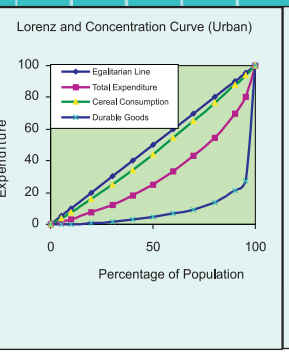
सत्यमेव जयते

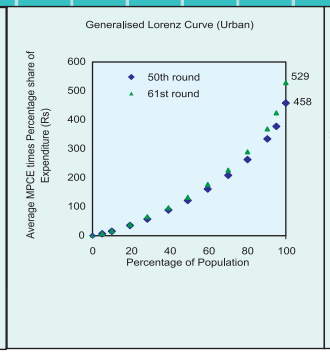
सर्वेक्षण
SARVEKSHANA

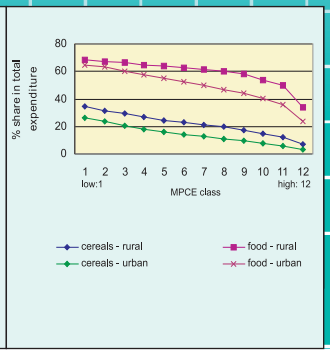
93rd Issue
Vol. XXVIII No. 1&2
(July 2008)

Journal of
National Sample Survey Organization

National Sample Survey Organisation
Ministry of Statistics & Programme Implementation
Government of India
New Delhi







SARVEKSHANA

93rd Issue
Vol. XXVIII No. 1&2

Journal of

National Sample Survey Organization

सत्यमेव जयते

National Sample Survey Organisation

Ministry of Statistics & Programme Implementation
Government of India
New Delhi

Printed at Chandu Press, D-97, Shakarpur, Delhi-110092.

Journal of National Sample Survey Organisation

Editorial Secretariat - Coordination and Publication Division, National Sample Survey Organisation, Sardar Patel Bhavan, New Delhi-110001.
Mr. Ramkripal, Director
Mr. A K Chopra, Assistant Director
Mr. S.A. Beg, J.I.

Frequency and Subscription

'Sarvekshana' is published twice a year

The subscription rate is Rs. 200 per issue.

Mail subscription to: Controller of Publications, Department of Publication, Civil Lines, Delhi-110054.

Ph. 23819689, 23813302, 23817823

Manuscript Submission

'Sarvekshana' is aimed at encouraging research and analysis of NSS data to bring about a deeper understanding of socio-economic development of the country. For details about manuscript submission refer to back of cover page.

Suggestions for improvement of the Journal may be addressed to:
The Managing Editor, Sarvekshana,
Coordination and Publication Division
National Sample Survey Organisation
Sardar Patel Bhawan, Sansad Marg, New Delhi. 110001

Sarvekshana
Vol. XXVIII No1&2
Issue No.93

CONTENTS

PART – I

TECHNICAL PAPERS

EXTERNAL VALIDATION OF NSS CONSUMER EXPENDITURE SURVEY

– Siladitya Choudhury and S. Mukherjee

1. Introduction

A statement on reliability of its results should always follow the reports on complex socio-economic surveys like the ones undertaken by the National Sample Survey. The NSS surveys are Multi-subject and follow a multistage sampling design. The reliability measures therefore, should be devised taking into consideration its complexity. There could be various measures of reliability of survey data such as measurement of relative standard error- to study the sampling fluctuations and various heuristic reliability measures- to have a check on non sampling errors. Permissible limits of such measures indicate the degree of reliability of any survey results. For convenience of exposition most of these issues can be discussed under two broad categories. One class of issues is more relevant to the text book variety assessment of internal validity of NSS estimates. The other category of issues go much beyond the more easily traceable area of internal validity of the survey estimates, and relate more to the examination of whether or not the sample survey estimates are in agreement with comparable external data set.

As strictly comparable external dataset are indeed rare to find, the comparison with independent datasets have to be satisfied with inherent difference between concepts, definitions coverage, time periods, method of collection, estimation procedures etc. In view of all this, the question of external validation of sample survey data has to be approached with fairness and scientific detachment. However, scientific scrutiny may or may not, lead to mutual validation of both datasets under examination. It may nevertheless, provide important clues for improving the reliability of either one or both datasets.

Minhas (1988), for purpose of this comparison of NSS CES, chose CSO's estimates of Total Private Consumptions as external datasets. The Total Private Consumption is indirectly derived by adjusting production and income flow of consumer goods and services in the framework of national accounting system(NAS). One could, therefore, hope that but for non-sampling bias of the survey results, the NSS estimates of household consumption expenditure for a particular year should be broadly comparable with the accounting estimate of total private consumption of NAS for the same year. Mukherjee and Chatterjee (1972), Vaidyanathan (1986) in their papers also compared the NSS NAS estimates at different time points. However, in one of the unpublished works,N. Bhattacharyya made comparisons between the NSS estimates of population and Census based population at village and urban block level. Almost all the important works on external validation of NSS results were on the final estimates and not at the unit level.

This paper is a stepping-stone to set rules for the validation of socio-economic survey estimates against independent data sources. The *external validation* could be either based on two completely independent sources of data or on similar data generated from different subject-schedules canvassed in the same survey. A comparison between different subject-schedules canvassed in the same survey not only cross-validates the results but also can be used as a yardstick of proper implementation of the sampling design.

In this paper the consumer expenditure survey (CES) data of NSS 61st Round (July 2004 to June 2005) has been taken up for *external validation*. The CES among many other things collects data on household size, age, sex and educational status of members of the households and the quantities and values of different items consumed by the household in the reference month. These data in turn generate

estimated number of households and population, estimated prices for different items consumed, estimated literacy rates and various other rates and ratios. These estimates of population parameters, prices of the items consumed and various rates and ratios, especially the data relating to educational status are used for external validation. It is important to note that the other subject-schedule canvassed in NSS 61st round was that for the Employment and Unemployment survey (EUS). The EUS *inter alia,* collected more detailed information on educational status for different classes of population and for different age groups.

The population parameters like total population, sex ratio and age distribution of population have been validated against projected census population. The derived prices of the items consumed, estimated from CES have been crosschecked with the Rural Retail Price (RRP) data for similar periods. The information on educational status of the members of Indian households obtained from CES has been cross-validated with similar but more detailed information obtained from EUS of 61st round of NSS.

The paper has five sections. In section II a cross-validation with the projected census figure for population has been carried out. In section III, the derived prices of selected commodities consumed by Indian households have been statistically tested against similar commodities of RRP collected through an independent survey. In section IV the two different subject schedules namely CES and EUS surveyed in 61st round has been cross validated against each other using Kolmogrov-Smirnov (K-S) non-parametric technique for comparing educational data from the surveys.

2. Section II: External Validation of estimated population with Census data

The CES of 61st round of NSS collected data on various aspects of household consumption through household enquiries. Household size was therefore available from the CES schedule. Household size was also collected for each household while listing of households was done in sample FSU/ selected hamlet-group / sub-block in listing schedule. Although rates and ratios generated from CES were found to be reliable by the users, the same cannot be said about the aggregates. Usually the estimated population is found to be smaller compared to census or census based projected population for the corresponding period. In the next few paragraphs we will work out how the different population parameters obtained from NSS compare with the corresponding data based on census operation.

Table-1: Population Estimates from CES by NSS rounds

NSS round Number	Survey period	Estimated pop (000)			Census
		Rural	Urban	Total	Population(000)
47	July -Dec '91	588622	186342	774964	
48	Jan -Dec '92	608923	200892	809815	
49	Jan -June '93	582899	192737	775636	
50	July '93-June '94	584889	192737	777626	
51	July '94-June '95	598194	224636	822830	Census 1991
52	July '95-June '96	594449	204776	799225	838015
53	Jan -Dec '97	599427	205853	805280	
54	Jan -June '98	682373	218600	900973	
55	July '99-June '00	691784	232393	924177	
56	July '00-June '01	689988	231772	921760	
57	July '01-June '02	769194	236810	1006004	
58	July -Dec '02	733920	259114	993034	
59	Jan -Dec '03	745037	250756	995793	Census 2001
60	Jan -June '04	728605	246594	975199	1025891
61	July -June '05	733103	248505	981608	

Traditionally NSS estimates of population from CES were always lower than the census or projected population. It was found that for all the quinquennial rounds starting from NSS 27th round (1972-73) the NSS based population estimates were always on the lower side. No matter whether it was a quinquennial or annual round of CES, population estimates at all-India level never surpassed the corresponding census/ projected population. State level estimates had shown both positive and negative deviation although they were mostly on the lower side. Given below are the population estimates for several past rounds against census figures for 1991 and 2001.

It may be noticed that besides being on the lower side, the NSS estimates have not necessarily increased over the immediately preceding round. However, sampling fluctuations may have contributed to increase or decrease of these estimates in short run.

Based on the population estimates from of schedule 1.0 (CES) of 61st round (July 2004 – June 2005), comparison was made with census population for 2001 and projected population for January 2005[1]. For comparability, census population was adjusted for the area not covered in NSS.

Table 2: Comparison with projected population for 2004-05: All India

All- India population (000)			% difference to Projected pop
sector	projected	NSS 61st round	
Rural+Urban	1082307	981608	-10
Rural	769610	733103	-6
Urban	312697	248505	-21

Table 3: Comparison with census 2001 population: All India

All- India population (000)			% difference to census pop
sector	census	NSS 61st round	
Rural+Urban	1025891	981608	-4.3
Rural	739842	733103	-0.9
Urban	286049	248505	-13.1

At all-India level, the NSS estimates are found to be lower by 10% than the projected population of January 2005 and by 4% even when compared to census 2001 population.

Rural population from CES was underestimated by 6% at all-India level compared to projected rural population. The State wise comparison showed that there was no underestimation for Haryana, Tripura, Chattisgarh, Dadra & Nagar Haveli and Tamilnadu. The estimated all-India population was lower by about 1% than the census 2001 population.

Urban population estimate from CES was smaller by 21% compared to projected all-India urban population. Further, all the State/UT estimates, except Lakshadweep, were lower than the corresponding projected populations. The estimate was found to be lower by 13% than census 2001 population and the underestimation was seen for almost all the States/ UTs.

2.1 The sample design followed in NSS rounds are based on sampling schemes and practice, which have sound theoretical basis. The estimators of population aggregates obtained are theoretically known to be unbiased estimators. However, the sample design of NSS are primarily meant for estimation of socio-economic indicators like MPCE, Employment-unemployment ratios, GVA per worker, etc. as well as distributions of population over different classes and categories. The design is not oriented towards providing a very good estimate of total population. Therefore, estimates of total population are not expected to be robust, especially for smaller States/ UTs. Even then, RSEs of the population estimates based on CES are quite low for all-India and reasonably low for most of the States/UTs in the rural sector. The pattern of RSEs does not reveal any inconsistency.

State-wise RSEs of population estimates based on NSS 61st round CES are given in Statement-1. All-India RSEs of population estimates are as shown below.

Table 4: RSEs of population estimates based on CES of NSS round: All India

sector	% RSE	Number of Samples	
		FSUs	households
Rural	0.15	7944	79298
Urban	0.55	4558	45346

2.2 Census enumerates three types of households, viz., *normal* households, *institutional* households and *houseless* households. Institutional households may be those living in residential educational institutions like hostels of schools and college, medical institutions like hospitals, sanatorium, religious institutions like ashrams and social security institutions like orphanages, elderly homes, punitive institutions like jails, juvenile homes etc. Houseless households are those who do not live in any building or census house but live in the open or on the road side, pavements, pipes, under fly-overs etc. The households that are neither institutional nor houseless are normal households. As per census 2001, there were 460595 institutional households having a total population of 7800984. The number of houseless households was 447552 having a population of 1943476.

The NSS concept of household, in case of normal households is similar to that of census, covering normally residing members of households including temporary stay-aways but excluding guests and temporary stay-ins. But there is a difference in case of institutional households. Some of the houseless households and institutional households are outside the coverage of NSS. In case of other residential institutions, NSS treats institutional household as comprising of single member households i.e. each residing member is considered as a separate household.

Therefore, number of households in NSS estimates happens to be on the higher side compared to census and the estimated average household size tends to be lower than the household size provided by census. This remains true even after adjustments for institutional households have been done.

The number of households in NSS CES is compared in table-5 with adjusted household and population from the census. Estimated number of households of NSS appears to be nearer to the number of census households when adjusted for institutional households.

Table-5: No. of households in census and NSS for 61st

Category of households	Households ('000)	Population ('000)	Household size
Census 2001 All hhd	193580	1028610	5.3
Adjusted hhd: Normal + institutional hhds (treating each member of institutional hhd as a single member household)	200456	1026667	5.1
61st Round of NSS	207114	981608	4.7

Percentage distribution of households in census 2001 and in CES of 61st round of NSS by household sizes revealed that on the whole; household size in former was higher than that in the CES. The table-6 shows the broad patterns.

Table-6: Percentage distribution of households by size in census 2001 and NSS 61st round CES

All-India								
	Population ('000)	No. of Households ('000)	Average household size	% distribution of households by hhd sizes				
				1	2	3-4	5-6	7+
Census 2001*	1026667	200456	5.1	7.6	7.9	29.7	30.9	23.8
NSS 61st round CES	981608	207114	4.7	6.5	9.7	34.1	31.4	18.1

* Normal + Institutional households (Considering each Institutional household as a number of single member households in conformity with NSS practices)

It is evident that percentage of large sized households (7+) is lower in NSS surveys compared to census. Perhaps larger sized households are being missed or under-listing of household members is happening during the NSS survey operations.

2.3 Comparison of distribution of population by age-group separately by sex between census2001 and CES of 61st round does not really indicate wide divergence between CES and Census. A close look at the percentage distributions shows that the CES accounted for higher percentage of population in the age group 20-59. The census on the other hand found the lower age group (0-14) bulging.

Table 7: Census 2001 versus NSS 61st round CES: All India

Comparison of percentage distributions of population over Age-group by sex

Age group	Persons		Male		Female		Sex ratio	
	census	est61	census	est61	census	est61	census	est61
0-4	10.7	10.3	10.7	10.3	10.7	10.2	934	928
5-9	12.5	11.7	12.5	12.1	12.4	11.3	923	877
10-14	12.1	11.8	12.3	12.2	11.9	11.4	902	883
15-19	9.7	9.7	10.1	10.3	9.3	9.2	858	839
20-24	8.7	8.9	8.7	8.6	8.8	9.2	938	1013
25-29	8.1	7.9	7.8	7.7	8.4	8.2	1007	1006
30-34	7.2	7.3	7.0	6.9	7.4	7.8	988	1062
35-39	6.9	7.1	6.8	6.9	7.0	7.2	958	994
40-44	5.4	5.8	5.6	5.8	5.2	5.9	865	957
45-49	4.6	5.1	4.7	5.3	4.5	5.0	906	882
50-54	3.6	3.9	3.7	3.9	3.4	3.9	843	928
55-59	2.7	3.2	2.6	3.1	2.8	3.3	1036	993
60 +	7.7	7.3	7.4	7.0	8.1	7.6	1021	1022
All ages	100.0	100.0	100.0	100.0	100.0	100.0		

2.4 Differences between census and CES of 61st round could perhaps be partly due to the difference in geographical coverage and coverage of segments of population. Census generally covers the entire geographical area of the country. However, in NSS some areas are usually not covered because of the operational difficulties. These are: (i) Leh (Ladakh) and Kargil districts of Jammu & Kashmir, (ii) Villages in Nagaland which are situated beyond 5 Kms of bus route and (iii) Villages in Andaman & Nicober Islands that are inaccessible throughout the year. However, the area excluded has a contribution of about 0.25% in the total population.

NSS also excludes the following categories of persons from its coverage:

1. Persons residing in barracks of military and para-military forces.
2. Orphanages, rescue homes, ashrams, vagrant houses
3. Floating population having no normal residences
4. Convicted prisoners undergoing sentence.

The magnitude of this category of population is difficult to estimate but to a small extent, they contribute to underestimation of population in the NSS.

3. Section-III: External validation of prices of items consumed by Indian households with the Rural Retail Price data[2].

Generally, in economic literature on demand analysis, almost all the price variation that can be identified comes from price changes over time and little attention is paid to changes over space. However, in developing countries price variations do take place over regions as well. Data on regional price differences are often available from the statistical offices responsible for constructing consumer price indexes. These price data can be merged with the household survey data of the nearest collection centre at the time closest to the reporting period of the households. The combined data can be used for demand analysis with individual households as the unit of analysis. More promising source of data is the individual household responses. As in NSS CES individual households are asked to report not only their expenditure on each goods but also the physical amount that they bought. The ratio of these two observations is a measurement of price or more accurately of unit value. This can also be

viewed as buyer's price. However unit values are not the same thing as prices, and are affected by the choice of quality as well as the actual price that the consumers face in the market.

Here, the External Validation of prices of an item consumed has been attempted following the assumption that the spatial price variation is minimum and the sets of items chosen are either quality invariant or the nomenclature of the items are exactly matching in both the datasets.

A section of the Indian households similar to the ones who visit markets from where the Rural Retail Price (RRP) data are collected, have been taken up for this study. Before analyzing the test results, one may briefly consider the mechanism of collection of RRP data and the type of households visiting those markets.

The set of rural retail price data used here are collected through NSS schedule 3.01from a fixed set of 603 village markets which rural agricultural labourers visit. The commodity basket consists of 260 items and the price data are collected from 21 major states. The sample villages are selected circular systematically with equal probability. 600 villages were selected in the form of 3 batches (each batch with 200 villages) having the batch nos. 1, 2 and 3. The number of villages selected in some of the major states are given below.

Table 8: Allocation of sample villages for RRP

State	Allocation to major states.
Andhra Pradesh	54
Assam	27
Gujarat	30
Haryana	12
Karnataka	36
Kerala	21
Maharashtra	54
Orissa	33
Pubjab	15
Rajasthan	21
Tamil Nadu	33
West Bengal	39

The schedule 3.01 is filled once a month with data collected from the relevant markets. This enquiry is conducted on the first market day of every month in places where the selected market is a non-daily market (hat), while part of the data may be collected from shops outside the selected markets on the same day or the day following. However, most of the data are reported from sources other than the non-daily market, e.g. shops of markets which are normally kept open on all days of the week. The enquiry is conducted on the first Saturday of each month. Since the market day of a non-daily market is generally a fixed day of the week, the first market day of the month will also be a fixed day of the week but is not likely to fall on the same date of every month. Accordingly, the data are collected either on the first market day of the month (in the case of non-daily market) or on the first Saturday of the month (in the case of a daily market). This data is taken as the price prevailing in the village on the date of the survey.

The section of households of CES used for this study consists of those who are self- employed in agriculture or agricultural labour and other labour. If one goes by the definition followed in CES, the household type codes are based on the means of livelihood of a household. This is decided on the basis of the sources of the household's income during the 365 days preceding the date of survey. For this purpose, only the household's income (net income and not gross income) from economic activities is considered; excluding the incomes of servants and paying guests, if any.

3.1 Procedure for assigning household type codes[3] in rural sector: For a rural household, if a single source contributed 50% or more of the household's income from economic activities during the last 365 days, it will be assigned the type code (1, 2, 3, 4 or 9) corresponding to that source.

For a household to be classified as 'agricultural labour' or 'self-employed in agriculture' (code 2 or 4) its income from that source must be 50% or more of its total income. If there is no such source yielding 50%

or more of the household's total income, it was given code 1, 3 or 9 according to the following procedure.

To be classified as self-employed in non-agriculture (code 1), the household's income from that source must be greater than its income from rural labour (all wage-paid manual labour) as well as that from all other economic activities put together (a three-way division is to be considered here).

A household not getting code 1, 2 or 4 was classified as other labour (code 3) if its income from rural labour (all wage-paid manual labour) is greater than that from self-employment as well as that from other economic activities (again a three-way division). All other households got type code 9.

Thus from CES data, due to the difficulty in finding the agricultural labour households, all the households engaged in agricultural activity were considered.

Price of any commodity is subject to fluctuations, mainly due to its quality and to seasonal effects. For any comparison of prices of commodities appeared in CES with RRP one must consider these essential causes of variation. Formally, the price of the ith commodity in the market (RRP), say yi, can compare with the price of the same commodity consumed by the households, say xi, through the following equation

$$y_i = x_i + \textit{function of}\ (\textit{set of dummy variables}) + e_i \quad i = 1,2,\ldots\ldots$$

The set of dummy variables may represent the quality difference between the commodity sold (RRP) and commodity consumed(CES) , the seasonality factor, bargaining factor, under reporting by the consumer household in CES. All these points have been kept in mind while validating CES prices against RRP. A set of 65 commodities

Table-9: Item description

Item no. in sch. 3.1	Description	Item no. in sch. 3.1	Description	Item no. in sch. 3.1	Description
022	Chira (Flattened rice)	070	Ghee (cow)	110	Bitter gourd
023	Muri (Puffed rice)	071	Ghee mixed (Cow & buffalo)	112	Banana
024	Maida	072	Curd	114	Coconut
026	Suji	076	Chillies green	115	Mango
029	Arhar (tur) dal	081	Garlic	116	Lemon
032	Masur dal (Split washed)	082	Ginger	117	Guava
036	Moong dal Washed	087	Potato	118	Papaya (ripe)
039	Urd dal (Washed)	088	Sweet potato	119	Pine apple
040	Khesari dal	089	Radish	120	Sugar
041	Pea dal	090	Onion fresh	122	Gur
042	Soyabean	091	Arum	123	Tea (Readymade)
046	Groundnut oil (Loose)	092	Carrot	124	Coffee (Readymade)
048	Mustard oil (Loose)	093	Turnip	125	Tea leaf (Loose)
049	Coconut oil	099	Tomato	126	Tea leaf (Packet)
055	Vanaspati	100	Cucumber	127	Coffee powder (Loose)
056	Meat (goat)	101	Gourd	129	Salted Refreshment
059	Beef	102	Snake gourd	132	Cooked meal
060	Pork	104	Pumpkin	134	Cigarette
061	Poultry	105	Lady's finger	140	Pan finished Ordinary
065	Eggs (farm)	106	Torai		
067	Milk (cow)	107	Beans		
068	Milk (buffalo)	108	Cauliflower		
069	Ghee (buffalo)	109	Cabbage		

has been taken up for the validation study. These commodities are, more or less, matching with the commodities consumed by Indian households covered in CES. Most of the items are assumed to be more or less quality invariant. However, there are some items in the list given below which are highly quality sensitive but exactly matching with the nomenclature consumed by households in CES eg. mango, readymade tea, readymade coffee etc. Commodities taken up for this study have been listed in the table 9.

The consumption data for all these items were collected in CES. The consumption of milk was collected without mentioning whether it is cow milk or buffalo milk. Therefore the consumption data on milk has been checked against RRP for both cow and buffalo milk. The seasonality factor has been taken care of by estimating the price data sub-round-wise from CES4. These sub-round-wise prices from CES have been checked against the corresponding quarterly price figures of RRP.

Bargaining is a reality in the Indian rural market situations. This phenomenon has been dealt with by giving 5% allowance on board to all the commodities that are purchased by Indian households. Having consciously making effort to minimizing the quality difference, taking care of seasonality factors by estimating sub-round-wise estimates and giving an allowance for bargaining , we can expect an agreement between of price demanded(RRP)-the supply side and the price paid(CES)- the demand side which will be statistically verified. In the next few paragraphs a discussion on the test procedures and test results will follow.

If we look at the price data of RRP and CES as it is(see statement 2) we find that most of the price data derived from CES is less than the RRP except few. For example: pork, beef, salted refreshments (see highlighted rows of statement 2)

A two-sample t-test[5] has been carried out on each of these 65 items. The results were mixed. The following table gives the results of the test both before adjustment for bargaining and after bargaining.

Table-10: Subround wise no. of items statistically tested

Sub-round	Agreement between RRP and CES	
	Before adjustment for bargaining	After adjustment for bargaining
1	39	47
2	38	46
3	38	46
4	40	50

For items which have passed the test , one confirms the Hypothesis that CES data could be externally validated against RRP prices. But, it is more important to explore the reasons why some of the items fail the test even after making the allowance for bargaining. A closer look for those items that failed the test is necessary. The following table shows some of the items appeared in sub-round 1 & 2, where wide divergence have been observed. The detailed tables are given in Statement-2

The percentage difference between RRP and CES ranges from 8.0 percent (Coconut oil) to 79.5 percent (Coffee (Readymade)) in subround-1 and 7.7 percent (Coconut oil) to 37.7 percent (Curd) in subround-2. Interestingly, even though the percentage difference was low for coconut oil, the t-test failed in one of the subrounds (subround-4), ostensibly, because of low price variation, both in seller's price and buyer's price. On the other hand, coffee (readymade) was perhaps wrongly reported in CES. A closer look at the items which failed the test even after making 5% allowance revealed that a fixed set of items, irrespective of sub-round, failed the test. Many items which failed the test are vegetables which may be home grown. The item like pork and beef and salted refreshments have prices derived from CES always greater than the RRP. From Statement-2 one can easily identify a pattern for which the price derived from CES is always greater than the price reported in the market(RRP). This indicates some kind of under-reporting of a set of items across the country.

Table 11: Items with wide divergence in prices between RRP and CES

Subround-1					Subround-2			
Item description	unit	RRP price for quarter ending sept-04	derived price in CES	% deference between RRP and CES	Item description	RRP price for quarter ending dec-04	derived price in CES	% deference between RRP and CES
Muri (Puffed rice)	kg.	21.8	15.7	28.0	Muri (Puffed rice)	21.9	17.1	21.9
Coconut oil	per litre	75.4	69.4	8.0	Coconut oil	76.7	70.8	7.7
Meat (goat)	kg.	112.9	102.5	9.2	Meat (goat)	115.4	87.2	24.4
Pork	kg.	56.6	70.2	-24.0	Pork	58.2	73.1	-25.6
Papaya (ripe)	kg.	10.6	8.9	16.0	Ghee mixed (Cow & buffalo)	154.7	119.5	22.8
Coffee (Readymade)	per cup	3.9	0.8	79.5	Curd	25.2	15.7	37.7
Coffee powder (Loose)	100 gms.	18	12.0	33.3	Coffee (Readymade)	10.1	7.7	23.8

Table 12: Some items which failed the test[6]

Item Description	unit	Quarterly average price (RRP) (Rs.)	Derived price in CES	Bargained price	T values on Bargained price	% deference between RRP and CES
Sub-round-1						
Pea dal	kg.	19.5	16.6679	18.525	7.015	14.5
Pork	kg.	56.6	70.1993	56.6	-5.769	-24.0
Ghee (cow)	kg.	192.2	155.3689	182.59	13.243	19.2
Curd	kg.	24.2	17.0269	22.99	9.747	29.6
Cucumber	kg.	9.5	6.946	9.025	6.086	26.9
Lady's finger	kg.	12.1	8.6611	11.495	10.884	28.4
Torai	kg.	10.4	6.2932	9.88	9.586	39.5
Lemon	pair	1.7	0.6885	1.615	6.454	59.5
Coffee powder (Loose)	100 gms.	18	12.0005	17.1	5.021	33.3
Sub-round-2						
Suji	kg.	12.5	13.3825	12.5	-10.643	-7.1
Pea dal	kg.	19.7	17.5282	18.715	4.962	11.0
Mustard oil (Loose)	per litre	53.4	57.1944	53.4	-5.49	-7.1
Vanaspati	kg.	51	50.8751	48.45	-5.17	0.2
Meat (goat)	kg.	115.4	87.2222	109.63	17.583	24.4
Pork	kg.	58.2	73.1497	58.2	-6.085	-25.7
Tomato	kg.	7.6	10.4555	7.6	-9.283	-37.6
Cucumber	kg.	10.1	7.6754	9.595	9.027	24.0
Lady's finger	kg.	14.8	10.234	14.06	19.987	30.9
Torai	kg.	11.8	6.8119	11.21	10.702	42.3
Bitter gourd	kg.	14.9	11.657	14.155	14.11	21.8

Item Description	unit	Quarterly average price (RRP) (Rs.)	Derived price in CES	Bargained price	T values on Bargained price	% deference between RRP and CES
Pine apple	kg.	15	7.8199	14.25	12.631	47.9
Sub-round-3						
Muri (Puffed rice)	kg.	21.9	17.4874	20.805	11.948	20.1
Suji	kg.	12.5	13.3968	12.5	-11.412	-7.2
Pork	kg.	58.2	73.0273	58.2	-6.215	-25.5
Ghee (cow)	kg.	194.2	132.2023	184.49	6.249	31.9
Cucumber	kg.	10.1	7.2961	9.595	13.909	27.8
Lady's finger	kg.	14.8	11.1623	14.06	23.126	24.6
Torai	kg.	11.8	9.2259	11.21	8.683	21.8
Bitter gourd	kg.	14.9	12.0713	14.155	13.512	19.0
Pine apple	kg.	15	8.2831	14.25	6.794	44.8
Sub-round-4						
Muri (Puffed rice)	kg.		18.3437	20.805	7.45	16.2
Suji	kg.		13.4172	12.5	-10.668	-7.3
Coconut oil	per litre		66.6452	72.865	8.726	13.1
Pork	kg.		75.639	58.2	-9.294	-30.0
Carrot	kg.		11.0553	9	-8.29	-22.8
Cucumber	kg.		6.7473	9.595	14.533	33.2
Lady's finger	kg.		9.0136	14.06	24.146	39.1
Torai	kg.		7.0893	11.21	13.113	39.9
Pine apple	kg.		5.0887	14.25	25.593	66.1

4. Section-IV: Cross-validation of 61st round CES data on general education with the EUS results.

A comparison between data collected through the different subject-schedules canvassed in the same survey not only cross-validate the results but also could be used as a check on the proper implementation of the sampling design at the field level. This means that the results obtained from CES are consistent with those of EUS. Here the education data collected in CES have been cross-validated against the same data collected in the EUS of 61st round of NSS.

If one examines the formation of second stage strata and the allocation of sample households among them , one finds that for both Schedule 1.0 (CES) and Schedule 10 (EUS), households listed in the selected villages/blocks/ hamlet-groups/sub-blocks were stratified into three second stage strata (SSS). In the rural sector the second stage strata were (a) Relatively Affluent Households (SSS1), (b) From The remaining households, households having Principal Earning From Non- Agricultural Activity (SSS2), (c) Other households (SSS3). Likewise in the urban sector the second stage strata were: (i) Households with MPCE more than A (i.e. MPCE > A) (SSS1), (ii) Households with MPCE equal to or less than A but equal to or more than B (i.e. B ≤ MPCE ≤ A) (SSS 2), and (iii) Households with MPCE less than B (i.e. MPCE < B) (SSS 3)7. Ten distinct households were selected for each of CES and EUS following identical rules for distribution of households over different SSS. From each SSS the sample households for both the schedules were selected by SRSWOR.

Thus, if the sampling design is properly implemented at the field level the results of CES will be in statistical agreement with similar data collected in EUS. Two alternative tests can be thought of: one

using χ^2 for contingency table and the other, a more stringent test, using Kolmogrov-Smirnov (K-S) non-parametric test. The Null hypothesis was: 'sample design was properly implemented in the villages and urban blocks i.e. the data on education collected through CES and EUS relate to the same population.'

Table 13: Per 1000 distribution of general education level for age 15+ population for CES and EUS: All India

	General Education Level								Persons (15+)	
	not literate	literate & upto primary	Middle school	secon-dary	higher secondary	diploma/ certificate course	graduate & above	n.r.	estd. (00)	sample
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Schedule 1.0 (CES)									
Rural	314	249	212	118	61	7	39	1	2379029	134645
Urban	119	180	211	178	120	22	170	1	925857	74387
	Schedule 10 (EUS)									
Rural	320	277	191	107	55	10	38	0	2344814	132633
Urban	121	202	194	169	116	35	162	0	918966	73335

General education level for the age 15+ population has been taken up for study. Table-14 gives the per 1000 distribution of population over various educational attainment levels. As it appears, per 1000 distributions over various attainment levels are very close for CES and EUS. Statistical test were applied to check whether the per 1000 distribution obtain from CES is in conformity with that from EUS.

In the present deliberation only one alternative (K-S test:) have been examined. Interested readers may work out the experimentation for χ^2 for contingency table[9].

To construct the test statistics the following formula was used.

4.1 Kolmogrov-Smirnov (K-S) statistics for two sample test is defined as follows: where x and X denote the two samples, CES and EUS with N and M observation respectively.

$$D_{NM} = \sup_x |S_N(x) - F_M(x)|$$

where $S_N(.)$ & $F_M(.)$ are cumulative proportions.

Kolmogrov-Smirnov test statistic is $\sqrt{\frac{M*N}{M+N}} D_{NM}$

While the χ^2 test is more straightforward the Kolmogrov-Smirnov test is more stringent. In K-S test the maximum vertical distance of the points of the two ogives is taken as the test statistic. For example: For rural male of Andhra Pradesh the cumulative proportions of different education status is as follows:

Table 14: Cumulative proportion of 15+ person from CES and EUS: Andhra Pradesh, Rural Male

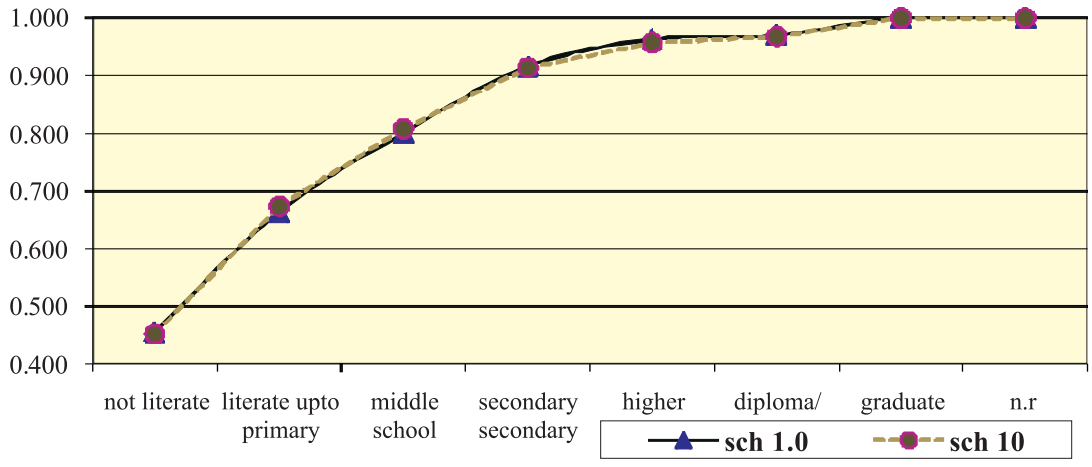
	not liter-ate	Literate upto pri.mary	Middle School	secondary	Higher Sec-ondary	Diploma etc.	Graduate & above	n.r	No. of samples
sch 1.0	0.456	0.664	0.801	0.916	0.963	0.970	1.000	1.000	7909
sch 10	0.453	0.674	0.808	0.914	0.957	0.968	1.000	1.000	7852

One finds that the maximum vertical distance between the two curves occurred at 'literate upto primary' class (.010). This is the K-S statistic. The results of four states have been given in statement-3.

5. Limitations:

As described earlier , the main objective of this paper is to present certain results on the external

Chart-1 Cumualative proportions of 15+ persons different education status of observed from two schedules for Andhra Pradesh Rural Male



validation of CES data. The procedures stated above are a few validations one can think of. A detail study requires longer time and institutional participation. The price comparison between RRP and CES assumes no spatial variation between the price of an item available in the village and the average price offered by the RRP collection centre of the states. One of the limitations of statistical tests like χ^2 and K-S is that they tend to reject the Null Hypothesis for large samples. A better option would have been to slice the samples and perform the tests at sub state level.

6. Conclusion:

This paper is an attempt to validate NSS data externally. It is true that the NSS CES data has been compared with Census data in many studies and found to be under estimating the population. That makes it all the more necessary to validate estimates of the other parameters generated from CES externally. On an average, the cross validation of CES data with RRP made the CES data reliable. One of the interesting findings from this cross validation was that value and quantities of some items tend to be improperly reported irrespective of the individual investigator or any specific region. The Field Operation Division of NSSO may investigate the reasons for such peculiarities.

The results of the **K-S** tests are encouraging. Such a test of divergence between data collected through two subject-schedules in the same survey checks the consistency of the estimates and also checks whether the design has been implemented properly at the second stage stratification level or not. This is specially important because these statistical tests are known to reject Null Hypothesis when the sample sizes are very large. However, for those that have failed the test one should attempt bootstrapping techniques to check whether the design has been implemented properly at the lower level. One may even try to check the compatibility of two schedules canvassed in the same survey at the district level.

However, for making policies of external validation of all the NSS surveys detailed study with institutional participation is required.

Notes

1. Projected figures are based on the document "Population Projections for India and States, 2001-2006", Report of the Technical Group on Population Projection constituted by National Commission on Population (May 2006) and published by the Office of the Registrar General of India. However, since the figures for January 2005 are not available in the document, average

of projected figures for Oct '04 and Mar '05 has been taken.

2. Note that we can compute the price implicit in item-wise quantities and values of consumption recorded in NSS CES schedule. Such prices are compared with rural retail price data of corresponding period in this section.

3. The type codes are self-employed in non-agriculture-1, agricultural labour –2, other labour-3, self-employed in agriculture- 4 others- 9

4. The NSS round of consumer expenditure survey can be divided into four sub-rounds. The design permits independent estimates of each sub-round.

5. Two sample t-test: suppose two independent samples x_i (i=1,2,….., n_1) and y_j (j=1,2,… ..,n_2) of size n_1 and n_2 have been drawn from the populations with same means. Under the null hypothesis $\mu_1=\mu_2$ where μ_1, μ_2 are the population means of the two populations the t statistic: $t=\dfrac{\left(\bar{x}-\bar{y}\right)}{s\sqrt{\left(\frac{1}{n_1}-\frac{1}{n_2}\right)}}$ follows student's t-distribution with (n_1+n_2-2) d.f.

6. No bargained price has been calculated for RRP prices less than CES prices

7. Two cut-off points, say 'A' and 'B', based on MPCE of NSS 55th round, have been determined at **NSS Region level** in such a way that top 10% of households have MPCE more than 'A' and bottom 30% have MPCE less than 'B'.

8. First Stage Unit (FSU), village for rural area and urban block for urban area.

   The estimates from 61st round for both CES and EUS were generated using the same set of multipliers as given below

s = subscript for s-th stratum, t = subscript for t-th sub-stratum, m = subscript for sub-sample (m =1, 2), i = subscript for i-th FSU [village (panchayat ward) / block]8, j = subscript for j-th second stage stratum in an FSU/ hg/sb (j = 1, 2 or 3)

D = total number of hg's/sb's formed in the sample village (panchayat ward) / block

D* = 1 if **D** = 1

= **D** / 2 for FSUs with **D** > 1

Z = total size of a rural sub-stratum (= sum of sizes for all the FSUs of a rural sub-stratum), **z** = size of sample village used for selection, **n** = number of sample village / blocks surveyed including zero cases but excluding casualty for a particular sub-sample and sub-stratum, **H** = total number of households listed in a second-stage stratum of a village/block/hamlet-group/ sub-block of sample FSU, **h** = number of households surveyed in a second-stage stratum of a village/block/hamlet-group/sub-block of sample FSU for a particular schedule.

Multiplier used in CES and EUS

Sch. 1.0 / 10	rural	$\dfrac{Z_{st}}{n_{stmj}} \times \dfrac{1}{z_{stmi}} \times D^*_{stmi} \times \dfrac{H_{stmi1j}}{h_{stmi1j}}$ j = 1, 2, 3
	urban	$\dfrac{N_{st}}{n_{stmj}} \times D^*_{stmi} \times \dfrac{H_{stmi1j}}{h_{stmi1j}}$, j = 1, 2, 3

9. Let $\boldsymbol{a_{1j}}$ *(j=1,2,.....k)* be the no. of observations in j^{th} class of education attainment obtained from CES and $\boldsymbol{a_{2j}}$ the corresponding figure from EUS. Where $\Sigma_j\, \boldsymbol{a_{1j}} = \boldsymbol{m_1}$ and $\Sigma_j\, \boldsymbol{a_{2j}} = \boldsymbol{m_2}$ and $\boldsymbol{m_1} + \boldsymbol{m_2} = \boldsymbol{N}$ and $\boldsymbol{a_{1j}} + \boldsymbol{a_{2j}} = \boldsymbol{n_j}$. $\boldsymbol{p = m_1/N}$ and

q=1-p

Under the null hypothesis of homogeneity of two distribution , one has

$$\chi^2 = \frac{1}{pq}\left(\sum_{i=1}^{k}\frac{a_{ij}^2}{n_j} - \frac{m_1^2}{N}\right) \sim \chi^2 \text{ with } \textbf{\textit{(k-1)(d-1)}}$$

degrees of freedom. i.e. where ***k*** is the no. of classes of education attainments and ***d*** is the number of parallel samples (here 2).

References:

1. *Report of The Committee on Underestimation of Population in the NSS -December 2006. Ministry of Statistics and Programme Implementation, National Sample Survey Organisation.*

2. *B.S.Minhas(1988). Validation of large scale sample survey data case of NSS estimate of household consumption expenditure Sankhya: the Indian Statistical Institute, Vol. 50,series B pp 1-63.*

3. *C.R.Rao(1974)- Linear Statistical Inference And Its Applications, Wiley Eastern Private Limited.*

4. *Angus Deaton(1994): The Analysis of Household Surveys Microeconomics analysis for development policy, Research Program in Development Studies, Princeton University.*

5. *Dasu, T. and T. Johnson. (2003). Exploratory Data Mining and Data Cleaning. John Wiley & Sons: New York.*

6. *Tukey, J.W. (1962). The future of data analysis. Annals of Mathematical Statistics,33, 1-67.*

7. *Mukherjee M and Chatterjee G.S(1972): On the validity of NSS estimates of consumption expenditure, Arthavijnana, XIV, 113-121*

8. *Vaidyanathan, A. (1986): On the validity of NSS consumption data. Economic and Political Weekly, XXI, no. 3, 129-137.*

9. *N. Bhattacharyyya NSS expert group report on Non Sampling Error Vol-I: April 2002*

10. *N. Bhattacharyya: A Report on the Rural Frame Survey (unpublished document).*

Statement 1: RSE of statewise estimates of population:CES NSS 61st Round

State code	State name	Rural			Urban		
		Estd. Popln.	RSE(%)	Sample households	Estd. Popln.	RSE(%)	Sample households
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
01	Andhra pradesh	54227140	0.4413	5555	18642337	1.6433	2876
02	Arunachal pradesh	771304	1.5564	1503	99820	3.7343	540
03	Assam	22912412	0.8762	3350	2336495	4.0311	900
04	Bihar	66754099	0.5703	4354	6810923	4.3422	1398
05	Chhattisgarh	18192277	0.9071	1997	3290984	2.9613	799
06	Delhi	839486	0	59	11578570	2.836	1101
07	Goa	670762	1.8575	160	402821	8.6433	238
08	Gujarat	30935559	0.8116	2320	16283668	3.2464	1955
09	Haryana	15821321	1.2766	1680	5742435	2.5352	1040
10	Himachal pradesh	5557755	0.6593	2143	580727	7.4891	400
11	Jammu & kashmir	5064930	0.7774	1882	1705214	2.0698	884
12	Jharkhand	20342693	0.8094	2379	3910094	4.1751	1040
13	Karnataka	34112124	0.61	2880	15167622	1.7214	2227
14	Kerala	23567249	0.5384	3300	7230306	2.0544	1950
15	Madhya pradesh	46018374	0.6398	3838	14069192	1.999	2075
16	Maharashtra	55121475	0.501	5014	37218575	1.4324	4993
17	Manipur	1451626	2.0343	2177	469111	3.9107	1000
18	Meghalaya	1805274	1.525	1159	277005	3.9621	437
19	Mizoram	427969	1.2691	800	278864	2.4556	1112
20	Nagaland	572113	1.8079	960	237932	2.7487	320
21	Orissa	32108027	0.5377	3836	5082842	3.1698	1187
22	Punjab	15707276	0.7272	2433	7449611	2.2246	1855
23	Rajasthan	42977092	0.5145	3541	12318841	2.3135	1630
24	Sikkim	446454	1.2265	920	56802	6.335	200
25	Tamil nadu	34508254	0.6237	4159	21563520	1.3993	4137
26	Tripura	2751111	0.7761	1760	448804	4.1812	560
27	Uttaranchal	6372975	0.9327	1465	1943801	4.0679	750
28	Uttar pradesh	132536305	0.4334	7868	32414282	1.9064	3345
29	West bengal	59616847	0.4488	4988	19319973	1.9096	2889
30	A & N islands	196652	1.7515	268	101281	2.7015	359
31	Chandigarh	90307	7.0717	80	793605	4.7306	300
32	Dadra & nagar haveli	181419	3.5382	160	24245	3.8928	80
33	Daman & diu	107004	2.3912	80	57952	17.0644	80
34	Lakshadweep	29279	3.9457	70	28768	3.6193	129
35	Pondicherry	310563	1.3033	160	568092	4.5322	560
	All India	733105507	0.1477	79298	248505113	0.5467	45346

Statement 2: Results of cross-validation between RRP and CES prices

item	Item description	Unit of quantity	No. of quotation received in RRP	RRP price Qtr. ending Sept'04	No. of observation in CES	Derived price in CES	t- Values	t test results (at 5% level of significance)	Bargained price (RRP)	t- values on Bargained price (at 5% level of significance)	t test results on Bargained price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Subround-1 (1st july'04 to 30th sept'04)											
022	Chira (Flattened rice)	kg.	1361	15.3	2504	12.5	11.094	failed	14.5	8.026	failed
023	Muri (Puffed rice)	kg.	1346	21.8	3140	15.7	8.016	failed	20.7	6.589	failed
024	Maida	kg.	1669	12	1301	12.5	-3.177	passed	12.0	-3.177	passed
026	Suji	kg.	1581	12.7	4119	13.4	-8.832	failed	12.7	-8.832	failed
029	Arhar (tur) dal	kg.	1655	32	9771	28.7	14.034	failed	30.4	7.227	failed
032	Masur dal (Split washed)	kg.	900	27.4	8509	28.3	-2.331	passed	27.4	-2.331	passed
036	Moong dal Washed	kg.	1509	28.9	8503	26.7	10.473	failed	27.5	3.158	passed
039	Urd dal (Washed)	kg.	1313	26	6768	24.6	5.328	failed	24.7	0.453	passed
040	Khesari dal	kg.	299	15.9	588	14.6	2.358	passed	15.1	0.871	passed
041	Pea dal	kg.	567	19.5	1878	16.7	10.698	failed	18.5	7.015	failed
042	Soyabean	kg.	587	29.3	787	25.8	4.869	failed	27.8	2.839	passed
046	Groundnut oil (Loose)	per litre	843	56.8	2504	55.1	2.755	passed	54.0	-1.718	passed
048	Mustard oil (Loose)	per litre	1106	54.5	11021	49.1	0.461	passed	51.8	0.228	passed
049	Coconut oil	per litre	336	75.4	841	69.4	10.714	failed	71.6	3.194	passed
055	Vanaspati	kg.	1646	52.2	2827	45.3	1.303	passed	49.6	0.812	passed
056	Meat (goat)	kg.	1546	112.9	3400	102.5	7.568	failed	107.3	3.247	passed
059	Beef	kg.	300	45.1	2033	48.2	-1.101	passed	45.1	-1.101	passed
060	Pork	kg.	431	56.6	1348	70.2	-5.769	failed	56.6	-5.769	failed
061	Poultry	approx. weight (kg.)	1343	66.7	4040	68.7	-1.672	passed	66.7	-1.672	passed
065	Eggs (farm)	each	1608	1.9	6805	1.9	-0.010	passed	1.9	-0.01	passed
067	Milk (cow)	per litre	1322	12.9	13707	11.4	0.464	passed	12.3	0.262	passed
068	Milk (buffalo)	per litre	1255	13.5	13707	11.4	0.635	passed	12.8	0.429	passed
069	Ghee (buffalo)	kg.	656	161.9	1625	155.4	3.014	passed	153.8	-0.961	passed
070	Ghee (cow)	kg.	542	192.2	1625	155.4	17.918	failed	182.6	13.243	failed
071	Ghee mixed (Cow & buffalo)	kg.	597	155.5	1625	155.4	0.076	passed	147.7	-1.444	passed
072	Curd	kg.	1117	24.2	659	17.0	11.725	failed	23.0	9.747	failed
076	Chillies green	100 gms.	1615	2.2	16813	1.0	0.449	passed	2.1	0.408	passed
081	Garlic	100 gms.	1627	3.1	15987	3.3	-1.838	passed	3.1	-1.838	passed
082	Ginger	100 gms.	1599	5.3	10208	4.5	3.166	passed	5.0	2.398	passed
087	Potato	kg.	1665	8.2	18130	7.2	0.465	passed	7.8	0.265	passed
088	Sweet potato	kg.	711	7.9	268	7.7	0.603	passed	7.5	-0.803	passed
089	Radish	kg.	1351	6.3	3433	5.7	2.931	passed	6.0	1.506	passed
090	Onion fresh	kg.	749	9.1	18917	7.9	2.890	passed	8.6	1.775	passed

Statement 2: Results of cross-validation between RRP and CES prices

item	Item description	Unit of quantity	No. of quotation received in RRP	RRP price Qtr. ending Sept'04	No. of observation in CES	Derived price in CES	t- Values	t test results (at 5% level of significance)	Bargained price (RRP)	t- values on Bargained price (at 5% level of significance)	t test results on Bargained price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Subround-1 (1st july'04 to 30th sept'04) Contd.											
091	Arum	kg.	913	9.7	4988	7.0	6.642	failed	9.2	5.435	failed
092	Carrot	kg.	1020	13.1	1732	12.6	2.943	passed	12.4	-1.032	passed
093	Turnip	kg.	322	9.3	126	8.2	2.615	passed	8.8	1.509	passed
099	Tomato	kg.	1688	12.7	12195	11.6	3.133	passed	12.1	1.61	passed
100	Cucumber	kg.	1280	9.5	4992	6.9	7.476	failed	9.0	6.086	failed
101	Gourd	kg.	1564	6.7	8156	5.8	3.125	passed	6.4	2.099	passed
102	Snake gourd	kg.	497	8.8	1828	6.8	3.143	passed	8.4	2.668	passed
104	Pumpkin	kg.	1415	6.7	8213	5.2	2.730	passed	6.4	2.672	passed
105	Lady's finger	kg.	1331	12.1	11193	8.7	13.207	failed	11.5	10.884	failed
106	Torai	kg.	921	10.4	8151	6.3	10.976	failed	9.9	9.586	failed
107	Beans	kg.	1180	13.2	4988	10.0	9.247	failed	12.5	7.339	failed
108	Cauliflower	kg.	1442	12.5	1624	13.5	-4.186	failed	12.5	-4.186	failed
109	Cabbage	kg.	1476	9.5	5217	9.5	0.066	passed	9.0	-2.479	passed
110	Bitter gourd	kg.	1307	13	6175	10.8	9.184	failed	12.4	6.426	failed
112	Banana	pair	1619	2.2	10985	0.9	2.560	passed	2.1	3.257	passed
114	Coconut	each	1484	8.4	5068	5.8	3.197	passed	8.0	3.132	passed
115	Mango	kg.	35	13.9	2413	16.9	-0.569	passed	13.9	-0.569	passed
116	Lemon	pair	1572	1.7	7217	0.7	7.046	failed	1.6	6.454	failed
117	Guava	kg.	1096	9.8	3076	6.1	2.624	passed	9.3	3.006	passed
118	Papaya (ripe)	kg.	992	10.6	412	8.9	5.336	failed	10.1	3.171	passed
119	Pine apple	kg.	567	14.9	819	6.1	12.236	failed	14.2	11.205	failed
120	Sugar	kg.	1710	17.8	16481	17.4	1.297	passed	16.9	-1.699	passed
122	Gur	kg.	1619	18.7	4020	16.6	8.721	failed	17.8	2.788	passed
123	Tea (Readymade)	per cup	1610	2.1	9395	1.6	0.616	passed	2.0	0.476	passed
124	Coffee (Readymade)	per cup	788	3.9	155	0.8	3.043	passed	3.7	2.849	passed
125	Tea leaf (Loose)	100 gms.	1304	12.1	16725	13.1	-2.147	passed	12.1	-2.147	passed
126	Tea leaf (Packet)	100 gms.	1502	15.7	16725	13.1	5.750	failed	14.9	3.199	passed
127	Coffee powder (Loose)	100 gms.	239	18	983	12.0	5.908	failed	17.1	5.021	failed
129	Salted Refreshment	100 gms.	1707	5.3	8959	14.5	-1.871	passed	5.3	-1.871	passed
132	Cooked meal	single meal	1490	15.7	1251	12.6	1.023	passed	14.9	0.765	passed
134	Cigarette	each packet	1612	11.6	1156	11.8	-0.159	passed	11.6	-0.159	passed
140	Pan finished Ordinary	each	1439	1.8	2710	1.0	0.526	passed	1.7	0.465	passed

Statement 2: Results of cross-validation between RRP and CES prices

item	Item description	Unit of quantity	No. of quotation received in RRP	RRP price Qtr. ending Dec'04	No. of observation in CES	Derived price in CES	t- Values	t test results (at 5% level of significance)	Bargained price (RRP)	t- values on Bargained price (at 5% level of significance)	t test results on Bargained price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Subround-2 (1st oct'04 to 31st dec'04)											
022	Chira (Flattened rice)	kg.	1365	15.1	2907	12.5	6.886	failed	14.3	4.912	failed
023	Muri (Puffed rice)	kg.	1346	21.9	3367	17.1	8.453	failed	20.8	6.511	failed
024	Maida	kg.	1672	12	1808	11.7	1.381	passed	11.4	-1.741	passed
026	Suji	kg.	1652	12.5	4797	13.4	-10.643	failed	12.5	-10.643	failed
029	Arhar (tur) dal	kg.	1647	29.7	9836	29.7	0.125	passed	28.2	-1.57	passed
032	Masur dal (Split washed)	kg.	961	27.7	8455	28.5	-2.156	passed	27.7	-2.156	passed
036	Moong dal Washed	kg.	1554	29.1	8822	26.9	11.519	failed	27.6	3.199	passed
039	Urd dal (Washed)	kg.	1360	27	7300	24.6	8.630	failed	25.7	3.177	passed
040	Khesari dal	kg.	294	16.4	496	13.3	2.239	passed	15.6	1.643	passed
041	Pea dal	kg.	567	19.7	1976	17.5	9.081	failed	18.7	4.962	failed
042	Soyabean	kg.	591	29.3	717	26.1	5.878	failed	27.8	3.174	passed
046	Groundnut oil (Loose)	per litre	836	54.4	2375	57.0	-3.242	passed	54.4	-3.241	passed
048	Mustard oil (Loose)	per litre	1124	53.4	11044	57.2	-5.490	failed	53.4	-5.49	failed
049	Coconut oil	per litre	338	76.7	819	70.8	9.427	failed	72.9	3.262	passed
055	Vanaspati	kg.	1625	51	3074	50.9	0.266	passed	48.5	-5.17	failed
056	Meat (goat)	kg.	1554	115.4	3661	87.2	22.111	failed	109.6	17.583	failed
059	Beef	kg.	292	46.8	2170	48.4	-0.522	passed	46.8	-0.522	passed
060	Pork	kg.	455	58.2	1397	73.1	-6.085	failed	58.2	-6.085	failed
061	Poultry	approx. weight(kg)	1369	68.1	4558	67.1	1.007	passed	64.7	-2.514	passed
065	Eggs (farm)	each	1591	2	7465	1.9	0.201	passed	1.9	-0.185	passed
067	Milk (cow)	per litre	1351	12.9	14068	11.5	0.448	passed	12.3	0.247	passed
068	Milk (buffalo)	per litre	1288	13.6	14068	11.5	0.650	passed	12.9	0.443	passed
069	Ghee (buffalo)	kg.	684	162.3	1688	119.5	1.573	passed	154.2	1.275	passed
070	Ghee (cow)	kg.	544	194.2	1688	119.5	2.443	passed	184.5	2.125	passed
071	Ghee mixed (Cow & buffalo)	kg.	616	154.7	1688	119.5	1.229	passed	147.0	0.959	passed
072	Curd	kg.	1126	25.2	704	15.7	14.658	failed	23.9	12.717	failed
076	Chillies green	100 gms.	1666	2.1	16899	1.1	0.530	passed	2.0	0.472	passed
081	Garlic	100 gms.	1663	3	17269	3.3	-2.878	passed	3.0	-2.878	passed
082	Ginger	100 gms.	1627	5.1	12505	3.8	8.337	failed	4.8	6.726	failed
087	Potato	kg.	1684	5.9	18367	7.0	-1.873	passed	5.9	-1.873	passed
088	Sweet potato	kg.	1026	7.2	942	7.1	0.324	passed	6.8	-0.781	passed
089	Radish	kg.	1366	5.1	8756	4.3	3.251	passed	4.8	2.381	passed
090	Onion fresh	kg.	961	7.6	19051	8.4	-2.525	passed	7.6	-2.525	passed
091	Arum	kg.	703	10.1	3923	7.1	6.255	failed	9.6	5.211	failed
092	Carrot	kg.	1567	9	3583	8.4	2.644	passed	8.6	0.623	passed

Statement 2: Results of cross-validation between RRP and CES prices

item	Item description	Unit of quantity	No. of quotation received in RRP	RRP price Qtr. ending Dec'04	No. of observation in CES	Derived price in CES	t- Values	t test results (at 5% level of signific-ance)	Bargained price (RRP)	t- values on Bargained price (at 5% level of signific-ance)	t test results on Bargained price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Subround-2 (1st oct'04 to 31st dec'04) Contd.											
093	Turnip	kg.	489	7.4	772	5.8	5.861	failed	7.0	4.544	failed
099	Tomato	kg.	1704	7.6	14352	10.5	-9.283	failed	7.6	-9.283	failed
100	Cucumber	kg.	1110	10.1	3667	7.7	11.402	failed	9.6	9.027	failed
101	Gourd	kg.	1484	7	7439	5.3	7.649	failed	6.7	6.043	failed
102	Snake gourd	kg.	372	8.9	1293	8.3	2.687	passed	8.5	0.723	passed
104	Pumpkin	kg.	1292	6.6	6976	5.3	5.131	failed	6.3	3.186	passed
105	Lady's finger	kg.	1097	14.8	6110	10.2	23.853	failed	14.1	19.987	failed
106	Torai	kg.	533	11.8	4236	6.8	12.138	failed	11.2	10.702	failed
107	Beans	kg.	1336	11.8	4837	10.5	6.686	failed	11.2	3.268	passed
108	Cauliflower	kg.	1526	8.4	9504	7.7	1.966	passed	8.0	0.797	passed
109	Cabbage	kg.	1618	6.2	9713	7.5	-2.546	passed	6.2	-2.546	passed
110	Bitter gourd	kg.	1151	14.9	3979	11.7	18.318	failed	14.2	14.11	failed
112	Banana	pair	1629	2.3	11942	0.9	2.587	passed	2.2	2.297	passed
114	Coconut	each	1490	8.6	5772	6.3	2.687	passed	8.2	2.997	passed
116	Lemon	pair	1589	1.7	5874	0.6	6.869	failed	1.6	6.321	failed
117	Guava	kg.	977	10.1	3159	8.2	2.395	passed	9.6	1.743	passed
118	Papaya (ripe)	kg.	1082	9.9	580	8.7	4.267	failed	9.4	2.554	passed
119	Pine apple	kg.	590	15	262	7.8	14.104	failed	14.3	12.631	failed
120	Sugar	kg.	1724	20	16539	17.6	1.822	passed	19.0	1.051	passed
122	Gur	kg.	1668	17.4	4958	16.6	3.167	passed	16.5	-0.311	passed
123	Tea (Readymade)	per cup	1641	2.2	9364	1.7	0.731	passed	2.1	0.569	passed
124	Coffee (Readymade)	per cup	793	4	196	1.0	3.149	passed	3.8	3.256	passed
125	Tea leaf (Loose)	100 gms.	1307	12.1	17020	13.0	-1.853	passed	12.1	-1.853	passed
126	Tea leaf (Packet)	100 gms.	1508	16	17020	13.0	6.611	failed	15.2	2.846	passed
127	Coffee powder (Loose)	100 gms.	219	15.6	1067	13.0	3.102	passed	14.8	2.17	passed
129	Salted Refreshment	100 gms.	1693	5.5	9383	32.3	-9.138	failed	5.5	-9.138	failed
132	Cooked meal	single meal	1477	15.7	1293	14.0	0.129	passed	14.9	0.068	passed
134	Cigarette	each packet	1617	11.6	1186	12.3	-0.634	passed	11.6	-0.634	passed
140	Pan finished Ordinary	each	1442	1.9	2672	1.1	0.267	passed	1.8	0.233	passed

Statement 2: Results of cross-validation between RRP and CES prices

item	Item description	Unit of quantity	No. of quotation received in RRP	RRP price Qtr. ending mar'05	No. of observation in CES	Derived price in CES	t- Values	t test results (at 5% level of significance)	Bargained price (RRP)	t- values on Bargained price (at 5% level of significance)	t test results on Bargained price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Subround-3: (1st jan'05 to 31 mar'05)											
022	Chira (Flattened rice)	kg.	1371	15.1	3004	12.3	9.613	failed	14.3	7.03	failed
023	Muri (Puffed rice)	kg.	1349	21.9	3316	17.5	15.892	failed	20.8	11.948	failed
024	Maida	kg.	1664	12	1346	12.0	-0.014	passed	12.0	-0.014	passed
026	Suji	kg.	1652	12.5	4194	13.4	-11.412	failed	12.5	-11.412	failed
029	Arhar (tur) dal	kg.	1645	29.7	9585	28.2	5.070	failed	28.2	0.043	passed
032	Masur dal (Split washed)	kg.	974	27.7	8514	28.4	-1.889	passed	27.7	-1.889	passed
036	Moong dal Washed	kg.	1564	29.1	8522	25.8	1.877	passed	27.6	1.049	passed
039	Urd dal (Washed)	kg.	1366	27	7197	24.7	9.825	failed	25.7	3.115	passed
040	Khesari dal	kg.	306	16.4	549	14.9	2.606	passed	15.6	1.161	passed
041	Pea dal	kg.	569	19.7	1908	17.7	7.865	failed	18.7	3.192	passed
042	Soyabean	kg.	594	29.3	675	25.5	2.488	passed	27.8	2.397	passed
046	Groundnut oil (Loose)	per litre	844	54.4	2296	55.2	-1.571	passed	54.4	-1.571	passed
048	Mustard oil (Loose)	per litre	1160	53.4	11117	54.7	-0.320	passed	53.4	-0.32	passed
049	Coconut oil	per litre	342	76.7	834	72.0	6.877	failed	72.9	1.211	passed
055	Vanaspati	kg.	1630	51	2696	50.6	1.213	passed	48.5	-1.696	passed
056	Meat (goat)	kg.	1566	115.4	3614	108.8	7.766	failed	109.6	0.992	passed
059	Beef	kg.	292	46.8	2202	49.9	-1.276	passed	46.8	-1.276	passed
060	Pork	kg.	470	58.2	1473	73.0	-6.215	failed	58.2	-6.215	failed
061	Poultry	approx. weight (kg)	1365	68.1	4740	69.7	-1.390	passed	68.1	-1.39	passed
065	Eggs (farm)	each	1608	2	7778	2.0	0.041	passed	1.9	-0.269	passed
067	Milk (cow)	per litre	1359	12.9	13924	11.4	0.477	passed	12.3	0.267	passed
068	Milk (buffalo)	per litre	1286	13.6	13924	11.4	0.686	passed	12.9	0.471	passed
069	Ghee (buffalo)	kg.	690	162.3	1570	132.2	3.197	passed	154.2	2.899	passed
070	Ghee (cow)	kg.	558	194.2	1570	132.2	7.410	failed	184.5	6.249	failed
071	Ghee mixed (Cow & buffalo)	kg.	629	154.7	1570	132.2	2.873	passed	147.0	1.885	passed
072	Curd	kg.	1169	25.2	851	17.9	8.183	failed	23.9	6.773	failed
076	Chillies green	100 gms.	1680	2.1	16634	1.2	0.604	passed	2.0	0.532	passed
081	Garlic	100 gms.	1653	3	17568	3.3	-2.413	passed	3.0	-2.413	passed
082	Ginger	100 gms.	1619	5.1	12916	3.7	8.520	failed	4.8	6.957	failed
087	Potato	kg.	1713	5.9	18466	4.6	1.969	passed	5.6	1.51	passed
088	Sweet potato	kg.	669	7.2	1381	6.4	2.083	passed	6.8	1.142	passed
089	Radish	kg.	909	5.1	7803	4.0	3.240	passed	4.8	2.575	passed
090	Onion fresh	kg.	602	7.6	19054	7.4	0.293	passed	7.2	-0.304	passed
091	Arum	kg.	719	10.1	2604	6.6	6.900	failed	9.6	5.905	failed

Statement 2: Results of cross-validation between RRP and CES prices

item	Item description	Unit of quantity	No. of quotation received in RRP	RRP price Qtr. ending mar'05	No. of observation in CES	Derived price in CES	t- Values	t test results (at 5% level of significance)	Bargained price (RRP)	t- values on Bargained price (at 5% level of significance)	t test results on Bargained price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Subround-3: (1st jan'05 to 31 mar'05) Contd.											
092	Carrot	kg.	1014	9	6775	6.9	7.089	failed	8.6	5.577	failed
093	Turnip	kg.	206	7.4	933	5.6	2.368	passed	7.0	2.477	passed
099	Tomato	kg.	1701	7.6	16940	7.4	0.418	passed	7.2	-0.523	passed
100	Cucumber	kg.	1515	10.1	3358	7.3	16.964	failed	9.6	13.909	failed
101	Gourd	kg.	1569	7	5626	5.1	6.428	failed	6.7	5.268	failed
102	Snake gourd	kg.	484	8.9	1229	8.7	1.219	passed	8.5	-0.961	passed
104	Pumpkin	kg.	1425	6.6	5550	4.7	3.284	passed	6.3	3.155	passed
105	Lady's finger	kg.	1636	14.8	4343	11.2	29.032	failed	14.1	23.126	failed
106	Torai	kg.	1046	11.8	1723	9.2	11.265	failed	11.2	8.683	failed
107	Beans	kg.	1055	11.8	4577	9.8	7.525	failed	11.2	5.28	failed
108	Cauliflower	kg.	821	8.4	11562	6.3	2.700	passed	8.0	3.178	passed
109	Cabbage	kg.	1230	6.2	13323	5.4	1.576	passed	5.9	0.927	passed
110	Bitter gourd	kg.	1501	14.9	3319	12.1	18.343	failed	14.2	13.512	failed
112	Banana	pair	1610	2.3	9828	0.9	3.176	passed	2.2	3.144	passed
114	Coconut	each	1507	8.6	5352	6.4	3.156	passed	8.2	2.874	passed
116	Lemon	pair	1575	1.7	5850	0.7	6.511	failed	1.6	5.98	failed
117	Guava	kg.	484	10.1	2520	7.8	6.634	failed	9.6	3.154	passed
118	Papaya (ripe)	kg.	1080	9.9	808	7.4	7.502	failed	9.4	6.031	failed
119	Pine apple	kg.	650	15	211	8.3	7.648	failed	14.3	6.794	failed
120	Sugar	kg.	1738	20	16368	19.8	0.784	passed	19.0	-1.411	passed
122	Gur	kg.	1698	17.4	6578	16.2	5.160	failed	16.5	1.299	passed
123	Tea (Readymade)	per cup	1639	2.2	9222	1.7	0.658	passed	2.1	0.513	passed
124	Coffee (Readymade)	per cup	795	4	153	1.0	3.235	passed	3.8	3.123	passed
125	Tea leaf (Loose)	100 gms.	1351	12.1	16942	13.4	-2.902	passed	12.1	-2.902	passed
126	Tea leaf (Packet)	100 gms.	1497	16	16942	13.4	6.382	failed	15.2	2.448	passed
127	Coffee powder (Loose)	100 gms.	240	15.6	1068	12.7	3.072	passed	14.8	2.251	passed
129	Salted Refreshment	100 gms.	1702	5.5	9531	20.3	-2.345	passed	5.5	-2.344	passed
132	Cooked meal	single meal	1495	15.7	1342	11.8	0.847	passed	14.9	0.677	passed
134	Cigarette	each packet	1630	11.6	1255	11.7	-0.071	passed	11.6	-0.071	passed
140	Pan finished Ordinary	each	1462	1.9	2703	1.1	0.679	passed	1.8	0.593	passed

Statement 2: Results of cross-validation between RRP and CES prices

item	Item description	Unit of quantity	No. of quotation received in RRP	RRP price Qtr. ending Jun '05	No. of observation in CES	Derived price in CES	t- Values	t test results (at 5% level of significance)	Bargained price (RRP)	t- values on Bargained price (at 5% level of significance)	t test results on Bargained price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Subround-4: (1st apr'05 to 30th jun'05)											
022	Chira (Flattened rice)	kg.	1353	15.1	2903	12.6	9.789	failed	14.3	6.835	failed
023	Muri (Puffed rice)	kg.	1349	21.9	3229	18.3	10.764	failed	20.8	7.45	failed
024	Maida	kg.	1674	12	1602	11.7	1.547	passed	11.4	-1.38	passed
026	Suji	kg.	1657	12.5	4503	13.4	-10.668	failed	12.5	-10.668	failed
029	Arhar (tur) dal	kg.	1666	29.7	10065	28.0	8.374	failed	28.2	0.913	passed
032	Masur dal (Split washed)	kg.	992	27.7	8756	28.2	-1.219	passed	27.7	-1.219	passed
036	Moong dal Washed	kg.	1571	29.1	8853	27.5	6.764	failed	27.6	0.751	passed
039	Urd dal (Washed)	kg.	1354	27	6978	25.4	8.036	failed	25.7	1.411	passed
040	Khesari dal	kg.	296	16.4	556	15.3	1.687	passed	15.6	0.404	passed
041	Pea dal	kg.	555	19.7	2019	17.5	8.248	failed	18.7	2.582	passed
042	Soyabean	kg.	594	29.3	710	26.6	3.187	passed	27.8	1.752	passed
046	Groundnut oil (Loose)	per litre	849	54.4	2343	54.8	-0.552	passed	54.4	-0.552	passed
048	Mustard oil (Loose)	per litre	1135	53.4	11205	55.1	-2.671	passed	53.4	-2.671	passed
049	Coconut oil	per litre	336	76.7	825	66.6	14.106	failed	72.9	8.726	failed
055	Vanaspati	kg.	1641	51	2925	50.1	2.635	passed	48.5	-1.172	passed
056	Meat (goat)	kg.	1562	115.4	3694	111.1	2.988	passed	109.6	-2.045	passed
059	Beef	kg.	287	46.8	2199	48.5	-0.250	passed	46.8	-0.25	passed
060	Pork	kg.	443	58.2	1312	75.6	-9.294	failed	58.2	-9.294	failed
061	Poultry	approx. weight (kg)	1377	68.1	4904	66.7	0.699	passed	64.7	-0.971	passed
065	Eggs (farm)	each	1605	2	7573	1.9	0.294	passed	1.9	-0.068	passed
067	Milk (cow)	per litre	1360	12.9	14012	11.9	0.371	passed	12.3	0.139	passed
068	Milk (buffalo)	per litre	1304	13.6	14012	11.9	0.610	passed	12.9	0.371	passed
069	Ghee (buffalo)	kg.	688	162.3	1588	96.6	1.949	passed	154.2	1.708	passed
070	Ghee (cow)	kg.	583	194.2	1588	96.6	2.661	passed	184.5	2.397	passed
071	Ghee mixed (Cow & buffalo)	kg.	642	154.7	1588	96.6	1.665	passed	147.0	1.443	passed
072	Curd	kg.	1151	25.2	1034	19.0	7.171	failed	23.9	3.172	passed
076	Chillies green	100 gms.	1685	2.1	16849	0.8	0.588	passed	2.0	0.54	passed
081	Garlic	100 gms.	1665	3	17190	3.0	0.238	passed	2.9	-0.951	passed
082	Ginger	100 gms.	1599	5.1	10775	3.9	7.778	failed	4.8	3.097	passed
087	Potato	kg.	1718	5.9	18658	6.5	-1.094	passed	5.9	-1.094	passed
088	Sweet potato	kg.	356	7.2	711	6.7	0.951	passed	6.8	0.314	passed
089	Radish	kg.	918	5.1	3297	5.7	-2.534	passed	5.1	-2.534	passed
090	Onion fresh	kg.	345	7.6	19276	6.8	0.357	passed	7.2	0.195	passed
091	Arum	kg.	1095	10.1	2680	6.9	8.073	failed	9.6	6.801	failed
092	Carrot	kg.	688	9	2764	11.1	-8.290	failed	9.0	-8.29	failed

Statement 2: Results of cross-validation between RRP and CES prices

item	Item description	Unit of quantity	No. of quotation received in RRP	RRP price Qtr. ending Jun '05	No. of observation in CES	Derived price in CES	t- Values	t test results (at 5% level of significance)	Bargained price (RRP)	t- values on Bargained price (at 5% level of significance)	t test results on Bargained price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Subround-4: (1st apr'05 to 30th jun'05) Contd.											
093	Turnip	kg.	133	7.4	274	7.7	-0.820	passed	7.4	-0.82	passed
099	Tomato	kg.	1652	7.6	15156	9.0	-3.198	passed	7.6	-3.198	passed
100	Cucumber	kg.	1499	10.1	6996	6.7	17.110	failed	9.6	14.533	failed
101	Gourd	kg.	1539	7	9137	5.5	6.287	failed	6.7	2.771	passed
102	Snake gourd	kg.	643	8.9	1639	7.8	5.630	failed	8.5	3.137	passed
104	Pumpkin	kg.	1461	6.6	8170	5.0	6.828	failed	6.3	2.394	passed
105	Lady's finger	kg.	1647	14.8	11141	9.0	27.687	failed	14.1	24.146	failed
106	Torai	kg.	1221	11.8	5908	7.1	14.990	failed	11.2	13.113	failed
107	Beans	kg.	1036	11.8	4780	11.2	2.176	passed	11.2	-0.044	passed
108	Cauliflower	kg.	845	8.4	2467	10.1	-2.734	passed	8.4	-2.734	passed
109	Cabbage	kg.	1201	6.2	6780	8.0	-7.291	failed	6.2	-7.291	failed
110	Bitter gourd	kg.	1516	14.9	6536	10.9	29.629	failed	14.2	24.085	failed
112	Banana	pair	1665	2.3	8578	1.0	3.233	passed	2.2	3.046	passed
114	Coconut	each	1541	8.6	5155	6.0	3.085	passed	8.2	3.04	passed
115	Mango	kg.	674	24.3	8477	13.9	6.965	failed	23.1	6.153	failed
116	Lemon	pair	1611	1.7	8693	0.8	7.805	failed	1.6	7.093	failed
117	Guava	kg.	820	10.1	500	7.9	3.193	passed	9.6	3.02	passed
118	Papaya (ripe)	kg.	964	9.9	671	9.3	1.875	passed	9.4	0.383	passed
119	Pine apple	kg.	787	15	482	5.1	27.689	failed	14.3	25.593	failed
120	Sugar	kg.	1730	20	16558	19.8	0.909	passed	19.0	-2.456	passed
122	Gur	kg.	1685	17.4	4500	17.0	1.889	passed	16.5	-2.571	passed
123	Tea (Readymade)	per cup	1659	2.2	9315	1.2	0.058	passed	2.1	0.051	passed
124	Coffee (Readymade)	per cup	809	4	150	0.7	3.154	passed	3.8	3.264	passed
125	Tea leaf (Loose)	100 gms.	1342	12.1	16817	13.4	-3.165	passed	12.1	-3.165	passed
126	Tea leaf (Packet)	100 gms.	1516	16	16817	13.4	6.830	failed	15.2	2.745	passed
127	Coffee powder (Loose)	100 gms.	249	15.6	1064	13.3	2.118	passed	14.8	1.396	passed
129	Salted Refreshment	100 gms.	1699	5.5	9660	21.6	-2.316	passed	5.5	-2.316	passed
132	Cooked meal	single meal	1493	15.7	1291	12.4	0.888	passed	14.9	0.679	passed
134	Cigarette	each packet	1653	11.6	1362	11.7	-0.050	passed	11.6	-0.05	passed
140	Pan finished Ordinary	each	1480	1.9	2735	1.1	0.629	passed	1.8	0.553	passed

Statement 3: Test of homogeneity of educational status between CES and EUS using Kolmogrov-Smirnov(K-S) and χ^2 tests.

RURAL	Male											
State	not literate	literate & upto primary	middle	secon-dary	higher secondary	diploma/ certificate course	graduate & above	n.r.	estd. (00)	sample	K-S stat.	result
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
						Andhra Pradesh						
Schedule 1.0	456	208	137	115	47	7	30	0	184533	7909	1.463	passed
Schedule 10	453	221	134	106	43	11	33	0	183008	7852		
						Bihar						
Schedule 1.0	360	203	192	145	53	4	42	1	189752	7063	3.223	failed
Schedule 10	386	239	156	121	55	3	39	1	184402	6780		
						Gujrat						
Schedule 1.0	276	256	241	117	64	12	32	1	106751	4006	0.729	passed
Schedule 10	259	291	228	121	49	15	37	0	108064	4003		
						Haryana						
Schedule 1.0	239	263	151	185	86	14	61	0	55645	3175	0.602	passed
Schedule 10	272	266	135	180	76	16	54	0	54564	3177		

RURAL	Female											
State	not literate	literate & upto primary	middle	secon-dary	higher secondary	diploma/ certificate course	graduate & above	n.r.	estd. (00)	sample	K-S stat.	result
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
						Andhra Pradesh						
Schedule 1.0	676	165	73	57	19	1	8	0	190787	8182	0.339	passed
Schedule 10	674	165	69	63	18	3	8	0	190383	8167		
						Bihar						
Schedule 1.0	705	148	82	46	13	0	5	2	189627	6957	1.703	failed
Schedule 10	706	163	70	46	10	0	3	1	182730	6751		
						Gujrat						
Schedule 1.0	563	185	133	70	37	3	9	0	101980	3862	1.058	passed
Schedule 10	568	199	120	58	34	3	18	0	103920	3854		
						Haryana						
Schedule 1.0	537	184	106	93	54	2	25	0	49390	2988	1.455	passed
Schedule 10	554	205	86	72	45	4	34	0	48873	2910		

Test of uniformity between CES and EUS using Kolmogrov-Smirnov(K-S) and χ^2 tests.

Urban	Male											
State	not literate	literate & upto primary	middle	secon-dary	higher secondary	diploma/ certificate course	graduate & above	n.r.	estd. (00)	sample	K-S stat.	result
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
					Andhra Pradesh							
Schedule 1.0	187	157	167	187	111	24	166	1	69222	4175	1.791	failed
Schedule 10	186	192	146	161	102	48	164	0	66932	4129		
					Bihar							
Schedule 1.0	151	136	171	142	138	10	230	22	23919	2380	0.798	passed
Schedule 10	156	158	168	165	138	8	207	0	22492	2350		
					Gujrat							
Schedule 1.0	80	179	231	214	112	33	151	0	60716	3330	0.31	passed
Schedule 10	77	198	213	214	118	38	141	0	59588	3332		
					Haryana							
Schedule 1.0	111	203	161	214	131	18	161	0	20984	1790	0.443	passed
Schedule 10	129	184	146	245	115	33	148	0	21410	1753		

Urban	Female											
State	not literate	literate & upto primary	middle	secon-dary	higher secondary	diploma/ certificate course	graduate & above	n.r.	estd. (00)	sample	K-S stat.	result
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
					Andhra Pradesh							
Schedule 1.0	370	179	149	123	88	6	85	0	65821	4152	1.938	failed
Schedule 10	381	201	121	122	72	14	88	0	68115	4164		
					Bihar							
Schedule 1.0	374	151	137	151	104	1	78	3	20131	2086	0.773	passed
Schedule 10	380	191	141	165	73	0	48	1	18746	2099		
					Gujrat							
Schedule 1.0	230	155	211	165	112	9	119	0	56262	3189	1.019	passed
Schedule 10	222	195	216	158	83	20	106	0	53978	3149		
					Haryana							
Schedule 1.0	300	162	124	163	108	21	122	0	18447	1569	0.194	passed
Schedule 10	305	150	115	155	125	23	127	0	18994	1591		

ACTIVITY PROFILES OF CHILDREN IN INDIA

P C Mohanan

The employment-unemployment surveys conducted by the National Sample Survey Organisation (NSSO) provide detailed information on the activity profiles of persons. Though the primary purpose of recording the activity profiles is to identify the activities that can be categorized as economic activities leading to the identification of persons employed and those not employed, it is possible to gain information on several other non-economic activities. The activity profiles of children provide interesting aspects of school and out-of-school activities of children of different ages. In this paper we concentrate on the activity profiles of persons in the age 5 to 24 years. While we look at the activity profiles in terms of education, work and non-work activities, the primary focus remains on the school attendance. Juxtaposing the results from the different quinquennial rounds for different ages provide a picture of the changing pattern of the activity profiles of children.

1. INTRODUCTION:

The 86th amendment to the Constitution of India was enacted to make free and compulsory education to the children in the age group 6 to 14 years, a Fundamental Right. Towards this end the Government of India has launched various programs including the flagship program Sarva Shiksha Abhiyan for achievement of universalization of elementary education in a time bound manner. Over the years there has been substantial increase in the percentage of children attending schools both in rural and urban areas and among male and female children. Increased school attendance also brings down extent of child labour. Data on school attendance is available both from the administrative sources and also from household surveys. Official statistics on school attendance are usually collected from the educational institutions and suffer from certain limitations. Data on school attendance collected from household surveys, however, are free from agency bias, but may not be useful to distinguish attendance in the recognized curriculum streams, in view of the variety of schooling available in the country. This also implies that the household surveys have a distinct advantage as they provide a complete picture of school attendance among children. It is also necessary to distinguish school enrolment and attendance. The official statistics generally provide figures of school enrolment which may not translate into school attendance. One of the important sources of information on the participation of persons on a wide range of economic and non-economic activities is the sample surveys of NSSO. In particular the quinquennial surveys on employment-unemployment conducted by NSSO follows a well tested methodology for recording the activity profiles of the household members as also current attendance in different levels.

In the NSS, activity profiles are recorded using three different reference periods, the usual status, current weekly status and the current daily status. The usual principal status has a reference period of one year and uses the major time criteria. In case of persons pursuing multiple activities a priority cum major time criteria is used. Considering that the weekly and daily status recording takes in to account much shorter duration, where the priority criteria would not take into account the normal or usual activity status, the usual status, especially the principal usual status is more suited for understanding the activity profiles of persons better. This is especially important if one is interested to look at the school attendance, which in rural areas may still be dictated by the needs of agricultural operations.

The activity classification used consists of three broad categories viz. employed, unemployed and those not-in-labour-force. The detailed classification for recording the usual status and the codes used by NSS are as follows:

In the first category i.e. those pursuing economic activities or the activities of the employed the categorizations are:

i. Working in household enterprise (self-employed):[1]

own account worker -11

employer-12,

unpaid family worker -21,

ii. Working as regular salaried/wage employee-31

iii. Working as casual wage labour: in public works-41, in other types of work-51;

1.1 Unemployed

Did not work but was seeking and/or available for work-81,

1.2 Out of labour Force

i. Attended educational institution-91,

ii. Attended domestic duties only-92

iii. Attended domestic duties and was also engaged in free collection of goods (vegetables, roots, fire-wood, cattle feed, etc.), sewing, tailoring, weaving, etc. for household use-93,

iv. Rentiers, pensioners, remittance recipients, etc.-94

v. Not able to work due to disability-95

vi. Beggars, prostitutes-96

vii. Others-97

In this paper we concentrate on the activity profiles of persons in the age 5 to 24 years. Persons of these ages are generally expected to be attending educational institutions. We tabulate the activity statuses for each age from the basic unit level data. While we look at the activity profiles in terms of education, work and non-work activities, the primary focus remains on the school attendance. Juxtaposing the results from the different quinquennial rounds provide picture of the changing pattern of the activity profiles of children.

1.3 Digit preference in age reporting

Tabulation of age data for each single age of the 61st round clearly shows that there are larger percentage of persons of ages that are multiples of 5 starting from age 10. For example there are 1.88 percent of rural males reporting age 9 and 1.76 percent reporting age 11 whereas there are 3.37 percent reporting age 10. This is observed for both males and females in rural and urban areas. However this should not normally be a problem when we look at the distribution of persons by different activity statuses for each age group. If the digit preference is more among illiterate members or households with illiterate members then there is a chance that there would be more people not attending educational institutions for these preferred ages.

2. School attendance

In the NSS, the status 'attending educational institutions' does not necessarily imply formal recognized school streams, allowing more accurate description of the activity profiles. For example attendance in schools by children of five years would mainly mean attending nursery schools etc. However the level of school attendance including information on attendance in the past is separately ascertained, providing another set of information relating to participation in education. Second, the definition of usual status encompasses the concept of enduring status and therefore

[1]Initially NSSO did not separate own account workers and employers and one single code was used for identifying these two. However from the 1993-94 survey (corresponding to 50th round of NSS), a separate code was used for the Employers. The current weekly and current daily status classification also follows the above divisions but also includes a few additional codes to take in to account for persons temporarily staying away from certain economic activities due to leave or sickness etc, which are not relevant when one adopts a longer reference period as in usual status

temporary absence from an activity would not matter. Lastly the concept is applied to a variety of activity statuses ranging from different types of employment, unemployment, out of labour force activities, which are mutually exclusive, making simultaneous comparisons possible. In the next four tables the percentage of children in the different activities are presented for boys and girls for rural and urban sector. Since the percentages in the categories of rentiers, pensioners, remittance recipients, disabled, beggars, prostitutes etc are negligible at the national level these are omitted. Therefore the residual share would consist of those recorded as 'others'

Table 1a: Distribution of persons by activity-NSS 61st round

Age	Activity status for NSS 61st Round									
	11	12	21	31	41	51	81	91	92	93
RURAL MALE										
5								55.11	0.10	0.05
6			0.07					78.79	0.01	0.08
7	0.02		0.06					88.69	0.06	0.11
8	0.06		0.08			0.08	0.01	89.11	0.15	0.09
9	0.15		0.29	0.01		0.15	0.00	94.14	0.05	0.24
10	0.21		0.80	0.02		0.29	0.03	89.68	0.14	0.13
11			1.01	0.09		0.41	0.04	93.76	0.01	0.23
12	0.49		2.81	0.22		1.44	0.09	86.32	0.16	0.74
13	0.35		3.98	0.46		2.69	0.43	85.76	0.14	0.61
14	0.52		6.42	0.93		5.10	0.90	80.16	0.21	0.66
15	1.81		11.00	1.83		12.67	2.03	65.32	0.37	0.56
16	2.40		15.11	2.40		17.66	3.18	55.03	0.36	0.49
17	3.10	0.07	16.12	3.15	0.16	20.71	4.42	48.94	0.41	0.32
18	5.33	0.09	23.27	4.40	0.13	26.90	4.42	32.68	0.48	0.40
19	7.29	0.02	22.23	5.31	0.11	25.75	6.59	30.17	0.72	0.44
20	9.95	0.02	28.74	6.42	0.03	29.73	4.78	17.88	0.49	0.42
21	12.29	0.07	27.21	8.49	0.23	28.49	6.86	14.37	0.08	0.01
22	15.61	0.09	29.33	7.59	0.09	33.04	5.36	7.34	0.32	0.24
23	16.68	0.22	27.60	10.26	0.19	30.87	5.69	7.17	0.10	0.27
24	18.60	0.45	28.01	9.03	0.20	33.89	5.09	2.99	0.14	0.30

We first look at the profiles of children and the youth in the age group 5 to 24 years as obtained from the 61st round of NSS corresponding to the reference period 2004-05, which are the latest survey results currently available. Table 1a gives the distribution of persons of ages between 5 and 24 by different usual activity statuses for rural males. The important activity statuses we need to look for children between 5 and 24 are 'currently attending educational institutions' (91) and those relating to work viz 11, 21 and 51 corresponding to working as own account worker, unpaid family worker and casual worker respectively. We do not generally expect to find persons of this age group in activity statuses like employers, retired persons, regular salaried worker etc.

Slightly over half of the children aged 5 years are found attending educational institutions. This should roughly correspond to the actual number who enrolls at the age of 5 years in educational institutions as there would be no drop outs for this age. The percentage of children in educational institutions increases to 79 percent for those of age 6, and steadily rises to 94 percent for those of age 9 years. The figures for those aged 10 years show a slightly different situation. The share of those in education is lower than those for ages 9 and 11 breaking the monotonous increase or decrease expected.. For them, the percentage in the residual category 'others', is higher than that for 9 and 11 years. One cannot discount the effect of age reporting bias while

looking at the age wise activity profiles. After the age 9 we find a monotonous decrease in those attending the educational institutions. The percentage drops steeply after the age 14. At the age 14, we find that only 80 percent are in educational institutions, 6.4 percent are employed as unpaid family workers in household enterprise and 5 percent are working as casual labour and 5 percent are found not doing any economic activities. For those of age 15, these percentages are 65, 11 and 12.7 respectively. For higher ages the percentage of persons in educational institutions decreases and those employed increases and of the persons in the age group 18, as high as 60 percent are in employment, and only around 32 percent are in educational institutions. Percentage of those who are seeking or available for work is only 4.4 percent.

Thus in the rural sector, we observe that the children move out of the educational institutions to take up employment at a fairly young age. As expected, the employment is mostly in the family enterprises and as casual worker.

Table 1b gives the distribution of different activity statuses pursued by rural girls. The girls unlike the boys leave the educational institutions to join household chores. While three fourth of the girls of age 12 are in educational institutions, already 12 percent are engaged in household chores. For girls of age 15 years the percentage in schools is just 52 percent. 28 percent are in their homes engaged in household chores. Just as in the case of boys, the employment is mostly in household enterprises as unpaid worker (6.7 %) and as casual workers (7.2 %). Only around 18 Percent of the rural girls of age 18 are in educational institutions. 52 percent are at home. Only 15 percent are in employment

Figure 1: Percentage of children attending educational institutions - NSS 61st round

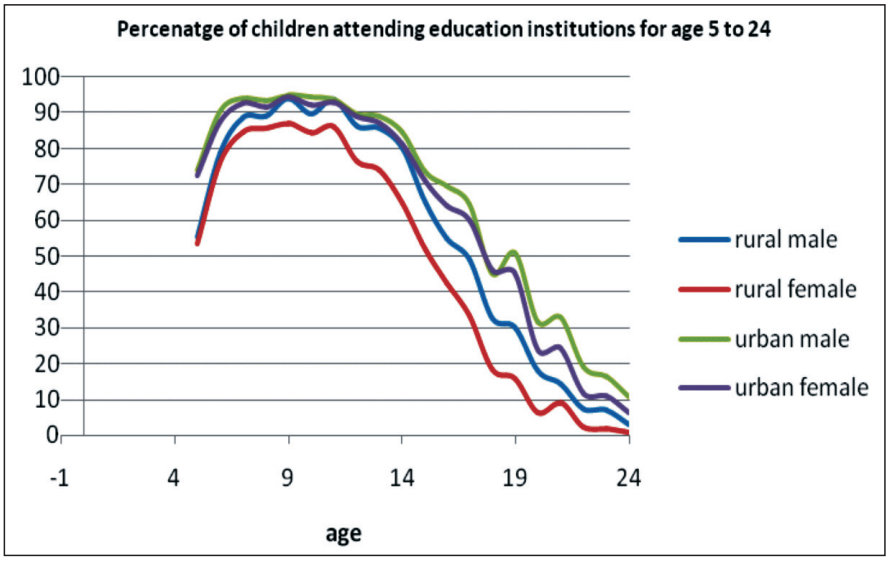


Figure 1 shows the lines plotting age and attendance for persons in the age group 5 to 30. The inside graph is for rural females, followed by rural male, urban female and urban male, The steep fall in attendance is noticed around the age of 14 years, except for rural females for whom it starts an year earlier. For a vast majority of the young people in the rural areas the school life is rather short by universal standards, lasting a mere six to seven years.

The highest attendance is seen at the age of nine for both boys and girls. It is 94 percent for boys and 87 percent for girls. Since fresh enrollment beyond the age of nine is unlikely, the remaining boys and girls of this age are unlikely to prosecute any further

education. Of course it is quite possible, but much unlikely, that some of them might have attended schools for a year or two earlier.

Since the attendance keeps increasing till the age 11 we have to accept that many of the children enroll at a much later age than the generally accepted age of 6 years for admission to Class I. Further since the attendance drops after the age 11, which roughly correspond to the completion of primary level, if one join the first standards at the age of 6 (which again does not happen looking at the data), we may surmise that a large number do not go beyond the primary stage.

Table 1b: Distribution of persons by activity-NSS 61st round

Activity status for RURAL FEMALE										
Age	11	12	21	31	41	51	81	91	92	93
5	0.01					0.01		53.60	0.01	0.12
6	0.00					0.09	0.02	76.31	0.03	0.00
7	0.00						0.05	84.70	0.29	0.36
8	0.08							85.67	0.49	0.21
9	0.03					0.06	0.03	86.97	0.97	0.67
10	0.23					0.39	0.00	84.40	2.20	1.44
11	0.28		1.34			0.59	0.01	86.15	2.85	2.35
12	0.32		2.07	0.19		1.53	0.13	76.42	5.99	5.28
13	0.52		4.05	0.22		2.30	0.06	73.91	7.41	6.77
14	0.66		4.88	0.25	0.04	4.81	0.39	64.66	10.21	9.97
15	0.86		6.68	0.44	0.03	7.21	0.82	52.03	13.04	15.45
16	1.72		7.94	0.92		9.17	0.59	42.58	17.89	17.01
17	2.06		10.56	0.98	0.01	11.17	1.59	33.25	22.91	16.26
18	2.66		12.01	1.02	0.02	10.41	2.63	18.35	28.96	23.03
19	2.64		11.71	1.37	0.06	11.19	2.25	15.88	30.96	22.93
20	2.32	0.05	12.91	1.03	0.04	11.10	2.13	6.40	36.02	26.85
21	2.16		10.45	1.85	0.07	9.47	4.62	9.02	33.75	27.70
22	2.18		13.19	1.27	0.03	12.50	2.86	2.39	32.54	31.76
23	3.35	0.03	12.52	2.12	0.00	11.64	3.85	1.81	34.09	30.27
24	3.14	0.03	13.75	2.43		11.88	2.53	0.82	32.25	32.62

Almost three-fourth of the urban boys aged five years are attending schools. For urban girls of five years the percentage in schools is a close 72 percent. Almost 95 percent of the children aged nine years are in the schools. Thus we observe that the gender difference is not very prominent as far as the starting age for school attendance is concerned in both rural and urban sector are concerned. There could be however large differences at sub-national levels.

It is interesting to note that while the boys, after leaving schools gravitate towards the left of the table (corresponding to employment activity statuses) the girls move to the right (corresponding to non-economic activity statuses i.e performing household chores)

While as high as 94 percent of the boys of age 11 years are in school in urban areas, only around 70 percent of the boys of age 16 years are in education. This is the age when generally one completes the secondary school level. About 20 percent of the boys aged 16 years are in employment, one third of them reporting regular wage employment.

For urban girls of age 16 years, we find only 64 percent in schools. 25 percent of urban girls are reporting as doing household chores and do not get counted as in labour force. As against 20 percent of

Table 1c: Distribution of persons by activity-NSS 61st round

	Activity status for URBAN MALE									
Age	11	12	21	31	41	51	81	91	92	93
5								74.04	0.11	
6								90.55	0.00	
7								93.97	0.08	
8	0.03		0.08	0.07		0.04		93.43	0.16	
9	0.16	0.01	0.33	0.08		0.13	0.40	94.94		
10	0.04		0.15	0.04		0.50	0.32	94.34	0.20	0.11
11	0.32		0.20	1.29		0.40	0.19	93.60	0.35	0.00
12	0.12		1.12	1.78		0.99	0.38	89.63	0.37	0.14
13	0.48		1.47	2.54		1.37	0.62	88.98	0.10	0.20
14	1.15		2.57	2.81		2.50	1.14	84.69	0.27	0.05
15	1.14		5.70	5.57		6.87	2.05	73.55	0.32	0.12
16	3.34		4.92	7.26		6.55	4.77	69.53	0.32	
17	2.60	0.01	6.21	10.85	0.03	7.92	4.44	64.52	0.61	
18	5.82	0.24	10.90	16.44	0.08	11.88	7.05	45.12	0.55	0.14
19	6.36	0.09	8.70	15.02		10.16	7.15	50.80	0.31	0.01
20	9.82	0.29	10.62	21.25	0.02	15.57	8.67	31.67	0.39	
21	10.84	0.60	11.45	24.22		9.73	8.52	32.85	0.11	
22	13.13	0.30	13.21	28.73	0.05	14.63	9.40	18.97	0.11	0.16
23	13.83	0.37	12.62	30.29	0.04	13.18	11.82	16.39	0.20	0.38
24	16.66	0.71	14.15	31.55	0.08	15.24	9.84	10.74	0.18	0.15

Table 1d: Distribution of persons by activity-NSS 61st round

	URBAN FEMALE									
Age	11	12	21	31	41	51	81	91	92	93
5				0.13				72.35		
6								87.43	0.13	
7								92.78	0.12	
8			0.21	0.01				91.64	0.31	0.20
9			0.20	0.05		0.03		94.37	1.15	
10	0.13		0.37	0.06		0.10		92.13	1.71	0.29
11	0.30		0.41	0.11		0.05	0.01	92.84	1.32	0.12
12	0.08		1.16	0.89		0.28	0.01	88.97	3.83	1.18
13	0.53		1.24	0.73		0.43		87.10	5.97	2.11
14	0.63		2.22	1.23		0.73	0.75	81.11	7.91	2.78
15	0.91		1.74	2.57		1.31	0.45	70.87	16.35	3.82
16	0.86		2.67	2.46		1.98	1.52	64.18	20.13	4.03
17	1.40		2.73	2.17		3.27	1.59	60.04	22.06	5.61
18	2.65	0.01	2.83	4.81		1.87	2.26	46.08	28.96	9.45
19	1.23		3.23	4.29		1.13	2.93	45.23	31.74	8.11
20	2.15		3.58	5.52	0.01	2.37	4.08	23.76	44.13	13.39
21	1.68	0.35	4.15	8.41		1.75	6.79	24.37	37.31	14.49
22	2.06		2.91	6.89		1.65	5.02	11.64	55.97	13.05
23	2.30		3.84	8.01		2.33	7.42	10.90	49.86	14.82
24	3.33	0.08	3.23	9.81		2.68	5.16	6.12	51.40	17.22

urban boys only 7.5 percent of urban girls of age 16 years are in employment.

3. Attendance in educational institutions beyond schooling

We may also look at the percentage of boys an girls reporting attending educational institutions for the ages 18 when generally they would be attending college or other technical institutions after their higher secondary level. The data for the last four rounds starting from 1987-88 are summarized below (Table 2).

During the last two decades, though there is an increase in the percentage of 20 year olds reporting attendance, which should roughly correspond to attendance in some higher educational or vocational stream, the increase is not spectacular for any of the four categories considered.

The results for the years 18 and 19 are not very specific as the attendance in schools (higher secondary level) and higher educations (colleges or vocational streams after higher secondary are likely to get mixed in the survey reporting.

Table 2: Percentage of children aged 18, 19 and 20 years reporting usual status as attending educational institutions

Round/period	Rural boys	Rural girls	Urban boys	Urban girls
Aged 18 years				
1987-88	21.43	6.09	42.74	27.93
1993-94	25.57	9.50	46.12	38.09
1999-00	29.03	14.05	46.38	39.47
2004-05	32.68	18.35	45.12	46.08
Age 19 years				
1987-88	17.86	5.65	41.49	27.55
1993-94	23.03	8.94	45.41	35.58
1999-00	27.42	11.28	46.78	36.04
2004-05	30.17	15.88	50.80	45.23
Age 20 years				
1987-88	9.40	1.91	28.46	14.38
1993-94	11.59	2.85	31.39	19.87
1999-00	14.95	4.78	32.30	24.21
2004-05	17.88	6.40	31.67	23.76

4. Children in employment

The activity profiles of children in different ages also provide a picture of children in employment. We need to remember that the profile presented is the 'usual profile' and not any current profile observed during the survey. In table 3 the percentage of children in different employment activities are reported. We find that child employment generally starts at the age of 9 years. Roughly one out of 100 children aged 11 years are working. The work participation goes up to 11 to 12 percent for rural children of age 14 years. Over 6 percent of the urban boys and 3.5 percent of the urban girls of 11 years are in employment.

Table 3: Percentage of children in different employment activities for each age

	Type of employment- NSS 61st round											
age	unpaid	casual	others	unpaid	casual	others	unpaid	casual	others	unpaid	casual	others
	Rural boys			Rural girls			Urban boys			Urban girls		
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.2	0.0	0.0
9	0.3	0.1	0.2	0.0	0.1	0.0	0.3	0.1	0.2	0.2	0.0	0.0
10	0.8	0.3	0.2	0.0	0.4	0.2	0.1	0.5	0.0	0.4	0.1	0.1
11	1.0	0.4	0.0	1.3	0.6	0.3	0.2	0.4	0.3	0.4	0.1	0.3
12	2.8	1.4	0.5	2.1	1.5	0.3	1.1	1.0	0.1	1.2	0.3	0.1
13	4.0	2.7	0.3	4.1	2.3	0.5	1.5	1.4	0.5	1.2	0.4	0.5
14	6.4	5.1	0.5	4.9	4.9	0.7	2.6	2.5	1.1	2.2	0.7	0.6

As is to be expected major type of employment is as unpaid worker in family run enterprises and to some extent in casual work. However what is heartening to note is the decrease in the percentage of children in employment over the years. The children reporting employment in 1987-88 are as given below in table 4.

We find that during 1987-88 there were significant reporting of children in employment even at the age of 5 years and in rural areas as high as 32.6 percent of boys and 29.4 percent of girls of age 14 years reported employment. These figures for the current survey (2004-05) are 12 percent for boys and 10.5 for girls. Obviously the increased attendance in educational institutions keeps them away from employment.

Table 4: Percentage of children in employment during 1987-88

Age	Rural boys	Rural girls	Urban boys	Urban girls
5	1.38	1.60	0.22	0.08
6	1.78	2.19	0.03	0.16
7	1.84	1.97	0.34	0.16
8	2.90	2.78	0.80	0.34
9	4.19	3.91	1.28	1.04
10	10.08	9.72	3.38	2.36
11	12.23	13.68	3.41	2.97
12	20.53	19.34	8.46	4.82
13	23.43	24.05	8.91	5.38
14	32.57	29.44	12.72	7.10

5. Nowhere children

Children are generally expected to be in educational institutions or in not so rare cases in employment. However many of them may not be found in these activities and are therefore called 'no where' children. Generally these children especially girls would be at their homes doing domestic work. Most of them would be in categories like attending domestic duties (codes 92 and 93), beggars etc (96) or in other category (code 97). The percentages of such children for different ages are given in table 5.

As we have seen there is large scale non-enrollment in the ages 5 and 6, which is why for children of age 5 the percentage is quite large.

Table 5: Percentage of children who are neither in schools nor in economic activities

age	Rural boys	Rural girls	Urban boys	Urban girls
5	44.88	46.38	25.96	27.52
6	21.14	23.53	9.45	12.57
7	11.22	15.19	6.03	7.22
8	10.66	14.07	6.34	8.14
9	5.27	12.80	3.94	5.36
10	8.97	14.26	4.62	7.21
11	4.68	11.63	3.99	6.27
12	8.64	19.34	5.98	8.60
13	6.33	18.93	4.54	9.97
14	5.97	24.30	5.14	13.33

However the children who are neither in the schools nor economically active are still quite sizable.

6. Household types and activity statuses

In the rural areas lowest reporting of 'attending educational institutions' is from children coming from households that derives major share of their income from self employment in non-agricultural activities. Further children in employment are seen to be much higher in the households that are self employed in agriculture

or in other labour where most of them report unpaid work.

In the urban areas lower attendance is reported from casual labour households. Employment being reported more by self employed households, where again the children are in the unpaid family helper category.

Table (6): Distribution of children in the age-group 5 to 14 by activity statuses for different household types

hh type	11	12	21	31	41	51	81	91	92	93	94	95	97
					Rural Male								
Self-employed in agri	0.23		2.09	0.22		0.44	0.21	84.48	0.10	0.21		0.37	11.64
self employed in non-agri	0.26		0.69	0.22		2.79	0.18	76.43	0.22	0.37		0.32	18.51
agri lab.	0.22		0.89	0.33		1.35	0.30	81.23	0.09	0.40		0.48	14.71
Other lab	0.15		2.21	0.07		0.11	0.05	86.73	0.07	0.26		0.25	10.10
Others	0.03		0.09	0.06		0.07	0.04	91.78	0.01	0.21		0.26	7.45
					Rural Female								
Self-employed in agri	0.31		1.24	0.03		0.30	0.09	78.63	2.72	2.16	0.01	0.15	14.37
self employed in non-agri	0.29		0.57	0.08		2.95	0.10	69.14	3.69	3.50		0.33	19.34
agri lab.	0.11		0.67	0.31	0.04	1.02	0.09	75.50	3.69	2.20		0.25	16.12
Other lab	0.17		2.05	0.03		0.06	0.05	79.42	2.58	2.64	0.01	0.11	12.89
Others	0.03		0.41	0.02		0.13	0.02	87.17	1.67	1.07		0.21	9.27
					Urban Male								
self employed	0.25		1.30	0.39		0.42	0.32	89.19	0.17	0.07		0.16	7.73
regular salaried	0.14		0.02	1.43		0.11	0.21	93.45	0.13	0.02		0.10	4.38
Casual Labour	0.44		0.08	1.39		2.89	0.68	77.94	0.34	0.11		0.32	15.82
Others	0.02		0.09	0.05			0.01	94.74	0.05		0.10	0.30	4.63
					Urban Female								
self employed	0.08		1.18	0.21		0.05	0.02	87.92	2.48	0.64		0.24	7.17
regular salaried	0.13		0.12	0.46		0.07	0.20	91.18	1.56	0.47		0.14	5.67
Casual Labour	0.64		0.23	0.62		0.92	0.01	78.01	4.71	1.73		0.50	12.63
Others	0.03		0.20			0.03		93.01	1.04	0.63	0.18	0.14	4.73

7. Level of school attendance

The Employment surveys also provide information on the level of school attendance for each person. Based on which, age-wise school attendance for the 55th and 61st round were tabulated (Table 7 & 8). Generally it is expected that children start attending primary classes at the age of six years. In 1999-2000 only 46 percent of the six year old rural boys were attending primary classes with 21 percent were still attending pre-primary classes and 31 percent had never attended any schools. However the good news is that in 2004-05, 70.7 percent of the six year old rural boys were attending primary classes with only 7 percent in pre-primary classes. The percentage of six year olds who never attended any educational institutions decreased to 20.7 percent.

Only 41 percent of six year old rural girls were in primary classes in 1999-00 and this percentage increased to 69.6 percent in 2004-05, which is close to the percentage of boys attending primary classes.

In urban areas 51.6 percent of the boys and 50 percent of the girls of age six years were attending primary classes in 1999-2000 and this has increased to 77.9 percent and 76.6 percent respectively. However in urban areas the percentage of children attending pre-primary classes at the age of six years is quite significant. In 1999-2000 28.6 percent of boys and 26.6 percent of the girls were in pre-primary classes. This however decreased to 11.9 and 11.0 percent respectively in 2004-05. Possibly the urban children attend pre-primary classes at an earlier age than in the past.

The results thus indicate that the gender discrimination in sending girls to school is perhaps coming down.

Table 7: Level of school attendance of children aged 6 years in 55th and 61st rounds of NSS

NSS rounds	never attended	attended in past	attending non-formal	pre-primary	primary	middle	All
Rural Male							
55th	31.0	.7	.4	21.3	45.9	.6	100.0
61st	20.7	.8	.5	7.0	70.7	.4	100.0
Rural Female							
55th	39.0	.9	.3	18.4	41.0	.5	100.0
61st	22.4	1.1	.5	5.7	69.6	.7	100.0
Urban Male							
55th	16.4	1.3	.6	28.6	51.6	1.4	100.0
61st	9.1	.3	.5	11.9	77.9	.4	100.0
Urban Female							
55th	21.7	.7	.2	26.6	49.9	.7	100.0
61st	11.0	.8	.1	11.0	76.6	.5	100.0

Note: The unlikely figures under "middle' could be attributed to wrong coding etc

Table 8: Level of school attendance for children aged 10 years and 15 years in 55th and 61st rounds of NSS

Age	NSS rounds	never attended	attended in past	attending non-formal	pre-primary	primary	middle	Secondary & Higher Sec	All
		Rural Male							
10	55th	15.3	2.8	.2	9.8	54.5	17.2	.3	100
	61st	8.5	1.9	.0	.6	67.7	21.2	.1	100
15	55th	20.5	20.0	.0	.6	3.8	19.4	35.7	100
	61st	10.1	24.7	.0	.0	3.5	19.0	42.5	100
Rural Female									
10	55th	27.1	3.3	.3	7.7	45.4	16.0	.2	100
	61st	12.6	3.0	.1	.7	63.6	19.9	.1	100
15	55th	33.2	23.4	.1	.5	2.9	13.0	27.0	100
	61st	19.9	28.0	.1	.0	3.0	15.6	33.2	100
Urban Male									
10	55th	7.4	2.0	.0	9.4	53.5	27.3	.4	100
	61st	4.6	1.1	.4	.6	61.6	31.7	.1	100
15	55th	9.3	18.5	.0	.4	2.9	18.1	50.8	100
	61st	6.5	21.5	.1		2.2	12.0	56.9	100
Urban Female									
10	55th	10.6	2.8	.1	7.8	49.1	29.0	.5	100
	61st	6.2	1.7	.1	1.4	56.0	34.6	.1	100
15	55th	11.3	19.7	.0	.4	1.9	14.9	51.8	100
	61st	8.7	20.3			.6	10.6	58.6	100

8. Withdrawal from schooling

As we have seen the children up to the age of 10 get in and out of schools. However no fresh enrolment by children aged 10 years and above is expected. Therefore it is possible to compare the school attendance of children aged 10 years in 1999-2000 and five years later to get an idea of the extent of children dropping out of schools. 81.6 percent of the rural boys aged 10 years were attending school in 1999-200 and during 2004-05 we find only 65.3 percent of those aged 15 years attending educational institutions i.e about 20 percent has dropped out of studies. The percent of rural girls of age 10 years in 1999-2000, percentage dropping out in the next five years is about 24 percent. For urban children the corresponding figures are 21 percent and 18 percent for boys and

girls. Thus for this age, we do not observe much rural-urban or gender differentials

From the data relating to level of school attendance it is also possible to look at the above from a different angle. 54.5 percent of the rural boys were in primary school in 1999-2000. Ideally we would expect the same percentage to be in secondary classes five year later i.e. in 2004-05, but for the dropouts and repeaters. This can be checked from the school attendance for the 15 year old boys in 2004-05. We find among this cohort only 42.5 percent in secondary and higher secondary classes[2].

The percentage of children below the age of 15 years reporting 'attended in the past' is also a measure of dropping out as these children are unlikely to have completed secondary school which is the basic level expected to be completed. The percentage of children reporting 'attended in the past' is 2.8 for rural boys aged 10 and is 6.1 for boys aged 12. This steadily climbs to 10.7 for 13 years old and is as high as 20 percent for 15 years old. The percentage of rural girls of age 15 years (roughly corresponding to those dropping out before matriculation) is 23.4 percent. For urban boys this percentage is 18.5 for boys and 19.7 for girls. However for urban areas the chances that 15 years old has completed matriculation would be much higher due to early start of school attendance.

9. Other estimates of 'out of school children'

Department of Elementary Education, Ministry of Human Resource Development had conducted a study by Social and Rural Research Institute IMRB International using the same samples as those in the 61st round of NSSO[3]. The object of the survey was to get quick estimates of the number of out of school children. While the 61st round was conducted during the period July 2004 to June 2005, the SRI-IMRB study was during July – October 2005.

Table 9: All India percentage of 'out of school children' in the age group 6–13 years as per NSSO and the SRI-IMRB study

	Out of school children in the age group 6 – 13 years			
	As per 'SRI-IMRB study'		As per NSS 61st round*	
	Rural	Urban	Rural	Rrban
Boys	6.78	4.33	12.1	7.7
Girls	9.14	4.36	18.4	9.1
	Out of school children of age 5 years			
	As per 'SRI-IMRB study'		As per NSS 61st round* (figures in bracket are for 6 years old children)	
	Rural	Urban	Rural	Urban
Boys	22.63	10.77	45.89 (21.21)	25.06(9.45)
Girls	24.22	11.38	46.40 (23.69)	27.75(12.57)

Source: Table A1 and C41 of the SRI-IMRB Report

* The figures are the percentages of children reporting principal status other than '91'. In fact the percentage of children reporting 'never attended' and 'dropped out' for the age group 6-13 years are also identical.

[2] In general we have the rough identity that for children of age 'n' years in 61st round

$$A^{n}_{61} = A^{n-5}_{55} - P^{n}_{61} + (X^{n-5}_{55} - X^{n}_{61})$$

Where

A^{n}_{61} is the percentage of children of age n years attending schools in the 61st round

P^{n}_{61} is the percentage of children reporting 'attended in the past' in 61st round

X^{n}_{61} is the percentage of children reporting 'never attended'

[3] Report of the study is available at http://ssa.nic.in/research/outschool.asp

The figures computed from the NSS are almost double that of the figures obtained by the SRI-IMRB survey for the 6 to 13 years age group. For the children aged 5 years, the out of school percentage from the SRI-IMRB survey is less than half of that in NSS. Compared to NSS, the SRI-IMRB study rather excludes certain category of children attending unrecognized madrassas, informal Sanskrit schools etc for the scope of schooling. Some possible reasons for this difference could be the different survey periods and survey methodologies. While the survey period of the study is slightly later compared to the 61st round, the fact that the study covered the four months closer to the commencement of the school year could have a bearing on the lower percentage of children reporting 'out of school'. In the NSS, the adoption of the usual status with a long reference period of one year substantially removes the seasonality aspect in the reporting.

In the SRI-IMRB survey the age of children is reported in years completed as on 1st July 2005. Thus the data from this survey would have children of age at least 5 years and above, while the corresponding age group in NSS would include children who were less than five years on this date. This would vitiate comparison with NSS apart from the fact that that the reference period in this survey is six months after that of the NSS 61st round. The commencement of school attendance is linked to a specific age group and NSS follows a moving age reference. This brings out a vital problem in comparing the data relating to education collected in NSS with that coming out of official and other sources. One possible way to avoid this would be in to use a fixed reference time for age reporting in NSS for education related indictors.

10. Concluding observations:

The data on activity status of children can be used to study the activity profiles of children in particular their school attendance and non-school attending activities. In this paper we have used the activity status data for discussing activity profiles including school attendance, as it provides the details of all alternate activities pursued by children. Secondly it was also observed that there is a perfect match in the data relating to activity status "code 91: attending educational institutions" and the data on "status of current attendance" recorded separately in the questionnaire. However while discussing levels of school attendance, the data on school attendance have been used.

Analysis of the age wise activity profiles provides interesting highlights of the 'school' and 'out of school' activities of children. The availability of regular survey data helps in understanding the changing activity patters over time and age group. The highest attendance is seen for the age 9 years. Generally the percentage of children in schools falls steeply after the age 11, indicating that there are substantial dropouts from the schooling system. While employment is an activity for out of school children, there are still children who are neither in employment nor in schools. This is much higher for girls, who are mainly in household activities after being out of school. Enrolment of children in regular primary schools at the age of six has improved over the years. However a very large proportion of children do not go beyond secondary level and over the years the proportion who attends higher studies has not increased in comparison to the increase in enrollment in the schools. Withdrawal from schooling is quite significant with almost 20 percent of all children of age 10 years in 1999-2000 withdrawing from schooling during the next 5 years.

As far as the percentage of children attending pre-primary and primary schools is concerned, there is not much gender difference.

The percentage of children in employment has decreased substantially during the last two decades with practically no reporting of child labour till the

age of 8. Significant participation in work among children is generally after the age of 10. Most of the child employment is as unpaid family worker in household enterprises.

The views expressed if any in this paper are personal. The tables were generated from the unit level data of NSS employment surveys. The author wishes to thank the anonymous referees for the suggestions.

Charts showing percentage of children in educational institutions for different NSS rounds separately for rural male, rural female, urban male, urban female

Chart 1: Percentage of children attending educational institutions over different NSS rounds - Rural Male

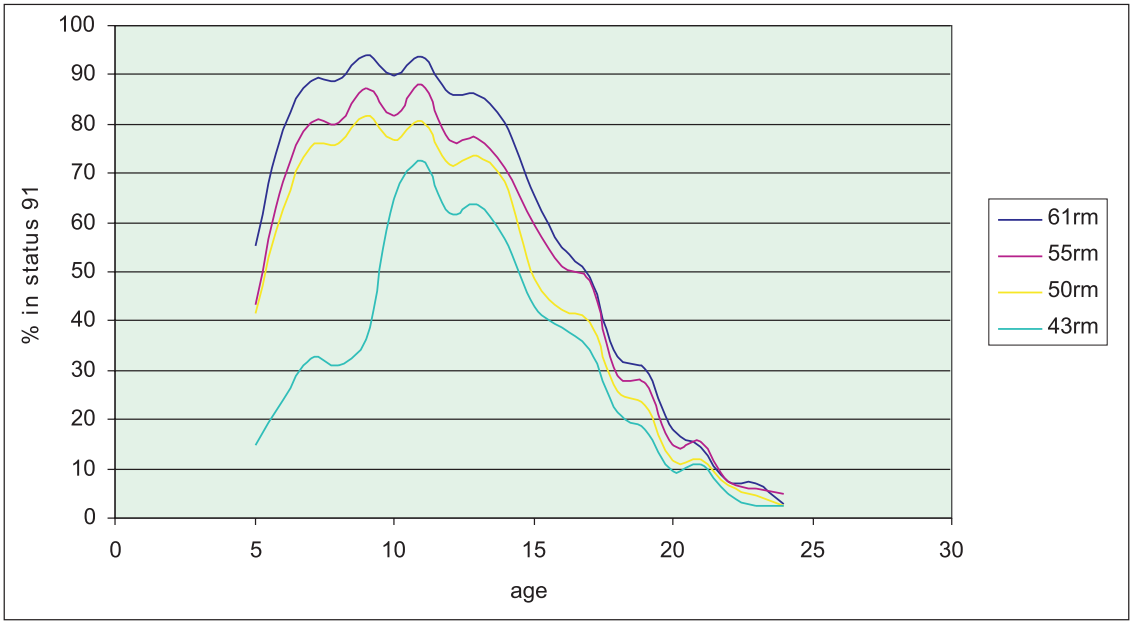


Chart 2: Percentage of children attending educational institutions over different NSS rounds - Rural Male

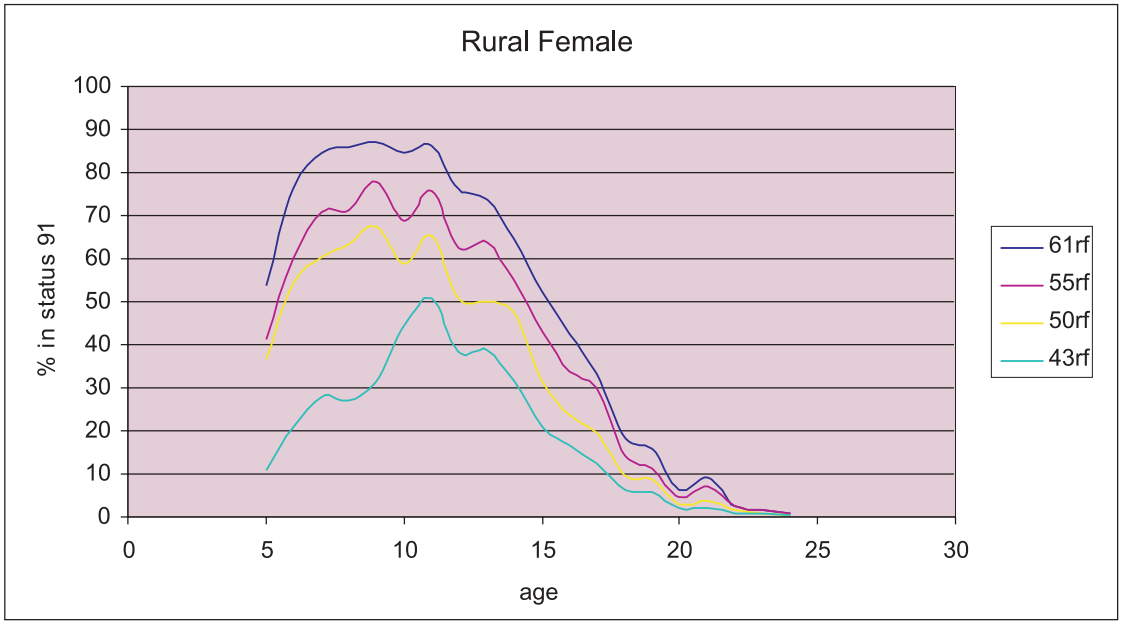


Chart 3: Percentage of children attending educational institutions over different NSS rounds - Urban Male

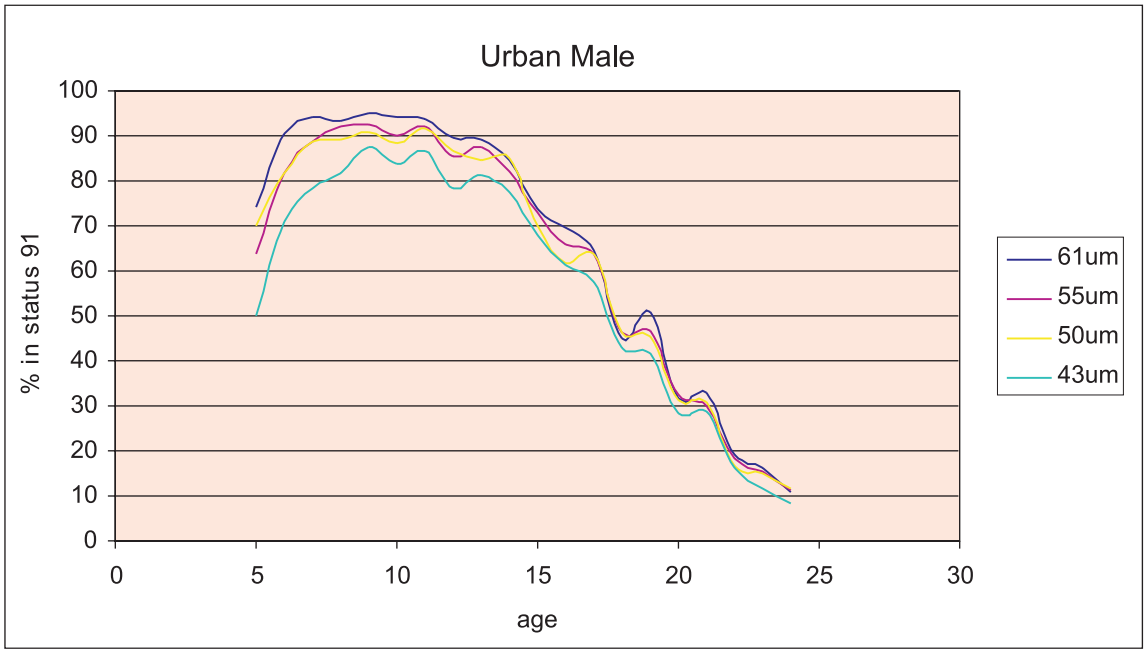
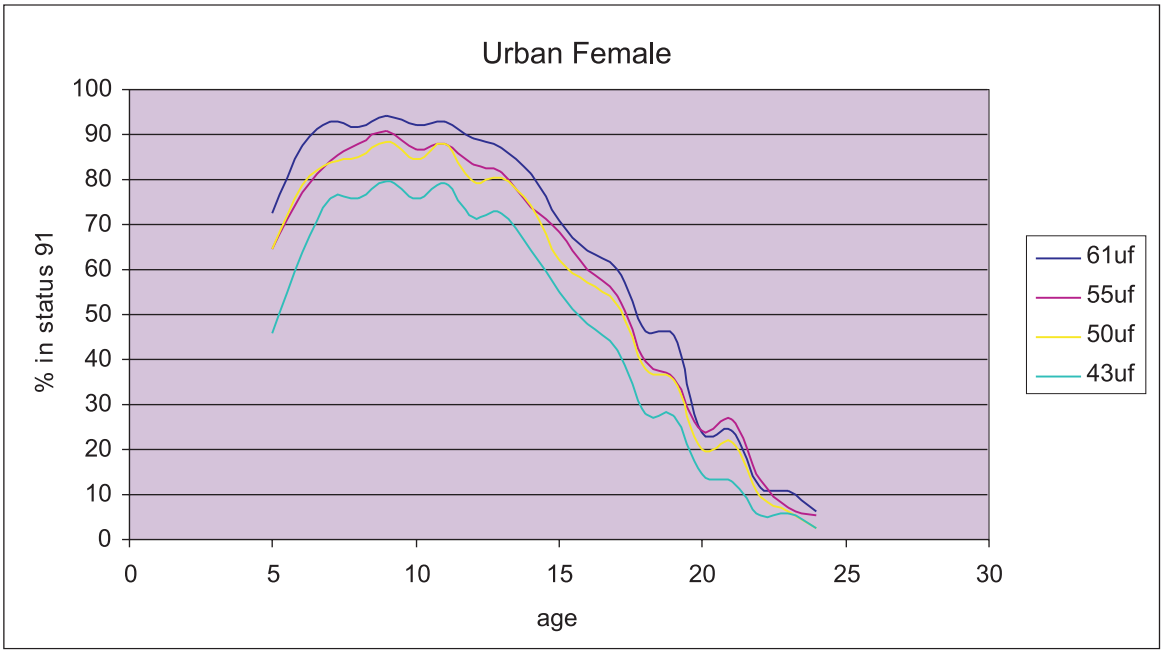


Chart 4: Percentage of children attending educational institutions over different NSS rounds – Urban Female



PART – II

SUMMARY AND MAJOR FINDINGS OF SURVEYS

AN INTEGRATED SUMMARY OF 61ST ROUND (JULY 2004 – JUNE 2005) ON "HOUSEHOLD CONSUMER EXPENDITURE IN INDIA"

Nivedita Gupta

1. Introduction

1.1 About NSS Consumer Expenditure Surveys

1.1.1 Household consumer expenditure surveys (CES) are the regular feature of the activities of National Sample Survey (NSS) since its inception in 1950. Originally it used to be conducted annually as part of every round of NSS till 1971-72 (26th round). From 1972-73, the consumer expenditure survey became a quinquennial feature and was also integrated with the employment and unemployment survey in the sense that a common sample of households was subjected to both the enquiries. An annual series of consumer expenditure surveys on a smaller scale was again launched from the 42nd round (1986-87) to fill the data gaps which planners and researchers had begun to feel. From 45th round (1989-90) onwards the item coverage of the annual consumer expenditure surveys was expanded to include important key characteristics of employment-unemployment to build up an annual data series of both consumer expenditure and employment-unemployment. It is the larger-scale quinquennial surveys, however, which are widely used for the study of changes over time in the level of consumer expenditure and of the emergence of new spending patterns. Seven quinquennial surveys of consumer expenditure have been conducted so far in the 27th, 32nd, 38th, 43rd, 50th, 55th and 61st rounds of NSS. They relate to the years 1972-73, 1977-78, 1983, 1987-88, 1993-94, 1999-2000 and 2004-05 respectively.

1.1.2 In the 27th, 32nd, 38th, 43rd and 50th rounds of NSS, the schedule on employment-unemployment and the schedule on consumer expenditure were canvassed in the same sample of households during the same visit. This was done to enable employment-unemployment data to be cross-classified by information on consumption level. From the 55th round (1999-2000) onwards, the practice has been discontinued to minimise respondent fatigue from very long interviews. Instead, one summary block on consumer expenditure was introduced in the employment-unemployment survey schedule for the purpose of cross classification by consumption level.

1.1.3 The household consumer expenditure schedule (sch.1.0) used for the NSS 61st round survey collected information on quantity and value of household consumption on 142 items of food; 13 items of fuel; 27 items of clothing, bedding and footwear; 17 items of educational and medical expenses; 52 items of durable goods and about 90 other items. The schedule also collected some other household particulars including age, sex and educational level of each household member.

1.2 Geographical coverage

1.2.1 The survey covered the whole of the Indian Union except (i) Leh (Ladakh) and Kargil districts of Jammu & Kashmir, (ii) interior villages of Nagaland situated beyond five kilometres of a bus route and (iii) villages in Andaman and Nicobar Islands which remain inaccessible throughout the year.

1.3 Sample Design

1.3.1 A stratified multi-stage design was adopted for the 61st round survey. The first-stage units (FSU) were the 2001 Census villages (panchayat wards for Kerala) in the rural sector and Urban Frame Survey blocks in the urban sector. The ultimate stage units(USU), in both sectors, were households. In the case of large villages/ blocks an intermediate stage of hamlet-groups (hg)/ sub-blocks (sb) formation was adopted for ease of listing and selection of the

households. Within each district of a State/UT, two basic strata were formed: (i) rural stratum and (ii) urban stratum, comprising all rural and urban areas of the district respectively. However, each town with population 10 lakhs or more as per population census 2001 formed a separate basic stratum and the remaining urban area of the district was considered as another basic stratum.

1.3.2 In order to spread the sample over households at different levels of living, households, listed in the selected village/block/ hamlet-groups/sub-blocks, were stratified into three second-stage strata (SSS) on the basis of their relative affluence. Ten (10) households were then selected for Schedule 1.0 by SRSWOR.

1.3.3 Total sample size: In the Central Sample surveyed by NSSO, the number of first and second stage units surveyed is given below:

Number in Central Sample of	Rural	Urban
villages /blocks (FSU) surveyed	7999	4602
sample households (USU)	79298	45346

1.3.4 Survey Period: The survey period was from July, 2004 to June, 2005.

1.4 Major Concepts & Definitions

1.4.1 **Household:** A group of persons, normally living together and taking food from a common kitchen, constitutes a household. The word "normally" means that temporary visitors are excluded but temporary stay-aways are included.

1.4.2 **Household consumer expenditure:** The expenditure incurred by a household on domestic consumption during the reference period is the household's consumer expenditure. It is the sum total of the monetary values of consumption of various groups of items, namely (i) food, pan (betel leaves), tobacco, intoxicants and fuel & light, (ii) clothing and footwear and (iii) miscellaneous goods and services and durable articles.

1.4.3 **Value of consumption:** Consumption out of purchase is evaluated at the purchase price while consumption out of home produce is evaluated at ex farm or ex factory rate. Value of consumption out of gifts, loans, free collections, and goods received in exchange of goods and services is imputed at the rate of average local retail prices prevailing.

1.4.4 **Monthly per capita consumer expenditure (MPCE):** For a household, this is the total consumer expenditure over all items per month (30 days basis) divided by the size of the household. A person's MPCE is taken as that of the household to which he or she belongs.

1.4.5 **MPCE class:** For tabulation purpose twelve MPCE class are conventionally used. The class limits for the 61st round survey were chosen so that the bottom two and the top two classes each contained 5% of the all-India (rural/urban) population according to the estimates of this survey, and the remaining eight classes each contained 10%. Thus the upper limits of these classes correspond broadly to cumulative frequencies 5%, 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90%, 95% and 100% of the all-India distribution of MPCE over the population. The class limits thus determined in the 61st round CES (2004-05) are given above. MPCE class limits thus set are usually retained till the next quinquennial round when they are reset.

Sector-wise MPCE classes		
MPCE Class	MPCE range (Rs.)	
	Rural	Urban
1	0 – 235	0 – 335
2	235 – 270	335 – 395
3	270 – 320	395 – 485
4	320 – 365	485 – 580
5	365 – 410	580 – 675
6	410 – 455	675 – 790
7	455 – 510	790 – 930
8	510 – 580	930 – 1100
9	580 – 690	1100 – 1380
10	690 – 890	1380 – 1880
11	890 – 1155	1880 – 2540
12	1155 & more	2540 & more

1.5 **Major States:** This refers to the 17 States of India which had a population of 20 million or more according to the Census of 2001. Together, these states accounted for nearly 94.7% of India's population in 2001.

1.6 **Reference periods:** In the 61st round NSS reverted to the reference periods used for collection of consumption data in the 50th round (1993-94) for better long term comparability. The reference periods adopted for different groups of items in the last three quinquennial rounds of Consumer Expenditure Surveys are given below:

item of consumption	Reference period		
	61st Round (2004-05)	55th Round (1999-00)	50th Round (1993-94)
food, pan, tobacco & intoxicants	"last 30 days"	"last 7 days" & "last 30 days"	"last 30 days"
fuel and light, miscellaneous goods and services including non-institutional medical care, rents and taxes	"last 30 days"	"last 30 days"	"last 30 days"
clothing, footwear, education, medical care (institutional) and durable goods	"last 30 days" & "last 365 days"	"last 365 days"	"last 30 days" & "last 365 days"

1.7 **Two sets of estimates :** The 61st round enabled two sets of estimates of Monthly Per Capita Consumer Expenditure (MPCE): (i) MPCE with uniform reference period, i.e. **MPCE (URP), or "MPCE"**, using data collected with "last 30 days" as reference period for all items of consumption and (ii) MPCE with mixed reference period MPCE (MRP)" or "adjusted MPCE" using the data with reference period of "last 365 days" for the infrequently purchased items. In this summary, MPCE will mean 'MPCE with uniform reference period' unless otherwise specified.

1.8 The findings of the survey based on data collected through central sample surveyed by NSSO, have already been released in NSS reports no. 508, 509, 510, 511, 512, 513 and 514 (for the title of the reports, see References). However a summary of the major results of the survey is presented here.

Major Findings of the Survey

2. Level of Consumer Expenditure

2.1 Population characteristics

2.1.1 Average household size in rural India was 4.88 while in urban India it was 4.36 in 2004-05.

Table 1 : Average number of adults and children per household in different MPCE classes all-India

Rural				Urban			
MPCE class (Rs.)	average no. per household of			MPCE class (Rs.)	average no. per household of		
	Adults	Children *	persons		Adults	Children*	Persons
0 – 235	2.88	2.73	5.61	0 – 335	3.19	2.73	5.93
235 – 270	3.13	2.80	5.93	335 – 395	3.47	2.32	5.79
270 – 320	3.18	2.48	5.66	395 – 485	3.47	2.06	5.53
320 – 365	3.18	2.24	5.42	485 – 580	3.45	1.72	5.17
365 – 410	3.20	2.05	5.26	580 – 675	3.39	1.57	4.96
410 – 455	3.22	1.85	5.07	675 – 790	3.29	1.41	4.70
455 – 510	3.24	1.73	4.97	790 – 930	3.27	1.20	4.47
510 – 580	3.20	1.54	4.75	930 – 1100	3.13	1.03	4.16
580 – 690	3.18	1.32	4.50	1100 – 1380	3.00	0.85	3.86
690 – 890	3.13	1.17	4.30	1380 – 1880	2.83	0.69	3.52
890 – 1155	3.08	0.99	4.06	1880 – 2540	2.68	0.58	3.26
1155 & more	2.84	0.80	3.64	2540 & more	2.47	0.43	2.90
all classes	3.15	1.74	4.88	all classes	3.12	1.24	4.36

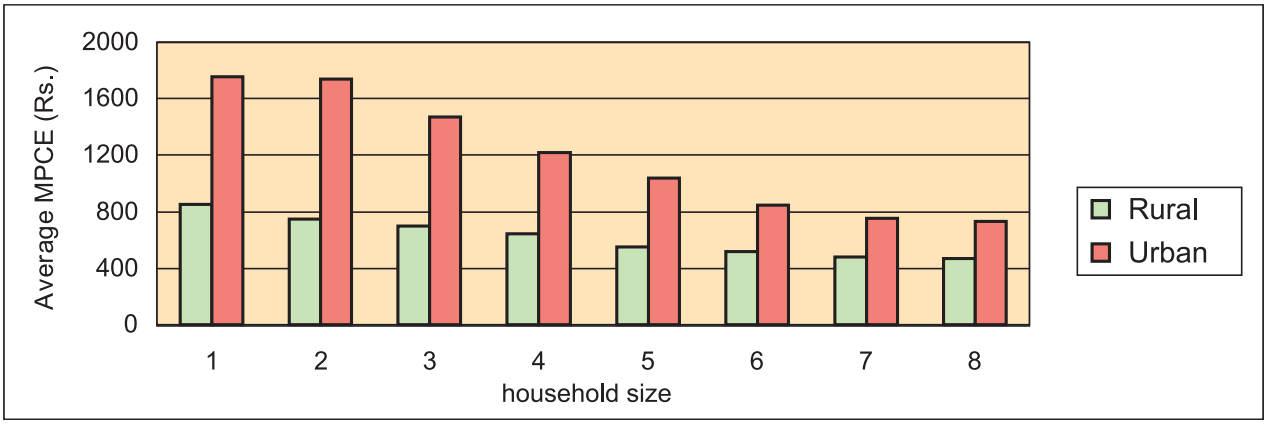
*persons under the age of 15

Source: Table P2: Report no. 508

The average household size and the average number of children per household were found to decrease steadily as one move up the MPCE scale both in rural and urban sector.

2.1.2 Among households of different sizes, it was the single-member households that were, on the average, the richest. This is not surprising because, except for a small proportion of remittance-receiving households, these households have one earner and no dependants. Growth in the number of 2-member urban households with both members having significant earnings was probably the reason for the average MPCE of 2-member households being very close to that of single-member households in urban India.

Fig 1: Average MPCE for households of sizes 1 to 8



Source: Fig. 1, Report no. 508

2.2 Average MPCE

2.2.1 Average MPCE at state level for rural and urban sectors is shown below for the major States and all-India. In rural India, among major states it ranged from Rs. 399 in Orissa to Rs. 1013 in Kerala while the all-India average stood at Rs. 559. The urban average for the country was at a much higher level, Rs. 1052, and it was as low as Rs. 696 in Bihar and as high as Rs. 1326 in Punjab.

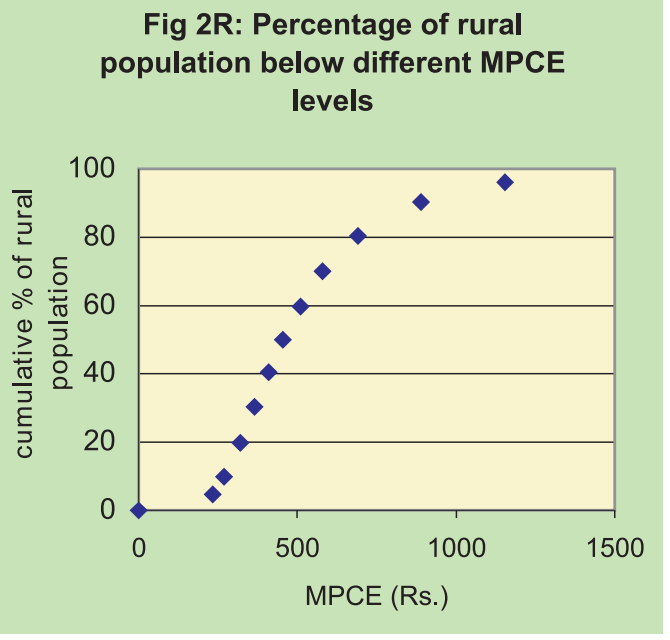
Table 2: Average MPCE in rural and urban areas of major States and all-India

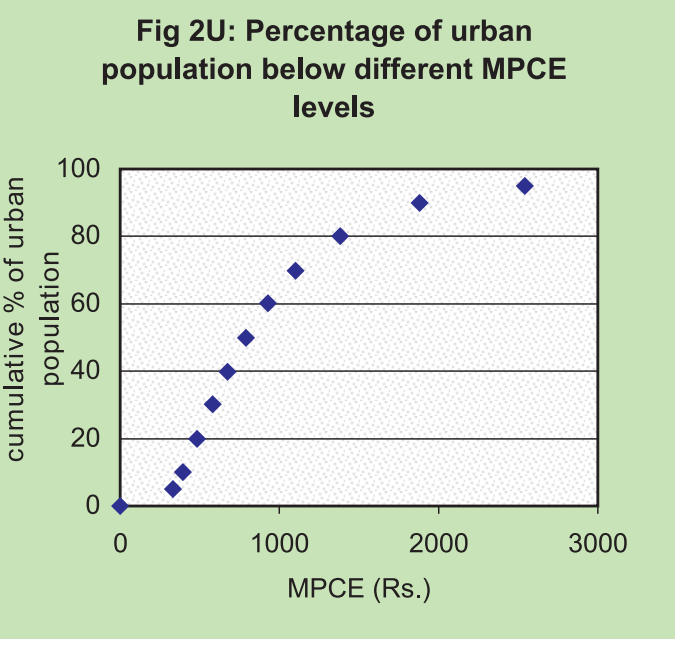
State	Average MPCE (Rs.)		State	Average MPCE (Rs.)	
	Rural	Urban		Rural	Urban
Andhra Pradesh	586	1019	Madhya Pradesh	439	904
Assam	543	1058	Maharashtra	568	1148
Bihar	417	696	Orissa	399	757
Chhattisgarh	425	990	Punjab	847	1326
Gujarat	596	1115	Rajasthan	591	964
Haryana	863	1142	Tamil Nadu	602	1080
Jharkhand	425	985	Uttar Pradesh	533	857
Karnataka	508	1033	West Bengal	562	1124
Kerala	1013	1291	All-India	559	1052

Source: Table P5, Report no.508, figure for U.P. corrected

2.3 Distribution of population by MPCE

2.3.1 As already discussed the twelve MPCE size classes correspond broadly to all India 5%, 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90%, 95% and 100% of population separately for rural and urban sector. Rural population was more concentrated in the lower levels of MPCE. Those with MPCE below Rs. 580 comprised 70% of the population in rural areas but only 30% of the population in urban India, although ignoring rural-urban price differences.





Source: Fig 2R & 2U , Report no. 508

2.3.2 The differentiated prevalence of economic deprivation, as measured in terms of percentage of state population below the all India lower percentile MPCE cut-off points is presented below for the 17 major states of the country. For the rural population in 2004-05, the MPCE level of Rs.365 corresponded to the 30th percentile of the all-India distribution of MPCE and Rs.270 was the 10th percentile.

2.3.3 In Orissa and Chhattisgarh as many as 55-57% of villagers was living below the MPCE level of Rs. 365. In MP, Bihar and Jharkhand, 46-47% were living below this level. Even lower levels of living of Rs.270 per person per month (Rs.9 per day) and below were observed for 31% of the rural population in Orissa and over 20% in Chhattisgarh and MP.

2.3.4 For urban India, Rs.580 was roughly the 30th percentile of the distribution of MPCE and Rs.395 was the 10th percentile. We find that 55% of Bihar's and 50% of Orissa's urban population lived below the MPCE level of Rs.580 (Rs.19 per day). Even lower consumption levels - as low as Rs.13 per day or less (MPCE<Rs.395) - were found in respect of 28% of Bihar's and 25% of Orissa's urban population.

2.3.5 On the other hand, the upper ranges of the MPCE distributions give a view of the proportion of people living in relative affluence. The MPCE levels above which the top 20% and top 10% of the rural population of India lived in 2004-05 were Rs.690 and Rs.890 respectively. For the urban population of India, Rs.1380 and Rs.1880 were the approximate values of the corresponding percentiles.

2.3.6 While Kerala, Punjab and Haryana had the highest proportions of rural affluent population, in

Table 3: Statewise percentages of rural and urban population below specified levels of MPCE

State	% of **rural** population with MPCE		state	% of **urban** population with MPCE	
	below Rs. 365 (bottom 30%)	below Rs.270 (bottom 10%)		below Rs.580 (bottom 30%)	below Rs.395 (bottom 10%)
Orissa	57	31	Bihar	55	28
Chhattisgarh	55	24	Orissa	50	25
Madhya Pr.	47	21	Uttar Pradesh	44	17
Bihar	46	15	Chhattisgarh	44	20
Jharkhand	46	15	Madhya Pradesh	43	18
Uttar Pradesh	33	10	Rajasthan	36	10
Karnataka	32	7	Jharkhand	33	14
Maharashtra	30	11	Andhra Pradesh	33	8
Tamil Nadu	26	6	Karnataka	31	12
Andhra Pradesh	25	8	West Bengal	29	8
West Bengal	24	5	Tamil Nadu	26	7
Gujarat	21	5	Maharashtra	25	8
Assam	17	3	Assam	23	4
Rajasthan	17	3	Kerala	22	7
Haryana	7	1	Haryana	22	7
Kerala	7	2	Punjab	18	1
Punjab	4	1	Gujarat	16	3
All-India	**30**	**10**	**All-India**	**30**	**10**

Source: Table P3, Report no.508

urban India the top three positions were occupied by Kerala, Punjab and West Bengal. Bihar had the lowest proportion of rich people in both rural and urban areas.

Table 4: Statewise percentages of rural and urban population above specified levels of MPCE

State	% of rural population with MPCE		state	% of urban population with MPCE	
	Rs.690 or more (top 20%)	Rs.890 or more (top 10%)		Rs.1380 or more (top 20%)	Rs.1880 or more (top 10%)
Kerala	57	38	Kerala	28	15
Punjab	51	32	Punjab	27	14
Haryana	47	28	West Bengal	24	13
Gujarat	26	13	Gujarat	23	10
Andhra Pradesh	23	11	Maharashtra	23	13
Rajasthan	22	10	Haryana	22	11
Maharashtra	21	11	Tamil Nadu	22	11
Tamil Nadu	21	11	Karnataka	21	11
West Bengal	18	8	Assam	21	9
Assam	18	5	Andhra Pradesh	18	8
Uttar Pradesh	17	8	Jharkhand	17	8
Karnataka	13	6	Chhattisgarh	16	8
Madhya Pradesh	11	5	Rajasthan	15	7
Orissa	9	4	Madhya Pr.	14	7
Chhattisgarh	8	3	Uttar Pradesh	12	6
Jharkhand	7	3	Orissa	8	3
Bihar	6	2	Bihar	7	3
All-India	**20**	**10**	**All-India**	**20**	**10**

Source: Table P4, Report no.508

2.4 Household Consumer Expenditure among Socio-Economic Groups

2.4.1 Till the NSS 55th round (1999-00), the classification of households into different social groups was limited only to scheduled caste, scheduled tribe and 'others'. However, from 55th round onwards a new social group, 'other backward classes' (OBC) was introduced. Accordingly in the 61st round the consumption pattern was derived for the four social groups - Scheduled Tribes (ST), Scheduled Castes (SC), Other Backward Classes (OBC) and the residual class (Others) having share of population 8.63%, 19.59%, 40.94% and 30.80% respectively.

Table 5: Percentage share in population and level of living for different social groups in 2004-05 all India

Social Group	Percentage Share in Population			Average MPCE (Rs.)		
	Rural	Urban	Combined	Rural	Urban	Combined
ST	10.57	2.92	8.63	426.19	857.46	463.15
SC	20.92	15.64	19.59	474.72	758.38	532.07
OBC	42.75	35.60	40.94	556.72	870.93	625.89
Others	25.71	45.81	30.80	685.31	1306.10	919.09
All	100	100	100	558.78	1052.36	683.75

Source: table 4.7, Report no.514

2.4.2 In rural India the households belonging to the social group Scheduled Tribes (ST) had the lowest MPCE (Rs. 426.19) followed by the households belonging to the social group Scheduled Castes (SC) with Rs. 474.72. In urban India, the households belonging to the social group Scheduled Castes had the lowest MPCE (Rs. 758.38) followed by the households belonging to the social group Scheduled Tribes (Rs. 857.46). In the case of both the sectors, the households belonging to the social group 'Other Backward Classes' (OBC) had lower MPCE than that of the residual 'others' class. However, it is interesting to note that in both rural and urban India, among the social groups, the average MPCE of OBC was closest to the all-India average in 2004-05. For social group ST the rural-urban average MPCE differential was the largest.

Table 6 : Average MPCE and per cent break-up of persons by MPCE class for different social groups all India

MPCE class (Rs)	Rural					MPCE class (Rs)	Urban				
	ST	SC	OBC	Others	All		ST	SC	OBC	Others	All
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
0 – 235	14	6.3	3.7	1.7	4.8	0-335	11.7	9.2	6.1	2.4	5
235 – 270	9.2	6.8	4.8	2.5	5.1	335-355	6.8	8.8	6.4	2.7	5.1
270 – 320	14.2	13.4	9.6	5.9	9.9	355-485	10.1	14.3	11.7	6.7	9.8
320 – 365	12.3	12.8	10.7	7.4	10.5	485-580	8.3	13.4	12.8	7.5	10.3
365 – 410	10	11.6	10.7	8.3	10.2	580-675	8.9	11	12	7.6	9.7
410 – 455	8.1	10.5	9.9	8.1	9.4	675-790	11.1	10.6	11.7	8.3	9.9
455 – 510	8.3	9.1	10.7	9.9	9.9	790-930	9.3	9.2	10	10.9	10.3
510 – 580	7.5	9.4	10.5	11.4	10.2	930-1100	11.9	8.6	8.9	10.6	9.7
580 – 690	7.3	8.5	10.3	13.2	10.4	1100-1380	7.4	6.8	8.3	13.1	10.2
690 – 890	5.7	6.3	9.9	14.1	9.8	1380-1880	8	4.7	7	14.1	9.9
890 – 1155	2	2.8	4.7	8.3	5	1880-2540	5.1	1.9	3	7.8	5.1
≥ 1155	1.4	2.4	4.6	9.2	5	≥ 2540	1.5	1.5	2.2	8.4	4.9
all classes	100	100	100	100	100	all classes	100	100	100	100	100
average MPCE (Rs.)	426.19	474.72	556.72	685.31	558.78	average MPCE (Rs.)	857.46	758.38	870.93	1306.1	1052.36

Source: table 1, Report no.514

2.4.3 In rural India, the average MPCE is Rs. 558.78 and 65.7% of the rural population was below this level. In the case of the social group 'ST', 79.6% of the population has average MPCE less than the national average for rural India. The corresponding figures for SC, OBC and 'Others' were 77.4%, 64.1%, and 53.3% respectively. Similarly, in urban India, the average MPCE was Rs.1052.36 and 67.1% of the urban population has MPCE below this level. In the case of the social group 'SC', 84.0% of the population was having average MPCE less than the national average for the rural India. The corresponding figures for ST, OBC and 'Others' were 74.3%, 75.4%, and 54.5% respectively.

2.4.4 Even in case of MPCE class-wise distribution of population for the social groups, the closeness of distribution for the OBC with the 'all classes' distribution, especially in the rural areas, is the single most important feature, which deserves special mention.

2.5 The Differences in Consumption across Economic Groups

2.5.1 In rural India, the average MPCE (Rs.416) of households belonging to the household type 'agricultural labour' was the lowest among all the household types. This was followed by the average MPCE (Rs.520) of households type 'other labour'. This depicts the overall poor economic condition of the rural labour class in rural India. The average MPCE (Rs.583) of households belonging to the type 'self-employed in agriculture' was lower than the average MPCE (Rs.604) of those, 'self-employed in non-agriculture'. The average MPCE (Rs. 818) of persons belonging to the household type 'others', was the highest among that of all the household types.

Table 7: Percentage share in population and level of living of different household types in 2004-05 all India

Rural		
Household type	Percentage Share in Population	Average MPCE (Rs.)
self-employed in non- agriculture	16.5	604.41
agricultural labour	24.9	415.65
other labour	10.4	519.81
self-employed in agriculture	39.4	583.48
others	8.7	818.19
All	100	558.78
Urban		
Household type	percentage share in population	average MPCE (Rs.)
self-employed	42.9	982.35
regular wage/salary earner	39.4	1212.66
casual labour	11.7	579.63
others	5.8	1444.97
All	100	1052.36

Source: Statement 8 and table 4.3, Report no.514

2.5.2 In urban India, the average MPCE (Rs.580) of households belonging to the household type 'casual labour' was the lowest among all the household types. This was followed by the average MPCE (Rs.982) of household type 'self-employed'. The average MPCE (Rs.1213) of households belonging to the household type 'regular wage/salary earning' was lower than the average MPCE (Rs.1445) of households belonging to the household type 'others'.

Table 8 : Average MPCE and per cent break-up of persons by MPCE class for different social groups **all India**

MPCE class	self-empl. in non-agr.	agr. lab.	other lab.	self-empl. in agr.	other	MPCE class	self-employed	regular wage /salary earning	casual labour	other labour
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
0 – 235	3.1	9.2	5.6	3	2.8	0 – 335	5.4	1.7	15.3	4.2
235 – 270	3.2	8.9	5	4.1	2.3	335 – 395	5.5	2.6	12.5	3.2
270 – 320	8.5	16.3	10.5	7.5	4.6	395 – 485	10.5	6.6	19.8	4.9
320 – 365	10.4	14.5	11.8	8.7	5.4	485 – 580	11.8	7.8	15.8	6.1
365 – 410	9.9	12	10.2	10.1	6	580 – 675	10.6	8.7	11.7	6.8
410 – 455	9.8	10	10.5	9.1	6.2	675 – 790	10.1	10.3	9.5	7.8
455 – 510	10.7	8.6	10.1	10.8	8	790 – 930	10	11.6	6	11
510 – 580	10.2	7.7	10.3	11.8	9.9	930 – 1100	9.1	12	3.9	10.8
580 – 690	10.9	6.4	9.8	12.5	11.8	1100 – 1380	9.4	13.1	3.3	11.3
690 – 890	11.2	4	8.4	11.6	16.9	1380 – 1880	9.2	12.7	1.4	13.7
890 – 1155	5.9	1.4	4	5.7	11	1880 – 2540	4.5	6.7	0.4	8.3
≥ 1155	6.2	1.1	3.8	5	15.1	≥ 2540	4	6.2	0.3	11.8
all classes	100	100	100	100	100	all classes	100	100	100	100
av. MPCE	604.41	415.65	519.81	583.48	818.19	av. MPCE	982.35	1212.66	579.63	1444.97

Source: Table 2R and 2U, Report no.514

2.5.3 An examination of the distribution of population over the MPCE classes reveals the relative position of the persons belonging to the different household types. In rural India the distribution for the household type 'other labour' is closest to the overall distribution, while in urban India the distribution for the household type 'self-employed' is nearest to that of all households over the MPCE classes. The economic condition is most precarious for the household type 'agricultural labour' in rural India and for the 'casual labour' in urban India.

2.6 Trends in all-India average per capita consumption expenditure since 1972-73

2.6.1 Average rural and urban MPCE (all-India) at current prices as obtained from the quinquennial

Table 9 : Trends in all-India average per capita consumption, 1972-73 to 2004-05

Year	Rural			Urban		
	MPCE (Rs.) at current prices	Index of current price MPCE with 1972-73 =100	CPI-AL with base 1972-73=100	MPCE (Rs.) at current prices	Index of current price MPCE with 1972-73 =100	CPI-UNME with base 1972-73=100
1972-73	44.17	100	100	63.33	100	100
1977-78	68.89	156	144	96.15	152	160
1983	112.31	254	227	165.80	262	258
1987-88	158.10	358	289	249.92	395	364
1993-94	286.10	637	520	464.30	723	618
1999-00	486.16	1101	833	854.92	1350	998
2004-05	558.78	1265	922	1052.36	1662	1230

Note: 1999-2000 survey estimates, being based on a different reference period, were not strictly comparable with those from the other rounds.
Source: Table P6, Report no.508

series of consumer expenditure surveys, i.e. rounds 27, 32, 38, 43, 50, 55 and 61, is shown in the table below. To facilitate comparison at constant prices, consumer price indices [based on CPI for agricultural workers (CPI-AL) for rural areas and CPI for non-manual employees (CPI-UNME) for urban areas] with 1972-73 as base are shown alongside.

2.6.2 It is seen that the rural average MPCE indexed at 1972-73 prices have become 12.65 times that of the base year while the price index(CPI-AL) have increased to 922 from 100, which means that the real increase in per capita consumption at constant prices since 1972-73 might have been of the order of 37%.

2.6.3 For urban India, again the average MPCE indexed at 1972-73 prices in 2004-05 was 16.62 times that of the base year while the increase in price level was only from 100 to 1230 indicating an increase in real terms of the order of 35%.

2.7 Trends in level of consumption expenditure for different segments of population

2.7.1 In the next table, average MPCE figures for different percentile groups of the population obtained from the 50th, 55th and 61st rounds of NSS – all surveys of the quinquennial series – are deflated by suitable price indices and expressed at 1993-94 prices. The CPI-AL series of indices is used for the rural sector and the CPI-UNME series for the urban.

2.7.2 Among the 61st round estimates, both rural and urban, while the "MPCE (URP)" based on "last 30 days" reference period for all items can be compared with the estimates of the 50th round (1993-94), the alternative estimate, i.e. "MPCE (MRP)", based on mixed reference period ("last 365 days" reference period for the 5 infrequent-expenditure categories and 'last 30 days" for the rest) should be compared with that of the 55th round(1999-00). This is what the term 'recall period comparability' means.

2.7.3 Comparison of the time periods 1993-94 (50th round) and 2004-05 (61st round) captures the decadal change in a dynamic economic environment. It reveals that there was an increase in real per capita consumption of the order of 10-12% for most of the lower percentile groups in the rural areas and higher for the top two groups. In urban areas, the increase was under 10% for the lower half of the population but around 15% or more for the upper groups.

Table 10 : Comparison of average MPCE at constant prices over rounds

Percentile group of population	Average MPCE (Rs.) at constant (1993-94) prices							
	Rural				Urban			
	50th	55th	61st		50th	55th	61st	
	(URP)*	(MRP)**	(URP)	(MRP)	(URP)	(MRP)	(URP)	(MRP)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
0 - 5%	100	121	114	137	133	159	141	164
5% - 10%	131	153	145	169	176	203	186	210
10% - 20%	153	176	169	193	211	242	223	248
20% - 30%	178	203	195	220	248	288	269	294
30% - 40%	200	228	221	245	287	334	316	342
40% - 50%	222	252	246	271	332	385	368	396
50% - 60%	249	281	275	299	381	447	433	461
60% - 70%	282	313	310	333	448	523	512	545
70% - 80%	325	358	359	380	543	628	619	657
80% - 90%	398	433	442	455	698	800	804	854
90% - 95%	500	537	570	569	923	1052	1088	1144
95% - 100%	872	849	1116	938	1643	1912	2137	1985
all	281	307	319	331	458	532	531	555

* Uniform Reference Period ** Mixed Reference Period Source: Table P7, Report no. 508

2.7.4 Comparing the average MPCE of 1999-2000 (55th round) and 2004-05 (61st round) the percentage rise in real rural per capita consumption over this 5-year period declines gradually as one moves from the lower percentile groups to the higher ones (from about 13-14% for the poorest 5% to less than 5% for the "80-90" and "90-95" groups, though it is over 10% for the top "95-100" group. For the urban population, however, the percentage rise is lowest in the poorest groups, rising from 2-3% for the lowest five groups to about 7-9% for the "80-90" and "90-95" groups.

2.8 Inequality and Welfare

2.8.1 Consumption inequality and welfare

The Lorenz curve for total consumer expenditure and specific concentration curves for cereal consumption (in value terms) and expenditure on durable goods are shown in Figure 3. The concentration curve for cereals lies between the Lorenz curve and the egalitarian line, indicating that cereals are a necessity with Engel elasticity between 0 and 1, and disparities in cereal consumption are less marked than disparities in total consumption expenditure.

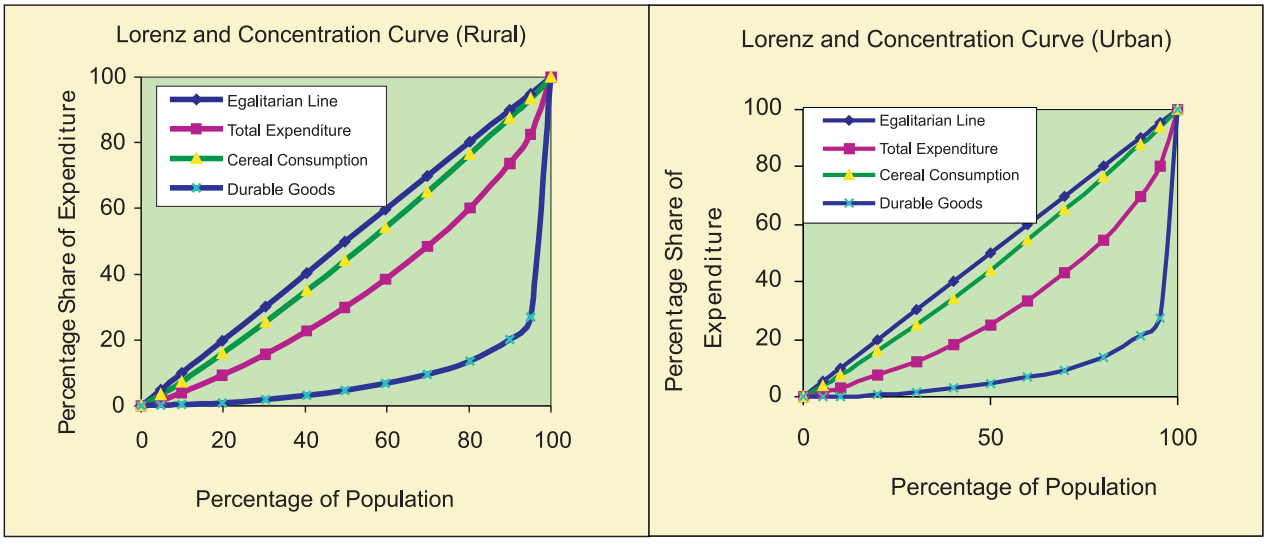
2.8.1.2 On the other hand, the concentration curve for durable goods lies below the Lorenz curve, indicating that this category of goods is on the whole a luxury for the Indian population, and greater disparities exist in consumption of durable goods than in total consumption.

Table 11: Lorenz ratio for total consumer expenditure, and concentration ratios for cereal consumption (value) and expenditure on durable goods for rural and urban India

Lorenz/Concentration ratio* for	Rural	Urban
Total consumer expenditure	0.30	0.37
Cereal consumption (value)	0.08	0.08
Expenditure on durable goods	0.81	0.81

Source: Table P20, Report no. 508

Fig 3: Lorenz and specific concentration curves for total consumption, cereal consumption (value) and expenditure on durable goods for rural and urban India



*based on size distributions of MPCE

Source: Fig. 5, Report no. 508

2.8.1.3 The Lorenz ratio provides a summary measure of relative inequality based on the Lorenz curve. The State-wise Lorenz ratios for both rural and urban sectors are calculated separately and presented in the table below.

[1]Shorrocks, Anthony F. (1983), 'Ranking Income Distributions', Economica, 50, pp. 3-17.

Table 12: Lorenz Ratio in rural and urban areas of major States and all-India

State	Lorenz Ratio		State	Lorenz Ratio	
	Rural	Urban		Rural	Rrban
Andhra Pradesh	0.288	0.370	Madhya Pradesh	0.269	0.397
Assam	0.197	0.314	Maharashtra	0.310	0.371
Bihar	0.208	0.339	Orissa	0.302	0.355
Chhattisgarh	0.305	0.439	Punjab	0.278	0.393
Gujarat	0.268	0.304	Rajasthan	0.248	0.367
Haryana	0.323	0.361	Tamil Nadu	0.315	0.358
Jharkhand	0.231	0.354	Uttar Pradesh	0.287	0.370
Karnataka	0.264	0.365	West Bengal	0.273	0.376
Kerala	0.341	0.400	All-India	0.297	0.373

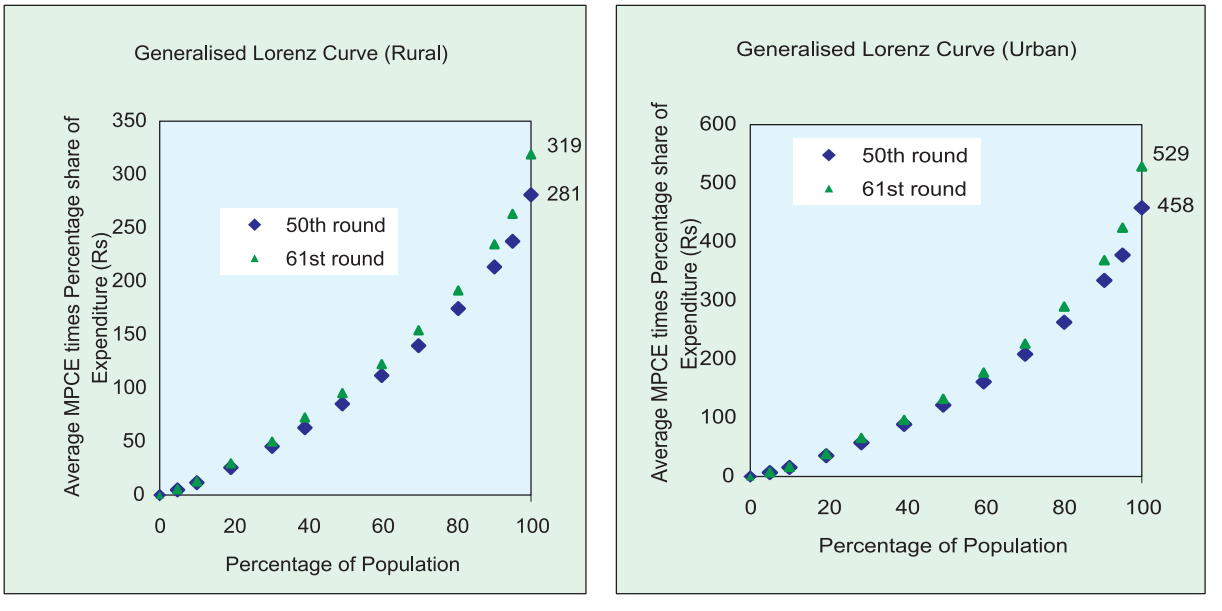
Source: Statement 1, Report no. 508

2.8.2 Change in welfare over time

2.8.2.1 Welfare comparisons of entire size distributions of MPCE can be carried out on the basis of non-intersecting Lorenz curves provided the means are the same. Otherwise the Lorenz curve fails to rank the distributions in terms of welfare. Non-intersecting generalised Lorenz curves, a concept introduced by A.F. Shorrocks[1], can be compared for welfare ranking of size distributions of MPCE in case Lorenz curves intersect and/or means are different.

2.8.2.2 The horizontal axis in the generalised Lorenz Curve is the same as that for the Lorenz curve, i.e., cumulative percentage of population, but the vertical axis shows, instead of percentage share of expenditure (or income), average expenditure (or income) for the entire population multiplied by cumulated percentage share at every point on the curve. If the generalised Lorenz curve in period 1, say, lies above the generalised Lorenz curve in period 2, it means that period 1 can be considered as having a better level of living or social welfare than period 2.

Fig 4: Generalised Lorenz curves for size distributions of MPCE (URP) in 50th and 61st rounds



Source: Figure 6, Report no. 508

2.8.2.3 Figure 4 shows the generalised Lorenz curves for 50th and 61st rounds for rural and urban India. To neutralise the price effect, the average MPCEs have been deflated by suitable consumer price indexes, viz., CPI-AL for rural and CPI-UNME for urban India. (The deflators are of course open to criticism, because they do not measure the effect of consumer price changes over time on the general population in rural/urban India.) Clearly the distribution of MPCE in 2004-05 (61st round) is ranked higher than the distribution in 1993-94 (50th round) by this method.

3. Pattern of Consumption

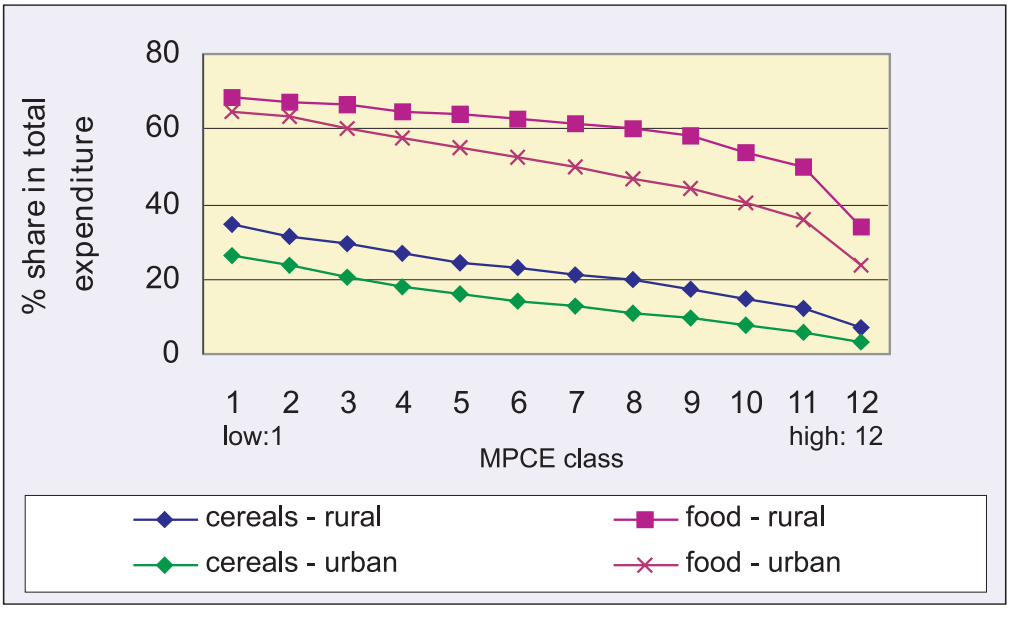
3.1 Share of food and share of cereals in total expenditure

3.1.1 Pattern of consumption implies break-up of consumption expenditure into 32 broad groups of food and non-food items. At all-India level, the share of food in total expenditure was 55% in the rural sector and 43% in the urban sector of the country. Inter-State variation indicates the share of food was highest in Assam (66%) and Bihar (65%), and lowest in Kerala (45%). For the urban sector, the share of food was highest in Bihar (51%), also high (50%) in Orissa and Assam, and was lowest in Punjab (38%). The lower percentage share of food in the states with higher average MPCE is also in consonance with the Engel's law.

3.1.2 Wide variation among states existed in the share of cereals in total expenditure. Inter-State variation was relatively moderate in urban areas. The share of cereals, which was 17% or less in urban areas of all major States, was 25% or more in rural areas of 5 of the 17 major States. The share of cereals was higher in States where rice was the major cereal consumed. Again, states with higher average MPCE had a lower share of cereals in total expenditure.

3.1.3 Again, both share of food and share of cereals fall appreciably with rise in MPCE level. In rural India as a whole, the share of food declines from over 68% in the lowest MPCE class (Rs.0-235) to under 34% in the highest (Rs.1155+). In urban India the decline in the share of food is steeper – from nearly 65% in the lowest class to fewer than 24% in the highest. The share of cereals fell steeply, in rural India, from over 34% in the lowest MPCE class to under 7% in the highest. In urban India the share of cereals drops from 26% in the lowest MPCE class to a mere 3% in the highest class.

Fig 5: Percentage shares of cereals and all food in total expenditure across MPCE classes



Source: Figure 4, Report no. 508

3.2 Shares of various food and non-food groups in total expenditure

3.2.1 Table below gives the break-up of all-India rural and urban MPCE in 2004-05 into 9 broad groups of food items and 11 broad groups of non-food items. The percentage composition of MPCE is also given alongside.

Table 13: Item group wise MPCE and its share in total consumer expenditure **all- India**

item group	monthly per capita expenditure (Rs.)		expenditure as % of total consumer expenditure (Rs.)	
	rural	urban	rural	urban
cereals & cereal substitutes	101	106	18	10
pulses & their products	18	24	3	2
milk & milk products	47	83	8	8
edible oil	26	36	5	3
egg, fish & meat	19	28	3	3
vegetables	34	47	6	4
fruits	10	24	2	2
sugar, salt and spices	27	34	5	3
beverages, refreshments & processed food*	25	65	5	6
food total	308	447	55	43
pan, tobacco & intoxicants	15	17	3	2
fuel and light	57	105	10	10
clothing & footwear**	30	49	5	5
education	15	53	3	5
medical	37	55	7	5
misc. consumer goods	33	73	6	7
conveyance	21	69	4	7
other consumer services	21	74	4	7
rent	3	59	1	6
taxes and cesses	1	8	0	1
durable goods	19	43	3	4
non-food total	251	605	45	57
all items	559	1052	100	100

* includes purchased cooked meals **excludes tailoring charges

Source: Table P10 and P11, Report no. 508

3.2.2 Thus, out of every rupee that the average rural Indian spent in 2004-05 on household consumption, 55 paise was spent on food, of which 18 paise was spent on cereals, 8 paise on milk & milk products, 6 paise on vegetables, 5 paise on sugar, salt & spices, and 5 paise on beverages, refreshments, processed food, purchased cooked meals, etc. He also spent 10 paise on fuel for cooking and lighting, 5 paise on clothing and footwear, 3 paise on education, 7 paise on medical expenses, 4 paise on conveyance, another 4 paise on all other consumer services, and 3 paise on consumer durables.

3.2.3 The average urban Indian likewise spent 43 paise on food, out of every rupee spent on household consumption, including 10 paise on cereals, 3 paise on edible oil, 4 paise on vegetables and 3 paise on sugar, salt, spices, etc. Each of these items has a much lower share in urban Indians spending than in their rural counterparts. The only food group that had a higher share in urban Indian budget was beverages, refreshments and processed food with a 6 paise share in a rupee. In the non-food group the items which claimed relatively higher share in the urban budget were rent, conveyance, other consumer services, education etc.

3.2.4 While making above observations the following points should be kept in mind. All averages are computed taking the entire estimated population in the denominator. Thus the very low average expenditure on rent in rural India reflects the fact that only about 7% of the country's rural households live in rented dwellings. The actual number of consuming persons in the population is not considered here for any of the item groups. Also "expenditure" includes the value of home-grown, calculated at ex farm prices, and the value of items collected free, imputed at local retail prices.

3.3 Per household consumption and consumption per consuming household

3.3.1 For items which were not consumed by a large section of the population an alternative estimate of consumption per consuming household can be computed. Only households reporting positive consumption of the item group are then taken into account in computing the average.

3.3.2 The table reveals that rural households which consumed eggs, fish or meat at least once during the last 30 days spent, on an average, Rs.155 on the "egg, fish and meat" group, and urban households, on an average, Rs.215. Further, urban households reporting expenditure on rent during the last 30 days spent on an average Rs.726 on rent during the last 30 days.

Table 14: Consumption per consuming household for selected item groups

item group	average value of consumption during 30 days (Rs.)				percentage of households reporting consumption during last 30 days	
	per household		per consuming household			
	R	U	R	U	R	U
egg, fish and meat	91	124	155	215	59	58
pan	12	12	38	56	31	21
tobacco	39	38	63	98	63	39
intoxicants	22	25	135	239	16	10
rent	14	259	270	726	5	36

Source: Table P 12 and P13, Report no. 508

3.4 Trends in all-India pattern of consumption expenditure since 1972-73

3.4.1 In both rural and urban India, the share of food in total expenditure continued to fall throughout the three decades prior to 2004-05. The overall fall was from 73% to 55% in rural areas and from 64% to 42% in urban areas. In urban India, apart from cereals and pulses, there has been a fall in the shares of other food groups as well, such as milk and milk products, edible oil, and sugar. In rural India, however, the shares of milk and milk products, egg, fish and meat, and fruits & nuts have increased marginally, the share of vegetables has increased by 2.5 percentage points, and that of beverages, refreshments & processed food has increased by 2 percentage points since 1972-73, and only the shares of sugar and pulses have declined noticeably, apart from cereals.

3.4.2 The share of clothing in total consumer expenditure over the last three decades fell from 7-9% to 4.5% in rural India and from 5-7% to 4% in urban India. The share of "miscellaneous goods and services" (here including education, medical care, rent and taxes, sundry consumables, conveyance and other consumer services including conveyance) grew from under 9% to 23% in rural India and from 19% to 37% in urban India. Also there has been marginal increase in the share of durable goods in both rural and urban sectors.

3.5 Alternative Estimates of Consumption by Use of Different Recall Periods

3.5.1 Last 30 days versus last 365 days

3.5.1.1 For items that are frequently purchased and are non-salient in the respondent's memory, a shorter recall period appears to be desirable. For items that are (relatively) infrequently purchased and hence salient in the respondent's memory, a longer recall period is deemed desirable. The "last 30 days"

Table 15R: Trends in percentage distribution of MPCE over broad groups of consumption items over last few decades **all India, Rural**

item group	expenditure as % of total consumer expenditure			
	27th rd. (1972-73)	38th rd. (1983)	50th rd. (1993-94)	61st rd. (2004-05)
(1)	(2)	(3)	(4)	(5)
cereals	40.6	32.3	24.2	18.0
gram	0.6	0.3	0.2	0.1
cereal substitutes	0.5	0.2	0.1	0.1
pulses & products	4.3	3.5	3.8	3.1
milk & products	7.3	7.5	9.5	8.5
edible oil	3.5	4.0	4.4	4.6
egg, fish & meat	2.5	3.0	3.3	3.3
vegetables	3.6	4.7	6.0	6.1
fruits & nuts	1.1	1.4	1.7	1.9
sugar	3.8	2.8	3.1	2.4
salt & spices	2.8	2.5	2.7	2.5
beverages, etc.	2.4	3.3	4.2	4.5
food total	72.9	65.6	63.2	55.0
pan, tobacco & intoxicants	3.1	3.0	3.2	2.7
fuel & light	5.6	7.0	7.4	10.2
clothing	7.0	8.6	5.4	4.5
footwear	0.5	1.0	0.9	0.8
misc. goods & services*	8.7	12.5	17.3	23.4
durable goods	2.2	2.3	2.7	3.4
non-food total	27.1	34.4	36.8	45.0
total expenditure	100.0	100.0	100.0	100.0

*includes education, medical care, rents and taxes Source: Statement 9R, Report no. 508

Table 15U: Trends in percentage distribution of MPCE over broad groups of consumption items over last few decades all-India, Urban **all India, Urban**

item group	expenditure as % of total consumer expenditure			
	27th rd. (1972-73)	38th rd (1983)	50th rd. (1993-94)	61st rd (2004-05)
(1)	(2)	(4)	(6)	(8)
cereals	23.3	19.4	14.0	10.1
gram	0.3	0.2	0.2	0.1
cereal substitutes	0.1	0.1	0.1	0.0
pulses & products	3.4	3.2	3.0	2.1
milk & products	9.3	9.2	9.8	7.9
edible oil	4.9	4.8	4.4	3.5
egg, fish & meat	3.3	3.6	3.4	2.7
vegetables	4.4	5.0	5.5	4.5
fruits & nuts	2.0	2.1	2.7	2.2
sugar	3.6	2.5	2.4	1.5
salt & spices	2.3	2.1	2.0	1.7
beverages, etc.	7.6	6.8	7.2	6.2
food total	64.5	59.1	54.7	42.5
pan, tobacco & intoxicants	2.8	2.4	2.3	1.6
fuel & light	5.6	6.9	6.6	9.9
clothing	5.3	7.6	4.7	4.0
footwear	0.4	1.1	0.9	0.7
misc. goods & services*	19.2	20.5	27.5	37.2
durable goods	2.2	2.3	3.3	4.1
non-food total	35.5	40.9	45.3	57.5
total expenditure	100.0	100.0	100.0	100.0

*includes education, medical care, rents and taxes Source: Statement 9U, Report no. 508

reference period usually performs inadequately for the infrequent, lumpy expenditures and these item groups are affected by transitory elements – seasonality and other short-term fluctuations.

3.5.1.2 The 61st round survey adopted the strategy of the 50th (1993-94) and earlier rounds of the quinquennial series of having, for the I-type (infrequent expenditure) item categories, both the "last 30 days" and the "last 365 days" reference period together, in every sample household. Thus two sets of monthly estimates of per capita consumption of clothing (and bedding), footwear, education, medical care (institutional), and durable goods exist, one using "last 30 days" data, and the other using "last 365 days". Similar data are available for the 50th round of NSS (1993-94). Such experiments provide useful data sets to analyse the difference in household-level and average consumption data obtained from the two reference periods.

Table 16: Percentage divergence of "last-365-days"-based monthly estimate from "last-30-days"-based estimate for each of five categories of I-type items, in 50th and 61st rounds all-India

sector	round	(Y365# – Y30*)/Y30 expressed in percentage form				
		clothing	footwear	education	medical (inst.)	durables
rural	50th	40.10	13.18	3.68	-26.84	-14.36
	61st	54.17	38.21	21.21	-6.18	13.05
urban	50th	52.79	32.59	-7.75	-35.77	-19.80
	61st	46.95	58.44	39.87	21.69	10.18

"last 365 days" estimate * "last 30 days" estimate Source: Table P26, Report no. 508

3.5.1.3 In general, the data suggest that with the double reference period, it is the "last 365 days" estimates that were usually higher than "last 30 days" estimates for all the five I-type categories except for medical (institutional) in rural areas in 2004-05.

3.5.2 Effect on household MPCE of using "last 365 days" for clothing, footwear, etc.: Clearly, for each sample household, the overall level of living indicator, or MPCE, can also be worked out using the 365-day data for those categories for which "last 365 days" data had been collected. This alternative MPCE is referred to here as "MPCE (MRP)" using mixed reference periods of 30-days for some items and 365-days for the others and the MPCE worked out using a uniform reference period of "last 30 days" referred to as "MPCE (URP)".

3.5.2.1 At all-India level, the effect on a household's MPCE of the use of the "MPCE (MRP)" method in place of "MPCE (URP)" is presented in detail in the following table. This table gives, out of every 1000 households placed in an MPCE class by the "MPCE (URP)" method, the numbers of households that would be placed in each of the 12 MPCE classes after "adjustment" (i.e. by using "MPCE (MRP)" instead). We find that in a majority of cases the adjusted MPCE, (i.e. MPCE (MRP) using a mixed reference period) of a household is higher than its usual MPCE, i.e. MPCE (URP) using uniform reference period of '30 days' for all the items. Therefore we find in the following tables that generally most of the households get classified into a higher MPCE class after adjustment of MPCE.

3.5.2.2 One may expect that indicators of inequality based on size distributions of MPCE(M) would show lower values than those based on MPCE (URP). The Lorenz ratios for rural India are 0.30 for MPCE (URP) and 0.28 for MPCE (MRP). The ratios for urban India are 0.37 for MPCE (URP) and 0.36 for MPCE (MRP).

3.6 Cereal consumption patterns

3.6.1 It has already been noted that expenditure on cereals forms 18% of total consumption expenditure

Table 17R: Per 1000 distribution of households by MPCE (MRP) for each class based on MPCE(URP)

All-India Rural															
MPCE (URP) class (Rs)	no.per 1000 households based on MPCE (MRP) class (Rs)													average MPCE (MRP) (Rs)	average MPCE (URP) (Rs)
	0 – 235	235 – 270	270 – 320	320 – 365	365 – 410	410 – 455	455 – 510	510 – 580	580 – 690	690 – 890	890 – 1155	1155 & more	all classes		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
0 – 235	567	358	68	5	0	0	1	0	0	0	0	0	1000	225	200
235 – 270	18	244	681	40	5	3	0	8	0	0	0	1	1000	284	254
270 – 320	5	19	371	519	72	8	2	2	0	0	0	0	1000	328	297
320 – 365	2	4	39	301	538	95	11	4	3	2	1	0	1000	377	342
365 – 410	0	1	13	45	261	514	140	16	6	3	1	0	1000	425	388
410 – 455	0	0	6	17	49	249	544	113	14	7	1	0	1000	470	432
455 – 510	0	0	3	9	25	57	293	511	83	15	3	0	1000	521	482
510 – 580	0	0	0	3	10	23	74	343	494	41	7	4	1000	586	543
580 – 690	0	0	0	2	4	11	28	70	481	380	19	5	1000	672	630
690 – 890	0	0	0	0	4	4	9	29	103	607	222	23	1000	814	775
890 – 1155	0	0	0	1	2	0	3	8	23	144	561	258	1000	1046	1000
1155 & more	0	0	0	0	1	1	2	2	14	50	121	809	1000	1652	1957
all classes	25	27	69	82	91	91	104	110	130	129	70	73	1000	579	559
Avg.MPCE (URP) (Rs)	188	237	279	324	369	412	460	518	607	753	984	1736	559	-	-
Avg. MPCE (MRP) (Rs)	200	253	296	343	387	433	482	544	630	775	999	1755	579	-	-

Source: Table 6R, Report no. 508

Table 17U: Per 1000 distribution of households by MPCE (MRP) for each class based on MPCE(URP)

All-India Urban															
MPCE (URP) class (Rs)	no.per 1000 households based on MPCE (MRP) class (Rs)													average MPCE (MRP) (Rs)	average MPCE (URP) (Rs)
	0 – 335	335 – 395	395 – 485	485 – 580	580 – 675	675 – 790	790 – 930	930 – 1100	1100 – 1380	1380 – 1880	1880 – 2540	2540 & more	all classes		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
0 – 335	659	310	25	1	2	1	0	0	0	0	0	1	1000	313	280
335 – 395	33	349	570	37	4	0	4	1	0	0	0	0	1000	409	368
395 – 485	8	35	475	436	34	9	2	1	0	0	0	0	1000	483	441
485 – 580	1	7	48	444	436	50	8	3	1	0	2	0	1000	584	533
580 – 675	0	0	7	57	411	459	49	11	3	1	1	1	1000	685	626
675 – 790	0	2	4	27	66	403	429	51	14	1	2	0	1000	791	730
790 – 930	0	0	0	6	17	74	425	402	60	13	2	1	1000	933	858
930 – 1100	0	0	0	2	8	17	70	441	413	42	5	2	1000	1100	1014
1100 – 1380	0	0	0	3	1	6	19	59	560	321	24	7	1000	1341	1226
1380 – 1880	0	0	0	0	3	2	9	16	77	623	239	31	1000	1733	1594
1880 – 2540	0	0	0	0	0	3	3	4	16	97	599	277	1000	2364	2157
2540 & more	0	0	0	0	1	0	2	6	10	30	86	865	1000	3735	4236
all classes	26	28	65	82	85	92	98	101	126	128	80	88	1000	1105	1052
Avg.MPCE (URP) (Rs)	270	353	420	512	601	700	824	972	1178	1529	2062	3588	1052	-	-
Avg. MPCE (MRP) (Rs)	285	368	441	531	628	731	856	1013	1230	1595	2161	3850	1105	-	-

Source: Table 6U, Report no. 508

in rural India and 10% in urban India. The all-India consumption pattern of cereals in quantity terms is shown below. Here "rice" includes all rice products, e.g. chira, "wheat" includes all wheat products, e.g. bread, and so on.

Table 18: Average monthly per capita cereal consumption: 2004-05 all-India

cereal	monthly per capita consumption (kg)	
	rural	urban
rice	6.55	4.85
wheat	4.29	4.65
jowar	0.43	0.22
bajra	0.39	0.11
maize	0.31	0.03
other cereals	0.15	0.08
all cereals	12.12	9.94

Source: Table P14, Report no. 508

3.6.2 The majority of States formed two groups, predominantly rice- (Group R) and wheat- (Group W) in terms of share in quantity of cereal consumption. In a Group R State, rice (and its products) formed at least 75% of all cereal consumption for both rural and urban sectors. In a Group W State, wheat (and its products) formed at least 65% of all cereal consumption in both sectors. Among the 17 major States, 7 belonged to Group R, 5 to Group W, and another 5 to neither.

3.6.3 The declining consumption of cereals

3.6.3.1 The per capita cereal consumption of the Indian population has been declining in both rural and urban areas over the past two or three decades. Now the question is: was the fall in consumption of cereals confined to the richer strata of the population? NSS 61st round data reveals that the bottom MPCE class

Table 19: Percentage shares of rice and wheat in total cereals consumed: major States, rural and urban, 2004-05

Group R States (share of rice ≥ 75%)	% of rice in cereals consumed		Group W States (share of wheat ≥ 65%)	% of wheat in cereals consumed		Other States	% of rice in cereals consumed		% of wheat in cereals consumed	
	R	U		R	U		R	U	R	U
AP	92	91	Haryana	89	87	Bihar	55	50	41	49
Assam	95	89	MP	65	77	Gujarat	20	25	36	65
Chhattisgarh	96	75	Punjab	91	88	Jharkhand	75	51	22	49
Kerala	90	88	Rajasthan	67	89	Karnataka	49	58	10	18
Orissa	95	84	UP	66	75	Maharashtra	28	36	33	51
Tamil Nadu	93	91								
West Bengal	93	76								

Source: Table P16, Report no. 508

(the bottom 5% ranked by MPCE) in both rural and urban sectors experienced a rise in cereal consumption over the past decade. For all other sections of the population, however, the fall is unmistakable.

3.6.3.2 The overall fall in cereal consumption appears to be a phenomenon similar to the slowing down of increase in cereal consumption as MPCE increases. With economic development and diversification of the consumption basket over time, the choice appears to be in favour of a reduction of cereal consumption and an increase in consumption of other items such as the "beverages, refreshments and processed food" group. Among the partial explanations that may be put forward for the decline in cereal consumption are:

(a) Eating out and purchase of cooked meals have increased. (Cereal content of meals taken outside at own cost or at public cost is hardly known.)

(b) Calorie needs may be declining because labour-saving devices are becoming increasingly available in the household, in the workplace, and in transportation.

Table 20: Changes in per capita cereal consumption in quantity terms over the last decade for population in different MPCE percentile classes: all-India, rural and urban

year	Rural					
	monthly per capita cereal consumption (kg) in MPCE percentile class					
	0-5	5-10	10-20	20-30	30-40	40-50
1993-94	9.68	11.29	12.03	12.63	13.19	13.33
1999-2000	9.78	11.15	11.64	12.27	12.56	12.89
2004-05	9.88	10.87	11.33	11.70	11.98	12.16
	50-60	60-70	70-80	80-90	90-95	95-100
1993-94	13.72	14.07	14.41	14.59	14.98	15.78
1999-2000	13.03	13.36	13.45	13.67	13.73	14.19
2004-05	12.37	12.61	12.77	12.72	12.77	13.50
year	Urban					
	monthly per capita cereal consumption (kg) in MPCE percentile class					
	0-5	5-10	10-20	20-30	30-40	40-50
1993-94	8.91	10.11	10.61	10.75	10.89	10.99
1999-2000	8.99	10.15	10.25	10.75	10.61	10.80
2004-05	9.25	10.04	10.09	10.24	10.12	10.25
	50-60	60-70	70-80	80-90	90-95	95-100
1993-94	10.91	10.95	10.73	10.68	10.19	10.29
1999-2000	10.69	10.66	10.50	10.52	9.94	9.72
2004-05	10.08	10.09	9.97	9.63	9.50	9.10

Source: Table P18, Report no. 508

4. Consumption of detailed items: Food

4.1.1 We have already discussed the physical quantity of cereals consumed. The cereal consumption per person per month has declined from 13.4 kg to 12.1 kg (by nearly 10%) between 1993-94 and 2004-05 in rural India and from 10.6 kg to 9.9 kg in urban India (by 6-7%). Though rice and wheat, individually, experienced a fall in consumption per capita since 1993-94, the decline was less marked than for cereals as a whole. Consumption of jowar and its products appears to have dropped by over 40% in both rural and urban areas. Since jowar is not consumed all over India but only in certain regions, one can conclude that (a) the fall in consumption of jowar per consuming person is presumably much higher, and (b) the fall in jowar consumption cannot explain the fall in the national per capita cereal consumption, which in fact has affected all the regions of the country. In rural areas, consumption of bajra and its products, too, has

Table 21: Consumption of major pulses in 2004-05 **All-India**

commodity	per capita quantity consumed in 30 days		% of hhs. consuming in a 30-day period	
	rural	urban	rural	urban
arhar	0.21	0.30	56.8	71.1
moong	0.09	0.11	43.7	59.4
masur	0.11	0.09	37.9	37.1
urd	0.08	0.09	35.4	41.7
gram (split)	0.06	0.07	33.2	44.3
all pulses & pulse products	0.71	0.82	97.3	94.4

Source: Table P3, Report no. 509

fallen since 1993-94, the absolute fall in monthly per capita consumption being of the order of 0.1 kg. The consumption of maize per person has also undergone a noticeable decline in rural areas between 1993-94 and 2004-05.

4.2 Pulses: Five common varieties of pulses account for about 80% of total pulse consumption in rural and urban India. While the overall percentage of households consuming any kind of pulse or pulse product has not increased much over years, the average household's consumption of pulses appears to be getting more diversified.

4.3 **Milk (liquid), eggs, fish, mutton and chicken:** There has been a slight fall (less than 2%) in per capita consumption of "milk (liquid)" in rural India and a slight rise (over 4%) in urban India as a whole between 1993-94 and 2004-05 [The consumption of milk products prepared from milk at home is accounted against "milk (liquid)" by convention. So even if a household that used to prepare the butter it consumed switches to purchase of butter from the market, aggregate consumption of "milk (liquid)" would fall.]. The percentage of households reporting milk consumption has grown in both rural and urban areas by 5 percentage points since 1993-94. Rural per capita egg consumption as also the percentage of rural households consuming eggs in a 30-day period had risen. Per capita consumption of goat meat / mutton and proportion of households consuming such meat has definitely declined, more so in urban India. The proportion of households consuming chicken and the per capita consumption has increased many fold in both urban and rural areas.

Table 22: Consumption of milk, eggs, fish and meat in 2004-05 **All-India**

commodity	per capita quantity consumed in 30 days		% of hhs. consuming in a 30-day period	
	Rural	Urban	Rural	Urban
milk: liquid (litre)	3.87	5.11	71.3	85.0
eggs (no.)	1.01	1.72	33.0	41.2
fish (kg)	0.201	0.206	34.2	27.8
goat meat/ mutton(kg)	0.047	0.070	17.9	25.2
chicken (kg)	0.050	0.085	19.6	27.8

Source: Table P4, Report no. 509

4.4 Edible oil: Per capita consumption of edible oil has definitely been rising over the eleven years following 1993-94. The extent of increase was as much as 30% in rural India and about 18% in urban India.

Table23 : Consumption of edible oils in 2004-05 **All-India**

edible oil	per capita quantity consumed in 30 days		% of hhs. consuming in a 30-day period	
	Rural	Urban	Rural	Urban
groundnut oil	0.07	0.16	13.8	20.9
mustard oil	0.22	0.20	51.1	37.6
vanaspati incl. margarine	0.03	0.05	13.7	16.0
edible oil (other)*	0.14	0.25	31.9	41.5
edible oil: all	0.48	0.66	98.0	94.5

** excludes coconut oil* *Source: Table P5, Report no. 509*

4.5 Fruits and nuts: The next table shows the consumption levels of five of the most commonly consumed fruits and nuts including four fresh fruits – bananas, coconuts, mangoes and apples in 2004-05. Slight increases were indicated in per capita consumption of these items over the last decade. Per capita consumption of groundnuts had risen appreciably in both rural and urban India.

Table 24 : Consumption of common fruits and nuts in 2004-05 **All-India**

fruit/ nut	per capita quantity consumed in 30 days		% of hhs. consuming in a 30-day period	
	Rural	Urban	Rural	Rrban
banana (no.)	2.37	4.14	48.5	68.6
coconut (no.)	0.35	0.47	27.9	33.9
mango (kg)	0.09	0.11	13.8	15.5
apple (kg)	0.03	0.12	11.0	31.6
groundnut (kg)	0.05	0.08	21.2	31.2

Source: Table P6, Report No. 509

4.6 Vegetables: The percentage of households consuming each vegetable has grown appreciably since 1993-94. The largest increase was however shown by onions.

Table 25 : Consumption of common vegetables in 2004-05 **All-India**

vegetable	per capita quantity consumed in 30 days		% of hhs. consuming in a 30-day period	
	rural	urban	rural	urban
potato	1.33	1.14	91.7	90.7
onion	0.56	0.72	96.5	92.6
brinjal	0.34	0.32	77.1	77.3
cauliflower	0.18	0.23	30.9	45.8
cabbage	0.17	0.23	41.4	57.6
tomato	0.34	0.53	74.2	87.2

Source: Table P7, Report no. 509

5. Consumption of Detailed Items: Non-Food

5.1.1 The non-food items include 20 items and ingredients of pan, tobacco and intoxicants, 13 items of fuel, 27 items of clothing, 17 items of educational and medical goods and services, and 70 other items.

5.1.2 For items of clothing, bedding, footwear, education, institutional medical care, and durable goods, consumption data were collected not only with a reference period of 30 days but also with a reference period of 365 days.

5.1.3 In case of durable goods, the number of sample households reporting expenditure during a reference period of 30 days was, in case of most items, so small that the estimates based on 365 days are expected to be much more acceptable.

5.2 Pan, bidis and cigarettes: Per capita consumption of bidis have dropped substantially in rural and urban areas by about 31% in rural India and 42% in urban India since 1993-94. Per capita cigarette consumption in urban areas has also registered a sharp fall, about 30%. The decline in the proportion of urban households containing at least one smoker appears to be mainly responsible for the fall. In urban areas per capita consumption of finished pan has declined, as also the proportion of consuming households. But rural per capita consumption of finished pan has risen in 2004-05 compared to 1993-94.

5.3 Fuel and light: Significant changes in use of fuels have taken place in rural and urban India between 1993-94 and 2004-05. The prevalence of LPG use has doubled in urban India from 29.5% in 1993-94 to 59% in 2004-05. In rural India the increase in use of LPG has been more spectacular: from a lower level of about 2% to 11.7% of households. While the rise of LPG in urban areas appears to be at the expense of kerosene, no such decline in kerosene consumption was seen in rural India. Rural electricity consumption in kwh per person per month has increased to two and a half times its level in 1993-94 (from 2.27 to 5.67). In urban areas, too,

per capita consumption of electricity has more than doubled. Households using electricity formed about 34% of rural households in 1993-94 and as much as 54% in 2004-05. In urban areas the proportion of households using electricity rose from 74% to 90% during the same period.

Table 26: Consumption of important household fuels in 2004-05 **All-India**

fuel	per capita quantity consumed in 30 days		% of hhs. consuming in a 30-day period	
	Rural	Urban	Rural	Rrban
firewood and chips (kg)	21.44	6.29	86.4	30.7
LPG (kg)	0.22	1.60	11.7	58.9
kerosene (litre)	0.62	0.62	27.4*	24.1*
electricity (kwh)	5.67	19.96	54.5	90.2

* consumption of kerosene out of PDS not included Source: Table P9, Report No. 509

5.4 Clothing: The estimates of per capita consumption of cloth based on 365 days' data were in most cases found to be roughly double those based on 30 days' data, and this was also true for hosiery articles. But for readymade garments, the two sets of estimates were of the same order. Thus inter-temporal comparisons are best restricted to estimates based on reference periods of the same length. The per capita consumption of cloth purchased for garments has, since 1993-94, generally registered a slight fall, and the consumption of readymade garments a corresponding increase. The proportion of households purchasing readymade garments during the last 30 days has increased in both rural and urban areas by about 75%, while the proportion purchasing hosiery articles during the last 30 days shows a three-fold increase.

Table 27: Consumption of selected clothing items in 2004-05 **All-India**

clothing items	monthly per capita qty of consn. based on 30-day (365-day) recall		percentage of hhs consuming in a 30-day (365-day) period	
	rural	urban	rural	urban
cloth for shirt, pyjama, salwar, etc. (metre)	0.09 (0.17)	0.09 (0.19)	8.0 (82.6)	7.4 (84.0)
cloth for coat, trousers, overcoat, etc. (metre)	0.018 (0.042)	0.022 (0.054)	3.9 (62.5)	4.2 (72.2)
hosiery articles (no.)	0.083 (0.16)	0.093 (0.20)	14.5 (90.5)	13.5 (94.2)
readymade garments (no.)	0.064 (0.068)	0.092 (0.092)	13.5 (76.1)	16.2 (83.7)

** Figures in parentheses are based on a reference period of "last 365 days".* *Source:Table P10, Report no. 509*

5.5 Education: The salient fact about educational expenditure that emerges is that "tuition and other fees", which form the major component of educational expenditure, are commanding a progressively larger share of educational expenses in both rural and urban India. In urban India the share of this category has increased from 42% in 1993-94 to 57% in 2004-05. In rural India it reached a level of 44% of educational expenditure during the same period. The share of "books, journals, etc." showed a definite fall in 2004-05 from its level in 1999-2000 – from 31% to 20% in rural areas and from 19% to 11% in urban areas. In part, this is, of course, simply a reflection of the rise in the share of fees. But it is clear that of the four categories of educational expenditure considered above, the increase in absolute expenditure has been slowest for books and journals. On the other hand, increases in "stationery" and "private tutor/ coaching centre" have, more or less, kept pace with the increase in educational expenditure as a whole.

Table 28: Household educational expenditure in 2004-05 **All-India**

Items	per capita expenditure (Rs.) in 30 days@		percentage of hhs incurring expenditure in reference period	
	Rural	Urban	Rural	Urban
books, journals, etc.	3.56 (20%)	8.22 (11%)	45.7	54.3
stationery	2.80 (16%)	5.36 (7%)	55.8	60.4
tuition & other fees	7.90 (44%)	42.37 (57%)	41.3	52.5
pvt. tutor/ coaching centre	2.22 (12%)	10.92 (15%)	8.3	15.5
education: total	18.06 (100%)	73.70 (100%)	59.2	70.0

@Figures in parentheses indicate percentage to total expenditure on education in the relevant year.
Source: Table P11, Report no. 509

5.6 Medical care: Information on medical expenditure was collected in two parts: institutional medical care (received as in-patient of a hospital or nursing home) and non-institutional care. Medicine (non-institutional), which is by far the largest component of non-institutional medical expenditure, formed as much as 63-64% of total medical expenditure in rural India and 56-57% in urban India in 2004-05. While the share of institutional medical expenditure in urban India (28%) was a little larger than in rural India (26%) in 2004-05.

Table 29: Percentage break-up of medical expenditure in 2004-05 **All-India**

	Percent of total medical expenditure	
	Rural	U rban
medical expenditure (institutional)	26%	28%
medicine (non-institutional)	64%	56%
other medical expenditure (non-institutional)	11%	16%

Source Fig. 1, Report no. 509

5.7 Other changes over time

5.7.1 The broad groups food, pan, tobacco, intoxicants, fuel, clothing, bedding, footwear and durable goods accounted for about 77% of household consumer expenditure in rural India and about 63% in urban India in 2004-05. The remaining items formed a category which is usually referred to as "miscellaneous goods and services". From the 50th round of NSS onwards, education and medical care were separated out from the "miscellaneous" category This category includes goods and services (excluding durables) for conveyance, entertainment, housekeeping, home maintenance and toilet, rent, and consumer services of all kinds. A common feature of most of these goods and services is that they are not amenable to measurement of quantities consumed.

5.7.2 The share of "miscellaneous" category as a whole has been registering a progressive increase over the years with its share raised from 19.6% to 23.0% in rural India and from 31.3% to 37.6% in urban India between 1999-2000 and 2004-05. In Table 30, detailed items of the "miscellaneous" category on which per capita expenditure has registered a change (at current prices) of 30% or more in the rural sector and 40% or more in the urban sector between 1999-2000 and 2004-05 are shown.

5.7.3 The most spectacular increase since 1999-2000 has been in telephone charges paid per person per month, which have soared to six times their level in 1999-2000 (increase of 515%) in rural India and to 3.3 times their level (increase of 230%) in urban India. The proportion of rural households incurring expenditure on telephones has jumped from 5% to 32% (25% to 63% for urban households).

5.7.4. Expenditure on tuition and other educational fees has, in rural areas, risen to nearly 3 times its 1999-2000 level (increase of 188%) and in urban areas reached two and a half times its earlier level. Rural petrol expenditure has doubled, while taxi/ autorickshaw expenditure has more than doubled

Table 30: Changes over time observed in consumption of selected detailed items **All-India**

item	per capita exp. (Rs.) in 2004-05	% increase in per capita exp. since 1999-00 (at current prices)	no. per 1000 households incurring exp. In 30* days ('04-05)	increase in no. per 1000 hhs incurring exp. since 1999-2000
				Rural
telephone charges	5.54	516	317	271
tuition and other fees*	7.90	188	413	135
taxi, auto-rickshaw fare	2.17	119	175	75
petrol	5.41	100	73	32
stationery*	2.80	85	558	97
pvt tutor, coaching centre*	2.22	73	83	10
powder, snow, etc.	1.56	43	377	69
toothbrush, toothpaste, etc.	2.58	40	675	126
barber, beautician	3.50	35	809	47
grinding charges	4.18	33	616	20
all consumption items	579.17	19	-	-
books, journals*	3.56	24	457	-3
tailor	2.05	-26	91	-41
cable TV connection	1.58	n.a.	88	n.a.
				Urban
telephone charges	37.80	230	633	388
insecticide, acid, etc	2.05	189	302	169
tuition and other fees*	42.37	154	525	84
newspapers, etc*	4.81	105	269	44
pvt tutor, coaching centre*	10.92	82	155	3
taxi, auto-rickshaw fare	5.95	78	266	71
stationery*	5.36	76	604	67
petrol	31.30	63	264	79
washerman, laundry	3.62	45	268	8
barber, beautician	5.91	43	826	60
railway fare	5.09	43	93	6
all consumption items	1104.60	29	-	-
books, journals*	8.22	20	543	-12
tailor	2.92	-33	83	-47
grinding charges	3.67	15	478	-62
cable TV connection	14.63	n.a.	435	n.a.

*No. per 1000 of households incurring expenditure during a 365-day period, instead of a 30-day period, has been shown for the item.
Source: Table P12, Report No. 509

in rural areas and risen by 78% in urban areas. Per capita expenditure on private tutors and coaching centres has gone up by 73% in the rural sector and 82% in the urban. Tailoring expenses per person have registered a dramatic fall by 26% (at current prices) in the rural sector and 33% in the urban sector.

5.7.5 Per capita expenditure on newspapers and periodicals in urban areas, which in 2004-05 was twice its level in 1999-2000. Telephone charges and railway expenditure per person in urban areas were about 7 times as high as in rural areas, expenditure on petrol was about 6 times as high, tuition and other educational fees were about 5 times as high, and cable TV expenses (a new item created since the 55th round survey) were about 9 times as high as in rural areas.

5.8 Durable goods: For this category estimates are based only on "last 365 days" data. Durable goods

formed only 3.75% (Rs.21.74 out of Rs.579.17) of average per capita consumer expenditure in rural areas and only 4.27% (Rs.47.17 out of Rs.1104.60) in urban areas in 2004-05. In 1999-2000 their share was 2.62% and 3.61% in the rural and urban sector. Five items "repair of land and building", "bicycle", "motorcycle/ scooter", "gold ornaments", and "television" together accounted for about 70% of expenditure on durables in 2004-05 in both rural and urban India. Possession of durable goods was on the increase for all the nine major durables with the exception of the radio, which has been giving way to television in both rural and urban India.

Table 31: Percentages of households possessing specific durable goods in 2004-05 **All-India**

Item	Bicycle	Radio	Sewing machine	Motorcycle / scooter	Television	Electric fan	Motor car/ jeep	Refrigerator	Air cooler
rural	47.1	26.3	9.5	7.7	25.6	38.4	0.8	4.4	2.9
urban	41.7	33.6	23.8	26	66.1	81.8	4.6	31.9	18.2

Source: Table P13, Report No. 509

6. Public Distribution System

6.1 Possession of ration card

6.1.1 Surveyed households were asked whether they possessed any ration card, and, if so, of what kind: the Antyodaya ration card meant for the ultra-poor, the BPL card for Below Poverty Line households, or any other card. At the all-India level 81% of rural households and 67% of urban households held ration cards. BPL cards were held by 26.5% of rural households and 10.5% of urban households. Antyodaya card holders formed less than 3% of rural households and less than 1% of urban households. The responses, as tabulated for the major States, are shown in the table below.

Table 32: Percentage Distribution of Households by Ration Card Type: Major States

Rural				State	Urban			
Percentage of Households with					Percentage of Households with			
Antyodaya card	BPL card	Other Card	No Card		Antyodaya Card	BPL Card	Other Card	No Card
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2.8	54	16	28	A.P.	1.5	26.6	18	54
0.6	12	63	25	Assam	0.2	3.2	40	56
2.3	15	60	23	Bihar	0.8	4.7	42	52
4.4	35	32	29	Chhattisgarh	2.1	15.2	40	43
0.8	36	50	13	Gujarat	0.1	8.4	67	24
2.6	16	68	13	Haryana	1.5	9.9	61	28
3.0	23	51	23	Jharkhand	0.8	7.5	33	58
9.6	42	26	23	Karnataka	2.0	14.4	33	51
1.8	28	57	13	Kerala	0.9	19.8	60	19
3.3	31	38	28	M.P.	1.9	12.7	43	43
4.4	31	46	19	Maharashtra	0.3	8.0	67	25
2.0	42	23	33	Orissa	1.3	11.8	29	58
0.1	12	76	12	Punjab	0.0	3.9	66	30
2.8	16	78	4	Rajasthan	0.6	2.4	82	15
1.5	19	69	11	T.N.	0.6	12.8	64	22
2.8	14	65	19	U.P.	0.7	7.2	57	36
3.2	27	61	8	West Bengal	0.8	8.8	71	20
2.9	26.5	51.8	18.7	India	0.8	10.5	55.6	33.1

Source: Table P1, Report no. 510

6.1.2 For both sectors, Andhra Pradesh was the only major State where the proportion of BPL-card-holding households (rural: 54%; urban: 27%) was more than double the national average. The proportion of BPL card holders was significantly high in rural areas of Karnataka and Orissa and in urban Kerala. On the other hand in states like Assam, Bihar, Rajasthan and U.P. the proportion was unexpectedly low.

6.1.3 Regarding possession of Antyodaya card also the results were quite intriguing. The proportion was very high in Karnataka and Chattisgarh in both the sectors while it is lower than national average in rural Orissa, and both sector of Bihar, Rajasthan, U.P. etc.

6.2 Ration card and household type

6.2.1 In rural areas, 80% or more households of all household types except "other households" held ration cards. BPL cards were held by 43% of agricultural labour households and 32% of other labour households. 5% of agricultural labour households and about 4% of other labour households held Antyodaya cards. Both BPL and Antyodaya cards were reported much less frequently among non-labour than among labour households.

6.2.2 In urban areas 26% of casual labour households had BPL cards and 3% had Antyodaya cards. The percentage of households holding any kind of ration card was, incidentally, highest among self-employed households, but only 11% of them held BPL cards.

6.3 Ration card and household social group

6.3.1 In rural areas the percentage of households having Antyodaya cards was 5% for Scheduled Tribes (ST), about 4½% for Scheduled Castes (SC), and 2% for the Other Backward Classes (OBC) and the rest. BPL cards were held by 40% of ST households, 35% for Scheduled Castes (SC), about 25% of OBC households, and 17% of other households.

6.3.2 In urban areas, however, it was the Scheduled Castes which had the highest percentage (17%) of households holding BPL cards, while ST and OBC households had about 14% each. In urban India more than 1% of households of the ST and SC groups had Antyodaya cards, while the other groups had less than 1% such households.

6.4 Ration card and household land possessed (rural)

6.4.1 The salient fact revealed is that 51% of households in the lowest land size class, '<0.01 hectares', had no ration card at all, while in all other size classes 77-86% households had a ration card of some kind. The highest proportion of households with ration cards was 86%, seen in the classes '0.41-1.00 hectares' and '1.01-2.00 hectares'. In respect of ration cards meant for the poor, the class '0.01-0.40 hectares' was the class of households with the highest proportion of cards for both BPL (32%) and Antyodaya (4%). It was followed by the class '0.41-1.00 hectares' (BPL,-28%, Antyodaya- 3%). The bottom class '<0.01 hectares' had 22% of its members holding BPL cards, but this was smaller than the overall proportion of BPL card holders taking all classes together (26.5%). Likewise, Antyodaya cards were held by 2.7% of households in the bottom land size class, compared to 2.9% for all households.

6.5 Ration card and household monthly per capita expenditure (MPCE)

6.5.1 In rural India the percentage of households holding BPL cards declines gradually from 41% in the bottom MPCE class to 11% in the top class. Interestingly, even in the top three MPCE classes, representing MPCE ranges of 'Rs.690-890', Rs.890-1155' and 'Rs.1155 or more', 18%, 14% and 11% households respectively were found to hold BPL cards. Antyodaya card holders, too, were found in rural India in all the MPCE classes, though in diminishing numbers as MPCE increases. About 8% Antyodaya card holders were found in the bottom MPCE class, about 6% in the next class, and so on, with the top two classes having about 1% each. The percentage of rural households with 'other' ration cards increases from 23% in the bottom MPCE class to over 60% in the top three classes. The percentage of households with no ration card is 28% in the lowest class and

24.5% in the highest, and is 20% or less in all other classes.

6.5.2 In urban India the percentage of BPL card holders declines from 29% in the lowest MPCE class to about 1% in the highest. The lowest class had 4% Antyodaya card holders and no class from the sixth upwards had more than 0.5%. In each of the top four MPCE classes, 37% or more households had no ration card.

6.6 Use of PDS in case of four selected commodities: rice, wheat/atta, sugar, kerosene

6.6.1 Let us consider four commodities – rice, wheat/atta, sugar and kerosene – which are available to households in India through the Public Distribution System as well as in the open market. For these items, percentage of consumption from the public distribution system (PDS) and from other sources was examined. Similar studies were then made for Antyodaya or BPL card holding households.

6.6.2 State wise estimated proportions of households reporting consumption from PDS during a 30-day period are given in table 33. The major state where consumption of rice from PDS was most common was undoubtedly Tamil Nadu, followed by Andhra Pradesh, Karnataka and Kerala. On the other hand, PDS rice was consumed by only a small minority of households in West Bengal, Assam and Bihar, though rice is the major cereal food in these States.

Table 33: Rice, wheat/atta, sugar and kerosene - Percentages of households reporting consumption from PDS during a 30-day period (in 2004-05) in major States

state	percentage of hhs reporting consumption from PDS during a 30-day period							
	RICE		WHEAT/ATTA		Sugar		Kerosene	
	R	U	R	U	R	U	R	U
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Andhra Pr.	62.2	31.1	0.6	0.7	35.8	15.0	63	26
Assam	9.0	2.3	0.2	0.3	39.8	15.9	83	38
Bihar	1.0	0.7	1.7	1.5	0.2	0.6	77	43
Chhattisgarh	21.7	13.2	5.3	5.4	15.4	3.5	86	41
Gujarat	31.5	7.2	28.7	6.8	25.3	6.7	78	25
Haryana	0.1	0.0	4.0	5.2	0.2	0.1	36	8
Jharkhand	4.4	2.8	4.3	2.0	0.2	0.8	70	19
Karnataka	58.5	21.0	45.6	14.6	15.2	4.8	74	31
Kerala	34.6	23.3	12.2	12.1	7.2	5.2	73	57
Madhya Pr.	17.9	8.7	20.3	10.3	12.7	5.6	62	27
Maharashtra	27.5	6.0	25.8	6.9	3.4	0.9	56	23
Orissa	21.5	5.8	0.2	1.0	1.6	1.2	76	35
Punjab	0.1	0.1	0.3	0.6	0.1	0.3	15	5
Rajasthan	0.0	0.2	12.7	1.9	2.7	0.1	84	35
Tamil Nadu	78.9	47.7	8.9	10.7	64.8	64.1	79	39
Uttar Pradesh	5.8	2.1	5.6	2.6	1.6	1.3	84	47
West Bengal	12.8	5.4	9.0	3.5	15.7	8.6	91	60
all-India	24.4	13.1	11.0	5.8	15.9	11.5	73	33

Source: Table P2, Report no. 510

6.6.3 PDS consumption of wheat was most common in Karnataka, rural Gujarat and Maharashtra, and in Madhya Pradesh. It was also relatively common in urban areas of Kerala and Tamil Nadu. Less than 1% households consumed PDS wheat in Assam, Punjab, Andhra Pradesh and Orissa, and fewer than 2% in Bihar.

6.6.4 PDS consumption of sugar, too, was most common in Tamil Nadu, followed by Assam and

Andhra Pradesh. On the other hand, in both rural and urban areas, fewer than 1% households consumed PDS sugar in Punjab, Haryana, Bihar and Jharkhand, and fewer than 2% in Orissa and Uttar Pradesh. The all-India proportions of households were 16% for rural areas and 12% for urban.

6.6.5 Over 55% of rural households used PDS kerosene in all major States except Punjab and Haryana, where the majority of households did not use kerosene from any source. Use of PDS kerosene was most common in West Bengal for both rural and urban areas. But dependence on PDS kerosene appeared to be higher in Kerala and Rajasthan, where fewer than 10% households purchased kerosene from the open market.

6.7 Rice, wheat/atta, sugar, kerosene: Percentage of consumption (quantity) coming from PDS

6.7.1 Among the four commodities, kerosene stands out in having a much larger share of consumption coming from PDS – 77% for rural and 57% for urban India. For rice the share of PDS in total consumption was 13% for rural and 11% for urban; for wheat it was about 7% for rural and 4% for urban, and for sugar, 9½% for rural and about 6½% for urban India.

Table 34: Percentage of consumption (quantity) coming from PDS for households **All-India**

Item	Percentage of Consumption Coming from PDS for			
	All households		Households with Antyodaya or BPL cards	
	Rural	Urban	Rural	Urban
rice	13.2	11.2	27.4	35.0
wheat/atta	7.3	3.8	28.2	28.1
sugar	9.5	6.6	18.5	20.3
kerosene	77.1	56.6	86.3	74.2

Source: Table P4 and P5, Report no. 510

6.7.2 Households holding a BPL or Antyodaya ration card exhibited a much greater degree of dependence on PDS than the population as a whole. The difference was most marked in case of wheat, where as much as 28% of consumption came from PDS for these households in both rural and urban areas, compared to 7% for the entire rural population and 4% for the urban. For rice and sugar, rural households holding Antyodaya/BPL cards reported a PDS share which was about twice the share reported by the overall population in rural areas while urban households holding such cards reported a PDS share which was more than three times the PDS share reported by the entire urban population. The difference was least pronounced in case of kerosene, but even here the average PDS share of this category of households differed from the overall population by about 9 percentage points in the rural sector and 17-18 percentage points in the urban.

6.7.3 While the proportion of consumption from PDS fell with rise in MPCE level, the fall was least for kerosene especially in rural India. For rice the share of PDS purchases in total consumption fell from 20-21% in the lowest MPCE class to 8% in the topmost class in rural areas and to under 2% in urban areas. For wheat, too, there was a steady decline in share of PDS purchases in total consumption as MPCE increased, and, as in the case of rice, the fall was sharper in the urban sector than in the rural. For households holding a BPL or Antyodaya ration card, on the other hand, there was very little variation in share of PDS with MPCE in rural areas, and though there was a decline in PDS share in urban areas, it was much more gradual than in case of the entire population.

6.8 Government food assistance schemes: Households benefiting during last 365 days

6.8.1 The surveyed households were asked whether any member of the household had benefited during the last 365 days from any of the four schemes: Food

for Work (FFW), Annapoorna (ANN), ICDS and Midday Meal (MDM). The estimated proportions at the all-India level of households having so benefited are shown in the table below. Out of these four schemes, the Midday Meal scheme benefited most, children from an estimated 22.8% of rural households, the Integrated Child Development Scheme (ICDS) benefited 5.7% of rural households, the Food-for-Work Scheme, only 2.7%, and the Annapoorna scheme for the elderly, 0.9%. In urban India, while children from 8% of households benefited from the Midday Meal scheme, and the ICDS scheme benefited 1.8% households, only 0.2% urban households benefited from Annapoorna, and only 0.1% from Food for Work.

Table 35: Proportions of households benefiting from selected food assistance schemes of the Government by sector **All-India**

Sector	Per cent of households with at least one member benefiting during the last 365 days from				
	Food for Work	Annapoorna	ICDS	Midday Meal	any scheme
(1)	(2)	(3)	(4)	(5)	(6)
rural	2.7	0.9	5.7	22.8	28.0
urban	0.1	0.2	1.8	8.0	9.5

Source: Table P6, Report no. 510

6.8.2 Benefit from food assistance schemes and household type: For each of the four schemes, the rural labour households – "agricultural labour" and "other labour" – had the highest proportions of beneficiary households. For FFW the proportion of beneficiaries among "other labour" households (54%) was double the overall proportion (27%). For the other schemes, variation over household types was much less marked.

Table 36R: Proportions of households benefiting from selected food assistance schemes of the Government by household type all-India rural

Household type	per 1000 no. of households with at least one member benefiting during the last 365 days from			
	FFW	ANN	ICDS	MDM
(1)	(2)	(3)	(4)	(5)
self-empl. in non- agriculture	11	10	56	219
agricultural labour	42	11	77	291
other labour	54	13	73	264
self-employed. in agriculture	24	4	45	207
others	3	9	31	121
All	27	9	57	228

Source: Table P7-R, Report no. 510

6.8.3 Among urban household types, "casual labour" households had an overwhelmingly larger proportion of beneficiaries of all the four government schemes, than other three types.

Table 36U: Proportions of households benefiting from selected food assistance schemes of the Government by household type all-India urban

Household type	per 1000 no. of households with at least one member benefiting during the last 365 days from			
	FFW	ANN	ICDS	MDM
(1)	(2)	(3)	(4)	(5)
self-employed	1	2	19	90
regular wage/salaried	1	1	14	57
casual labour	5	7	37	182
others	0	2	7	23
All	1	2	18	80

Source: Table P7-U, Report no. 510

6.9 Benefit from food assistance schemes and household social group

6.9.1 Among households belonging to each of the four social groups – ST, SC, OBC and others, the ST group had a much larger proportion of beneficiary households than any of the other groups in respect of the food assistance schemes like FFW and ICDS, both in rural and urban areas. Proportionately more households among the SC received Annapoorna benefits as compared to other social groups in rural areas. There was very little disparity over social groups in case of Midday Meal benefits, especially in the rural areas.

Table 37: Proportions of rural and urban households benefiting from selected food assistance schemes of the Government by household social group **All-India**

Social Group	per cent of households with at least one member benefiting during the last 365 days from							
	Rural				Urban			
	FFW	ANN	ICDS	MDM	FFW	ANN	ICDS	MDM
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Scheduled Tribe	7.2	0.9	9.5	28.8	0.7	0.2	3.2	9.0
Scheduled Caste	2.6	1.4	6.1	25.3	0.2	0.2	2.2	11.8
Other Backward Classes	2.0	0.8	4.7	22.1	0.1	0.3	2.3	10.7
Others	2.2	0.4	5.4	19.1	0.0	0.1	1.2	4.8
All	2.7	0.9	5.7	22.8	0.1	0.2	1.8	8.0

Source: Table P8, Report no. 510

6.9.2 The proportion of households benefiting from the four food assistance schemes of the Government was relatively very low for all the four schemes in urban India.

6.10 Benefit from food assistance schemes: inter-State variation:

6.10.1 The Mid day Meal scheme benefited more than 10% of rural households in all the major States, except for Punjab although in urban areas its impact was not so pronounced with only four states having such proportion of beneficiary households. The ICDS appears to have been most active in the rural areas of Orissa, Chhattisgarh and Maharashtra.

Table 38: Proportion of households benefiting during the last 365 days from selected food assistance schemes, by State/UT and sector all-India

per 1000 no. of households with at least one member benefiting during last 365 days from								
rural				state	urban			
FFW	ANN	ICDS	MDM		FFW	ANN	ICDS	MDM
40	6	44	216	A.P.	1	2	10	86
23	4	66	180	Assam	2	0	5	20
3	21	7	107	Bihar	0	3	0	36
54	14	147	406	Chhattisgarh	2	5	24	119
27	2	98	272	Gujarat	0	1	44	87
9	1	94	158	Haryana	0	1	30	28
6	1	9	112	Jharkhand	0	0	0	22
6	1	45	334	Karnataka	0	0	11	113
0	17	74	217	Kerala	0	4	53	125
18	8	31	323	M.P.	1	3	5	90
44	5	132	266	Maharashtra	1	1	32	93
82	10	155	265	Orissa	1	2	49	90
0	3	13	31	Punjab	0	0	1	3
120	14	15	216	Rajasthan	11	3	2	38
2	5	57	318	T.N.	0	2	30	156
3	12	9	161	U.P.	1	5	2	31
24	5	95	298	West Bengal	0	1	12	93
27	9	57	228	India	1	2	18	80

Source: Table P11, Report no. 510

6.10.2 As for the Food for Work scheme, the highest proportions of rural beneficiaries were found in Rajasthan (12%) and Orissa (8%) while the national average was only 2.7%. The impact of Annapoorna scheme was limited in almost all the states even in rural areas.

6.10.3 In urban areas, besides MDM, the ICDS had some impact, although even for this scheme, the proportion of beneficiary households was 1 % or less in most of the major states. The proportion of households benefitting from any of these four schemes had been unexpectedly low in Jharkhand and Bihar.

7. Consumption from home produce

7.1.1 For each item of food (including pan, tobacco and intoxicants) and fuel, the source of consumption of the reporting household was also ascertained as only purchase/ only home produce/ both purchase and home produce/ only free collection/ only exchange of goods and services/ only gifts and charities/ other. For any item of food, the share of consumption from home produce varies widely from one region of the country to another, depending mainly on the prevalence of cultivation of the crop or rearing of the livestock or poultry etc.

7.1.2 For some items of cereals, pulses, vegetables, fruits and other food, for which the share of home produce in total quantity consumed in rural India in 2004-05 was 10% or more and were consumed by more than 10% of rural households, are shown in the following table. Here only three source categories are shown ("only home produce", "both purchase and home produce", and "only purchase") which account for more than 98% of total consumption of these items. The first two practically exhaust all households making any consumption from home produce and together, can be taken as an approximation for the percentage of households which consume the item wholly or partly from home produce.

Table 39: Some aspects of consumption from home produce in rural India for selected items of food

Item	% of consumption (quantity) from home produce	percentage of hhs consuming item from		
		only home produce	both purchase and home produce	only purchase
rice	30	24.1	1.5	72.5
wheat/atta	40	26.9	0.8	71.0
arhar (tur)	18	10.4	0.1	88.9
gram (split)	14	7.4	0.0	92.2
gram (whole)	14	7.5	0.0	91.7
moong	15	9.0	0.0	90.4
masur	11	6.7	0.1	92.8
urd	17	10.3	0.0	89.1
peas	13	7.8	0.1	91.8
milk (liquid)	62	36.1	0.5	62.4
eggs	14	12.0	1.4	86.1
chicken	13	11.8	0.2	87.7
potato	10	4.1	0.1	95.5
coconut	37	14.5	1.8	81.1
mango	12	4.8	0.6	87.1

Source: Table P12, Report no. 510

7.1.3 As much as 62% of quantity of milk consumed in rural India came from home produce compared to 40% for wheat/atta, 30% for rice, and 11-18% for seven common pulse varieties. For eggs, 14% of consumption, and, for chicken, 13%, came from home-grown stock. Among vegetables and fruits home produce was most important in case of coconuts (37% of quantity consumed in rural India), consumption of which was reported by as many as 28% of rural households.

8. Energy Sources of Indian Households for Cooking and Lighting

8.1 Primary Source of energy for cooking:

8.1.1 Although the energy used by households in rural India is changing, traditional fuels such as firewood and chips, dung cake still remain the main sources of household cooking energy. In the rural

areas of the country, the households used mainly three primary sources of energy for cooking, viz., firewood and chips, dung cake and LPG. Firewood and chips was used by three-fourths of the rural households. However, if we compare between 61st round (2004-05) and the previous large sample round (1999-00), we find that there was a marginal decrease in the percentage of households using firewood and chips over the period 1999-2005. There has also been fall in the proportion of rural households using dung cake or other fuels for cooking including coke and coal. On the other hand, increasing number of rural households adopted the use of LPG because of its improved availability and convenience of use or have shifted to 'no cooking arrangement'. The pattern of use of firewood and chips for cooking was similar for all the major States except for in Punjab and Bihar, where the use of dung cake for cooking was relatively more common. The use of LPG was relatively more common mainly in four States, viz., Punajb (24% of households), Haryana (19%), Kerala (18%) and Maharashtra (15%) and not quite common in Bihar Chattisgarh, Jharkhand and Orissa.

Table 40: Per cent distribution of households by primary source of energy used for cooking **All India**

state	Rural						Urban					
	no cooking arrange-ment	firewood and chips	dung cake	LPG	others Incl. coke & coal	all	no cooking arrange-ment	Fire-wood and chips	kero-sene	LPG	others Incl. coke & coal	all
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
61st Round (2004 –05)	1.3	75.0	9.1	8.6	6.0	100	4.9	21.7	10.2	57.1	6.1	100
55th Round (1999-00)	1.1	75.5	10.6	5.4	7.4	100	0.7	22.3	21.7	44.2	11.1	100

Source: Statement 1R and 1U, Report no. 511

8.1.2 **In urban areas** of the country, the households used mainly three primary sources, viz., LPG (used by 57% of households), firewood and chips (22% of households), and kerosene (10% of households), as primary source of energy for cooking. There has been marginal change in percentage of households using firewood and chips over 1999-2005. LPG was predominantly used and was found to be gaining more and more acceptance. Only 44% households were using LPG as primary source of energy for cooking in 1999-2000 while 57% used it in 2004-2005. Use of kerosene decreased drastically to 10% of households from 22% in 1999. In urban India, proportion of households with no cooking arrangement increased substantially from 7% to 4.9%. In urban India, among states, Haryana (73%), Punjab (70%), Maharashtra (63%) and Gujarat (62%) were leading in the use of LPG for cooking. In urban Kerala, both firewood and chips (48%) and LPG (43%) were the primary sources of energy for cooking. More than one-third of the households used firewood and chips for cooking in Rajasthan (39%), M.P. and Chattisgarh (38% each) and Orissa(37%) as well. Kerosene was still used in more than 15% households in Tamil Nadu and Maharashtra.

8.1.3 Variation over MPCE classes: We find that rural households, even prosperous ones, continued to depend on traditional fuels to meet most of their energy requirements. Rural people belonging to lower MPCE classes used more firewood & chips and dung cake. Top MPCE classes in rural areas used mainly firewood & chips and LPG. However, the people belonging to topmost MPCE class in urban areas used more LPG (82%) while about 14% households did not have any cooking arrangement. The people belonging to lower MPCE classes in urban areas used more firewood & chips besides LPG and kerosene. The rural households belonging to bottom MPCE classes showed a high proportion

of households (9%) who did not have any cooking arrangement.

8.1.4 Variation over household types: The percentage of households using firewood and chips was the highest (84%) for agricultural labour households among the different household types in rural India. The use of firewood and chips was also very common (78 to 79 per cent) among the households classified as other labour and self-employed in agriculture. The use of LPG was relatively more common among household type 'others' (26%) and self-employed in agriculture (15%). The proportion of households in urban India using LPG for their cooking was the highest (69%) for regular wage/salary earners compared to other types of households. For firewood and chips, the percentage was the highest among the casual labour households (58%) as against the national average of 22%. The use of kerosene for cooking was also prevalent (16%) among the casual labour households.

8.1.5 Variation over social groups: Firewood and chips was used as energy for cooking by 90% of households belonging to scheduled tribes in rural areas. In use of dung cake, the percentages of households belonging to scheduled castes (11%) and other backward classes (11%) were higher than that for scheduled tribes (1%). LPG was found to be more popular among 'others' households (16%) followed by 'other backward classes' (8%). In urban India, LPG was the most common energy source for households in all the social classes in general but more so among 'others' households (70%) and 'other backward classes' (51%). Firewood and chips was used by 35 to 36 percent households belonging to ST and SC category and was least (11%) among 'others' households.

8.2 Primary Source of energy for lighting:

8.2.1 Different primary sources of energy used for lighting by the households in India were kerosene, gas, candle, electricity, other oil, etc. Among these, kerosene and electricity were more commonly used. At national level, these two together accounted for 99% of the households in both rural and urban areas. The use of kerosene as primary source of lighting is still much in vogue, in rural areas (44%) while in urban areas it was used by only 7%.

8.2.2 The use of electricity in rural areas was the highest in Punjab (96% of households) followed by Haryana (90%) and Karnataka (86%). The percentage of households using electricity was abysmally low in Bihar (only 10%), Uttar Pradesh (24%), Jharkhand (26%) and Assam (30%), where kerosene still dominates as lighting fuel. The percentage of households using electricity increased by more than 10 percentage points during 1999-2005 in the states of Andhra Pradesh, Karnataka, Kerala, Orissa, Tamil Nadu and West Bengal.

8.2.3 However, for urban areas the percentage of households using electricity was high in urban areas of all the major States: It was above 90% in 10 out of 17 major States. At all-India level, 92% urban households used electricity. The percentage was less than 75% only in Bihar (74%) but still somewhat low in Orissa (81%), U.P. (84%), Assam(86%), Jharkhand and West Bengal (87% each).

8.2.4 Variation over MPCE classes: From the distribution of households in each MPCE class by primary source of energy used for lighting one can see that in the bottom 10% MPCE class, about 70% of rural households still used kerosene while not more

Table 41: Per cent distribution of households by primary source of energy used for lighting all-India

state	61st Round (2004- 05)				55-th Round (1999- 00)			
	kerosene	electricity	others	total	kerosene	electricity	others	total
rural	44.4	54.9	0.7	100.0	50.6	48.4	1.0	100.0
urban	7.1	92.3	0.6	100.0	10.3	89.1	0.6	100.0

Source: Statement 5, Report no. 511

than 30% used electricity. In the top 10% MPCE class more than 80% households used electricity for lighting while the remaining households mainly used kerosene. In urban India, the picture is somewhat different. Barring for the poorest 10% households more than 80% households in all other MPCE classes predominantly used electricity. Kerosene was used by more than a quarter of households in the poorest 10% class while for all higher MPCE classes its use was negligible. For the top 20% population more than 99% households used electricity.

8.2.5 Variation over household types: In rural areas, the use of electricity was found relatively more frequent among the 'others' households (72%), followed by the self-employed in non-agriculture (60%), other labour (55%) and self-employed in agriculture (53%) households. Kerosene was more common in use among agricultural labour households (52%). In the urban areas, the percentage of households using electricity for lighting was the highest (97%) for the regular wage/salary earning households and more than 90% for all other household types except for the casual labour households. Among casual labour households 76% used electricity while 23% used kerosene.

8.2.6 Variation over social group: In both rural and urban areas, kerosene was used by the highest percentage of households in the social group scheduled tribe (56%), followed by scheduled caste (53%), and then by other backward class (43%) and 'others' (35%). The use of electricity by different social groups followed the opposite pattern as almost all the remaining households in each social group were using electricity. In urban areas the percentages of ST and SC households using electricity were fairly close (84-85%) while for the 'OBC' and 'others' category it was much higher at 91% and 96% respectively. Kerosene was used by 14-15% of SC/ ST households while for 'others' households it was negligible (3.5%).

9. Perceived Adequacy of Food Consumption

9.1.1 The survey ascertained for each sample household, whether its members had enough food to eat everyday throughout the year and if not, which were the months of the year for which enough food was not available to them. The information was obtained by asking a direct question if the investigator suspected that the household might have experienced inadequacy of food. In case the investigator could judge that the household did not suffer from any food shortage, he or she was allowed to record this fact without asking direct question. Thus the survey did not adopt any definition or measure of adequacy of food. The results of the survey did not constitute an objective measurement of food inadequacy in the country, but indicated the subjective perception of the population about it.

9.1.2 There were three statuses. 'Getting enough food throughout the year' (Food adequate in all months), 'not getting enough food in some months' (food inadequate in some months of the year) and 'not getting enough food everyday in any month of the year' (food inadequate in all months).

9.1.3 At the all India level, the percentage of rural households where all the members got enough food everyday throughout the year was around 97.4, the corresponding percentage for households who did not get enough food everyday for some months of the year was 2.0% and the percentage of households not getting enough food everyday in any month of the year was 0.4%.

9.1.4 In urban India, the overall percentage of households where all the members got enough food everyday throughout the year was around 99.4%, the corresponding figure for households where at least one member did not get enough food everyday for some months of the year and the percentage of households not getting enough food everyday in any month of the year was 0.4% and 0.1% respectively.

9.1.5 In general, the perception of the people in the country was similar to that in 1999 – 2000 (55th round) when the percentage of such households was above 97% for both rural and urban areas.

9.1.6 The proportion of rural households who did not get enough food every day in any month of

the year was highest in the state of Assam (3.6%) followed by Orissa and West Bengal (1.3% each). The percentage for not getting enough food everyday in some months of the year was the highest in West Bengal (10.6%) followed by Orissa (4.8%) and the people in Haryana and Rajasthan were least affected by perceived inadequacy of food.

9.1.7 In the urban sector about 2.1% of households reported that they did not get enough food in any month of the year in the state of Assam followed by Bihar (1.1%). The State of Kerala had highest percentage of dissatisfied households (1.7%) followed by Bihar (0.8%) who reported that food was scarce in some months of the year.

9.1.8 In rural areas, the percentage of households where all the members got enough food everyday throughout the year rose from 94.5% to 97.4% from 1993-94 to 2004-05. The percentage of households with at least one of the household members not getting enough food everyday during some months of the year fell from 4.2% to 2.0% between 1993-94 and 2004-05. The percentage of households with at least one member not getting enough food everyday in all the months of the year also declined from 0.9% to 0.4% over the decade from 1993-94 to 2004-05.

9.1.9 In urban areas also, the pattern of adequacy of food everyday for the members of households was similar. The percentage of households getting enough food everyday throughout the year increased from 98.1% to 99.4% from 1993-94 to 2004-05. The percentage of households not getting enough food everyday in some months of the year decreased from 1.1% to 0.4% over the period while the percentage of households not getting enough food everyday in any month of the year also declined from 0.5% to 0.1%.

9.2 Food adequacy status by types of ration card.

9.2.1 The Government of India undertakes various measures and programmes to uplift condition of the poorer section of the society. The 61st round NSS, for the first time made it possible to relate the reported subjective adequacy of food to the three types of ration card holders in the public distribution system (PDS), viz. 'antyodaya', BPL (Below Poverty Line) and ordinary ration card holders.

9.2.2 The Antyodaya cardholders represented the highest percentage (5.8%) of households who believed they were 'not getting enough food for some months the of year' followed by BPL cardholders (3.6%) in the rural area. In urban area, it was the BPL card holders (1.5%) who believed that they faced food shortage in some months of the year. However BPL card holders reported highest food inadequacy, both in rural and in urban areas, in terms of households *'not getting enough food everyday in any month of the year'*.

9.3 Norm" Level of Calorie Intake: From the 26th round, the NSS has been using a level of 2700 calories per consumer unit per day as a standard and compared the actual intake with it. This level is referred to as the "norm" level of calorie intake.

9.4 Consumer unit: Consumer unit is a number assigned to a person, depending on age and sex, representing the ratio of the calorie requirement of the person to that of a 'standard' male person aged 20-39 years and doing sedentary work.

Number of consumer units assigned to a person

age in completed years	male	female
less than 1	0.43	0.43
1-3	0.54	0.54
4-6	0.72	0.72
7-9	0.87	0.87
10-12	1.03	0.93
13-15	0.97	0.80
16-19	1.02	0.75
20-39	1.00	1.71
40-49	0.95	0.68
50-59	0.90	0.64
60-69	0.80	0.51
70+	0.70	0.50

9.5.1 The following table shows average MPCE, monthly per capita food expenditure, monthly per capita quantity of cereal consumption, monthly per capita calorie intake and percentage of a "norm" level of 2700 Kcal. per consumer unit per day for different food availability statuses in rural and urban India.

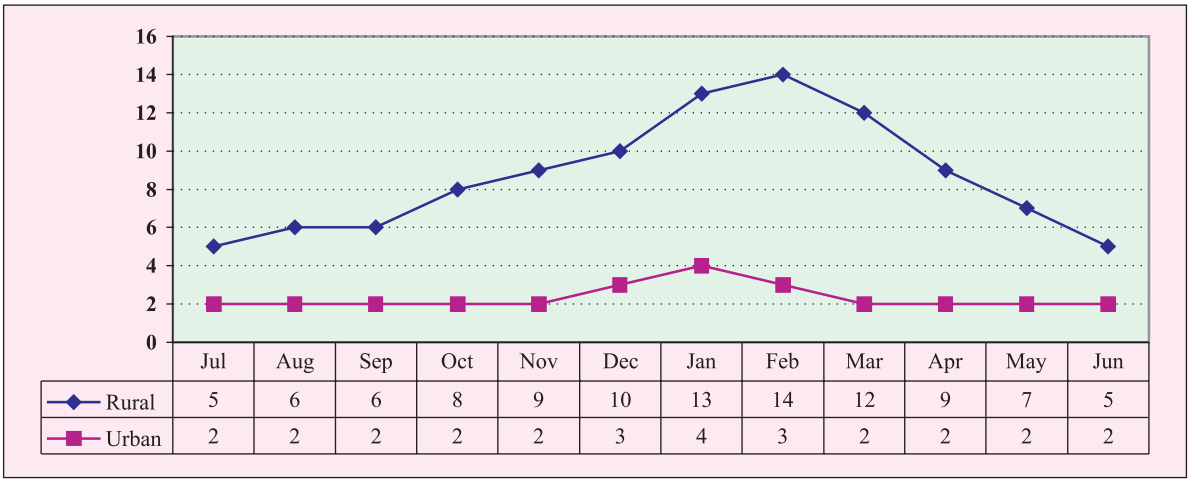
Table 42 : Adequacy of food vis-à-vis MPCE, per capita food expenditure and cereal consumption, norm level of Calorie intake

description	adequate availability of food	inadequate availability of food	
		for some months	for all months
Rural			
Per cent of households	97.4	2.0	0.4
MPCE (in Rs.)	560	389	334
Monthly per capita food expenditure (Rs.)	308	232	208
Monthly per capita quantity of cereal consumption (in Kg.)	12.10	13.08	10.60
Monthly per capita calorie intake	61416	57048	47691
Percentage of a "norm" level of 2700 Kcal per consumer unit per day	94.10	88.03	74.03
Urban			
Per cent of households	99.4	0.4	0.1
MPCE (in Rs.)	1055	441	371
Monthly per capita food expenditure (Rs.)	448	249	220
Monthly per capita quantity of cereal consumption (in Kg.)	9.94	10.20	9.90
Monthly per capita calorie intake	60663	49282	44941
Percentage of a "norm" level of 2700 Kcal per consumer unit per day	91.74	75.04	70.34

Source: Statement 8, Report no. 512

9.5.2 In the rural areas about 1.7% of households perceived that they went half fed for about 1 to 3 calendar months. The perception of about 0.3% of households had also been recorded as suffering food insufficiency for 4 to 6 months. About 0.5% reported that they did 'not get enough food throughout the year'. In urban areas about 0.4% suffered food inadequacy for 1 to 3 months, while 0.1% felt that they did not have sufficient food through out the year.

Fig 6. Per thousand number of households not getting sufficient food everyday in various months of the year



Source: Chart 6, Report no. 512

9.5.3 Per thousand number of households not getting sufficient food in different calendar months of the year 2004-05 is shown in the chart above. In the rural sector, during December to March, highest number of households did not get sufficient food. In urban areas the phenomenon of food inadequacy was reported between December and February but with considerably lower intensity.

9.5.4 It may however be noted that, the investigator's perceptions about food adequacy of a household ascertained without asking a question were indeed subjective and might have varied from person to person, state to state. What might have prompted them to record the food adequacy might be a quick inference from the level of living of a given household. The respondent's perception about seasonal or perennial inadequacy of food might also be, largely through experience, awareness and introspection. It is reassuring, however, to find that this two-stage sequential process of perceptions showed a plausible association with most, if not all, the objectively ascertained indicators of food availability.

10. Nutritional Intake

10.1 The major components of food are: carbohydrates, proteins, fats, vitamins and minerals. These are called nutrients. The data on intake levels of nutrients of the people of a country is imperative for understanding their general health status. The measures of nutritional intake status also reflect the adequacy of available food to the people.

10.1.1 The information on the number of meals taken is collected for each member of household and has three components viz. taken at home, taken outside home but free and taken outside home on payment. Since meals taken at home, the largest component of the three, has direct bearing on the nutrient intake of Indian households, this has been studied across different MPCE classes, different age-sex groups of persons and for the major states.

10.1.2 Estimated values of per capita and per consumer unit "intake of nutrients" viz. (a) protein (b) fat (in grams) (c) calorie (in Kcal.) and the number of units of energy or quantity of nutrients as the case may be derived from different food groups are presented here for both rural and urban sectors of states and also for the country as a whole.

10.2. **Number of meals consumed per household at home, away from home – free/on payment:** In the rural sector it was observed that total number of meals consumed per household in the reference period varied in the range of 261 for the MPCE class 'Rs. 1155 & more' to 419 for the class 'Rs. 235-270' whereas the corresponding national average was **348**. In Urban area it varied in the range of 183 in highest MPCE class to 405 in lowest MPCE class and the corresponding national figure was **296**. At all India level the number of meals taken at home had decreased by 0.57% and 1.66% in rural and urban part since 1993-94.

10.2.1 On an average the members of the rural households had taken 2.5 meals and that of urban households taken 2.3 meals per day during the reference period as derived from the data.

10.2.2 No significant gender difference has been observed so far as the meals taken at home or away from home were concerned for all age group together and for both the sectors. In rural sector out of an average of 73.80 meals taken in 30 days period by men folks of all age group, 71.09 meals taken at home and 2.71 meals taken outside home while the women members of all age groups of the households had taken 73.76 meals on an average out of which 71.42 at home and 2.34 meals outside home. Meals taken outside home were mainly concentrated for the age group 5-9 and 10-14 years for both the sexes in all the sectors. Most of these meals might have been from schools or Balwadis, in the form of 'Mid-day Meals'. Both in rural and urban area, meals taken on payment were a rare phenomenon.

10.2.3 People in Punjab and Kerala preferred to have almost 3 meals a day at home on an average, for both males and females and in both the rural and urban sectors. In Gujarat, West Bengal and a few other

major states people preferred more or less 2 meals a day in urban sector. More than 95% of meals were taken at home only in both rural and urban sectors.

10.3 **Per capita and per consumer unit intake of calorie, protein and fat per diem by MPCE:** A higher average intake of calorie and protein was observed in the rural India (2540 kcal and 70.8 gms. respectively) as compared to the urban India (2475 kcal & 69.9 gms.). But the average consumption of fat was relatively much lower in rural areas (44.0 gms.) as compared to that in urban areas (58.2 gms.).

10.3.1 Although the percentage of total expenditure spent on food and cereals is a decreasing function of MPCE, actual food expenditure per capita rises over the MPCE classes and the per capita or per consumer unit per diem intake of each of the three nutrients under study – calorie, protein and fat – is an increasing function of MPCE.

Fig 7R: Per consumer unit calorie intake (Rural)

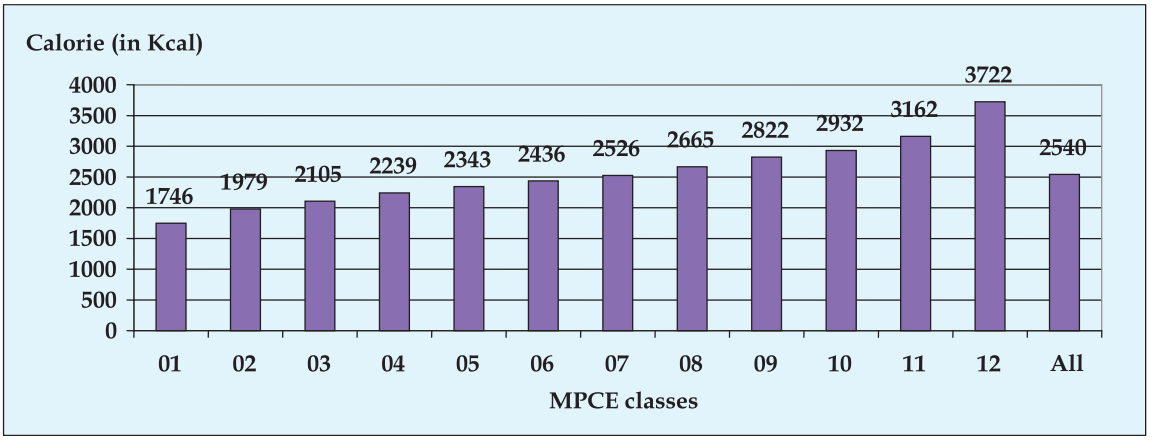
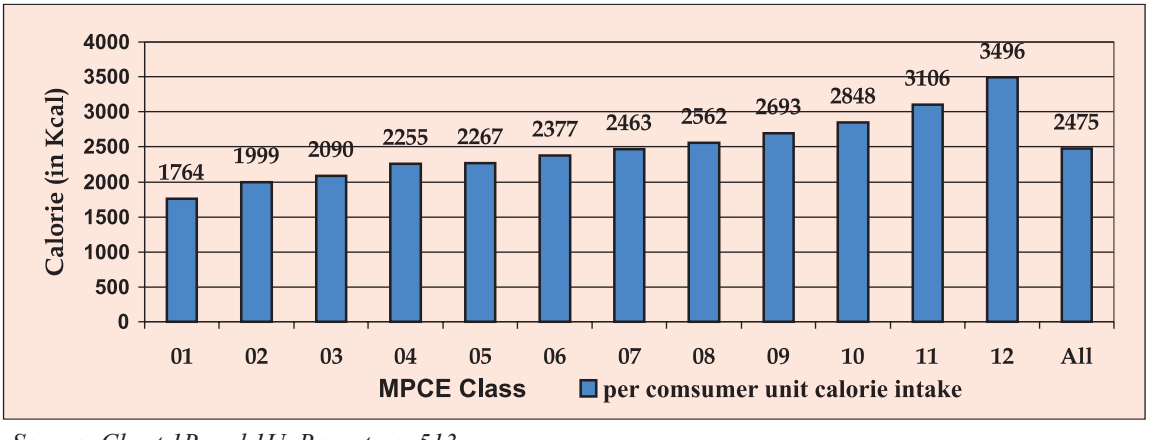


Fig 7U: Per consumer unit calorie intake (Urban)



Source: Chart 1R and 1U, Report no. 513

10.3.2 Significant inter-state variations in the per capita and per consumer unit intake of calorie, protein and fat were observed in each of the two sectors. The states at the higher end of the average intake of calorie per consumer unit per diem were Punjab (2763), Uttar Pradesh (2743) and Rajasthan (2714) in the rural areas and Jharkhand (3013), Bihar (2683) and Punjab (2614) in the urban areas. On the other hand, Karnataka (2276) and Tamil Nadu (2294) in the rural areas and Maharashtra (2261), Karnataka(2385) and Tamil Nadu (2394) in the urban areas were found to have much lower intake of calorie than the national average.

10.3.3 It is observed that the major part of the nutrients was derived from the cereals. At national level, out of the total calorie intake, more than 67% calorie intake in the rural areas and about 56% calorie intake in urban areas were derived from cereals alone. Remaining calorie intake was derived from non-cereals.

10.3.4 The percentage share of non-cereal food groups contributing towards calorie intake across states gives an indication of differences in the food habits of the people of different states. For example, the people of Punjab, Rajasthan and Haryana particularly favoured "milk & milk product" as a non-cereal source of calorie. The food group "Fish, egg & meat" was preferred in Orissa, Kerala and West Bengal. Likewise "pulses, nuts & oil seeds" had larger share of calorie intake among the non cereal food groups in the states of Chhattisgarh, Karnataka, Maharastra and Tamil Nadu.

10.4 Distribution of persons by level of calorie intake in relation to norm and by monthly per capita expenditure (MPCE) class

10.4.1 Calorie intake levels have been reported as percentage of a "norm" requirement of 2700 kcal per consumer unit (PCU) per diem. Eight PCU calorie intake levels, as percentages of normative requirement, have been distinguished for presenting the distributions. Table below shows for each MPCE class per 1000 distribution of persons by class-intervals of actual calorie intake level as per cent of normative level of 2700 Kcal separately for rural as well as urban areas of the country. It may be noticed that the households with lower calorie intake level in relation to the 'norm' (i.e. less than 100%) tended to be clustered in the lower MPCE classes and the households with higher calorie intake level in relation to the norm (i.e. exceeding 100%) were concentrated in the upper MPCE classes, in both the sectors.

10.4.2 It may be noted that the average estimate of calorie intake per consumer unit per diem may not necessarily represent the 'true' level of intake of a household. Given the inherent limitations of the survey practices, two types of problems may arise. Firstly, there may be members of the household who might have consumed food from their employers (without payment) or as guests in other households or from the schools / balwadis as free mid-day meals. Secondly, persons other than the household members might have been entertained as guests during the ceremonies or on any other occasions with food which though not

Table 43R: Per 1000 distribution of persons by level of household calorie intake[1] (per consumer unit) for each MPCE class all-India rural

MPCE class	<70	70-80	80-90	90-100	100-110	110-120	120-150	≥ 150
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
0 – 235	619	215	120	33	7	2	3	1
235 – 270	395	292	177	91	32	8	5	2
270 – 320	293	269	219	135	52	21	10	1
320 – 365	202	245	240	174	82	38	16	3
365 – 410	138	198	259	194	113	57	37	4
410 – 455	101	176	233	218	137	75	55	5
455 – 510	78	150	210	216	158	94	82	13
510 – 580	48	112	197	220	179	106	120	18
580 – 690	46	89	150	199	188	130	162	37
690 – 890	33	63	118	177	180	149	215	65
890 – 1155	18	46	83	136	156	158	280	122
1155 & more	16	35	71	95	133	116	261	272
All class	146	160	185	171	125	81	97	34

[*] *Percentage of norm level (2700 calories per consumer unit per day)*
Source: Statement 7, Report no. 513

consumed by household members, got included in the consumer expenditure of the household. Omission by the recipient household in the former case is likely to depress the reported per capita level of calorie intake of that household, while in the latter case the inclusion in the expenditure of the serving household tend to inflate the reported intake of that household as guests are not members of the serving household. Hence, to bring the estimate of calorie intake level closer to the 'true' intake level, adjustment procedure on the basis of the supplementary information on the number of meals can be followed. This 'adjusted' calorie intake level provides a reasonable approximation to the 'true' level.

Table 43U: Per 1000 distribution of persons by level of household calorie intake* (per consumer unit) for each MPCE class all-India urban

MPCE class	<70	70-80	80-90	90-100	100-110	110-120	120-150	≥ 150
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Urban								
0 – 335	626	195	119	43	10	3	3	1
335 – 395	375	277	208	89	28	18	5	0
395 – 485	324	257	225	103	60	15	12	3
485 – 580	236	245	220	158	74	33	26	8
580 – 675	188	226	254	162	90	46	28	6
675 – 790	134	189	254	195	109	62	47	10
790 – 930	98	171	237	214	140	80	50	11
930 – 1100	81	138	215	219	155	90	83	19
1100 – 1380	47	105	198	201	185	117	117	30
1380 – 1880	34	67	166	189	180	142	186	38
1880 – 2540	22	52	105	153	199	149	235	86
2540 & more	27	29	66	139	135	133	300	171
All class	167	167	202	165	118	74	82	25

Source: Statement 7, Report no. 513 * *Percentage of norm level (2700 calories per consumer unit per day)*

11. Concluding Remarks

11.1 The detailed results of the NSS sixty-first round Household Consumer Expenditure Survey (2004-05) have already been released by NSSO in seven Reports (no. 508, 509, 510, 511, 512, 513 and 514). An integrated summary of the major findings of the survey has been attempted here based on these reports alone. The focus of the discussion here has been on the national level features of the different aspects of consumer expenditure and only such limited state-level analysis has been included as was felt absolutely necessary. While making state level analysis and inter-state comparisons of expenditure, one needs to keep in mind the possible variations in prices of goods and services across states, which have not been adjusted for. Also, most estimates at state level or relating to smaller sub-domain may not possess the same degree of precision as those at the overall national level due to sample size limitations.

11.2 Keeping these limitations in mind, the major finding of the survey may be recapitulated as follows. The average monthly per capita expenditure (MPCE), considered to be the most important indicator obtained from this Consumer Expenditure Survey, was found to have grown in real terms by 13% in the rural sector and 15% in the urban sector over the last one decade. The generalised Lorenz Curves for the 50th (1993-94) and the 61st (2004-05) round survey indicate that there has been some improvement in the distribution of MPCE among population as well. The pattern of consumption has undergone significant change over time. The share of food in total expenditure has fallen steadily over the past three decades to 55% and 42%of total consumption expenditure in rural and urban areas respectively. On the other hand, the share of "miscellaneous goods and

services" (including education, medical care, rent and taxes, conveyance etc.) in consumption expenditure has grown over time to 23% and 37% in the rural and urban parts of the country.

11.3 However, for the detailed analysis of the various aspects of consumption expenditure as revealed by the latest survey, it is the detailed reports that one has to consult.

References:

1. NSS Report no. 508: Level and Pattern of Consumer Expenditure, 2004-05
2. NSS Report no. 509: (vol. I & II) Household Consumption of Various Goods and Services in India, 2004-05
3. NSS Report no. 510: (vol. I & II) Public Distribution System and Other Sources of Household Consumption, 2004-05
4. NSS Report no. 511: Energy Sources for Indian Households for Cooking and Lighting, 2004-05
5. NSS Report no. 512: Perceived Adequacy of Food Consumption in Indian Households, 2004-05
6. NSS Report no. 513: Nutritional Intake in India, 2004-05
7. NSS Report no. 514: Household Consumer Expenditure among Socio-Economic Groups, 2004-05

खण्ड III- हिन्दी

सर्वेक्षण

राष्ट्रीय प्रतिदर्श सर्वेक्षण संगठन
की पत्रिका

भाग -XXVIII सं.1 और 2
अंक संख्या 93

राष्ट्रीय प्रतिदर्श सर्वेक्षण संगठन
सांख्यिकी और कार्यक्रम कार्यान्वयन मंत्रालय
भारत सरकार
नई दिल्ली

सम्पादकीय सचिवालय

समन्वय एवं प्रकाशन प्रभाग,
रा'ट्रीय प्रतिदर्श सर्वेक्षण संगठन
सरदार पटेल भवन
संसद मार्ग
नई दिल्ली-110001

श्री राम कृपाल, निदेशक
श्री अशोक कुमार चोपड़ा, सहायक निदेशक
श्री विनोद सागर, वरिष्ठ सांख्यिकी अधिकारी
श्री एस.ए.बेग, कनिष्ठ अन्वेषक

मूल्यः अंतर्देशीय 200/- रू.

सर्वेक्षण
भाग XXVIII सं. 1 और 2

विषय - सूची

भारत में पारिवारिक उपभोक्ता व्यय-संबंधी 61वें दौर (जुलाई 2004-जून 2005) का समेकित सार

रामकृपाल

1. परिचय

1.1 राष्ट्रीय प्रतिदर्श सर्वेक्षण में उपभोक्ता व्यय की एक झलक

1.1.1 1950 में राष्ट्रीय प्रतिदर्श सर्वेक्षण (एन एस एस) की शुरूआत से ही पारिवारिक उपभोक्ता व्यय सर्वेक्षण (सीईएस) इसके कार्यकलापों का एक नियमित हिस्सा रहा है । प्रारम्भ में रा.प्र.सर्वे.के प्रत्येक दौर के एक भाग के रुप में यह सर्वेक्षण प्रति वर्ष आयोजित किया गया और यह क्रम 1971-72 (26वें दौर) तक चलता रहा । 1972-73 से उपभोक्ता व्यय सर्वेक्षण एक पंचवार्षिक आयोजन बन गया और साथ ही यह इस रुप में रोजगार और बेरोजगारी संबंधी सर्वेक्षण से भी जुड़ गया कि दोनों ही विषयों के लिए परिवार का एक साझा नमूना उपयोग में लाया जाने लगा । 42वें दौर (1986-87) से अपेक्षाकृत छोटे पैमाने पर उपभोक्ता व्यय सर्वेक्षण की वार्षिक श्रृंखला फिर से शुरु कर दी गई ताकि योजनाकारों और शोधकर्ताओं द्वारा महसूस की जा रही आंकड़ों की कमी को दूर किया जा सके । उपभोक्ता व्यय और रोजगार-बेरोजगारी दोनों के बारे में आंकड़ों की वार्षिक श्रृंखला तैयार करने के उद्देश्य से रोजगार-बेरोजगारी की प्रमुख महत्वपूर्ण विशेषताओं को शामिल करने के लिए उपभोक्ता व्यय संबंधी वार्षिक सर्वेक्षण में शमिल मदों की संख्या 45 वें दौर (1989-90) से बढ़ा दी गई । लेकिन, उपभोक्ता व्यय के स्तर में समय गुजरने के साथ-साथ होने वाले परिवर्तनों और व्यय के नए उभरते तौर-तरीकों का अध्ययन करने के लिए बड़े पैमाने के पंचवार्षिक सर्वेक्षण का व्यापक रुप से उपयोग किया जाता है । रा.प्र.सर्वे. के 27वें, 32वें, 38वें, 43वें, 50वें, 55वें और 61वें दौर में उपभोक्ता व्यय संबंधी 7 पंचवार्षिक सर्वेक्षण किए जा चुके हैं । ये सर्वेक्षण क्रमशः 1972-73, 1977-78, 1983, 1987-88, 1993-94, 1999-2000 और 2004-05 से संबंधित हैं ।

1.1.2 रा.प्र.सर्वे. के 27वें, 32वें, 38वें, 43वें और 50वें दौर में, रोजगार-बेरोजगारी संबंधी प्रश्नावली और उपभोक्ता व्यय संबंधी प्रश्नावली के जरिए समान प्रतिदर्श परिवारों से एक ही सर्वेक्षण में जानकारी प्राप्त की गई ताकि उपभोग स्तर के संबंध में सूचना के जरिए रोजगार-बेरोजगारी संबंधी आंकड़ों का परस्पर वर्गीकरण किया जा सके । अत्यन्त लम्बे साक्षात्कारों से उत्तरदाता को होने वाली परेशानियों को कम करने के लिए 55वें दौर (1999-2000) से इस प्रक्रिया को बंद कर दिया गया और उपभोक्ता स्तर के जरिए परस्पर वर्गीकरण के उद्देश्य से इसके स्थान पर रोजगार-बेरोजगारी संबंधी सर्वेक्षण की प्रश्नावली में उपभोक्ता व्यय के बारे में एक संक्षिप्त खण्ड जोड़ दिया गया ।

1.1.3 रा.प्र.सर्वे.के 61वें दौर के सर्वेक्षण के लिए पारिवारिक उपभोक्ता व्यय संबंधी प्रश्नावली (शे.1.0) में खाद्य पदार्थों की 142 मदों, ईंधन की 42 मदों, वस्त्र, बिस्तर और जूते की 42 मदों, शिक्षा तथा औषधि संबंधी व्यय की 17 मदों, टिकाऊ वस्तुओं की 52 मदों और लगभग 90 अन्य मदों के बारे में पारिवारिक उपभोग की क्वालिटी और मूल्य के संबंध में सूचना जुटाई गई । प्रश्नवाली में आयु, लिंग और परिवार के प्रत्येक सदस्य की शिक्षा के स्तर सहित कुछ अन्य पारिवारिक विवरण भी एकत्र किया गया ।

1.2 भौगोलिक दायरा

1.2.1 सर्वेक्षण में (i) जम्मू-कश्मीर के लेह (लद्दाख) और कारगिल जिलों (ii) नगालैंड में बस मार्ग से 5 कि.मी.से अधिक दूरी पर बसे गांव और (iii) अंडमान तथा निकोबार द्वीप समूह में बारहों महीने पहुंच से दूर रहने वाले गांवों को छोड़कर सम्पूर्ण भारत संघ को शामिल किया गया था ।

1.3 प्रतिदर्श डिजाइन

1.3.1 61वें दौर के सर्वेक्षण के लिए एक बहु-चरणीय स्तरीकृत डिजाइन अपनाया गया था । प्रथम चरण की इकाइयों में ग्रामीण क्षेत्र में 2001 के जनगणना ग्रामों (केरल के लिए पंचायत वार्ड) और शहरी क्षेत्र में शहरी फ्रेम सर्वेक्षण खण्डों को शमिल किया गया था । लेकिन, दोनों क्षेत्रों में अन्तिम चरण की इकाईयां (यूएसयू) परिवार ही थे । बड़े ग्रामों/खण्डों के मामले में, परिवारों की सूची और चयन का कार्य आसान बनाने के लिए बस्ती समूह (एच जी)/उप-खण्ड (एस बी) संरचना के रुप में एक मध्यवर्ती चरण अपनाया गया था । राज्य/केन्द्र शासित प्रदेश के प्रत्येक जिले के अंतर्गत दो बुनियादी स्तर (i) ग्रामीण स्तर (ii) शहरी स्तर बनाए गए थे । इनमें जिले के क्रमशः सभी ग्रामीण और शहरी क्षेत्रों को शामिल किया गया था । लेकिन जनगणना-2001

के आधार पर 10 लाख या इससे अधिक की आबादी वाले प्रत्येक नगर को एक बुनियादी स्तर माना गया और जिले के शेष शहरी क्षेत्र को अन्य बुनियादी स्तर के रुप में माना गया ।

1.3.2 जीवन यापन के विभिन्न स्तरों से परिवारों के नमूने चयन करने के उद्देश्य से चयनित गांवों/खण्डों/बस्ती-समूहों/उप खंडों में सूचीबद्ध परिवारों को उनकी तुलनात्मक बहुतायत के आधार पर दो चरण वाले तीन स्तरों (एसएसएस) में विभाजित किया गया था । इसके बाद एसआरएसडब्ल्यूओआर द्वारा दस (10) परिवारों को प्रश्नारवली 1.0 के लिए चुना गया ।

1.3.3 प्रतिदर्श का कुल आकारः रा.प्र.सर्वे.सं. द्वारा सर्वेक्षित केन्द्रीय प्रतिदर्श में, पहले तथा दूसरे चरण की सर्वेक्षित इकाइयों की संख्या नीचे दी गई हैः-

केन्द्रीय प्रतिदर्श में सर्वेक्षित इकाइयों की संख्या	ग्रामीण	शहरी
ग्राम/खण्ड (प्रथम चरण की इकाइयां)	7999	4602
प्रतिदर्श परिवार (अंतिम चरण की इकाइयां)	79298	45346

1.3.4 सर्वेक्षण की अवधि : सर्वेक्षण की अवधि जुलाई, 2004 से जून, 2005 थी ।

1.4 प्रमुख अवधारणाएं और परिभाषाएं

1.4.1 परिवार : व्यक्तियों का एक ऐसा समूह जो आम तौर पर एक साथ रहता है और एक ही रसोई में भोजन करता है, मिल कर एक परिवार कहलाता है । " आमतौर " शब्द से तात्पर्य यह है कि अस्थाई अतिथियों को शमिल नहीं किया गया है लेकिन अस्थाई तौर पर बाहर जा बसने वाले इसमें शामिल है ।

1.4.2 पारिवारिक उपभोक्ता व्यय : परिवार द्वारा संदर्भित अवधि के दौरान घरेलू उपभोग पर किया गया व्यय पारिवारिक उपभोग व्यय है । यह मदों के विभिन्न समूहों, नामतः (i) खाद्य, पान (पान का पत्ता), तम्बाकू नशीले पदार्थ और ईंधन तथा प्रकाश (ii) वस्त्र तथा जूते और (iii) विविध वस्तुओं और सेवाओं तथा टिकाऊ सामान के उपभोग के मौद्रिक मून्य का कुल योग है ।

1.4.3 उपभोग का मूल्यांकन : खरीद कर उपभोग की वस्तुओं का मूल्यांकन खरीद मूल्य पर किया जाता है जबकि घर में उत्पादित वस्तुओं के उपभोग का मूल्यांकन फार्म या फैट्री दर पर किया जाता है । उपहार, ऋण, निशुल्क संग्रहण से और बदले में प्राप्त वस्तुओं के उपभोग का मूल्यांकन स्थानीय प्रचलित मूल्यों की औसत दर पर किया जाता है ।

1.4.4 **प्रति व्यक्ति मासिक उपभोक्ता व्यय (एमपीसीई)** एक परिवार द्वारा उपभोग के लिए प्रति माह (30 दिन के आधार पर) सभी वस्तुओं पर किए गए कुल व्यय को परिवार के सदस्यों की संख्या (परिवार के आकार) से विभाजित करने पर प्रति व्यक्ति मासिक उपभोक्ता व्यय प्राप्त होता है । एक व्यक्ति का एमपीसीई उस परिवार के एमपीसीई के रुप में लिया जाता है, जिसका वह सदस्य है ।

1.4.5 एमपीसीई वर्ग : सारणी बनाने के उद्देश्य से पारंपरिक तौर पर एमपीसीई कों 12 वर्गों में बांटा गया है । 61वें दौर के सर्वेक्षण के लिए वर्ग सीमा का चयन इस प्रकार किया गया है कि सबसे नीचे के दो और सबसे ऊपर के दो वर्गों में से प्रत्येक में इस सर्वेक्षण के अनुमानों के अनुसार समग्र भारत (ग्रामीण/शहरी) की आबादी का 5 प्रतिशत और शेष 8 वर्गों में से प्रत्येक में 10 प्रतिशत निहित है ।

क्षेत्रवार एम पी सी ई वर्ग		
एम पी सी ई वर्ग	एम पी सी ई सीमा (रु.)	
	ग्रामीण	शहरी
1	0 – 235	0 – 335
2	235 – 270	335 – 395
3	270 – 320	395 – 485
4	320 – 365	485 – 580
5	365 – 410	580 – 675
6	410 – 455	675 – 790
7	455 – 510	790 – 930
8	510 – 580	930 – 1100
9	580 – 690	1100 – 1380
10	690 – 890	1380 – 1880
11	890 – 1155	1880 – 2540
12	1155 & more	2540 & more

इस प्रकार इन वर्गों की ऊपरी सीमाएं मौटे तौर पर जनसंख्या की तुलना में एम पी सी ई के अखिल भारतीय वितरण की 5%, 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90%, 95% और 100% की संचयी बारम्बारता दर्शाती हैं । सी ई एस (2004-05) के 61वें दौर में इस प्रकार निर्धारित वर्ग सीमाएं ऊपर दी गई हैं । इस प्रकार निर्धारित एम पी सी ई वर्ग सीमाओं को साधारणतया अगले पंचवर्षीय दौर

तक बनाए रखा जाता है जब उन्हें पुनः निर्धारित किया जाता है ।

1.5 प्रमुख राज्य : यह भारत के 17 राज्यों के संदर्भ में है जिनकी जनसंख्या 2001 की जनगणना के अनुसार 20 मिलियन अथवा अधिक है । साथ ही, इन राज्यों में 2001 में भारत की जनसंख्या का लगभग 94.7 प्रतिशत हिस्सा है ।

1.6 संदर्भ अवधि : रा.प्र.सर्वे.61वें दौर में बेहतर दीर्घ अवधि की तुलनीयता हेतु 50 वें दौर (1993-94) में उपभोग आंकड़ा संग्रहण हेतु प्रयुक्त संदर्भ अवधि को प्रत्यावर्तित किया गया । उपभोक्ता व्यय सर्वेक्षणों के अंतिम तीन पंचवर्षीय दौरों में विभिन्न मद समूहों के लिए अपनाई गई संदर्भ अवधि नीचे दी गई है:-

उपभोग की मद	संदर्भ अवधि		
	61 वां दौर (2004-05)	55 वां दौर (1999-00)	50 वां दौर (1993-94)
खाद्य, पान, तम्बाकू एवं मादक पदार्थ	"अंतिम 30 दिन "	" अंतिम 7 दिन " एव अंतिम 30 दिन "	"अंतिम 30 दिन "
ईंधन एवं प्रकाश, गैर-संस्थागत चिकित्सा देखभाल सहित विविध वस्तुएं तथा सेवाएं, किराया तथा कर	"अंतिम 30 दिन "	"अंतिम 30 दिन "	"अंतिम 30 दिन "
वस्त्र, जूते, शिक्षा, चिकित्सा देखभाल (संस्थागत) तथा टिकाऊ वस्तुएं	"अंतिम 30 दिन " तथा " अंतिम 365 दिन "	"अंतिम 365 दिन "	अंतिम 30 दिन " तथा " अंतिम 365 दिन "

1.7 रा.प्र.सर्वे.सं.द्वारा सर्वेक्षित केन्द्रीय प्रतिदर्श के माध्यम से संग्रहीत आंकड़ों पर आधारित सर्वेक्षण के निष्कर्ष रा.प्र.सर्वे.रिपोट सं. 508, 509, 510, 511, 512, 513 तथा 514 (रिपोर्टों के शीर्षक हेतु संदर्भ देखें) में पहले ही जारी किए जा चुके हैं । तथापि, सर्वेक्षण के प्रमुख परिणामों का सार यहां प्रस्तुत है ।

सर्वेक्षण के प्रमुख निष्कर्ष

2. उपभोक्ता व्यय का स्तर

2.1 औसत एम पी सी ई

2.1.1 प्रमुख राज्यों तथा अखिल-भारत के ग्रामीण तथा शहरी क्षेत्रों हेतु राज्य स्तर पर औसत एम पी सी ई को नीचे दर्शाया गया है । ग्रामीण भारत में, प्रमुख राज्यों में इसकी सीमा उड़ीसा में रु. 399 से लेकर केरल में रु. 1013 रही जबकि अखिल भारत स्तर पर इसका औसत रु. 559 रहा । देश में इसका शहरी औसत रु. 1052 के उच्चतम स्तर तक था और बिहार में न्यूनतम 696 रु. तथा पंजाब में सर्वाधिक 1326 रु. था ।

सारणी 1 : प्रमुख राज्यों तथा अखिल भारत के ग्रामीण तथा शहरी क्षेत्रों में औसत एम पी सी ई

राज्य	औसत एम पी सी ई (रु.)		राज्य	औसत एम पी सी ई (रु.)	
	ग्रामीण	शहरी		ग्रामीण	शहरी
आंध्र पद्रेश	586	1019	मध्य प्रदेश	439	904
असम	543	1058	महाराष्ट्र	568	1148
बिहार	417	696	उड़ीसा	399	757
छत्तीसगढ़	425	990	पंजाब	847	1326
गुजरात	596	1115	राजस्थान	591	964
हरियाणा	863	1142	तमिलनाडु	602	1080
झारखंड	425	985	उत्तर प्रदेश	533	857
कर्नाटक	508	1033	पश्चिम बंगाल	562	1124
केरल	1013	1291	अखिल भारत	559	1052

स्रोतः- सारणी पी 5, रिपोर्ट सं.508, उ.प्र.के आंकड़ों में सुधार किया गया

2.2 एम पी सी ई के अनुसार जनसंख्या का वितरण

2.2.1 जैसा पहले चर्चा की जा चुकी है कि बारह एम पी सी ई आकार वर्ग ग्रामीण एवं शहरी क्षेत्र के लिए पृथक-पृथक अखिल भारत जनसंख्या के 5%, 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90%, 95% तथा 100% के समानुरुप हैं। एम पी सी ई के निम्नतर स्तरों में ग्रामीण जनसंख्या ज्यादा है। यद्यपि ग्रामीण-शहरी मूल्य अंतरों को नकारते हुए 580 रु. से कम एम पी सी ई वाली ग्रामीण क्षेत्रों में 70 प्रतिशत जनसंख्या शामिल है, शहरी भारत में केवल 30 प्रतिशत जनसंख्या शमिल है ।

सारणी 2 : एम पी सी ई के विशिष्ट स्तरों के नीचे की समीक्षा

राज्य	एम पी सी ई की गामीण जनसंख्या का प्रतिशत		राज्य	एम पी सी ई की शहरी जनसंख्या का प्रतिशत	
	365 रु.से ानीचे की (बॉटम 30%)	270 रु. से नीचे की (बॉटम 10%)		580 रु. से नीचे की (बॉटम 30%)	395 रु. से नीचे की (बॉटम 10%)
उड़ीसा	57	31	बिहार	55	28
छत्तीसगढ़	55	24	उड़ीसा	50	25
मध्य प्रदेश	47	21	उत्तरप्रदेश	44	17
बिहार	46	15	छत्तीसगढ़	44	20
झारखंड	46	15	मध्य प्रदेश	43	18
उत्तरप्रदेश	33	10	राजस्थान	36	10
कर्नाटक	32	7	झारखंड	33	14
महाराष्ट्र	30	11	आंध्र प्रदेश	33	8
तमिलनाडु	26	6	कर्नाटक	31	12
आंध्र प्रदेश	25	8	पश्चिम बंगाल	29	8
पश्चिम बंगाल	24	5	तमिलनाडु	26	7
गुजरात	21	5	महाराष्ट्र	25	8
असम	17	3	असम	23	4
राजस्थान	17	3	केरल	22	7
हरियाणा	7	1	हरियाणा	22	7
केरल	7	2	पंजाब	18	1
पंजाब	4	1	गुजरात	16	3
अखिल-भारत	30	10	अखिल- भारत	30	10

स्रोतः सारणी पी 3, रिपोर्ट सं. 508

2.2.2 अखिल-भारत स्तर पर एम पी सी ई कट-ऑफ प्वांइट स के अपेक्षाकृत निम्न परसेन्टाइल से नीचे की राज्य जनसंख्या के प्रतिशत के रुप में आंकलन के अनुसार देश के 17 प्रमुख राज्यों के संबंध में आर्थिक वंचना की व्याप्ति का अंतर नीचे दर्शाया गया है । 2004-05 में ग्रामीण जनसंख्या के लिए, 365 रु. का एम पी सी ई स्तर एम पीसी ई के अखिल-भारत वितरण के 30वें परसेन्टाइल तथा 270 रु. 10वें परसेन्टाइल के तदनुरुप है ।

सारणी 3 : एम पी सी ई के विनिर्दिष्ट स्तरों के ऊपर ग्रामीण और शहरी जनसंख्या की राज्यवार प्रतिशतताएं

राज्य	एम पी सी ई सहित ग्रामीण जनसंख्या का %		राज्य	एम पी सी ई सहित शहरी जनसंख्या का %	
	690 रु. अथवा अधिक (शीर्ष 20 %)	890 रु. अथवा अधिक (शीर्ष 10 %)		1380 रु. अथवा अधिक (शीर्ष 20 %)	1880 रु. अथवा अधिक (शीर्ष 10 %)
केरल	57	38	केरल	28	15
पंजाब	51	32	पंजाब	27	14
हरियाणा	47	28	पश्चिम बांबल	24	13
गुजरात	26	13	गुजरात	23	10
आंध्र प्रदेश	23	11	महाराष्ट्र	23	13
राजस्थान	22	10	हरियाणा	22	11
महाराष्ट्र	21	11	तमिलनाडु	22	11
तमिलनाडु	21	11	कर्नाटक	21	11
पश्चिम बंगाल	18	8	असम	21	9
असम	18	5	आंध्र प्रदेश	18	8
उत्तर प्रदेश	17	8	झारखंड	17	8
कर्नाटक	13	6	छत्तीसगढ़	16	8
मध्य प्रदेश	11	5	राजस्थान	15	7
उड़ीसा	9	4	मध्य प्रदेश	14	7
छत्तीसगढ़	8	3	उत्तर प्रदेश	12	6
झारखंड	7	3	उड़ीसा	8	3
बिहार	6	2	बिहार	7	3
अखिल-भारत	20	10	अखिल-भारत	20	10

स्रोतः सारणी पी 4, रिपोर्ट सं. 508

2.3 सामाजिक आर्थिक समूहों में परिवार उपभोक्ता व्यय

2.3.1 एन एस एस के 55 वें दौर (1999-00) तक परिवारों का विभिन्न सामाजिक समूहों में वर्गीकरण अनुसूचित जाति, अनुसूचित जनजाति अथवा "अन्य" तक ही सीमित था। तथापि, 55 वें दौर से आगे एक नया सामाजिक समूह, "अन्य पिछड़े वर्ग (ओ बी सी)" शुरु किया गया। तदनुसार, 61वें दौर में उपभोग पैटर्न चार सामाजिक समूहों अनुसूचित जन जाति (एस टी), अनुसूचित जाति (एस सी), अन्य पिछड़े वर्गों (ओ बी सी) तथा अवशिष्ट वर्ग (अन्य) के लिए तैयार किया गया जनसंख्या में जिनका क्रमशः 8.63 प्रतिशत, 19.59 प्रतिशत, 40.94 प्रतिशत और 30.80 प्रतिशत अंश है।

सारणी 4 : 2004-05 में विभिन्न सामाजिक समूहों का जनसंख्या में प्रतिशतता अंश और जीवन स्तर अखिल भारत

सामाजिक समूह	जनसंख्या में प्रतिशतता अंश			औसत एम पी सी ई (रु.)		
	ग्रामीण	शहरी	संयुक्त	ग्रामीण	शहरी	संयुक्त
अनु.जनजाति	10.57	2.92	8.63	426.19	857.46	463.15
अनु.जाति	20.92	15.64	19.59	474.72	758.38	532.07
ओ बी सी	42.75	35.60	40.94	556.72	870.93	625.89
अन्य	25.71	45.81	30.80	685.31	1306.10	919.09
सभी	100	100	100	558.78	1052.36	683.75

स्रोतः सारणी 4.7, रिपोर्ट सं. 514

2.3.2 ग्रामीण भारत में सामाजिक समूह अनुसूचित जनजाति (एस टी) से संबंधित परिवारों की निम्नतम एम पी सी ई (426.19 रु.) थी जिसके बाद सामाजिक समूह अनुसूचित जाति (एस सी) के परिवारों की एम पी सी ई 474.72 रु. थी। शहरी भारत में, सामाजिक समूह अनुसूचित जाति से संबंधित परिवारों की निम्नतम एम पी सी ई (758.38 रु.) थी जिसके बाद अनुसूचित जनजाति के परिवारों की एम पी सी ई 857.64 रू. थी। दोनों ही क्षेत्रों के मामले में, सामाजिक समूह" अन्य पिछड़े वर्गों (ओ बी सी)" से संबंधित परिवारों की एम पी सी इ अवशिष्ट "अन्य" वर्ग की एम पी सी ई से कम थी। तथापि, इस बात पर ध्यान देना रूचिकर है कि ग्रामीण और शहरी भारत दोनों में, सामाजिक समूहों के बीच ओ बी सी की औसत एम पी सी ई, 2004-05 में अखिल भारत की औसत से निकटतम थी। सामाजिक समूह अनु.जनजाति का ग्रामीण-शहरी औसत एम पी सी ई-अन्तर अधिकतम था।

सारणी 5 : विभिन्न सामाजिक समूहों के संबंध में एमपीसीई वर्ग के अनुसार औसत एमपीसीई तथा व्यक्तियों का प्रतिशत विभाजन अखिल भारत

एमपीसीई वर्ग (रु.)	ग्रामीण					एमपीसीई वर्ग (रु.)	शहरी				
	एस टी	एस सी	ओ बी सी	अन्य	सभी		एस टी	एस सी	ओ बी सी	अन्य	सभी
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
0 – 235	14	6.3	3.7	1.7	4.8	0-335	11.7	9.2	6.1	2.4	5
235 – 270	9.2	6.8	4.8	2.5	5.1	335-355	6.8	8.8	6.4	2.7	5.1
270 – 320	14.2	13.4	9.6	5.9	9.9	355-485	10.1	14.3	11.7	6.7	9.8
320 – 365	12.3	12.8	10.7	7.4	10.5	485-580	8.3	13.4	12.8	7.5	10.3
365 – 410	10	11.6	10.7	8.3	10.2	580-675	8.9	11	12	7.6	9.7
410 – 455	8.1	10.5	9.9	8.1	9.4	675-790	11.1	10.6	11.7	8.3	9.9
455 – 510	8.3	9.1	10.7	9.9	9.9	790-930	9.3	9.2	10	10.9	10.3
510 – 580	7.5	9.4	10.5	11.4	10.2	930-1100	11.9	8.6	8.9	10.6	9.7
580 – 690	7.3	8.5	10.3	13.2	10.4	1100-1380	7.4	6.8	8.3	13.1	10.2
690 – 890	5.7	6.3	9.9	14.1	9.8	1380-1880	8	4.7	7	14.1	9.9
890 – 1155	2	2.8	4.7	8.3	5	1880-2540	5.1	1.9	3	7.8	5.1
≥ 1155	1.4	2.4	4.6	9.2	5	≥ 2540	1.5	1.5	2.2	8.4	4.9
सभी वर्ग	100	100	100	100	100	सभी वर्ग	100	100	100	100	100
औसत एमपीसीई (रु.)	426.19	474.72	556.72	685.31	558.78	औसत एमपीसीई (रु.)	857.46	758.38	870.93	1306.1	1052.36

स्रोतः सारणी 1, रिपोर्ट सं. 514

2.3.3 ग्रामीण भारत में, औसत एम पी सी ई 558.78 रु. है तथा 65.7 प्रतिशत ग्रामीण जनसंख्या इस स्तर के नीचे थी। सामाजिक समूह " एस टी " के मामले में, 79.6 प्रतिशत जनसंख्या का औसत एम पी सी ई, ग्रामीण भारत के संबंध में राष्ट्रीय औसत से कम था । एस सी, ओ बी सी और " अन्य " के संबंध में तदनुरुपी आंकड़े क्रमशः 77.4 प्रतिशत, 64.1 प्रतिशत और 53.3 प्रतिशत थे । इसी तरह, शहरी भारत में, औसत एम पी सी ई 1052.36 रु. थी और 67.1 प्रतिशत शहरी जनसंख्या की एम पी सी इस स्तर से नीचे है । सामाजिक समूह "एस सी" के मामले में, 84 प्रतिशत जनसंख्या की औसत एम पी सी ई ग्रामीण भारत के संबंध में राष्ट्रीय औसत से कम थी । एस टी, ओ बी सी और " अन्य " के संबंध में तदनुरुपी आंकड़े क्रमशः 74.3 प्रतिशत, 75.4 प्रतिशत और 54.5 प्रतिशत थे।

2.3.4 सामाजिक समूहों के संबंध में, एम पी सी ई श्रेणीवार जनसंख्या वितरण के मामले में, ओ बी सी के संबंध में वितरण की " सभी श्रेणियों " के वितरण से, विशेषतया ग्रामीण क्षेत्रों में, निकटता अकेली अत्यंत महत्वपूर्ण विशेषता है जिसका विशेष उल्लेख किया जाना अपेक्षित है ।

2.4 1972-73 से अखिल भारतीय औसत प्रति व्यक्ति उपभोग व्यय में रुझान

2.4.1 उपभोक्ता व्यय सर्वेक्षण अर्थात् 27, 32, 38, 43, 50, 55 और 61वें दौर की पंचवर्षीय श्रृंखलाओं से प्राप्त प्रचलित मूल्यों पर औसत ग्रामीण और शहरी एम पी सी ई (अखिल-भारत) नीचे सारणी में दर्शाया गया है । स्थिर मूल्यों पर तुलना को सहज बनाने की दृष्टि से, 1972-73 आधार के साथ उपभोक्ता मूल्य सूचकांक (ग्रातीण क्षेत्रों के संबंध में कृषिय कामगारों हेतु सी पी आई (सी पी आई-ए एल पर आधारित तथा शहरी क्षेत्रों के संबंध में गैर श्रम कामगारों हेतु सी पी आई (सी पी आई-यू एन एम ई) पर आधारित) साथ-साथ दर्शाए गए हैं ।

2.4.2 यह देखा गया है कि 1972-73 मूल्यों पर तैयार किए गए ग्रामीण औसत एम पी सी ई सूचकांक आधार वर्ष के 12.65 गुणा हो गए हैं जबकि मूल्य सूचकांक (सी पी आई-ए एल) 100 से बढ़कर 922 हो गया जिसका अभिप्राय यह है कि 1972-73 से स्थिर मूल्यों पर प्रति व्यक्ति उपभोग में 37 प्रतिशत की वास्तविक वृद्धि हुई है ।

सारणी 6 : समस्त भारत में औसत प्रति व्यक्ति उपभोग की प्रवृत्ति, 1972-73 से 2004-05

वर्ष	ग्रामीण			शहरी		
	प्रचलित मूल्यों पर एमपीसीई (रु.)	1972-73 = 100 सहित प्रचलित मूल्य एमपीसीई का सूचकांक	आधार 1972-73 = 100 सहित सीपीआई-ए एल	प्रचलित मूल्यों पर एमपीसीई (रु.)	1972-73 = 100 सहित प्रचलित मूल्य एमपीसीई का सूचकांक	आधार 1972-73 = 100 सहित सीपीआई-यू. एन.एम.ई.
1972-73	44.17	100	100	63.33	100	100
1977-78	68.89	156	144	96.15	152	160
1983	112.31	254	227	165.80	262	258
1987-88	158.10	358	289	249.92	395	364
1993-94	286.10	637	520	464.30	723	618
1999-00	486.16	1101	833	854.92	1350	998
2004-05	558.78	1265	922	1052.36	1662	1230

नोटः विभिन्न संदर्भ अवधि पर आधारित होने के कारण 1999-2000 के सर्वेक्षण अनुमान अन्य दौरों के अनुमानो से पूर्णतया तुलनात्मक नहीं थे।
स्रोतः सारणी पी 6, रिपोर्ट सं. 508

3. उपभोग का पैटर्न

3.1 कुल व्यय में विविध खाद्य एवं गैर-खाद्य समूहों का हिस्सा

3.1.1 नीचे दी गई सारणी खाद्य मदों के 9 बड़े समूहों और गैर-खाद्य मदों के 11 बड़े समूहों में 2004-05 में समस्त भारत ग्रामीण और शहरी एम पी सी ई के ब्यौरे दर्शाती है । एम पी सी ई के गठन का प्रतिशत भी दिया गया है ।

सारणी 7 : मद समूहवार एमपीसीई और कुल उपभोक्ता व्यय में उसका हिस्सा **समस्त भारत**

मद समूह	मासिक प्रति व्यक्ति व्यय (रू.)		कुल उपभोक्ता व्यय (रू.)के ऽ के अनुसार व्यय	
	ग्रामीण	शहरी	ग्रामीण	शहरी
अनाज और अनाज विकल्प	101	106	18	10
दालें और उनके उत्पाद	18	24	3	2
दुग्ध और दुग्ध उत्पाद	47	83	8	8
खाद्य तेल	26	36	5	3
अण्डा, मछली और मांस	19	28	3	3
वनस्पति	34	47	6	4
फल	10	24	2	2
चीनी, नमक और मसाले	27	34	5	3
पेय पदार्थ, जलपान और संबंधित खाद्य ।	25	65	5	6
खाद्य कुल	308	447	55	43
पान, तम्बाकू और नशीले पदार्थ	15	17	3	2
ईंधन एवं रोशनी	57	105	10	10
वस्त्र एवं जूते ।।	30	49	5	5
शिक्षा	15	53	3	5
चिकित्सा	37	55	7	5
विभिन्न उपभोक्ता सामान	33	73	6	7
परिवहन	21	69	4	7
अन्य उपभोक्ता सेवाएं	21	74	4	7
किराया	3	59	1	6
कर और उपकर	1	8	0	1
टिकाऊ सामान	19	43	3	4
गैर-खाद्य कुल	251	605	45	57
सभी मदें	559	1052	100	100

* इसमें खरीदा गया पका हुआ भोजन शामिल है ** इसमें टेलरिंग प्रभार शामिल है
स्रोतः सारणी पी 10 और पी 11, रिपोर्ट सं. 508

3.2 अनाज उपभोग पैटर्न

3.2.1 यह पहले ही नोट किया गया है कि ग्रामीण भारत में कुल उपभोग व्यय का 18 प्रतिशत तथा शहरी भारत में 10 प्रतिशत अनाज पर व्यय होता है । अनाज के समस्त भारत उपभोग पैटर्न की मात्रा नीचे दी गई है । यहां " चावल " में सभी चावल उत्पाद, अर्थात् चीरा, " गेहूं " में सभी गेहूं उत्पाद अर्थात् ब्रेड एवं ऐसे ही उत्पाद शामिल हैं ।

सारणी 8: औसत मासिक प्रति व्यक्ति अनाज उपभोगः 2004-05

समस्त भारत

अनाज	मासिक प्रति व्यक्ति उपभोग (किलोग्राम)	
	ग्रामीण	शहरी
चावल	6.55	4.85
गेहूं	4.29	4.65
ज्वार	0.43	0.22
बाजरा	0.39	0.11
मक्का	0.31	0.03
अन्य अनाज	0.15	0.08
	12.12	9.94

स्रोतः सारणी पी 14, रिपोर्ट सं. 508

3.2.2 अधिकतर राज्यों को अनाज उपभोग की मात्रा के हिस्से के संबंध में दो समूह, मुख्यतः चावल-(समूह-आर) और गेहूं (समूह-डब्ल्यू) में विभाजित किया गया है । समूह-आर राज्य में, ग्रामीण और शहरी दोनों क्षेत्रों के लिए सभी अनाज उपभोग का कम से कम 75 प्रतिशत चावल (और उसका उत्पाद) है । समूह-डब्ल्यू राज्य में, दोनों क्षेत्रों में सभी अनाज उपभोग का कम से कम 65 प्रतिशत गेहूं (और उसके उत्पाद) हैं । 17 प्रमुख राज्यों में, 7 समूह-आर से तथा 5 समूह-डब्ल्यू से और शेष 5 किसी भी समूह से संबंधित नहीं हैं ।

3.3 चिकित्सा देखभाल : चिकित्सा व्यय संबंधी सूचना को दो भागों : संस्थागत चिकित्सा देखभाल (अस्पताल या नर्सिंग होम में भर्ती मरीजों के अनुसार प्राप्त) और गैर-संस्थागत देखभाल में एकत्रित किया गया था । दवाई (गैर-संस्थागत) जो गैर-संस्थागत चिकित्सा व्यय का एक बहुत बड़ा घटक है, 2004-05 में ग्रामीण भारत में कुल चिकित्सा व्यय का 63-64 प्रतिशत तथा शहरी भारत में 56-57 प्रतिशत है । जबकि 2004-05 में शहरी भारत (28 प्रतिशत) में संस्थागत चिकित्सा व्यय का हिस्सा-ग्रामीण भारत (26 प्रतिशत) के मुकाबले थोड़ा अधिक है

सारणी 9 : कुल अनाजों में चावल एवं गेहूं की खपत का प्रतिशत हिस्साः प्रमुख राज्य, ग्रामीण एवं शहरी, 2004-05

समूह आर राज्य (चावल का हिस्सा > 75 %)	अनाज की खपत में चावल का %		समूह डब्ल्यू राज्य (गेहूं का हिस्सा > 65 %)	अनाज की खपत में गेहूं का %		अन्य राज्य	अनाज की खपत में चावल का %		अनाज की खपत में गेहूं का %	
	ग्रा	श.		ग्रा.	श.		ग्रा.	श.	ग्रा.	श.
आन्ध्र प्रदेश	92	91	हरियाणा	89	87	बिहार	55	50	41	49
असम	95	89	मध्य प्रदेश	65	77	गुजरात	20	25	36	65
छत्तीसगढ़	96	75	पंजाब	91	88	झारखंड	75	51	22	49
केरल	90	88	राजस्थान	67	89	कर्नाटक	49	58	10	18
उड़ीसा	95	84	उत्तर प्रदेश	66	75	महाराष्ट्र	28	36	33	51
तमिलनाडु	93	91								
पश्चिम बंगाल	93	76								

स्रोतः सारणी पी 16, रिपोर्ट सं. 508

सारणी 10 : 2004-05 में चिकित्सा संबंधी व्यय का प्रतिशत में विवरण समस्त भारत

	चिकित्सा संबंधी कुल व्यय का प्रतिशत	
	ग्रामीण	शहरी
चिकित्सा संबंधी व्यय (संस्थागत)	26%	28%
दवाईयां (गैर-संस्थागत)	64%	56%
चिकित्सा संबंधी अन्य व्यय (गैर-संस्थागत)	11%	16%

स्रोतः चित्र 1, रिपोर्ट सं. 509

4. अनुभव के आधार पर खाद्य उपभोग की पर्याप्तता का पता लगाना

4.1.1 सर्वेक्षण में नमूने के तौर पर चुने गए प्रत्येक परिवार के बारे में यह पता किया गया कि क्या इसके सदस्यों को पूरे वर्ष के दौरान प्रतिदिन खाने के लिए पर्याप्त भोजन मिल पाता है कि नहीं, यदि नहीं तो वर्ष के वे कौने से महीने हैं जिनमें उन्हें पर्याप्त भोजन नहीं मिल पाता है । यदि अन्वेषक को संदेह होता था कि इस परिवार को पर्याप्त भोजन नहीं मिल पाता है तो वह सीधा सवाल पूछ कर इसके बारे में सूचना प्राप्त करता था। यदि अन्वेषक यह अनुमान लगाता था कि परिवार में भोजन की कोई

कमी नहीं है तो उसे इस बात की अनुमति थी कि वह बिना सीधा सवाल पूछे इस तथ्य को रिकार्ड कर ले । इस प्रकार इस सर्वेक्षण में खाद्यों की पर्याप्तता की कोई परिभाषा अथवा परिमापन नहीं अपनाया गया था । सर्वेक्षण के परिणाम से देश में खाद्य की पर्याप्तता का वास्तविक परिमापन परिलक्षित नहीं होता, बल्कि यह लोगों के बारे में अनुभव के आधार पर संकेत प्रदान करता है ।

4.1.2 तीन तरह की स्थितियां व्याप्त थीं । पूरे वर्ष के दौरान पर्याप्त भोजन मिलता है " (सभी महीनों में पर्याप्त भोजन), " कुछ महीनों में पर्याप्त भोजन नहीं मिलता है " (वर्ष के कुछ महीनों में अपर्याप्त भोजन) तथा " वर्ष के किसी भी महीने में किसी भी दिन पर्याप्त भोजन नहीं मिलता है " (सभी महीनों में अपर्याप्त भोजन) ।

4.1.3 अखिल भारतीय स्तर पर वैसे ग्रामीण परिवार जिनके सभी सदस्यों को पूरे वर्ष के दौरान प्रतिदिन पर्याप्त भोजन मिलता है उनका प्रतिशत लगभग 97.4 प्रतिशत था । जिन परिवारों को वर्ष के कुछ महीनों में प्रतिदिन पर्याप्त भोजन नहीं मिलता है उनका प्रतिशत 2 था तथा जिन परिवारों को वर्ष के किसी भी महीने में पर्याप्त भोजन नहीं मिलता है उनका प्रतिशत 0.4 था।

4.1.4 शहरी भारत में जिन परिवारों के सभी सदस्यों को वर्ष के दौरान प्रतिदिन पर्याप्त भोजन मिलता है उनका समग्र प्रतिशत लगभग 99.4 है । जिन परिवाररों के कम से कम एक सदस्य को वर्ष के कुछ महीनों में प्रतिदिन पर्याप्त भोजन नहीं मिलता है तथा जिन परिवारों को वर्ष के किसी भी महीने में किसी भी दिन पर्याप्त भोजन नहीं मिलता है उनका प्रतिशत क्रमशः 0.4 तथा 0.1 है ।

4.1.5 सामान्यतः देश के लोगों के बारे में धारणा वही बनती है जो 1999-2000 (55वां दौर) में थी, जब ग्रामीण तथा शहरी क्षेत्रों दोनों में ऐसे परिवारों की प्रतिशतता लगभग 97 थी ।

4.1.6 जिन ग्रामीण परिवारों को पूरे वर्ष के दौरान किसी भी महीने में किसी भी दिन पर्याप्त भोजन नहीं मिल पाता, उनका अनुपात सर्वाधिक असम राज्य (3.6 प्रतिशत) तथा उसके बाद उड़ीसा एवं पश्चिम बंगाल (दोनों में 1.3 प्रतिशत) रहा । वर्ष के दौरान कुछ महीनों में किसी भी दिन पर्याप्त भोजन न मिल पाने की प्रतिशतता सर्वाधिक पश्चिम बंगाल (10.6 प्रतिशत) तथा उसके बाद उड़ीसा (4.8 प्रतिशत) की रही । अनुभव के आधार पर यह पता चला कि भोजन की कमी का सामना सबसे कम हरियाण एवं राजस्थान के लोगों को करना पड़ता है ।

4.1.7 असम राज्य के शहरी क्षेत्र के लगभग 2.1 प्रतिशत परिवारों तथा उसके बाद बिहार के 1.1 प्रतिशत परिवारों ने बताया कि उन्हें वर्ष के किसी भी महीनें में पर्याप्त भोजन नहीं मिल पाता है । असंतुष्ट परिवारों की सर्वाधिक संख्या केरल राज्य में (1.7 प्रतिशत) तथा उसके बाद बिहार (0.8 प्रतिशत) में रही जिन्होने बताया कि वर्ष के कुछ महीनों में उन्हें भोजन की कमी का सामना करना पड़ा ।

4.1.8 ग्रामीण क्षेत्रों में वैसे परिवार जिनके सदस्यों को पूरे वर्ष के दौरान प्रतिदिन पर्याप्त भोजन मिलता है उसकी प्रतिशतता 1993-94 के 94.5 प्रतिशत से बढ़कर 2004-05 में 97.4 प्रतिशत हो गई है । वैसे परिवार जिनमें कम से कम एक सदस्य को वर्ष के कुछ महीनों के दौरान किसी भी दिन पर्याप्त भोजन नहीं मिल पाता, उनकी प्रतिशतता 1993-94 के 4.2 प्रतिशत से घटकर 2004-05 में 2.0 प्रतिशत रह गई है । जिन परिवारों के कम से कम एक सदस्य को वर्ष के किसी भी महीने में किसी भी दिन पर्याप्त भोजन नहीं मिल पाता, उनकी भी प्रतिशतता 1993-94 के 0.9 प्रतिशत से घटकर 2004-05 में 0.4 प्रतिशत रह गई है ।

4.1.9 शहरी क्षेत्रों में भी परिवारों के सदस्यों को प्रतिदिन मिलने वाले भोजन की उपलब्धता का पैटर्न समान रहा । जिन परिवारों को पूरे वर्ष के दौरान प्रतिदिन पर्याप्त भोजन मिलता है, उनकी प्रतिशतता 1993-94 के 98.1 प्रतिशत से बढ़कर 2004-05 में 99.4 प्रतिशत हो गई है । इस दौरान जिन परिवारों को वर्ष के कुछ महीनों में किसी भी दिन पर्याप्त भोजन नहीं मिल पाता उनकी प्रतिशतता 1.1 प्रतिशत से घटकर 0.4 प्रतिशत रह गई है तथा जिन परिवारों को वर्ष के किसी भी महीने में किसी भी दिन पर्याप्त भोजन नहीं मिल पाता उनकी प्रतिशतता 0.5 प्रतिशत से घटकर 0.1 प्रतिशत रह गई है ।

4.2 कैलौरी प्राप्त करने का " मानक " स्तरः 26वें दौर से राष्ट्रीय प्रतिदर्श सर्वेक्षण में प्रतिदिन प्रति व्यक्ति 2700 कैलौरी के मानक स्तर का प्रयोग शुरु किया गया तथा वास्तविक रुप से ली जा रही कैलोरी के साथ इसकी तुलना शुरु की गई । इस स्तर को कैलोरी प्राप्त करने का " मानक " स्तर माना गया ।

4.3 उपभोक्ता यूनिटः उपभोक्ता यूनिट एक ऐसा नंबर है जो व्यक्ति को उसकी आयु तथा लिंग के आधार पर दिया जाता है, जिसमें कुर्सी-टेबल पर बैठकर कार्य करने वाले एक 20-39 वर्ष की आयु वाले " मानक " पुरुष की तुलना में उस

व्यक्ति के लिए जरुरी कैलोरी का अनुपात का निरुपण किया जाता है ।

व्यक्ति को दी गई उपभोक्ता यूनिट की सं.		
आयु (वर्ष में)	पुरुष	महिला
1 से कम	0.43	0.43
1-3	0.54	0.54
4-6	0.72	0.72
7-9	0.87	0.87
10-12	1.03	0.93
13-15	0.97	0.80
16-19	1.02	0.75
20-39	1.00	1.71
40-49	0.95	0.68
50-59	0.90	0.64
60-69	0.80	0.51
70 +	0.70	0.50

4.3.1 निम्न तालिका में औसत एम पी सी ई, भोजन पर किया जा रहा प्रति व्यक्ति मासिक व्यय, प्रति व्यक्ति अनाज की खपत की मासिक मात्रा, प्रति व्यक्ति द्वारा मासिक कैलोरी प्राप्ति तथा ग्रामीण एवं शहरी भारत में खाद्य उपलब्धता की विभिन्न स्थितियों के अनुसार प्रतिदिन प्रति व्यक्ति 2700 कैलोरी की यूनिट के " मानक " स्तर की प्रतिशतता दर्शायी गई है ।

4.3.2 ग्रामीण क्षेत्रों में लगभग 1.7 प्रतिशत परिवारों का अनुभव था कि लगभग 1 से 3 कैलेण्डर महीनों में उन्हें आधा पेट भोजन प्राप्त हुआ । यह भी रिकार्ड किया गया कि लगभग 0.3 प्रतिशत परिवारों का अनुभव था कि लगभग 4 से 6 महीनों के लिए वे भोजन की अपर्याप्तता से ग्रस्त रहे । लगभग 0.5 प्रतिशत ने बताया कि उन्हें "पूरे वर्ष पर्याप्त भोजन प्राप्त नहीं हुआ"। शहरी क्षेत्रों में लगभग 0.4 प्रतिशत परिवार 1 से 3 महीनों के लिए खाद्य अपर्याप्तता से ग्रस्त रहे, जबकि 0.1 प्रतिशत का अनुभव था कि पूरे वर्ष उन्हें पर्याप्त भोजन प्राप्त नहीं हुआ।

सारणी 11: एमपीसीई की तुलना में खाद्य पदार्थों की उपलब्धता, प्रति व्यक्ति खाद्य व्यय तथा खाद्यान्न उपभोग, कैलोरी उपभोग का मानक स्तर

विवरण	पर्याप्त खाद्य उपलब्धता	अपर्याप्त खाद्य उपलब्धता	
		कुछ महीनों के लिए	सभी महीनों के लिए
ग्रामीण			
परिवारों का प्रतिशत	97.4	2.0	0.4
एम पी सी ई (रु. में)	560	389	334
मासिक प्रति व्यक्ति खाद्य व्यय (रु.)	308	232	208
खाद्यान्न उपभोग की मासिक प्रति व्यक्ति मात्रा (कि.ग्रा.) में	12.10	13.08	10.60
मासिक प्रति व्यक्ति कैलोरी उपभोग	61416	57048	47691
प्रतिदिन प्रति उपभोक्ता इकाई 2700 किलो कैलोरी के "मानक" स्तर का प्रतिशत	94.10	88.03	74.03
शहरी			
परिवारों का प्रतिशत	99.4	0.4	0.1
एम पी सी ई (रु. में)	1055	441	371
मासिक प्रति व्यक्ति खाद्य व्यय (रु.)	448	249	220
खाद्यान्न उपभोग की मासिक प्रति व्यक्ति मात्रा (कि.ग्रा.) में	9.94	10.20	9.90
मासिक प्रति व्यक्ति कैलोरी उपभोग	60663	49282	44941
प्रतिदिन प्रति उपभोक्ता इकाई 2700 किलो कैलोरी के " मानक " स्तर का प्रतिशत	91.74	75.04	70.34

स्रोतः विवरण 8, रिपोर्ट सं. 512

5. निष्कर्षात्मक टिप्पणियां

5.1 एन एस एस के इकसठवें दौर के परिवार उपभोग व्यय सर्वेक्षण (2004-05) के विस्तृत परिणाम एन एस एस ओ द्वारा सात रिपोर्टों (सं. 508, 509, 510, 511, 512, 513 और 514) में पहले ही जारी किए जा चुके हैं । इन रिपोर्टों के आधार पर ही सर्वेक्षण के प्रमुख निष्कर्षों के एक समेकित सार को तैयार करने का यहां प्रयास किया गया है । यहां परिचर्चा

का केन्द्र बिन्दु उपभोक्ता व्यय के विभिन्न पहलुओं के राष्ट्रीय स्तर के लक्षणों पर रहा है तथा केवल ऐसे सीमित राज्य स्तरीय विश्लेषण को शामिल किया गया जिसे नितांत आवश्यक माना गया । राज्य स्तरीय विश्लेषण और व्यय की अंतर-राज्य तुलना करते हुए, राज्यों में वस्तुओं और सेवाओं के मूल्यों में संभावित अंतरों को ध्यान में रखा जाना आवश्यक है, जिनका समायोजन नहीं किया गया है । इसके अतिरिक्त, प्रतिदर्श आकार-संबंधी सीमाओं के कारण, राज्य स्तर के अथवा उससे छोटे उप-क्षेत्रों से संबंधित अधिकांश आंकलनों में उसी कोटि की परिशुद्धता नहीं भी हो सकती जो समग्र राष्ट्रीय स्तर पर होती है ।

5.2 इन सीमाओं को ध्यान में रखते हुए, सर्वेक्षण के प्रमुख निष्कर्ष को निम्नानुसार संक्षेप में प्रस्तुत किया जा सकता है। औसत मासिक प्रति व्यक्ति व्यय (एम पी सी ई), जिसे इस उपभोक्ता व्यय सर्वेक्षण से प्राप्त सबसे महत्वपूर्ण संकेतक माना गया, में पिछले एक दशक के दौरान ग्रामीण क्षेत्र में 13 प्रतिशत और शहरी क्षेत्र में 15 प्रतिशत की वास्तविक वृद्धि दर्ज की गई । 50वें (1993-94) और 61वें (2004-05) दौर के सर्वेक्षण हेतु सामान्यीकृत लॉरेंज वक्र सूचित करते हैं कि जनसंख्या में एम पी सी ई के वितरण में भी कुछ सुधार हुआ है । उपभोग के पैटर्न में समय के साथ महत्वपूर्ण परिवर्तन हुए हैं । पिछले तीन दशकों के दौरान कुल व्यय में खाद्य पदार्थों के भाग में क्रमशः ग्रामीण और शहरी क्षेत्रों में कुल उपभोग व्यय के 55 प्रतिशत और 42 प्रतिशत की निरंतर गिरावट हुई है । दूसरी ओर, उपभोग व्यय में " विविध वस्तुओं और सेवाओं " (शिक्षा, चिकित्सा देखभाल, किराया और कर, परिवहन आदि सहित) के भाग में समय के साथ देश के ग्रामीण और शहरी भागों में 23 प्रतिशत और 37 प्रतिशत की वृद्धि हुई है ।

5.3 तथापि, उपभोग व्यय के विभिन्न पहलुओं के विस्तृत विश्लेषण, जैसा कि नवीनतम सर्वेक्षण द्वारा प्रदर्शित किया गया है, के लिए विस्तृत रिपोर्टों का अध्ययन अपेक्षित होगा ।

BROAD CONTENTS OF THE LAST THREE ISSUES OF 'SARVEKSHANA'

(A) 90th ISSUE

PART – I : TECHNICAL PAPERS

PART – II : SUMMARY AND MAJOR FINDINGS OF SURVEYS

(B) 91st ISSUE

PART – I : TECHNICAL PAPERS

PART – II : SUMMARY AND MAJOR FINDINGS OF SURVEYS

(C) 92nd ISSUE

PART -I : TECHNICAL PAPERS

PART – II : SUMMARY AND MAJOR FINDINGS OF SURVEYS

PDOS 57 XXVIII No. 1&2
1300

The objective of this journal is to present analytical articles based on the results published by NSSO Sarvekshana welcomes contributions based on the NSS data and those relating to its methodology.

- Authors are requested to send three typewritten copies of their papers/articles to the Deputy Director General, Coordination and Publication Division, National Sample Survey Organisation, Sardar Patel Bhavan, New Delhi - 110 001.
- Typescript should be double-spaced. Margins should be 1½" wide on the left and 1" on the right. It is better that a soft copy of the paper/article in MS Word/Excel is also forwarded. The paper/articles cam directly be e-mailed at ramkripal skakawar@yahoo.co.in also.
- Mathematical formulae, symbols etc. should be neatly written, if typing is not possible. The graphs, charts and diagrams, if any, should be complete with all details and be such that direct reproduction can be obtained.
- Reference to other papers, books etc. should be given in full e.g. name of author, title of publication, name of journal, date of publication etc.
- A summary of the paper not exceeding, 150 words should also be sent.
- Subscription to Sarvekshana should be sent to the Controller of Publications, Department of Publication, Civil Lines, Delhi - 110 054.

SUGGESTIONS FOR IMPROVEMENT
ARE WELCOME