspects of the 1961-62, 1971-72, 1981-82, 1991-92 and 2002-03 surveys: the last is the most recent published survey on the inter-household distribution of assets available.

It should be clarified at the outset that our concern will be with only a subset of household wealth, that constituted by physical and financial assets, leaving out human capital. The latter is a quantitatively important component of wealth in richer countries, as pointed out by Davies and Shorrocks (2005) in their discussion of the World Bank's (1997) data. In developed countries, wealth in the form of public pension entitlements is also significant, though much less so in developing countries. The presence of spatial variations in the composition of household wealth suggests that what constitutes 'wealth' is context-specific. Wealth is an important, but also both an incomplete and imperfect, indicator of welfare—it is therefore a significant, without being an exhaustive, component in a more comprehensive assessment of distributional and welfare analysis.

The rest of this paper is organized as follows. Section 2 describes the principal features of the data available in the five surveys mentioned earlier. A separate paper by Subramanian and Jayaraj (2006) discusses certain difficulties which are encountered in the use of these data, and these difficulties are summarized, in a drastically abbreviated version, in the present paper—in fact, Section 2 of the present paper is, substantially, a reproduction of Sections 1 and 3 of Subramanian and Jayaraj (2006). Subject to these qualifications, Section 3 presents some findings from the five surveys, with a particular emphasis on the last two (1991-92 and 2002-03) surveys. Section 4 concludes. The focus, for the most part, will be on broad trends and magnitudes, on measurement issues, and on methodological concerns.

## **2 The survey data: a brief description**

In 1951-52 the Reserve Bank of India (RBI) commissioned an All-India Rural Credit Survey. This was followed a decade later, in 1961-62, by a more comprehensive All-India Rural Debt and Investment Survey (AIRDIS), which in this paper will represent the first of the five time points, separated by decadal intervals, in our series from 1961-62 to 2002-03. In 1971-72, the coverage was extended to the country's urban areas in the RBI's All-India Debt and Investment Survey (though the tabulated results for urban India are still (!) not available). The third (1981-82) decennial survey was entrusted by the RBI to the National Sample Survey Organization (NSSO), which also conducted the fourth (1991-92) survey on Assets and Liabilities of Rural and Urban Households, and the fifth (2002-03) survey on Household Assets and Liabilities in India. (The 2002-03 survey results have been covered in five volumes, and at the time of this writing—March 2006—only three of the volumes are available on the NSSO website.) From 1961-62 to 1991-92, the surveys coincided conveniently with the NSSO's work on landholdings and livestock (NSS Rounds 17, 26, 37 and 48), so that data on landholdings, assets, and indebtedness could be canvassed from the same sets of households. Despite a similar coincidence of surveys in 2002-03, different sample sets of households were resorted to in the two surveys.

The surveys were conducted in conformity with a two-stage stratified sampling procedure. The first stage units were villages for the rural areas and (where applicable) blocks for the urban areas, while the second stage units were households. In 1991-92 and 2002-03, the sample sizes of households were 36,425 and 91,192 respectively for the rural areas, and 20,606 and 52,093 respectively for the urban areas. The estimated numbers of households in the two years, for the rural areas, were 116.4 million and 147.9 million respectively; sample size as a proportion of population was around 0.03 per cent in 1991-92 and around 0.06 per cent in 2002-03.

In each of the five surveys, and at the level of each state and union territory of the country, data are provided on the household distribution of assets in nominal terms. A 'household' is taken to be a group of persons living together and sharing food from a common kitchen. A 'household asset' is an item owned by the household and possessing money value. The 'valuation' of physical assets is done at current market, sales, or purchase prices, as may be applicable. Households are classified according to the value of asset-holdings, and for each size class of holdings information is provided on the estimated number of households and the average value of both debt (any claim, in cash or in kind, against the household) and assets, for each of eight types of asset—land, building, livestock and poultry, agricultural machinery, non-farm business equipment, all transport equipment, durable household assets, and financial assets (the last broken up into shares, deposits and accounts receivable). For each size class and each category of asset, information is also available on the proportion of households reporting ownership of the asset.

The size classification of households by value of asset-holdings is variable across the surveys—a fact which (as noted in Subramanian and Jayaraj 2006) has certain implications for the over-time comparability of inequality indices computed from grouped data. The numbers of size classes in the 1961-62, 1971-72, 1981-82, 1991-92 and 2002-03 surveys are, respectively, seven, eleven, eight, ten and ten; and the size class intervals are also variable across the surveys.

The distributional data described above are presented in further disaggregated form according to occupational categories—classified broadly into 'cultivators' and 'non-cultivators' in the rural areas, and 'self-employed' and 'others' (or 'non-self-employed') in the urban areas. Cultivator households are those which operate at least 0.005 acres (or 0.002 hectares) of land, while households which operate less than 0.005 acres of land (and this includes the landless) are designated non-cultivators. Non-cultivators are further classified into agricultural labourers, artisans, and the rest, and the 1961-62 and 1971-72 surveys furnish detailed distributional data for these sub-classifications. Self-employed persons refer to those engaged in their own farm or non-farm enterprises. Both the self-employed and the non-self-employed categories subsume under themselves a number of heterogeneous occupations, and in terms of class

differentiation, the rural divide between cultivators and non-cultivators is perhaps sharper than the urban divide between the self-employed and the non-self-employed.

Another major group classificatory criterion is that of caste. The 1991-92 survey presents distributional data, in both the rural and the urban areas, for a three-fold categorization of caste, pertaining to the scheduled tribes, the scheduled castes (so designated under Article 39 of the Constitution of India, in reference to the erstwhile 'untouchables'), and the 'others'. In our own empirical exercises (to follow), the scheduled castes (SC) and the scheduled tribes (ST) have, often, been aggregated into a composite scheduled caste-scheduled tribe (SCST) group. Since data on both caste *and* occupation are available only in the 1991-92 survey, our analysis of horizontal, or group-related, distributional issues has been confined to this survey.

For 1991-92, computerized microdata are available at the level of each household. The availability of unit-level data is a considerable advantage. Among other things, this facilitates an assessment of the distribution of net worth (assets less liabilities), which is not possible with the published grouped data, since the classification of households is only by asset ownership and not by net worth status. The microdata also facilitate a finer partitioning of the population, for example, into caste-cum-occupation categories, than is possible with the grouped data.

Each of the surveys carries an enormous amount of detailed information on the distribution of assets and indebtedness, and what we have provided above is only a very quick and broad description of the salient features of the survey data which, by and large, do not suffer to any marked extent from inter-survey variations in definitions and concepts, as observed by Vaidyanathan (1993). In Subramanian and Jayaraj (2006), certain difficulties that are likely to be faced by a researcher in using these data are appraised. We would like to suggest that, apart from being of possible independent interest, the paper just cited is an important guide to the caution with which findings based on the survey data must be interpreted. The paper also highlights certain contextual features of the Indian economy which are important for an understanding of the overall background against which the analysis of household wealth distribution is done in this paper.

A very quick summary of Subramanian and Jayaraj (2006) would highlight the following features of the data. First, it is likely that the extent of debt, particularly in the more recent surveys, is under-estimated. Second, it is probable that the extent of asset-ownership, especially for the larger size classes, has been progressively under-estimated, and that this is particularly true with respect to the reporting of land and real estate (both extent and value), and gold. The suggestion, then, is that there could be an increasing under-estimation of inequality in the distribution of both assets and net worth as inferred from the survey results. Finally, computerized microdata at the individual household level are currently available only for 1991-92: their availability for all the

surveys conducted so far would be an essential part of any constructive suggestion for improvements in India's household wealth database.

### **3 Some findings from the survey data**

#### **3.1 Introduction**

In this section, we shall present some major findings from an analysis of the survey data for 1961-62, 1971-72, 1981-82, 1991-92 and 2002-03, in respect of magnitudes and trends for indebtedness, levels and composition of wealth, and inequalities in the distribution of wealth. The robustness of these findings is, of course, a function of the reliability of the data on which they are based, and a number of caveats in this regard—which will not be systematically repeated here—are available in the paper by Subramanian and Jayaraj (2006). Despite these difficulties, it is expected that the findings will reveal certain broad patterns and relationships which it would be difficult to reject out of hand.

#### **3.2 Debt**

Indebtedness can be captured in two indicators, the incidence measure (or proportion of households reporting indebtedness) and the debt-asset ratio. At the all-India rural level, the data (see Table 1) suggest that in respect of both indicators there has been a decline over time in indebtedness (though the 1981-82 survey report itself acknowledges that the incidence figure for this year is suspiciously low). While the incidence of indebtedness appears to be lower, the debt-asset ratio is generally higher for the urban areas than for the rural, as revealed by the data for 1981-82 and 1991-92. The burden of debt is typically higher for the asset-poor households than for the asset-rich ones, as reflected in a monotonically declining debt-asset ratio with the size class of asset ownership (see Table 2, which presents data for India, rural and urban combined, in 2002-03).

As noted in Subramanian and Jayaraj (2006), there is reason to believe that the extent of indebtedness is under-stated in the surveys. This issue is explored by Rao and Tripathi (2001) and Satyasai (2002), with particular reference to the 1981-82 and 1991-92 surveys. Rao and Tripathi point out that, to render the 1991-92 estimate comparable with the 1981-82 estimate, 'current liabilities' would have to be added to 'cash loans' in order to obtain a complete picture of the debt magnitude. When this is done, they report that the incidence of indebtedness in 1991 increases to 32 per cent in the rural areas and to 24.8 per cent in the urban areas—both substantially higher than the corresponding figures for 1981-82. Furthermore, they find that the extent of institutional credit, as available from figures provided by the lending agencies, is considerably higher than debt owed to these sources as reported in the 1991-92 survey. Specifically, they suggest that while the survey estimates of household debt owed to co-operative societies/banks

and commercial banks are of the order of Rs.69,420 million and Rs.100,850 million respectively (adding up to Rs.170,270 million), the corresponding estimates as provided by the lending agencies are in the region of Rs.201,730 million and Rs.454,160 million respectively (adding up to Rs.655,890 million). Institutional debt in respect of these agencies, as reported by the survey, is then Rs.170,270 million, while what is available from a consolidation of the accounts of co-operative societies/banks and commercial banks suggests a figure in the region of Rs.655,890 million; the survey estimate is thus only around 26 per cent of a more realistic figure. Adding debt owed to other institutional agencies (Rs.48,531 million) to the upwardly revised figure of debt owed to co-operative societies/banks and commercial banks (Rs.655,890 million), yields a total institutional debt figure of Rs.704,421 million.

Table 1: Indebtedness over time at the all-India level

Year	Rural		Urban	
	Proportion of indebted households (%)	Debt-asset ratio (%)	Proportion of indebted households (%)	Debt-asset ratio (%)
1961-62	62.80	NA	NA	NA
1971-72	42.87	4.43	NA	NA
1981-82	19.97	1.83	17.36	2.54
1991-92	23.40	1.78	19.30	2.51
2002-03	26.50	2.84	17.80	2.82

Source: Reserve Bank of India (1965); NSSO (1985 37th Round, Report No.318); NSSO (1998 48th Round); and NSSO (2005 59th Round, Report No.500).

Further, both Rao and Tripathi, and Satyasai, point out that, despite an increase in banking activities and the operations of commercial banks and co-operative societies, the share of institutional agencies in rural household debt, as reported by the surveys, declined over the period 1981-82-1991-92; this share, in 1991-92, was nearly 60 per cent at the all-India level (rural and urban areas combined). The high share of non-institutional debt is not implausible, considering, among other things, that, in the rural areas, interlinked transactions in the product and credit markets (through the mediation of traders-cum-moneylenders) have been a feature of agricultural modernization over the 1980s (see Janakarajan 1992). For both the rural and urban areas together, it may therefore not be unreasonable to suppose that the share of institutional debt in all household debt in 1991-92 was around 60 per cent, as suggested by the survey. Then, an estimate of total household indebtedness for 1991-92, given that institutional debt was around Rs.704,421 million (see above), would be Rs.1,174,035 million ( $= 704,421/0.6$ ). Total indebtedness, as reported by the 1991-92 survey, was only Rs.373,163 million. In terms of these calculations, it is not implausible that the extent of indebtedness in 1991-92 was around 3.15 times larger than the estimate yielded by the survey. A similar qualification seems to be indicated for the 2002-03 survey as well: in particular, rural indebtedness and debt-induced farmer suicides, which have been widely reported in the media in the time after the year 2000, are not commensurately reflected in the 2002-03 data.



Table 2: The inverse monotonicity between indebtedness and asset-holdings: India, 2002-03

Size class of household asset-holdings (rupees)	Average value of cash loans (rupees)	Average value of asset-holdings (rupees)	Debt-asset ratio (%)
0-15000	1443	6317	22.84
15000-30000	2510	22353	11.23
30000-60000	3251	44595	7.29
60000-100000	4323	78359	5.52
100000-150000	5279	123453	4.28
150000-200000	5729	173397	3.30
200000-300000	7458	244483	3.05
300000-450000	10201	367066	2.78
450000-800000	16772	592415	2.83
≥ 800000	36712	1752321	2.10
Aggregate	8694	306967	2.83

Source: Computations based on data in NSSO (2005 59th Round, Report No.500).

### 3.3 Assets: average holdings across space and over time

Table 3 presents information, at the all-India level, on the nominal and real values of asset-holdings per household, over the period of the five surveys. As noted in Subramanian and Jayaraj (2006), the frustrating non-availability of a suitable price index makes comparisons of real magnitudes difficult. For want of an alternative, one might have recourse to the Wholesale Price Index (WPI), as Vaidyanathan (1993) does, or the Consumer Price Index (CPI). Assuming that these price indices can serve as at least rough surrogates for an asset price indicator, Table 3 suggests that there has been a clear survey-to-survey increase in the real value of asset-holdings per household.

Table 4 presents detailed data for India and for its major states on the average (nominal) value of asset-holdings per household, and on both the Gini and Theil indices of inequality. (Theil actually advanced two indices; and the one we employ, sometimes referred to as Theil 1, is given by  $T = (1/n\mu)\sum_{i=1}^n a_i \log(a_i/\mu)$ , where  $a_i$  is the asset-holding of the  $i$ th of  $n$  households, and  $\mu$  is mean asset-holding.) These data are provided for the years 1961-62, 1971-72, 1981-82, 1991-92 and 2002-03 for the rural areas, and for the last three years for the urban areas. Data for the union territories have been omitted, and are confined to those states (15 in number) which are common across the surveys. It should be noted that data for the state of Haryana, which was then a part of Punjab, are not separately provided in 1961-62, while in 2002-03, the data for 'Bihar' are actually combined from those for Bihar and Jharkhand which was carved out of Bihar; and similar adjustments have been made for Madhya Pradesh and Uttar Pradesh, following on the creation of the states of Chhattisgarh and Uttaranchal respectively.

Table 3: Nominal and real values of asset-holdings per household, India 1961-62 – 2002-03

Year	Asset-holdings per household (rupees)								
	Nominal			Real (deflated by WPI)			Real (deflated by CPI)		
	R	U	C	R	U	C	R	U	C
1961-62	5267	NA	NA	27290	NA	NA	22900	NA	NA
1971-72	11343	NA	NA	30740	NA	NA	25780	NA	NA
1981-82	36089	40566	37157	36089	40566	37157	36089	40556	37157
1991-92	107007	144330	116873	51570	69557	56324	49540	65904	53865
2002-03	265606	417158	306967	66640	104664	77017	66568	90099	72990

Note: (a) WPI = Wholesale Price Index; CPI = Consumer Price Index; R = Rural; U = Urban; C = Combined. Data on WPI and CPI, for the years before 2002-03, are from Centre for Monitoring Indian Economy: *Basic Statistics for the Indian Economy (August 1993)*; and for the year 2002-03 are from *Annual Statistical Abstract 2002-2003*. (b) Time-series data on the official exchange rate are available on the statistical website [indiastat.com](http://indiastat.com). The data indicate that the annual average exchange rates, as expressed in Indian rupees per US dollar in 1961-62, 1971-72, 1981-82, 1991-92 and 2002-03 were, respectively, 4.76, 7.43, 8.97, 24.47 and 48.40. The all-India combined mean asset-holding per household, in US dollars at current domestic prices and exchange rates, were then of the order of: US\$4142 in 1981-82, US\$4776 in 1991-92, and US\$6342 in 2002-03.

There is a fair degree of stability over time in the rankings of states according to average asset-holdings per household. This is particularly well-marked at the lower and upper extremes. Data for the years 1971-72, 1981-82, 1991-92 and 2002-03 (see Table 4) suggest that in rural India, the five worst-performing states have been Orissa, Tamil Nadu, West Bengal, Assam and Andhra Pradesh, while the top five states have been Punjab, Haryana, Kerala, Uttar Pradesh and Rajasthan. The case of Kerala is of interest: from seventh place in 1971-72 it has moved up to third place in 1981-82, and maintained that rank in 1991-92 and 2002-03; an outcome greatly aided by repatriation of funds by migrants to the Gulf countries. In the urban areas, the five worst-performing states have been Orissa, Andhra Pradesh, Bihar, Assam and West Bengal, while the front-rankers have been Kerala, Haryana, Punjab, and Maharashtra. Taking both urban and rural areas into account, the polarities are described by Punjab, Haryana and Kerala at the top, and, systematically, Orissa at the bottom. The data suggest that all the states of the Indian Union have registered improvements in their mean asset-holding position, but in the rural areas the initially better-off states have outpaced the worse-off ones over time.

### 3.4 Asset composition

It should be noted straightaway that there is one feature of asset composition which sharply differentiates a developing country from an industrialized one: a predominantly rural and agrarian economy like India displays an asset portfolio which is significantly more strongly weighted in favour of physical assets than one would expect from the experience of industrialized economies in which financial assets play a relatively vastly more important role. A comparative picture of the division between tangible and financial assets as it obtains for India and for selected industrialized countries reveals

Table 4: Average asset-holdings per household and inequality in their distribution: India and states, rural and urban, 1961-62, 1971-72, 1981-82, 1991-92, 2002-03

		Rural																
		Year	India	AP	Assam	Bihar	Gujarat	Haryana	Karnataka	Kerala	MP	Maharashtra	Orissa	Punjab	Rajasthan	TN	UP	WB
Average asset holdings per household (rs.)	1961-62	5267	5619	3023	5491	6496		6864	5137	4089	5072	3472	10113	5249	5093	5182	3898	
	1971-72	11343	8094	7809	12831	12847	27132	10772	11632	10513	11677	6023	31844	12762	6839	13574	7339	
	1981-82	36089	26213	23170	32313	36834	90729	32988	76422	29885	35122	17539	96588	40863	19559	44658	20726	
	1991-92	107007	58175	60092	97899	102939	337641	107149	181535	93061	92892	45730	328663	158809	61979	139233	61881	
	2002-03	265606	135146	145782	193022	327864	716379	248409	509679	224836	252749	98454	903717	358351	181376	333467	151842	
Gini co-efficient of inequality	1961-62	0.6440	0.7139	0.5340	0.6783	0.6080		0.6482	0.7147	0.5853	0.6469	0.5621	0.6090	0.5098	0.7056	0.5850	0.6420	
	1971-72	0.6564	0.7033	0.5548	0.6715	0.6337	0.6290	0.6773	0.6612	0.5888	0.6487	0.5975	0.6828	0.5592	0.7117	0.5911	0.6603	
	1981-82	0.6354	0.6607	0.5934	0.6328	0.5844	0.5586	0.6221	0.6047	0.5893	0.6326	0.6030	0.6524	0.5256	0.6668	0.5752	0.6083	
	1991-92	0.6207	0.6491	0.4919	0.613	0.5421	0.5142	0.5513	0.5489	0.6093	0.6057	0.5519	0.5639	0.5387	0.6543	0.5573	0.5701	
	2002-03	0.6289	0.6271	0.4910	0.5823	0.5990	0.6134	0.5621	0.5539	0.5864	0.6247	0.5830	0.6105	0.5154	0.6386	0.5688	0.5771	
Theil index of inequality	1961-62	0.8031	1.0277	0.5439	0.9034	0.6714		0.8423	1.0374	0.6679	0.7834	0.6097	0.6702	0.4864	0.9897	0.6614	0.7794	
	1971-72	0.8471	1.0192	0.5624	0.8876	0.7620	0.7149	0.9585	0.8672	0.6509	0.7961	0.7054	0.8703	0.5949	1.0311	0.6545	0.8419	
	1981-82	0.8013	0.8613	0.8109	0.7734	0.6419	0.5920	0.8022	0.7065	0.6823	0.7857	0.6978	0.8238	0.5295	0.9087	0.6318	0.6947	
	1991-92	0.7123	0.8051	0.4142	0.6838	0.5216	0.5226	0.5452	0.536	0.6848	0.6618	0.5558	0.6258	0.5205	0.8155	0.5528	0.5735	
	2002-03	0.7501	0.7641	0.4227	0.6384	0.6529	0.7152	0.5950	0.5438	0.6409	0.7299	0.7018	0.7293	0.4651	0.7995	0.5829	0.6011	
		Urban																
		Year	India	AP	Assam	Bihar	Gujarat	Haryana	Karnataka	Kerala	MP	Maharashtra	Orissa	Punjab	Rajasthan	TN	UP	WB
Average asset holdings per household (rs.)	1981-82	40566	31776	32323	35586	43077	59565	42200	111647	27716	42380	21533	54569	39940	33507	37688	28146	
	1991-92	144330	94813	112184	98958	160047	151211	125123	221524	117340	165151	72338	255702	161044	119614	157542	101116	
	2002-03	417158	356656	276793	291253	459333	672684	377726	762200	415100	419667	250218	560705	492805	322129	373289	322023	
Gini co-efficient of inequality	1981-82	0.7037	0.7398	0.6431	0.6956	0.6819	0.5705	0.6863	0.6425	0.6530	0.7092	0.7351	0.6347	0.6026	0.7278	0.6842	0.6948	
	1991-92	0.6805	0.7145	0.6847	0.6181	0.6274	0.6238	0.6774	0.5256	0.666	0.7056	0.7123	0.5841	0.6275	0.7387	0.6493	0.6545	
	2002-03	0.6643	0.7328	0.6317	0.6245	0.6365	0.6590	0.7032	0.5390	0.6280	0.6764	0.6584	0.6033	0.5654	0.7037	0.6088	0.6510	

Theil index of	1981-82	1.0224	1.1476	0.7728	1.0368	0.9512	0.6014	0.9335	0.8224	0.8391	1.0463	1.1046	0.7743	0.6838	1.1287	0.9816	0.9168
Inequality	1991-92	0.881	0.9918	0.8990	0.7112	0.7228	0.7168	0.8616	0.5157	0.8309	0.9853	1.0088	0.6442	0.7259	1.0847	0.7945	0.7853
	2002-03	0.8241	1.062	0.7273	0.7129	0.7429	0.8353	0.9504	0.5362	0.7189	0.8637	0.8138	0.6673	0.5733	0.9452	0.6829	0.7748

Source: Computations based on data in Reserve Bank of India (1965), Reserve Bank of India (1975), NSSO (1985; 37<sup>th</sup> Round, Report No.318), NSSO (1998; 48<sup>th</sup> Round), and NSSO (2005: 59th Round, Report No.500).

Table 5a: Size class-wise composition of rural assets for India, rural and/ or urban, 1971-72, 1981-82, 1991-92, 2002-03

Year	Size class	Per cent contribution of asset component to total value of assets								
		land	building	livestock and poultry	agricultural machinery, etc.	non-farm business equipment	all transport equipment	durable household assets	financial assets	all assets
Rural 1971-72	1	3.04	55.65	8.70	3.91	0.00	0.00	26.96	1.74	100.00
	2	11.11	54.31	11.94	3.19	0.00	0.00	17.64	1.81	100.00
	3	29.80	40.10	12.79	2.62	0.00	0.00	11.84	2.86	100.00
	4	47.17	28.94	11.64	2.11	0.00	0.00	7.99	2.14	100.00
	5	57.51	23.17	9.93	2.14	0.00	0.00	5.87	1.37	100.00
	6	62.89	20.03	8.41	2.22	0.00	0.00	5.21	1.23	100.00
	7	66.04	18.67	7.29	2.18	0.00	0.00	4.70	1.13	100.00
	8	68.53	16.99	6.41	2.46	0.00	0.00	4.28	1.32	100.00
	9	71.23	15.71	5.33	2.68	0.00	0.00	3.79	1.27	100.00
	10	73.39	14.72	4.16	2.94	0.00	0.00	3.44	1.35	100.00
	11	75.29	12.82	2.64	4.22	0.00	0.00	2.45	2.58	100.00
Rural 1981-82	1	15.96	32.73	4.85	1.82	1.82	1.62	38.79	2.22	99.80
	2	29.26	38.94	9.11	0.91	0.95	1.16	17.66	2.00	100.00
	3	40.22	32.86	9.36	0.86	0.70	0.94	12.93	2.13	100.00
	4	48.67	27.13	8.87	1.08	0.43	1.02	10.88	1.93	100.00
	5	56.46	23.65	6.88	1.53	0.32	0.94	8.83	1.40	100.00
	6	62.12	21.18	5.11	2.00	0.23	0.86	7.26	1.25	100.00

	7	68.46	17.62	3.12	3.22	0.22	0.90	5.17	1.28	100.00
	8	74.86	11.79	2.26	4.96	0.45	1.45	3.16	1.07	100.00
Rural 1991-92	1	18.04	35.15	5.53	1.16	1.16	2.65	31.34	4.93	99.96
	2	28.87	39.54	6.83	0.71	0.83	1.79	19.33	2.08	99.99
	3	35.35	39.24	7.47	0.70	0.68	1.32	13.22	2.01	100.01
	4	42.15	35.67	6.78	0.77	0.54	1.08	11.00	2.00	99.99
	5	48.16	33.16	6.49	0.91	0.55	1.00	8.62	1.13	100.00
	6	51.14	29.67	5.56	1.03	0.40	1.02	7.80	3.37	100.00
	7	54.78	28.83	5.11	1.34	0.31	1.02	7.24	1.38	100.00
	8	59.19	25.89	4.28	1.43	0.36	0.91	6.73	1.20	99.99
	9	62.56	23.55	3.42	1.54	0.26	1.10	6.07	1.49	100.00
	10	73.36	14.67	1.94	3.22	0.26	1.38	4.16	1.00	100.00
Rural 2002-03	1	22.46	32.17	3.41	1.03	1.20	2.33	32.98	4.41	100.00
	2	30.14	43.32	3.86	0.68	0.65	1.23	17.33	2.81	100.00
	3	34.95	44.82	4.04	0.57	0.45	1.05	12.08	2.04	100.00
	4	42.77	40.22	4.01	0.66	0.46	0.86	9.02	2.00	100.00
	5	48.76	35.82	3.78	0.69	0.46	0.82	7.58	2.08	100.00
	6	52.29	32.88	3.58	0.84	0.42	0.87	6.84	2.29	100.00
	7	57.42	29.26	2.99	0.96	0.30	0.96	6.08	2.04	100.00
	8	59.40	26.97	2.43	1.35	0.42	1.03	5.69	2.74	100.00
	9	62.83	23.46	1.82	2.12	0.33	1.37	4.94	3.13	100.00
	10	73.78	14.98	1.16	2.91	0.30	1.81	3.07	1.99	100.00
Urban 1981-82	1	1.78	8.12	1.27	0.25	4.06	5.08	70.30	9.14	100.00
	2	10.42	15.19	2.08	0.11	2.99	3.28	49.60	16.35	100.00
	3	16.34	21.55	1.42	0.07	2.07	1.93	35.75	20.86	100.00
	4	20.84	26.82	1.51	0.12	1.51	1.94	27.82	19.43	100.00
	5	25.61	34.24	1.30	0.22	1.67	1.86	20.90	14.20	100.00
	6	29.35	38.83	0.96	0.30	1.33	2.07	16.36	10.81	100.00
	7	35.51	37.80	0.53	0.51	1.95	2.95	11.63	9.11	100.00
	8	43.80	33.97	0.60	0.64	3.90	2.71	5.89	8.49	100.00

Urban 1991-92	1	1.54	7.70	0.65	0.12	3.26	6.04	74.53	6.22	100.06
	2	7.93	15.88	0.89	0.11	3.74	4.23	57.79	9.41	99.99
	3	14.77	22.92	1.42	0.08	1.96	3.10	44.80	10.94	99.99
	4	22.99	26.69	1.03	0.08	1.69	2.58	33.72	11.21	100.00
	5	23.23	30.11	1.04	0.09	1.39	3.43	28.30	12.43	100.00
	6	26.80	35.52	0.60	0.08	1.24	2.78	21.46	11.53	100.00
	7	29.87	34.07	0.69	0.09	1.49	2.88	19.08	11.83	100.00
	8	32.28	38.10	0.71	0.16	0.96	2.37	14.66	10.76	100.00
	9	32.84	39.03	0.71	0.19	1.13	2.75	13.29	10.06	99.99
	10	38.57	41.19	0.25	0.32	1.59	3.16	7.85	7.07	100.00
Urban 2002-03	1	2.59	5.43	0.24	0.09	2.93	3.98	73.06	11.70	100.00
	2	10.35	13.99	0.53	0.06	2.54	3.73	59.12	9.66	100.00
	3	18.30	24.79	0.59	0.09	1.81	3.75	39.22	11.46	100.00
	4	25.62	32.87	0.59	0.05	1.41	4.08	24.40	10.98	100.00
	5	28.31	36.05	0.46	0.07	1.29	3.28	17.96	12.58	100.00
	6	31.00	40.22	0.37	0.07	1.37	2.09	13.68	11.20	100.00
	7	31.97	40.45	0.48	0.07	1.13	2.87	11.73	11.31	100.00
	8	31.98	43.34	0.39	0.08	0.99	2.57	10.10	10.56	100.00
	9	35.45	41.78	0.29	0.13	0.99	2.78	8.79	9.79	100.00
	10	42.41	36.50	0.11	0.30	1.54	4.46	5.69	8.99	100.00

Note: The categories 'non-farm business equipment' and 'all transport equipment' do not figure in the 1971/72 Survey.

Source: Calculations based on data in Reserve Bank of India (1975); NSSO (1985) 37th Round; NSSO (1998) 48th Round; and NSSO (2005) 59th Round.

Table 5B: Size class-wise composition of assets for India, rural and urban combined, 1981-82, 1991-92, 2002-03

Year	Size class	Per cent contribution of asset component to total value of assets								
		land	building	livestock and poultry	agricultural machinery, etc.	non-farm business equipments	all transport equipment	durable household assets	financial assets	all assets
1981-82	1	10.65	23.85	3.44	1.12	2.61	2.94	52.50	2.89	100.00
	2	25.00	33.56	7.52	0.74	1.41	1.63	24.88	5.29	100.00
	3	35.09	30.44	7.66	0.69	0.99	1.16	17.83	6.14	100.00
	4	42.91	27.07	7.34	0.89	0.65	1.21	14.38	5.55	100.00
	5	50.25	25.76	5.76	1.27	0.59	1.13	11.26	3.99	100.00
	6	54.16	25.46	4.10	1.59	0.49	1.16	9.47	3.57	100.00
	7	59.19	23.30	2.39	2.46	0.71	1.48	6.98	3.48	100.00
	8	62.42	20.68	1.59	3.23	1.83	1.96	4.25	4.04	100.00
1991-92	1	11.96	24.94	3.72	0.77	1.93	3.89	47.38	5.40	100.00
	2	24.20	34.31	5.52	0.59	1.48	2.33	27.84	3.73	100.00
	3	31.05	35.72	6.17	0.57	0.95	1.70	19.94	3.90	100.00
	4	37.95	33.74	5.54	0.62	0.82	1.41	15.92	4.01	100.00
	5	43.17	32.57	5.40	0.74	0.70	1.48	12.56	3.38	100.00
	6	45.81	30.95	4.48	0.82	0.58	1.41	10.79	5.16	100.00
	7	49.40	30.00	4.15	1.07	0.56	1.42	9.78	3.62	100.00
	8	52.06	29.11	3.33	1.09	0.52	1.30	8.84	3.74	100.00
	9	54.48	27.75	2.68	1.17	0.50	1.55	8.03	3.83	100.00
	10	59.61	25.15	1.27	2.07	0.79	2.08	5.62	3.40	100.00

2002-03	1	14.80	21.86	2.19	0.67	1.87	2.97	48.43	7.22	100.00
	2	25.84	36.96	3.14	0.54	1.06	1.77	26.40	4.30	100.00
	3	31.86	41.09	3.40	0.48	0.71	1.55	17.13	3.79	100.00
	4	39.55	38.77	3.34	0.53	0.68	1.50	12.06	3.73	100.00
	5	44.35	35.87	3.06	0.56	0.64	1.35	9.82	4.35	100.00
	6	47.75	34.45	2.90	0.68	0.62	1.14	8.30	4.19	100.00
	7	51.14	32.02	2.37	0.74	0.51	1.43	7.47	4.33	100.00
	8	51.66	31.59	1.85	0.99	0.58	1.47	6.92	4.95	100.00
	9	53.35	29.81	1.29	1.44	0.56	1.86	6.27	5.44	100.00
	10	59.11	25.03	0.67	1.69	0.88	3.05	4.29	5.26	100.00

Source: Calculations based on data in NSSO (1985) 37th Round; NSSO (1998) 48th Round; NSSO (2005) 59th Round.



the following: the share of financial assets in all assets was 5.01 per cent for India in 2002-03, 18.2 per cent for Italy in 1991 (Brandolini et al. 2004: table 7), 21.2 per cent for Canada in 1984 (Morissette et al. 2003: table 1), 24 per cent for Sweden in 1975 (Spant 1981: table 2), and 22.1 per cent for Germany in 1983 (Hauser and Stein 2003). Thus, while financial assets in the industrialized countries could easily account for a fifth of the value of all assets, the corresponding share in India is only around a twentieth. We shall return to this theme a little later.

Table 5A presents a comprehensive picture of the composition of household assets at the all-India level, for the rural areas in 1971-72, 1981-82, 1991-92 and 2002-03, and for the urban areas in 1981-82, 1991-92 and 2002-03, disaggregated by the size class intervals of household asset-holdings relevant for the respective surveys. Table 5B presents these data at the combined (rural and urban) level for 1981-82, 1991-92 and 2002-03. The data for rural India in 1991-92 are typical of a pattern in which asset diversification is a declining function of aggregate wealth, with specialization in land rising with wealth. If we divide the population into the poorest 51 per cent and richest 49 per cent of households, then we find that among themselves three asset components—land, buildings and durable household assets—account for 89 per cent of the value of all assets for the poorest 51 per cent and for nearly 92 per cent for the richest 49 per cent. For the first group, the shares of land, buildings and durable household assets are 43.09 per cent, 35.08 per cent and 10.87 per cent, whereas, in contrast, there is a much heavier emphasis on land for the second group, with land accounting for 66.67 per cent, buildings for 19.92 per cent, and durable household assets for 5.34 per cent. The contrast becomes sharper when we compare the asset composition of the poorest 7.5 per cent of households with that of the richest 14.4 per cent: the three asset components under discussion account for about 85 per cent of the value of all assets for the poor group and for about 92 per cent for the rich group; the relative shares of land, buildings and durable household assets for the poor group are 18.04 per cent, 35.15 per cent and 31.34 per cent, with a markedly different picture emerging for the rich group, as reflected in corresponding shares of 73.36 per cent, 14.67 per cent and 4.16 per cent respectively. This pattern of asset diversification contrasts with that in the developed countries, where there is some suggestion—see, for instance, King and Leape (1984) who employ survey data for the late 1970s in the USA—that diversification tends to increase with wealth. Land continues to remain the symbol and substance of both wealth and power in rural India. It may be added that while durable household assets account for just a little over 4 per cent of the asset portfolio of the richest 14.4 per cent of households in 1991-92, this share is as high as 31 per cent for the poorest 7.5 per cent of households, but the per household holding of durable assets for the rich group (at Rs.22,650) is nearly 29 times the corresponding figure (Rs.782) for the poor group. Issues of inequality will be considered in greater detail at a later stage.

Table 6 presents a more aggregated time-series picture of asset composition in India. The numbers in the table confirm that wealth in rural India is heavily land-dominated. There is a fair measure of inter-temporal stability in the asset composition, with land accounting for about two-thirds of the value of all assets, followed by buildings which account for about a fifth, and durable household assets edging out the share of livestock and poultry over time. Among themselves, these four asset components account for about 95 per cent of all wealth. The share of both non-farm business equipment and transport equipment has increased over time, but their weight in the overall asset value is very small. In the urban areas, land and buildings between themselves claim between two-thirds and three-fourths of the total value of assets, with buildings being somewhat weightier than land. The third most important asset component in the urban areas is durable household assets, followed by financial assets, though the latter has overtaken the former in 2002-03: these two components, along with land and buildings, claim about 94 per cent of the value of all assets. Between 1981-82 and 2002-03, the (small) share of transport equipment has risen, but the shares of durable household assets and financial assets have declined to the gain of land and buildings. Financial assets are significantly more important in the urban areas than in the rural. Between 1991-92 and 2002-03, at the combined all-India level, the share of financial assets has risen from 3.6 per cent to 5 per cent, but given the large weight of rural population in total population, the overall picture is still very heavily biased in favour of physical assets, in particular, land. Even in 2002-03, financial assets are overwhelmingly constituted by deposits (92.3 per cent of the total), with shares accounting for only 4.5 per cent.

Table 6: Asset composition of household wealth for India, rural and/or urban, 1971-72, 1981-82, 1991-92, 2002-03

Year	Per cent contribution of asset component to total value of assets								
	land	building	livestock and poultry	agricultural machinery, etc.	non-farm business equipment	all transport equipment	durable household assets	financial assets	all
1971r	66.22	18.42	6.46	2.73	NA	NA	4.61	1.55	100
1981r	62.12	20.71	4.98	2.47	0.30	0.96	7.10	1.37	100
1991r	64.25	21.40	3.38	2.23	0.32	1.21	5.88	1.33	100
2002r	63.22	23.53	2.10	1.98	0.35	1.39	5.11	2.32	100
1981u	32.36	35.65	0.83	0.41	2.05	2.51	15.14	11.05	100
1991u	35.80	39.46	0.42	0.26	1.48	3.03	11.29	8.26	100
2002u	38.54	37.84	0.21	0.22	1.38	3.85	8.37	9.58	100

Note: 'r' stands for 'rural' and 'u' for 'urban'.

Source: Calculations based on data in Reserve Bank of India (1975); NSSO (1985) 37th Round, NSSO (1998) 48th Round; NSSO (2005) 59th Round.

It bears remarking that the picture presented above is seldom reflected in the pink press or the visual media: entire television channels are devoted to a continuous monitoring of the stock market, and to the consumer durables-oriented life style of the urban elite. The

dominant reality on the ground presents a stark contrast to this construction. From a major country-wide household survey conducted in 2000 by NCAER (2000), it emerges that only an estimated 8 per cent of all Indian households had invested in either or both of equity shares and debentures at the end of the financial year 1998-99. Comparison with a 1986 Survey of Financial Assets conducted by the NCAER suggests that investor households have grown at a compound rate of 22 per cent per year between 1985-86 and 1998-99; further comparison with the results of a SEBI survey conducted in 1991-92 reveals that this growth has been much sharper in the post 1991-92 period (the watershed year for economic liberalization in the country). Despite these developments, by the turn of the millennium, 92 per cent of all Indian households had no direct investment in equity shares—see *Rediff Money Special* (2000).

The situation is not very different in the matter of durable household assets. Despite their relatively large presence in the wealth portfolio of the poor, there is reason to believe that the nature and quality of durables owned by the poor is of doubtful value. Data on the ownership of assets and amenities provided by Census of India 2001 (tables on houses, amenities and assets are available on compact disk) confirm this proposition. For a class of consumer durables constituted by radios/transistors, television sets, telephones, bicycles, scooters, motorcycles and mopeds, and cars, vans and jeeps, it turns out that the headcount ratio of households which do not own *any* of these durables, not even a radio, is as high as 34.5 per cent. These deprivation statistics are compatible with the positive relationship between consumer expenditure and wealth: as the 1991-92 survey unsurprisingly reveals, for both rural and urban India, average household asset-holdings systematically rise with the per capita expenditure class in which the households fall.

Briefly, and in the light of the statistics reviewed above, it would appear to be premature, unrealistic, and essentially diversionary to construct India's wealth status in the image of a small, enclave, urban elite's aspirations. In the larger scheme of things, financial assets and durables in India are still nowhere near imitating their relative significance in the industrialized West. It is worth underlining the issue: misplaced priorities can not only cost a government its seat (as happened in India's General Elections of 2004), but derail important programmes and policy orientations. The proposition is nowhere more evident than in the sadly discredited and all-but-forgotten role of land reform as an egalitarian and anti-poverty instrument in India's economic development. This brings us directly to a consideration of distributional questions.

### **3.5 Vertical inequality in the distribution of household assets**

#### *The polarities: assetless-ness and the top 1 per cent*

Sample data at either end of a distribution are in general not very reliable. Further, 'assetless-ness' is a necessarily somewhat vague notion: it is unlikely to be an accurate description of the state of being literally in possession of *no assets of any kind whatever*,

and what constitutes assetless-ness could also well be temporally, spatially, and culturally variable. Subject to these qualifications, and confining ourselves to 1991-92 and 2002-03, we find that the proportion of assetless households in the country as a whole has declined from 0.41 per cent to 0.12 per cent. It is significant that a preponderant majority of assetless households in 1991-92 were single-member households: the microdata suggest that of the households without assets, 81 per cent in the rural areas and 95 per cent in the urban areas were single-member households—possibly comprising elderly widows or widowers. The immensity of India's population allows very large numbers to be absorbed in very small proportions. Thus, the number of households without any asset-base to fall back upon in the event of an adverse state of nature is distressingly huge: this figure, in 2002-03, was 0.26 million—a little more than one-twelfth of Portugal's total number of households of 3.15 million, and 1.7 times Luxembourg's 0.15 million households. The issue is not just one of relative deprivation, but of stark and absolute destitution.

The microdata for 1991-92 permit us to explore the upper end of the asset spectrum. The wealthiest household in urban India is reported to have had assets of the value of Rs.14.30 million, with a corresponding figure of Rs.12.70 million in rural India. The data suggest that, at the all-India level, the wealthiest 1 per cent of households—call these the 'rich' households—accounted for 16.67 per cent of the value of all assets. The caste-related distribution of the burdens and benefits of society are revealed starkly in the following summary statistics. The ratio of the incidence of scheduled caste and scheduled tribe (SCST) assetless-ness to that of non-SCST assetless-ness is in excess of 3, while the ratio of the incidence of non-SCST 'richness' to that of SCST 'richness' is 15. It is doubtful that, in the absence of deliberate over-sampling of the very rich, the true wealth status of this category of households will have been captured in the sample surveys. We shall return to this issue at a later stage.

*Inter-household inequality in the distribution of assets: the picture at the all-India level*

Table 4 presents information for India and its major states on the Gini co-efficient (calculated from various surveys grouped distributional data by the usual 'geometric' method) and the Theil index of inequality. Taking rural India as a whole, following a slight increase in the value of the Gini co-efficient from 0.6440 in 1961-62 to 0.6564 in 1971-72, there is a subsequent decline—to 0.6354 in 1981-82 and to 0.6207 in 1991-92—with a slight upturn again, to 0.6289 in 2002-03. The Theil index describes a similar pattern: 0.8031 in 1961-62, 0.8471 in 1971-72, 0.8013 in 1981-82, 0.7123 in 1991-92, and 0.7501 in 2002-03. Urban inequality is substantially higher than rural inequality, but there has been a continuous decline in inequality in urban India from 1981-82 to 2002-03, with Gini values of 0.7037 in 1981-82, 0.6805 in 1991-92, and 0.6443 in 2002-03, and corresponding Theil values of 1.0224, 0.8810 and 0.8241 respectively. The overall picture, then, is one of greater inequality in the urban than in the rural areas with, by and large, an indication of over-time decline in both areas.

As has been discussed in Subramanian and Jayaraj (2006), there is a case for interpreting these figures, especially the temporal pattern, with a good deal of caution. Apart from the possibility of increasing under-reporting and under-valuation of assets (especially land and buildings) over time, there are also problems of comparability of grouped data occasioned by variable numbers of size classes over time and unverifiable impacts of inflation, *via* the particular size classification that has been resorted to from survey to survey, on the estimate of inequality. Thus, the all-India (combined rural and urban) estimate of the Gini co-efficient obtained from the published grouped data of the 1991-92 survey, at 0.6434, is lower than the estimate, at 0.6683, obtained by employing the individual household observations available in the microdata set.

It would be distinctly helpful to be able to present distributional information in the form of fractile shares. This is aided, when we are working with grouped data, by the ability to estimate the equation of the Lorenz curve. Two methods of estimation based on parameterized Lorenz curves are the so-called Beta method of Kakwani (1980) and the General Quadratic (GQ) method of Villasenor and Arnold (1989). Employing the algorithmized computational procedure for the GQ method available in the 'POVCAL' package created by Chen et al. (1991), it proved possible to obtain fitted Lorenz curves for the distribution of household asset-holdings at the all-India (combined rural and urban) level for 1991-92 and 2002-03.

Table 7: Decile shares in total value of assets: India (rural and urban combined) 1991-92, 2002-03

Decile	1991-92		2002-03	
	Asset share	Average asset-holding per household (rs)	Asset share	Average asset-holding per household (rs)
1 <sup>st</sup>	0.00133	1558	0.00246	7539
2 <sup>nd</sup>	0.00726	8487	0.00786	24118
3 <sup>rd</sup>	0.01441	16836	0.01447	44418
4 <sup>th</sup>	0.02323	27144	0.02277	69890
5 <sup>th</sup>	0.03447	40279	0.03352	102895
6 <sup>th</sup>	0.04943	57769	0.04808	147596
7 <sup>th</sup>	0.07069	82607	0.06913	212197
8 <sup>th</sup>	0.10423	121810	0.10294	315989
9 <sup>th</sup>	0.16956	198154	0.16997	521752
10 <sup>th</sup>	0.52540	614005	0.52881	1623273
Share of top 5%	0.38225		0.38319	
Share of top 1%	0.16222		0.15717	
Gini co-efficient	0.66820		0.66875	

Source: Computations based on data in NSSO (1998) 48th Round and (2005) 59th Round, after estimating the equation of the Lorenz curve by the General Quadratic Method Using POVCAL.

Table 7 presents a picture of considerable inequality. The asset share of the poorest 50 per cent of the population is just 8.07 per cent in 1991-92 and 8.11 per cent in 2002-03. The average asset-holding of the richest decile exceeds that of the poorest decile by a factor of around 39,400 per cent in each of the years 1991-92 and 2002-03. The asset share of the very rich (top 1 per cent) is a little higher, at 16.22 per cent, in 1991-92 than it is, at 15.72 per cent, in 2002-03. The median asset value, at Rs.48,123 (respectively, Rs.122,809) is just 41.2 per cent (respectively, 40.01 per cent) of the mean value, at Rs.116,873 (respectively, Rs.306,967) in 1991-92 (respectively, 2002-03). The cumulative density functions (cdfs) are plotted in Figure 1, and the Lorenz curves of the distributions in Figure 2. Each of the cdfs in Figure 2 is typical of a concentrated distribution, as reflected in the small clearance between the curve and its western and northern boundaries. Each of the Lorenz curves likewise displays a substantial deviation from the diagonal of the unit square, and it is virtually impossible to distinguish the two curves. The Gini co-efficients calculated from the fitted Lorenz curves are larger than those obtained through the usual 'geometric' method from the grouped survey data: 0.6682 for 1991-92 and 0.6688 for 2002-03. It may be added that the distribution of household assets is pronouncedly more unequal than the distribution of household consumption expenditure: the microdata for 1991-92 suggest that the asset Gini is 0.6683, while the consumption expenditure Gini is 0.3505. Also, the asset share of the top 1 per cent, in 1991-92, at 16.2 per cent, is much higher than the income share of the top 1 per cent, which is estimated at 7 per cent, on the basis of income-tax returns, by Banerjee and Piketty (2003: figure 3).

Figure 1: Cumulative density functions for asset distribution: India (rural and urban combined) 1991-92, 2002-03

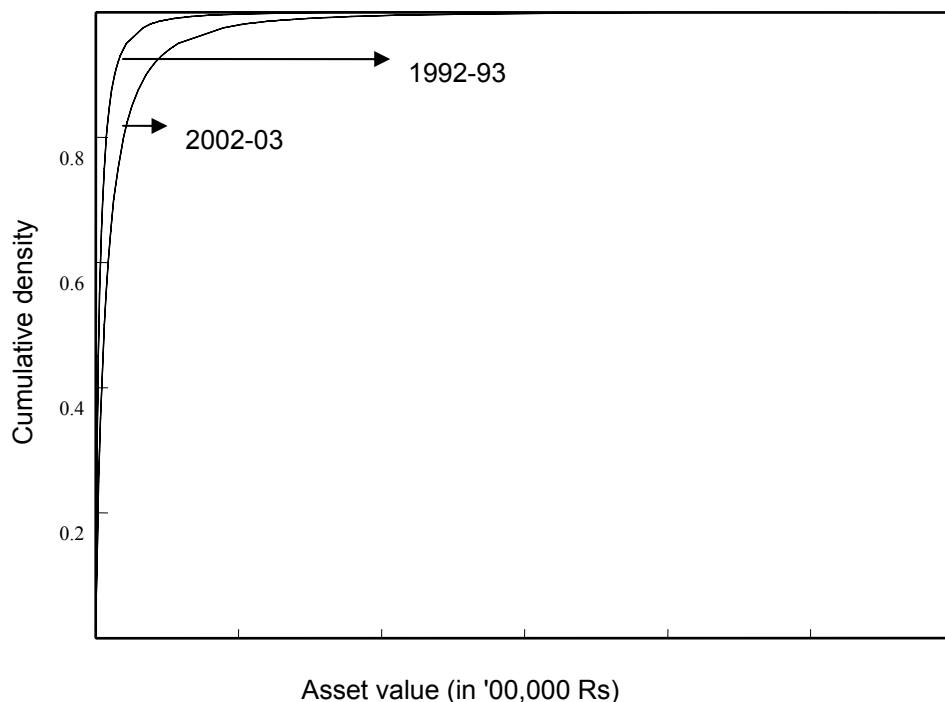
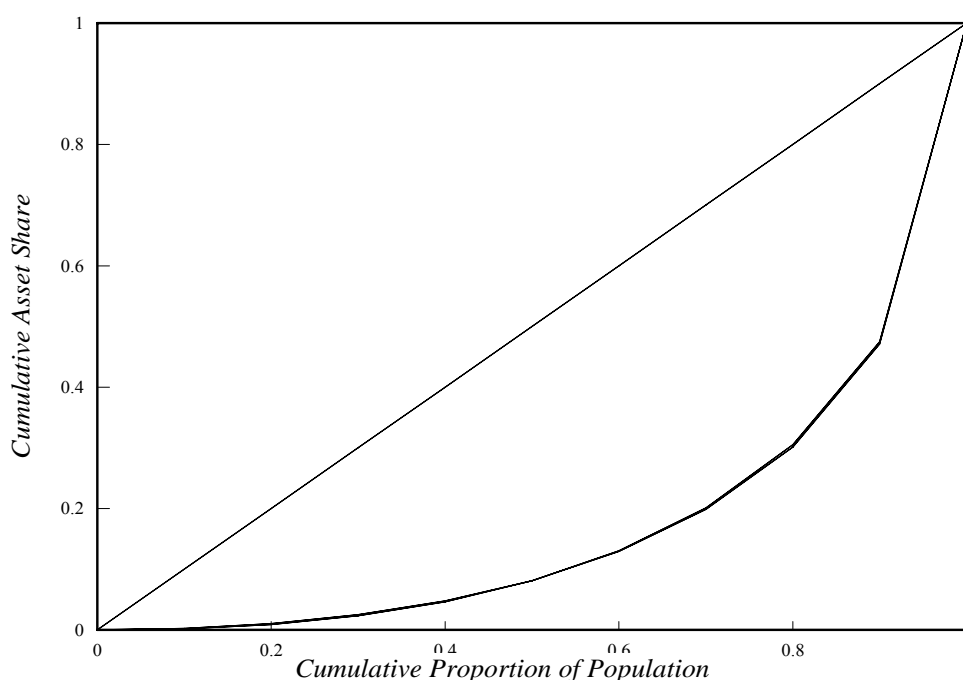


Figure 2: Lorenz curves for asset distribution: India (rural and urban combined) 1991-92, 2002-03



As was noted earlier, the true wealth status of the very rich is unlikely to be accurately reflected without resort to deliberate over-sampling of this category of households. Comparison with alternative sources of information for the 1991-92 and earlier surveys has proved to be difficult. For more recent years, data from journalistic sources on the very rich are available. For instance, *Forbes Magazine* mentions nine Indians among the world's wealthiest persons in 2004. *Business Standard* magazine (2005) provides a list of the 178 wealthiest individuals/families in India, and the list is available for 2003 and 2004 (as on 31 August of the respective years). Sinha (2006) has analyzed these data, and he shows that the distribution of wealth of these ultra-rich households is well-approximated by the Pareto distribution. The richest entity, according to the *Business Standard* list, increased its wealth from Rs.189,636 million in 2003 to Rs.311,984 million in 2004: this sort of quantum leap is very much a feature of the burgeoning Information and Technology sector of corporate industry. The wealth of the least wealthy on the 2003 list is Rs.192.4 million (around 3.98 million USD at the 2002-03 exchange rate); the lower bound on the highest (open-ended) size class interval for asset ownership, as reported in the 2002-03 survey, is, by comparison, a paltry Rs.0.8 million (or 16,529 USD).

The purist may frown upon an attempt at directly incorporating these rough-and-ready orders of magnitude based on journalistic sources in any calculation of inequality that requires 'adjusting' the survey data. There is, nevertheless, strong reason to believe—see Davies (1993) and Davies and Shorrocks (2000)—that such an exercise could be suggestive of a more realistic picture of wealth concentration than is afforded by the 'uncontaminated' survey data. With this in mind, we have added the *Business Standard*

2003 wealth data on the richest 178 households to the open-ended class interval of the grouped 2002-03 survey data on asset distribution, and re-estimated the General Quadratic equation of the Lorenz curve: the asset share of the richest 1 per cent is now found to rise from 15.72 per cent to 17.77 per cent. Combining the *Business Standard* data with the survey data suggests that the wealthiest 178 households account for 0.00009 per cent of all households, and for 2.045 per cent of the country's estimated wealth: the ratio of asset share to population share of the *Business Standard*'s ultra-wealthy is a small matter of 23,239. We do not have to accept these numbers at face value, but it would seem to be hard to deny that the surveys underestimate the wealth of the very rich by a significant margin.

*Inter-household inequality in the distribution of assets: the picture at the state-level*

At the level of individual states, we find that inter-state disparity in inequality levels is quite muted when compared to inter-state disparity in average asset-holdings. The wealth status of a state can be described in terms of its average level of asset-holding and how unequally it is distributed. Letting  $\mu$  stand for mean asset-holdings per household and  $G$  for the Gini co-efficient of inequality in the distribution of assets,  $W \equiv \mu(1-G)$  is Sen's (1976) measure of the 'distributionally adjusted mean', and can be employed, in the present context, as an ad hoc way of combining information on the level (interpreted as a 'good') and inequality (interpreted as a 'bad') of wealth. In rural India, the best-performing state, Punjab, has a  $W$ -value of Rs.394,111, and the worst performer, Orissa, has a  $W$ -value of Rs.41,055, the proportionate difference between the two being of the order of 0.8958. In urban India, the best performing state is Kerala, with a  $W$ -value of Rs.351,374, and the worst-performing state is Orissa, with a  $W$ -value of Rs.85,475; the proportionate difference between the two is a high 0.7567. The data suggest that vertical inequality in the distribution of wealth is generally high for India and its states, and higher for some states than for others; and identifiable states like Orissa, Andhra Pradesh and Tamil Nadu labour under the twin burdens of high inequality and low average wealth.

*Inter-household inequality in the distribution of net worth*

Net worth, defined as assets *less* liabilities, is obviously a more accurate indicator of wealth than asset-holding. Unfortunately, distributional analysis of net worth based on the published data provided by the surveys is not possible because the households are ranked by asset-holding rather than by net worth. The availability of unit-level data for 1991-92 however enables us to examine the distribution of net worth. Using the 1991-92 microdata, we have ranked households according to net worth, and then classified them into the same size classes as are to be found in the published 1991-92 survey, with one further size class added. The additional size class relates to households for which debt is in excess of asset-holding. At the combined (rural and urban) all-India level, an estimated 1.43 million households are reported to have negative net worth. Grouped data on cumulative population and net worth shares, derived from the microdata, are



presented in Table 8. When a variable (like net worth) assumes negative values, the Gini co-efficient can be computed along the lines suggested by Chen et al. (1982).

As we have seen earlier, the debt-asset ratio declines monotonically with the size class of asset-holdings. Debt, like taxation, is a drain. Therefore, the distribution of net worth when the debt-asset ratio is a declining function of asset size can be expected to be like a post-tax income distribution under a regressive tax scheme. It is not surprising, then, that the Gini co-efficient for net worth, at 0.6588, is higher than the Gini co-efficient for assets, at 0.6436. The actual difference is perhaps larger, because the extent of total indebtedness reported by the survey is very small, the aggregate debt-asset ratio being just 2.01 per cent. If each household's debt figure is blown up by the factor (3.15) obtained after correction for the under-reported extent of institutional debt along the lines discussed earlier in the section on 'debt', and if households are reclassified by net worth corresponding to these revised debt estimates, then we obtain an 'adjusted' net worth distribution (see Table 11). The Gini co-efficient for this 'adjusted' distribution is, as might be expected, higher at 0.6820 than the co-efficient for the unadjusted distribution. Our general sense is that the underestimation of both asset-holdings and debt in the survey has worked in such a way as to understate the true extent of inequality in the distribution of net worth.

Table 8: Co-ordinates of the Lorenz curve for the distribution of net worth: India (rural and urban combined) 1991-92

Size class	Without correcting the debt figure		After correcting the debt figure	
	cumulative population share	cumulative share in net worth	cumulative population share	cumulative share in net worth
<0	0.00907	-0.00086	0.03481	-0.01041
0-5,000	0.11429	0.00108	0.13912	-0.00839
5,000-10,000	0.18481	0.00568	0.20825	-0.00369
10,000-20,000	0.29735	0.02005	0.32070	0.01135
20,000-30,000	0.38581	0.03917	0.40646	0.03078
30,000-50,000	0.51733	0.08432	0.53248	0.07590
50,000-70,000	0.61239	0.13372	0.62633	0.12693
70,000-1,00,000	0.71035	0.20562	0.72098	0.19958
1,00,000-1,50,000	0.80408	0.30601	0.81159	0.30114
1,50,000-2,50,000	0.89459	0.45818	0.89874	0.45419
≥2,50,000	1.00000	1.00000	1.00000	1.00000
Gini co-efficient		0.6588		0.6820

Note: The debt figure is corrected by blowing up each household's reported debt by the factor by which the aggregate debt figure is blown up when corrected for the possible under-estimation of institutional debt, as detailed in the section on 'debt' in the text.

Source: Computations based on unit-level data made available by NSSO in CD ROM (marked as 48th Round, Schedule 18.2, Debt and Investment).

*Inequality decomposition by asset components*

Table 9, based on 1991-92 microdata, provides information on the Gini co-efficient of inequality in the inter-household distribution of each asset component, separately for the rural and the urban areas. As can be seen from the table, financial assets display an extraordinarily high order of concentration, as do agricultural machinery and non-farm business equipment, but these assets together account for less than 6 per cent of the value of all assets at the combined (rural and urban) all-India level. The Gini co-efficients for land and buildings are also particularly high in the urban areas, and these categories of assets together constitute a weighty part of the asset portfolio, accounting, between them, for 82 per cent of the value of all assets. It is these asset components which might be expected to drive aggregate inequality, to the decomposition of which we now turn.

Table 9: Inequality in the distribution of asset components: rural and urban India, 1991-92

Asset component	Gini co-efficient of inequality	
	rural	urban
Land	0.7280	0.8265
Building	0.6094	0.7997
Livestock and poultry	0.6883	0.9557
Agricultural machinery	0.9147	0.9885
Non-farm business equipment	0.9786	0.9677
All transport equipment	0.8978	0.9209
Durable household assets	0.6566	0.6523
Financial assets:		
shares	0.9858	0.9919
deposits	0.9629	0.8730
Loan receivable in cash	0.9955	0.9960
Loan receivable in kind	0.9995	0.9995

Source: See Table 8.

A *decomposition rule*  $R$  is a procedure by which the proportionate contribution of each asset component to aggregate inequality can be reckoned, with the proportionate contributions adding up to unity. Without further restrictions placed on the rule, the door is open to any number of decomposition rules which, in principle, could assess component contributions very differently from each other. Shorrocks (1982, 1983) has shown that under certain weak and reasonable restrictions, the only decomposition rule (which is invariant with respect to which measure is employed for computing inequality) that is available, is given by  $R_V: s_k = \text{cov}(\mathbf{A}_k, \mathbf{A}) / \text{Var}(\mathbf{A})$ , where  $s_k$  is the proportionate contribution to aggregate inequality of the  $k$ th asset component,  $\mathbf{A}$  is the distribution for total assets,  $\mathbf{A}_k$  is the distribution for the  $k$ th asset component,  $\text{cov}$  stands for co-variance, and  $\text{var}$  stands for variance. Shorrocks observes that, as it happens,  $R_V$  is the ‘natural’ decomposition rule for the variance and the squared co-efficient of variation: we could therefore call  $R_V$  the ‘variance rule’.

Table 10: Per cent contribution of asset components to total value of assets (c) and to aggregate inequality (s) under the 'variance rule': India 1971-72, 1981-82, 1991-92

Year	Land	Building	Livestock and poultry	Agricultural machinery, etc.	Non-farm business	All transport equipment	Durable household assets	Financial assets	All
1971r									
c	66.22	18.42	6.46	2.73	NA	NA	4.61	1.55	100
s	74.78	13.4	3.36	3.64	NA	NA	2.80	2.02	100
s/c	1.13	0.73	0.52	1.33	NA	NA	0.61	1.30	
1981r									
c	62.12	20.71	4.98	2.47	0.30	0.96	7.10	1.37	100
s	71.84	14.71	2.66	4.03	0.32	1.16	4.12	1.16	100
s/c	1.16	0.71	0.53	1.63	1.07	1.21	0.58	0.85	
1991r									
c	64.25	21.4	3.38	2.23	0.32	1.21	5.88	1.33	100
s	74.09	14.29	1.81	3.23	0.25	1.37	3.98	0.98	100
s/c	1.15	0.67	0.54	1.45	0.78	1.13	0.68	0.74	
2002r									
c	63.22	23.53	2.10	1.98	0.35	1.39	5.11	2.32	100
s	73.98	14.83	1.11	2.92	0.30	1.80	2.97	2.10	100
s/c	1.17	0.63	0.53	1.48	0.85	1.30	0.58	0.91	
1981u									
c	32.36	35.65	0.83	0.41	2.05	2.51	15.14	11.05	100
s	40.87	35.67	0.57	0.60	3.16	2.79	7.76	8.59	100
s/c	1.26	1.00	0.69	1.46	1.54	1.11	0.51	0.78	
1991u									
c	35.8	39.46	0.42	0.26	1.48	3.03	11.29	8.26	100
s	38.99	41.55	0.24	0.32	1.58	3.16	7.20	6.96	100
s/c	1.09	1.05	0.57	1.23	1.07	1.04	0.64	0.84	
2002u									
c	38.54	37.84	0.21	0.22	1.38	3.85	8.37	9.58	100
s	42.85	36.71	0.10	0.30	1.53	4.47	5.13	8.91	100
s/c	1.11	0.97	0.48	1.36	1.10	1.16	0.61	0.93	

Note: 'r' stands for 'rural' and 'u' for 'urban'.

Source: See Table 6.

Table 10 presents information, for all survey years under review, on each of the various asset components' proportionate contribution to aggregate inequality in the distribution of assets (s) under the decomposition rule  $R_V$ , and also on each component's contribution to the total value of assets (c). Table 10 reveals considerable stability in the decomposition pattern over time. Component contributions to inequality are generally consistent with component shares in the total value of assets, with land and buildings between them accounting for between three-fourths and four-fifths of all inequality in

both the rural and the urban areas: the division is heavily weighted in favour of land in rural India and more balanced between the two in urban India. The ratio  $s_k/c_k$  is of significance: when it is in excess of unity for any asset component  $k$ , the suggestion is that asset  $k$  has a disequalizing impact on the aggregate distribution which is disproportionately greater than its share in the aggregate value of assets. Table 10 reveals that the  $s/c$  ratio is *consistently* at least equal to one for three categories of assets in the rural areas—land, agricultural machinery—and all transport equipment, and for four categories of assets in the urban areas—land, agricultural machinery, transport equipment—and non-farm business equipment (for buildings,  $s/c$  is in excess of unity in 1981-82 and 1991-92, and falls just short of unity in 2002-03). The component-wise decomposition invites attention to those components for which both  $s$  and  $s/c$  are high. By this reckoning, Table 10 signals a simple message: land and buildings between them in the urban areas, and land by itself in the rural areas, must be seen to be the major driving force behind aggregate inequality in the distribution of assets. This is of a piece with what we have seen earlier: the centrality of land in India’s wealth picture is re-emphasized.

#### **4 Horizontal inequality in the distribution of assets**

In this section we undertake a review, for 1991-92, of group-related inequality in wealth distribution. As noted in Section 2, the grouping is in terms of each of caste and occupation, and the 1991-92 survey is distinguished by the fact that it provides (a) caste-related information and (b) household-level microdata. We look at two aspects of the problem: inequality as it obtains for each group, and a decomposition of aggregate inequality into its ‘within-group’ and ‘between-group’ components. Table 4, and Tables 11A-11D, are relevant for these exercises.

##### **4.1 Group-wise inequalities and distributionally adjusted wealth levels**

Table 11A provides information on average asset-holdings per household, the Gini coefficient of inequality, and the Theil index of inequality, separately for all households, scheduled castes and tribes (SCST) households, and ‘others’ households, for rural India in 1991-92. Table 11B provides the same information for urban India. Tables 11C and 11D relate to occupational category: the former provides information on average assets per household, Gini, and Theil, separately for all households, cultivator (C) households, and non-cultivator (NC) households, for rural India; and the latter provides the same information for self-employed (SE) households and non-self-employed (NSE) households, for urban India. We consider caste first. In the rural as well as in the urban areas, mean asset-holdings per household are systematically and substantially higher for the ‘Others’ group than for the SCST group. For the rural areas, in the majority of states (as in India as a whole) Gini for the ‘others’ is greater than Gini for the SCST, although there are instances of rank-reversal by the Theil index; for the urban areas, the rankings by Gini and Theil are identical, and again in a majority of states inequality (as measured by either index) for the ‘others’ exceeds that for the SCST.

Table 11A: Mean asset-holdings, inequality, and inequality decomposition: scheduled castes and tribes, and 'others', rural India and states, 1991-92

		India	AP	Assam	Bihar	Gujarat	Haryana	Karnataka	Kerala	MP	Maharastra	Orissa	Punjab	Rajasthan	TN	UP	WB
Assets per household	all	107007	58175	60092	97899	102939	337641	107149	181535	93061	92892	45730	328663	158809	61979	139233	61881
	others	134501	72744	61491	119330	123954	425241	123538	198761	129413	115768	63373	474913	198892	78549	166055	74769
	SCST	50363	27931	53618	45801	56478	89943	58313	45012	52900	42500	30392	90358	88606	27690	66817	40361
Gini co-efficient of inequality	all	0.6207	0.6491	0.4919	0.6130	0.5421	0.5142	0.5513	0.5489	0.6093	0.6057	0.5519	0.5639	0.5387	0.6543	0.5573	0.5701
	others	0.5954	0.6323	0.5019	0.5862	0.5184	0.4341	0.5446	0.5262	0.5763	0.5744	0.5297	0.4317	0.5108	0.6288	0.5310	0.5546
	SCST	0.5707	0.5956	0.4360	0.5729	0.5006	0.5968	0.4697	0.4185	0.5730	0.5771	0.5160	0.5683	0.5045	0.6065	0.5185	0.5482
Theil Index of inequality	all	0.7123	0.8051	0.4142	0.6838	0.5216	0.5226	0.5452	0.5360	0.6848	0.6618	0.5558	0.6258	0.5205	0.8155	0.5528	0.5735
	others	0.6410	0.7458	0.4305	0.6095	0.4663	0.3946	0.5271	0.4918	0.5929	0.5851	0.4939	0.4119	0.4672	0.7310	0.4963	0.5331
	SCST	0.6079	0.6518	0.3324	0.6626	0.4856	0.6570	0.3728	0.3059	0.6133	0.5930	0.4868	0.6399	0.4574	0.7333	0.4882	0.5420
% contribution to aggregate Theil of Inequality	among others	76.12	78.21	86.07	76.98	74.32	70.25	83.46	89.21	63.18	75.77	57.28	58.94	71.55	76.59	77.98	70.23
	among SCST	13.10	12.61	13.51	13.21	15.67	8.78	9.35	1.59	24.13	12.78	31.09	10.69	17.82	13.09	11.42	23.06
	between groups	10.78	9.18	0.41	9.81	10.01	20.96	7.19	9.20	12.68	11.45	11.63	30.37	10.62	10.32	10.60	6.71

Note: SCST stands for 'scheduled castes and scheduled tribes'.

Source: calculations based on data in NSSO (1998) 48th Round.

Table 11B: Mean asset-holdings, inequality, and inequality decomposition: scheduled castes and tribes, and 'others', urban India and states, 1991-92

		India	AP	Assam	Bihar	Gujarat	Haryana	Karnataka	Kerala	MP	Maharashtra	Orissa	Punjab	Rajasthan	TN	UP	WB
Assets per household	all	144330	94813	112184	98958	160047	151211	125123	221524	117340	165151	72338	255702	161044	119614	157542	101116
	others	159746	105019	115341	104683	174592	169486	134965	232685	139939	181578	92806	292328	185288	132141	170743	109678
	SCST	58873	31889	76311	64980	68415	58264	56156	40933	48535	66694	23291	84262	51532	42180	85189	55729
Gini co-efficient of inequality	all	0.6805	0.7145	0.6847	0.6181	0.6274	0.6238	0.6774	0.5256	0.6660	0.7056	0.7123	0.5841	0.6275	0.7387	0.6493	0.6545
	others	0.6695	0.7009	0.6792	0.6244	0.6097	0.6147	0.6728	0.5080	0.6463	0.7012	0.6901	0.5594	0.6010	0.7286	0.6371	0.6458
	SCST	0.6466	0.5936	0.7132	0.5250	0.5972	0.3840	0.6039	0.5694	0.6174	0.5652	0.5811	0.5312	0.5333	0.6999	0.6714	0.6640
Theil index of inequality	all	0.8810	0.9918	0.8990	0.7112	0.7228	0.7168	0.8616	0.5157	0.8309	0.9853	1.0088	0.6442	0.7259	1.0847	0.7945	0.7853
	others	0.8480	0.9421	0.8769	0.7269	0.6796	0.6940	0.8478	0.4845	0.7730	0.9670	0.9188	0.5997	0.6698	1.0457	0.7585	0.7630
	SCST	0.7898	0.6871	1.2422	0.4715	0.6467	0.2986	0.6649	0.6116	0.6887	0.6329	0.6222	0.4914	0.5121	0.9575	0.9265	0.8015
% contribution to aggregate Theil of inequality	among others	89.86	91.78	92.08	92.52	85.14	91.06	92.86	92.95	83.53	92.56	82.38	87.68	86.93	91.71	87.50	88.67
	among SCST	5.58	2.29	7.75	6.28	6.43	2.22	4.33	1.28	8.47	3.65	5.87	4.43	4.09	4.29	9.67	8.76
	between groups	4.56	5.94	0.17	1.20	8.43	6.72	2.81	5.77	8.00	3.79	11.75	7.89	8.98	4.00	2.84	2.57

Note: SCST stands for scheduled castes and tribes.

Source: See Table 11A.

Table 11C: Mean asset-holdings, inequality, and inequality decomposition: cultivators and non-cultivators, rural India and states, 1991-92

		India	AP	Assam	Bihar	Gujarat	Haryana	Karnataka	Kerala	MP	Maharastra	Orissa	Punjab	Rajasthan	TN	UP	WB
Assets per household	all	107007	58175	60092	97899	102939	337641	107149	181535	93061	92892	45730	328663	158809	61979	139233	61881
	cultivator	142308	89964	73008	127068	141865	544634	136545	212893	118171	133087	54911	614888	182901	103384	164570	81955
	non-cultivator	38180	18109	27390	30641	43671	59724	40668	69293	32071	30776	25797	106359	60079	29661	57408	24298
Gini co-efficient of Inequality	all	0.6207	0.6491	0.4919	0.6130	0.5421	0.5142	0.5513	0.5489	0.6093	0.6057	0.5519	0.5639	0.5387	0.6543	0.5573	0.5701
	cultivator	0.5545	0.5563	0.4350	0.5448	0.4704	0.2769	0.4876	0.4978	0.5563	0.5043	0.5066	0.2824	0.5000	0.5721	0.5147	0.4929
	non-cultivator	0.6463	0.6128	0.5328	0.6368	0.5184	0.4965	0.5834	0.6388	0.6224	0.6661	0.6138	0.6120	0.6183	0.6354	0.6005	0.5969
Theil index of inequality	all	0.7123	0.8051	0.4142	0.6838	0.5216	0.5226	0.5452	0.5360	0.6848	0.6618	0.5558	0.6258	0.5205	0.8155	0.5528	0.5735
	cultivator	0.5521	0.5661	0.3214	0.5253	0.3814	0.1974	0.4199	0.4376	0.5588	0.4440	0.4665	0.2221	0.4455	0.5904	0.4656	0.4180
	non-cultivator	0.8382	0.7408	0.5153	0.8739	0.4875	0.4457	0.6257	0.8308	0.7517	0.8907	0.7023	0.7665	0.6945	0.7875	0.7001	0.7163
% contribution to aggregate Theil of inequality	among cultivators	68.13	60.64	67.57	69.54	60.83	34.92	68.06	74.84	73.40	57.89	69.02	29.02	79.24	52.94	76.01	62.93
	among non-cultivators	14.23	12.67	16.06	12.10	15.71	6.44	13.35	12.92	11.03	17.74	22.47	22.31	9.90	25.95	12.35	17.08
	Between groups	17.63	26.69	16.37	18.36	23.45	58.64	18.59	12.24	15.56	24.38	8.51	48.67	10.86	21.11	11.65	20.00

Source: See Table 11A.

Table 11D: Mean asset-holdings, inequality, and inequality decomposition: self-employed and non-self-employed, urban India and states, 1991-92

		India	AP	Assam	Bihar	Gujarat	Haryana	Karnataka	Kerala	MP	Maharastra	Orissa	Punjab	Rajasthan	TN	UP	WB
Assets per household	all	144330	94813	112184	98958	160047	151211	125123	221524	117340	165151	72338	255702	161044	119614	157542	101116
	se	189710	115401	152306	97814	204391	186837	204048	275476	195868	263192	84495	328101	212947	166845	173684	110785
	nse	120928	84614	84715	99599	136629	120894	92631	193173	85166	125015	66521	200882	132977	100687	142705	96255
Gini co-efficient of inequality	all	0.6805	0.7145	0.6847	0.6181	0.6274	0.6238	0.6774	0.5256	0.6660	0.7056	0.7123	0.5841	0.6275	0.7387	0.6493	0.6545
	se	0.6410	0.7258	0.6743	0.6301	0.6020	0.5227	0.5916	0.4573	0.6073	0.6646	0.7567	0.4961	0.5483	0.7109	0.5773	0.6515
	nse	0.6962	0.7061	0.6769	0.6087	0.6352	0.7027	0.6936	0.5578	0.6585	0.7011	0.6830	0.6452	0.6681	0.7485	0.7128	0.6557
Theil index of inequality	all	0.8810	0.9918	0.8990	0.7112	0.7228	0.7168	0.8616	0.5157	0.8309	0.9853	1.0088	0.6442	0.7259	1.0847	0.7945	0.7853
	se	0.7713	1.0473	0.8774	0.7352	0.6689	0.4834	0.6439	0.4045	0.6823	0.8675	1.2113	0.4734	0.5516	0.9919	0.5944	0.7775
	nse	0.9296	0.9541	0.8625	0.6977	0.7372	0.9879	0.9191	0.5741	0.8155	0.9729	0.8760	0.7894	0.8337	1.1196	1.0086	0.7861
% contribution to aggregate Theil of inequality	among self-employed	39.13	41.62	52.94	39.83	40.78	38.57	35.54	33.59	39.84	40.73	45.32	40.68	35.10	36.24	39.50	36.27
	among non-self-employed	58.20	57.68	43.35	60.14	57.02	59.06	55.94	63.67	50.53	53.05	54.04	54.71	61.23	61.59	59.88	63.44
	between groups	2.67	0.71	3.73	0.03	2.19	2.37	8.52	2.74	9.63	6.23	0.64	4.63	3.67	2.18	0.61	0.29

Note: 'se' stands for self-employed, and 'nse' stands for non-self-employed

Source: See Table 11A.



We consider occupational groupings next. In the rural areas, cultivator households, on average, are much wealthier than non-cultivator households. Further, for the country as a whole and in every single state, inequality—whether it is measured by the Gini or the Theil index—is systematically greater for the non-cultivator households than for the cultivator households. Urban data on self-employed and non-self-employed households (Table 11D) reveal that, with the exception of Bihar, the average asset-holdings of the SE group is higher than that of the NSE group, though the margin of difference is not as pronounced as that between SCST and ‘others’ groups or as that between cultivator and non-cultivator groups. As in the case of non-cultivators, the NSE group, which is on average poorer than the SE group, also displays greater inequality in a majority of the states—in 12 out of 15 according to the Gini co-efficient, and in 11 according to the Theil index.

As we have noted earlier, the overall wealth status of a group can be seen as an increasing function of its level and a declining function of the extent of inequality in its distribution. Sen’s ‘distributionally adjusted mean’,  $W \equiv \mu(1-G)$ , where  $\mu$  is mean asset-holdings per household and  $G$  is the Gini co-efficient of inequality, can be employed as an ad hoc way of combining information on the level and inequality of wealth with a view to conveying a summary picture of how well or badly a group is performing on the wealth front. The gulf in wealth status (in terms of Sen’s index) which separates identifiable sub-groups of the population is captured in a stark and summary form in Table 12. Table 12 presents the values of  $\mu$ ,  $G$  and  $W$  for each pair of polar cases of grouping by caste and by occupational category, in each of the rural and the urban areas, and the last column measures the proportional difference in ‘wealth-related welfare’ between the best-off and the worst-off groups. The gulf in each case is enormous, and the gap between rural Punjabi cultivators and rural Andhra Pradesh non-cultivators is as close to the theoretical maximum as makes no difference.

Table 12: Differences in ‘distributionally adjusted’ levels of wealth between best and worst performing groups: India 1991-92

Item	State and group	$\mu$ (rupees)	G	$W \equiv \mu(1-G)$ (Rupees)	$(\text{Max}W - \text{Min}W) / \text{Max}W$
Rural polarization by caste	AP, SCST	27,931	0.5956	11,295	0.9582
	Punjab, others	474,913	0.4317	269,893	
Urban polarization by caste	Orissa, SCST	23,291	0.5811	9,757	0.9242
	Punjab, others	292,328	0.5594	128,800	
Rural polarization by occupation	AP, nc	18,109	0.6128	7,012	0.9841
	Punjab, c	614,888	0.2824	441,244	
Urban polarization by occupation	Orissa, nse	66,521	0.6830	21,087	0.8725
	Punjab, se	328,101	0.4961	165,330	

Note:  $\mu$  stands for mean asset-holdings per household;  $g$  for the gini co-efficient of inequality; SCST for scheduled castes and tribes; nc for non-cultivators; c for cultivators; se for self-employed; and nse for non-self-employed.

Source: See Table 11A.

A finer partitioning of the population is rendered possible by employing the 1991-92 microdata, which facilitate a caste-cum-occupation categorization. We have three castes: scheduled caste, scheduled tribe, and ‘others’; and four occupation groups: agricultural labourers, artisans, cultivators, and ‘other labourers’ in the rural areas, and casual labourers, self employed, regular/salaried employees, and ‘other labourers’ in the urban areas. In combination, these castes and occupations yield 12 groups for the rural areas which can be derived from the cartesian product {scheduled caste, scheduled tribe, ‘others’}  $\times$  {agricultural labourers, artisans, cultivators, ‘other labourers’}, and similarly 12 groups for the urban areas derived from the cartesian product {scheduled caste, scheduled tribe, ‘others’}  $\times$  {casual labourers, self employed, regular/salaried employees, ‘other labourers’}. We do not present the detailed calculations here, but simply note that in any given occupational category, the worst-off caste groups are either the scheduled castes or the scheduled tribes, while in any given caste category, the worst off occupational groups are the agricultural labourers in the rural areas and the casual labourers in the urban areas. The proportionate difference between best and worst performing caste-cum-occupation groups, in terms of Sen’s ‘distributionally adjusted mean’ indicator  $W$ , also turns out to be huge (in excess of 90 per cent in the both the rural and the urban areas). Group differentiation by wealth in India is clearly massive.

#### **4.2 Within- and between-group inequality**

An inequality index is *sub-group decomposable* when it can be expressed as a sum of two components: a *between-group* component (obtained by imagining that within each sub-group asset ownership is equally distributed at the level of the sub-group mean), and a *within-group* component (which is a weighted sum of sub-group inequality levels, with the weights, typically, being some combination of sub-group population and asset shares). The class of decomposable inequality indices is constituted by the so-called Generalized Entropy Measures (see Shorrocks 1988), of which the Theil index is a member. The proportionate contributions of within- and between-group inequalities to aggregate inequality as measured by the Theil index are furnished in the final rows of Tables 11A-D.

The relevant numbers in Tables 11A and 11B suggest the following. For rural India as a whole, the between-group contribution is relatively small, at 10.8 per cent, and it is sizeable in only two states, Haryana (21 per cent) and Punjab (30 per cent). For the urban areas, the between-group contribution is systematically and considerably lower than in the rural areas, for the country as a whole (4.6 per cent), and for every state except Orissa. In a decomposition by occupational category (Tables 11C and 11D), we find that in the rural areas the between-group contribution is appreciably higher than it is for the caste decomposition: at the all-India rural level, it is 17.6 per cent, and ranges from 8.5 per cent in Orissa to a high 48.7 per cent in Punjab. It may be noted that Punjab, which displays a high between-group contribution in the decomposition by both caste and occupation in the rural areas, also has a relatively large population share of SCSTs (38 per cent) and of non-cultivators (56 per cent). In the urban areas, where the

occupational grouping is in terms of the self-employed and the non-self-employed, the between-group contribution is very low: 2.7 per cent for the country as a whole, and ranging between 0.29 per cent (West Bengal) and 9.6 per cent (Madhya Pradesh).

For the country as a whole, and in three of the four cases of decomposition considered, it turns out that the largest contribution to aggregate inequality is the within-group inequality of the better-off group: thus the contribution of the 'Others' caste group is 76 per cent for rural India and nearly 90 per cent for urban India, while the contribution of the cultivators group in rural India is 68 per cent; it is only in the case of occupational categorization in the urban areas that the worse-off (non-self-employed) group has a dominant within-group contribution (of 58 per cent) to overall inequality.

These are positive results, and they do not warrant the *normative* inference that reducing between-group inequality is a relatively unimportant matter. Such an inference is somewhat crudely 'contribution-oriented' in motivation, in the sense that it is not overly informed by a sense of the intrinsic unfairness of group disparity, but rather by a sense of how much group disparity contributes to aggregate inequality. It is often enough advanced as a justification of the *status quo ante* by the better-off and politically powerful groups in a society. All too frequently, however, the 'contribution-consistent' view that the within-group inequality of the dominant group needs urgent rectification is simply (and conveniently) overlooked. Inter-group inequality merits attention for reasons which are of salience from an intrinsically ethical, and political, perspective. That there is plenty of reason to be concerned with such a perspective has already been established by the findings, in the preceding sub-section, on the extent of group differentiation that obtains in the distribution of wealth in India.

## **5 Summary and conclusions**

This study started out with the proposition that the level and distribution of assets are an important determinant of the success or failure of entitlements. This is borne out on the ground in an important empirical study, by Jain et al. (1989), on the determinants of poverty in India. In a cross-sectional analysis of 56 regions of the country for 1971-72, employing National Sample Survey data, the authors have attempted to explain the inter-regional variations in levels of living and poverty. Their major finding is that, at the margin, mean asset security has a greater impact on poverty than even agricultural performance.

In developing countries like India, with a preponderantly rural population, land is the single most important component of the asset portfolio. The composition and distribution of assets, with particular emphasis on the land component, and their role in the 'dynamics of rural transformation', have been studied by Kurien (1989) in the context of the state of Tamil Nadu. His analysis of agricultural production, technology, and the household distribution of assets by land ownership suggests that while

agricultural technology is largely scale-neutral, its benefits are unequally distributed in favour of the larger landowners on account of their superior ability to take advantage of the complementarities of modern inputs, implements and machinery, and farm processes. Janakarajan's (1992) field work on Tamil Nadu shows that improved irrigation, technology, high yielding crop varieties, and the availability of credit have all contributed considerably to a dynamic growth of agricultural output in the State, but inequalities in the distribution of both land and access to private (lift) irrigation have played a large part in preserving feudal social relations of dependence and oppression even in an environment of modernizing, 'capitalist' forces of production in agriculture.

Given the centrality of land in the asset structure of rural India and of other developing countries, and its driving force in precipitating inequalities in the distribution of assets, one would imagine that land reform must constitute an important component of anti-poverty policy. Implementation of land reform has often been compromised by both the political power of 'land-lobbies' and that aspect of ideological orientation which insists on seeing equity as endangering efficiency. Increasingly, however, the conservatism underlying such positions has been undermined by a number of careful empirical studies. Bandyopadhyay (2003) provides an instructive account of the role of land reform in explaining agricultural growth and poverty reduction in the state of West Bengal. The Indian experience, employing state-level data, has been analyzed by Besley and Burgess (2000), who conclude that of the four components of land reform policy in India, two (tenancy reform and abolition of intermediaries) have had a depressing effect on poverty, while the other two (land redistribution and land consolidation) have been very poorly implemented: 'Although the effects on poverty are likely to have been greater if large-scale redistribution of land had been achieved, our results are nonetheless interesting as they suggest that partial, second-best reforms which mainly affect production relations in agriculture can play a significant role in reducing rural poverty' (p.424). Similarly optimistic appraisals are available for South Africa in the study by Deininger and May (2000), who say: 'The good news is that the data on land reform implementation provide strong support in favour of the hypothesis that land reform was able to target the poor and that there is little difficulty in combining equity and efficiency objectives.' Deininger et al. (2000) present the case of the contribution of land reform to economic growth and poverty reduction in Zimbabwe, a study in which they cite a number of other cases of success, reported by other authors, relating to Japan, Korea, Taiwan, the Philippines, Brazil, and Colombia.

Against this background, we have outlined (in Section 1) the importance of a study of India's wealth statistics for an understanding of the structural features of the country's economy, and for being guided in the formulation and implementation of pro-egalitarian and anti-poverty policy. Section 2 has reviewed the contents of the principal source of India's wealth distributions statistics, which is constituted by the five major decennial sample surveys of 1961-62, 1971-72, 1981-82, 1991-92 and 2002-03. A number of difficulties confronting the user of these data have been discussed, in a non-nihilistic

spirit, in the paper by Subramanian and Jayaraj (2006), on parts of which the present paper relies. One has to allow for the strong possibility that both the level and inequality in the distribution of asset-holdings are increasingly understated over time in the surveys. This problem is so much a function of the general environment of untruthful voluntary disclosure that it would amount largely to token exhortation if one were to urge more accurate reporting by the surveys, although there is a case for some internal cross-checking in the matter, for example, of land operations. The construction of wealth statistics must also be accompanied, importantly, by the construction of appropriate asset-specific prices, so that meaningful real comparisons, in both cross-section and time-series exercises, are rendered possible. Thirdly, for a number of reasons, it would greatly enhance both freedom and accuracy of analysis if the survey results were available in the form of unit record data, an outcome which presently obtains only for 1991-92. This would call for discussions between the data-generating agency and data-users on how best the data may be arranged and computerized, with a considerable measure of urgency attached to the process.

Section 3 has presented some salient findings (subject to the data limitations earlier discussed) from the five wealth surveys. Levels of debt, levels of asset-holdings across space and over time, the composition of wealth, vertical inequalities in its distribution, decomposition of inequality by asset components, and questions of horizontal inequalities, in terms of the highly skewed distribution across caste and occupation groups, have been investigated. The general picture which emerges is one of considerable concentration of wealth both vertically and horizontally, considerable inter-state differentials, and the continuing centrality of land and real estate in the wealth composition of the country. These findings only underscore the importance of land-reform, especially its re-distributive component, as a policy instrument for the cure of deeply entrenched structural inequality and poverty—an issue of centrality which has got lost in a regrettable policy mix of neglect, political unpreparedness, and denial.

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